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Chapter 1

INTRODUCTION

The first Yemeni PAPCHILD was implemented in 1991-92, after the unification of Yemen. The second round of the survey was carried out during 1997 by the Central Statistical Organization. As for the third round of the survey it was carried out by the Ministry of Health and Population in cooperation with the Central Statistical Organization during 2003, with Yemeni personnel who participated in all phases of the study (including planning, preparation, implementation, supervision, and writing of the report) under the supervision of the Arab Family Health Survey.

This survey is considered as an important benchmark in statistical work since it covers all governorates of the Republic of Yemen and went through highly precise phases during preparation and set-up, training and editing, follow-up and implementation.

1.1 Geographic Characteristics

The Republic of Yemen is located in the southern part of the Arabian Peninsula and is bordered by the Kingdom of Saudi Arabia in the north, the Arabian Sea and Gulf of Aden in the South, the Sultanate of Oman in the east, and the Read Sea in the west. The Bab Al Mandab strait lies off the southwestern tip of the Republic, Mayoun, a Yemeni island in the middle of the strait, controls the passage into and out of the Read Sea.

There are over 112 Yemeni Islands in the Red Sea and the Arabian Sea. The largest is Sucotra, which has an area of 3,650 square kms and is inhabited by a population of 37,623, according to the results of the 1994 census. Socotra Island lies 510 kilometers southeast of the Yemeni seaport of Mukalla. Next is Kamaran Island with an area of 110 square kms and inhabited by 2,220 persons. In addition, there are the islands of Larger Hunaish and Smaller Hunaish, Zaqar, and Al Tair as well as other islands. Yemen is characterized by an irregular terrain that accounts in large part of the dispersion of population aggregates. Despite the country's small size, the terrain makes it hard for statistical work to be undertaken in many areas. Yemen can be divided geographically into five major areas: the Mountainous area, the Coastal area, the Plateau area, the Desert (Al-Ruba Al-Khali) area, and the Yemeni islands.

1- Mountainous Area

The Mountainous Area consists of two mountain ranges. The first, the north-south mountain range, runs parallel to the Red Sea The second is the east-west mountain range, which parallels the Gulf of Aden. The height of these mountains varies from 1,000 to 3,700 meters, the highest elevation being on the level of the Arab peninsula and Greater Syria, where the land is around 3,666 meters above sea level at the peak of the Nabi Shuuaib Mountain. Water from the mountains drains in all directions into a number of agricultural wadis. These mountain ranges contain several plains and basins forming extensive agricultural areas.

2- Coastal Area

The coastal plains overlooking the Red Sea, the Gulf of Aden, and the Arabian Sea stretch along a coastal strip approximately 2,000 kms long from the Omani border in the east to Bab Al Mandeb in the west, and then to the border of Saudi Arabia in the north. The width of this coastal area varies from 30 to 60 kilometers.

3- Plateau Area

The highest elevation in the Plateau area is around 1,000 meters and lies to the east of the mountainous highlands and parallel to them. The plateau becomes wider towards Al-Ruba Al-Khali (the Empty Quarter). The outer parts of this hilly area are contiguous in the north with the Al-Rub Al-Kali region, which extends deep into the Arabian Peninsula and comprises almost a quarter of the area of the Arabian Sub-Peninsula.

4- Desert (Al-Rub Al-Kali) Area

The Al-Rub Al-Kali region is part of the Yemen Desert. It contains some desert and herbs, particularly in the outermost parts that are contiguous with the Plateau area. Fewer plants are seen as one goes deeper into the Al-Rub Al-Kali region of the Arabian Sub-Peninsula where sand dunes increase.

5- Yemeni Islands

There are 112 islands scattered in the Yemeni territorial waters of the Red Sea and the Arabian Sea. Many of these islands are inhabited by people and are used by Yemeni fishermen as waiting centers and for fishing purposes. The majority are situated in the Red Sea adjacent to the Yemeni coast.

The largest and most important island is Sucotra in the Arabian Sea, which is known world wide as the home of rare trees such as the ormosia, dracaena draco, and pterocarpus draco trees from which gum, various medicines, incense, and pigments are obtained. Kamaran Island is another important Yemeni island.

For the purposes of this survey, data were collected from hilly and desert areas, as can be observed from the results presented in this report. Sample segments were selected based on three main regions: the coastal region, the mountainous region, and the plateau and desert region. The islands were excluded from the sample because of the small size of the populations, and the difficulty in accessing them.

1.2 Historical Review

In ancient times Yemen's geographical location and favorable natural conditions played an important role in population settlement and the development of civilization in the territory of Yemen, particularly in the valleys opening into the Al-Rub Al-Kali desert in the east, the Arabian Sea in the south, and the Red Sea in the west.

The eras of Mae'en, Hadramaut, and Saba'a are considered to be the first organized political entities in Yemen before the birth of Christ. The Hemyar era flourish later and ended with the Abyssinian invasion in 525 A.D.

The most important activites of the people of these regimes were agriculture and trade; they invented agricultural terracing on the mountains and erected dams, the most famous of which was the Ma'arib dam.
They also controlled mercantile caravans and roads which transported commodities from India and East Africa across the Arabian Sub-Peninsula to areas around the Mediterranean Sea.

Yemen civilization flourished in those years; it was called Arabia Feli (Arabia the Happy) by the ancient Greeks.

At the end of the Hamiarite era, Yemen was dominated first by the Abyssinians and then by the Persians. This lasted until the emergence of Islam when the Yemenis embraced the Islamic religion and Yemen became part of the central Islamic state. This period lasted from 628 A.D. to 824 A.D. Small independent states emerged thereafter leaving Yemen weak and divided. The Turks (Ottomans) occupied Yemen from the sixteenth century until the beginning of the seventeenth century; then the British occupied Aden in 1839.

The Turks invaded the northern part of Yemen again in 1873 and continued occupation until the outbreak of World War I, and then Yemen came

under the rule of the Hamid Al Deen family in the north. This lasted until the outbreak of the Yemeni revolution on September 266, 1962.

The British remained in the south until the outbreak of the revolution of October 14, 1963, which resulted in independence on November 20, 1967.

With the success of these two revolutions, Yemen entered the era of economic, social, cultural and political change. The latest of these changes was the unification of the two parts of Yemen on May 22, 1990.

1.3 Population Characteristics

The first Population Census under the Republic of Yemen was conducted in 1994. The de facto population of the country reached 15,831,757 persons. The urban population was 3,423,518 and the rural population was 11,164,289, representing 23.5 percent and 76.5 percent of the population, respectively, while The population residing outside Yemen was 737,669 persons.

The population density for the country in 1994 was estimated at 28 per square kilometer, distributed among 18 governorates. Including the capital area (Sana'a city), these governorates comprise 226 districts. The cities of Sana'a, Aden, Taiz, El-hudaidah, El-Mukalla, and Ibb are considered Yemen's largest cities from the standpoint of population density. The annual population growth rate resulting from the difference between births and deaths in Yemen was approximately 3.4 percent. The crude birth rate was 45.4 per thousand populations according to 1996 estimates, while the crude mortality rate in the same year was 11.3 per thousand. This indicates a tangible decrease in mortality, as the crude mortality rate was 11.4 per thousand in 1994. However, these rates are still high and are a clear sign that the state must adopt a sound population policy aimed at solving current and anticipated population problems. For example, infant and child mortality remain high in Yemen compared with other countries in the region and most third world countries. The impact of high mortality is reflected in life expectancy, which is relatively low. Results of the 1994 census indicated that life expectancy is only 58 years for both sexes.

The total fertility rate is still high as well, despite a decrease from 7.7 births per woman in 1991-92 to 7.4 in the 1994 census.

1.4 Socioeconomic Conditions

Education

Education in one of the most important indicators of socioeconomic development; the state has paid great attention to this sector since the revolution in the early 1960's. Illiteracy among Yemenis was the highest among Arab and other developing countries. At the time of the revolution there was not one secondary school in the country, with the exception of Aden.

Statistics indicate that considerable progress has been achieved in the area of education. The number enrolled in basic education for the year 1996/1997 was 2,557,329 students of both sexes, distributed over 10,355 schools. The number enrolled in secondary education for the same year was approximately 289,578 students of both sexes, distributed over 1993 schools. As for higher education, the enrollment figures in the Yemeni public universities reached 104,784 students of both sexes.

The private sector has taken on an effective role in education that needs encouragement, guidance, and supervision in order to maintain a strong supporting role with the state. The private sector can serve the community in this important area by becoming involved in all stages of basic, secondary, and higher education, as well as pre-school nurseries and kindergartens, and technical and vocational training.

Health

Health conditions in any community are the result of various social, economic, cultural and environmental factors. Yemen witnessed many changes in the period following the revolution. The number of hospitals in 1997 reached 84 in addition to 421 health centers, with a total capacity of 9,788 beds and a staff of 4,070 doctors, of whom 3,803 are Yemeni doctors.

Despite development in the health sector, the rate of coverage by health services for the population is still at the 45 percent level, and this is basically concentrated in urban centers. At the same time rural areas are relatively deprived of these health services, especially the remote areas which have difficult geographical terrain. In fact the private sector has participated in a tangible and effective manner, whether on the level of cooperative or charitable societies or by individual effort. In spite of its growth throughout the country, the private sector for the most part is still confined to the main cities. There is no precise monitoring of the role of the private sector which is in need of support, sponsorship, and supervision from the state and the community, in order to have a more improved and effective role.

Labor Force and Food Production

The age group 15-64 years represents 46 percent of the country's population in 1994 compared with 50 percent for children in the age group under 15 years, and about 4 percent in the age group 65 years and over. Therefore, the dependency ratio in Yemen is high: for every 100 persons in the age group 15-64 years approximately 117 persons in the non productive age groups are being supported.

Around 53 percent of the Yemeni labor force is involved in the agriculture and fishing sectors, while the rest of its labor force is distributed among other sectors.

Total arable land in the country is approximately 1.66 million hectares, representing 67 percent of the total land area. Only 1.11 million hectares are under cultivation.

Agriculture depends mainly on rain water, thus production is subject to changing climatic conditions. Generally, locally grown fruits and vegetables are sufficient to meet the needs of the population. However, Yemen imports some essential food such as wheat; two-third of flour consumed is imported from other countries. There is indication that Yemen has considerable unexploited mineral wealth, especially oil, which has gained great attention from the state.

1.5 Organization of the Report

The topics dealt with in this report are presented in 20 chapters; the first covers the most important geographic features and some economic, social, historical, and demographic features of Yemen. The second chapter covers the methodology of the survey. Chapters from three to nineteen present the results of the survey, indicators and information that ensued from analyzing the data collected from the field arranged under the main topics included in the different questionnaires: Community characteristics, Getting acquainted with the prevalence rates of some chronic diseases, prevalence of diseases among mothers and children and the quality level of health care services, and smoking, mutuality, fertility, family planning, fertility trend, maternal care, STD, infant , child, and maternal mortality, female circumcision and violence against women. The last chapter includes the summary, the main findings and recommendations.

Chapter 2

SURVEY DESIGN AND IMPLEMENTATION

2.1 Survey Objectives

The Survey was specifically designed to meet the following objectives:

1. Providing policymakers and decision makers with a reliable database and analyses useful for policy choices and population programs, and to provide researchers, other interested persons, and scholars with such data;
2. Update and expand the national population and health data through collection of data which will allow the calculation of demographic rates, especially fertility rates, and infant and child mortality rates;
3. Analyze the direct and indirect factors which determine levels and trends of fertility. Indicators related to fertility will serve to elaborate plans for social and economic development;
4. Measure the level of contraceptive knowledge and practice by method;
5. Collect quality data on family health: immunizations, prevalence and treatment of diarrhea and other diseases among children under five, prenatal visits, assistance at delivery and breastfeeding;
6. Measure the nutritional status of children under five years (anthropometric measurements: weight and height;
7. Measure the level of maternal mortality at the national level;
8. Develop skills and resources necessary to conduct high-quality demographic and health surveys.

2.2 Survey Activities

A number of basic tasks were implemented:

1. Preparation of the project document including the work plan, the time table, and the budget;
2. Formation of the survey committees and administrative structure (supervisory and technical);
3. Preparation of the technical documents;
4. Sample design;

5. Household listing to update the selected areas of the sample;
6. Pretest of the survey documents;
7. Estimation for the provision of human and material resources required for the survey.

Below are some of the important details for this phase.
Preparation of documents: The survey documents include the following:

2.2.1 Household Health Questionnaire

The household questionnaire consisted of a group of questions relating to socioeconomic status of all usual household members. This questionnaire was used to list each of the individuals including information on the relationship to the household head, age, sex, marital status (for those 10 years and older), educational level and work status (for those 10 years and older). It also collected information on prevalence of diseases in addition to questions on housing characteristics including the type of dwelling, location, materials used in construction, number of rooms, kitchen in use, main source of drinking water and health related aspects, lighting and toilet facilities, disposal of garbage, durable commodities, and assets, and other related residential information.

2.2.2 Reproductive Health Questionnaire

The individual questionnaire was administered to all ever-married women age 15-49 years who were usual residents. It contained 8 sections on the following topics:

1. Respondent's background and marriage.
2. Reproduction and Infant mortality
3. Maternal health care
4. Nutrition and health of the child
5. Prevalence of chronic diseases and ailments due to reproduction
6. AIDS and other sexually transmitted diseases
7. Family planning and fertility attitudes
8. Female circumcision

2.2.3 Maternal Mortality Questionnaire

The questionnaire was administered to collect information on maternal mortality during the two years period before the survey, and it included 5 sections on the following topics:

1. Maternal woman's background
2. Reproductive Health and Use of Family Planning
3. Maternal Health before death
4. Causes of death
5. Circumstances that led to death of the woman

Also, a guide book (manual) of technical definitions and instructions for collecting data of all health institutions and a separate report will be issued for this.

Other documents:

Other documents prepared for use in survey activities were training manuals and field reporting forms (interviewer's and supervisor's assignment sheets, and editing and coding instructions).

2.3 Work Plan

The work plan of carrying out the activities of the survey was as follows:

Preparations	April, 1st., 2002 to July, 14th.,2002
Sample Design	July, 1st., 2002 to October, 31st., 2002
Pre-test	July, 15th., 2002 to August, 15th., 2002
Data Processing	December, 14th., 2002 to April, 15th., 2003
Preparing Preliminary Report	May, 2003

2.4 Pretest

The Pretest was prepared and carried out as one of the main survey activities, for testing the survey tools, documents and the work plan. At the end of the pretest fieldwork, a meeting was held with experts and teams which conducted the interviews. In the meeting, the experiences of interviewers, editors, and supervisors were discussed.

The pretest was extremely helpful in revising and modifying the questionnaires and in producing the final version of the questionnaires that was used for the main fieldwork. The completed pretest questionnaires were checked for data quality and completeness of answers to some questions considered sensitive such as the questions on female circumcision. The questionnaires were modified and interviewer's instructions were revised in light of the feedback from the field staff and review of the pretest questionnaires.

2.5 Sample Design

The 2003 Family Health Survey sample in Yemen was designed on the basis of the weighted sampling units or clusters methodology in order to provide estimates for general indicators for the following domains: Yemen as whole, urban and rural areas.

The sample was designed as a two-stage sample of 655 enumeration areas and covered all the inhabitants in the governorates. In each selected sampling area, a complete household listing was implemented as a

preparation for the second stage. Centrally, 20 households were chosen from each enumeration area for the completed household and housing questionnaire as well as the reproductive health questionnaire. As for the maternal mortality questionnaire, data were collected for all cases that took place during the last two years preceding the survey; among female deaths aged 15-54 years.

The final sample was 13,815 as a whole and out of this number, 3,173 household were in urban areas and 10,642 in rural areas. As for the reproductive health' questionnaire, data were collected from ever-married women age 15-54 years. The data collection took place during the period of January – March 2003.

A summary of the result of the fieldwork for the survey is presented in Table 2.1.

Table 2.1 Results of the household and individual interviews

Results of interview	Place of residence		Total
	Urban	Rural	
Household sampled	3,173	10,642	13,815
Household interviewed	2,912	9,752	12,665
Household Response rate	91.78	91.64	91.68
Number of eligible women	2,838	9,495	12,333
Number of eligible women interviewed	2,647	8,644	11,292
Eligible woman response rate	93.3	91.1	91.6

A total of 834,233 births and 11,368 death cases were counted. Out of this number, there were 1047 deaths for women age 15-54 years, and it included 221 maternal deaths (365 case/100,000 live birth) during the two years preceding the survey while 200 cases were successfully completed. This was the first time data were collected concerning maternal death.

2.6 Data Collection and Processing

The fieldwork began on December, 14th. 2002 and was completed on January, 6th. 2003. A total of 150 applicants were selected for training as interviewers. Trainees as interviewers, editors, and supervisors, were in charge of main survey questionnaires.

Data collection was carried out during January to March, 2003. A total of 20 teams participated in field work and each team had a supervisor, field editor, and four interviewers. The administration of the Survey gave special attention to the quality of daily work and fully controlled and supervised the work in the field, in the governorates and centrally by members of the Survey Technical Committee, especially during the first days of fieldwork, to ensure precision and commitment to the technical instructions. Office editing, coding and Machine entry and editing began while interviewing teams were still in the

field. Members who participated in office editing and machine entry were selected from those who took the training of the main field work to be familiar with the questionnaire and to facilitate their work during editing or machine entry.

The data from the questionnaires were entered and edited using CSPRO software package developed by both the American Bureau of Census and Macro International Inc.

Chapter 3

MAIN CHARACTERISTICS OF HOUSEHOLDS

This chapter aims at providing detailed information concerning the demographic and economic characteristics of the survey sample, as age distribution, gender, educational level and occupation of the household members in addition to the characteristics of the dwelling in which the household members live. It also includes a description of the characteristics of the household sample and household possession of durable goods. This chapter aims at creating a background that helps in understanding the findings laid down in the following chapters.

3.1 Household Size and Composition

Table 3.1 presents the distribution of the household sample by household size in both urban and the rural areas. The table shows that the average size of the household is 7 persons as a total for both urban and rural areas.

Table 3.1 Percent distribution of the households by number of household members according to place of residence

Household size	Urban	Rural	Total
1-4 individuals	25.2	26.9	26.5
5-7 individuals	35.2	32.2	32.9
More than 7 individuals	39.6	40.9	40.6
Average size of the household	7.0	7.0	7.0

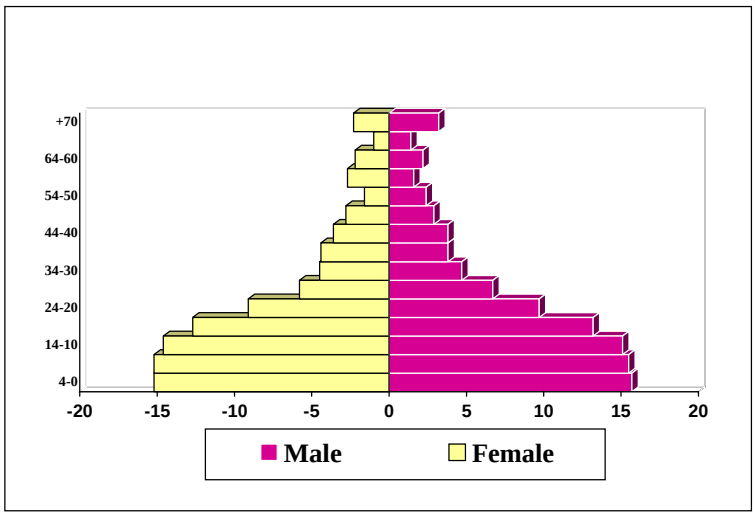
3.2 Age – Sex Structure

Population growth factors play a role in the age composition of the population. Table 3.2 and figure 3.1 show the effect of high fertility rates on the wide base with a large concentration of the population under 15 years of age. The proportion of children under age 5 is 15.5%. The proportion under age 15 is greater in the rural population than in the urban population which reflects the lower recent fertility in urban areas compared with rural areas.

Table 3.2 Percent distribution of the population according to current age, sex and place of residence

Age groups	Urban			Rural			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	13.9	13.4	13.6	16.2	15.8	16.0	15.7	15.2	15.5
5-9	13.8	13.5	13.6	16.0	15.8	15.9	15.5	15.2	15.4
10-14	14.2	14.5	14.3	15.4	14.6	15.0	15.1	14.6	14.8
15-19	13.7	13.6	13.6	12.5	13.1	12.8	12.7	13.2	13.0
20-24	10.9	11.3	11.1	8.6	9.2	8.9	9.1	9.7	9.4
25-29	6.8	7.7	7.3	5.5	6.5	6.0	5.8	6.7	6.3
30-34	5.3	5.1	5.2	4.5	4.4	4.5	4.7	4.5	4.6
35-39	4.3	5.5	4.9	3.6	4.4	4.0	3.8	4.7	4.2
40-44	4.4	3.9	4.1	3.6	3.5	3.5	3.8	3.6	3.7
45-49	2.9	2.7	2.8	2.9	2.8	2.8	2.9	2.8	2.8
50-54	2.8	1.5	2.2	2.3	1.6	2.0	2.4	1.6	2.0
55-59	1.6	2.4	2.0	1.6	2.8	2.2	1.6	2.7	2.1
60-64	1.8	1.9	1.9	2.3	2.3	2.3	2.2	2.2	2.2
65-69	1.1	0.8	1.0	1.4	1.1	1.2	1.4	1.0	1.2
70+	2.3	2.1	2.1	3.5	2.3	2.9	3.2	2.3	2.7
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number(=100)	10521	10156	20677	34687	33728	68416	45208	43885	89093

Figure 3.1 Population Pyramid



3.3 Marital Status of Population of 15-years of Age and Older

Table 3.3 indicates the percent distribution of those aged 15 and above by marital status, sex, and place of residence (urban and rural areas). The percentage of being single among those aged 15 and above is higher in rural than in the urban areas, especially among females (39.9% and 33.2% respectively). Besides, the percentage of widowers is higher among females than males (7.9% and 2.6% respectively). Also, the percent of married and divorcees is higher among rural than in urban area (61.4% and 54.9% respectively).

Data also indicate that the percent of married and divorced females is higher than the percent of married and divorced males either in rural areas or in urban areas.

Table 3.3 Percent distribution of population aged 15 and above by marital status and place of residence

Marital Status	Urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Single	45.2	34.5	39.9	37.8	28.6	33.2	39.7	30.0	34.9
Married	52.1	54.2	53.1	58.3	61.8	60.1	56.8	60.0	58.4
Widowed	1.7	8.5	5.1	2.9	7.7	5.3	2.6	7.9	5.2
Divorced	0.8	2.7	1.8	0.8	1.8	1.3	0.8	2.0	1.4
Not stated	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Number (=100)	6112	5953	12064	18166	18157	36323	24277	24110	48387

3.4 Educational Level

The educational level of the household members is considered to be one of the most important characteristics of a family's living standard, since it is directly connected to a number of phenomena such as the reproductive behavior, the use of family planning methods and family health, particularly maternal and child health. The educational level reflects the impact of the educational polices in the field of illiteracy elimination and the comprehensiveness of education. Table 3.4 indicates the distribution of the population aged 10 years and above by the educational level, gender, and place of residence.

Table 3.4 Percent distribution of the population (10 years and older) by educational level, sex & place of residence

Educational level	urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Illiterate	15.2	40.5	27.7	31.1	57.7	53.2	27.3	69.1	47.0
Read & write	29.1	24.5	26.8	31.8	15.0	23.4	31.1	17.3	24.3
Primary	13.2	9.9	11.6	12.8	4.7	8.8	12.9	6.0	9.4
Preparatory	17.2	11.4	14.4	12.1	2.8	7.5	13.4	4.9	9.2
Secondary	18.2	10.6	14.4	9.7	1.2	5.5	11.8	3.5	7.7
University	6.6	2.6	4.6	1.9	1.0	1.0	3.0	0.7	1.0
Not stated	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5
Number	7602	7428	15030	23492	23076	46568	31094	30504	61598

Overview data in Table 3.4 show a high percentage of illiteracy among population 10 years and older (47%), especially among female. Female in urban areas are more educated than those from rural areas. Among urban female, 11 percent have completed at least secondary school, compared with 1 percent of rural female.

As expected Table 3.4 indicates that male have more educational attainment (at the primary level) as almost 41 percent of males have primary education or higher compared to only 15 percent of females. The strong association between residence and literacy observed in Table 3.4 is clearly a reflection of residential differences in educational levels. Both males and females in urban area are more likely to be literate than other in rural areas.

3.5 School-attendance

Table 3.5 shows the percentage of current school-attendants among the 6-17 age group for both males and females by place of residence.

Table 3.5 Percentage of population 6-17-year olds enrolled in educational association by sex, age and place of residence

Age group	urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
6-11	84.6	83.7	84.1	70.3	47.9	59.4	73.2	55.5	64.6
12-14	89.3	83.4	86.7	82.8	41.4	62.7	84.4	51.0	68.2
15-17	74.3	63.5	69.2	66.6	21.0	43.7	68.5	30.6	49.7
Total	83.4	78.9	81.2	72.6	40.2	56.8	75.0	48.7	62.2

It is clear from Table 3.5 that enrollment rates are higher in urban areas compared with rural areas (84 percent against 60 percent respectively). Data presented in the same table indicate that around 65 percent of the children of both sexes and up to age 11 are currently attending school. The percentage of current school enrollment is higher among males compared to females (75 percent against 49 percent). Also, the gap increases with age especially among those older than the elementary level age**.**

3.6 Working Status

The percentage of those working aged 15 and older was about 37.1 percent and this means that around 62.9 percent of those working aged 15 and older are economically inactive. The employment differentials presented in Table 3.6 indicate that males are more likely to work than women (62.1 percent compared with 11.9 percent). Overall, data show that only 12 percent of women age 15 years and older were working during the time of the survey and this percent is higher in rural areas than it is in urban areas (13.2 percent and 8 percent respectively). This could be due to the nature of work in farms in the rural areas.

Table 3.6 Percentages of population aged 15 years and older who were working during the time of the survey by sex and place of residence

Sex	Urban	Rural	Total
Males	58.2	63.4	62.1
Females	8.0	13.2	11.9
Total	33.4	38.3	37.1

Table 3.7 shows the distribution of working population aged 15 and older during the time of the survey by their employment status for both males and females and place of residence.

Table 3.7 Distribution of working population aged 15 and older, by their employment status and sex and place of residence

Employment status	Sex		Place of residence		Total
	Males	Females	Urban	Rural	
Salaried employees	62.7	25.3	73.7	52.0	56.9
Own account worker	27.8	13.2	19.9	27.2	25.5
Self- employed	2.0	0.3	1.9	1.7	1.7
Unpaid family worker	6.7	59.5	3.7	18.1	14.9
Not stated/ Other	0.8	1.7	0.7	0.9	0.9
Total	16309	2981	4381	14909	19290

Data shows that 62.7 percent of males are paid workers, while the percentages of own account workers reaches 28 percent and the percentage of unpaid family worker decreases to 7. Similarly, in rural area, unpaid family

women worker is higher in rural than in urban areas (18.1 percent against 3.7 percent).

3.7 Housing Characteristics

The basic characteristics of the household dwelling reflect the economic and social situation of the population in terms of type and ownership of the dwelling, type of materials used in the flooring, number of rooms and mean number of roommates per each room in addition to source of drinking water, and use of electricity. Housing characteristics also reflect the type of sanitation facilities, availability of kitchen and type of fuel used for cooking and the manner and number of garbage disposal. The environmental conditions and their characteristics and their direct effect on the public health were measured though out housing cleanness and drying of the surrounding nearby the selected households.

3.6.1 Type of Housing Unit and mean number of rooms

Results of the Yemeni Family Health Survey show that about 77 percent of the families live in an independent house, a percentage that rises in rural areas to reach about 80 percent. As for living in a home or in an apartment; it is more prevalent in urban areas than in rural areas.

Households are greatly keen on owning their dwellings. Therefore, the percentage of owned dwellings was about 64 percent (66 percent and 57 percent in urban and rural areas respectively). If we add the joint ownership of the dwelling, the percentage of ownership is about 13% on the overall level. Most of the remaining households use rented dwellings particularly in urban areas.

Findings of the Yemeni Family Health Survey show that the average number of rooms per dwelling reaches 2.6 rooms, a percentage that rises to 3.1 in the urban areas and decreases to 2.5 in the rural areas. As for the average of crowdedness per room, it is 2.4 persons per room. This average rises to 2.2 persons per bedroom in the urban areas and decreases to 1.8 in the rural areas (see Table 3.8).

The results of the survey show that only 20 percent of the households have drinking water ready from public water net, a percentage that rises to about 52 percent in urban areas and decreases to about 9.6 percent in rural areas. As for the rest of rural inhabitants, about 45 percent get their drinking water mainly from pumped wells. (See Table 3.9).

Regarding the availability of water inside and outside the dwelling, 45 percent of the urban households have their water inside the dwelling, which decreases to 10 percent in rural areas. Data indicates that 16.6 percent of

households living in rural areas depend on a lake as the main source for drinking water compared with only 2.2 percent in urban areas.

Table 3.8 Distribution of household according to the main Housing characteristics by place of residence

Characteristics	Urban	Rural	Total
A. Type of housing unit that the family live in			
Independent house/villa	68.3	79.7	77.0
Flat	27.7	6.1	11.1
Tent	3.7	11.8	10.0
Other	0.3	2.4	1.9
Mean number of rooms in dwelling	3.1	2.5	2.6
Average crowdedness per room	2.2	2.5	2.4
Mean number of bedrooms in a dwelling	2.2	1.8	1.9
Average crowdedness per bedroom	3.1	3.5	3.4
Total	2942	9723	12665

Table 3.9 Distribution of households by type and location of drinking water source and place of residence

Description	Urban	Rural	Total
1. Source of drinking water			
Public water net	52.4	9.6	19.5
Common water place	1.9	12.2	9.8
Well supplied with a pump	2.3	15.1	12.1
Well supplied	2.1	28.0	22.0
Running water/Lake	2.2	16.6	13.2
Tanks	10.3	7.0	7.7
Bottled water	24.6	0.6	6.2
Other	4.2	11.0	9.4
2. Location of drinking water source			
Inside the housing unit	45.3	10.1	18.3
Outside the housing unit/ near building	6.4	5.3	5.5
Elsewhere	48.2	84.2	75.8
Not stated	0.1	0.5	0.4
Number of households	2942	9723	12665

3.6.2 Availability of a Toilet Facility, source of electricity, and type of used fuel

Due to the importance of the toilet facility and its use on public hygiene, many questions in the survey were asked about its existence and type of toilet used. It appears that 90 percent of the urban households have an independent toilet facility inside the dwelling and the remainder outside. In rural areas the percentage of households with an independent toilet facility inside the dwelling is 47 percent, while 43.6 percent of the rural households do not have a toilet facility.

Table 3.10 Percent distribution of households by availability of toilet facility, source of lighting, and type of used fuel according to place of residence

Availability and type of toilet facility	Urban	Rural	Total
1. availability of toilet facility			
Inside the housing unit	90.4	46.8	57.0
Outside of the dwelling	6.9	9.5	8.9
No toilet facility	2.7	43.6	34.1
2. Type of toilet used			
Shared	6.4	8.3	7.9
Private	90.7	47.4	57.5
No toilet facility	2.7	43.7	34.1
3. Sanitation facility			
Connected to public net	43.9	2.5	12.1
Unconnected to public net	32.0	15.1	19.0
Pit toilet/ other	15.7	31.9	28.1
Public facility/ open air/other	8.4	48.5	40.4
4. Source of lighting			
Public	91.4	21.6	37.8
Private/ cooperative	2.9	8.5	7.2
Gas	0.8	13.5	10.6
Kerosene	3.8	54.3	42.5
Other/ not available	1.0	2.1	1.8
5. Availability of kitchen			
Inside the dwelling	84.1	52.2	59.6
Outside the dwelling	7.7	28.5	23.7
Not available	8.2	19.2	16.6
6. Type of used fuel			
Wood/coal	5.5	57.1	45.2
Natural gas	86.3	35.7	47.5
Kerosene	6.3	5.9	6.0
Number of households	2942	9723	12665

As for the type of toilet used, it appears that about 57.5 percent of households have a private toilet. This percent increases to 90.7 percent in urban areas compared with 47.4 percent in rural areas. Data in Table 3.10 show that only 12.1 percent of the household all over Yemen are connected to public drainage system compared with 19 percent unconnected to public drainage system, 28.1 percent connected to a pit and 40.4 percent with a public facility.

As data show, kerosene is the main source of lighting in Yemen (42.5 percent) followed by public (37.8 percent) and Gas (10.6 percent). Table 3.10 indicates that urban households are more likely to live in dwellings connected to a public source of lighting (91.4 percent), compared with 21.6 of rural households.

3.8 Garbage Disposal

The way people dispose of garbage has its impact on public health, on one side, and the environment, on the other. The survey results show that 2.1 percent of the inhabitants put the garbage in containers with cover: 64 percent of urban households use plastic bags and this percent decrease to 12 percent in rural areas. Data also show that more than half of the rural households dispose their garbage in the street compared with 7.3 percent in urban areas. The majority of urban households dispose their garbage in a special place (61 percent), while those who depend on a garbage collector reach 17 percent. As for rural households, only 14.8 percent of the households dispose their garbage in a special place while 1 percent of them use garbage collectors.

Table 3.11 Distribution of households by manner and number of garbage disposal, and nature of surrounding area by place of residence

Characteristics	Urban	Rural	Total
1. Type of keeping garbage Disposal			
Containers with cover	4.5	1.3	2.1
Containers without cover	23.2	30.8	29.1
Plastic bags	64.1	12.1	24.2
Throws in the street	7.3	51.2	41.0
Other/ not stated	0.9	4.5	3.7
2. Garbage Disposal			
Collector	16.7	1.0	4.6
Special place	61.1	14.8	25.5
Burning	3.3	7.7	6.6
Throw in the street	18.1	68.4	56.7
Other	0.9	8.3	6.6
3. Number of Garbage Disposal			
Daily	60.7	16.4	26.7
Twice a week	18.2	10.6	12.4
Weekly	2.7	3.8	3.5
Throw in the street	18.1	68.4	56.7
Other/ not stated	0.4	0.8	0.7
4. Cleanness of place surrounding households			
Clean and dry	53.7	32.5	37.4
Unclean/ garbage	40.0	65.6	59.7
Running water	6.0	1.5	2.5
Not stated	0.3	0.4	0.4
Total	2942	9723	12665

Interviewers noticed that, around 54 percent of urban households are surrounded by a clean and dry area compared with 33 percent of rural households. But they noticed that garbage is available in around 40 percent of urban households compared with 66 percent in rural households. Also, they noticed that 6 percent of urban households are surrounded by water (either calm or running) compared with 1.5 percent in rural areas.

3.9 Possession of Durable Goods

Possession of durable goods has social, economic and cultural significance, and also expresses the citizens' consumption tendency especially with regard to some durable goods.

Table 3.12 Percentages of households having specific consumer goods, according to place of residence

Durable goods	Urban	Rural	Total
Radio/Cassette	74.2	65.3	67.4
Television	83.5	31.0	43.2
Video	10.4	1.6	3.6
TV reception dish	38.1	4.8	12.5
Refrigerator	57.9	9.5	20.7
cooking stove	85.5	45.9	55.1
Water Heater	21.8	2.7	7.1
Sewing Machine	25.8	10.1	13.7
Electric Fan	42.6	6.5	14.9
Washing Machine	51.7	5.2	16.0
Telephone	44.4	6.1	15.0
Air Conditioner	12.6	0.9	3.6
Vacuum	19.2	1.4	5.5
Mixer	48.4	6.0	15.9
Bicycle	15.6	3.7	6.4
Motorcycle	3.8	1.6	2.1
Private Car	17.7	9.7	11.6
Taxi/ Bus	5.2	2.1	2.8
Tractor	1.8	1.3	1.4

Table 3.12 provides information on household ownership of durable goods and other possessions by place of residence. As regard to durable goods, especially those that use electricity, are more available in urban areas than in rural areas. The survey results show that about 67 percent of households own a radio. As for T.V set 43 percent of households in urban areas are own a T.V set. Also, around 12.5 percent have a TV reception dish and this percent increases to 38 percent in urban areas compared to only 5 percent in rural areas. Besides, 44 percent of the households in urban areas have a telephone and this drop to 6 percent in rural areas. Regarding the availability of an electric refrigerator or a cooking stove, around 58 percent and 86 percent of urban households have a refrigerator and a cooking stove respectively compared with 9.5 percent and 46 percent in rural areas respectively. Overall, the reaches 58 percent while it rises to 96% in urban areas and falls to 89% in rural ones. The overall percentage of having an electric washing machine is also high (85%) with 90 % in urban areas against 75 % in rural areas.

Urban households possess more durable goods compared with rural households (see Table 3.12).

Chapter 4

BACKGROUND CHARACTERISITICS OF FEMALE RESPONDENTS

This chapter provides a profile of the ever-married women aged (15-49) who were interviewed in the survey. Data of eligible women by various demographic and socio-economic background characteristics including their age, marital, educational and work status will explored in the following chapter.

4.1 General Characteristics:

Table 4.1 presents the distribution of ever married women (15-49) by selected background characteristics and place of residence. Among the ever-married women in the sample, 93.6 percent are currently married, 3.1 percent widowed and 3.3 percent divorced or separated. These percentages slightly vary between urban and rural area and the percentage of the divorced is clearly low, implying that marriage is stable in Yemen especially in rural areas.

Table 4.1 Percent distribution of ever married women (15-49) by selected background characteristics and place of residence

Characteristics	Urban	Rural	Total	Number of women
Age Groups				
15 - 19	6.5	8.1	7.7	867
20 - 24	18.3	20.2	19.8	2232
25 - 29	19.4	19.6	19.5	2207
30 - 34	15.4	14.8	15.0	1690
35 - 39	18.4	15.3	16.0	1808
40 - 44	12.9	12.1	12.3	1391
45 - 49	9.2	9.9	9.7	1097
Marital status				
Currently married	92.1	94.1	93.6	10570
widow	3.5	2.9	3.1	347
Divorced	4.0	2.6	2.9	329
Separated	0.4	0.4	0.4	46
Educational Level				
Illiterate	52.7	85.3	77.5	8747
Read & write	14.5	7.6	9.2	1043
Primary	11.5	4.1	5.8	661
Preparatory	9.0	2.0	3.7	417
Secondary+	12.3	1.1	3.8	425
Total of women(=100)	2713	8579	11292	11292

Looking at the age distribution, Table 4.1 shows that more than 47 percent of the women in the survey were aged less than 30, and almost a fourth of them aged 40 and above. It is noticed that a percentage of 7.7 of those ever married were aged 15-19 and this is due to the increasing trend in Yemen towards delaying marriage. Considering place of residence, about 8.1 of interviewed women in rural areas married at age 15-19 compared with 6.5 percent in urban areas.

As presented in Table 4.1, the majority of eligible women are illiterate (77.5 percent) and only 9.2 percent of the interviewed women can read and write. The strong association between residence and illiteracy observed in Table 4.1 is clearly a reflection of residential differences in educational levels. Women in urban areas are more educated than those from rural areas. Among urban women, 12 percent have completed at least secondary school, compared with 1 percent of rural women. The lowest levels are found in rural areas, where 85 percent of women are illiterate compared with 53 percent in urban areas.

4.2 Characteristics of Married Women in Comparison with Husbands' Characteristics

When comparing the educational level of the husband with that of the wife, the husband's education is either higher than or equal to that of the wife.

Table 4.2 Percent distribution of ever married women (15-49) by their educational level and that of their current or previous husbands

Educational level of the husbands	Educational level of the women					Total	
	Illiterate	Read & write	Primary	Preparatory	Secondary+	(N)	Husband %
Illiterate	95.4	3.0	1.0	0.4	0.3	3350	29.7
Read & write	88.5	8.2	1.8	0.9	0.6	2663	23.6
Primary	77.5	10.7	7.6	3.0	1.3	1643	14.6
Preparatory	61.7	13.1	12.1	8.3	4.8	1089	9.6
Secondary+	48.7	15.9	12.9	9.5	12.9	2531	22.4
Total	873	1043	661	417	425	11276	100

* Do not know was excluded

The husbands tend to marry women of a lower educational level than theirs or of an equal one at the most, as it is clear from Table (4.2). For instance, about 95 percent of illiterate husbands have illiterate wives, and

about 96.7 percent of literate husbands have either illiterate wives or ones able to read and write only, and so on.

Comparing a husband's mean age to that of his wife's, one can easily see that the husband is usually older than the wife. Table 4.3 shows the wife's mean age compared with the husband's and the average of the age difference between the two in both urban and the rural areas. From the table, it is clear that the difference between the two ages is on average about 6.7 years and the results show that in very few cases (about 1.5 percent) the wife is older than the husband.

Table 4.3 Mean age of husband and wife for all currently married women by place of residence

Place of residence	Wife's mean age	Husband's mean age	Age difference average
Urban	31.7	38.8	7.1
Rural	30.9	37.5	6.6
Total	31.1	37.8	6.7

4.3 Exposure to Mass Media

The survey collected information on the exposure of women to both broadcast and printed media. This data are important because they provide some indication of the extent to which Yemeni women are regularly exposed to mass media.

The level of exposure of interviewed women to television, radio, and newspapers and magazines is shown in Table 4.4. Data in the table reflected a high rate of illiteracy among women. The percentage of those who read newspapers and magazines is obviously low: about 16 percent do that on a daily basis or at least once a week.

Considering place of residence, one fifth of women in urban areas indicated that they read newspapers daily compared with 4 percent in rural areas. However, this percentage rises with the increase of educational level from 27 percent among those who can read and write to 35 percent among those with elementary education, 38 percent among those with preparatory education and then to about 54 percent among those with secondary education or higher.

Data show that the percentage of women who are exposed to TV is higher than those who are exposed to any other mass media (radio or newspapers and magazines), especially in urban areas. Overall, 58 percent of women never watch TV. Considering place of residence, around 70 percent of women in rural areas reported that they never watch TV compared with 21 percent in urban area. There is a strong association between the level of

education and watching TV. Around 73 percent of women who completed at least secondary school say they watch TV daily compared with 30 percent of illiterate women. The same trend also applies listing to radio.

Table 4.4 Percent distribution of ever-married women aged 15-49 by frequency of watching TV, reading newspapers and listening to radio, according to educational level and place of residence

Characteristics	Place of residence		Educational level					Total
	Urban	Rural	Illiterate	Read & Write	Primary	Preparatory	Secondary+	
Read newspapers and magazines								
Daily	20.4	4.1	0.0	27.3	35.3	37.8	53.8	8.0
At least once a week	15.2	5.6	0.0	33.5	35.3	41.3	31.7	7.9
Less than once a week	8.0	3.0	0.0	22.7	18.2	16.5	11.0	4.2
Never	3.6	2.0	0.0	16.1	10.7	3.8	3.5	2.4
Does not read/ Illiterate	52.7	85.3	100.0	0.0	0.0	0.0	0.0	77.5
Watching TV								
Daily	56.9	18.8	22.0	45.1	47.9	53.9	51.7	28.0
At least once a week	18.4	7.8	8.2	15.7	19.3	15.8	21.0	10.3
Less than once a week	4.2	3.4	3.2	3.8	4.6	5.4	7.0	3.6
Never	20.5	70.0	66.5	35.5	28.2	24.8	20.3	58.1
Listening to radio								
Daily	30.2	23.5	21.9	38.0	34.8	36.1	33.6	25.1
At least once a week	17.6	15.5	15.1	19.0	18.1	16.4	22.3	16.0
Less than once a week	6.1	5.4	5.5	5.4	5.0	6.6	7.6	5.6
Never	45.9	55.7	57.5	37.5	42.1	40.6	36.4	53.3
Number of women	2713	8579	8747	1043	661	417	425	11292

4.4 Work Status

4.4.1. Current Employment Status

Respondents were asked a number of questions about their employment, including whether they were currently working and the kind of work they were doing. Respondents who are not currently working were asked whether they have the intention to work in the future or not, and who is taking the decision for this.

