Jordan

Population and Family Health Survey 1997

Department of Statistics

DHS

Demographic and Health Surveys
Macro International Inc.

World Summit for Children Indicators: Jordan 1997

		Value
BASIC INDICATORS		
Childhood mortality	Infant mortality rate	24 per 1,000
	Under-five mortality rate	34 per 1,000
Maternal mortality	Maternal mortality ratio	79 per 100,000
Childhood malnutrition	Percent stunted	7.8
	Percent wasted	1.9
	Percent underweight	5.1
Clean water supply	Percent of households within 15 minutes of a safe water supply[1]	99.3
Sanitary excreta disposal	Percent of households with flush toilets	91.8
Basic education	Percent of women 15-49 with completed primary education	85.8
	Percent of men 15-49 with completed primary education	89.9
	Percent of girls 6-12 attending school	90.6
	Percent of boys 6-12 attending school	90.2
	Percent of women 15-49 who are literate	88.9
Children in especially difficult situations	Percent of children who do not live with their natural mother	2.7
	Percent of children who live in single adult households	1.9
SUPPORTING INDICATORS		
Women's Health		
Birth spacing	Percent of births within 24 months of a previous birth	44.2
Safe motherhood	Percent of births with medical antenatal care	95.6
	Percent of births with antenatal care in first trimester	78.9
	Percent of births with medical assistance at delivery	96.6
	Percent of births in a medical facility	93.1
	Percent of births at high risk	66.9
Family planning	Contraceptive prevalence rate (any method, currently married women)	52.6
	Percent of currently married women with an unmet need for family planning	14.2
	Percent of currently married women with an unmet need for family planning to avoid a high-risk birth	12.2
Nutrition		
Maternal nutrition	Percent of mothers with low BMI	2.3
Low birth weight	Percent of births at low birth weight (of those reporting numeric weight)	10.1
Breastfeeding	Percent of children under 4 months who are exclusively breastfed	14.8
Child Health		
Vaccinations	Percent of children whose mothers received tetanus toxoid vaccination during pregnancy	39.5
	Percent of children 12-23 months with measles vaccination	89.9
	Percent of children 12-23 months fully vaccinated (including BCG)	20.5
	Percent of children 12-23 months fully vaccinated (excluding BCG)	85.7
Diarrhea control	Percent of children with diarrhea in preceding 2 weeks who received oral rehydration therapy (ORS or sugar-salt-water solution)	28.8
Acute respiratory infection	Percent of children with acute respiratory infection in preceding 2 weeks who were seen by medical personnel	76.3

[1] Piped, well, and bottled water

THE HASHEMITE KINGDOM OF JORDAN

Jordan Population and Family Health Survey 1997

Department of Statistics
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The report summarizes the findings of the 1997 Jordan Population and Family Health Survey (JPFHS), which was conducted by the Jordan Department of Statistics (DOS). Macro International Inc. provided technical assistance. Funding was provided by the U.S. Agency for International Development.

The JPFHS is part of the worldwide Demographic and Health Surveys (DHS) program, which is designed to collect data on fertility, family planning, and maternal and child health. Additional information on the Jordan survey may be obtained from the Department of Statistics, P.O. Box 2015, Jubaiha Street, Amman, Jordan (telephone 962-6-5342171; fax 962-6-5333518). Additional information about the DHS program may be obtained by writing to DHS, Macro International Inc., 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, USA (telephone 301-572-0200; fax 301-572-0999).

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PREFACE

The Department of Statistics (DOS) takes pleasure in presenting the principal report for the 1997 Jordan Population and Family Health Survey (JPFHS). This survey was carried out by DOS during the period June 7 through October 31, 1997, in collaboration with Macro International Inc. under the worldwide Demographic and Health Surveys (DHS) program. The U.S. Agency for International Development (USAID)/Amman provided funding for the survey, while Macro furnished technical assistance throughout various stages of the survey.

The survey covered a national sample of close to 7,600 households, in which about 5,800 ever-married women ages 15 to 49 were identified. This sample is nationally representative and has been designed to produce estimates at the national level, by urban-rural residence, by region, and for each of the three major governorates—namely Amman, Irbid, and Zarqa.

The survey was used to collect information on households—including demographic characteristics, level of education, and household amenities and durables. Information collected from ever-married women covered background characteristics, fertility preferences, family planning, breastfeeding and nutrition, child health care, immunization, morbidity, maternal mortality, husband's background, women's employment, and height and weight of children under five and their mother.

The Department of Statistics would like to express its thanks and appreciation to all agencies that participated in this survey, whose support brought this work to success—especially USAID; Macro International Inc.—in particular Dr. Mohamed Ayad, Miss Sri Poedjastoeti, Dr. Alfredo Aliaga, and Noureddine Abderrahim; the Ministry of Health and Health Care (Jordan); and the Jordan Family Planning and Protection Association (JFPPA). Thanks are also due to all households that cooperated with the DOS enumerators by providing the required information. Special thanks are also due to the local and international expert researchers who drafted the present report.

I hope that the data in this report will be useful to those interested in policy formulation and decisionmaking in the various health and population areas.

Dr. Abdulhadi Alawin
Director General of Statistics

SUMMARY AND RECOMMENDATIONS

The 1997 Jordan Population and Family Health Survey (JPFHS) is a nationally representative survey in which 7,335 households and a total of 5,548 ever-married women between the ages of 15 and 49 were successfully interviewed. The survey was fielded between June and October 1997. This survey is the second in a series of Demographic and Health Surveys (DHS) survey in Jordan carried out by the Department of Statistics. The DHS project of Macro International Inc. provided technical assistance under a contract funded by the United States Agency for International Development (USAID).

The JPFHS was designed to provide information on levels and trends of fertility, infant and child mortality, and family planning. The survey also gathered information on breastfeeding, maternal and child health care, the nutritional status of children under five, as well as the characteristics of households and household members. Survey results are presented at the national level, by urban and rural residence, and for each of the three regions in the country. Results of this survey can be compared with those of previous demographic surveys, including the 1976 Jordan Fertility Survey, the 1983 Jordan Fertility and Family Health Survey and the 1990 JPFHS.

CURRENT STATUS AND PROGRESS

Fertility

- The JPFHS indicates that fertility continues to decline in Jordan. The total fertility rate for the five-year period prior to the survey indicates that on average, women have 4.4 children by the end of their reproductive years, three children less than 20 years ago, when the total fertility rate was 7.4 in the 1975-1976 period. The decline in fertility has accelerated over time. It was 11 percent in the mid-1970s through the early 1980s, 15 percent in the 1980s, and 21 percent in the early 1990s.

- Fertility levels vary across regions. The total fertility rate in the Central region is 4.1 births per woman, while women in the North and South regions have an average of 4.8 children or more.