In general, data show that 19.3 percent of ever married women aged 15-49 years old are currently working. Percentage of working women either currently or ever worked is higher in rural areas than in urban areas. This is due to the fact that rural women do take a part in farm work.

Respondents who reported that they were not working at the time of the interview were asked whether they have the intention to work in the future or

not. Data in Table 4.5 indicate that 28 percent of the ever-married women had the intention to work in the future, while 68 percent do not intend to work in the future and only 3 percent are not sure whether they intend to work in the future or not. Place of residence did not show any significant differential among those who have the intention to work in the future or not. Highly educated women are much more likely to intend to work in the future. Data show that 53 percent of ever-married women who completed at least secondary school intend to work compared with 26.5 percent among illiterate women.

Table 4.5 Percent distribution of ever-married women who are not currently working by intention to work in the future and selected background characteristics

Characteristics	Intend to work in the future	Do not intend to work in the future	Don't know/ Unsure	Number=(100)
Place of residence				
Urban	29.5	67.9	2.6	2462
Rural	28.1	68.3	3.6	8339
Marital status				
Currently Married	27.6	69.1	3.4	10173
Widowed	36.7	59.3	4.0	297
Divorced	49.9	46.7	3.4	292
Separated	33.7	63.6	2.7	39
Educational Level				
Illiterate	26.5	70.0	3.5	8495
Read & write	30.9	65.2	3.9	994
Primary	33.3	64.4	2.4	628
Preparatory	38.4	59.3	2.3	382
Secondary+	53.1	44.7	2.2	302
Total	28.4	68.2	3.4	10801

Regarding who takes the decision for women to join the labor market, Table 4.6 shows that one third of the women declared that it is a joint decision, while, about 16 percent of the women reported that the decision is solely theirs, whereas about 44% reported that the decision is that of the husband only.

Table 4.6 Distribution of ever-married women who reported their intention to work in future or being unsure of that by the person controlling the decision to work and selected background characteristics

Characteristics	Respondent alone	Husband alone	Joint decision	Others	Unsure/ Don't know	Number
Place of residence						
Urban	17.8	41.2	34.6	3.7	2.7	790
Rural	15.0	44.7	31.4	4.1	4.8	2614
Educational Level						
Illiterate	16.5	45.6	29.8	3.3	4.7	2518
Read & Write	12.4	39.4	36.8	6.5	4.7	342
Primary	12.9	41.2	37.9	7.0	1.0	222
Preparatory	13.8	38.9	38.3	7.7	1.2	155
Secondary+	14.6	34.7	44.5	2.0	4.3	167
Age Group						
15-19	8.6	49.6	31.6	6.9	3.3	287
20-24	9.6	47.2	32.6	5.9	4.7	817
25-29	13.7	45.1	33.4	4.1	3.7	705
30-34	16.6	44.5	31.2	3.4	4.3	498
35-39	15.0	43.2	33.9	2.5	5.4	498
40-44	26.1	37.7	30.1	1.5	4.6	331
45-49	32.9	31.8	29.2	2.6	3.5	267
Total	15.6	43.9	32.2	4.0	4.3	3403

- Stability of Current Work and Mode of Payment:

Table 4.7 shows the distribution of currently working women by whether their work is permanent or seasonal and some selected characteristics. It is clear that more than 39 percent of the working women work on a permanent basis, whereas 39 percent work on a seasonal basis and 22 percent work once in a while. The percentage of those working on a permanent basis is higher in urban areas than in rural areas (77 percent and 33 percent respectively), while seasonal work is more prevalent in the rural areas (43 percent) compared with 10 percent in urban areas. It is also noticed that the percentage of those working on a permanent basis increases with a rise in the educational level, about 88 percent of the women with secondary education or higher work on a permanent basis, but this percentage falls to 36 percent among the illiterates.

Table 4.7 Percent distribution of currently working women by stability of work and selected background characteristics

Characteristics	Stability of work*			
	Permanent work	Seasonal only	Once in a while	Number=(100)
Place of residence				
Urban	76.6	9.5	13.7	289
Rural	32.9	43.3	23.6	1889
Educational Level				
Illiterate	35.5	41.1	23.1	1749
Can Read & Write	29.8	40.0	30.3	165
Primary	38.1	33.2	28.7	76
Preparatory	52.0	36.4	11.6	56
Secondary+	87.6	10.5	1.4	131
Total	38.7	38.8	22.3	2177

* Do not know was excluded

Table 4.8 presents the Percent distribution of currently working women by mode of payment and selected background characteristics. Data show that the percentage of working women who receive a cash wage reaches 20 percent, rising in urban areas to 86 percent against only 10 percent in rural ones. Furthermore, work for a cash payment rises with the educational level from 12 percent among illiterates to 93 percent among those with secondary education or higher. The percentage of those who work for no pay rises in rural areas to about 80 percent.

Table 4.8 Percent distribution of currently working women by mode of payment and selected background characteristics

	Mode of payment				
Characteristics	Cash only	Cash and in kind	Only in kind	Not paid	Number(=100)
Place of residence					
Urban	86.4	0.8	1.1	11.4	289
Rural	9.8	2.8	7.0	80.2	1889
Marital status					
Currently married	18.4	2.0	5.7	73.7	1945
Widowed	28.3	12.0	18.2	41.5	125
Divorced/ Separated	38.6	1.8	2.5	57.0	107
Educational Level					
Illiterate	11.5	2.9	6.8	78.6	1749
Read & Write	27.6	1.7	7.3	63.4	165
Primary	41.5	0.9	4.7	52.9	76
Preparatory	62.2	0.0	2.4	35.4	56
Secondary+	93.4	0.8	0.3	5.5	131
Total	20.0	2.6	6.2	71.1	2177

When women who were working for cash were asked about who controls their earnings 42.4 percent declared that she and her husband decided how to spend the cash, while 47.1 percent said it was her decision only with no significant differential between urban and rural areas.

Chapter 5

CHRONIC DISEASES, DISABILITY AND SMOKING

Information about Population Suffering from chronic diseases, smoking and disability is considered one of the goals of the Yemeni Family Health Survey, due to its importance in both the health and economic fields. Chronic diseases cause reduced productivity by those affected and may cause early death apart from the expenses over medicines, medical examinations and hospitalization. Also, studying and treating the disabilities and defining the handicapped and securing the various forms of social and psychological care, plus the suffering caused by the handicap for the disabled and those around him, are all some of the factors that necessitate developing programmes to fight chronic diseases and cure them. Moreover, smoking is a bad social behavior leading to health damages not only to the smokers themselves, but also to around (passive smoking). It makes it binding on smokers to spend large amounts on tobacco plus the amounts on the many diseases. It also leads to death and consequently a national loss in the patients' productivity.

5.1 Chronic Diseases

The Yemeni Family Health Survey included a question for respondents about the health status of each of the family members by name, and whether he/she suffered from any chronic disease and its type, and if it was diagnosed or not by a doctor.

Suffering from chronic diseases is numerous and differ by age and sex of the patient. For instance, arthritis and high blood pressure diseases mainly attack the elderly while other diseases can attack all people at different ages but still have a higher prevalence percentage among the old.

- Prevalence of Diseases:

The number of household members included and asked about whether they had a chronic disease was 89093. Table 5.1 indicates that 15 percent of them had one or more chronic diseases, 10.2 percent had one chronic disease, and around 4.2 percent had two chronic diseases. From Table 5.1, one can notice that the extent of population suffering from chronic disease in the urban area is 11.8 percent, against 16.1 percent in the rural areas, 13.1 percent among the males and 17.2 percent among the females.

Table 5.1 Percentages of population who suffering from chronic diseases (one disease or more) by place of residence and sex.

Sex	Urban			Rural			Total		
	Only One Disease	Tow Diseases	At least one Disease	Only One Disease	Tow Diseases	At least one Disease	Only One Disease	Tow Diseases	At least one Disease
Male	7.5	1.9	9.6	10.5	3.2	14.2	9.8	2.9	13.1
Female	9.0	4.5	14.1	11.0	5.9	18.1	10.6	5.6	17.2
Total	8.2	3.2	11.8	10.8	4.5	16.1	10.2	4.2	15.1

Figure 5.1 shows that suffering from chronic diseases are more common among female than male. Data indicate that the percentage of female who have one chronic disease is 17.2 compared with 13.1 among male. Also, chronic diseases are more common in rural areas than in urban areas.

Figure 5.1 Percentages of population who suffer from at least one chronic disease by place of residence and sex

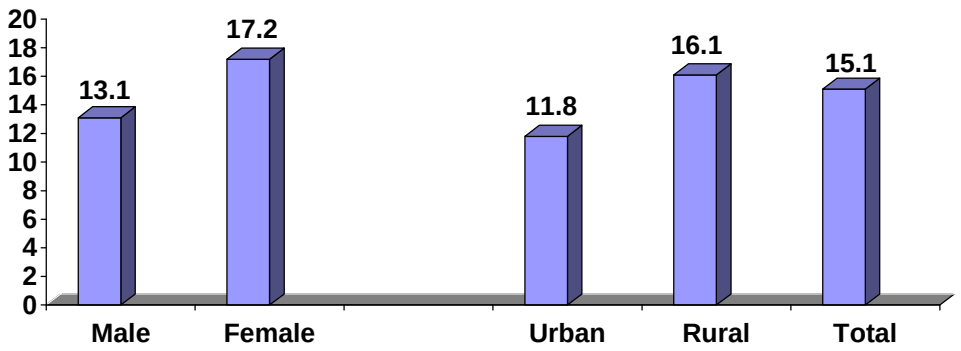


Table 5.2 shows that the suffering from one chronic disease by age groups increases as the family members get older due to the regressive changes at the joints and blood vessels beside gland disturbances. Suffering from one chronic disease is 4.6 percent in the 0-14 age group and rises to 25 percent in the 70 and over. Similarly it is noticed that the percent of patients suffering from at least one chronic disease rises with the increase in age, from 5.2 percent in the 0-14 age group to 42.5 percent in the 70 + age group. (See Table 5.2).

Table 5.2 Percentages of population suffering from chronic diseases by sex and age group (presence of one disease or at least one disease)

Age group*	Male		Female		Total		Number
	One Disease Only	At least one Disease	One Disease Only	At least one Disease	One Disease Only	At least one Disease	
0-14	5.0	5.6	4.2	4.7	4.6	5.2	40688
15-19	6.5	7.5	7.8	9.9	7.1	8.7	11562
20-29	9.6	11.9	14.1	22.8	11.9	17.6	13989
30-39	16.4	20.8	18.7	36.0	17.6	28.6	7877
40-49	19.3	29.1	20.9	41.8	20.1	35.1	5785
50-59	23.3	33.2	23.0	42.7	23.2	38.0	3704
60-69	22.5	36.5	23.7	39.7	23.1	38.0	3024
70 +	26.1	43.8	23.2	40.6	25.0	42.5	2434
Not stated	35.6	41.0	31.1	49.1	33.4	44.9	31
Total	9.8	13.1	10.6	17.2	10.2	15.1	89093

When studying the most prevalent chronic diseases, table 5.3 demonstrates that the most wide spread disease is the stomach diseases (2.6 percent), then kidney diseases (2.6 percent), followed by Joint diseases (rheumatism) (1.8 percent), hypertension (1.1 percent) and Anemia (1.2 percent). It is also observed that there is a decrease of stomach illness in urban areas (1.9) in comparison with the rural areas (3.1). Similarly, we notice the decrease of the diabetes patients in rural areas and the reason might be lack of diagnosis.

Table 5.3 Percentages of population suffering from the most common chronic diseases, by type of diseases, sex, and place of residence.

Type of disease	Place of residence		Sex		Total
	Urban	Rural	Male	Female	
Hypertension/High BP	1.6	1.0	0.8	1.5	1.1
Diabetes	1.1	0.4	0.7	0.5	0.6
Stomach Illness	1.9	3.1	1.8	3.9	2.9
Anemia	0.8	1.3	0.5	1.9	1.2
Heart diseases	0.7	0.5	0.6	0.5	0.5
Kidney diseases	1.7	2.9	2.4	2.9	2.6
Liver diseases	0.4	0.5	0.5	0.5	0.5
Joint diseases	1.7	1.9	1.0	2.7	1.8
Headache	0.2	0.6	0.3	0.7	0.5
Asthma	0.6	0.6	0.6	0.6	0.6

Table 5.4 Percentages of population suffering from the most common chronic diseases, by type of diseases, sex, and age group

Age group	Hypertension		Diabetes		Stomach Illness		Anemia		Kidney diseases		Joint diseases	
	M	F	M	F	M	F	M	F	M	F	M	F
0-14	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.4	0.2	0.2	0.1	0.2
15-19	0.1	0.1	0.0	0.0	0.7	1.9	0.5	0.8	0.7	2.2	0.5	1.0
20-29	0.2	1.1	0.1	0.1	1.8	6.3	0.6	3.2	3.2	5.2	0.4	2.4
30-39	0.5	3.1	0.7	0.7	4.5	10.8	0.4	5.4	6.1	8.2	0.6	5.2
40-49	2.1	5.1	2.4	1.9	6.2	11.0	0.6	5.0	8.5	7.4	1.7	8.7
50-59	3.9	7.0	4.0	2.3	6.0	10.6	0.6	2.7	6.6	5.5	3.7	4.9
60-69	5.1	7.0	4.4	3.2	5.7	7.1	0.4	1.3	5.7	3.5	5.8	10.4
70+	6.5	6.4	5.0	2.6	5.6	7.3	0.3	1.3	4.9	2.6	9.0	14.0
Total	0.8	1.5	0.7	0.5	1.8	3.9	0.5	1.8	2.4	2.9	1.0	2.7

Table 5.4 presents the percentage of prevalence of the most common chronic diseases, by type of diseases, sex, and age group. Data indicate that there is an association between the advance of age and increase of prevalence rate of some diseases. As it is shown in the table, the percent of patients who have high blood pressure, diabetes, or joint diseases increases with the advance in age for both males and females. As for stomach illness, anemia, and kidney diseases, they are common among males and females starting from the age 15 years. It is also observed that there is an increase in the prevalence of diseases among females in comparison with males because of their exposure to pregnancies and repeated procreation.

5.2 Disability

Disability constitutes a social problem either for the handicapped themselves or their family and consequently it calls for increasing efforts towards curbing it and integrating the handicapped in their society in order that they may show their potential talents and contribute to the economic and social development of their countries.

Raising the economic and social levels of any country and improving health services and social care and ensuring communication and transportation means in addition to health enlightenment and limiting cross-cousin marriages, improving the environmental conditions and eliminating bad social and nutritional customs, all of these factors contribute to reducing the number of disabilities and their negative impacts on the disabled themselves and as well as on their families and society.

During the Yemeni Family Health Survey, a study on the prevalence of handicaps was carried out. All interviewed household members were asked a question whether anyone of their members had a disability which was defined as "any physical or mental state or any health condition that has lasted or

expected to last for six months or more which limits one's ability to practice any daily life activity in a normal way compared to another person of the same age". In case of affirmation, a question was asked about type of disability, what caused it, how severely it affected the person and how old he/she was at the time he suffered it first, and whether the person had received any social or health care during the 12 months before the survey.

The percentage of those who suffered from no symptoms preventing them from carrying out their daily activities was 97 percent among all the subjects studied, while only 2.9 percent had problems that prevented them from practicing their daily activities, (1.1 percent severely and 1.8 percent moderately) with a difference between urban areas (1.9 percent) and rural areas (3.1 percent). Also, the handicaps were more prevalent among males (3.3 percent) than among females (2.3 percent) and this might be due to the fact that families tend to hide females' handicaps for social reasons (Table 5.5).

Table 5.5 Percent distribution of the survey sample population by disability status, sex and place of residence

Disability Status	Place of residence		Sex		Total
	Urban	Rural	Male	Females	
Severely disabled	0.8	1.1	1.2	0.9	1.1
Moderately disabled	1.1	2.0	2.1	1.4	1.8
No disability	98.0	96.7	96.5	97.4	97.0
Not Stated	0.1	0.2	0.2	0.2	0.2
Number =(100)	20677	68416	45208	43885	89093

Furthermore, the disability prevalence increases with the advance in age from 1.4 per thousand for those aged 0-14 rising gradually to 10.4 per thousand for the 60-69 age group and up to 21.5 per thousand for the 70 and above age group, and this is natural due to the regressive ailments that appear with age such as those affecting the hearing, the vision and the kinetic system.

Figure 5.2 Percentages of disabled population by sex and place of residence

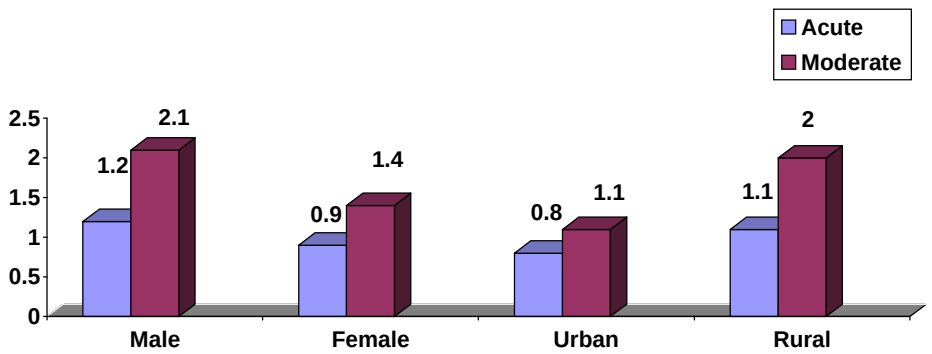


Table 5.6 Percentage (per thousand) of disabled population by age group and sex*

Age group	Males	Females	Total
0-14	1.6	1.2	1.4
15-19	2.2	1.4	1.8
20-29	2.3	1.7	1.9
30-39	3.2	1.9	2.6
40-49	5.0	2.8	3.9
50-59	6.3	3.9	5.1
60-69	10.5	10.3	10.4
70 +	21.6	21.2	21.5
Total	3.3	2.3	2.9

*N.S is excluded

The survey shows that vision handicap is the most common one: (36.2 percent of all the disabled) against 29.8 percent kinetic handicap (limitation in movement), and 28.2 percent who are unable to hear. The handicap related to understanding and communication reached 14.8 percent while the percent of handicaps that are unable to care for themselves reached 6.2 percent as shown in Table 5.7 with little variation between urban and rural.

Table 5.7 Percentages of the disabled population by type of handicap, place of residence and sex

Type of handicap	Place of residence		Total
	Urban	Rural	
Vision	33.7	36.7	36.2
Hearing	21.9	29.4	28.2
Understanding and communication	15.8	14.6	14.8
Movement	34.5	28.9	29.8
Personal care	5.4	6.3	6.2
Socializing with people	13.6	10.7	11.1
Total	395	2121	2516

Table 5.8 Percentages of the disabled population by type of handicap, sex*

	Vision		Hearing		Understanding and communication		Movement		Personal care		Socializing with people	
	M	F	M	F	M	F	M	F	M	F	M	F
Total	33.4	40.2	25.3	32.4	14.6	15.1	33.2	24.9	6.0	6.5	11.9	10.0

*N.S is excluded

Data in Table 5.8 show that vision handicap is most common among females than males (40.2 percent and 33.4 percent respectively). The same applies to the inability to hear, understanding and communication, and Personal care**,** while kinetic handicap (limitation in movement) and socializing with people are more common among males than females.

Table 5.9 shows that, natural aging factors have topple the percentage of the cause of handicaps (25.5 percent), followed by congenital and hereditary (20.8 percent), then diseases (21.0 percent), while injuries and accidents account for 16.5 percent of the causes. As for causes related to infant birth trauma they constituted 1.8 percent only.

Table 5.9 Percent distribution of the disabled people by cause of the handicap, place of residence and sex

Causes	Place of residence		Sex		Total
	Urban	Rural	Male	Female	
Congenital or Hereditary	20.6	20.8	19.9	22.5	20.8
Infant birth trauma	2.3	1.7	1.8	1.8	1.8
Diseases	21.6	21.0	19.3	23.6	21.0
Psychological or psychical abuse	1.3	1.1	1.4	0.8	1.2
Natural aging process	18.8	26.7	22.1	30.4	25.5
Accidents or injuries	18.5	16.1	21.6	9.0	16.5
Envy	4.7	2.8	3.7	2.2	3.1
Other Causes/ Unknown	12.1	9.9	10.5	9.7	10.2
Total	100	100	100	100	100

Regarding the age when the handicap started, Table 5.10 shows that 23 percent of the handicapped had it since birth, while for 12.9 percent of the cases, the handicap started before they reached their 5th.birthday and for 37 percent of the cases, the handicap started before they reached their 20th birthday. These percentages slightly rise in rural areas and among males. The table also shows that 28 percent of the handicapped received social, health, or financial care during the 12 months before the survey. These percentages rise in urban areas.

Table 5.10 Percent distribution of the disabled people according to the age when the handicap started and whether they received any care during the previous 12 months, sex and place of the residence.

Background Characteristics	Place of residence		Sex		Total
	Urban	Rural	Male	Female	
Age when handicap started					
Since Birth	22.4	22.7	21.9	23.7	22.6
0-4	9.2	8.0	7.8	8.6	8.2
5-9	7.2	5.1	4.9	6.2	5.5
10-19	10.0	7.2	8.4	6.5	7.7
20 years+	34.9	37.1	38.3	34.4	36.7
Don't known /NS	16.5	20.0	18.6	20.4	19.3
Received medical or social care					
Yes	37.3	26.3	28.2	27.1	27.7
No	65.7	73.7	72.3	72.8	72.5
Don't known /NS	2.2	1.5	1.6	1.7	1.6
Number	395	2121	1489	1027	2516

5.3 Smoking:

Tobacco contains a toxic material harming different systems of the body and contributes in killing more than four million persons around the world and more than two thirds of these deaths occur in the developing countries. It is predicted to increase to ten million deaths in the year 2020 and more than 70% of them in the developing countries. The majority of these deaths are due to cancer and chronic obstructive pneumonosis and vascular and cardiac diseases, especially among males aged 35 years or more. The average of the international prevalence of smoking is 47% for males and 12% for females.

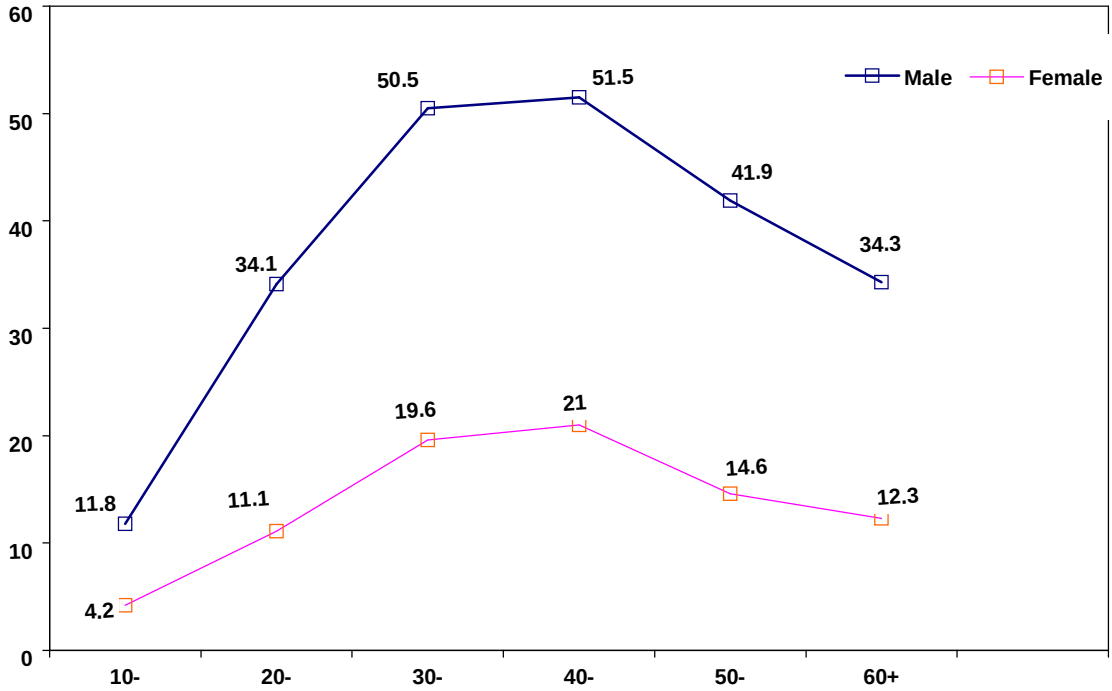
As shown in Table 5.11, smokers accounted for 19 percent while those who ceased smoking (previous smokers) accounted for 4.2 percent. Variation according to sex was very obvious; the percentage of current male smokers is 27 compared with 10 percent among females. Results indicate that there are slight variations between urban and rural areas.

Table 5.11 Percent distribution of population aged 10 years and older by smoking status, place of residence and sex

Smoking status	Place of residence		Sex		Total
	Urban	Rural	Male	Female	
Current smokers	19.4	18.8	27.4	10.3	18.9
Previous smokers	3.5	4.4	5.4	3.0	4.2
Non smokers	76.5	76.2	66.6	86.2	76.3
Don’t know/NS	0.6	0.6	0.6	0.5	0.5
Number	15030	46568	31094	30504	61598

According to the age groups, the prevalence of smoking increases gradually with age, then starting to decrease after age 45 as shown in figure 5.3.

Figure 5.3 Percentages of smokers according to the age and sex



5.4 Chewing El-Kat

The survey question was extended to some smoking customs related to chewing and storing El-Kat and its frequencies; daily, weekly or sometimes. This is considered as one of the customs that has a negative economic and health effect.

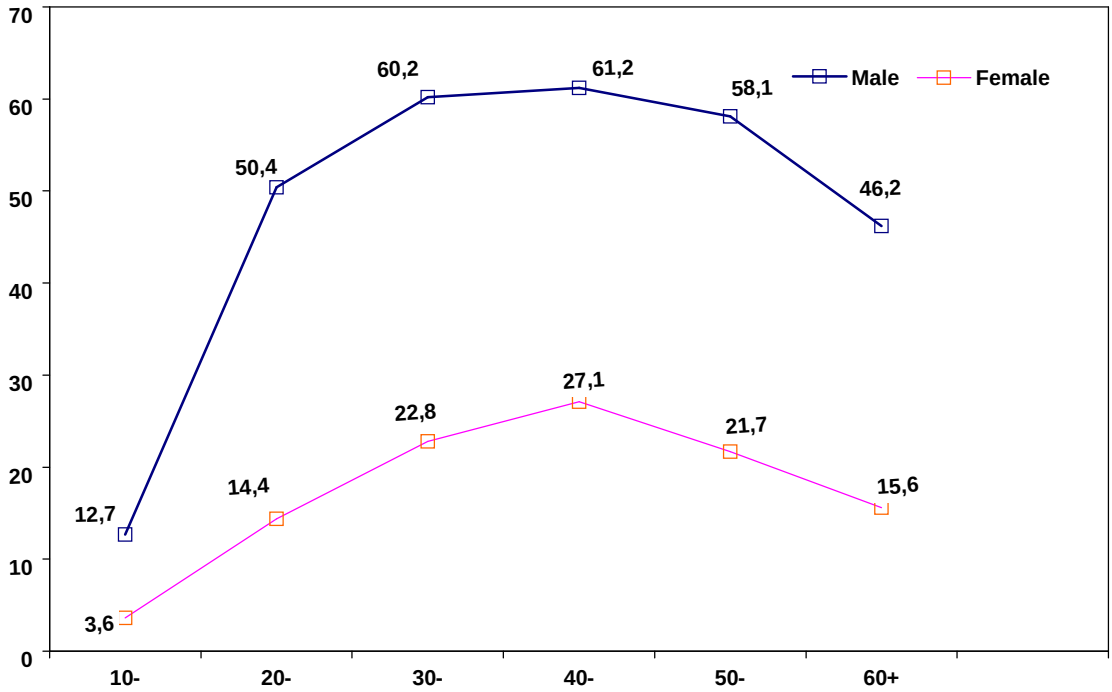
Table 5.12 Percentages of population (10 years +) chewing (storing) El-Kat and its frequencies by place of residence and sex

Chewing El-Kat	Place of residence		Sex		Total
	Urban	Rural	Male	Female	
Daily	21.1	27.1	38.0	13.1	25.7
Weekly	5.9	3.1	5.0	2.6	3.8
Sometimes	10.3	12.5	12.6	11.3	12.0
Previous use	2.1	2.5	2.5	2.1	2.3
Never use	60.0	54.3	41.4	70.3	55.7
Don't know/NS	0.6	0.5	0.5	0.5	0.5
Number	15030	46568	31094	30504	61598

Table 5.12 indicates that overall, 41.5 percent of the population age 10 years and older are using El-Kat in addition to 2.3 percent who reported that they stopped using it. More than 25 percent of El-Kat users chew it daily and this percent increases in rural areas compared with urban areas.

Figure 5.4 presents the age pattern of daily use of El-Kat by sex and age. It is noted that chewing El-Kat increases gradually with age till age group 40-49 then starts to decrease for both sexes.

Figure 5.4 Percentages of El-Kat daily use according to the age and sex



5.5 El-Shama (Drugs)

Use of El-Shama has negative health, social and economical effects, because it leads to a kind of addiction with its effect on the individual and the society.

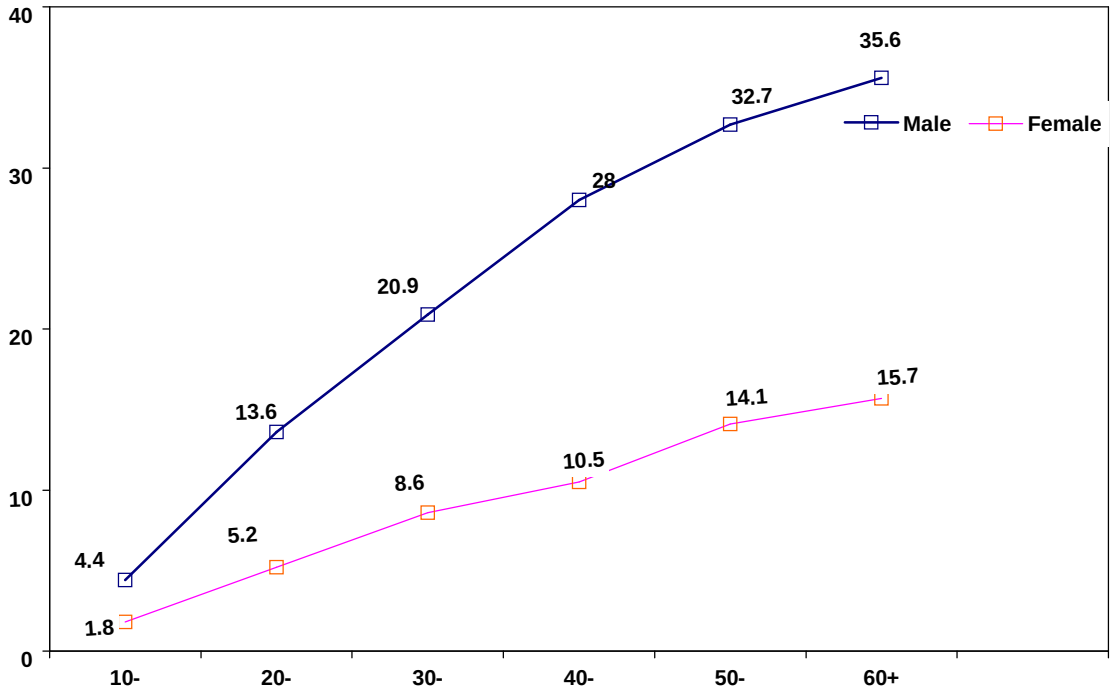
Table 5.13 indicates that overall, 11 percent of the population age 10 and older are using of El-Shama and this percent increases in rural areas compared with urban areas and among females compared with males.

Table 5.13 Percentages of population according to use of El-Shama by place of residence and sex

El-Shama	Place of residence		Sex		Total
	Urban	Rural	Male	Female	
Currently using	5.2	12.5	15.1	6.2	10.7
Previous use	0.5	0.8	1.0	0.5	0.8
Never use	93.7	86.1	83.3	92.7	88.0
Don't know/NS	0.6	0.6	0.6	0.5	0.6
Number	15030	46568	31094	30504	61598

Figure 5.5 presents the age pattern for current use of El-Shama by sex and age, which indicates that percentages of current use increase as the age increases. This is true for both sexes.

Figure 5.5 Percentages of current use of El-Shama according to the age and sex



Chapter 6

MARRIAGE PATTERNS

Marriage is viewed as interrelated social and demographic processes and as a sequential phase in the life cycle of women for having a family and giving births.

This chapter is confined to an analysis of nuptiality data collected in the survey. It should be recalled that information is on:

- Marital status
- Age at marriage
- Consanguineous marriages
- Polygamy
- Stability of marriage

6.1 Marital Status

In general, Table 6.1 shows that the percentage of males aged 15 and above who are currently married is 57 percent compared with 60 percent among females. Data also show that the percent of widowed females is almost three times that of widowed males (7.9 percent against 2.6 percent respectively).

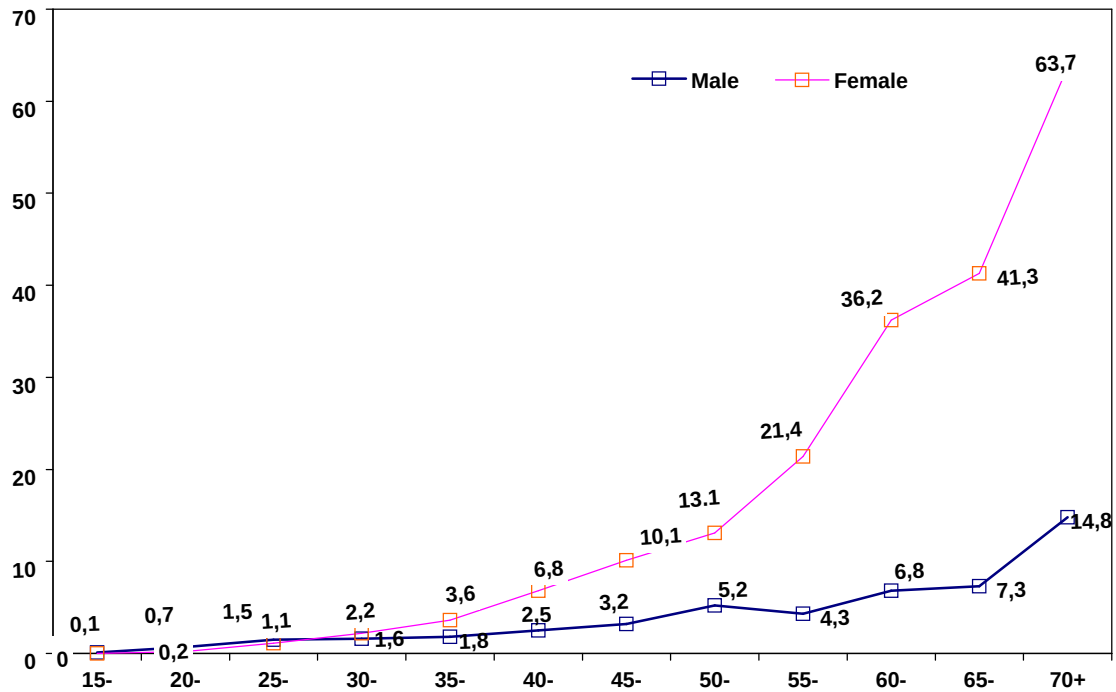
Table 6.1 looks in more detail at the variation in divorce levels between males and females by marital status and age. The percentage of divorced female is almost twice the percentage of divorced male (2.0 percent and 0.8 percent respectively). As for those who never married, data presented in Table 6.1 indicate that the percentage of those never married among males is higher than that among females (40 percent and 30 percent respectively). The survey data show that the percentage of never married adults gradually decreases with age, for both males and females.

Looking at the percentage of widowed females with age, it is clear that the percentage of widowed females is gradually increases with age especially among those who are 60 years old and above. This difference is due to high life expectancy for females compared with males. Also, husbands' are always older than their wives, and that the chance of remarrying among males is higher compared with females (figure 6.1).

Table 6.1 Distribution of population aged 15 and more by marital status, age and sex

Age group	Males					Total	
	Never Married	Married	Widowed	Divorced	N.S	%	Number
15-19	96.8	2.8	0.1	0.2	0.2	100.0	5763
20-24	70.2	28.4	0.7	0.4	0.2	100.0	4122
25-29	29.3	68.1	1.5	1.1	0.1	100.0	2643
30-34	10.0	87.0	1.6	1.4	0.1	100.0	2129
35-39	5.4	91.9	1.8	0.9	0.0	100.0	1717
40-44	1.9	94.3	2.5	1.2	0.0	100.0	1707
45-49	1.4	94.4	3.2	1.0	0.0	100.0	1308
50-54	1.3	91.9	5.2	1.7	0.0	100.0	1090
55-59	0.4	94.3	4.3	1.0	0.0	100.0	736
60-64	0.6	91.3	6.8	1.3	0.0	100.0	994
65-69	0.5	90.8	7.3	1.1	0.3	100.0	613
70+	0.2	83.6	14.8	1.0	0.4	100.0	1446
Total	39.7	56.8	2.6	0.8	0.1	100.0	24277
Females							
15-19	82.6	16.6	0.0	0.6	0.2	100.0	5799
20-24	41.0	56.7	0.2	2.1	0.1	100.0	4267
25-29	15.2	81.1	1.1	2.6	0.0	100.0	2957
30-34	6.2	88.9	2.2	2.7	0.0	100.0	1990
35-39	2.7	91.2	3.6	2.5	0.0	100.0	2042
40-44	2.1	88.5	6.8	2.6	0.0	100.0	1561
45-49	0.5	87.0	10.1	2.4	0.0	100.0	1209
50-54	1.5	83.1	13.1	2.3	0.0	100.0	700
55-59	0.8	74.8	21.4	2.8	0.1	100.0	1178
60-64	1.0	59.5	36.2	2.9	0.4	100.0	970
65-69	0.0	57.5	41.3	1.2	0.0	100.0	446
70+	0.8	31.7	63.7	3.3	0.6	100.0	988
Total	30.0	60.0	7.9	2.0	0.1	100.0	24110

Figure 6.1 Percentages of Widowed population aged 15 and above by sex and age groups



6.2 Age at Marriage

The singulate mean age at marriage (SMAM) of those who marry before age 50 is considered one of the standards that allow for the study of timing of first marriage in recent times. The survey data show a rise in the SMAM among both males and females; for males it is 25.5 and for females it is 22.3 years.

Table 6.2 present the singulate mean age at first marriage (SMAM) for both males and females by place of residence and educational level. It is clear from the table that the mean age at first marriage is higher in urban areas than rural areas for both males and females; 26.9 years for males and 23.5 years for females in urban areas compared with 25 years for males and 21.9 years for females in rural areas. Also, the mean age at first marriage increases with the increase of the educational level for females; from 21.4 years for illiterate females to 24.9 for those with a secondary certificate and above. As for male, the mean age at first marriage is 26 years for illiterate males and 24.2 years for those with a primary certificate.

Table 6.2 The singulate mean age at first marriage (SMAM) for both males and females by place of residence & educational level

Sex	Male	Female
Place of residence		
Urban	26.9	23.5
Rural	25.0	21.9
Educational level		
Illiterate	26.0	21.4
Read & write	25.0	22.4
Primary	24.2	20.2
Preparatory	25.8	23.4
Secondary+	25.3	24.9
Total	25.5	22.3

An examination of the changes in age at first marriage over successive cohorts among currently and ever married women, the percent of women who are get married before age 18 years and before age 20 years.

Table 6.3 shows both the percentage of women who ever married by selected exact ages and the median age at marriage, according to current age. The results document a substantial increase in age at first marriage among younger cohorts. Overall, the median age at first marriage among women 25-29 is 17.9 years, around two years higher than the median age at first marriage among women age 45-49 (15.6 years). Accompanying the overall trend to later marriage is a marked decline in the proportion of women marrying at very young ages. The percentage of women married by the exact age of 18 has dropped from 72.9 percent among women 45-49 to 36.9 percent among women age 20-24. The percent of women married by the exact age of

20 has fallen from 69 percent among women 45-49 to 50.9 percent among women 20-24.

Table 6.3 Percentages of ever married or ever married women (20-49) who were first married by exact age 18, 20 by age.

Age groups	% of women who were first married by exact age		Percentage never married	Number	Median age at marriage
	18	20			
20-24	36.9	50.9	39.7	3703	19.9
25-29	51.2	67.1	15.1	2599	17.9
30-34	64.4	75.4	6.1	1800	16.4
35-39	71.3	72.2	2.7	1859	15.8
40-44	70.2	82.5	2.2	1422	15.8
45-49	72.9	85.3	0.5	1103	15.6
Total 20-24	55.9	69.0	16.5	12486	17.2

6.3 Consanguineous Marriage

Marriages between relatives (consanguineous marriages) are common in Yemen. Table 6.4 presents the distribution of ever-married women by their relationship to their spouse according to educational status and place of residence. The survey results show that 31 percent of those women are first degree cousins to their spouses and 17 percent have other relationships with them, while 57 percent are not related in any way to their spouses.

Consanguineous marriages are common in urban and rural areas; 48 percent of rural women say that their current or most recent husband was relative compared with 45 percent in urban areas.

As for the educational level differentials, Table 6.4 shows that there is a higher percentage among illiterate women than among the more educated women in which the women are blood-related to their husbands. This percentage was 31 among the illiterates, 27.5 percent among the elementary certificate holders and to 25.4 percent among those of secondary education and above.

Table 6.4 Percent distribution of the ever-married women, by their relationship to their spouse, according to place of residence and educational level*

Background characteristics	Maternal or paternal Cousin	Another relationship	No relationship	Number of women
Place of residence				
Urban	27.2	18.1	54.6	2713
Rural	31.5	16.9	51.4	8579
Educational level				
Illiterate	30.8	16.6	52.4	8747
Read & write	30.9	19.2	49.8	1043
Primary	27.5	22.0	50.5	661
Preparatory	33.1	18.1	48.8	417
Secondary+	25.4	15.4	59.0	425
Total	30.5	17.2	57.2	11292*

*N.S is excluded

6.4 Polygamy:

The survey results show that 6.3 percent of wives are married to polygamous husbands. Results also show that younger women are less likely to have polygamous husbands; 8 percent of wives, aged 45-49, are married to polygamous husbands, whereas this percentage drops to 5 among wives aged 20-24. It is also clear that the percentage of polygamy is almost the same in rural and urban areas: 7 percent in urban against 6 percent in rural areas. It is also apparent that these percentages decrease as the wife's educational level rises: from 6.6 percent among the illiterate to 4 percent among the holders of secondary certificate and above. (See Table 6.5).

Table 6.5 Percentages of women married to polygamous husbands by age groups, place of residence and educational level

Background characteristics	Percentages of women married to polygamous husbands	Total number of women
Age groups		
15-19	3.5	835
20-24	5.0	2143
25-29	6.3	2111
30-34	7.1	1605
35-39	7.2	1701
40-44	6.5	1265
45-49	8.0	955
Place of residence		
Urban	6.9	2510
Rural	6.1	8105
Educational level		
Illiterate	6.6	8226
Read & write	5.9	983
Primary	5.8	616
Preparatory	2.4	391
Secondary+	4.0	401
Total	6.3	10616

6.5 Stability of Marriage:

Stability of marriage is very important and is indicative of how cohesive and self-supportive a family is, which is positively reflected onto society. The survey results show that marriage is stable in Yemen. Table 6.6 show that the percentage of ever-married women married only once was 89 percent. Looking at the variations of marriage stability by residence, data indicated that marriage is more stable in rural areas compared with urban areas (99 percent and 90 percent respectively). The same table shows that the marriage of 3 percent of ever-married women had their marriages dissolved, and that 66 percent of those women re-married.

Looking at the variations of marriage stability, we notice that the percentage of marriage dissolution is around 8 percent for 25-year-olds, and reaches the maximum, (25 percent), for the 45-49 age groups. The percentage of dissolution is a bit higher in urban areas than in the rural areas (15.3 percent against 14 percent respectively), while it slowly decreases as the educational level rises from 15 percent among the illiterate women to 7 percent among those holding a secondary certificate or higher.

Table 6.6 Percentages of ever-married women (15-49) who married only once and women whose first marriage was dissolved and women who remarried among those whose marriage was dissolved by age, place of residence, and educational level

Background characteristics	Percentages of women married only once	Percentages of women whose first marriage was dissolved	Percentages of women who remarried among those whose marriage was dissolved	Percentages of women who remarried married
Age-group				
15-19	97.0	4.9	32.9	93.1
20-24	93.8	7.7	58.9	90.1
25-29	91.4	10.7	67.3	87.5
30-34	87.9	14.2	71.4	83.7
35-39	85.6	17.5	72.5	80.6
40-44	83.0	22.3	68.6	75.6
45-49	82.9	25.0	59.5	72.5
Place of residence				
Urban	89.8	15.3	60.4	83.5
Rural	98.7	13.7	68.0	84.0
Educational level				
Illiterate	87.4	15.3	69.3	82.5
Read & write	91.9	11.3	55.8	86.4
Primary	94.7	10.8	42.3	88.2
Preparatory	96.6	8.8	36.5	90.9
Secondary+	97.3	6.9	29.1	91.8
Total	89.0	14.1	66.0	83.8

Chapter 7

FERTILITY PATTERNS

This chapter deals with a number of reproductive indicators that include levels, patterns, and trends of fertility, and the age at which a woman begins her reproductive life. The availability of such data is considered necessary for following up the development plans and assessment of the impact of demographic policies and programmes in Yemen. Such data is also considered important due to its interrelation with maternal and child mortality and health.

The YFHS collected a number of questions including the number of sons and daughters a woman had, whether they lived with her or not, and the number who have died, if any, and their age at death.

7.1 Currently Pregnant Women

The percentage of pregnant women at the time of the survey indicates the level of fertility expected within the coming months, but some errors are likely to occur due to the fact that a woman might not be sure of her pregnancy, especially in the first three months.

Data in Table 7.1 indicate that 15.8 percent of the women currently married were pregnant at the time of the survey. This percentage is higher in rural areas (16.6 percent) than in urban areas (13.3 percent) and gradually declines as the woman becomes old, from 24.0 percent at age 15-19 to 19.2 percent at age 25-29, to 11.6 percent at age 35-39, then to 6.7 percent for 40-44 and 4.0 percent for 45-49. The percentage of pregnant women at early ages (less than 20) at which the health of the mother and the baby is at risk is 24.0 percent.

Table 7.1 Percentages of married women pregnant at the time of the survey by age group and place of residence

Age Groups	Urban	Rural	Total
15-19	25.6	23.6	24.0
20-24	22.0	21.6	21.7
25-29	17.4	19.7	19.2
30-34	15.6	18.7	18.0
35-39	7.2	13.2	11.6
40-44	1.7	8.3	6.7
45-49	0.0	5.0	4.0
Total	13.3	16.6	15.8

7.2 Levels and differentials of Current Fertility

The total fertility rates and the age-specific fertility rates were calculated for the five-year period before the survey since calculating such rates is useful for understanding the age patterns of fertility. Despite the fact that the reproductive data were collected from only the ever-married women, the age-specific fertility rates also included the data of never married women using their age composition from the household health questionnaire assuming that they never had children.

The total fertility rate (TFR) is defined as the average number of children a woman produces up to the end of her reproductive life if reproduction occurs according to the age-specific fertility rates observed. The total fertility rate is calculated between ages15-49.

During the five years before the survey, that total fertility rate was 6.2 births per woman. The age-specific fertility rate was highest among women aged 25-29, and slightly dropped for the next category before sharply rising from age group 35-39 (see Table 7.2). The findings of the survey, however, show that there are substantial differences between the urban TFR and rural TFR (6.7 births per woman against 4.5).

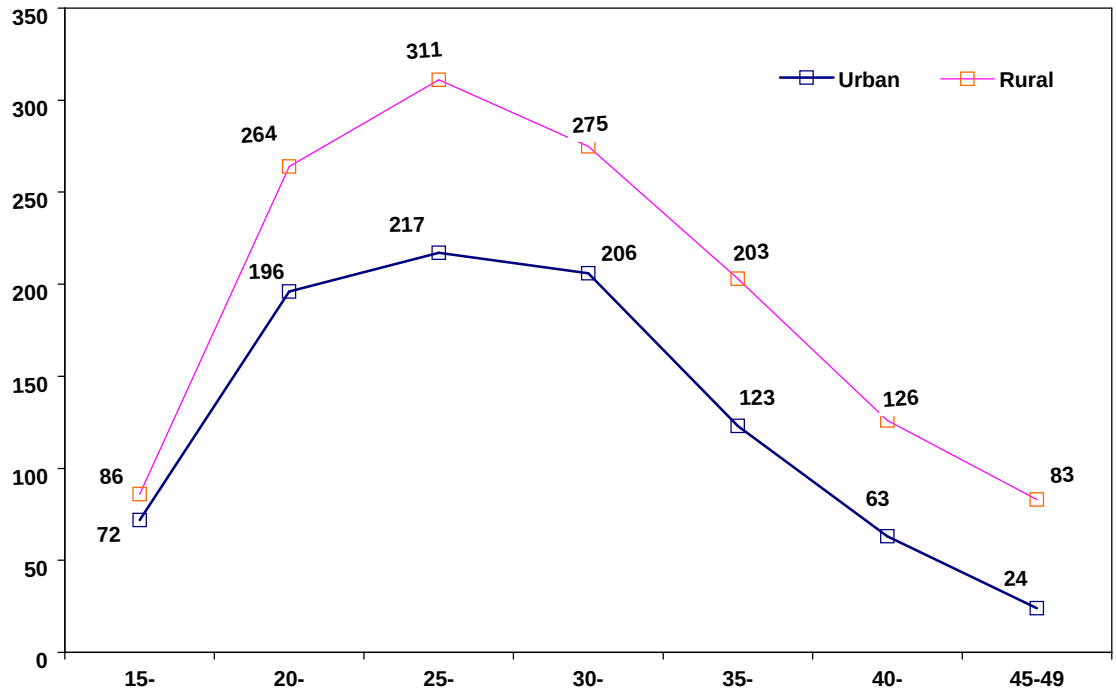
Table 7.2 shows a reverse relationship between a woman's educational level and her fertility during the five years before the survey. The total fertility rate decreased as the educational level increased from 6.7 births for an illiterate woman to 4.3 for one who completed her preparatory education, and 2.8 for who completed at least her secondary education, meaning that the difference between the highest and lowest educational level of a woman is 3.9 births.

Table 7.2 Age-specific fertility rates (per 1,000 women) and total fertility rate (per woman) during the five years period before the survey, by place of residence and educational level

Age groups	Place of residence		Educational status					Total
	Urban	Rural	Illiterate	Read & write	Primary	Preparatory	Secondary+	
15-19	72	86	103	72	80	36	31	83
20-24	196	264	278	242	238	190	100	245
25-29	217	311	309	251	227	259	156	286
30-34	206	275	271	216	169	182	154	255
35-39	123	203	191	146	138	102	81	182
40-44	63	126	113	94	128	98	35	111
45-49	24	83	72	18	**	**	**	69
TFR	4.5	6.7	6.7	5.2	4.9	4.3	2.8	6.2

On the other hand, the age-specific fertility rate reached its highest in the 25-29 age group among women of all educational levels then it began to decrease as the age rose and that decrease was sharp starting from age group 35-39. (See figures 7.1)

Figure 7.1 Age-specific fertility rates by place of residence



7.3 Fertility Trends

The data collected on the reproductive history of women enabled us to estimate the trends of fertility during the 15 years before the survey.

Table 7.3 shows a decrease in the total fertility rate during period of 10-14 years before the survey from 8 births to 7.5 during period of 5-9 years before the survey then dropped to 6.2 during the five years before the survey. As shown in the table, a relatively moderate decrease on the level of fertility during the nineties for both urban and rural areas. The table indicates that women's fertility in urban areas dropped from 6.8 births during period of 10-14 years before the survey to 5.6 births and 4.5 births during period of 10-14 years and five years before the survey respectively. In the rural area, the women's fertility dropped from 8.4 births to 8.2 births and 6.7 births for the same period of time respectively.

Table 7.3 Trends of total fertility rates of three 5-year periods
Prior to the survey by place of residence and educational level of women

Place of residence	Years before the survey		
	0-4	5-9	10-14
Urban	4.5	5.6	6.8
Rural	6.7	8.2	8.4
Total	6.2	7.5	8.0

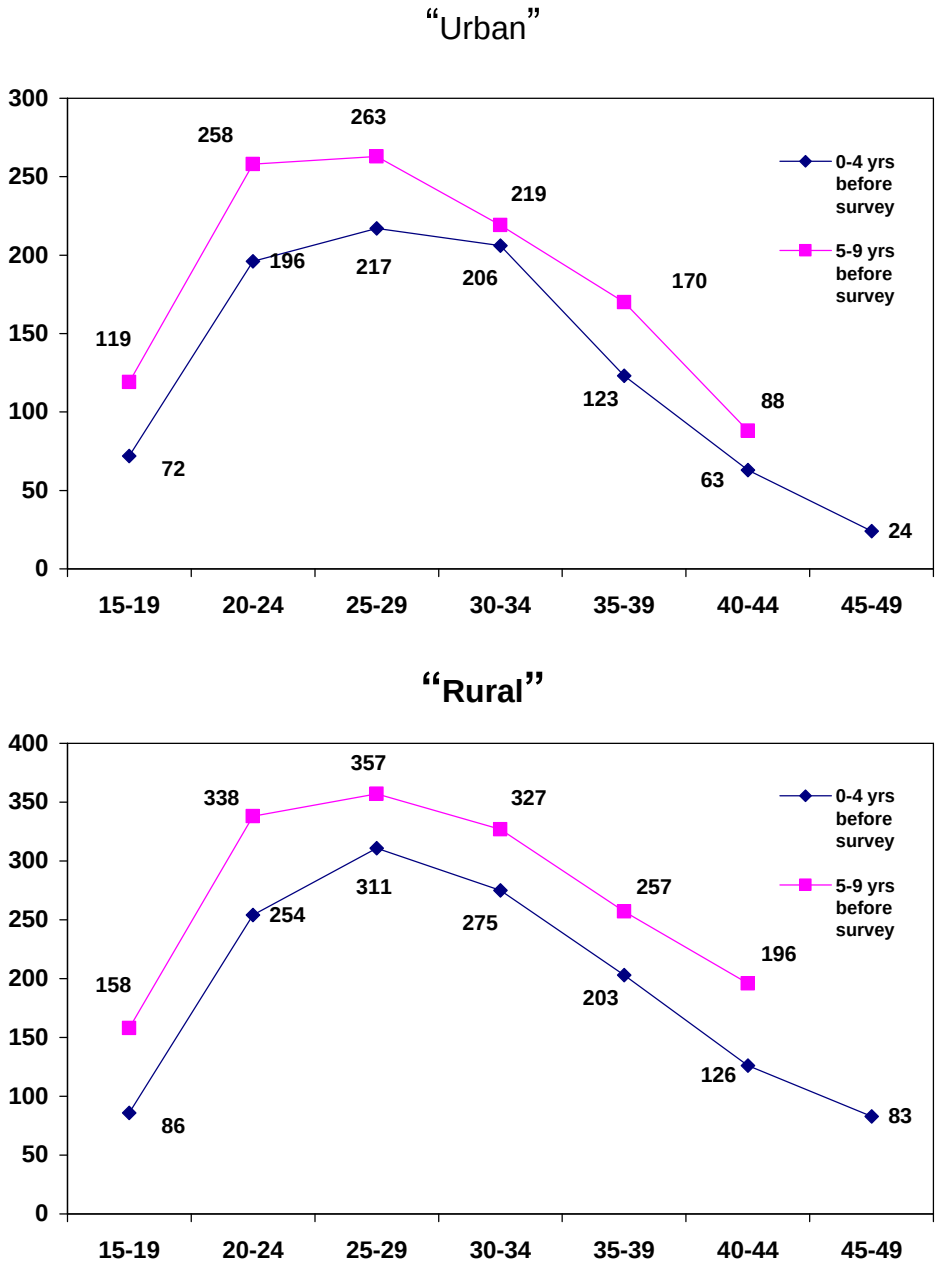
Tables 7.4 and Figure 7.2 show that the age-specific fertility rates (ASFRs) significantly dropped from the levels prevailing in the past. The decline in fertility was consistent among all age groups by place of residence. The data show that the decline in the ASFRs was much more observed in rural areas compared to urban areas. Although fertility decline was observed in all age groups of women, the significant decline was mainly among women in the age group 20-24 both in urban and rural areas, which might be associated with the increase in the age at marriage and increased utilization of family planning methods.

Regarding variation in the level of fertility by the educational status of women, Table 7.5 shows that the decline in fertility level is observed among all age groups of women of different educational levels and that the degree of decrease for the illiterate women was relatively the highest especially among women in the 20-24 and 25-29 years of age during the last ten years (1991-2000) compared to what it was in the 1986-1990 period.

Table 7.4 Trends of age-specific fertility rates per 1000 women, for five-year periods before the survey, by place of residence

Woman's Age	Urban		Rural		Total	
	0-4	5-9	0-4	5-9	0-4	5-9
15 – 19	72	119	86	158	83	147
20 - 24	196	258	254	338	245	317
25 - 29	217	263	311	357	286	331
30 - 34	206	219	275	327	255	299
35 - 39	123	170	203	257	182	235
40 - 44	63	88	126	196	111	170
45 - 49	24	--	83	--	69	--
TFR (15-49)	4.5	5.9	6.7	8.2	6.2	7.5

Figure 7.2 Age-specific fertility rates during two five-year periods before the survey by age groups and place of residence



7.4 Cumulative and Completed Fertility

Cumulative fertility is the number of live births a woman had given birth to up to the time of the survey, and thus it does not represent the completed fertility behavior during her fertile life particularly for younger women whose fertile life is not completed yet.

Table 7.5 shows a clear tendency towards high fertility. Through around 11.0 percent out of all the women did not have any children, 21.2 percent of them had 1-2 children, 20.3 percent had 3-4, 30.0 percent 5-8 and 17.5 percent 9 or more. Studying the impact of women's age at first marriage and duration of married life on the average number of live births helps form a better understanding of fertility levels. Figure 7.3 show the mean numbers of live births by mother's age.

Table 7.5 Percent distribution of married or ever-married women by number of live births and mean number of live births

No. of Live Births	Age groups	
	15-49	45-49
0	11.0	1.9
1-2	21.2	3.4
3-4	20.3	7.5
5-6	16.5	14.1
7-8	13.5	20.1
9+	17.5	52.9
Mean No. of live births	4.8	8.5
No of women	11292	1097

Figure 7.3 Mean numbers of live births by mother's age

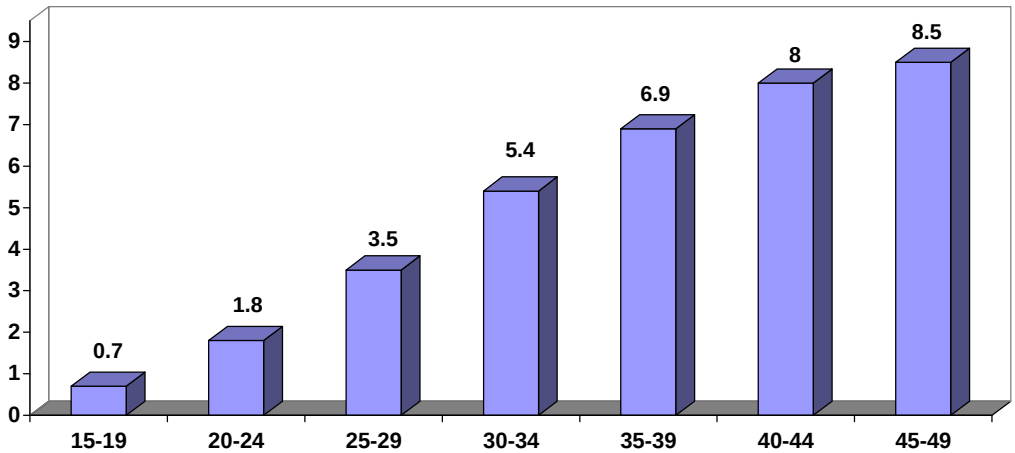


Table 7.6 shows that the mean number of live births increases with the advance in age. Findings indicate that it is less than one birth for women aged15-19, then gradually rises to 3.5 children for women aged 25-29, 5.4 for women aged 30-34, 6.9 for women aged 35-39 and 8.5 for women at 45-49

years of age. The same table shows that the percentage of women who never had children decreased sharply from 51.5 percent for women at ages 15-19 years to 21.0 percent for women aged 20-24 and that less than 3 percent of women aged 40 years and above never had a child.

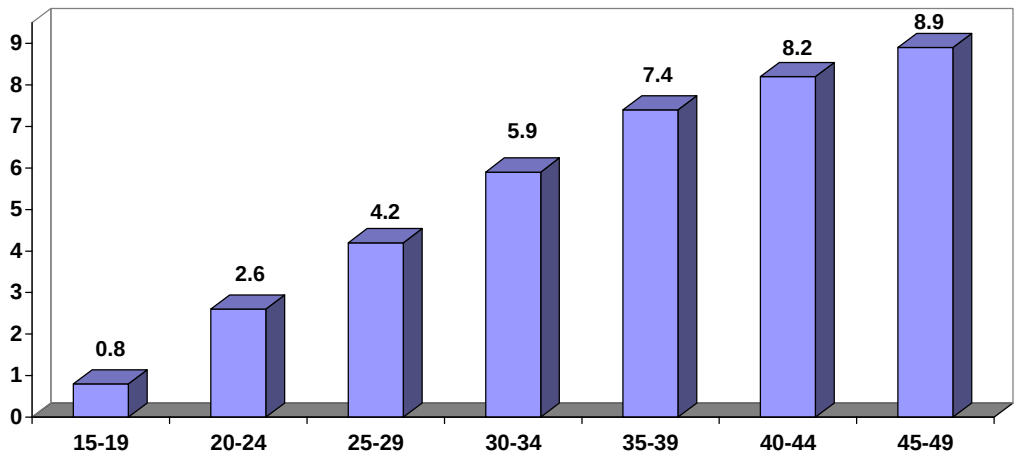
Data also show that 3.3 percent of women aged 15-19, and 28.6 percent of women aged 20-24 had three or more children, whereas the percentage of 28.3 percent of women aged 25-29 had five or more births and 32.8 percent of women aged 30-34 had seven births or more. It is noticed that the percentage of women who had nine live births and more started to rise greatly from age 30 and more to reach 10.8 percent within the 30-34 group, 30.7 within 35-39 age group, 46.1 percent within the 40-44 age group, and 52.9 percent within the 45-49 age group.

Taking into consideration the duration since first marriage, data show the same trend which is shown in Figure 7.4.

Table 7.6 Percent distribution of married or ever-married women (15-49) by number of live births and current age

Age groups	Number of live births						Mean No. of live births	Number of women
	0	1-2	3-4	5-6	7-8	9+		
15 – 19	51.5	45.1	3.1	0.2	0.0	0.0	0.7	867
20 - 24	21.0	50.5	23.6	4.7	0.2	0.1	1.8	223
25 - 29	7.3	24.2	40.3	21.9	5.5	0.9	3.5	2207
30 - 34	3.3	8.5	25.9	29.9	22.0	10.8	5.4	1690
35 - 39	3.4	5.4	11.4	22.4	26.7	30.7	6.9	1808
40 - 44	2.4	4.5	8.4	15.2	23.4	46.1	8.0	1391
45 - 49	1.9	3.4	7.5	14.1	20.1	52.9	8.5	1097
Total	11.0	21.2	20.3	16.5	13.5	17.5	4.8	11292

Figure 7.4 Mean numbers of live births according to duration since 1st. marriage



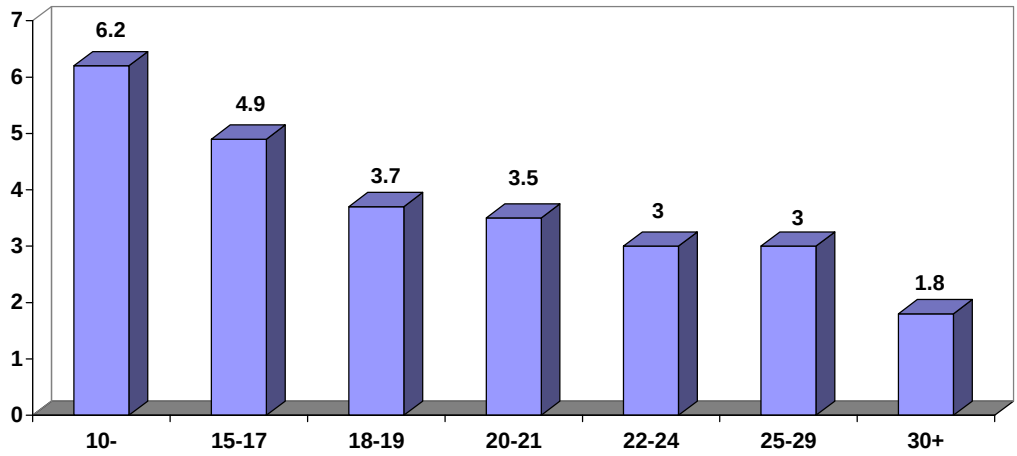
As for the parity progression ratio for mothers who have a specific number of births, Table 7.7 indicates that the probability of having another child among currently married and ever-married women is very high. Data in the table show that probability of having another child among women who have one or two children is 98 percent, while the probability of having another child among those who have three or four children is 97 percent, even among those who have 9 children the probability of having another child is 77 percent.

Table 7.7 Parity progression ratio per 1000 married and ever-married women age 45-49

No. of Live Births	Parity progression ratio
0-1	981
1-2	982
2-3	975
3-4	978
4-5	945
5-6	929
6-7	903
7-8	870
8-9	819
9-10	770

An advanced age at first marriage is considered to be one of the important factors to the level of fertility, rising in age at first marriage affect decrease fertility level (as shown in Figure 7.5).

Figure 7.5 Mean numbers of live births by marriage at first marriage



Place of residence and educational level

As mentioned earlier, there are significant differentials among fertility levels according to place of residence and women's level of education. Table 7.8 shows the effect of place of residence and education level on the mean number of live births per woman. Data show that the mean number of live

births in urban areas is 4.6 children compared with 4.9 children in rural area. Data indicate also that the mean number of live births decrease gradually with the increase of women's education level.

The mean number of live births drops from 5.4 births among illiterate women to 2.9 among those with an elementary education and 2.1 among those with a secondary education and above.

Table 7.8 Mean number of live births for ever married woman (15-49) by current age, place of residence, and educational level

Background characteristics		Current age							
		15-19	20-	25-	30-	35-	40-	45-49	Total
Place of residence	Urban	0.8	1.8	3.2	4.9	6.4	7.2	8.2	4.6
	Rural	0.7	1.8	3.5	5.5	7.1	8.2	8.6	4.9
Educational level	Illiterate	0.7	1.9	3.6	5.6	7.2	8.2	8.6	5.4
	Can read & write	0.7	1.8	3.4	4.9	5.9	6.8	6.1	3.4
	Elementary	0.6	1.8	3.4	4.1	5.2	6.2	8.0	2.9
	Preparatory	0.6	1.5	2.8	4.3	4.7	5.1	5.2	2.5
	Secondary+	0.4	1.2	2.2	3.0	3.4	3.1	3.7	2.1
Total		0.7	1.8	3.5	5.4	6.9	8.0	8.5	4.8

Age at first birth:

The age at which childbearing begins has important demographic consequences for the society as a whole as well as for the health and welfare of mother and child.

Overall, the median age at first marriage among women age (25-49) is 20.0 years. The median age at first birth is almost the same in both rural and the urban areas. The results in Table 7.9 suggest that there has been a steady rise in the age at first birth among Yemeni's women. Data indicate that the median age at first birth ranges from a low of 20 years among illiterate women to 25.5 among women with a secondary education and above. This means that the median constantly increases with a rise in a woman's educational level, which will lead to reducing the fertility level because it shortens the reproductive life period.

Table 7.9 Median age at first birth for women 25-49 years old by current age, place of residence and educational level

Background characteristics		Current age					Total
		25-29	30-34	35-39	40-44	45-49	
Place of residence	Urban	21.1	19.6	19.0	19.5	19.9	19.9
	Rural	20.2	19.2	19.4	20.0	21.2	20.0
Educational level	Illiterate	20.1	18.9	19.0	19.8	20.9	19.7
	Read & write	19.7	18.9	19.3	19.7	20.9	19.5
	Primary	19.3	20.7	20.4	19.9	23.2	19.9
	Preparatory	22.3	21.3	21.5	22.8	17.2	22.0
	Secondary+	--	25.2	25.1	25.3	23.4	25.5
Total		20.4	19.3	19.3	19.9	20.9	19.9

Spacing between births gives the mother a chance to recuperate her health, and make up for the lost substances and nutrients during her pregnancy and delivery, which reflects positively onto her children's health, in general and her reproductive health in particular.

Table 7.10 shows that 24 percent of all the births born during the 5 years before the survey were separated from the ones before them by an interval less than 18 months. A birth interval of less than 18 months was much higher among younger women than among the older ones and findings show that 45.7 percent of women aged 15-19, had less than 18 months birth interval versus 15.6 percent among women aged 45-49.

A birth interval of less than 18 months was also higher among the second or third order births compared to the others and much higher again among the mothers whose previous child died. It was also higher in rural areas than in urban areas and among mothers who completed their secondary education.

On the other hand, 15.9 percent of births were separated by an 18-23 month interval, thus the percentage of close deliveries (less than two years) reached about 39.6 percent or more which constitutes third of all the deliveries that took place during the five years before the survey. The high percentage of close deliveries (less than two years) requires exerting further efforts to inform women on the bad effect of close deliveries on the mother's health and that of the child.

However, the median previous birth interval for the past five years was 27.5 months and this varied according to the woman's background, and demographic and social characteristics.

On average, almost half of the women who lost their previous child are more likely to give birth to another child in a period less than 18 months compared with 28.3 months if the pervious child is still alive.

On average, women in rural areas had their last two births 2.6 month earlier than women in urban areas. As for the women's education, data shows that median previous birth interval is not significantly different according to women's education level; the median birth interval is ranges between 27.2 among illiterate women to 31.1 months among women with preparatory education.

Table 7.10 Percent distribution of births during the five years before the survey by number of months since the preceding birth, and selected background characteristics

Background characteristics		Number of months since preceding birth					Number	Median previous birth
		<18	18-23	24-35	36-47	48+		
Mother's age	15-19	45.7	16.3	29.9	6.7	1.4	168	20.4
	20-24	31.5	21.5	29.3	12.4	5.3	1908	23.3
	25-29	26.1	17.2	30.0	15.6	11.0	3142	25.9
	30-34	20.3	15.2	29.0	17.2	18.3	2377	29.2
	35-39	19.8	12.0	26.4	18.2	23.5	1988	31.8
	40-44	16.7	12.3	25.9	17.9	27.2	1045	33.6
	45-49	15.6	11.4	20.8	20.3	31.9	454	36.8
Birth's order	2-3	27.5	18.2	29.2	14.0	11.2	3731	25.1
	4-6	22.3	15.2	27.8	16.7	18.0	3777	28.3
	7+	21.1	14.1	27.8	17.7	19.2	3576	29.6
Survival status	Alive	21.5	15.6	29.2	17.0	16.7	10173	28.3
	Dead	47.7	18.4	18.4	6.8	8.6	909	18.6
Place of residence	Urban	20.7	15.1	26.0	16.3	21.8	2208	29.6
	Rural	24.4	16.0	28.8	16.1	14.6	8875	27.0
Education -al level	Illiterate	24.1	15.8	28.2	16.3	15.5	9002	27.2
	Read & write	22.9	16.2	27.9	14.4	18.7	917	28.2
	Primary	22.1	13.1	31.1	15.9	17.8	544	28.1
	Preparatory	16.5	18.0	29.6	18.2	17.7	323	31.1
	Secondary+	22.4	17.7	24.3	15.3	20.2	297	27.7
Total		23.7	15.9	28.3	16.1	16.1	11083*	27.5

***** Not included the first birth

7.5 Pregnancy and motherhood under 20

Mothers under 20 and their children are exposed to health risks more than the others beyond that age, and pregnancy below this age has its own negative social effects particularly in relation with women's education since those who get pregnant or give birth are more likely not to continue with their education.

Table 7.11 shows the percentage of teenagers who became mothers or got pregnant with their first child. Generally, the percentage who started childbearing among all women under 20 was about 9.4 percent, out of whom 7.2 percent gave birth and 2.1 percent got pregnant with their first baby. This percentage increased with age as 1.3 percent became mothers or got pregnant at age 15, and 25.0 percent at age 19, with no variations by place of residence (9.1 percent in the urban areas against 9.5 percent in the rural areas).

The level of childbearing below 20 was highly connected to the educational level of the woman: 11.2 percent among the illiterates and 8.2 percent among those who can read and write, but quickly increased after that to reach 11.0 percent among the elementary certificate holders, and

decreased again to 4.6 percent among the preparatory certificate holders and more. Since the 15-19 age group is still a schooling age group, the table indicates that the percentage of childbearing among those not attending school is 12.3 percent against 1.4 percent among those attending school.

Table 7.11 Percentages of teenagers (aged 15-19) who are mothers or pregnant with their first child by selected background characteristics

Background characteristics		% Who are mothers	% pregnant for 1st time	% mothers or pregnant	No. of teenagers
Age*	15	0.6	0.7	1.3	1380
	16	2.1	1.3	3.4	1129
	17	4.7	2.5	7.2	1012
	18	10.6	3.0	13.6	1353
	19	21.4	3.6	25.0	926
Place of residence	Urban	7.2	2.0	9.1	1378
	Rural	7.3	2.2	9.5	4421
Educational Level	Illiterate	8.9	2.3	11.2	3009
	Read & write	6.0	2.2	8.2	1190
	Primary	8.1	2.9	11.0	585
	Preparatory+	3.3	1.2	4.6	980
School enrollment	Attending	1.0	0.4	1.4	1529
	Not attending	9.5	2.8	12.3	4266
Total		7.2	2.1	9.4	5799*

*N.S is excluded

7.6 Level of Childlessness

Table 7.12 shows that among currently married and non-pregnant women and still menstruating, the percentage of those trying to get pregnant with no success is 7.8 percent, and is a little higher in rural areas (8.0 percent) than in urban areas (7.2 percent). It is also higher among the 15-19-year olds compared to the other groups and among those who have been married for less than five years. Data indicate also that the percentage is 14.6 percent among women 35 and more, whereas it is lower among women who have been married for less than five years (13.9 percent).

The survey findings show that two thirds of all currently married non-pregnant women and trying to get pregnant with no success did consult a doctor for that problem (80 percent in urban areas compared with 64 percent in rural areas). It is natural to see the percentage of those who did not consult a doctor more likely in rural areas (30 percent compared with 17 percent in urban areas). High cost was the main reason for not consulting anyone (mentioned by 30 percent). In addition, around 56 percent of husbands did not consult anyone to help their wives get pregnant

Table 7.12 Percentages of non-pregnant currently married and still menstruating women, who are trying to get pregnant but with no success by place of residence and selected background characteristics

Background Characteristics		Urban	rural	Total
Age	15-19	11.4	13.0	12.7
	20-24	10.6	12.5	12.1
	25-29	7.0	7.4	7.3
	30-34	6.3	6.7	6.6
	35-39	6.4	6.4	6.4
	40-44	6.2	4.7	5.1
	45-49	2.2	3.3	3.1
Duration since first marriage	0-4	12.6	14.3	13.9
	5-9	7.5	9.1	8.7
	10-11	9.2	8.3	8.5
	15-19	5.6	5.9	5.8
	20+	4.2	4.6	4.5
No. of live births	0	47.2	44.4	45.0
	1	13.3	11.6	12.0
	2	5.8	8.6	7.8
	3	4.6	4.3	4.4
	4	3.5	3.6	3.6
	5+	1.1	1.0	1.0
Total		7.2	8.0	7.8

Chapter 8

FAMILY PLANNING

The effect of developments which took place during the last 3 decades of the previous century due to the relative improvement in the health and standard of living conditions of the individuals and the reduction in epidemics and mortality in general, and the reduction in child mortality in particular caused a huge increase in population. Yet, fertility rate reached the highest level compared with other Arab countries. Hereby the Yemeni government paid great attention to family planning as part of its population and health polices, emphasizing the married couple's option to determine the number and spacing of children they desire to have, and pointing out their right to obtain family planning knowledge and methods. The population policies which were implemented by the government emphasized this right under the strict rules of our religion. This chapter, as in other chapters, enables researchers and decision makers to get detailed data related to the prevalence of family planning methods and their types (modern and traditional methods). This chapter refers to some important conclusions to clarify the objectives. Statistical means are also used to make more clarification.

This chapter combines the results of the Family Health Survey of Yemen concerning the prevalence of Family planning methods and their types (modern and traditional methods). In addition to the differentials in use according to some selected background characteristics and time and reason of using family planning methods.

This chapter focuses on data on levels, differentials, and trends in current use of family planning. Then the chapter looks at the information obtained in the survey on attitudes toward family planning use, the levels of ever use of family planning, in addition to the problems of use that have been addressed by the wives (respondents) that cause discontinuation of using a method.

Finally, this chapter will show the level of family planning discontinuation, reasons for discontinuation, reasons for nonuse, intention to use in the future, timing of future use, and the methods preferred among women who are currently using a family planning method.

8.1 Ever Use of Family Planning Methods

The 2003 YFHS collected data on the level of ever use of family planning methods. These data were obtained by asking women separately about whether they had ever used each of the family planning methods that they knew. The following section explore the level of ever use of family planning methods among Yemeni women.

Table 8.1 shows the Percentages of ever-married women and of currently married women who have ever used a family planning method according to the woman's current age. Overall, the results indicate that 40.9 percent of ever-married women have ever used a family planning method at some time. Across age groups, the highest level of ever use of any family planning method is observed among women age 30-34, while the lowest level is found among women age 15-19. Data indicate also that 28 percent of ever-married women reported that they had ever used a modern family planning method. The percentage of ever use of family planning methods (modern or traditional) (16.3%) among women aged 15-19, whereas the greatest percentage of use (49.8%) occurs among 30-34 age group. The percentage slightly decreases (39.2%) among 45-49 age group. The lowest percentage of women who ever used modern methods (9.7%) is among 15-19 age group, while it increases by age until it reaches the greatest among women aged 35-39 (35.1%) and then reduces until it reaches the lowest (26.1%) among women aged 45-49. The same pattern was observed among women who have ever used any family planning methods. This might be due to unawareness among older women concerning the use of family planning methods.

Table 8.1 Percentages of ever-married women who ever used any or modern family planning method by woman's age

Age groups	% Any Modern method	% Any method	No of women
15-19	9.7	16.3	867
20-24	20.8	32.2	2232
25-29	28.1	41.9	2207
30-34	34.4	49.8	1690
35-39	35.1	49.6	1808
40-44	34.8	47.7	1391
45-49	26.1	39.2	1097
Total	27.9	40.9	11292

As shown in Table 8.2, the pill is the most commonly used method (20 percent) followed by prolonged breastfeeding (18.2 percent), IUD (8 percent), then the rest of other methods. Table 8.2 shows that the pills were the most prevalent modern method among women of all age groups followed by IUD. The prolonged breastfeeding was the most prevalent traditional method among women of all age groups followed by withdrawal. The great drop in use for male and female sterilization and Norplant is noticed. The use of condom is

also limited (3.6 percent) while the use of periodic abstinence is relatively prevalent (6.9 percent).

Table 8.2 Percentages of family planning methods use by type and age group among ever-married women or their spouses about the use of male condom or male sterilization.

Method	15-19	20-	25-	30-	35-	40-	45-49	Total
Pills	7.4	15.4	21.0	26.0	25.0	23.8	16.8	20.2
IUD	2.2	5.4	8.5	9.9	11.1	10.5	6.1	8.0
Injections	0.8	2.9	5.0	5.9	7.6	6.8	5.4	5.1
Norplant	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1
Foams or Jelly	0.5	1.4	2.2	3.8	3.1	3.9	1.5	2.5
Male condom	0.9	2.8	4.7	5.1	4.5	3.6	1.5	3.6
Female sterilization	0.1	0.0	0.3	1.1	3.5	4.3	4.7	1.8
Male sterilization	0.0	0.2	0.1	0.1	0.4	0.3	0.1	0.2
Periodic abstinence	2.3	5.5	8.2	8.4	9.1	7.6	3.8	6.9
Withdrawal	3.4	7.0	10.1	11.2	10.4	10.3	4.7	8.7
Prolonged breastfeeding	6.8	12.3	19.8	24.8	21.4	20.0	18.2	18.2
Other	0.1	0.5	0.7	0.9	1.0	1.1	0.8	0.7
Total	867	2232	2207	1690	1808	1391	1097	11292

- Differentials in ever use

Data in Table 8.3 present differences in the overall proportions of ever-married women who have ever used family planning and the number of methods with which ever users have had experience according to women's age groups. Generally, data show that the use of family planning methods increases with women's age and duration of marriage. There is relatively high variation among percentages of use by place of residence where 65 percent of women resident in urban areas had ever used any family planning methods compared with 33 percent of women resident in rural areas. The same variation can be observed in relation to use of modern family planning methods (53 percent compared with 20 percent). Data indicate that 63.5 percent of women with secondary school and above have ever used any family planning methods compared with 36 percent of illiterate women. Also, the percentage of ever using FPMs also rise as the duration of first marriage gets longer. Data show that 46 percent of women who are been married for 15-19 years have ever used any contraceptive method compared with 20 percent of those who been married for 0-4 years.

As expected, education has a great effect on the use of family planning methods especially modern ones. The more the education level, the more the use of family planning methods, as 60 percent of women who completed primary level had ever used any contraceptive method and 45.5 percent of them have ever used modern methods. The percentages of ever use of any contraceptive method increases to 63.5 percent among those who completed

secondary and above, (54.1 percent have ever used modern methods). Also, the percentage of those who ever used modern family planning methods compared with those who have ever used any family planning method increase to 85 percent among women who completed secondary and above against 62.5 percent among illiterate women. Thus, education has a great effect on use of family planning methods and modern methods in particular.

Table 8.3 Percentages of ever use among ever-married women (15-49) by type of method used (modern or any type else) and some selected demographic variables

Demographic variables	Ever use of any method	Ever use of any modern method	Ever use of modern comparing to any method	No of women
Duration since first marriage				
0-4 years	20.1	12.9	64.2	2033
5-9	42.1	27.8	66.0	2089
10-14	44.6	30.7	68.8	1841
15-19	49.6	33.6	67.7	1571
20 years +	46.0	32.4	70.4	3760
Place of residence				
Urban	64.7	53.1	82.1	2713
Rural	33.4	20.0	59.9	8579
Educational Level				
Illiterate	36.0	22.5	62.5	8747
Read & write	54.4	42.1	77.4	1043
Primary	59.6	48.5	81.4	661
Preparatory	57.7	47.7	82.7	417
Secondary +	63.5	54.1	85.2	425
Total	40.9	27.9	68.2	11292

- Ever use of FPMs by number of living children at first use and reasons for using

Women who reported that they had used family planning methods at some time were asked about the number of children they had when they first used family planning. These data are useful in identifying the stage in the family-building process when begin using family planning as well as their motivation for adopting family planning.

Table 8.4 presents the percent distribution of ever-married women by the number of living children at the time of the first use of family planning. Almost none of the women started using family planning immediately after marriage while still childless. Overall, birth spacing was the main cause of using family planning among women followed by desire to stop childbearing (78 percent versus 21 percent respectively). Data indicate that 61 percent of women who have 1-2 live births used family planning for spacing, while this

percent decreased to 10 percent among the same women who used family planning to stop childbearing.

Table 8.4 Percent distribution of ever-married women who ever used any family planning method by reason for first use and number of living children at first use.

Number of living children	Reasons for using family planning methods		
	Birth spacing	Stop childbearing	other
None	1.8	0.8	41.4
1-2	61.7	9.5	31.8
3+	36.5	89.6	25.8
Total percentage*	100	99.9	100
No. of women who ever used	3599	951	50

*N.S is excluded

Table 8.5 shows the Percent distribution of ever-married women who ever used family planning method by number of living children and women's age at first use

Overall, the mean number of living children at first use is 3.2 children. This number's increase is related to women's age. As for women in age group (15 -19) the mean number of children when they started using family planning method's for the first time was one child, while it increases to 4.8 children among women aged 45-49. A third of women who have ever used family planning methods started using after having their first child compared with 16.2 percent who used family planning methods after having two children. It then increases to 18.5 percent after having the sixth child.

Table 8.5 Percent distribution of ever-married women who ever used family planning method by number of living children at first use and woman's age groups

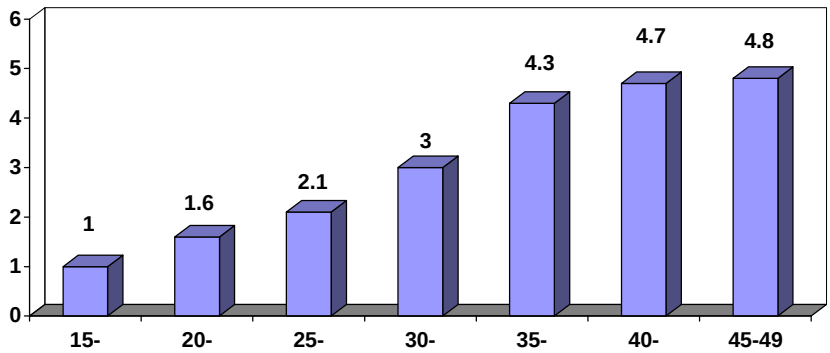
Woman's age	% never used	Total No .of women who ever used	% users by no of living children at first use							Mean No. of living children at first use
			None	1	2	3	4	5	6+	
15-	83.7	867	12.6	71.6	14.1	1.7	0.0	0.0	0.0	1.0
20-	67.8	2232	5.5	56.2	22.6	10.1	3.6	1.3	0.5	1.6
25-	58.1	2207	1.9	44.4	20.1	17.9	8.4	4.1	2.6	2.1
30-	50.2	1690	1.2	32.2	16.1	15.1	12.6	10.1	12.4	3.0
35-	50.4	1808	0.5	21.5	12.3	9.7	12.2	11.1	32.6	4.3
40-	52.3	1391	0.4	17.2	12.6	10.1	11.1	9.9	38.2	4.7
45-49	60.8	1097	0.0	20.7	11.3	8.5	7.7	10.5	40.8	4.8
Total	59.1	11292	2.0	34.3	16.2	12.1	9.2	7.4	18.5	3.2

* N.S is excluded

Figure 8.1 shows an early use of family planning methods when the woman is younger, as the mean number of living children at the starting of use is higher among older women.

The figure shows that younger women started to use family planning methods at early age compared with older women, as women aged 15-19 stated using family planning methods after having one child whereas the mean children increases until it reaches 4 children at first use among women aged 35 or more.

Figure 8.1 Mean numbers of living children of ever users at first use of family planning method



8-2 Current use of Family planning methods

Data in Table 8.6 indicate that generally, 23.1 percent of women interviewed in this survey are currently using any family planning methods. While only 13.4 percent use modern methods and 9.7 percent use traditional methods. This percentage is not high compared with other developing countries and other surveys.

Table 8.6 shows the distribution of current women users by type of method used. The pill is the most prevalent among modern family planning methods (6.3 percent), followed by IUD (3.4 percent). The prolonged breastfeeding is the most prevalent among traditional methods (5.7 percent), followed by withdrawal (2.1 percent). Table 8.6 also shows that the level of current use is not high in particular the use of modern methods. Hence, this draws our attention to the importance of awareness and a need to provide urban and rural areas with safe, easy and low-cost family planning methods.

Table 8.6 Percent distribution of currently married women currently using family planning by type of method currently used

Type of method used	%
Pills	6.3
IUD	3.4
Injections	1.3
Diaphragm/ Foam/Jelly	0.1
Male condom	0.4
Female sterilization	1.7
Male sterilization	0.1
Total use of modern method	13.4
Periodic abstinence	1.7
Withdrawal	2.1
Prolonged breast-feeding	5.7
Other	0.2
Total use of traditional method	9.7
Total	23.1

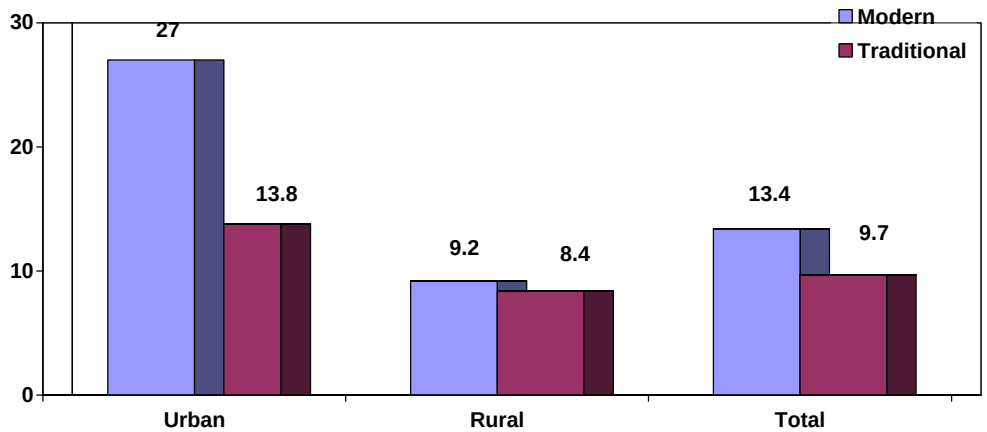
Table 8.7 indicates that the prevalence rate of using any method increases as women's age increases till reaching age 39 years. This might be due to the common belief that woman will be infertile after reaching age of 40 or 45 years or the desire of women to have another birth before reaching the age of infertility. The table also shows that the level of current use is higher in urban areas than in rural areas. This is true for both modern (27 percent versus 9.2 percent) and traditional methods (42 percent versus 17.6 percent).

Data indicate that the percentage increases with the level of education as 19.3 percent of illiterate women use any family planning methods (only 10.5 percent use modern methods) compared with 44.8 percent among women with secondary certificate or above (32.6 percent modern methods). It is also noticed that the more education the more use of modern methods especially pills and IUD.

Table 8.7 Contraceptive prevalence rates among married women, by age group, place of residence and method currently used

Variables	Use of a modern method	Use of a Traditional method	Currently used						Number
			Pills	IUD	Prolonged Breast-feeding	Periodic abstinence	withdrawal	other	
Age-group									
15-19	5.2	4.6	3.1	1.6	3.4	0.5	0.7	0.5	835
20-24	10.4	7.9	6.4	2.9	5.3	0.8	1.7	1.1	2143
25-29	13.2	11.1	7.0	3.9	7.2	1.9	2.0	2.3	2111
30-34	16.7	12.6	8.6	4.4	7.5	2.4	2.6	3.8	1605
35-39	18.5	11.3	7.6	4.1	5.8	2.4	2.7	7.2	1701
40-44	16.3	10.4	5.8	3.6	4.6	2.5	3.1	7.1	1265
45-49	9.8	6.5	2.2	1.1	3.4	1.0	1.9	6.7	955
Place of residence									
Urban	27.0	13.8	12.2	8.8	4.5	3.5	3.5	8.4	2511
Rural	9.2	8.4	4.5	1.7	6.1	1.2	1.0	3.1	8105
Educational Level									
Illiterate	10.5	8.8	4.5	2.1	6.0	1.0	1.6	4.1	8226
Read & write	19.4	12.3	10.1	5.3	5.2	2.7	4.2	4.2	983
Primary	25.2	14.0	12.5	9.6	4.4	5.0	4.5	3.2	616
Preparatory	22.5	12.9	12.4	7.3	5.1	5.0	2.7	2.9	391
Secondary+	32.6	12.2	18.3	10.8	2.6	5.2	4.4	3.5	401
Total	13.4	9.7	6.3	3.4	5.7	1.7	2.1	3.9	10616

Figure 8.2 Prevalence of using any method (traditional/modern) among married women by successive surveys and place of residence



8.3 Decision about Using Family Planning Methods

Concerning the decision to use family planning methods, a question was asked to all women whether they are users or non users. Women were also asked about who is responsible for taking the decision of using family planning; wife, husband or a joint decision taken by the couple or by other relative. Table 8.8 shows the distribution of women by use and decision maker.

The decision to use family planning is mostly the decision taken by the husband (53 percent) while 29 percent of the women jointly make the decision with their partners and 6.5 percent of make the decision alone. Therefore, advocacy and education about family planning should be addressed to both partners stressing the role of the husband since he is a major partner in decision-making.

Table 8.8 Percent distribution of current use of Family Planning methods by main decision-maker

Decision maker	Not using	Using modern method	Using traditional method	% total	No. of women	% of decision maker
Mainly respondent	68.9	21.5	9.6	100	688	6.5
Mainly husband	81.2	10.3	8.5	100	5607	52.8
Joint decision	62.8	22.7	14.4	100	3033	28.6
Other	82.3	8.7	9.0	100	94	0.9
DK	96.0	0.5	3.5	100	1194	11.2

8.4 The Duration of Using Family Planning Methods

Data show that most of the married women who are currently using family planning methods have used the methods non stop for short time, as 45 percent have used the methods for less than one year continually. Also, two thirds of current users have used the methods for a period between one to two years, while 22 percent reported using the method for three years or more.

Table 8.9 shows the differentials in the duration of use by age of women. Data indicate that 3 percent of the women aged 20-24 have used family planning methods for 3-4 years, against 18 percent among women in the age group 40-44.

Table 8.9 Percent distribution of current use of Family Planning methods by period of non-stop use and age

Age groups	The period of non-stop use							No. of women
	Less than a year	1-2	3-4	5-6	9-7	10+	NC	
15-	69.7	29.1	0.0	0.0	0.0	0.0	1.2	82
20-	61.8	33.2	3.1	0.8	0.0	0.0	1.1	391
25-	55.7	35.5	4.6	1.6	0.4	0.0	2.2	513
30-	47.0	35.4	9.0	4.5	1.6	0.8	1.7	470
35-	33.9	33.4	15.3	8.7	4.3	2.4	1.9	507
40-	28.7	31.9	18.4	7.3	7.0	4.2	2.4	339
45-49	15.0	26.7	16.7	17.2	10.9	11.9	1.5	156
Total	44.7	33.4	10.0	5.2	2.9	2.0	1.8	2457

8.5 Problems of Using Family Planning Methods:

All ever-married women who are currently using any contraceptive methods were asked if they had any problem during their use of the family planning methods. Table 8.10 shows that 21 percent of the women reported having problems during using the contraceptive methods with no variation according to women's age. It is noticed that the highest percentage of problems recorded was health problems (82.2 percent) which may be as a result of "not consulting a health provider", "because of no appropriate choice", "not consulting a doctor", "other health problems", "the great effort excreted by women in the countryside" (chores and field work), and "working for long hours" that cause her health problems especially family planning methods health problem. The second type of problems mentioned by the women is inconvenient to use the method (12.3 percent) which is still a high percentage. It needs more study to find out its factors and try to overcome these factors. Unavailability of methods has the least percentage.

Table 8.10 Percentages of current users of family planning methods who faced specific problems during their use by the type of problem faced

Problems of Use	%
Health problems	82.2
Method failed	0.2
Husband's disapproval	4.9
Access/Unavailability/of methods	0.9
High cost	3.3
Inconvenient to use	12.3
Other	8.0
Total of users facing a problem	511

8.6 Reasons for Stopping the Use of Family Planning Methods:

This section focuses on women who are not using family planning. It presents information on; levels of family planning discontinuation, reasons for discontinuation, reasons for nonuse, intention to use in the future, timing for future use, and the methods preferred among women who are not currently using a family planning method.

Overall, Table 8.11 shows that 23.3 percent of users stop using as a result of having health problems, 18.8 percent stop using because they want to have more children, 18.5 percent reported methods failure, and 28.9 percent stop using for other reasons.

The highest percent of those who stopped using as a result of method failure or became pregnant is observed among women in age group 15-24 years, while the highest percent of those who stopped as a result of health problems is observed among older women where it is reached 28 percent among women age group 35-44 years.

Table 8.11 Percent distribution of ever-users who are not currently using by the main reason for stopping using contraception and by age

Age groups	Method failed	Menstrual problems	Health problem	Dislike of method	Difficulty of obtaining method	Desire for another child	other	No. of women
15-24	25.5	3.3	17.0	0.8	5.4	27.1	20.9	363
25-34	22.3	2.9	21.2	2.0	3.8	23.5	24.3	724
35-44	14.0	2.4	28.1	3.2	6.6	13.6	32.1	663
45-49	8.2	4.3	26.4	2.5	5.2	6.1	38.4	233
Total	18.5	3.0	23.3	2.3	5.2	18.8	28.9	1985

8.7 Sources of Obtaining Family Planning Methods:

It is clear that the government sector contributes to the availability of about 52.1 percent of the methods used. The private sector contributes to providing about 42.8 percent of these methods, including NGOs private hospitals, doctors and pharmacies.

As for the method currently used, it is clear that the main source of family planning methods is the government sector especially for pills, IUD and female sterilization, followed by pharmacists who provide condoms (78 percent) and pills (32.8 percent), while IUD is obtained from NGOs, hospitals and private doctors (47 percent).

Table 8.12 Percent distribution of current users of modern methods by source

Type of method	Public hosp. / health centers	NGOs & private Doctors /Hosp.	Pharmacy	Other	DK/NS	Number of women
Pills	52.3	8.2	32.8	5.8	0.9	672
IUD	47.8	46.9	2.4	2.9	0.0	357
Injections	48.6	24.2	23.4	2.4	1.4	141
Male condoms	12.4	3.8	77.8	2.6	3.4	42
Female sterilization	71.7	25.9	0.0	0.5	1.9	182
Total	52.1	21.8	21.0	4.1	1.0	1427*

*Combined users of modern methods who are not mentioned in this table

8.8 Intention to Use Family Planning in the Future

Due to the reduction of current use of family planning methods, this survey wanted to highlight the potential intention to use planning methods among married women and methods they want to use.

It is clear that 29 percent of currently married women and not using family planning at the time of the survey intend to practice family planning in the future (Table 8.13), while 13 percent have not made their decision and 58.2 percent do not intend to use family planning methods in the future. The rate of no intention to use in future is consider high and therefore awareness and enhancing services are needed to reduce the health problems they face. Among those who intend to use family planning methods in the future, 11.3 percent intend to use a method within 12 months, while 9.7 percent did not identify when they want use family planning methods. The percentage of women who do not want to use family planning methods were not affected by number of living children (about 54 percent to 63 percent).

Table 8.13 Percent distribution of currently married non-user women by intention to use in the future and number of living children

Intention to use in future	No of living children						Total
	None	1	2	3	4	5+	
Within 12 months	3.8	9.9	13.6	14.2	13.3	12.5	11.3
In 1-2 years	3.7	5.5	4.9	6.3	5.3	4.5	4.8
In 3 years +	4.5	5.0	3.9	2.5	2.7	1.9	3.1
Unspecified	13.0	11.3	10.3	10.2	9.8	7.6	9.7
Overall intention to use in future	24.9	31.7	32.7	33.2	31.2	26.5	28.9
% not intending to use	56.8	53.8	54.5	55.6	56.8	62.6	58.2
Don't know if she will	18.1	14.1	12.8	10.9	11.8	10.7	12.7
Number of women	1229	1004	980	921	848	3177	8158

*Non significant is excluded

Table 8.14 shows that 36.3 percent of the women intend to use pills, followed by IUD (20.3 percent) then injections (10.2 percent), whereas the remaining mentioned other methods, while a quarter of women intended to use traditional methods.

Women were asked about reasons for not intending to use family planning methods in the future, A quarter of them reported that they want to have more children while 22 percent reported it is up to God will and 15 percent mentioned the fear of the methods' side effects. This result emphasizes the necessity to know more about side effects, try to overcome them and develop people's awareness, facts, hazards and how to avoid them by choosing the appropriate methods.

It is clear from Table 8.14 that the main reason for not intending to use family planning method in the future is a desire to have more children 49 percent among women at 15-24 age groups against 10 percent among women at 35-49 age groups.

Table 8.14 Percent distribution of married women not using and not intending to use Family Planning Methods in the future by reason of not intending to use and woman's age

Reason for not intending to use	Women's age			Total
	15-24	25-34	35-49	
Wants another child	48.8	27.1	10.1	25.4
Prohibitions	9.8	11.1	8.3	9.5
Husband's disapproval	6.1	7.7	4.2	5.8
Fear of side-effect	12.3	18.3	14.5	15.1
Lack of knowledge	4.4	5.3	4.4	4.7
It is God will	11.2	19.6	30.3	22.1
Menopausal/sub fecund	0.3	0.5	14.4	6.5
DK	7.1	10.4	13.8	10.9
Number of women	1241	1435	2075	4751

Chapter 9

MATERNAL CARE

The reproductive age span is considered one of the most delicate and important age groups a woman passes through, since she undergoes a number of successive states of physiological and physical activity particularly during pregnancy and delivery, and it has its impact on both maternal and infant health. The health care needed by women during her reproductive life is affected by prevalent beliefs and social and cultural background of the community in addition to economic factors.

Providing maternal health care at this stage of a woman's life is one of the health sector's priorities since it insures care during pregnancy, and safe delivery, through periodic tests that concentrate on informing the pregnant woman health wise in relation to all the changes related to conception and breast-feeding in addition to the medical check up that aims at detecting a high risk pregnancy and proper treatment. Also included is care during delivery which is connected to providing delivery services, how obtainable they are, and the level of those who provide it as well as a system that refers cases to specialized centers in time. As for postpartum care, it is as important as the others due to its impact on both maternal and infant health.

The Yemeni Family Health Survey asked a number of questions on health care for mothers who had their last live birth during the five years before the survey and this chapter presents the most important findings.

9.1 Currently Pregnant Women:

A series of questions pertaining to antenatal care were asked about the last live births that had occurred in the five-year period preceding the survey. Data presented in Table 9.1 indicates than 55 percent of the interviewed women did not receive any antenatal care during this pregnancy. As for the rest of the women, 41 percent of them saw a doctor for their anti-natal care, while 4 percent saw a traditional midwife or daya for their anti-natal care.

Data shows an inverse relationship between mother's age and antenatal care as mothers aged 15-19 years are more likely to see a doctor for antenatal care compared with older mothers (35-49years) (47 percent and 35 percent respectively).

The percentage receiving care by a doctor during the first pregnancy was 55.6 percent and dropped gradually to reach 34.3 percent among women during their sixth pregnancy or above. The pregnant women residing in urban areas showed more keenness on following up their pregnancy with a doctor than those in rural areas (66 percent against 35 percent).

The same table shows that as the woman's educational level rose, she was keener on following up her pregnancy: 77.7 percent of those holding the secondary certificate or more did that with a doctor but the percentage dropped among the illiterates to reach 34.2 percent.

Table 9.1 Percent distribution of ever-married women (15-49) by care received during pregnancy of the last birth in the five years before the survey, and selected background characteristics.

Background characteristics	No care received	Care by a doctor	Any medical care	No. of births
Mother's age groups				
15-19	49.4	46.9	3.7	887
20-34	53.8	42.3	3.9	5029
35-49	61.0	35.4	3.6	1649
Order of birth				
First	40.4	55.6	4.0	966
1-3	51.3	44.7	4.0	2037
4-5	54.2	41.5	4.3	1625
6+	62.4	34.3	3.3	2937
Place of residence				
Urban	30.8	65.7	3.5	1670
Rural	61.7	34.5	3.8	5894
Level of education				
Illiterate	62.1	34.2	3.7	5817
Read & write	38.6	58.2	3.2	716
Primary	31.4	65.2	3.4	458
Preparatory	22.8	71.2	6.0	298
Secondary +	17.9	77.7	4.4	275
Total	54.9	41.4	3.7	7564

Women were asked about the mode of transportation to the health facility. The majority of the women indicated to have taken a bus or taxi (59 percent) and 23 percent mentioned that they traveled on foot to the health facility, while 18 percent mentioned that they went by private car to the place they had their pregnancy check-up.

Women who received antenatal care were asked about the length of time they had to wait at the health facility for check-up. Data indicated that the average waiting time was one hour and half, while the average time to reach the health facility was around one hour.

Table 9.2 shows timing and reason of the first antenatal care visit. Data indicate that 67 percent of women who received antenatal care began seeing a provider within the first five months of pregnancy. Mothers saw a provider for care for the first time during the sixth and seventh months of pregnancy for two in ten women for which antenatal care was reported (20 percent). The median length of time the mother was pregnant at the time of the first visit was 4 months.

Results in Table 9.2 indicate that having a health problem during pregnancy is the main reason for the first visit for antenatal care for 54.4 percent of the women and this percent increases to 69 percent among women during their sixth and seventh months of pregnancy, while only 5 percent of women mentioned that their first visit for antenatal care was for routine examination.

Table 9.2 Percent distribution of the women who followed up pregnancy of the last birth in the past five years by reason for the first check up and month of the pregnancy at the first checkup

Month of pregnancy at first check up	Find if Fetus O.K	Book for delivery	Find out if pregnant	Family's urging	Routine examination	Insure safe pregnancy	Had health Problem	Other/NC	Number (=100)
< 6 months	16.2	0.2	22.5	0.2	5.6	6.1	47. 4	1.7	2249
6-7 months	18.8	0.2	0.4	0.0	4.2	4.2	69.2	3.0	674
8-9 months	19.7	2.1	0.0	0.6	2.2	3.3	68.7	3.4	384
D.K	14.0	0.0	24.2	0.0	2.9	0.0	58.9	0.0	49
Mean pregnancy month	4.7	6.1	1.9	5.7	4.1	3.9	4.7	9.6	4.1
Total	17.1	0.5	15.5	0.2	4.9	5.3	54.4	2.1	3356

Number of Checkups during Pregnancy:

The findings of Table 9.3 show that the mean number of checkups made by woman during her last pregnancy was 3.2 and that this dropped to 2.6 checkups in the rural areas and rose to 4.3 in the urban areas. This shows that women in urban areas are keener to see a provider for antenatal care more than women in rural areas. The table also shows that 14 percent of women paid more than 4 checkup visits.

Table 9.3 Percent distribution of women who went for antenatal care during the last five years according to number of visits and place for antenatal care

Service provided	Urban	Rural	Total
Never went for check-up	31.6	62.5	55.6
One visit	11.1	14.5	13.7
2-3 visits	23.2	14.4	16.4
4 visits and more	33.2	8.4	13.9
Don't remember	0.8	0.2	0.4
Number	1670	5894	7564
Mean number of visits*	4.3	2.6	3.2

*Mean number is calculated only for those who went for antenatal care

Types of Services Provided

Table 9.4 shows that 60 percent of the pregnant women who sought pregnancy care visited a public hospital or a public health center, while 34 percent visited private hospital or private doctors, and all the remaining consultations took place at home and at other places (6 percent).

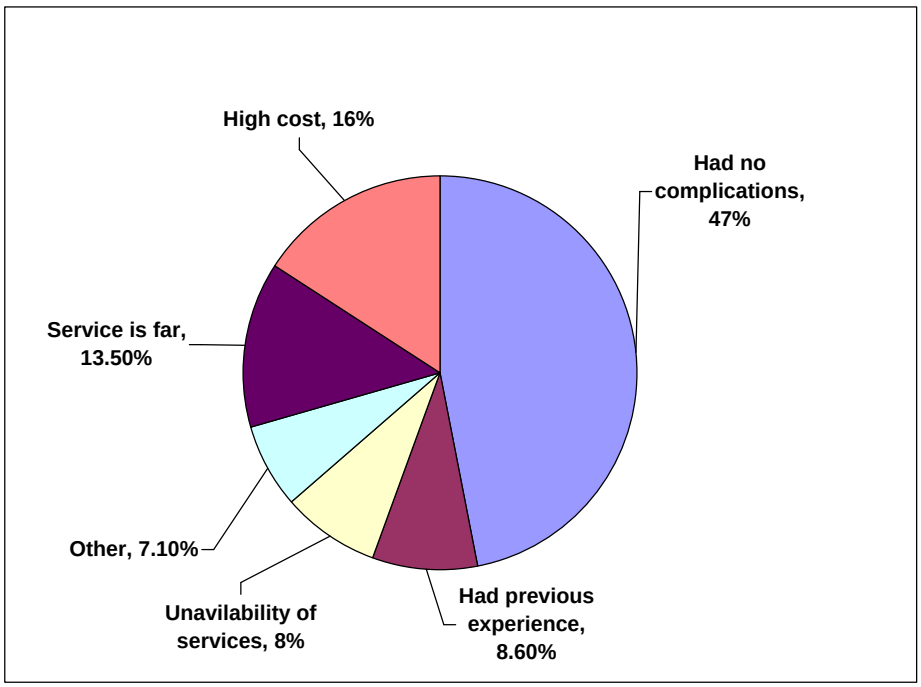
Table 9.4 reflects the types of services provided to a pregnant woman, either those related to medical examinations or information from health-centers. Around 44.8 percent of the women had their weight measured, 76 percent had their blood pressure measured, 65.4 percent had blood test performed, 60.9 percent had urine tests, and 48 percent had ultrasonic imaging performed.

Table 9.4 Percentages of women who had their last live birth in the five years before the survey and received at least one checkup, by the services provided during the checkups

Service provided	Public Hospital/ clinic	Public health centre	Private hospital	Private doctor	At home/ others	Total
Weight measured	45.7	53.3	30.5	45.2	12.4	44.8
Height measured	23.7	30.3	14.1	18.4	0.0	22.6
Blood pressure measured	76.3	76.6	74.2	77.6	51.7	76.0
Blood test performed	68.0	57.9	70.4	69.4	10.3	65.4
Urine analysis performed	61.9	56.6	66.8	63.8	7.5	60.9
Abdomen measured	49.5	51.2	39.4	46.9	36.6	47.7
Listening to fetus	54.7	53.7	49.7	61.0	33.4	54.9
Ultrasonic imaging	47.7	30.9	67.3	59.2	0.0	48.0
Internal examination	38.3	34.2	34.6	39.4	17.4	36.5
Told fetus position	59.0	56.2	60.7	71.6	42.1	61.0
Received information on:						
Diet	44.9	46.0	44.9	53.1	44.6	47.5
Dangerous signs of pregnancy	26.1	20.9	26.8	26.4	15.5	25.2
Breastfeeding	31.4	32.3	27.2	36.9	22.7	31.8
Family planning	25.3	23.2	21.9	27.2	20.0	24.9
Postnatal care	21.3	19.6	21.3	27.2	15.9	22.6
Number	1416	549	503	639	46	3356

It is noticed that these examinations vary by the place where the service was provided, for example 67.3 percent of the women had underwent ultrasonic imaging at private hospital followed by private doctor (59.2 percent). Furthermore, 32 percent received information about breastfeeding, 25 percent received information about risk information about dangerous signs of pregnancy, while 25 percent received information about family planning and 23 percent about postnatal care.

Figure 9.1 Percent distribution of women did not seek pregnancy care by place of last follow up



As for the reasons why some women did not follow up their pregnancy, the main reason for the majority (47 percent) of the women was that they had no complications followed by the high cost or services. Also, women reported that they had previous experience in about 8.6 percent of the cases, while the unavailability of services did not exceed 8 percent.

Taking Tonics during Pregnancy:

Table 9.5 shows that the percentage of those who had iron during their last pregnancy reached 25 percent, vitamins 29.4 percent and that of those who had at least one anti tetanus dose was 31.5 percent. These percentages were higher in urban than in the rural areas and greatly increased with the educational level. Among Women who are holding a secondary certificate or higher 51. 7 percent had iron, 52.6 percent had vitamins and 65.3% had at least one dose for protection against tetanus. It is also noticed that the percentages were higher among younger women and among women pregnant with their first child.

Table 9.5 percentages of women who had iron, vitamins and tetanus vaccines during their pregnancy with the last birth during the five years before the survey by some selected background variables

Variables	Percentage of those who had during pregnancy			
	Iron	Vitamins	At least 1 dose against tetanus	Number of births
Women's age				
15-19	26.3	31.5	36.5	887
20-34	25.1	30.2	32.8	5029
35-49	21.7	25.5	24.9	1649
Birth order				
First	33.2	38.6	42.5	966
2-3	26.0	30.5	35.0	2037
4-5	25.1	29.4	33.1	1625
6+	20.2	25.5	24.5	2937
Place of residence				
Urban	36.1	41.4	50.6	1670
Rural	21.2	25.9	26.1	5894
Educational level				
Illiterate	20.3	25.1	25.4	5817
Read & write	34.7	40.7	44.7	716
Primary	33.3	39.5	48.8	458
Preparatory	43.5	48.3	61. 3	298
Secondary +	51.7	52.6	65.3	275
Total	24.5	29.4	31.5	7564

Health Problems during Pregnancy:

Table 9.6 shows that 52.5 percent of the pregnant women suffered from at least one health symptom 29.8 percent from pain in the upper abdomen, 27.3 percent suffered from severe headache, 18.9 percent from breath problems, 17.3 percent from swelling in the face and body and 7.3 percent from high blood pressure.

Data indicate that older women suffer more from symptoms like fever, high blood pressure and swelling of face and body. Data show that 55 percent of women age 35-49 suffered from at least one symptom during their pregnancy compared with 48 percent of women age 15-19 years.

The percentage of women who suffered from symptoms and who did not seek care is 45 percent compared with 47 percent of women who suffered from symptoms and did seek care.

The various care indicators typically are higher for urban women than rural women. For example, the percentage of urban women who saw a doctor increased of any symptoms is more than proportion of rural women.

Table 9.6 Percentages of women who suffered from symptoms during their pregnancy with the last birth during the five years before the survey by some selected background variables

Variables	Heavy vaginal bleeding	High BP	Swelling of face & body	Severe headache	Upper abdomen pain	Very high fever	Breath problem	% having at least one symptom	Number
Age									
15-19	5.0	5.1	11.7	24.7	26.4	20.8	15.9	48.4	887
20-34	5.2	7.3	16.7	26.7	29.9	23.0	19.0	52.5	5029
35-49	5.9	8.7	21.8	30.7	31.5	28.6	20.0	55.0	1649
Place of residence									
Urban	5.8	8.8	17.5	21.6	24.2	14.8	16.3	51.1	1670
Rural	5.2	6.9	17.2	29.0	31.4	26.6	19.6	53.9	5894
Total	5.3	7.3	17.3	27.3	29.8	24.0	18.9	52.5	7564

The percentage of the women who suffered from symptoms and who did not seek care in spite of health problems reported that:

- The cost was too high, (37 percent)
- Problems did not necessitate that, (23 percent),

Generally, there is a positive association between women's education status and the various pregnancy care indicators. The relationship is particularly marked in the case of seeing doctor in case of any symptoms with such care being more than 2 times as common among women who have a secondary education than among illiterate women.

9.2 Medical Care at Delivery

Place of Delivery

Table 9.7 shows that delivery at home is still common in Yemen: the percentage of those who had delivery at home reached 77.2 percent during the five years before the survey. The delivery at a public hospital clinic was 16 percent against 3.5 percent at the private hospital.

Data show that 79 percent of births of mothers in age group 35-49 years which took place during the five-year period preceding the survey occurred at home. The likelihood of the delivery occurring at home is greatest for births of order four or higher (from 60 percent to 80 percent for first birth and 6+ respectively). Regarding place of residence, overall, the majority of deliveries in rural areas occurred at home (82.2 percent) compared with 59.5 percent in urban areas. However, deliveries in public health facilities were more prevalent than deliveries in private health facilities among more educated women compared with less educated women.

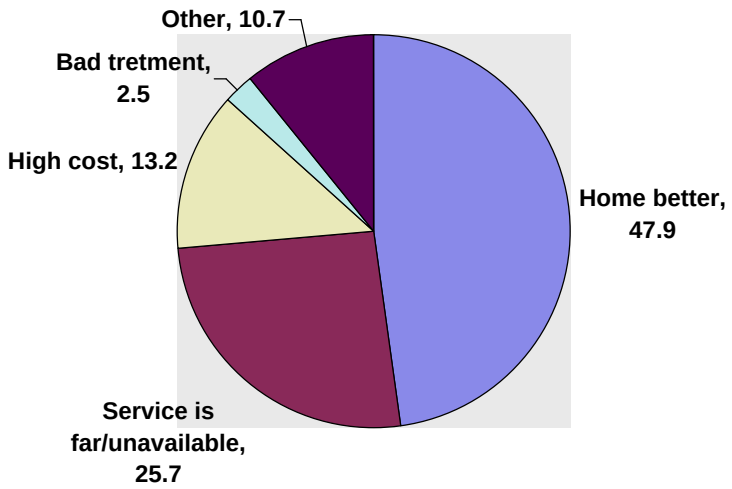
Figure 9.2 shows that those who had their delivery at home 65 percent of urban women and 48 percent of rural women mentioned that “home is better”, while 39 percent of rural women mentioned:

- Unavailability of delivery services
- Costly delivery services
- Place of delivery is far

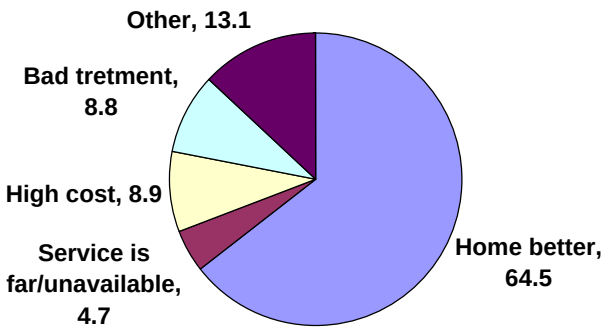
Table 9.7 Percent distribution of last birth during the five years before the survey by place of delivery and some selected variables

Variables	Home	Public hospital	Private hospital/ doctor	Others	Number (= 100)
Age					
15-19	69.3	21.9	5.2	3.6	887
20-34	78.0	15.5	3.2	3.3	5029
35-49	79.0	14.8	3.2	3.0	1649
Birth order					
First Birth	59.8	27.0	7.8	5.4	966
2-3	77.7	16.7	3.2	2.4	2037
4-5	80.2	14.6	2.6	2.6	1625
6+	80.9	13.0	2.7	3.4	2937
Place of residence					
Urban	59.5	30.9	6.7	2.9	1670
Rural	82.2	12.0	2.5	3.3	5894
Educational level					
Illiterate	81.6	12.7	2.4	3.3	5817
Read & write	67.5	25.7	4.5	2.3	716
Primary	61.3	28.1	7.7	2.9	458
Preparatory	59.8	29.1	7.6	3.5	298
Secondary +	53.6	30.4	11.4	4.6	275
Total	77.2	16.1	3.5	3.2	7564

Figure 9.2 Percent distribution of the last birth during the five years before the survey by reason and place of residence (Rural)



(Urban)



Results show that 48 percent of deliveries at home took place in the hands of mother or mother in law, 38.7 percent is the hands of relatives, while deliveries that took place in the hand of doctor is only 3.7 percent.

Around 8.6 percent of women had a caesarean sections compared with 87.1 percent who had a natural delivery. Data indicate that place of residence or education level did not have a clear significant differential among women in relation to type of delivery.

Medical Complications at Delivery

The Yemeni Family Health Survey questionnaire included questions designed to obtain information on whether the mother experienced signs or symptoms of delivery complications. The signs or symptoms about which they were asked included prolonged labor, excessive bleeding, and vaginal infection or convulsions. The survey results show that 40 percent of the women suffered from at least one symptom or health problem during their last delivery. Prolonged labor was reported by 25 percent, fever occurred in 25 percent of the cases, convulsions occurred in 9 percent of births and excessive bleeding occurred in 14 percent of the cases. Data show that women in rural areas suffer more of these diseases compared with urban women (figure 9.3).

Figure 9.3 Percentage of women who reported specific signs
And symptoms of delivery complications by place of residence

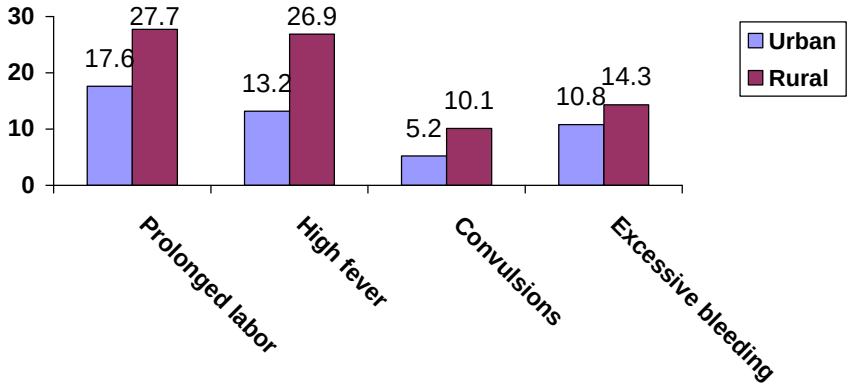


Table 9.8 Percent distribution of last birth during the five years before the survey by place of delivery and some selected variables

Variables	No one	Doctor	Daya	Midwife	Others	Was at the hospital	Number (= 100)
Birth order							
First	31.6	31.6	9.4	9.7	7.3	8.6	389
2-3	52.5	18.5	7.0	6.9	8.6	5.7	740
4-5	50.2	19.4	9.4	6.5	8.6	5.0	635
6+	51.4	17.8	9.4	5.7	8.3	6.4	1311
Place of residence							
Urban	27.2	40.6	6.9	12.0	3.2	8.9	492
Rural	53.0	16.1	9.2	5.6	9.3	5.7	2582
Educational level							
Illiterate	52.1	16.7	8.8	6.2	9.0	6.3	2507
Read & write	43.4	31.5	7.2	4.4	5.4	7.3	268
Primary	29.1	35.7	13.2	9.7	6.2	3.9	132
Preparatory	25.2	37.2	9.3	16.6	6.7	4.1	89
Secondary +	26.1	42.6	7.3	12.4	1.1	7.9	79
Total	48.9	20.1	8.8	6.7	8.3	6.2	3075

*N.S is excluded

As data in Table 9.8 show, around 50 percent of women who suffered from medical complications at delivery did not consult a health provider and this percent is almost twice in rural areas than that in urban areas. Doctor was the main source for medication and treatment among women (20 percent). There was comparatively variation in consulting health providers by place of residence (16 percent and 41 percent for rural and urban areas respectively). Data also indicates that less educate women are more expose to health consultations compared with highly educated women.

Treatment of Umbilical Cord during Delivery at Home

The survey results show the means of cutting the umbilical cord and the treatment of the umbilical stump for those delivering at home: 76.2 percent

used new scissors, while 15 percent of the cases used ordinary scissors, and 7.5 percent used medical instruments. But as far as how the navel stump was treated, 76.3 percent used ordinary thread and 5.1 percent used sterilized gauze and medical cotton.

Results show that urban residents use medical instruments for cutting the umbilical cord more than rural residents (22.7 percent against 4.4 percent respectively). The same result is applied to more educated women compared to less educated women.

9.3 Postnatal Care

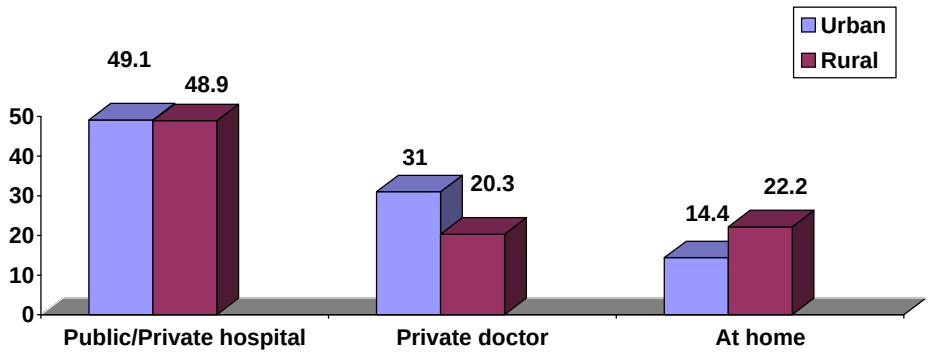
Use of Postnatal Care

Table 9.9 shows that about 87 percent of mothers who did not seek any postnatal care it reached 89.3 percent in rural areas against 80.1 percent in urban areas, while 9.2 percent of mothers did seek care by a doctor. High educated women are more likely to receive postnatal care than none or less educated women (73 percent and 89 percent respectively).

Table 9.9 Percentage of women who received postnatal care after the last birth during the five years before the survey by place of residence and educational level

Residence and education	No postnatal care	Care by a doctor	Care by midwife/ Or Nurse	Number of births
Birth order				
First	82.5	13.5	4.0	966
2-3	86.7	10.0	3.3	2037
4-5	88.0	8.8	3.2	1625
6+	88.8	7.6	3.6	2937
Place of residence				
Urban	80.1	16.7	3.2	1670
Rural	89.3	7.1	3.6	5894
Educational Level				
Illiterate	89.2	7.3	3.5	5817
Read & write	84.2	12.9	2.9	716
Primary	83.2	14.4	2.4	458
Preparatory	74.7	18.0	7.3	298
Secondary+	73.4	22.3	4.3	275
Total	87.2	9.2	3.4	7564

Figure 9.4 Percentage of women receiving postnatal care by place of care and place of residence



As for place of postnatal care, women often resorted to public hospitals for postnatal care (49 percent), while 24.1 percent resorted to private doctor, and 20 percent received care at home. Figure 9.4 show the place of receiving that care by place of residence.

As for those who received no postnatal care, 57 percent of them reported that they faced no problems necessitating that and 14 percent reported that the service cost is high or the place providing services is too far, while 16 percent reported the unavailability of services.

9.4 Postnatal Medical Complications:

Data in Table 9.10 indicate that 43.9 percent of women who gave birth during the five years preceding the survey suffered from at least one symptom during the first postpartum six weeks and among these symptoms were:

- Lower back pain with fever, (33.3 percent),
- Lower abdomen pain with fever, (33.3 percent),

Data show that women in rural areas have more postpartum health complications than women in urban areas (46.5 percent against 32.4 percent).

Despite that a lot of women suffer from delivery complications, only a third of them saw a health provider for medical advice. About 18.2 percent of those who had medical problems sought medical care from a doctor, while 7 percent consulted a pharmacist, 3.4 percent consulted a midwife and 8.2 percent consulted their own mothers, relatives or their husbands.

Generally, more educated women are more likely to seek medical care from a doctor. Data show that 37.3 percent of women who are holding at least secondary certificate and suffered from at least one symptom after delivery

saw a doctor for medical advice compared with 15.5 percent of women with less education.

Table 9.10 Percentages of women who suffer from at least one symptom after the last birth during the five years before the survey by symptom and place of residence

symptom	Urban	Rural	Total
Excessive bleeding	8.5	13.6	12.5
Swelling of face & body	4.9	11.1	9.7
Bad smelling vaginal discharge with high fever	7.7	13.9	12.5
Lower abdomen pain with fever	20.0	33.6	30.6
Lower back pain with fever	19.2	33.7	30.5
Upper back pain with fever	12.4	25.6	22.7
Dysuria	11.8	24.6	21.7
Masralgia	9.8	16.4	14.9
Total (at least one symptom)*	32.4	46.5	43.4
Number	1670	5894	7564

* It is possible that the woman suffer from more than one symptom in the same time

When asked why they did not seek medical care when they had the symptoms, 35 percent declared that the services were too costly, 24.8 percent reported it was not serious, while 24.3 percent reported that services were unavailable or too far.

9.5 Miscarriage

In general, the overall percentage of women who experienced at least one miscarriage during their previous reproductive years was 33.4 percent. Table 9.10 shows that the percentage of those who had at least one miscarriage among the ever-married women during the five years before the survey was 13.4 percent with no considerable variations between urban and rural areas. But the differences became very clear when women's educational level was considered. Findings show that the percentage of miscarriages increased among illiterate women (36.1 percent) compared with highly educated women who are holding a secondary certificate and higher (19.8 percent). Moreover, younger women are more likely to experience a miscarriage for at least one time compared with older women (Table 9.11).

Results indicate that 60 percent of miscarriages took place during the first three months of pregnancy and it increases in urban areas to 65 percent. Around 31 percent of the women sought medical care and 60 percent of them were because of having a health problem.

Table 9.11 Percentages of ever married women who had at least one miscarriage during the five years before the survey

Variables	% who had at least one miscarriage	Mean number of miscarriages	% who had a miscarriage during the 5 years before the survey	Number
Number of births				
None	11.4	0.2	9.8	1245
1-2	21.8	0.4	16.6	2393
3-5	32.6	0.6	13.7	3268
6+	46.6	1.0	12.4	4385
Educational				
Illiterates	36.1	0.7	13.5	8747
Read & write	26.5	0.5	13.0	1043
Primary	23.9	0.4	13.8	661
Preparatory	22.5	0.4	12.5	417
Secondary+	19.8	0.3	11.7	425
Total	33.4	0.7	13.4	11292

Figure 9.5 Percentages of women who suffered from health problems during their last miscarriage during the last five years preceding the survey

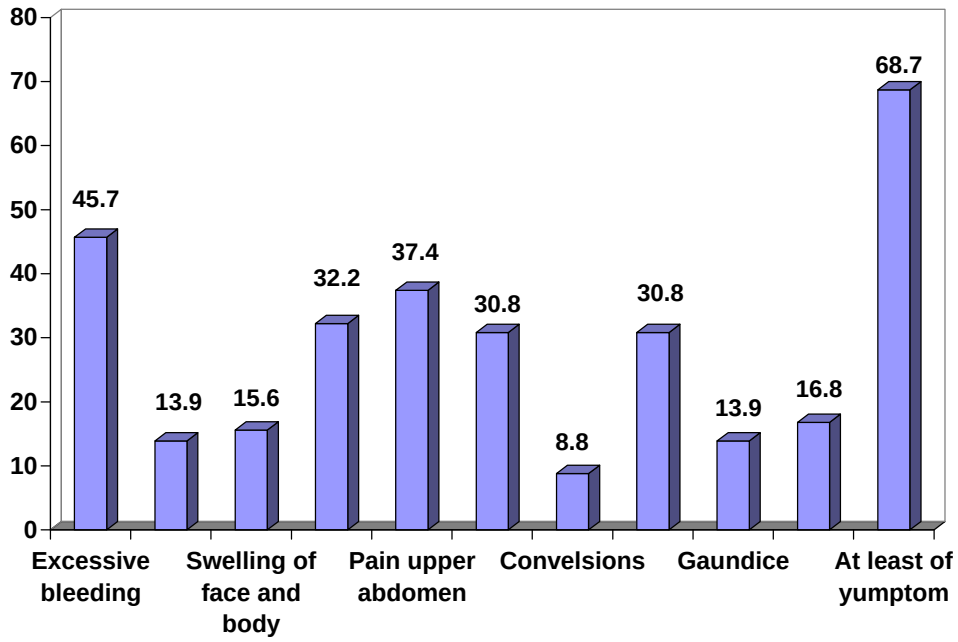


Figure 9.5 includes information on women who experienced health problems during miscarriage in the five years preceding the survey. Data indicate that 69 percent of the women had at least one health problem or complications. For example, 45.7 percent of the women suffered from severe vaginal bleeding and 37.4 percent suffered from strong pain in upper abdomen.

Forty five percent of women who suffered from health problems during their last miscarriage did not seek any health provider. But 45 percent sought medical care from a doctor. It is observed that the percent of women who sought medical care from a doctor is higher in urban areas compared with rural areas (65 percent against 40 percent), and this percent decrease among illiterate women to 41 percent while it increase to 67 percent among those holding secondary certificate and higher.

Findings show that when women were asked why they did not seek medical care when they had the symptoms, 36 percent declared that the services were too costly, followed by services is too far (19.4 percent), unavailability of services (12.3 percent) and around 14 percent of women reported it was not serious.

Chapter 10

PREVALENCE OF CHRONIC AND REPRODUCATIVE ILLNESS AMONG WOMEN

An assessment of women's physical health in terms of morbidity related to the reproductive function, women's perceptions on their health and reproductive health services sought for consultation by ever-married women aged 15-49, are among the main issues dealt with in the report of the Yemen Family Health Survey as they are very crucial components for examining women's health in general. Most importantly, chronic and reproductive illnesses are considered indicators of social and health care provision and of their availability.

10.1 Prevalence of chronic illnesses

In the Yemen Family Health Survey, a series of questions pertaining to women's health were asked to ever-married women of 15-49 years of age. The questions provided information on women's self assessment of their health status, and whether their health status remained the same or had changed in comparison with their health conditions during the past year. Questions on the existence or the prevalence of specific diseases were addressed and women were asked if they suffered from any of these diseases and if they sought medical help.

- Health Status and comparison with health conditions during the past year

The survey data revealed that half of ever married women aged 15-49 reported that they were in a good health, 40 percent considered their health fair and, only 13 percent considered themselves in bad health. When women were asked to compare their health status with that of last year, 16 percent reported that their health became better than their health status of last year, while 27 percent of them indicated that their health became worse than it was last year. The rest of women considered their health were the same.

Data show some differences arise in women's health status when their background characteristics are considered. Data indicate that the percentage of women reporting good health decreases with the increase of women's age (from 16.4 percent at age 15-19 to 35.9 percent at age 45-49), while it

increases with the number of births (from 17.7 percent for women with no births to 33.6 percent for women with 6 births or higher). Women's health status differs, as well, according to the place of residence; data show that 13.6 percent of urban women reported that their health status did change in comparison to that of the past year compared with 27.8 percent of rural women. Also, data show that 29 percent of women holding a secondary certificate and above and 15.5 percent of illiterate women reported that their health status did change in comparison to that of the past year.

Table 10.1 Percent distribution of ever-married women aged 15-49 by their assessment of their current health status compared with that of the past year and some background characteristics

Variables	Current health status	Health status compared to the past year	No. of women
Age-group			
15-19	4.2	16.4	867
20-	7.6	21.7	2232
25-	9.6	23.7	2207
30-	14.7	28.2	1690
35-	16.7	30.7	1808
40-	18.4	32.5	1391
45-49	21.3	35.9	1097
Number of live births			
None	5.6	17.7	1245
1-2	7.2	20.7	2393
3-5	11.8	25.7	3268
6+	18.9	33.6	4385
Place of residence			
Urban	9.0	13.6	2713
Rural	14.2	27.8	8579
Educational Status			
Illiterate	15.2	29.0	8747
Read & Write	6.9	21.6	1043
Primary	4.7	20.2	661
Preparatory	2.9	15.7	417
Secondary+	3.8	15.5	425
Total	12.9	26.8	11292

10.2 Prevalent Chronic Illnesses

The Yemen Family Health Survey included questions on the most prevailing chronic diseases to ever-married women aged 15-49, and if they suffer from any of these chronic diseases. Women were asked about each disease especially whether a woman suffers from more than one disease at the same time. In case if the disease was diagnosed by a physician, the answer is "Yes". More questions were asked in relation to a woman's age when she discovered this disease and how she committed to the medical treatment.

Table 10.2 presents the prevalence of illnesses among ever-married women aged 15-49. Data show that women were most frequently affected by rheumatism (11 percent), kidney diseases (10.6 percent), stomach diseases (13.5 percent), and anemia (10.7 percent). Most of the women (around 95 percent) reported that they knew about their diseases when they were 15 years old except for those who are having T.B., asthma, or heart diseases. As for commitment to medical treatment, the percentage of women who are committed to medication is very low (less than 50 percent) except for those who are having diabetes, high blood pressure, and asthma.

Table 10.2 Percentages of women (15-49) who had any chronic diseases according to reports of ever-married women aged 15-49, Percentages of who are receiving medical treatment.

Chronic disease	% Having chronic disease	% Taking regular treatment	Number of women
T.B.	1.0	34.7	111
Diabetes	0.8	76.5	89
High blood pressure	4.2	53.6	476
Asthma	1.9	60.8	209
Heart diseases	1.2	49.1	136
Rheumatism	11.1	33.1	1255
Hepatitis	2.4	43.8	266
Kidney diseases	10.6	45.6	1201
Stomach diseases	13.5	44.2	1524
Anemia	10.7	38.0	1206
Thyroids	1.1	48.3	126

- Prevalence of Cancer

The findings from the Yemen Family Health Survey indicate, that 3.5 per 1000 of ever-married women reported that they were affected with cancer, around 40 women out of the total of 11292 reported to be affected by cancer. This low level of women affected by cancer can be explained by the fact that women with cancer have their own great fears. Data show that 15.5 percent of women were affected with skin cancer, uterus cancer (9.1 percent), colon cancer (8.5 percent), and breast cancer (5.9 percent). Due to the low number of cases, it is recommended to take these percentages with caution. Data show some statistical variations in relation to cancer by place of residence. The percent of women affected by skin cancer is higher in urban areas compared with rural areas (30 percent against 12.5 percent). As for the other types of cancer, the percent is higher in rural areas compared to urban areas. Around 50 percent of the women reported that they discovered the diseases at age 25, while 20 percent discovered it at age 15-24 yeas, and 13.6 percent discover it before age 15. Out of those women, only 15.5 percent of the women are committed to treatment.

10.3 Prevalence of Reproductive System Diseases

The reproductive system diseases have serious medical consequences and they bring about discomfort or suffering to the affected women. The gynecological diseases occur mainly due to recurrent pregnancies & deliveries in addition to hormone disorder among women at older ages. Ever-married women (15-49) were asked to report on the occurrence of symptoms of specific reproductive diseases they were experiencing, and if they obtained information on the prevalence of reproductive morbidities.

Uterus Prolapsed

Women might be affected with Uterus Prolapse due to recurrent pregnancies, birth difficulties, with difference in the extent of illness which could increase if not treated. Table 10.3 shows that the percentage of occurrence of the symptoms of uterus prolapse according to reports of ever-married women in the age group 15-49 accounts for 22 percent. More than half of the women reported that they had been affected by Uterus Prolapse since they were five years old. Also, 61 percent of the women mentioned that this symptom was accompanied by constipation, cough or sneezing or carrying heavy loads.

Findings also indicate that there are no significant differentials according to place of residence, but 64 percent of women in rural areas reported that the situation was getting worse compared with 50 percent of women in urban areas. Fifty one percent of women who are affected with Uterus Prolapse did not seek medical consultation, while 43 percent did consulted a doctor and this percent increased to 59 percent among women in urban areas. There is a linkage between women's educational status and consultation from a doctor where the percentage of highly educated women who consult a doctor is higher than illiterate women (55 percent among who are holding secondary certificate against 39 percent among illiterate women).

The percentage of the women who are affected by Uterus Prolapse and who did not seek consultation in spite of health problems reported that:

- The cost was too high, (55 percent),
- Services is not available, (31 percent),
- Problems did not necessitate that, (18 percent),

Table 10.3 Prevalence of reproductive related diseases among ever-married women by some background characteristics

Variables	Uterus prolapse	Enuresis	Urinary tract infection*
Age group			
15-19	10.1	5.5	23.6
20-	18.8	9.9	26.1
25-	25.1	10.8	27.5
30-	25.4	13.2	30.7
35-	26.5	12.3	30.2
40-	21.7	13.0	28.9
45-49	20.5	13.4	29.9
No. of live births			
None	4.4	4.1	26.2
1-2	18.6	8.6	26.5
3-5	25.4	12.5	26.7
6+	26.6	14.0	30.9
Place of residence			
Urban	18.5	8.1	22.1
Rural	23.2	12.3	30.2
Educational status			
Illiterate	22.7	12.1	29.9
Read & write	24.0	9.8	25.9
Primary	17.0	8.9	20.7
Preparatory	16.8	9.1	23.7
Secondary+	18.3	5.8	15.0
Total %	22.1	11.3	28.2
Number	2496	1279	1812

*** During three months ago.**

- Enuresis

Women affected with Enuresis are subject to psychological and social disorder resulting in a tendency towards isolation and avoiding social relations. The prevalence of this illness increases to 11.3 percent among women especially with cough or sneezing or carrying heavy loads. Table 10.3 shows that the proportion of women experiencing enuresis is higher among women at age 40 and above (13 percent) and among women with a large number of births (14 percent) and is more pronounced among women in rural than urban areas (12.3 percent and 8.1 percent respectively).The proportion of women who reported having symptoms of this illness accounts for 4.4 percent among those who did not give any birth and it increases to 14 percent among those who have 6 births and more. More educated women and women in urban areas are less likely to complain about having this symptom compared to less educated women and it may be due to feeling more reserved to answering this question.

- Urinary Tract Infection

The female's urinary system is the most vulnerable system of a woman's body and is subject to the risk of the urinary tract infection. The proportion of women who reported symptoms of urinary tract infection rises to 28.2 percent Table 10.3 indicate that its prevalence is much more pronounced among women in rural areas compared with women in urban areas (30.2 percent against 22.1 percent respectively), among illiterate women (29.9 percent) and it is decreases with the increase of the education level where it reaches its minimum level among women who are holding a secondary certificate and higher (15 percent). There are no significant differentials according to age or number of living births. As for consulting a doctor for this symptom, 66 percent of the women reported that they did not consult a doctor compared with 28 percent. The percentage of the women who are affected with Urinary Tract Infection and who did not seek consultation in spite of health problems reported that:

- The cost was too high, (54 percent),
- Services are not available, (29 percent).

- Cervicitis

The Yemeni Family Health Survey included a question to ever-married women whether they were suffering from having severe vaginal discharge during the last three months before the survey. Findings show that among ever-married women, 16 percent reported the occurrence of symptoms of severe vaginal discharge, 72 percent of the women mentioned that this symptom was accompanied with itching or infection of reproductive system**,** and 66 percent reported having a bad smelling vaginal discharge while 78 percent reported having lower abdomen pain which is not related to the menstrual cycle.

Table 10.4 indicates that there is no variation in the severe vaginal discharge or the symptoms accompanying it according to women's age or number of births.

It was found that 50 percent of the women who suffered vaginal discharge or dysuria did not seek advice on treatment compared with 40 percent who sought consultation. The percentage of the women who suffered vaginal discharge and who did not seek consultation in spite of health problems reported that:

- The cost was too high (53 percent),
- Services are not available (33 percent),
- Problems did not necessitate that (15 percent),
- Consultation is not provide any help (11 percent),
- Frighten or shy of consultation (15 percent).

Table 10.4 Percentages of women who reported having severe vaginal discharge during the past three months preceding the survey by some background characteristics

Variables	% having vaginal discharge	% having vaginal discharge			Number of women
		Itching	Bad smelling	Lower abdomen pain	
No. of live births					
0	14.4	69.8	65.4	76.0	179
1-2	15.7	70.4	65.5	76.9	376
3-5	16.6	72.2	64.7	76.2	541
6+	16.3	72.9	67.6	81.0	716
Place of residence					
Urban	14.4	63.2	52.8	65.9	391
Rural	16.6	74.3	69.8	81.6	1421
Educational status					
Illiterate	16.3	74.3	69.5	81.1	1422
Read & write	16.1	67.0	54.7	71.5	168
Primary	14.2	60.4	61.5	74.9	94
Preparatory	17.5	58.8	42.4	61.0	73
Secondary+	13.1	62.4	53.3	51.0	56
Total	16.0	71.9	66.1	78.2	1812

10.4 Menses Problems

The menstrual cycle among women is usually regular in terms of duration and intensity and interval between cycles. Sometimes some changes and disorders occur. The survey collected information on the menstrual cycle problems during the past three months for non- pregnant women aged 15-49 still having their menses.

Findings, as seen in Table 10.5, disclose that the most common problem is excessive pain (15.7 percent) followed by irregularity of the menstrual cycle which accounts for 13.6 percent, heavy bleeding (up to 9.4 percent), and duration of the menstrual cycle that exceeds 7 days (8.6 percent).

Generally, as shown in Table 10.5, substantial differences in occurrence of menstrual problems not can be observed according to specific background characteristics, but excessive pains accompanied with menstrual cycle increase among women who have never got pregnant before (26.8 percent) compared with those who having at least one child (ranges between 13-15 percent).

It can be noticed that older women suffer from duration of the menstrual cycle that exceeds 7 days or heavy bleeding compared with younger women.

Menstrual problems increase among primipara and women who never got pregnant before. Substantial differences in occurrence of menstrual

problems are not observed according to place of residence, yet they decrease with the increase in women educational level.

Overall, 64 percent of the ever-married women suffering from menstrual problems did not seek consultation while only 29 percent saw a doctor.

Table 10.5 Prevalence of menstrual problems during the last three months among ever-married women aged 15-49 still menstruating and non-pregnant according to some background characteristics

Variables	More than 7 days menses	Heavy bleeding	Excessive Pain	Irregular menstrual cycle	Number of women
Age group					
15-19	6.4	8.1	18.8	12.5	649
20-24	7.1	8.0	16.6	12.9	1735
25-29	8.9	8.7	14.7	12.4	1751
30-34	8.0	9.5	12.8	12.7	1342
35-39	9.1	10.7	16.1	13.8	1531
40-44	10.4	10.7	16.0	13.4	1167
45-49	10.1	11.0	17.3	19.9	790
No. of live births					
0	6.9	9.2	26.8	18.7	928
1-2	8.4	8.9	14.9	12.6	1875
3-5	7.4	8.0	13.4	12.3	2633
6+	10.0	10.9	14.9	13.7	3528
Place of residence					
Urban	8.5	8.6	13.2	13.9	2221
Rural	8.6	9.7	16.5	13.5	6744
Educational status					
Illiterate	8.5	9.4	15.9	13.4	6895
Read & write	9.6	10.0	16.9	15.3	837
Primary	9.7	9.8	15.3	14.4	541
Preparatory	9.1	9.6	13.9	11.4	341
Secondary+	6.3	7.8	12.8	14.2	351
Number	8.6	9.4	15.7	13.6	8965

Figure 10.1 show the percentage of ever married women aged 15-49 who reported that they suffered from menstrual problems during the last three cycles by source of consultation and place of residence.

Generally, more educated women seek for a doctor's consultation more than less educated women. As it is shown, around fifty percent of women holding preparatory certificate consulted a doctor compared to 25 percent of illiterate women. Also, women in urban areas seek doctor consultation more than women in rural areas.

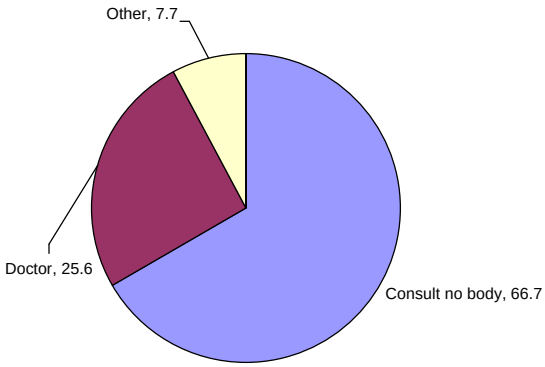
Women who suffered from menstrual problems during the last three cycles and who did not seek consultation in spite of health problems reported that:

- The cost was too high (42.4 percent),

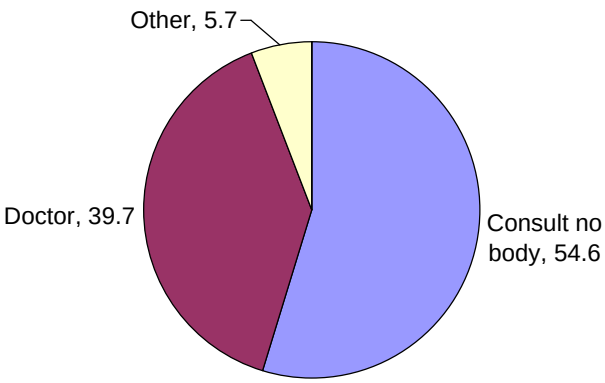
- Services are not available (24 percent),
- Problems did not necessitate that (21.6 percent),
- Consultation would not help (11 percent),

Figure 10.1 Percent distribution of ever married women aged 15-49 who reported that they suffered from menstrual disturbance during the last three cycles by source of consultation and place of residence

(Rural)



(Urban)



10.5 Source of Consultation and Obstacles Preventing from Using Health Care

The Yemeni Family Health survey included a question to ever-married women who reported symptoms related to reproductive system morbidities whether they sought advice on treatment and type of personnel/place consulted and obstacles preventing them from using health facility care.

Findings shown in Table 10.6 indicate that public hospital or governmental health units (60.7 percent), are the most sought when the medical consultation is needed, followed by the private doctor (8.7 percent), and then the private hospital or clinic with some variations by place of

residence. The findings show that women in rural areas are seeking consultation in public hospital more than women in urban areas who prefer private doctors for consultation. Also, women of higher educational level tend to seek consultation from private doctors more than illiterate women (30 percent versus 6 percent. It can be noticed as well that the contribution of private doctors in providing health care services is higher in urban than in rural areas, while the contribution of public hospital or health centers in rural areas is much more pronounced compared to urban areas.

Table 10.6 Percent distribution of ever married women (15-49) by source of health care facility and some selected background characteristics

Variables		Public hospital	Public health center	Private health center	Private hospital/ clinic	Private doctor	At home	Don't know/ Unsure	Number
Place of residence	Urban	43.2	12.7	3.9	10.7	19.9	7.9	1.6	2713
	Rural	47.8	14.4	4.5	7.0	5.1	18.0	3.1	8579
Educational status	Illiterate	47.0	14.9	4.4	6.9	5.9	17.8	3.0	8747
	Read & write	51.7	10.2	4.1	10.9	12.4	8.9	1.8	1034
	Primary	46.2	10.3	4.0	12.4	16.9	8.8	1.2	661
	Preparatory	42.0	13.3	2.8	10.2	23.7	5.8	1.5	417
	Secondary+	33.8	10.7	5.5	11.7	29.8	6.8	1.7	425
Total		46.7	14.0	4.4	7.9	8.7	15.6	2.7	11292

Regarding obstacles facing women for receiving health care services, Table 10.7 show that lack of desire to go alone is the first and the most common obstacle facing the women for not receiving heath care services (81 percent), then comes not having enough money (72 percent), far distance to health facility (64 percent), and the lowest percent (32.8 percent) is not knowing where to go.

Variations according to place of residence and women's educational attainment are observed. The percentage of women in rural areas who reported that they did not have the desire to go alone is 88 percent compared with 61 percent among women in urban areas. Also, not having enough money is considered the second obstacle among rural and urban women which prevents them from getting health care with some variations (77 percent versus 54 percent), while far distance to health facility is considered an obstacle for 75 percent of women in rural areas compared with only 25 percent among women in urban areas.

Table 10.7 Percentages of ever married women (15-49) reporting that there are obstacles preventing them from using health care by type of impediment, place of residence and education level*

Variables		Knowing where to go	Getting permission	Getting enough money	Place far away	Having to use transport	Having to go alone	No female provider	Number
Place of residence	Urban	16.4	29.6	54.1	25.6	29.1	60.8	45.7	2713
	Rural	38.0	53.7	77.4	75.7	72.1	87.9	61.3	8579
Educational status	Illiterate	36.4	51.5	78.4	70.7	68.2	85.0	60.1	8747
	Read & write	25.1	40.9	53.6	46.7	46.7	74.6	51.7	1043
	Primary	20.5	35.6	51.2	38.4	39.9	71.7	47.9	661
	Preparatory	17.6	31.6	46.4	35.8	33.5	67.0	55.7	417
	Secondary+	12.7	27.8	35.9	24.0	27.2	52.6	37.1	425
Total		32.8	47.9	71.8	63.5	61.7	81.4	57.0	11292

*Multiple answers allowed

Overall, the importance of the obstacles decreases with the increase of the education level. While not having enough money is a main obstacle for 78.4 percent of illiterate women it is decreases to 35.9 percent among women who are holding secondary certificate and higher. Also, 85 percent of illiterate women reported that the desire to go alone is an obstacle preventing them from using health care and this percent decreases to 53 percent among women who are holding secondary certificate and higher.

Chapter 11

SEXUALLY TRANSMITTED DISEASES

Due to the nature and source of the diseases, STDs are usually surrounded by secrecy and a sense of shame especially in the case of improper sex relations. In most cases, those affected do not seek health care and consider it fair enough to consult acquaintances, neighbors and pharmacists. Even when visiting a doctor, they do not explain the case properly, nor do they mention the partner's name and thus the two are not treated together. Therefore, there is desperate need for spreading knowledge about these diseases, and how to prevent them. The YFHS was keen on collecting information about these diseases, including knowledge about them, sources of knowledge, the prevalence rate and venues for consultation, in addition to data available about AIDS.

11.1 Knowledge about Sexually Transmitted Diseases (STD):

Knowledge about these diseases and how to prevent them is one of the important factors of reproductive health. The YFHS included information on knowledge of ever-married women aged 15-49 about most STD. Table 11.1 presents the percent distribution of married women (15-49) by their knowledge about some STD. Data show that the highest percentage of spontaneous or after probing knowledge was that of AIDS (34.6 percent and 9.2 percent respectively), followed by that of mycosis.

Table 11.1 Percentages of ever married women (15-49) knowing about some STD's.

	Yes, spontaneously	Yes, after Probing	Total
Syphilis	3.6	6.5	10.1
Gonorrhea	4.6	7.0	11.6
Mycosis	3.6	6.2	9.8
AIDS	34.6	9.2	43.8
Venereal warts	1.9	4.3	6.2

Table 11-2 shows that knowledge about STD's is higher in urban areas than in rural areas. Knowledge about AIDS rises with the woman's educational level. It rises from 34.1 percent among the illiterates to 95.5 percent among secondary certificate holders, and of syphilis from 5.8 percent among the illiterates to 52.5 percent among the secondary certificate holders.

Table 11.2 Percentages of ever married (15-49) who had knowledge about a number of STD's by place of residence and educational level

characteristics	Syphilis	Gonorrhea	Mycosis	AIDS	Ven. warts	Other STD	No of women
Place of residence							
Urban	21.9	21.6	16.4	76.6	10.9	2.8	2713
Rural	6.4	8.4	7.8	33.4	4.7	1.0	8579
Educational level							
Illiterate	5.8	7.1	6.7	34.1	4.2	0.9	8747
Read &write	15.1	16.6	16.1	67.8	10.8	2.5	1043
Primary	19.3	21.2	14.4	76.1	9.9	1.8	661
Preparatory	29.9	33.6	25.3	84.7	15.3	3.2	417
Secondary +	52.5	54.9	37.6	95.5	21.7	7.3	425
Total	10.1	11.6	9.8	43.8	6.2	1.5	11292

11.2 Sources of knowledge:

Table 11.3 presents the percent distribution of women by the source from which they get their information about AIDS. The table confirms the fact that television is the main source of information about AIDS; more than 6 in ten women knew about AIDS from television. Radio made a much smaller contribution to creating AIDS awareness; only forty percent of women reported that radio was their source of information. Among the remaining women, the principle source of information was community meetings (28.6 percent) followed by relatives and friends (21.6 percent). However, rural women were less likely to hear about AIDS from television and were more likely to hear it from radio.

Educated women were much more likely to have been exposed to AIDS information through magazines and newspapers compared to women who can read and write (55 percent, 34 percent, 22 percent and 11 percent among women holding secondary certificate, who had completed preparatory school, who had completed primary school and those who can read and write respectively).

Table 11.3 Percentages of women having knowledge about AIDS by source of knowledge

Source	Urban	Rural	total
TV	27.7	49.7	40.5
Radio	87.5	51.6	66.7
Magazines / newspapers	19.5	5.4	11.3
Posters/pamphlets	6.3	2.2	3.9
Health workers	4.6	2.9	3.6
Mosques	1.3	1.9	1.6
Schools	2.5	1.6	2.0
Community Meetings	29.2	28.1	28.6
Friends / relatives	21.2	21.7	21.6
Work place	2.5	0.5	1.4
Others	2.1	2.9	2.6
Number of women	2079	2869	4948

11.3 knowledge of AIDS Infection Methods and how to avoid it

The survey showed that 85 percent of the women who know about AIDS reported that contracting it occurs basically through sexual intercourse. Knowledge about the fact that sexual intercourse is a cause of contracting AIDS increased with age, number of births and a high educational level, and was higher in the urban areas than in rural areas (91.4 percent versus 79.7 percent).

As for other means of AIDS infection, data in Table 11.4 show a significant variation among women according to place of residence as related to identifying other means of AIDS infection i.e. Blood transfusion, not using a condom, using the same injection for different persons, than through sexual intercourse. More educated women and those who are living in urban areas knows other means of AIDS infection than less educated women and those who are living in rural areas.

Table 11.4 Percentages of ever-married married women (15-49) knowing about AIDS, who are knowing the methods of infection with AIDS and place of residence and educational level

Characteristics	Sexual intercourse	Blood transfusion	No use of condom	Use of injections	Use of sharp cutter	From the mother to her baby	Mosquito bite	Other	No of women
Place of residence									
Urban	91.4	44.2	6.6	28.4	29.4	10.8	2.2	5.2	2079
Rural	79.7	29.4	1.5	10.9	13.0	4.8	1.1	2.5	2869
Educational Level									
Illiterate	80.6	27.5	2.0	11.5	13.2	4.4	1.2	3.3	2979
Read & write	87.9	41.6	3.9	20.2	20.2	5.6	1.4	3.0	707
Primary	88.5	46.7	4.1	21.2	25.9	8.2	0.9	2.7	503
Preparatory	95.3	57.9	5.4	27.9	31.5	13.0	1.9	6.3	353
Secondary+	98.9	77.1	13.0	52.4	49.7	25.4	5.0	6.1	406
Total	84.6	37.7	3.6	18.2	19.8	7.3	1.6	3.6	4948

As for the methods for preventing AIDS, the data show that 81 percent of the women mentioned safe sexual relations and avoidance of blood transfusion, (29.1 percent) as shown in Table 11.5.

Table 11.5 Percentages of ever-married married women (15-49) knowing about AIDS, who are knowing the methods of prevention and place of residence and educational level

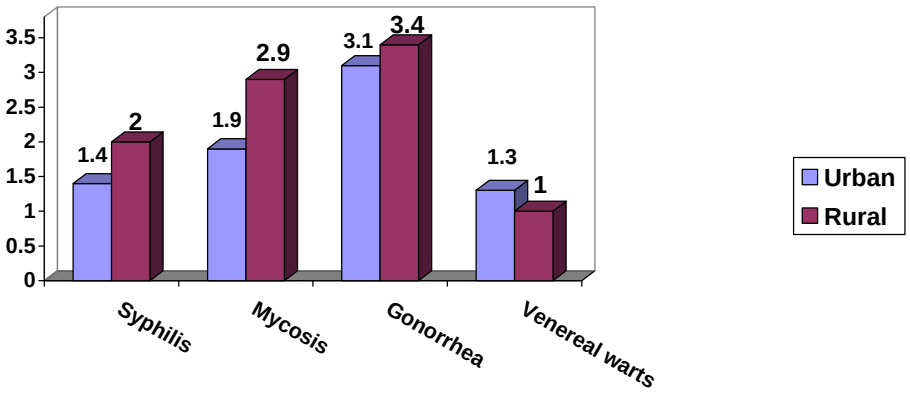
Variables	Safe sexual relations	Use of condom	Avoid blood transfusion	Avoid injections	Do not use sharp tools	No of women
Place of residence						
Urban	82.1	5.8	41.0	26.3	24.1	2079
Rural	80.4	1.3	20.4	9.9	8.9	2869
Educational level						
Illiterate	80.7	1.7	19.8	10.1	9.4	2979
Read & write	81.4	3.7	33.1	17.2	16.9	707
Primary	83.2	3.6	37.0	22.9	19.7	503
Preparatory	82.2	4.2	48.7	28.4	23.7	353
Secondary+	80.4	11.9	63.6	47.2	42.7	406
Total	81.1	3.2	29.1	16.8	15.3	4943

***** Multiple answers acceptable

11.4 Infection with Sexually Transmitted Diseases

Women were asked if they have been infected with STD (except AIDS) during the last twelve months before the surveys. Small percentage of women admitted of having been infected with one of the STD's (7.2 percent). Syphilis infection was the most STD mentioned by the infected women (8.1 percent) followed by Mycosis (3.3 percent), Gonorrhea (2.7 percent), and then Venereal warts (1 percent), while 1.5 percent of the women mentioned that they were infected with other STDs. Figure 11.1 show that the percent of women living in rural areas and who are infected with STDs in higher than the percent of women living in urban areas and infected with STDs.

Figure 11.1 Percentage of the women (15-49) suffering from some STD's during the 12 months preceding the survey by place of residence

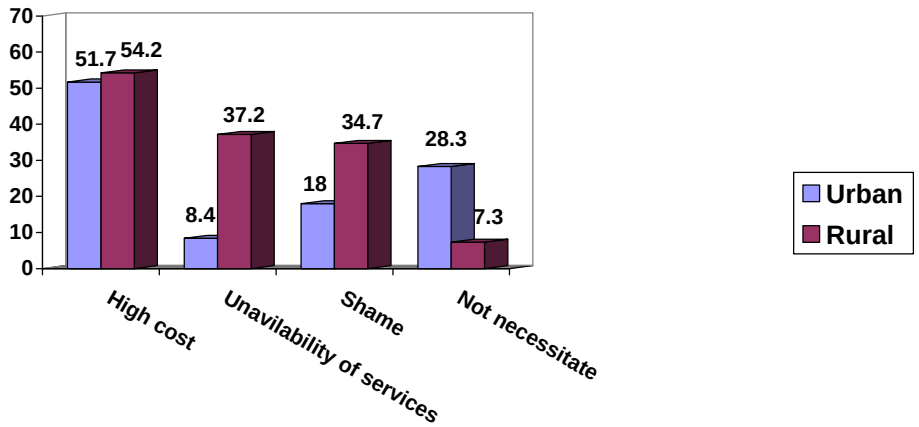


The survey showed that 52 percent of women infected with STDs during the last 12 months before the survey did seek for consultation, whereas 39 percent did not seek for consultation. Pharmacies, dayas, and relatives were the most places mentioned by 11 percent women as a source for their medical consultation. As for those who consulted a doctor, most of them were from urban areas (73 and 46 percent in urban and rural areas respectively).

The percentage of the women who did not seek for consultation for treatment in spite of their infection with one of the STD reported that:

- The cost was too high (54 percent)
- Unavailability of services (34 percent)
- Feeling shame of afraid (32.6 percent)
- Problems did not necessitate that (10 percent).

Figure 11.2 Percentages of the women (15-49) suffered from any STD's during the 12 months preceding the survey and did not seek for consultation for treatment by reason and place of residence



As it is shown in the figure, cost is too high, and unavailability of services were the main causes that prevented women in rural areas to seek for consultation compared to women in urban areas, while feeling a shamed as a reason of not seeking for consultation is mentioned by a high percent of women in urban areas than those in rural areas.

The data also show that 19 percent of the husbands of those infected with STDs' sought consultation, and 6 percent were not been informed about it.

As it shown in Table 11.6, husbands in urban areas sought for consultation more than those in rural areas (22.1 percent versus 18.2 percent respectively). Data also indicates that education has a positive effect on husbands attitudes towards seeking for consultation, where 57.0 percent of husbands married to women finished preparatory school and higher seek for

consultation comparing to 17.7 percent of husbands married to illiterate women.

Table 11.6 Percentages of husbands of women infected with STDs' who sought consultation by place of residence and educational level

Characteristics	husbands who sought consultation	Number of women
Place of residence		
Urban	22.1	170
Rural	18.2	603
Educational level		
Illiterate	17.7	583
Read & write	21.7	106
Primary	19.8	33
Preparatory	35.8	23
Secondary +	22.0	28
Total	19.0	773

Chapter 12

CHILDREN NUTRITIONAL STATUS

Nutritional status is a primary determinant of child's health and well-being. Malnourished children have a higher risk of mortality and morbidity. Therefore the Yemeni Family Health Survey collected the required data to assess the nutritional status of children less than 5 years of age; including age, weight and height, using the anthropometrical measures recommended by World Health Organization (WHO).

Three anthropometrical measures are usually used for assessing the nutritional status:

1- Height -for-age to measure the level of stunted,
2- Weight-for-height to measure the level of wasted, and
3- Weight-for-age to measure the level of under weight.

The use of a reference population is based on the findings that well-nourished children in all population groups follow similar growth patterns and thus exhibit similar distribution with respect to height and weight at given ages. Children whose measures are between below –2 and –3 standard deviations from the median of the reference population are considered moderately malnourished, while those whose measures are below –3 standard deviations are considered to be severely malnourished.

The weight-for-height index measures body mass in relation to body length. Children whose weight-for-height measures are below minus two standard deviations (-2 SD) from the median of the reference population are too thin for their height, or wasted, while those whose measures are below minus three standard deviations (-3 SD) from the reference population median are severely wasted. Wasting represents the failure to receive adequate nutrition during the period immediately before the survey. In may be the result of recent episodes of illness or acute food shortages.

Height and weight measurements were obtained for 10161 children.

12.1 Height for Age (Stunting)

Table 12.1 presents the percentage of children, less than 5-year old suffering from stunting by some variables. Data show that more than 50 percent of children less than 5-year old suffer from moderate to severe stuntedness. The percentage of children with severe stuntedness is about 31 percent. Rural children are more likely to suffer from stuntedness than those in urban areas (44.2 percent and 55.5 percent respectively). Similar pattern is noted for children who suffer from severe stuntedness (21.4 percent in urban areas and 33.4 percent in rural areas).

Table 12.1 Percentages of children, less than 5-year old suffering from stunting by some variables

Variables	Stunting*	Severe stunting**	No. of children
Age in months			
<6 months	14.2	4.8	1021
6-9	36.9	14.9	663
10-11	59.9	31.8	190
12-15	46.2	20.3	1051
16-23	66.8	41.9	894
24-35	57.4	35.6	2078
Sub-total			
0-35	47.0	26.1	5897
36-47	60.9	38.8	2166
48-59	62.3	36.2	2098
Sex			
Male	53.1	30.9	5275
Female	53.1	30.8	4886
Place of Residence			
Urban	44.2	21.4	2133
Rural	55.5	33.4	8028
Total	53.1	30.9	10161

*<-2 SD ** <-3 SD

12.2 Weight for Height (Wasting)

Table 12.2 shows the percentages of children suffering from wasting; moderate and severe wasting according to age, sex and place of residence. It is clear that overall, 12.4 percent of the children under study suffered from wasting in comparison with the standard median of the reference population; with more than 2 SD, and 3 percent suffered from severe wasting with more than 3 SD below the reference median.

The analysis of wasting according to child's sex indicates that males were more likely to suffer from wasting than females (13.3 percent and 11.4 percent respectively). The table also shows that children resident in rural areas were more likely to suffer from wasting than children resident in urban areas (13.1 percent against 10 percent).

Table 12.2 Percentages of children, less than five-years who are suffering from wasting by some characteristics

Characteristics	Wasting*	Severe wasting*	No. of children
Age			
<6 months	14.3	4.1	1021
6-9	17.9	4.4	663
10-11	14.0	4.4	190
12-15	17.2	5.9	1051
16-23	15.8	2.5	894
24-35	12.0	2.6	2078
Sex			
Male	13.3	3.5	5275
Female	11.4	2.4	4884
Place of residence			
Urban	10.0	2.3	2133
Rural	13.1	3.1	8028
Total	12.4	3.0	10161

*<-2 SD ** <-3 SD

12.3 Weight for Age (Underweight)

Table 12.3 shows that about 45.6 percent of children under study are suffering from underweight (moderate or severe), whereas the percent of those who suffer from severe underweight is 15.2 percent. The table also shows that underweight is lower among children aged less then 6 months (12.3 percent).

As the other two measures, females are less likely to be under weight than males (45.1 percent and 46 percent respectively), and rural children are more likely to suffer from under weight than those who are living in urban areas (47.9 percent and 36.7 percent respectively).

Table 12.3 Percentages of children, less than five-year who are suffering from underweight by some characteristics

Characteristics	Underweight*	Severe Underweight**	No. of children
Age			
<6 months	12.3	4.1	1021
6-9	42.2	13.1	663
10-11	55.7	23.1	190
12-15	42.4	16.2	1051
16-23	52.3	20.5	894
24-35	53.5	22.2	2078
Sex			
Male	46.0	15.4	5275
Female	45.1	15.0	4886
Place of residence			
Urban	36.7	9.7	2133
Rural	47.9	16.7	8028
Total	45.6	15.2	10161

*<-2 SD ** <-3 SD

12.4 Yemen situation according to World Health Organization (WHO) classification

The following table indicates the World Health Organization (WHO), evaluation of nutritional status. In this report, it is based on the comparison of three indices of children in the survey with those reported for the reference population of well-nourished children.

Table 12.4 World Health Organization (WHO), evaluation of nutritional status in Yemen

Indicator	Prevalence in Yemen	Malnutrition status according to the prevalence range (%)			
		Low	Moderate	High	Very high
Stunting	53.1	<20	20-29	30-39	>=40
Wasting	12.4	>5	5-9	10-14	>=15
Underweight	45.6	<10	10-19	20-29	>=30

According to Table 12.4, Yemen is suffering from very severe malnutrition status. Whereas the prevalence of stunting is high, the prevalence of wasting and underweight reached a very high level especially in rural areas and among children less than 6 months of age. This situation reflects the low level of breastfeeding during the first six months of the child's age and the early introduction of supplementary foods.

12.5 Use of Iodized Salt

Iodine is another important micronutrient. Low levels of iodine in the diet are associated with a number of problems including miscarriage and among children, retarded mental development.

In the 2003 YFHS, the iodine content of salt used in the household was measured. Table 12.5 shows the percentage of households using iodized salt. Overall, salt was not iodized at all in slightly more than half of households. Urban households were much more likely than rural households to be using salt considered to be adequately iodized (80 percent versus 42 percent). The variation according to place of residence is as a result of availability of iodized salt in urban areas compared to rural areas.

Table 12.5 Percentages of households according to type of use

Place of residence	Households use no iodized salt (%)	Households use iodized salt		Salt no available at household	Households in which salt was untested	Number
		Iodine is less than 15 ppm	Iodine is equal to 15 ppm or more			
Urban	19.0	30.5	47.1	2.0	1.4	2930
Rural	47.6	25.2	24.2	1.6	1.3	9674
Total	41.0	26.4	29.5	1.3	1.3	12604

Chapter 13

INFANT AND CHILD MORTALITY

Reducing mortality rates, especially among children, is considered one of the most important aims that health policies and programs in different countries seek. These rates, in general, and of infants, in particular, represent basic indicators for measuring hygienic and living standards prevailing in a community. They can also be used for estimating the dimension of success of the efficiency of applied policies and health programs.

The Yemeni Arab Republic exerted great efforts through the Ministry of Health that executed integrated programmes for propagating a network of health care services, preventive and therapeutic, all over the country and improved its quality in rural and urban regions within the framework of primary health care unit. Such programs and activities resulted in a rapid drop in mortality rates, in general, and child mortality in particular.

This chapter deals with information pertaining to the levels, trends and differentials of the neonatal, postnatal deaths, infant deaths and deaths of children less than 5 years old in addition to the differentials of mortality levels according to the background characteristics that might have impacts on child mortality.

Mortality estimates were calculated according to the Yemeni Family Health Survey 2001 that collected data on women's reproductive history and included all live births beginning with the first born child: sex, month and year of birth, survival status, age of those alive, and age at death for those dead. This data allowed calculation of rates using the direct method.

Since calculation of mortality estimates is based on data from birth histories reported by mothers such as date of live births, survival status, and age at death of children who have died, they are in general subject to reporting errors which are due to memory lapse. Accordingly, data could suffer from under estimation of live births and inaccuracy of reporting dates of age at deaths which certainly jeopardize the calculation of mortality estimates. The data used in this chapter to examine the levels, trends and differentials of infant and child mortality were subject to quick, and initial assessment. Nevertheless, it is worth mentioning that there is a need to undertake a comprehensive review for studying and checking accuracy, quality and data reporting.

13.1 Levels of Child Mortality:

Estimation of infants' and children's mortality was carried out by using

the direct method from the survey data by relying on the reproductive history collected in the second part of the reproductive health questionnaire. As mentioned above, estimations of child mortality calculated according to household's surveys data, relying on the woman's reproductive history, might be affected by omission errors resulting from incomplete registration of vital data such as birth, death, accuracy of the age, and date of age at death that usually increases since information is related to dates that are far away from the date of the survey.

Table 13.1 shows that there is a substantial decline in mortality during infancy and childhood as indicated. Infant mortality dropped from 90.4 deaths per 1000 live births over the fifteen years period preceding the survey to 74.8 per 1000 live births during the five years prior to the survey. The corresponding decline in the under-five mortality rate was from 122.8 to 101.9 deaths per 1000 births, respectively. Data indicate that the mortality rate of neonatal amounted to 37.3 per 1000 and that of post neonatal (from one month to less than one year) amounted to 37.5 per 1000.

13.2 Trends and Levels of Infant and Child Mortality:

Estimation of neonatal, post neonatal and infant and child mortality over the three 5-year periods prior to the survey are presented in Table 13.1. Data in the table show a tangible drop in all infant and child mortality rates over the ten years period preceding the survey. Out of every 1000 births during 10 years prior to the survey there were 120.9 deaths while during the five years prior to the survey, the value dropped to 101.9 per 1000 births. The mortality rate among children 1-4 yrs old dropped from 32.5 per 1000 to 29.3 per 1000. The mortality rate among the neonatal also dropped from 44.5 per 1000 to 37.3 per 1000 and post-neonatal mortality dropped from 46.9 per 1000 to 37.5 per 1000.

Table 13.1 Estimation of infant and child Mortality during three 5-year periods prior to the survey, per each 1000 live Births

Years preceding the survey	Mortality rates				
	Neonatal (NN)	Post Neonatal (PNN)	Infant (1qo)	Child (1q4)	under 5 (5qo)
0-4	37.3	37.5	74.8	29.3	101.9
5-9	44.5	46.9	91.4	32.5	120.9
10-14	38.4	52.0	90.4	35.6	122.8

13.3 Differentials in Infant and Child Mortality

The importance of the differentials in the level of child mortality resides in defining the population groups that most need the health programs that aim at improving the hygienic level, in general and decreasing child mortality in particular. It also provides some indicators that show the most determinants of child health status.

Table 13.2 presents neonatal and infants and under 5 mortality rates, during 10 years prior to the survey by some background characteristics. Data clarifies the variations of child mortality during the five years prior to the survey according to the child sex and place of residence. It shows a rise in all children mortality rates in rural regions, in comparison with urban ones. The infant mortality rate varied between 70.6 per 1000 in urban regions, versus 86.3 per 1000 in rural ones. All mortality rates were also higher among males than females. Infant mortality rates varied between 77.1 per 1000 among females and 88.6 per 1000 among males.

This subsection deals with factors that are particularly associated with infant and child mortality namely; mother's educational status, mother's age at delivery, the previous birth interval and their impact on the probability of children's death as can be seen in table 13.2.

Children of illiterate women were much more likely to be exposed to death in comparison with women of other educational levels, especially those with a secondary school certificate and above.

Infants born to women under 20 years of age and to older women above 34 years age were much more likely to die than children born to mothers at age 20-34 years.

Infant mortality among live births that occurred after an interval of less than two years is much higher than that among children who were born after an interval above a two year period.

Table 13.2 Neonatal, infants and under 5 mortality rates, during 10 years prior to the survey, by some background characteristics.

Characteristics		Neonatal mortality	Infant mortality	Under 5 mortality
Residence	Urban	39.7	70.6	87.3
	Rural	41.1	86.3	117.6
Mother's educational status	Illiterate	41.1	87.4	119.1
	Literate	37.6	65.5	75.6
	Primary	37.6	68.9	80.6
	Preparatory	48.2	60.3	73.8
	Secondary +	40.7	48.7	55.2
Infant's sex	Male	45.8	88.6	114.4
	Female	35.5	77.1	108.0
Mother's age at birth	< 20 years	59.9	109.8	133.0
	25-29	39.1	80.7	110.0
	30-34	33.7	71.5	97.7
	35-49	34.5	75.7	109.5
Previous birth interval	First birth	63.0	102.7	120.9
	>2 years	57.1	122.5	165.9
	2-3 years	18.1	42.8	60.4
	4 +	19.6	35.3	48.8
Total		40.8	83.1	111.3

CHAPTER 14

BREASTFEEDING AND INFANT'S NUTRITION

Both the mother and child are affected by the infant's feeding. The frequency, duration and amount of feeding affects the child's nutritional status, which in turn influences child survival and the mother's risk of pregnancy; thus breastfeeding is an important factor in spacing births in societies where use of contraception is uncommon.

This chapter examines infant feeding practices for children born in the five years preceding the survey to women interviewed for the YFHS. A number of topics related to infant feeding and weaning practices are considered including: prevalence, pattern, and duration of breastfeeding, introduction of supplemental foods, use of bottle with a nipple for feeding liquids or semisolid foods, age at weaning, manner in which weaning takes place, and reason for weaning.

14.1 Initiation of Breastfeeding

An early start of breastfeeding has several benefits for both the mother and the baby. Regarding the mother, early breastfeeding enhances the secretion of the hormone which assists in restoring the womb to its natural position, and reduces the risk of postpartum bleeding. Moreover, the early breast feeding is important for the newborn because it enables him/her to obtain that certain milk only available in the first suckling. It contains the antibodies which the newborn needs due to his/her incomplete immune system.

Table 14.1 shows that most of the children in Yemen (97 percent) are normally breast-fed for some time. The table shows that most of them started suckling immediately after birth, i.e. within the first hours after birth, about 40 percent were breastfed, while the rate of those who started breastfeeding within one hour to less than three hours after birth was about 15.5 percent. Data in Table 14.1 presents the differentials in breastfeeding by place of residence. Among all births, 52.5 percent of mothers' resident in rural areas started suckling during the first three hours after birth compared to 66.7 percent of mothers resident in urban areas.

The habit of giving other liquids to the baby after birth and before feeding (pre-lacteal feed), is relatively common and is estimated to be about 75 percent among the last babies born during the last three years before the

survey. There are some slight differentials, but it is a habit that is quite prevalent as shown in Table 14.1.

Table 14.1 Percentages of births ever breast-fed among the last live births during the last three years prior to the survey and their distribution by starting time of breastfeeding and percentage of those who received pre-lacteal feed according to some characteristics.

Characteristics	% of those who were breast-fed	Number of births	% of those who started to be breast-fed				% of those who received pre-lacteal feed
			Within the first hour	Within 1-3 hours	Within 3-6 hours	After 6 hours	
Mother's age							
15-19	95.8	401	36.1	16.9	9.2	37.8	72.4
20-24	95.9	1535	40.2	15.7	7.4	36.8	75.8
25-29	97.7	1586	40.3	14.5	8.1	37.2	74.8
30-34	97.2	1119	40.8	15.7	7.9	36.1	73.9
35-40	96.0	901	38.3	17.0	7.3	37.4	76.2
40-45	96.4	485	42.5	15.7	7.9	33.9	72.0
45-49	95.7	202	43.9	11.9	2.9	41.2	75.1
Child sex							
Male	96.4	3240	39.9	15.3	7.7	37.1	74.6
Female	96.9	2989	40.1	15.8	7.6	36.5	74.8
Birth order							
1	94.3	867	34.5	13.0	8.1	44.4	77.9
2	96.9	896	39.8	16.9	9.0	34.3	74.6
3	97.2	852	40.4	16.5	8.5	34.7	73.2
4	97.6	714	45.8	15.5	5.8	33.0	69.4
5+	96.9	2901	40.1	15.6	7.3	37.0	75.6
Place of residence							
Urban	96.1	1309	49.0	17.7	8.7	24.7	72.3
Rural	96.8	4920	37.6	14.9	7.4	40.1	75.3
Mother's education level							
Illiterate	96.8	4781	38.8	14.8	7.5	38.9	75.0
Read & write	97.3	594	44.3	18.4	6.8	30.5	72.4
Primary	96.0	380	42.9	18.5	8.6	30.0	75.1
Preparatory	95.3	248	46.4	14.1	12.3	27.2	74.1
Secondary+	93.5	226	42.4	14.4	7.0	31.2	74.5
Total	96.6	6229	40.0	15.5	7.6	36.8	74.7

14.2 Introduction of Complementary Feeding

The UNICEF recommends exclusive breast-feeding throughout the first six months of a baby's life, and giving the baby no other complementary liquids (including plain water) or solids, since giving the baby any other complementary food early will expose him/her to germs which may cause diarrhea. Moreover, complementary food is not sufficient to provide the infant with calories he/she needs particularly if they are watered down. Finally, the

flow of breast milk is affected by the frequency and the amount of suckling which may lead to reducing its flow and in turn may lead to malnutrition.

The survey included a question to the mothers concerning the status of breast-feeding for children less than three years old, if that feeding was exclusive, and if the child was given complementary food, as shown in Table 14.2

Table 14.2 shows that most Yemeni children continue breast-feeding even after the first year of age and the percentage of those who receive exclusive breast-feeding until the age of three months is about 16 percent, and those who received breast-milk and were given water as well is only about 23.4 percent while about 3.4 percent of the children were given juice and liquids. Also, the percent of children who were given complementary food /milk during the first three months increased gradually to reach about 50 percent. Data show that, a bottle with nipple was used in feeding only 42 percent of the children during the first three months of their life.

The results in Table 14.2 indicate that the majority of older children were receiving other foods or milk in addition to breast milk. At 10-11 months, however, about 18.6 percent of children were still being breastfed while the percent of those who were still being breastfed or those who were given water reduced to 4 percent.

Two thirds of children at age 12-23 months were still breastfeed and around one third were weaned.

Table 14.2 Percent distribution of living children less than 3 years old according to current feeding status, introduction of complementary feeding, and the child's age in months.

Age in months	No breast feeding	Exclusive breast feeding	Breastfed with			% use feeding bottle	Infants' Number*
			Water	Water, Juice, & Liquids	Complementary food/milk		
0-3	3.6	16.0	23.4	3.4	50.7	41.7	819
4-5	7.7	3.7	13.6	1.7	70.7	52.7	470
6-9	11.1	1.7	8.6	0.7	76.3	51.4	942
10-11	18.6	0.6	3.5	0.6	74.4	54.9	325
12-23	35.8	0.7	2.7	0.4	59.4	48.9	2058
24-35	68.6	0.2	0.5	0.0	24.6	42.7	1294
Total	31.4	3.1	7.0	0.9	55.0	47.6	5909

*N.S is excluded

Although breastfeeding is common in Yemen, a small proportion of children were not breastfed at all (209 children). Mothers who did not

breastfeed their children were asked about the reasons and the most common reason for non initiation of breastfeeding was the death of the baby after birth which was mentioned by 35.7 percent of mothers who did not breastfeed. Lack of breast milk was the second common reason given (14.9 percent), followed by mother was sick (11.6 percent). Equally important as a reason was infant's refusal (11.5 percent) and the rest was related to other reasons.

14.3 Duration and Frequency of Breastfeeding

Table 14.3 shows the differentials in the median duration of breast-feeding, the prevalence of bottle-feeding and the estimate of the average duration of breastfeeding among the last live births of each woman during the last three years. The first estimate depends on the current status, and the second is calculated by the prevalence/incidence method. The average duration is calculated by dividing the number of the children still breast-fed at the time of survey by the overall number of births per month.

The Median duration of breastfeeding is 21.7 months while, the mean of the breast-feeding period is 23.1 months.

Exclusively breastfeeding is applied to children who were given only breast milk and did not receive other complementary liquids (including plain water) or solids. While children who were given breast milk and plain water only is considered as "predominant breastfed". As for children who were given breast milk in addition to liquids or completely foods is consider as "any breastfed".

As for the differentials in the median of breastfeeding, findings indicate that the breastfeeding rate is slightly higher among females than males' (22.6 percent and 21.3 percent respectively). Moreover, the median of the breastfeeding in rural areas is longer than in urban areas (22.2 against 20.8 months). Besides, it is inversely related to the level of mothers' education. The figure shows that illiterate mothers breast-feed for longer periods than educated ones.

Table 14.3 Median duration of any breastfeeding, exclusive breastfeeding and predominant breast-feeding, among live births born during the last three years prior to the survey according to some characteristics

Characteristics	Breastfeeding median by months			Number of births
	Any breastfeeding	Exclusive breastfeeding	Predominant breastfeeding	
Birth's sex				
Male	21.3	0.5	0.5	3240
Female	22.6	0.5	0.5	2989
Birth's order of child				
First	15.1	0.4	0.7	867
2	17.6	0.5	0.5	896
3	23.4	0.5	0.5	825
4	22.2	0.5	0.5	714
5+	23.7	0.5	0.5	2901
Place of residence				
Urban	20.8	0.5	0.6	1309
Rural	22.2	0.5	0.5	4920
Educational status of mother				
Illiterate	22.6	0.5	0.5	4781
Read & write	19.6	0.5	0.4	594
Primary	16.9	0.4	0.6	370
Preparatory	17.3	0.4	1.9	248
Secondary +	11.7	0.4	1.0	226
Median	21.7	0.5	0.5	6229
Prevalence/incidence	23.1	1.0	2.6	6229

Mothers were asked questions about the frequency of breastfeeding during the 24 hours before the survey. Table 14.4 shows the percentage of children aged less than 6 months by number of breast-feedings during day and night prior to the survey.

Among children under the age of six months, 12.9 percent were breasted at least six times during the 24-hour period before the survey. Mothers reported a mean number of 4.6 daytime feedings and 3.8 nighttime feedings. The largest differentials in the measures of breastfeeding frequency are place of residence and the child's sex. The number of breast-feeding is a bit higher among mothers resident in rural areas compared with mothers in urban areas either during the day or at night, and among females' babies than among males' babies especially during daytime.

Table14.4 Percentages of children less than 6 months old who had 6 breast feeds or more within the 24 hours preceding the survey and the overall mean by background characteristics

Background Characteristics	Percentage breastfed + times in the past 24 hours	Mean number of Feeds		Number of children < 6 months of age
		Daytime	Nighttime	
Child's sex				
Male	12.0	4.2	4.1	676
Female	13.9	5.0	3.6	612
Child's Birth order				
First	19.3	4.3	4.0	202
2	13.2	4.3	3.8	193
3	13.2	4.4	4.2	182
4	16.0	5.5	4.2	147
5+	9.9	4.6	3.5	565
Place of Residence				
Urban	13.0	3.9	3.6	247
Rural	12.8	4.8	3.9	1042
Educational level of mother				
Illiterate	10.9	4.5	3.9	976
Read & write	15.0	5.3	4.5	119
Primary	15.6	5.1	3.8	72
Preparatory	25.0	4.9	3.1	64
Secondary +	25.7	4.1	3.4	57
Total	12.9	4.8	3.8	1289

14.4 Complementary Food and Bottle Feeding

Table 14.5 shows the types of food and liquids given to children less than 3 years old during 24 hours before the interview by the current breast-feeding status of the child. In general, the results show that 80 percent of mothers in Yemen give an infant simple complementary food (mostly water). Moreover, there are some mothers who give their children along with breast-milk ordinary milk (22 percent). Besides, about 30.3 percent give their children juice, and about 6.2 percent give them rice water. A large number of children, about 22 percent are given yoghurt. It is noted that mothers depend on children's preserved food for their children more than home made food (51.6 percent against 31.6 percent).

Table 14.5 Percentages of children less than 2 years old who received certain types of food during the 24 hours before the survey by current breast-feeding status*

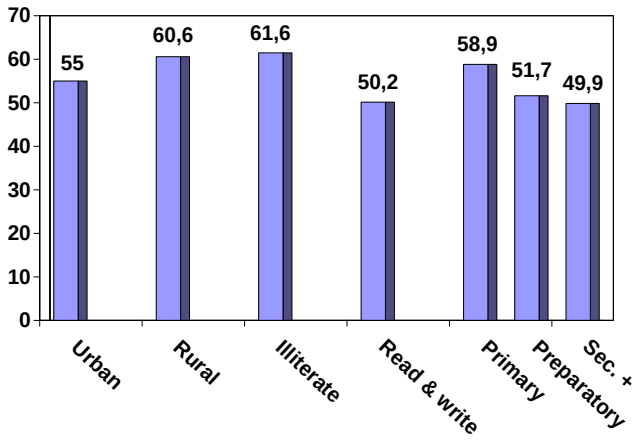
Group age (months)	Plain Water	Full Cream Milk	Pasteurized Milk	powder Milk	Other milk	Fruit juices	Sugar water	Rice water	Yoghurt	Home-made baby food	Family food	Baby preserved food	Number
Currently Breastfed													
0-3	73.0	17.6	1.1	27.8	3.2	5.3	12.0	0.3	2.5	2.9	0.6	2.0	236
4-5	85.3	11.3	2.1	29.5	12.4	7.8	11.3	0.0	2.1	7.5	6.1	8.1	74
6-9	82.3	13.9	5.8	23.9	11.2	22.1	12.8	4.7	15.4	20.3	7.0	8.7	164
10-11	79.1	7.9	3.9	17.5	27.1	17.6	5.9	4.4	15.1	41.9	6.2	13.8	67
12-23	84.5	23.7	2.3	15.3	21.2	18.2	6.0	3.1	9.2	23.2	31.4	7.5	242
Total	80.2	17.0	2.8	22.1	14.1	14.0	9.6	2.3	8.6	16.3	13.8	7.0	783
Currently-not breastfed													
0-3	72.7	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
4-5	100.0	61.9	0.0	0.0	38.1	0.0	0,0	0.0	0.0	0.0	0.0	31.0	3
6-9	87.5	41.1	0.0	23.7	18.8	12.5	15.3	5.6	4.5	20.9	8.7	23.7	20
10-11	96.5	30.1	4.7	20.1	46.6	33.9	6.2	4.7	21.2	50.1	11.2	15.9	23
12-23	90.5	16.1	6.9	20.5	45.3	32.0	9.5	6.0	25.6	35.7	11.0	44.0	234
Total	87.2	22.0	6.3	18.5	41.1	30.3	9.3	6.2	22.0	31.6	12.1	51.6	282

14.5 Weaning Mode

Weaning may take place either gradually or abruptly. The results show that 40 percent of mothers weaned their children gradually, while 60 percent weaned them abruptly. No considerable differences are noted in the mode of weaning by mothers' characteristics.

Concerning the reasons for weaning, 51.3% of the mothers stated that the child had reached the proper age to be weaned, while about 11% attributed it to the mothers' insufficient milk, or to the fact that the mother got pregnant or the breast milk was not sufficient for the baby's growth any more. Figure 14.1 show that the prevalence of sudden weaning is lower among urban than rural mothers. Abrupt termination of breastfeeding is also negatively associated with mothers' education; it decreases from 61.6 percent among children whose mothers are illiterate to 50 percent of those whose mothers had a secondary certificate and higher.

Figure 14.1 Percentages of mothers who had weaned their children abrupt according to place of residence and mother's educational level



A new pregnancy was given as the reason for stopping breastfeeding in 25.6 percent of the responses and together with the child being old enough, was by far the most common reason for weaning (20 percent). Finally, lack of or insufficient of milk was the third reason for stopping breastfeeding which was mentioned by 14 percent of the cases.

Chapter 15

IMMUNIZATION AGAINST CHILDHOOD DISEASES

Immunization against the common childhood diseases is considered among the basic components of primary health care. Besides, it is the easiest and the speediest way to reduce infant mortality and the rate of infection with these diseases and their complications such as paralysis, deformities, blindness and deafness. The large-scale national program for vaccination included vaccination against the seven diseases officially declared by the World Health Organization. These are Polio, Tuberculosis, Measles, Tetanus, Diphtheria, Whooping Cough and Epidemic Hepatitis. Some of the vaccines used give the required immunity by one dose, others need two or more doses.

The Yemeni Family Health survey was keen to gather data about vaccination of the under-5 children. In this chapter we focus on the 12 – 23 month olds (because they are supposed to have had their basic vaccines).

15.1 Availability of Vaccination Cards

The availability of vaccination cards for registering each vaccination, is very important for following up the child's health status and for accurately measuring the coverage by different vaccinations. Therefore, the survey included a question about the availability of such cards and the possibility of showing them to the interviewers.

The data showed that the percent of children 12 – 23 months old who had a health card that was seen by the interviewer is about 26.8. Table 15.1 does not indicate any differences about the availability of cards according to the place of residence, but it is noticeable that there is a higher rate of seen cards in the urban areas than in the rural areas (41.6 percent compared to 22.8 percent).

Table 15.1 Among the last born alive children aged 12-23 months, the percentages that have a health card that was seen by the interviewer by sex and place of residence

place of residence	Male	Female	Total
Urban	40.1	43.3	41.6
Rural	22.8	22.8	22.8
Total	26.6	27.1	26.8

The drop in the percentage of seeing the health cards might be attributed to negligence of the family to keep them, the failure by the health workers to remind mothers to keep them or to the unavailability of those cards, at times, in the vaccinating units as those units sometimes write down the vaccinations on easily perishable paper. Moreover, most private sector doctors keep the vaccination cards in the children's files in the clinics and do not deliver them to the people concerned. Finally, it is doubtless that there are a small percentage of children who have not been vaccinated.

15.2 Vaccination Coverage among Children (12 – 23 months old)

The findings of the survey show that about 37.2 percent of the children aged12– 23 months old is fully immunized as stated in the health cards, whereas the percentage decreases among their peers whose vaccination cards had not been seen. The health cards of the children (12–23) months old show that those vaccinated against BCG reached 54.8 percent and 44.8 percent received the measles vaccination as shown in Table (15-2). There are, however, no important differences according to the place of residence or sex. When a child has completed the basic vaccination, it means, the infant has completed all the prescribed vaccination that are the BCG + three doses of DPT + three doses of the polio vaccine + measles + one shot at least of epidemic hepatitis. Moreover, it should be noticed that the percentage of coverage by the hepatitis vaccine (one shot at least) reached 20.4 percent.

Table 15.2 among the last born children aged (12 – 23 months old) who have vaccination cards that have been seen, the percentage who received specific vaccination by place of residence and sex of child

Vaccine	Sex of child		Place of residence		Total
	Male	Female	Urban	Rural	
BCG	54.2	55.5	85.7	46.5	54.8
DPT1	55.6	55.6	84.9	47.7	55.6
DPT2	50.7	50.1	80.9	42.2	50.4
DPT3	45.9	43.5	76.3	36.2	44.7
Polio1	61.5	63.0	86.4	55.7	62.2
Polio2	55.7	56.1	82.5	48.7	55.9
Polio3	48.1	46.7	76.0	39.7	47.4
Measles	45.2	44.3	73.2	37.1	44.8
Any dose of Hepatitis	19.6	21.2	32.6	17.1	20.4
% fully immunized*	38.4	35.9	67.2	29.1	37.2
Number of Children	1057	1001	437	1620	2058

* Fully immunized means, completed all the prescribed vaccines that are the (BCG + three doses of DPT + three doses of the polio vaccine + measles)

Table 15.3 Percentages of children aged (12 - 23 months) old who have fully immunized (either from health card or mothers answers), by mother's educational level

Type of Vaccine	% fully immunized	Number of Children (12 – 23 months)
Illiterate	29.5	1567
Read & write	52.4	206
Elementary	65.3	131
Preparatory	68.4	80
Secondary+	73.5	74
Total	37.2	2058

Table 15.5 shows that the proportion of all children who received any immunization rose steadily with mother's education, from almost 29.5 percent of those whose mothers are illiterate to around 65.3 percent of those whose mothers had completed primary education, and to 73.5 percent of those mothers who had complete secondary school and above.

15.3 Completeness of Immunization Coverage (12-59 months)

Data in Table 15.4 present the percentage of children aged (12-59) months who received different immunization and the percentage of those who reported as fully immunized before the first year of their life out of children whose health cards were seen. Data indicate that among children at age 12-59 months who were fully immunized reached to 38.6 percent.

Table 15.3 also indicates that the percentage of children who did complete the triple doses of diphtheria, pertussis, and tetanus (DPT) dropped to 59.6 percent compared to 78 percent who received the first dose of the DPT. The same pattern can be observed for the polio vaccine. Data show that the percentage of children who receive the three doses of polio vaccine dropped from 80.2 percent for those who received one dose to 72.1 percent then to 59.9 percent among those who received the second dose and the third dose respectively. Measles vaccination is recommended at the end of infancy and not before the age of nine months. This is consistent on the one hand, with the vaccine being ineffective in the presence of the maternal antibody which may persist to age one year, and on the other with ages one to four years being the most common ages of the disease's occurrence. The percentages of children immunized against measles, conform roughly to the recommendation; 47.5 percent of children aged 12-23 were immunized with dropped to 40 percent among children aged 24-35 months and then rose steeply to 43.5 percent of children aged 36-47 months.

Table 15.4 Percentages of children aged (12 - 59 months old) who have vaccination card that have been seen, the percentage who received specific vaccination by age of child

Age (months)	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	% Full immunized	Number of children
12-23	81.8	85.6	76.5	63.6	88.0	79.2	63.5	47.5	41.1	552
24-35	76.6	71.4	65.5	56.3	71.7	64.4	55.4	40.0	35.2	274
36-47	71.4	68.1	61.2	52.4	72.9	63.9	53.8	43.5	43.6	141
48-59	67.1	63.7	59.9	56.0	67.1	63.3	61.7	42.9	34.6	71
Total	75.6	78.0	70.4	59.6	80.2	72.1	59.9	44.6	38.6	1038

15.4 Vitamin A Supplementation

Vitamin A is a micronutrient found in very small quantities in some foods. Vitamin A is important in protecting the body against some infectious illnesses such as measles and diarrhea disease. Also, it is considered essential for normal sight, growth, and development. Severe vitamin A deficiency is associated with total loss of vision or with other vision impairments including night blindness.

To obtain information on having vitamin A supplementation, mothers were asked if their children had received vitamin A to protect them from the night blindness. Mothers' reported that about 35.6 percent of Yemeni children have received vitamin A. Data show that vitamin A supplementation is more common for children living in urban areas (48 percent) than for rural areas (32 percent). The likelihood of supplementation increases with the mother's education level.

Chapter 16

CHILD MORBIIDITY

The children's' health status reflects the extent of progress in health and living conditions of a country, thus, controlling the most prevailing diseases related to childhood is a must to analyze the current health status of a society. Infectious diseases remain among the most common diseases that attack children particularly respiratory infections and diarrhea, that are highly associated with environmental factors and with hygienic practices

Repeated exposure to respiratory infections and diarrhea badly affects a child's growth, in addition to increasing the probability of child death. This chapter aims at examining the prevalence of infectious diseases among children under age 5 with focus on respiratory infections and diarrhea prevalence and treatment.

16.1 Respiratory Infections

Respiratory infections are among diseases that are common in infancy and childhood. The YFHS survey collected data on the prevalence of symptoms indicating the existence of respiratory infections among last born alive children during the past five years preceding the survey. Mothers were asked if the child had experienced specific symptoms during the two-weeks period and during the 24 hours prior to the survey, including cough, fever, and difficult breathing.

- Symptoms of Respiratory Infections

Table 16.1 shows the percentage of children reported to have had fever or cough accompanied by other symptoms during the two weeks preceding the survey by sex of child and place of residence.

Generally, data show that 40 percent of children were reported to have suffered from high fever during the two weeks prior to the survey, while those who suffered from cough is 42 percent, around 20 percent of children suffered from three symptoms together and four among ten suffered from cough.

Overall, the percentage of children resident in rural reported to have suffered from symptoms of respiratory infections is higher that children resident in urban areas (42.1 percent versus 32.7 percent) and those who

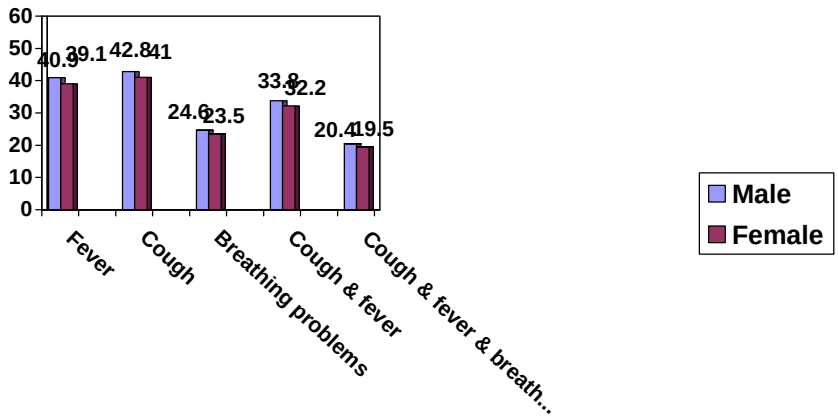
suffered from cough is 44.2 percent in rural areas compared with 34.1 percent in urban areas. The same trend is applies to the percent of children who had cough accompanied by fever or breathing difficulty or both, where the percent of children resident in rural areas who had suffered of either of these symptoms is higher than children who are resident in urban areas.

The survey findings indicate that the percent of children who suffered from symptoms of respiratory infections increase among children born to illiterate mothers compared with those born to highly educated mothers (21.3 percent compared with 12.3 percent).

Table 16.1 Percentages of last born alive children under 5 years of age with respiratory infections during the two weeks prior to the survey by age of child, place of residence, and education level

Sex of child and place of residence	Fever	Cough	Cough with breathing problems	Cough with fever	Cough with fever & breathing problems	No. of children
Age of child (month)						
0-5	35.6	39.8	23.1	29.2	17.6	1289
6-11	43.4	44.3	26.2	35.7	21.9	1269
12-23	45.3	47.3	27.2	38.1	23.5	2058
24-35	39.4	40.5	23.0	32.1	19.3	1294
36-47	34.1	36.4	19.6	27.4	15.3	799
58-59	31.5	31.5	18.3	24.8	15.7	468
Place of Residence						
Urban	32.7	34.1	17.7	25.7	14.3	1590
Rural	42.1	44.2	25.9	35.2	21.6	5587
Education Level						
Illiterate	42.0	43.8	25.2	35.2	21.3	5505
Read & write	38.0	41.4	22.7	30.8	19.0	691
Primary	31.6	31.5	18.2	23.9	13.8	435
Preparatory	28.4	32.7	20.3	22.0	14.2	282
Secondary+	30.2	32.9	17.8	21.7	12.3	264
Total	40.0	42.0	24.1	33.1	20.0	7177

Figure 16.1 percentages of last born alive children under 5 years of age with respiratory infections during the two weeks prior to the survey by sex of child



Data indicate that around 30.3 percent of the children were suffering from cough, while 18.2 percent of children were suffering from cough accompanied with breathing problems at the time of the interview (during the 24 hours prior to the survey). It can also be noticed that the current prevalence rate of cough was much more pronounced among children in urban compared to rural areas (23 percent and 33 percent respectively). The mean duration of episodes of any cough was 7.7 days in urban areas compared to 6.4 days in urban areas, with slight variation among boys than girls.

- Sources of Consultation Received

Women were asked whether the child had been taken anywhere for treatment and what type of treatment the child had received when he or she was sick. Data indicate that 47 percent of the children had suffered from any symptoms during the two weeks preceding the survey was taken to seek medical advice on treatment. The figure shows that the percent of children who were taken to seek medical advice on treatment and residence in urban areas is higher than those residences in rural areas. Also, it is higher among male than among female.

The figure shows that public hospitals were the most frequently consulted for treatment (14 percent) followed by public health centers (9 percent).

The percentage of children who suffered from symptoms and who did not seek care in spite of health problems reported that:

- Illness is mild (42.7 percent)
- Unavailability of services (32 percent)
- Parents have previous experience in dealing with this symptoms(12.3 percent)

As for types of treatment, Table 16.2 gives information on the nature of treatment given to children reported to have had fever or cough during the two weeks preceding the survey. Around 33.9 percent of children under the age of five were not given any treatment, while the figures show higher treatment intake rates among urban compared to rural children. Antibiotics were more used to treat the sick children in urban areas compared with children in rural areas (41 percent and 28.5 percent respectively). Also, the use of antibiotics increased steadily with mother's education. The figures also indicate that cough syrup seem to be the most commonly given treatment, 43.8 percent, whereas 17.2 percent of children under five years of age were treated with injections.

Table 16.2 Among the last born alive children under five years of age who had cough or fever during the two weeks preceding the survey, the percentage who received different treatments according to type of treatments and selected background characteristics*

Background characteristics	No treatment given /Don't know	Injection	Antibiotics	Capsule/syrup For Malaria	Cough syrup	Capsule/syrup And Don't know	Home treatment	Other	No. of Children
Sex of child									
Male	30.7	18.8	32.9	2.2	45.9	6.2	1.8	12.1	1875
Female	37.5	15.5	28.4	2.2	41.4	2.2	1.6	12.8	1635
Birth order									
1	25.0	20.8	32.9	1.7	52.7	6.9	1.8	14.5	434
2	31.1	17.3	32.0	2.5	49.0	6.3	2.2	12.5	470
3	31.7	20.5	31.6	1.8	48.6	4.4	1.3	14.2	452
4	32.4	18.9	34.9	3.0	43.1	6.0	1.4	13.9	398
5+	37.7	15.1	28.8	2.2	39.2	6.2	1.7	11.1	1756
Place of residence									
Urban	17.1	19.7	40.7	3.0	56.8	5.5	2.7	17.8	653
Rural	37.7	16.7	28.5	2.0	40.8	6.5	1.5	11.2	2856
Mother's education									
Illiterate	37.4	17.7	28.3	2.3	41.1	6.0	1.6	10.8	2784
Read & write	24.3	16.4	36.5	2.3	48.6	8.2	1.6	17.2	335
Primary	17.2	15.3	41.8	1.3	57.7	1.7	1.0	23.9	171
Preparatory	15.4	14.3	45.7	2.6	65.2	7.7	3.2	15.5	110
Secondary+	16.9	14.6	44.7	1.5	55.5	4.8	3.1	17.9	109
Total	33.9	17.2	30.8	2.2	43.8	6.1	1.7	12.4	3510

***** Multiple answers acceptable

16.2 Diarrhea

Dehydration as a result of severe diarrhea is considered to be among the most frequent causes of morbidity and death in infancy and childhood. The YFHS included questions that indicate whether children under five years of age

had suffered from diarrhea and the severity of the diarrhea during the two weeks period before the interview and in the last 24 hours.

The survey data indicate that there were 29.6 percent of children reported to have had diarrhea episode in the two weeks preceding the interview. About 19.5 percent were reported to have experienced diarrhea with fever, while the percentage of children with severe diarrhea who had blood in stool with or without fever accounts for 4.4 percent. Differentials according to place of residence were not important, however, the prevalence of diarrhea episode varies with mothers' education level and data in Table 16.3 show that it is much observed among illiterate mothers and those who can read and write (31 percent).

Table 16.3 Among the last born alive children under five years of age who had diarrhea in the two weeks preceding the survey, the percentage reported as having other symptoms according to selected background characteristics

Background Characteristics	Diarrhea	Diarrhea with fever	Diarrhea with blood in stool	Diarrhea with fever & blood in stool	No. of children
Sex of child					
Male	30.5	20.1	5.1	3.6	3759
Female	28.5	18.9	3.7	3.0	3418
Place of residence					
Urban	24.2	13.8	2.3	1.4	1590
Rural	31.1	21.1	5.1	3.8	5587
Mother's education					
Illiterate	30.5	20.7	5.1	3.9	5505
Read & write	31.3	19.0	4.2	2.6	691
Primary	25.5	16.0	1.0	0.8	435
Preparatory	22.9	10.8	1.6	0.0	282
Secondary+	19.6	10.5	0.8	0.6	264
Total	29.6	19.5	4.4	3.3	7177

The prevalence rate of diarrhea among children under five years of age in the 24 hours before the interview accounts for 17.7 percent, with 2.8 percent accompanied with blood in stool.

Maternal education appears to have been a more important factor in diarrhea prevalence. Among children under five years of age, diarrhea prevalence decreased with the increase of mother's education from 18.7 percent among children born to illiterate women to 10.4 percent among children to mothers with secondary certificate and higher.

Analysis of the impact of diarrhea must include, in addition to prevalence the duration of an episode. The YFHS findings indicate that the mean duration of an episode of diarrhea was 6 days and this episode increases to 6.2 days in rural areas compared to 5.4 days in urban areas. Data show that the mean duration of an episode fell gradually with mother's

education, (6.3 and 5.5 days among children to illiterate and highly educated mothers).

It is important that children who have diarrhea receive adequate nutrients, and thus it is recommended that the solids given to a child be increased or at least remains the same during diarrheal episodes. To prevent dehydration, the amount of liquids given to the child should be increased.

Data show that mothers of children who had diarrhea during the two-week period before the survey reported that in one third of the cases, the child was given less than the normal amount of food during the most recent diarrheal episode. In about 35 percent of the cases, the mother either stopped feeding the child (15.4 percent) or gave the child the same normal amount of food (20 percent).

Mothers also reported that, for slightly more than 22 percent of children with diarrhea, fluid intake was less than normal during the diarrheal episode. For the rest of the cases, mothers said that the child was either given more to drink (43 percent) or gave the child the same normal amount of liquids (22.5 percent).

- Treatment of Diarrhea (in the two weeks preceding the survey).

The YFH Survey findings indicate that the proportion of children under five years of age who were suffering from diarrhea in the two weeks preceding the survey and of whom medical advice on treatment was sought for is 36 percent, while 61 percent of the children suffering from diarrhea were not taken to seek any advice on treatment with no variations according to mother’s age, child’s age, or sex of child.

Private doctors were the most frequently consulted for treatment of childhood diarrhea among mothers with a secondary certificate and higher (24.3 percent), while this percent decreases to 5 percent among children born to illiterate mothers.

Table 16.4 Among the last born alive children under five years of age who have had diarrhea in the two weeks preceding the survey, the percentage that were taken to seek advice on treatment, according to source consulted and selected background characteristics

Background characteristics	No Advice Sought	Percent consulting a medical source	Percentage consulting any medical source	No. of children
Birth order				
1	49.6	45.2	5.2	257
2	63.1	37.4	3.0	298
3	62.1	33.5	3.4	303
4	63.6	33.6	4.3	261
5 and over	63.6	33.5	2.9	1002
Place of residence				
Urban	52.0	44.1	4.0	384
Rural	62.9	33.6	3.5	1737
Mother's education				
Illiterate	62.9	33.9	3.2	1679
Read & write	57.2	37.1	5.7	216
Primary	46.6	49.0	4.4	111
Preparatory	55.4	39.4	5.2	65
Secondary+	48.1	46.6	5.3	52
Total	60.9	35.5	3.6	2121

Figure 16.2 Percentages of children who have had diarrhea in the two weeks preceding the survey, and did not seek medical consultation by reason and place of residence

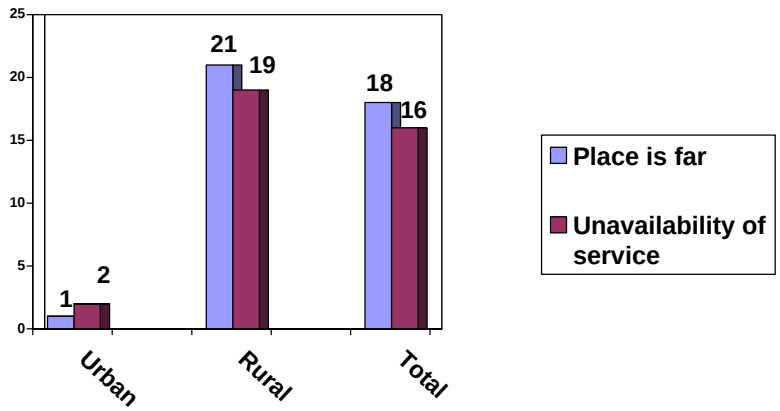
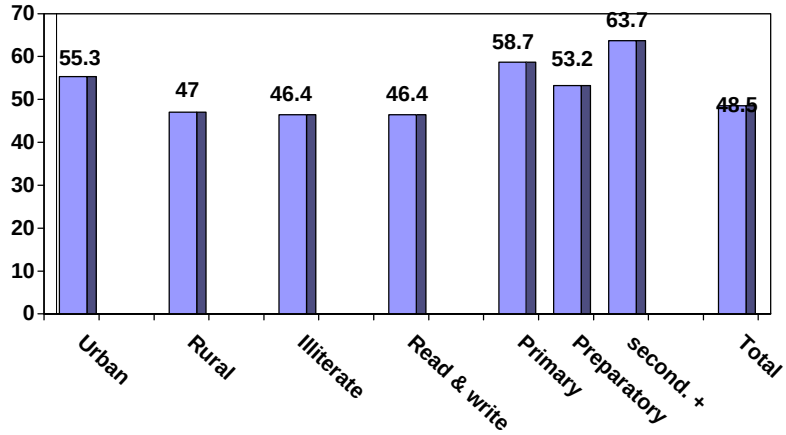


Figure 16.3 Percentages of children who have had diarrhea in the two weeks preceding the survey, and did seek medical consultation by place of residence and education level



Increasing a child's intake during a diarrheal episode is important to prevent or treat dehydration. Virtually most of the mothers (77.5 percent) are aware of the availability of packets of oral dehydration salts that can be used to prevent dehydration (not shown in table). As shown in Table 16.6, 49 percent of the mothers reported previous use of these packets and this percent is higher in urban areas than in rural areas (91.2 percent and 67 percent respectively). Mothers with secondary certificate and higher (98.2 percent) were more aware of the availability of packets of oral dehydration salts than illiterate women (67 percent).

Findings of the YFHS indicate that more than 95 percent of mothers with children (last birth) under five years of age have heard of oral rehydration solution (ORS).

The knowledge of packets of oral dehydration salts is almost universal where 95 percent reported that they knew it. The figures present the main source of oral rehydration solution known by mothers. The most frequently mentioned source was the pharmacy (70 percent), followed by public health facilities (21 percent).

Table 16.5 Among the last born alive children under five years of age who have had diarrhea in the two weeks preceding the survey, the percentage who received different types of treatment, according to types of treatments and selected background characteristics

Background characteristics	No treatment	ORS packets	Home made solution	Antibiotics	Other Capsule/syrup	Injection	Injection	Home remedy	Other	No. of Children
Place of reside										
Urban	33.3	34.0	7.2	19.8	14.6	9.2	2.3	6.9	9.9	384
Rural	48.8	22.4	6.6	19.2	16.0	5.7	1.2	2.8	3.9	1737
Mother's education										
Illiterate	49.7	24.3	6.5	17.5	15.8	6.3	1.6	3.2	7.3	1678
Read & write	36.4	22.9	7.9	27.7	14.4	5.1	1.3	7.4	6.2	216
Primary	27.0	26.3	5.2	30.6	14.5	7.3	0.0	8.5	12.8	111
Preparatory	31.4	25.5	8.6	16.8	16.6	8.0	0.0	8.4	12.7	65
Secondary +	25.2	32.2	9.4	23.4	20.8	7.3	0.0	9.4	13.5	52
Total	46.0	24.5	6.7	19.3	15.8	6.3	1.4	3.5	5.0	2121

Increasing a child's fluid intake during a diarrheal episode is important to prevent or treat dehydration. Virtually around 25 percent of mothers report that the child was given a solution prepared using a packet of oral dehydration salts. In 6.7 percent of the cases, the child was given a solution of sugar and salt followed by antibiotics (19.3 percent), injection (6.3 percent). As shown in Table 16.5, medical care was sought most often for children living in urban areas and those having highly educated mothers.

Table 16.6 Percentages of women by their knowledge about packet of oral dehydration salts by selected background characteristics

Background characteristics	% knowing packet of dehydration salts	% ever use packet of dehydration salts	No. of Children
Place of residence			
Urban	91.2	60.5	1590
Rural	67.0	45.5	5587
Mother's education			
Illiterate	66.9	45.5	5505
Read & write	87.6	59.3	691
Primary	91.3	61.6	435
Preparatory	93.0	56.8	282
Secondary +	98.2	61.2	264
Total	77.5	48.5	7177

Chapter 17

FERTILITY ATITTUDES TOWARDS FERTILITY AND FAMILY PLANNING

On account of a high population growth rate which eventually leads to impeding development efforts, and to negative impact on maternal and child health, there rises a keen interest in studying the aspects of reproduction, and in taking necessary measures to raise the contraceptive prevalence, encourage women to extend birth intervals and control their own fertility, which inevitably would have a positive impact on health and socio-economic conditions of the family and the society.

Aiming at presenting a future picture of the reproductive trends in Yemen and how to affect changes in that regard, some components have been considered to study the impact on reproductive behavioral aspects and trends through examining family size desires and family planning intentions.

This chapter will deal with the following subjects:
- Desire for additional children
- Attitudes towards using family planning methods
- Husband's attitudes from respondent's viewpoints
- Met needs and the total demand for family planning
- Number of desired children
- Attitudes towards birth spacing
- Attitudes towards marriage and reproduction and employment of daughters

17.1 Desire for additional children

Investigation of the attitudinal dimensions of a specific issue should be addressed to a targeted group that is capable of dealing with and affecting this issue. In this chapter, married and fecund women were investigated and a question on whether they desire to have another child was addressed. In the YFH 2003 survey, findings indicate that among currently married women aged 15-49, the proportion that considered themselves fecund accounts for 94.5 percent and 5.5 percent reported that they were in fecund. Among fecund women, the proportion that wants another child constitutes 38.2 percent against 38.6 percent reporting that they desire to cease childbearing. Among the remaining women, 16% left it to God's will, and three percent were not sure.

Comparing these results with those of the YMCHS in 1997, we find that the proportion of women who wish to have another child decreased considerably from 49 percent to 38 percent.

Figures in Table 17.1 indicate that the proportion of currently married women who wanted to have another child is inversely associated with women's age. As can be seen, the proportion wanting more children is high (76.7 percent) among women aged 15-19 and decreases to a minimum level of 6.3 percent among women aged 45-49. As for women wanting no more children, the underlying pattern is that a woman's desire to cease childbearing increases by a proportionate increase in women's age. The figures indicate that the proportion of women wanting no more children accounts for 9.3 percent among women aged 15-19 and 52.1 percent among women at ages 45-49. Less than six percent of women under age of 40 years declared themselves in fecund. However, the figure increases to 22.8 percent among women aged 45-49.

The proportion wanting more children among urban women is higher than that among rural women (40 percent versus 37.7 percent). However, urban-rural differentials seem much more pronounced for women wanting to cease childbearing as it rises to 42.6 percent among urban women versus 37.4 percent among rural women.

Education affects women's desire to have another child. The proportion of women wanting another child has a minimum level among illiterate women, 33.8 percent versus 62.8 percent among women having secondary education and above. We believe that the increased proportion of women wanting more children among the more educated is attributed to the fact that these women generally have a lesser number of living children and are more likely to participate in decision taking than women with lower education. This can be somehow confirmed by the fact that among illiterate women, 17.1 percent declared that it is up to God's will versus only 8 percent of women with secondary education**.** In other words, it may be concluded that taking the decision of having more children requires a women to be having high awareness and play a decisive role and practice decision making on reproductive issues.

It can be noticed that the highest proportion of women wanting more children is observed among childless women (73.4 percent) and that it goes higher than the rate given for women with 1-2 children (70.2 percent). Among women with 6 children, very few express a desire for another child (8.5 percent), while the proportion of women who wanted to cease childbearing is very low (1.6 percent) among childless women. On the other hand, the highest proportion of women wanting to cease childbearing is among women with 6 children or more and accounts for 63.9 percent. It is worth mentioning that among childless women, the proportion believing that they are in fecund is

relatively high; the value accounts for 6.8 percent. The percentage decreases to around 2% among women with 1-2 children and to 3.6 percent among women with 3-5 children. The increase in the proportion believing that they are in fecund among childless women might be attributed to their lack of knowledge about issues of pregnancy and delivery.

Table 17.1 Percent distribution of currently married women (15-49) years according to desire for more children by selected background characteristics

Background characteristics		Wants more	Wants no more	Declared in fecund	Up to God's will	Don't know	N.S	No. of women
Age group	15-19	76.7	9.3	0.5	11.8	1.6	0.0	835
	20-24	65.3	18.6	1.0	13.0	1.8	0.2	2143
	25-29	48.3	32.1	1.3	16.4	1.7	0.3	2111
	30-34	30.7	47.7	2.9	17.4	1.2	0.1	1605
	35-39	18.9	54.8	6.4	18.8	0.6	0.5	1701
	40-44	9.9	59.1	12.8	16.7	0.8	0.6	1265
	45-49	6.3	52.1	22.8	17.4	0.8	0.5	955
Place of residence	Urban	40.0	42.6	7.1	9.1	0.8	0.4	2510
	Rural	37.7	37.4	5.1	18.2	1.5	0.5	8105
Educational status	Illiterate	33.8	41.4	6.1	17.1	1.2	0.4	8226
	Read & write	46.4	32.3	5.0	14.2	2.0	0.0	983
	Primary	54.9	28.1	2.7	13.3	1.0	0.0	616
	Preparatory	60.2	24.4	3.4	10.4	1.7	0.0	391
	Secondary+	62.8	26.3	1.1	8.0	1.0	0.8	401
No. of living children	None	73.4	1.6	6.8	16.0	1.7	0.5	939
	1-2	70.2	14.0	2.2	12.7	1.6	0.2	2503
	3-5	36.4	40.1	3.6	18.2	1.4	0.2	3587
	6+	8.5	63.9	10.1	16.2	0.8	0.5	3587
Total		38.2	38.6	5.5	16.0	1.3	0.3	10616

Women were asked about their own fertility preference (the desire for more children and gender preference) in relation to the number and sex of living children. These results are presented in Table 17.2. In general, these findings reflect a higher fertility preference among women (38.2 percent) and this percent rise to 75 percent among childless women, women with living male (62.2 percent) and women with living females (67.8 percent).

With regard to sex preference for the next child among those who reported wanting more children, data clearly indicate a preference for males over females among women (29 percent against 20.4 percent) regardless of the sex composition of living children. As for childless women, mothers' desire to have a baby boy is higher than that of having a baby girl (26.2 percent versus 10.2 percent). The same trend applies to women who have only living girls (63.3 percent and 2.4 percent for boys and girls respectively), those who have more girls than boys (48.4 percent and 2.5 percent for boys and girls

respectively) or those who have an equal number of boys and girls (17.5 versus 8.6 percent respectively).

Table 17.2 Fertility preference of currently married women according to sex composition of living children

Sex composition of living children	% Wants another child	Number	Desired child			Number
			Boy	Girl	Up to God's will	
None	75.1	1246	26.2	10.2	63.6	936
No girls	62.2	1219	5.4	61.8	32.8	758
No boys	67.8	1144	63.3	2.4	34.3	775
Boys> girls	18.4	2811	8.0	35.8	56.2	517
girls> Boys	21.7	2535	48.4	2.5	49.1	549
Boys=girls	31.5	1662	17.5	8.6	73.9	523
Total	38.2	10616	29.0	20.4	50.6	4059

In the survey, pregnant women were asked whether they wanted or not their current pregnancy and about factors that affected their desire. Data in Table 17.3 show that 42 percent wanted to have their pregnancy at the time it occurred versus 35.3 percent of women who wanted this pregnancy but at a later period whereas 22.3 percent of them did not want to become pregnant.

Regional differentials indicate that the number of urban women who never want their pregnancy is slightly lower than that of rural women. It is clear as well that more educated woman tend to be more specific regarding their satisfaction on timing of their pregnancy as satisfaction on becoming pregnant is positively associated with women educational attainment.

Table 17.3 Percent distribution of pregnant women at the time of the survey according to their desire for this current pregnancy and background characteristics

Background characteristics		Want pregnancy	Want pregnancy later	Don't want pregnancy	N.S	No. of women
Place of residence	Urban	38.5	39.6	21.1	0.9	335
	Rural	42.8	34.3	22.7	0.2	1347
Educational status	Illiterate	41.3	31.1	27.1	0.5	1279
	Read & write	44.7	45.3	10.0	0.0	171
	Primary	37.3	54.1	8.6	0.0	105
	Preparatory	45.9	49.8	4.4	0.0	62
	Secondary +	51.8	48.2	0.0	0.0	66
No. of births	First birth	76.9	19.8	2.5	0.8	290
	2	55.3	38.8	5.5	0.3	234
	3	46.6	42.9	10.0	0.5	234
	4+	26.5	37.4	35.9	0.2	925
Total		42.0	35.3	22.3	0.4	1682

Birth order seems to play an important role on women's satisfaction or desire for their current pregnancy. Data show that 76.9 percent of women of first birth order want that pregnancy and this rate drops to a minimum level (26.5 percent) among women of fourth or above birth order. We notice as well, that 2.5 percent of women of first birth order refused this pregnancy compared to 35.9 percent of women of fourth or above birth order.

17.2 Attitudes towards Using Family Planning Methods

Acceptance and adoption of family planning in Yemen has become much more widespread among all population groups due to increased awareness of family planning's important and positive impact on health and socio-demographic aspects whether on family level or national level.

The YFHS dealt with opinions of ever-married women towards using family planning services. Data of the SFHS, as can be seen in Table 17.4 indicate that the percentage of ever-married women who unconditionally agree on using family planning reaches 58 percent, while the rate of those who approve, conditionally is 4.2 percent compared with 25 percent of those who disapprove the use of family planning methods.

Table 17.4 Percent distribution of ever-married women (15-49) years according to their attitudes towards family planning use and background characteristics

Background characteristics		Approve	Conditionally approve	Disapprove	Don't know	No. of women
Place of residence	Urban	76.8	4.7	15.3	3.2	2713
	Rural	52.1	4.0	29.0	14.8	8579
Educational status	Illiterate	52.4	4.3	29.0	14.3	8747
	Read & write	73.3	4.2	15.9	6.6	1043
	Primary	75.1	4.3	16.7	3.8	661
	Preparatory	81.6	3.0	13.9	1.5	417
	Secondary+	86.8	3.0	9.2	1.0	425
No. of living children	None	45.0	4.5	31.7	18.7	1049
	1-2	55.5	4.2	28.8	11.4	2715
	3-5	60.1	4.5	23.5	11.9	3766
	6+	61.3	3.8	24.1	10.7	3763
Total		58.0	4.2	25.7	12.0	11292

It is clear that the approval of using family planning is affected by women's place of residence. We find that the proportion of women who approve is 76.8 percent in urban areas compared with 52.1 percent among rural women. As for the proportion who disapprove, it can be found that it is higher among rural than urban women (29 percent against 15.3 percent). Data also indicate that urban women tend to be more definite and precise about their opinion, thus about 14.8 percent of rural women reported that they were

not sure or rather had no specific opinion compared to 3.2 percent of urban women.

However, as might be expected, differentials according to women's education are quite pronounced and seem to have had their own impact on women intending to use family planning. Data indicate that the percentage of the better educated women who approve the use of family planning is higher than among the less educated. The figure rises to 86.6 percent and falls to 52.4 percent among illiterate and women with secondary education respectively. On the other hand, the proportion who disapproves the use of family planning rises to 29.0 percent among women with no schooling against 9.2 percent among women with at least secondary education.

Figures in Table 17.4 also indicate, women's opinion on using family planning is affected by their number of living children that where the proportion approving is 45.0 percent among women with no children and 61.3 percent among women with at least 6 children.

17.3 Husband's Attitudes from Respondent's Viewpoints

In general, we might say that taking decisions regarding family planning use is a family decision where the husband's preference in this issue is most significant particularly in eastern societies like the Yemeni society. It is worth stating that lately, the family planning issue has become among major areas of interest by families as all socio-economic groups have given this topic a lot of attention and discussions. In the YFHS s women were asked whether they discussed with their husbands their family planning intentions during the last year. Results indicate that among ever married women, more than half of them discussed this topic with their husband last year whereas 46 percent of the women did not. The data show that 21 percent discussed this once or twice, and third of them discussed it more often.

Table 17.5 Percent distribution of currently married women (15-49) years according to frequency of discussing family planning use with husbands during the past year and background characteristics

Background characteristics		Never	Once or Twice	More Often	Number of women
Place of residence	Urban	32.3	26.3	41.2	2511
	Rural	50.1	18.8	30.8	8105
Educational status	Illiterate	50.4	19.9	29.4	8226
	Read & write	32.9	21.4	45.4	983
	Primary	32.3	21.1	46.4	614
	Preparatory	27.9	25.8	46.2	391
	Secondary+	24.3	25.0	50.7	401
Total		45.9	20.6	33.3	10616

*N.S is excluded

Table 17.6 shows that discussion of family planning is relatively higher among women in higher age groups (30 years onward). In general, older women become highly aware and knowledgeable regarding this issue. Among ever-married women, the proportion of women who discussed the topic of family planning with their husbands drops to a minimum level (39.3 percent) among women aged 15-19 years old. The figure reaches around 61 percent among women at age 30-44 then declines once more among women aged 45-49 years to 37.1 percent.

For the same reasons mentioned above and due to an increased level of awareness among households in urban societies, we find that the proportion of women who discussed this topic with their husbands is less among rural women in comparison with urban women and the figure accounts for 49.6 percent and 67.5 percent respectively.

The same pattern is applicable if we consider educational attainment where a positive relationship is observed. Figures indicate that the proportion of women who discussed family planning issues with their husbands accounts for 49.3 percent among illiterate women against 75.7 percent among women with secondary education or above. A positive relationship can also be seen when the number of living children and frequency of discussion are considered.

Table 17.6 Percent distribution of currently married women according to final say regarding family planning use and background characteristics

Background characteristics		Mainly Respondent	Mainly Husband	Joint decisions	Other	Unsure	Number of women
Place of residence	Urban	11.6	39.1	44.8	1.0	3.5	2510
	Rural	4.9	57.1	23.5	0.9	13.4	8105
Educational status	Illiterate	5.9	56.1	23.7	0.9	13.2	8226
	Read & write	7.7	50.6	36.9	0.8	3.9	983
	Primary	6.2	39.1	48.4	1.0	5.2	616
	Preparatory	10.6	38.2	46.3	1.2	3.7	391
	Secondary+	11.4	26.2	59.5	0.6	2.0	401
Total		6.5	52.8	28.6	0.9	11.1	10616

*N.S is excluded

To explore who takes decision on issues regarding family planning use, ever-married women were asked who had the final decision for adopting family planning. The YFHS data indicate that much of the final say on adopting family planning is taken solely by the husband (28.6 percent). The proportion where the decision is mutual, taken by the wife and the husband together, accounts for 6.5 percent, against 6.5 percent by the wives. In general, households nowadays, independently take decisions regarding their family and reproductive issues the interference of parents, a characteristic which is becoming very common among many families.

Regional differentials in the final decision for adopting family planning are quite observed. Data show that in rural areas, much of the decision is taken solely by husbands (57.1 percent) compared to 39.1 percent in urban areas. The percentage of adopting family planning mutually by the wife and the husband together is higher in urban than in rural areas (44.8 percent and 23.5 percent respectively).

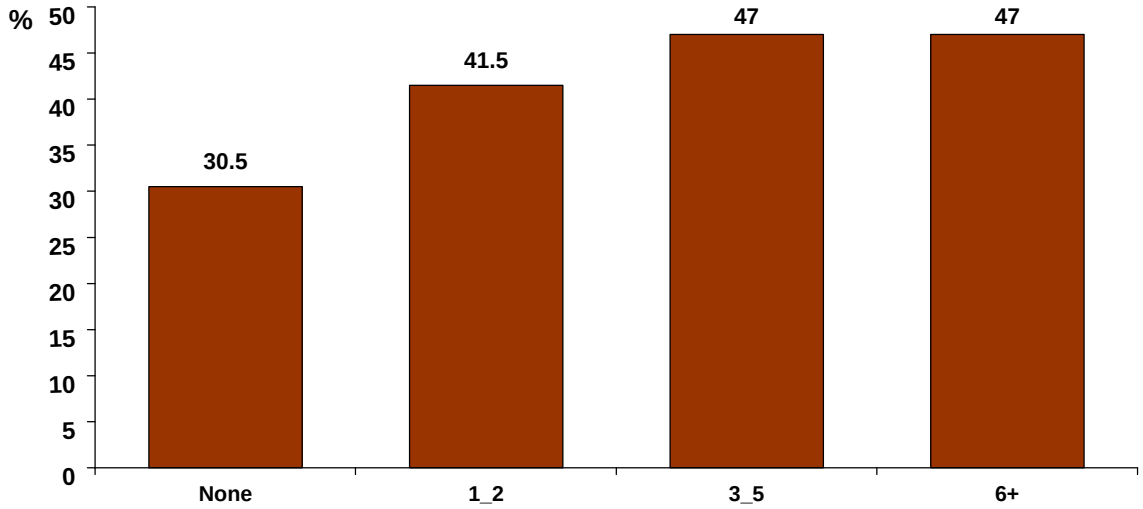
The educational level is positively associated with the final say of adopting family planning in the family. Women with better education are more likely to have a joint decision with their husbands than women with no schooling. Data indicate that the proportion of husbands who solely have the final say rises to 56.1 percent among illiterate women against 26.2 percent among women with a secondary education or more. 23.7 percent of families where women are illiterate, the decision is mutual between husbands and wives whereas families with wives having a secondary education or more, the figure rises to 59.5 percent.

Table 17.7 Percent distribution of currently married women (15-49) years according to their perception of husband attitudes regarding family planning use and background characteristics

Background characteristics		Approves	Conditionally Approves	Disapprove	Don't know	Number of women
Place of residence	Urban	60.3	5.4	25.0	9.2	2510
	Rural	33.7	3.8	35.8	26.4	8105
Educational status	Illiterate	34.4	4.2	36.0	25.3	8226
	Read & write	55.4	4.3	25.1	15.2	983
	Primary	57.6	4.0	25.4	13.0	616
	Preparatory	63.3	3.3	23.3	10.1	391
	Secondary+	69.3	4.9	18.9	6.9	401
No. of living children	None	26.4	4.1	33.0	35.9	939
	1-2	37.9	3.6	35.1	23.4	2503
	3-5	42.9	4.1	32.0	20.8	3587
	6+	42.3	4.7	33.4	14.6	3587
Total		40.0	4.2	33.3	22.4	10616

Data in Table 17.7 show women who reported their husband's opinion on using family planning. Women indicate that 40 percent of husbands unconditionally agree that couples adopt family planning, while 4.2 percent conditionally approve, 33.3 percent do not approve and 22.4 percent don't know of their husband's opinion. Rates differ according to background characteristics including place of residence. We can see that 60.3 percent of women in urban areas report that their husbands unconditionally agree on using family planning against only 33.7 percent of women in rural areas.

Figure 17.1 Percentages of currently married women who thinks that their husbands approve family planning use by number of living children



It is clear that education is the most effective variable in this issue. We can see that the proportion of husbands who approve family planning use increases as women's education increases. The figure accounts for 34.4 percent among women with no schooling and 69.3 percent among women with secondary education or more. Again, the number of living children positively affects husband's approval on family planning use. The proportion of husband's approval on family planning use decreases to a minimum level of 26.4 percent among childless women whereas among women with 3-5 children the proportion rises to 42.9 percent.

17.4 Met Needs and the Total Demand for Family Planning

Table 17.8 indicates that among currently married women, demand for family planning reaches 72.8% .Among them, 30.9 percent adopt it for spacing births and 41.2 percent adopt it for stopping childbearing. Patterns of family planning demands differ according to women's age. Data show that the proportion of women at age 15-19 demanding family planning accounts for 53.9 percent and rises to above 56.1 percent among women at age 20-24, then the rate drops to 47 percent, 45.9 percent and 46.9 percent among women at ages 35-39, 40-44, and 45-49 years respectively. These differences become much more pronounced when we consider the pattern of family planning demands. We find that among currently married women, the proportion reporting adoption of family planning for spacing births rises to 53.4 percent among women aged 15-19 against 4.7 percent among women at ages 45-49. While women reporting adoption for limitation of childbearing the figures are 9.4 percent and 57.9 percent respectively. Again, regional differentials regarding the demand for family planning use can be observed. The rate rises to 79.2 percent among urban women and decreases to 69.9 percent among rural women. It can be seen that the peak of family planning demand rises to

80.5 percent among women with secondary education and above against 70.6 percent among the illiterate.

The number of living children plays an important role on demand for family planning, where we find 24 percent of childless women have a demand for family planning use (22.4 percent for spacing births and 1.6 percent for stopping childbearing). This figure rises to above 70% among women with at least one child, while the peak of the proportion reporting desire to limit childbearing accounts for 79.8 percent and is observed among women with 6 children and more, indicating that women had met the desired number of children.

Unmet need for family planning demands accounts for 50.9 percent. In other words, 30% of married women in Yemen would have adopted family planning methods if the methods have been available or there has been an easy access to them. Indicators show that this demand has been increasing due to the increases in the awareness and expansion of information, education, communication and media programmes in addition to higher urbanization rates, widespread employment among women, and higher living standards. The Indicators show, as well, that increased unmet needs for family planning demands are accompanied by the occurrence of undesired births.

Regarding current use of family planning, the overall use of family planning methods reaches 21.2 percent which differs according to women's age. As can be seen, among women aged 15-19, the rate is 8.9 percent and then begins to increase dramatically with women's age to a peak of 55% that is observed among women at 35-39 years old.

Besides, the pattern of family planning demand is affected by women's age as well. Data show that only 1.6 percent of women aged 15-19 adopt the "cease childbearing policy" against 15 percent among those aged 45-49.

Regional differentials in family planning demands are observed as might be expected as family planning use among urban women is much higher than that of their counterparts in rural areas, (38.6 percent and 15.8 percent respectively). They differ as well in terms of pattern of family planning use where figures indicate that some adopt family planning for spacing births while others for stopping childbearing. The data show that there is a positive association between the level of women's education and family planning method use. Among currently married women, the proportion of family planning methods used is 17.6 percent for women with no schooling against 42.5 percent among women with at least secondary education. This pattern is also applicable when the number of living children is taken into account; only 1.7 percent of childless women use family planning where one half reported adopting it for spacing births and the other half reported adopting it to stop

childbearing, whereas the majority of women with 6 children and above reported adopting “the stop childbearing” policy.

Table 17.8 Percentages of currently married women aged 15-49 with met and unmet needs for family planning and the total demand for family planning by selected background characteristics

Background characteristics		Unmet needs			Met needs Current users			Total demand			% Met needs	No. of women
		Spacing birth	Cease childbearing	Total	Spacing birth	Cease childbearing	Total	Spacing birth	Cease childbearing	Total		
Age group	15-19	46.1	7.8	53.9	7.3	1.6	8.9	53.4	9.4	62.9	14.1	835
	20-24	41.3	14.8	56.1	12.5	4.6	17.1	53.8	19.4	73.2	23.4	2143
	25-29	28.8	23.1	52.0	12.3	10.2	22.4	41.1	33.3	74.4	30.1	2111
	30-34	19.3	31.9	51.2	7.9	17.8	25.7	27.2	49.7	76.9	32.2	1605
	35-39	10.3	36.7	47.0	4.3	22.8	27.2	14.6	59.6	74.2	36.7	1701
	40-44	5.5	40.4	45.9	1.2	23.4	24.6	6.7	63.8	70.5	34.9	1265
	45-49	4.0	42.8	46.9	0.6	15.0	15.7	4.7	57.9	62.5	25.1	955
Place of residence	Urban	17.8	22.7	40.6	15.0	23.7	38.6	32.8	46.4	79.2	48.7	2510
	Rural	25.0	29.1	54.1	5.4	10.4	15.8	30.3	39.5	69.9	22.6	8105
Educational status	Illiterate	21.5	31.4	52.9	4.8	12.8	17.6	26.3	44.3	70.6	24.9	8226
	Read & write	28.8	17.5	46.3	11.7	17.0	28.7	40.5	34.4	75.0	38.3	983
	Primary	29.7	13.6	43.2	19.0	16.3	35.3	48.7	29.9	78.6	44.9	616
	Preparatory	32.3	12.2	44.5	20.0	13.3	33.3	52.3	25.5	77.7	42.9	391
	Secondary+	28.1	9.9	38.0	26.1	16.4	42.5	54.3	26.3	80.5	52.8	401
No. of living children	None	20.8	1.5	22.3	1.5	0.1	1.7	22.4	1.6	24.0	7.1	939
	1-2	42.3	10.9	53.1	13.9	3.6	17.6	56.2	14.5	70.7	24.9	2503
	3-5	25.3	27.7	53.1	10.4	14.4	24.8	35.8	42.1	77.9	31.8	3587
	6+	8.6	46.0	54.6	2.1	23.1	25.2	10.6	69.2	79.8	31.6	3587
Total		23.3	27.6	50.9	7.6	13.6	21.2	30.9	41.2	72.1	29.4	10616

17.5 Number of Desired Children

In this section, we will investigate the mean desired number of children women would ideally like to have if they chose, even though it is rather difficult for women to think in an objective manner and independent of their actual family size the number of children they would choose if they did start over again. At large, there is difficulty of defining whether women’s responses were truly representing the number of children desired or justifying the number of children they already have.

Table 17.9 Percent distribution of ever-married women (15-49) years according to number of children desired including women who reported nonnumeric responses according to age and education level

Background characteristics		Number of children desired							Total
		0	1	2	3	4	5+	Nonnumeric answer	
Place of residence	Urban	0.4	2.3	20.5	10.9	29.2	24.5	12.1	2713
	Rural	0.2	1.7	12.4	8.3	21.0	18.7	27.7	3579
Educational status	Illiterate	0.2	1.8	12.7	8.5	20.6	28.9	27.1	8747
	Read & write	0.0	2.6	18.7	8.8	26.8	25.9	17.3	1043
	Primary	0.3	2.1	18.3	11.3	31.5	24.4	12.1	661
	Preparatory	0.2	1.5	21.2	10.1	34.4	22.0	10.3	417
	Secondary+	0.2	0.9	24.3	13.8	36.6	17.9	6.3	425
Total		0.2	1.9	14.3	8.9	23.0	27.7	23.9	11292

It can be noticed that overall, the desired number of children is still high where 23 percent of women reported that they want five children and more (27.7 percent) compared to 23 percent who reported that they want 4 children. As for residence differentials, data in Table 17.9 indicate that the number of children desired decreases with the increase in educational level especially among women with secondary school and higher as 17.9 percent of them desire 5 children and more compared to 28.9 percent among illiterate women. Moreover, rural women want more children that urban women.

As mentioned before, the mean desired number of children is affected by the actual number of children women have had. The desired number of children increases with the family size too. Women with one child want around 3.7 children and those with 5 or more desire 5.9 children.

As can be seen, Table 17.10 yields the average desired family size based on numeric responses, in other terms, it does not include women who reported indefinite answers like “the same” as an answer on preference sex composition of the desired number of children. Sex composition of the desired number of children is effected by women’s age, women’s place of residence, women’s educational status and by duration of marriage. It is found that a large proportion of women have a preference of a boy rather than a girl.

17.10 Mean ideal number of desired children for ever-married women (15-49) reporting numeric responses according to some selected background characteristics

Background characteristics		Mean number of desired children	Mean number of desired boys	Mean number of desired girls	Mean number of desired children (doesn't matter)	Number of women
Age	15-19	4.0	1.9	1.6	0.5	768
	20-24	4.0	1.9	1.7	0.4	2230
	25-29	4.3	2.1	1.8	0.4	2207
	30-34	4.7	2.3	2.1	0.4	1690
	35-39	4.9	2.4	2.1	0.4	1808
	40-44	5.1	2.5	2.2	0.4	1391
	45-49	5.5	2.7	2.3	0.5	1097
Place of Residence	Urban	4.1	2.0	1.8	0.2	2713
	Rural	4.7	2.3	2.0	0.5	8579
Duration of marriage	0-4	3.9	1.9	1.6	0.4	2033
	5-9	4.1	2.0	1.8	0.4	2089
	10-14	4.4	2.1	1.9	0.3	1841
	15-19	4.8	2.3	2.1	0.4	1571
	20-24	5.1	2.5	2.2	0.4	1585
	25+	5.4	2.6	2.3	0.5	2174
Educational status	Illiterate	4.7	2.3	2.0	0.4	8747
	Read & write	4.2	2.0	1.8	0.4	1043
	Primary	4.0	2.0	1.7	0.3	661
	Preparatory	4.0	1.8	1.8	0.4	417
	Secondary+	3.7	1.8	1.7	0.2	425
Total		4.6	2.2	2.0	0.4	11292

17.6 Attitudes towards Birth Spacing

Spacing between births is considered among the basic targets of family planning use on the basis that repeated births would have their negative impact on mother and child health at the same time. Ever-married women were asked their ideal birth interval between two consecutive births. Responses, as can be seen in Table 17.11, show that 42.9 percent of ever-married women's birth interval preference is 2 years compared to 26.1 percent who reported 3 years as the preferred birth interval. We find as well that 7.5% of them want a preference interval of less than 2 years. The reported preference of birth interval less than two years among ever-married women reaches its peak among the illiterate.

Data also show that the proportion of ever-married women with a two-year preference birth interval is more pronounced among rural than urban women as values are as high as 45.9 percent and 33.5 percent respectively. While women with a three-year preference birth interval is higher among urban

than rural women, figures account for 28.1 percent and 25.4 percent respectively. There is evidence that an increased level of education among ever-married women affect the preference of birth interval. However, the rate is maintained at 2 to 3 years. Figures show that the proportion of women preferring 2 years' birth interval is inversely associated with women's education, whereas the proportion with 3 years preference becomes higher with the increasing level of women education.

Table 17.11 Percent distribution of ever-married women (15-49) according to main perception of ideal period between two consecutive births by selected background characteristics

Background characteristics		Less than 1 year	1	2	3	4	5 +	other	Main period	No. of women
Place of residence	Urban	0.1	4.1	33.5	28.1	17.8	15.6	0.8	3.1	2713
	Rural	0.2	8.4	45.9	25.4	10.3	8.1	1.6	2.7	8579
Education -al status	Illiterate	0.2	8.8	45.4	25.0	10.6	8.5	1.7	2.7	8747
	Read & write	0.1	2.9	36.8	30.8	16.5	11.9	0.9	3.0	1043
	Primary	0.1	3.7	34.0	26.6	18.7	16.1	0.8	3.2	661
	Preparatory	0.2	1.6	35.8	30.4	15.7	15.5	0.8	3.2	417
	Secondary+	0.0	1.9	28.9	32.0	19.1	17.7	0.4	3.3	425
No. of living children	None	0.3	12.4	50.8	21.0	7.3	4.8	3.5	2.4	1049
	1-2	0.1	7.6	43.4	27.3	11.4	8.9	1.3	2.7	2715
	3-5	0.1	5.7	40.1	26.6	13.8	12.4	1.3	2.9	3766
	6+	0.1	7.6	43.3	26.0	12.2	9.6	1.2	2.8	3763
Total		0.1	7.4	42.9	26.1	12.1	9.9	1.4	2.8	11292

17.7 Attitudes towards Marriage and Reproduction and Employment of Daughters

In the previous sections we studied desires and perceptions of Yemeni women regarding reproductive health and family planning issues, referring to the fact that their opinions are colored by their present status. To further explore women's stated preferences regarding family size, for the sake of exploring trends in fertility levels that are expected to prevail in the future, we now present ever-married women's perceptions regarding ideal age at marriage and the mean desired number of children for daughters besides their attitudes towards employment of daughters.

Table 17.12 presents parental aspirations towards ideal age at marriage for daughters. Data show that 35.4 percent of women prefer their daughter to marry between 20-21 and around 23.4 percent less than 16 years old. Generally, it can be noticed that there is no preference for late marriages in Yemen; thus, the ideal mean age at marriage for daughters is as high as 18.3 years. Differentials of ideal age at marriage for daughters are observed according to women's background characteristics. Considering women's

educational level, we see that 27.6 percent of illiterate women preferred their daughters to marry before 16 years old compared with less than 2.9 percent of women with secondary education and above. As for women who prefer their daughters to marry at 25 years old or more, the proportion is as low as 3.6 percent among women with no schooling and rises to 10.8 percent for women with at least secondary education. This affects women's aspiration for ideal mean age of marriage for daughters. As can be seen, the rate accounts for 17.9 and 20.5 years for illiterate women and women with at least secondary education respectively. So, it can be concluded that there is a strong and positive relationship between women's educational level and the ideal age of marriage for daughters. On the other hand, the findings show that there is a common perception among women regardless of their educational level namely, their preference for their daughters to marry at age 20-21 years and this, as data show, is higher among women in each level of education with some differentials as well.

Table 17.12 Percent distribution of ever-married women (15-49) according to attitudes towards daughter's ideal age at marriage according to place of residence and education level

Background characteristics		Ideal age at marriage for daughters							Mean Ideal Age	No. of women
		<than 16	16-17	18-19	18-19	22-24	25+	Other		
Place of residence	Urban	10.6	7.5	16.5	47.6	7.4	7.5	3.0	19.5	2713
	Rural	27.5	12.4	14.7	31.5	1.7	3.3	8.9	17.8	8579
Education -al status	Illiterate	27.6	12.2	13.6	32.1	2.0	3.6	5.9	17.9	8747
	Read & write	12.6	11.1	23.5	41.0	4.1	5.4	6.7	18.9	1043
	Primary	9.6	7.7	20.1	47.5	5.8	5.6	9.0	19.3	661
	Preparatory	5.7	6.2	19.7	53.0	8.2	6.2	7.9	19.7	417
	Secondary+	2.9	1.7	15.6	53.4	13.1	10.8	0.0	20.5	425
Total		23.4	11.2	15.2	35.4	3.1	4.3	7.5	18.3	11292

In attempt to examine Yemeni women's vision and attitude towards employment of daughters, women were asked if they would approve or disapprove of their daughter's working if a good opportunity for work was available. As data indicate, it can be noticed that differentials in the proportion of women approving of their daughters work in urban and rural areas are quite observed (82 percent and 72 percent respectively). It is also observed that the proportion of women who approve their daughters to work increases with an increase in the level of mothers' education where findings show that the proportion that approves is 90 percent among women with secondary education against 72 percent among illiterate women.

Figure 17.3 presents ever-married women by the ideal number of children they desire for their daughters, and the mean ideal number of children for daughters according to mother's place of residence and level of education. As can be seen, the ideal number of children women desired for their daughters is 3.8 children. It is also observed that as mother's education increases,

differentials in the ideal family size decreases, thus mothers with higher educational level desire a lesser number of children for their daughters (4 among illiterate women compared with 3.2 children for women with secondary education and above. Regional differentials can also be observed as the figure represents as high as 4.1 on average among rural women compared with 3.2 among urban women.

Figure 17.2 Mean ideal age at marriage for daughters among ever-married women (15-49) years according to place of residence and education level

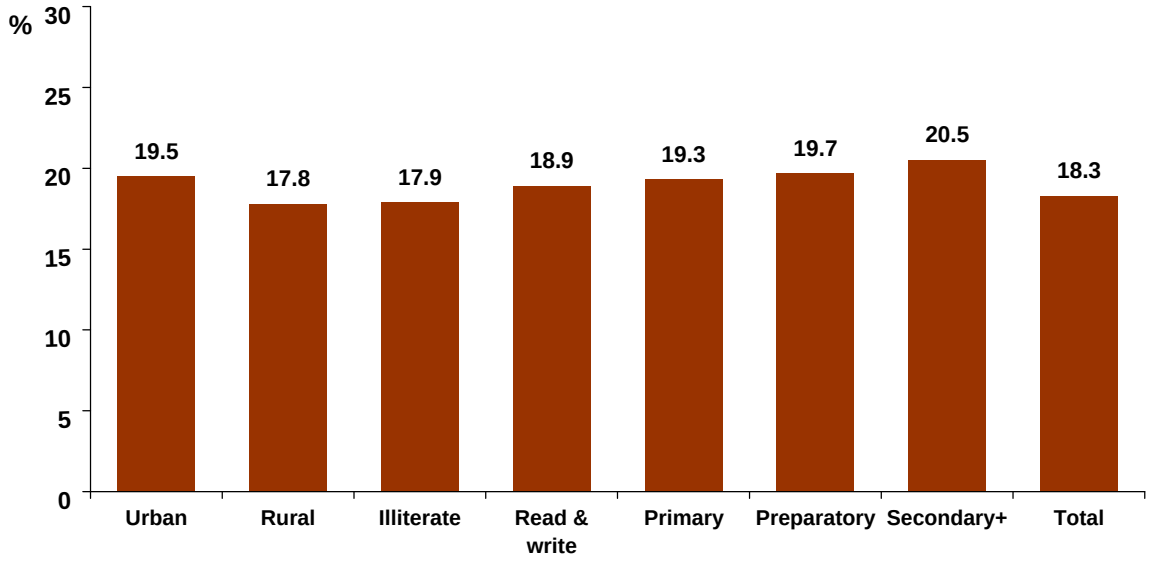
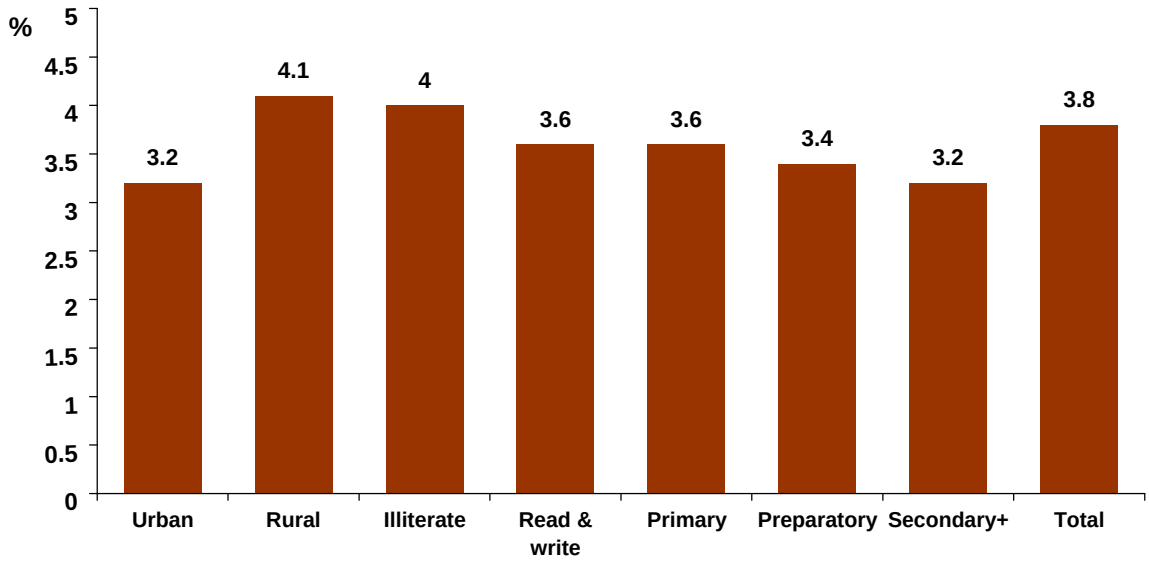


Figure 17.3 Ideal desired numbers of children for daughters among ever-married women (15-49) years according to place of residence and education level



Chapter 18

FEMALE CIRCUMCISION

Female circumcision widely known as female genital mutilation (FGM) is a term used for a variety of surgical operations carried out on female genitalia. These operations are practiced on healthy female children for traditional reasons backed by great social pressure. The operations may lead to immediate health risks and, sometimes, to long term health damage.

In Yemen, it is believed that the practice of female circumcision is limited to certain areas. In the YDMCHS, women were asked whether they approved or disapproved of female circumcision. The data indicated that 21 percent of women approved of female circumcision, but no information was collected on the prevalence of female circumcision or reasons for women' attitudes toward female circumcision.

So, the YFHS questionnaire included a series of questions on female circumcision. All women were asked if they had heard of female circumcision. Those who had heard of the practice were asked if they had been circumcised.

Attitudinal questions on female circumcision were included for women who had heard of the practice. Women were asked about their reasons for either supporting or opposing circumcision.

8.1 Prevalence of Female Circumcision

Table 18.1 shows that slightly more than half of ever married women (56.3 percent) have heard of female circumcision. Knowledge of female circumcision is higher in urban areas (76.4 percent) than in rural areas (50 percent). The proportion of women who knew circumcision increases with the level of education reaching 88 percent among those who have secondary certificate and above compared with 51 percent among illiterate women.

Table 18.1 also shows the percentage of women who had been circumcised. Nearly 38 percent of Yemeni women have been circumcised. Women in rural areas are slightly less likely to report being circumcised than women in urban areas (40.7 percent and 33.1 percent respectively). The prevalence of the practice by education level varies substantially; 41.7 percent of illiterate women were circumcised, compared with 32 percent among those

who can read and write and finished primary school and 24.2 percent among those who are holding secondary certificate and above.

Table 18.1 Percentage of ever-married women who have heard of female circumcision, percentage who have been circumcised; and among ever-married women who have at least any daughter circumcised by selected background characteristics

Variables	Percentage heard of female circumcision	No of women	Percentage know about female circumcision		No of women know about female circumcision
			Percentage circumcised	Percentages of daughter most recently circumcised	
Place of residence					
Urban	76.4	2713	33.1	15.2	2072
Rural	50.0	8579	40.7	25.9	4286
Educational level					
Illiterate	51.1	8747	41.7	25.8	4469
Read & write	68.2	1043	32.2	16.8	711
Elementary	72.5	661	31.5	16.1	479
Preparatory	78.2	417	29.3	14.5	326
Secondary+	87.8	425	24.2	7.9	373
Number of births					
None	52.2	1538	36.6	0.0	709
1-2	57.5	2660	38.6	19.0	1530
3-5	57.3	3646	39.8	28.5	2091
6+	55.9	3628	37.0	26.6	2028
Total	56.3	11292	38.2*	22.4	6358

* This percent is 21.5 if it is calculated for the total number of women

Overall, the prevalence of female circumcision among mothers is almost one and half time the proportion of the prevalence among daughters (38.2 percent and 22.4 percent respectively). The proportion of daughters who are circumcised shows slight differences by urban-rural residence (15.2 percent and 25.9 percent respectively). But differentials by educational level are substantial: illiterate women (25.8 percent), Read and write and women who finished primary (around 16.0 percent for each), women who finished preparatory school (14.5 percent), and women who are holding secondary certificate and above (7.9 percent).

18.2 Age at Circumcision and the Way it was performed

Data were collected from the YFHS respondents who had a circumcised daughter on a number of details concerning the circumcision including her age at the time she was circumcised, the person who performed the circumcision, and the nature of the procedure.

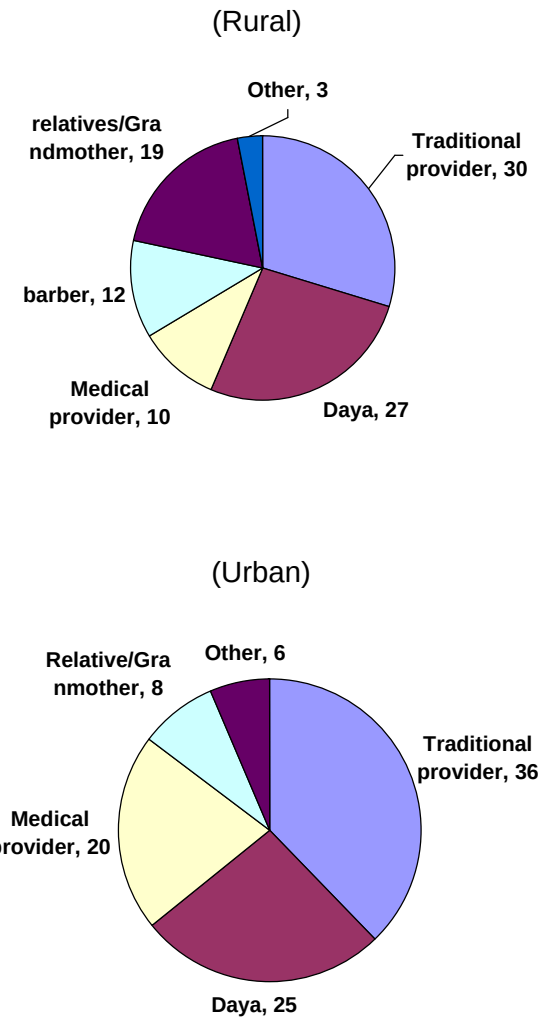
Data indicate that 99 percent of all daughters were circumcised before the end of the first year of life. Out of this percent 93 percent of all daughters were

circumcised during the first month of life. Women with secondary education and higher tend to delay the circumcision procedure for their daughters till they completed their forth months of life.

Figure 18.1 shows that a third of circumcised daughters had the procedure done by a traditional provider and 26.7 (around one-quarter) were circumcised by a daya. Only 12 percent of procedures were carried out by a medical personnel (doctor/nurse/midwives).

As for the tool that was used for circumcision, data show that razorblades were used in 71 percent of all circumcision operations and scissors were used in two out of ten operations.

Figure 18.1 Percent distribution of daughters who have been circumcised by person who performed circumcision by place of residence



Many medical complications, immediate and long term, arise from female circumcision. To get an indication on the immediate consequences of the circumcision for a woman's health, women were asked if their daughters

had experienced any complications at the time they underwent the procedure. Data indicate that 12 percent of the women reported that their daughters experienced frequent complications. Bleeding was the most frequent complications mentioned by 67.3 percent of mothers, followed by severe pain (55 percent), fever or infection (51 percent), difficulty of passing urine (32 percent), swelling (36 percent), and pus (21 percent).

18.3 Attitudes toward Female Circumcision

Ever-married women (15-49) who had heard of female circumcision were asked whether the practice should be continued or discontinued and the reasons for their belief.

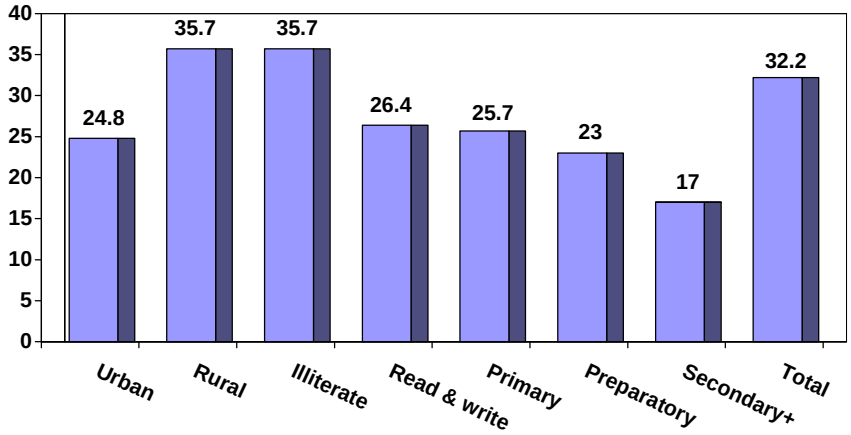
Results presented in Table 18.2 and Figure 18.2 indicates that 32 percent believe it should be continued. Support for the practice is strongly affected by place of residence and level of education. Rural women are more likely to favor continuing the practice compared with women in urban areas.

By level of education, the highest proportion supporting the practice is among illiterate women. In contrast, women with preparatory or secondary and higher believe the practice should be stopped as it is shown in figure 18.2.

Table 18.2 Percentages of ever-married women who have heard of female circumcision and who favor continuation of female circumcision by reason and selected background characteristics

Variables	Good tradition	Customs	Religious tradition	Cleanliness	Better marriage prospects	Reservation of virginity	Other/DK	Number of women
Place of residence								
Urban	19.8	31.3	32.1	59.9	2.6	10.2	3.7	515
Rural	18.6	44.8	26.3	52.9	4.5	7.6	3.0	1530
Educational level								
Illiterate	20.3	42.6	27.6	54.5	4.0	7.8	3.3	1595
Read & write	13.8	39.4	19.9	48.9	4.7	13.2	3.1	188
Elementary	8.9	37.3	39.1	62.2	5.0	5.0	0.8	123
Preparatory	12.0	39.9	26.8	45.3	4.3	8.5	3.5	75
Secondary+	25.6	27.1	37.0	48.4	1.4	10.8	3.0	64
Total	18.9	41.4	27.8	53.9	4.0	8.2	3.1	2045

Figure 18.2 Percentages of women who know female circumcision and who are in favor of continuation of female circumcision by place of residence and education level



Women who are opposed circumcision were asked about reasons for discontinuing circumcision. Data in Table 18.3 and figure 18.3 shows that 66 percent of the women mentioned that it is a bad tradition while 41 percent mentioned that it is against religion. Women resident in urban areas are more in favor of discontinuing circumcision because it causes complications, than women resident in rural areas (21.6 percent versus 10.5 percent). The percent of highly educated women, who are in favor of discounting of circumcision because it is against the dignity of women, is almost twice the percent of illiterate women (18.5 percent against 9 percent).

Figure 18.3 Percentages of women who know female circumcision and who favor discontinuation by place of residence and education level

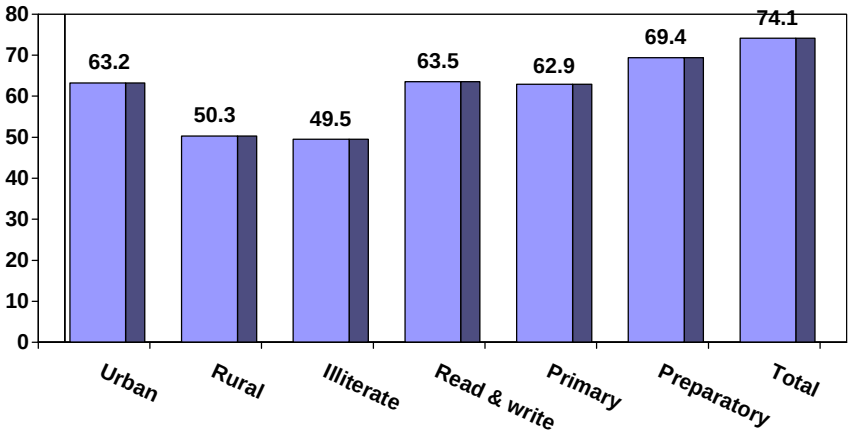
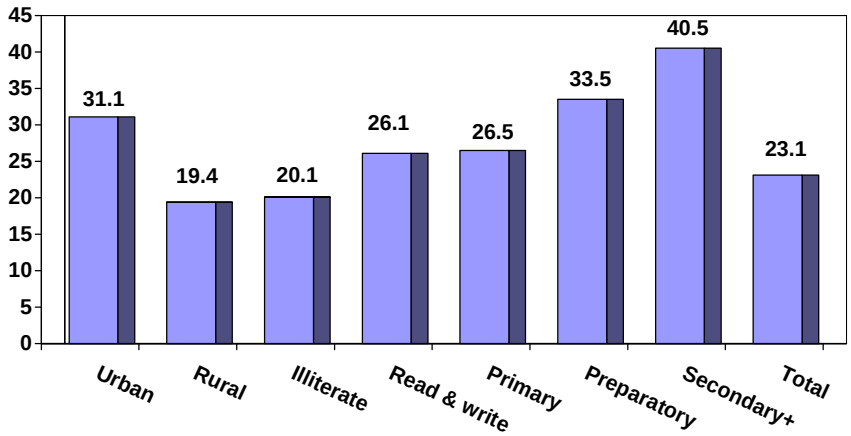


Table 18.3 Percentages of ever-married women who have heard of female circumcision and who favor discontinuation of female circumcision by reason and selected background characteristics

Variables	Bad tradition	Against religion	Cause many medical complications	Painful experience	Against dignity of woman	Other/DK	Number of women
Place of residence							
Urban	69.3	45.9	21.6	2.9	10.9	10.0	1309
Rural	66.9	37.8	10.5	2.4	11.1	10.5	2158
Educational level							
Illiterate	66.8	40.5	11.5	2.7	9.0	10.8	2211
Read & write	68.8	39.4	14.3	1.5	12.2	11.3	452
Primary	70.9	40.6	18.4	2.2	16.1	7.4	302
Preparatory	68.3	40.5	19.4	2.3	13.0	8.0	226
Secondary+	69.7	46.3	33.2	4.5	18.5	10.2	277
Total	67.8	40.9	14.7	2.6	11.1	10.3	3467

Figure 18.4 Percentage of married women and their husbands favor discontinuation of female circumcision by place of residence and education level



Currently married women were asked if they had discussed circumcision with their husbands'. The questionnaire also collected information on husbands' attitudes regarding the practice of circumcision. Data in figure 18.4 indicate that 37.4 percent of the women discussed this subject with their husbands, (this percent increased to 40.6 percent in urban areas while it decreased to 35.9 in rural areas). Also, highly educated women were more able to discuss the circumcision issue with their husbands. As for husbands' attitudes, 22.3 percent of women believe that their husbands support continuation of circumcision, while 22.3 percent think their husbands would like to see the practice discontinued.

18.4 Violence against Women

Women were asked a series of questions on whether they had ever been beaten during the two years preceding the survey. Women who were beaten were asked who mostly beat them and reasons why they were beaten. Information was also collected on whether they had ever sought help for the beatings and from whom.

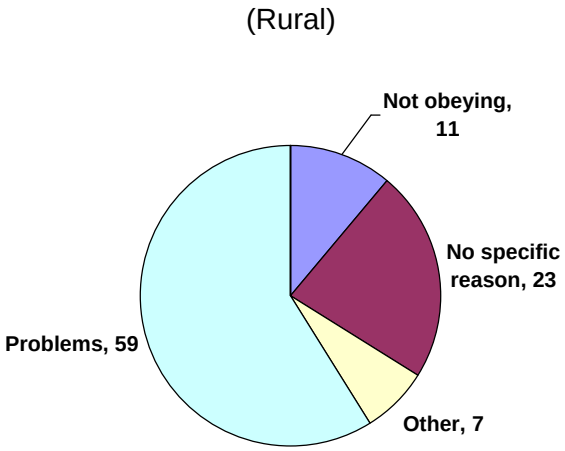
Data indicate that 5 percent of the women reported that they had been beaten during the two yeas preceding the survey. This proportion is somewhat slightly higher in urban areas than in rural areas (5.4 percent and 4.9 percent respectively). Less educated women are more likely to be beaten than highly educated women. Almost more than fifty percent of women (56.4 percent) reported being beaten exclusively by their husband.

Women were asked about reasons why they were beaten. Almost 62 percent of the women mentioned that family problems were the main reason for husbands to beat their wives, followed by “no reasons” (mentioned by 21.5 percent), and 10 percent reported not obeying their husbands.

Women who were beaten were asked whether they had ever sought help for the beatings and from whom. The majority of women beaten reported not needing medical attention compared to 10 percent who mentioned that they needed treatment from relatives, friends or neighbors with no variation according to place of residence, age or women’s level of education.

Data also indicate that 47 percent of women who had been beaten did complain to their relatives while 5 percent did go the police station.

Figure 18.5 Percent distribution of women who had been beaten during the last two years before the survey by reason and place of residence



(Urban)

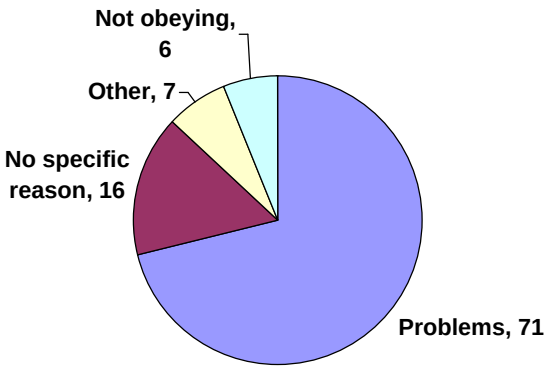


Table 18.4 shows that a high percent of older women complained more to friends and neighbors than to their relatives. Also, women resident in urban areas are less likely to complain than women resident in rural areas (49 percent compared with 33.4 percent).

Table 18.4 Percentages of women who had been beaten during the last two years before the survey by complaint and person they sought for help by selected background characteristics

Variables	Relatives	Friends/ Neighbors	Policemen	Other	Did not complain	Number of women
Age						
15-24	46.7	4.9	2.4	8.8	41.3	169
25-34	54.3	4.5	4.3	5.1	32.4	196
35+	39.3	11.4	8.1	6.7	39.2	198
Place of residence						
Urban	35.2	10.1	4.8	3.8	49.0	146
Rural	50.9	6.0	5.2	7.8	33.4	417
Educational level						
Illiterate	48.4	6.7	5.3	5.9	37.1	468
Read & write	38.0	6.9	3.6	12.6	40.3	43
Primary+	39.1	10.3	4.9	9.7	38.7	53
Total	46.8	7.1	5.1	6.8	37.5	564

***** Multiple answers acceptable

Chapter 19

MATERNAL MORTALITY

Maternal mortality is among the leading causes of death among women of reproductive age in most of the developing world, and has been given high priority in international and national strategies.

According to the International Classification of Diseases (ICD9): “A maternal death is defined as a death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes”.

Maternal death is much less common than childhood death and, therefore, more difficult to measure. The difficulty of measuring maternal mortality has long proved an impediment to progress in alerting health planners and others to the magnitude and causes of the tragedy of maternal deaths and hence to effective interventions on an appropriate scale.

19.1 Estimation of Maternal Mortality Rate

The Yemeni Family Health Survey concentrated on having an estimation of maternal mortality rate and determined its causes depending on the available data. The application in the field of the sampling plan yielded a sample of 125 thousand households. Within this number a total of 843233 births and 11368 deaths were counted during the 24 months preceding the survey and out of this number there were 1047 case of female death at age group 15-54 years. So, these families were revisited again during the field work to investigate more detailed information related to these deaths (their maternal status, cause of death). According to ICD9 classification, data show that there are 221 cases dying of pregnancy-related causes.

Data indicate that the percentage of maternal mortality rate is estimated at 365 deaths per 100,000 live births during the last 24 months preceding the survey.

19.2 General Characteristics of Dead Mothers

This section provides a profile of the ever-married women who died during the 24 months preceding the survey. First, information is presented on a

number of 200 cases out of 221 maternal death cases (14 cases from urban areas and 186 cases from rural areas).

Table 19.1 indicates that around 58 percent of the deaths occurred to mothers in age groups less than 20 years old and 35 years and older. Also, the majority of these deaths occurred among illiterate mothers and married at young age (less than 20 years). The average number of live births was 4.3 births while the percentage of deaths that have 5 births and more is around 37 percent.

Data indicate also that 43 percent of dead mothers were married to illiterate husbands and around 50 percent of them were married before age 25 years.

Table 19.1 Percent distribution of the maternal motility according to some characteristics

Characteristics	Percent
Age at death	
15-24	33.5
25-34	41.8
35+	24.6
Educational level	
Illiterate	89.3
Literate	10.3
N.S	0.5
Age at marriage	
<20 yrs	74.2
20 yrs+	17.1
N.S	8.7
Marital status at death	
Married	97.6
Divorced	1.9
Widowed	0.5
Total number of deaths =(100)	200

Table 19.2 presents the percentage of mothers who had experienced a miscarriage, or still birth according to their age at death and education level. Overall, data show that 26 percent of those mothers had experienced a miscarriage while 21 percent of them had a stillbirth. There are marked differences by age. Forty six percent of mothers who died at age 35 and older had experienced a miscarriage and 31 percent of them had experienced a stillbirth while this percent decreased to 14.7 percent and 14.8 percent among mothers who died at age 15-24 years respectively.

Table 19.2 Percent distribution of dead mothers who had experienced a miscarriage, or still birth according to their age at death and education level

Age and education level at death	% of miscarriage	% of stillbirth	Number
Age at death			
15-24	14.7	14.8	67
25-34	21.3	20.5	84
35+	48.2	31.0	49
Educational level			
Illiterate	26.8	20.7	179
Literate	17.7	25.8	21
Total	25.7	21.2	200

As for using contraceptive methods among dead mothers, Table 19.3 shows that around 8 percent of those mothers ever used a family planning method during their last marriage and this percent increases among illiterate mothers compared to literate ones (38 percent and 4 percent respectively).

Table 19.3 indicates a remarked difference according to age at death and education level. As it is shown, only 4 percent of mothers who died at age 15-24 years were using a family planning method during their last marriage compared to 10.2 percent of mothers who died at age 25-34 years. The same trend can be noticed among mothers who were using family planning method between their last two pregnancies (3 percent and 8 percent among mothers who died at age15-24 and at age 25-34 years respectively).

Literate mothers were more using family planning methods either during their last marriage (37.7 percent) or between their last two pregnancies (29.8 percent) compared to illiterate mothers (4.3 percent and 2.8 percent respectively).

Table 19.3 Percentages of dead mothers who had ever used a family planning method during their last marriage or between the last two pregnancies according to their age at death and education level

Age and education level at death	% ever used Family planning method at last marriage	% ever used Family planning method between the last two pregnancies	Number
Age at death			
15-24	3.9	2.8	67
25-34	10.2	8.0	84
35+	8.5	5.1	49
Educational level			
Illiterate	4.3	2.8	179
Literate	37.7	29.8	21
Total	7.7	5.5	200

19.3 Maternal Health Care for Dead Mothers

The 2003YFHS collected a range of information on whether the dead mothers suffered from any health problems before their death and in case they did what were these problems.

Overall, data indicate that 57 percent of dead mothers were suffering from some type of health problems.

As it is shown in Figure 19.1, malaria was the main health problem facing Yemeni mothers (29.8 percent) followed by breathing problems (16.8 percent), liver problems (14.7 percent), high blood pressure (12.5 percent), heart diseases (8 percent), and finally TB (6.3 percent).

Figure 19.1 Percentages of dead mothers according to type of health problems they experienced during their life

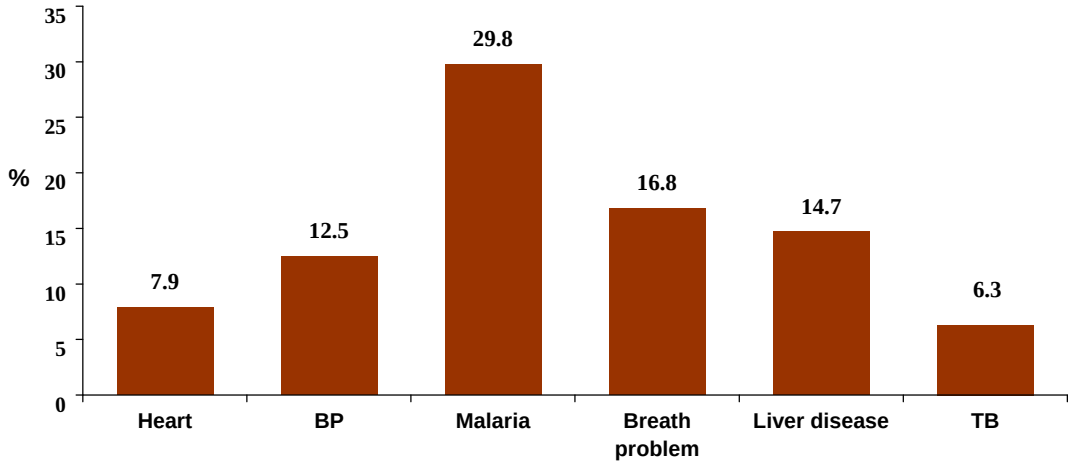
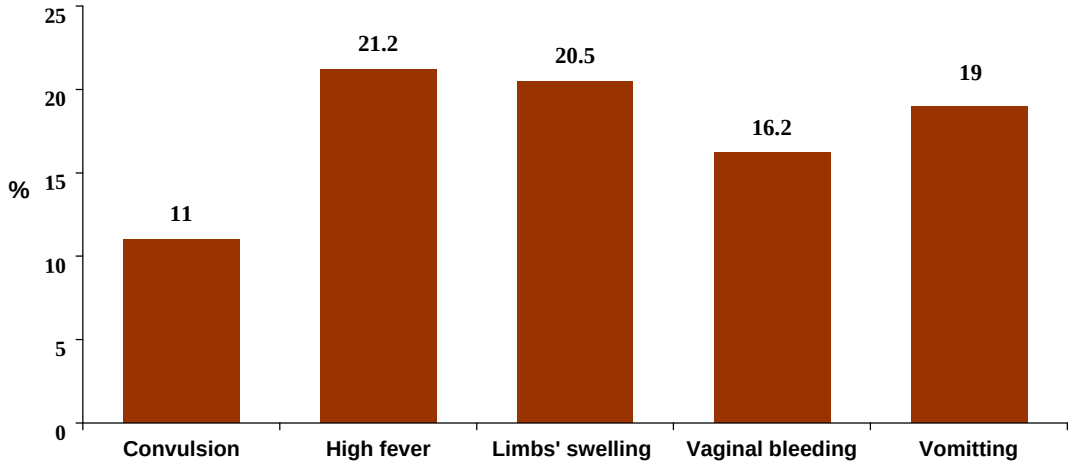


Figure 19.2 shows that high fever during the postpartum period was the most prevalence health problem among dead women and it was followed by limb's swelling, vomiting, and vaginal bleeding.

Figure 19.2 Percentages of dead mothers who suffer from any health problems during any of her previous pregnancies by type of health problem



Early and regular checkups by trained medical providers are very important in assessing the physical status of women during pregnancy. Table 19.4 presents data from 2003 the YFHS on the coverage of medical care the dead women had taken during their last pregnancy.

Results in Table 19.4 indicate that 31 percent of the dead women who had suffered from a health problem did receive any care, while those who received a care by trained medical providers (public/ private doctor or trained midwife) was 30 percent. Data show that 58 percent of the dead women who were residing in urban areas received care by trained medical providers compared with 28 percent of dead women who were residing in rural areas. It is observed from the table that the percent of those who saw a doctor either at a private clinic (35.6 percent) or at a public health facility (17.3 percent) is higher in urban areas compared to rural areas (15.4 percent and 13.3 percent respectively).

Table 19.4 Percentages of dead mothers who received medical care during their last pregnancy by type of care and lace of residence

Place of residence	Type of care			
	Any care	Care of medical provider*	Doctor's care	Private doctor's care
Urban	58.3	58.3	17.3	35.6
Rural	29.9	27.7	13.3	15.4
Total	31.9	29.9	13.5	16.8

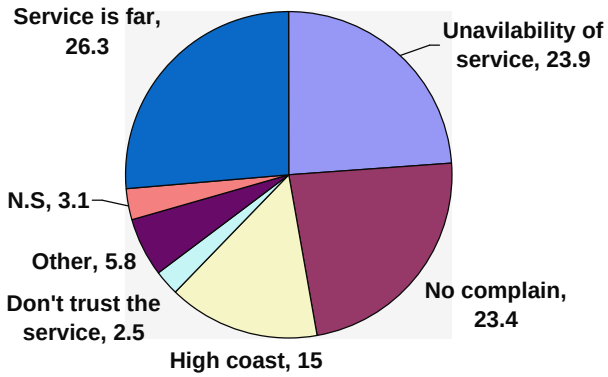
*Private/public doctor/trained midwife

Information was collected on the source from which care was received. These results are presented in Figure 19.3. Data indicate that 72 percent of the women received medical care from a public sector compared to 41 percent who received it from a private source. It is also observed that the percent of

those who received care from a public sector is higher in rural areas compared to urban areas.

Data show that most of the dead women (around 63 percent) who received medical care began seeing a health provider within the first six months of pregnancy. The percentage of women who saw a provider and residing in urban areas is higher than those who residing in rural areas. As for those cases that did not receive care from a medical provider, Figure 19.3 show that place of service is far, unavailability of services, and high cost were the main three reasons for not seeing a medical provider.

Figure 19.3 Percent distribution of dead mothers who did not received any care during there pregnancy by reason

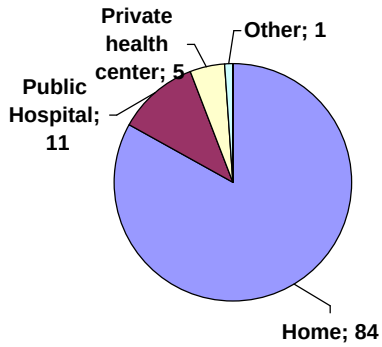


19.4 Place of Last Delivery

The survey data indicate that around 18 percent of the dead cases did occur during pregnancy and the rest (82 percent) during either the delivery process or during the postpartum period.

Figure 19.4 shows that the majority of births occurred outside of a health facility. It is shown that 82 percent of the deliveries occurred at home and this percent is higher in rural areas that it is in urban areas, while only 11 percent of delivery occurred at public hospital/center compared to 5 percent that occurred within a private sector.

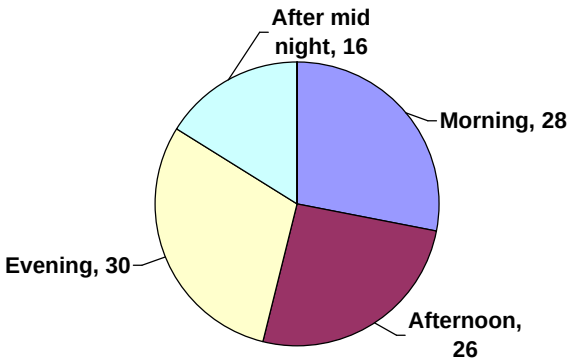
Figure 19.4 Percent distribution of mothers who died during or after delivery by place of last delivery



19.5 Dying Circumstances

Data in Figure 19.5 show that 28 percent of the deaths occurred in the morning compared with 26 percent that occurred in the afternoon and around 30 percent occurred in the evening, while 16 percent did occur at the midnight.

Figure 19.5 Percent distribution of mothers who died during delivery by time of death



Data also indicate that 48 percent of the deaths occurred in the presence of husbands versus 27 percent that occurred when the husbands were away, and 77 percent of deaths that occurred after delivery.

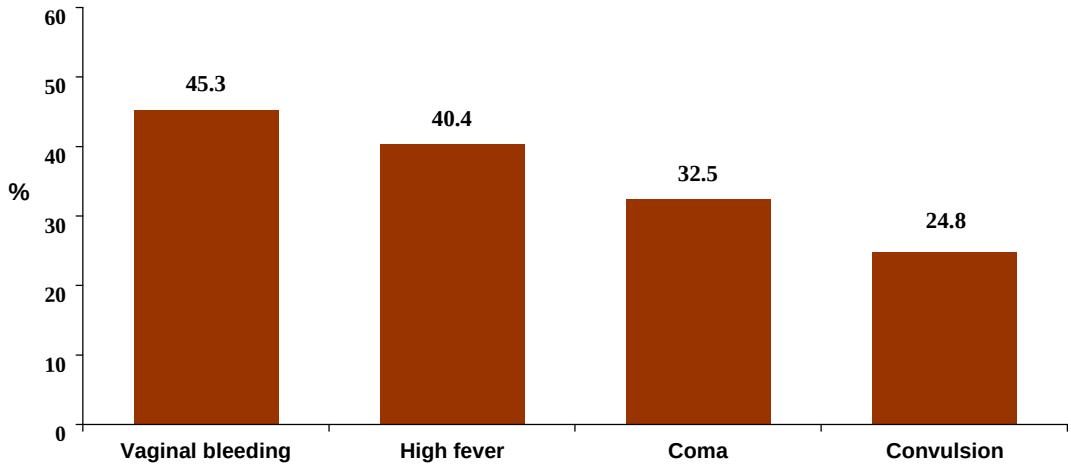
Results show that mother or in law assisted during delivery in 48 percent of the deliveries while other relatives assisted during delivery in 4 percent and medical providers assisted during delivery in 10 percent of deliveries.

As for deaths that occurred during pregnancy, data indicate that 25 percent of them occurred during the first six months of pregnancy while the rest occurred in the last trimester of pregnancy.

19.6 Direct Cause of Death

The survey paid special attention to provide information on causes of death. Data in Figure 19.6 show that vaginal bleeding was reported as the main cause of death (45 percent), followed by high fever (40 percent), and coma (33 percent).

Figure 19.6 Percentages of dead mothers who suffer from any centimes directly before dying by type



Chapter 20

SUMMARY AND RECOMMENDATIONS

The Yemeni Family Health Survey (YFHS) is a nationally representative sample. The field operations were carried out during January-March 2003. A total of 12665 households with a total of 11292 ever-married women under age 55 years of age were successfully interviewed in the reproductive health survey.

20.1 Main Findings

- General Characteristics of households and housing

Data indicate that the population pyramid of Yemen has a wide-base, with large concentration (46 percent) of the population under 15 years of age while the older population (65 years and older) represents only 4 percent of the total population. The mean number of persons per household is 7 persons. Data also indicated that 7 percent of the households headed by a female in the 2003 Yemeni Family Health Survey.

The education level of household members is among the most important characteristics of the household. Overall, data show that the illiteracy rate is very high in Yemen (47 percent) and this percent increased to 67 percent among females aged 10 years and higher and it is also higher in rural areas than in urban areas especially among females.

As for the housing characteristics, more than three quarters of the households own their dwelling unit while around 10 percent live in apartments. The average number of rooms is 2.6 rooms per household and the average bed room is 1.9 rooms. In Yemen, 30 percent of the households have access to piped water and this percent is higher in urban areas compared with rural areas.

Around 45 percent of households have electricity. Differentials in availability of electricity by urban-rural residence is big (94 percent versus 30 percent respectively), while sanitation facilities appear to be poorest in rural areas than in urban areas.

Results provide information on household ownership of durable goods and other possessions. Almost all electric goods are available in urban areas compared with rural areas especially the radio.

- **General Characteristics of respondents (ever-married women age 15-49 years)**

The percentage of currently married is 94 percent and the widowed is around 3.1 percent of the whole sample and the rest (2.9 percent) is of divorced women. Three women out of four are illiterate and the female illiteracy reaches 85 percent in rural areas. The level of exposure of women to mass media is very low as around 28 percent of the interviewed women watch television daily, and one out of four women reported listening to the radio, compared to less than 8 percent who read newspapers or magazine daily. This percentage does not exceed 8 percent of those who read newspapers or magazines once a week.

Less than 20 percent of the women reported that they are working and 84 percent of the women in rural areas work in agricultural occupations.

- **Prevalence of Chronic Diseases and Disability**

The survey allowed measuring the prevalence of a number of chronic diseases and of disability among the population aged 15 and above.

It was noted that 10 percent of the population suffered from one chronic disease, while 15 percent suffered from at least one chronic disease and the prevalence was higher in rural than in urban areas, among females rather than males, and it increased with age. High blood pressure and stomach diseases were the most prevalent, followed by kidney, anemia, and joint diseases.

The prevalence of disability increases with advance in age from 1.4 per thousand for those aged 0-14 rising gradually to 10.4 per thousand for those in the 60-69 age group and up to 21.5 per thousand in the 70 and above age group, and this is natural due to the regressive ailments that appear with age such as those affecting the hearing, vision and the kinetic systems.

The survey shows that vision handicap is the most common one: 36.2 percent of all the disabled against 29.8 of the kinetic handicap (limitation in movement), followed by 28.2 percent who are unable to hear. The handicaps related to understanding and communication reached 14.8 percent while the percent of handicaps that are unable to care for themselves reached 6.2 percent.

- Prevalence of smoking, Chewing El-Kat and El-Shama

Smokers accounted for 19 percent while those who ceased smoking (previous smokers) accounted for 4.2 percent. Variation according to sex was very obvious; the percent of current male smokers is 27 compared with 10 percent among females. Results indicate that slight variations between urban and rural areas. The results showed that the percentage of smokers was 26.2 percent among persons aged 15 years and more, and this percentage ranged

between 8 percent among females and 43.4 percent among males, and between 10.4 percent among those in the age group 15-19 years and 37.1 percent among in the age group 40-49 years.

Overall, 41.5 percent of the population age 10 and older are using El-Kat, More than 25 percent of El-Kat users chew it daily and this percent increase in rural areas compared with urban areas and the spread of chewing El-Kat increases gradually with age and the highest percent (61.2 percent) is observed among females and males respectively in age group 45-54.

11 percent of the population age 10 and older is using El-Shama and this percent increase in rural areas compared with urban areas and among female compared to males.

- Marriage Patterns

The percentage of ever-married out of the 15 and more year olds, was 60 percent among males and 56.8 percent among females, and rose with age: 97.5 percent among males aged less than fifty years and 87.4 percent among females in the same age group.

The survey data show a rise in the singulate mean age at marriage among both males and females; for males it is 25.5 and for females 22.3 years.

Marriages between relatives (consanguineous marriages) are common in Yemen. The survey results show that 31 percent of Yemeni women are married to first degree cousins and 17 percent have other relationships with them, while 57 percent are not related in any way to their spouses.

Consanguineous marriages are more common in urban and rural areas; 48 percent of rural ever-married women are married to a relative compared with 45 percent in urban area.

The phenomenon of polygamy was relatively limited (6.3 percent of women are married to polygamous husbands). Data indicate that younger women are less likely to have polygamous husbands and it is also clear that the percentage of polygamy is almost the same in rural and urban areas.

- Fertility and Family Planning

The results showed that 15.8 percent of the women currently married were pregnant at the time of the survey. During five years before the survey, the TFR was 6.2 births per woman, and the age-specific fertility rate was highest among women aged 25-29. The findings of the survey, however, show

that there are substantial differences between the urban TFR and rural TFR which is higher in rural areas (6.7 births per woman against 4.5).

Results indicate that 40.9 percent of ever-married women have ever used a family planning method at some time while 23.1 percent of the women interviewed are currently using any family planning methods. Across age groups, the highest level of ever use of any family planning method is observed among women age 30-34. Data indicate also that 28 percent of ever-married women reported that they used a modern family planning method. Pill is the most commonly used method (20 percent) followed by prolonged breastfeeding (18.2 percent), IUD (8 percent). Overall, birth spacing was the main cause of using family planning among women followed by stop childbearing (78 percent versus 21 percent). The decision to use family planning methods is mostly taken by the husband (53 percent) whereas 29 percent jointly take the decision and only 6.5 percent of the wives take the decision alone.

Data show that 23.3 percent of users stop using as a result of having health problems, 18.8 percent stop using because they want to have more children and another similar percentage reported methods failure (18.5 percent), while 28.9 percent stop using for other reasons.

- Maternal Care

Data indicated than 55 percent of the interviewed women did not receive any antenatal care during their pregnancy. Almost two thirds of those women were resident in rural areas and 62 percent of them were illiterate while more than fifty percent of them had pregnancy complication.

Data show an inverse relationship between mother’s age and antenatal care as the proportion of mothers aged 15-19 years are more likely to see a doctor for antenatal care compared with older mothers (35-49years) (47 percent and 35 percent prospectively).

The percentage receiving care by a doctor during the first pregnancy was 55.6 percent and dropped gradually to reach 34.3 percent among women during their sixth pregnancy or above. The pregnant women residing in the urban areas showed more keenness on following up their pregnancy with a doctor than those in the rural areas (66 percent against 35 percent).

Findings showed that the mean number of checkups made by woman during her last pregnancy was 3.2 and that this dropped to 2.6 checkups in rural areas and rose to 4.3 in urban areas.

Results shows that the percentage of those who had iron during their last pregnancy reached 25 percent, vitamins 29.4 percent and that those who

had at least one anti tetanus dose was 31.5 percent. These percentages were higher in urban than in rural areas and greatly increased with the educational level.

Data show that 52.5 percent of the pregnant women suffered from at least one health symptom, 29.8 percent from pain in the upper abdomen, 27.3 percent suffered from severe headache, 18.9 percent from breath problems, 17.3 percent from swelling in the face and body and 7.3 percent from high blood pressure.

- Prevalence of Chronic and Reproductive Diseases

The survey data revealed that half of ever married women aged 15-49 reported that they were in a good health, 40 percent considered their health fair and, only 13 percent considered themselves to be in bad health.

Data show that women were most frequently affected by rheumatism (11 percent), kidney diseases (10.6 percent), stomach diseases (13.5 percent), and anemia (10.7 percent). As for commitment to medical treatment, the percentage of women who were committed to medication was very low (less than 50 percent) except for those who were having diabetes, high blood pressure, asthma.

Data indicated that the percentage of occurrence of the symptoms of uterus prolapse accounted for 22 percent. More than a half of the women reported that they had been affected with uterus prolapse for more than five years. Fifty one percent of women who were affected with Uterus Prolapse did not seek for medical consultation, while 43 percent did consult a doctor and this percent increased to 59 percent among women in urban areas compared with women in rural areas. There was a linkage between women's educational status and consulting a doctor, where the percentage of highly educated women who consult a doctor was higher than illiterate women (55 percent among those who were holding secondary certificate against 39 percent among illiterate women).

- Prevalence of STD'S

Data showed that knowledge about STD's was higher in urban areas than in the rural areas. Knowledge about AIDS rise parallel to the woman's educational level and it rose from 34.1 percent among the illiterates to 95.5 percent among secondary certificate holders while that of syphilis rose from 5.8 percent among the illiterates to 52.5 percent among the secondary certificate holders. Women were most knowledgeable about AIDS. The knowledge increased with age and educational level of women and was higher in urban than in rural areas.

Figures confirmed the fact that television is the main source of information about AIDS; more than 6 in ten women knew about AIDS from television. Radio made a much smaller contribution to creating AIDS awareness; only forty percent of women reported that radio was their source of information. Among the remaining women, the principle source of information was community meetings (28.6 percent) followed by relatives and friends (21.6 percent). However, rural women were less likely to hear about AIDS from television and were more likely to hear about it from radio.

- Children Nutritional Status

Overall, more than 50 percent of children less than 5-year old suffered from moderate to severe stuntedness. The percentage of severe stuntedness was about 31 percent. Rural children were more likely to suffer from stunted than in urban areas (44.2 percent and 55.5 percent respectively). Also, data show that 12.4 percent of the children under study suffered from wasting in comparison with the standard median of the reference population; (with more than -2 SD), and 3 percent suffered from severe wasting (with more than -3 SD) below the referenced median.

Data indicated that about 45.6 percent of children under study were suffering from underweight (moderate or severe) whereas the percent of those who suffered from severe underweight was 15.2 percent.

- Infant and Children Mortality

Results of YFHS showed that there was a substantial decline in mortality during infancy and childhood as indicated. Infant mortality dropped from 90.4 deaths per 1000 live births over the fifteen years period preceding the survey to 74.8 per 1000 live births during the five years prior to the survey. The corresponding decline in the under-five mortality rate was from 122.8 to 101.9 deaths per 1000 births respectively. Data indicated that neonatal mortality rate of amounted to 37.3 per 1000 and that of post neonatal (from one month to less than one year) amounted to 37.5 per 1000.

- Breastfeeding and Infant’s Nutrition

Most of the children in Yemen (97 percent) were normally breast-fed for some time. Data showed that most of children started suckling immediately after birth, i.e. within the first hours after birth, about 40 percent were breastfed, while, the rate of those who started breastfeeding within one hour to less than three hours after birth was about 15.5 percent. Data indicated substantial differentials in breastfeeding by place of residentce. Among all births, 52.5 percent of mothers’ resident in rural areas started suckling during the first three hours after birth compared to 66.7 percent of mothers resident in urban areas.

The habit of giving other liquids to the baby after birth and before feeding pre-lacteal feed was relatively common and was estimated to be about 75 percent among the last babies born during the last three years before the survey. The Median duration of breastfeeding was 21.7 months while, the mean of the breast-feeding period was 23.1 months. Exclusively breastfeeding was applied to children who were given only breast milk and not receive other complementary liquids (including plain water) or solids, while children who were given breast milk and plain water only was considered as “predominant breastfeeding”. As for children who were given breast milk in addition to liquids or completely foods it was considered as “any breastfeeding”.

- Immunization against Childhood Diseases

Data showed that the percent of the children 12 – 23 months old who had a health card that was seen by the interviewer was about 26.8 percent. Data did not indicate any differences about the availability of cards according to place of residence, but it was noticeable that there was a higher rate of seen cards in urban areas than in rural areas (41.6 percent compared to 22.8 percent).

- Child Morbidity (Children less than 5 years old)

Generally, data showed that 40 percent of children were reported to have suffered from high fever during the two weeks prior to the survey, and those who suffered from cough was 42 percent. Around 20 percent of children suffered from three symptoms together and four among ten suffered from cough. Overall, the percentage of children resident in rural areas reported to have suffered from symptoms of respiratory infections was higher than that of children resident in urban areas (42.1 percent versus 32.7 percent) and those who suffered from cough was 44.2 percent in rural areas compared with 34.1 percent in urban areas. The same trend applied to the percent of children who had cough accompanied by fever or breathing difficulty or both, where the percent of children resident in rural areas who had suffered from either of these symptoms was higher than children who were resident in urban areas.

The survey data indicate that 29.6 percent of children were reported to have had diarrhea episode in the two weeks preceding the interview. About 19.5 percent were reported to have experienced diarrhea with fever, while the percentage of children with severe diarrhea who had blood in stool with or without fever accounted for 4.4 percent. The YFH Survey findings indicated that the proportion of children under five years of age suffering from diarrhea in the two weeks preceding the survey, of whom medical advice on treatment was sought for was 36 percent, while 61 percent of the children suffering from diarrhea were not taken to seek any advice on treatment with no variation according to mother’s age or child’s age, or sex of child.

- Fertility Attitudes towards Fertility and Family Planning

In the 2003 YFH survey, findings indicated that among currently married women aged 15-49, the proportion that considered themselves fecund accounted for 94.5 percent while 5.5 percent reported that they were infecund. Among fecund women, the proportion that wanted another child constituted 38.2 percent against 38.6 percent reporting that they desired to cease childbearing.

Figures indicated that the proportion of currently married women who wanted to have another child was inversely associated with women's age. The proportion wanting more children among urban women was higher than among rural women (40 percent versus 37.7 percent). Education affected women's desire to have another child. The proportion of women wanting another child had minimum level among illiterate women, (33.8 percent versus 62.8 percent among women having secondary education and above).

Acceptance and adoption of family planning in Yemen has become much more widespread among all population groups due to increased awareness of family planning's important and positive impact on health and socio-demographic aspects whether on the family level or the national level.

The YFHS dealt with opinions of ever-married women towards using family planning services. The data indicated that the percentage of ever-married women who unconditionally agree on using family planning reached 58 percent, while the rate of those who approve conditionally was 4.2 percent compared with 25.7 percent who disapprove the use of family planning methods. Data showed that 21 percent of the women reported that they discussed using family planning with their husbands once or twice and a third of them discussed it more often. The YFHS data indicated that the final say on adopting family planning was taken solely by the husband and reached 28.6 percent.

It is clear that education was the most effective variable in adopting family planning. It can be seen that the proportion of husbands approving family planning use increased as women's education increased. The figure accounted for 34.4 percent among women with no schooling and 69.3 percent among women with secondary education or more. Again, the number of living children positively affected husband's approval on family planning use. The proportion of husband's approval on family planning use decreased to a minimum level forming 26.4 percent among childless women whereas among women with 3-5 children the proportion rose to 42.9 percent.

- Female Circumcision and Violence against Women

Results showed that slightly more than half of ever married women (56.3 percent) had heard of female circumcision. Knowledge of female circumcision was lower in urban areas (76.4 percent) than in rural areas (50 percent). The proportion of women who knew about female circumcision increased with the level of education reaching 88 percent among those who have secondary certificate and above compared with 51 percent among illiterate women.

Data indicated that 32 percent of the women believe that female circumcision should be continued. Support for the practice is strongly affected by place of residence and level of education. Rural women are more likely to favor continuing the practice comparing with women in urban areas.

As for violence against women, data indicate that 5 percent of the women reported that they had been beaten during the two yeas preceding the survey. This proportion was somewhat slightly higher in urban areas than in rural areas (5.4 percent and 4.9 percent respectively). Less educated women were more likely to be beaten than highly educated women. Almost more than fifty percent of women (56.4 percent) reported being beaten exclusively by their husbands.

- Maternal Mortality

Data indicated that the percentage of maternal mortality rate was estimated at 365 deaths per 100,000 live births during the last 24 months preceding the survey and that 60percent of these deaths were during the unsafe motherhood periods. Results show that high fever during the postpartum period was the most prevalence health problem among dead women followed by swelling of hands and legs, vomiting, and bleeding. The survey paid special attention to provide information on causes of death. Data show that vaginal bleeding was reported as the main cause of death (45 percent), followed by high fever (40 percent) and coma (33 percent).

20 .2 Recommendations

- Improve the quality of housing especially availability of safe drinking water and sanitation facilities particularly in rural areas. Also availability of electricity is important it has a relation ship with all the households' electric goods and for the media health campaign.

- Increase education opportunities especially among female because it has a great effect on women's behavior towards their health and reproductive behavior.

- The reproductive health care should be widened to include services and information about family planning means, antenatal care, safe

delivery, postnatal care, and works on preventing and treating the reproductive system diseases, and prevention and termination of all types of practices harmful to the health in the field of nourishing both the mother and the baby.

- Efforts must be done according to systematic policies and programmes towards eliminating the obstacles of using family planning to serve the couple's attitudes, facilitating their availability, and providing centers with qualified and trained health staff in order to improve services.

- Efforts must be done to improve maternal health services especially with regard to referring patients to doctors in time, the low standard of labs at some health centers, and minimizing pregnancy complications through some continual qualified and integrated medical care.

- Advocacy and guidance programs should be directed to give special help to men and support their attitudes and behavior towards reproductive health in the hope of reaching a better and healthy family.

- The youth should be provided with proper information about reproductive health and attention should be given to educating them about sexually transmitted diseases and the dangers of smoking.

- The government should go on with its trend towards integrating health services and improving the quality of services rendered and the technical and consultative skills of health care providers,

- Maximum use should be made of the media to raise awareness and health education among family members in Yemen.

- Family–oriented, and well studied campaigns should be organized, and exclusive breast-feeding for the first three months of life should be promoted, and mothers are educated about healthy infant nutrition to protect them from malnutrition and contagious diseases.

- Information campaigns should point out the importance of medical and lab examinations to detect the reproductive tract diseases as early as possible, and demand that all means of treatment be made available at a low cost especially in rural areas.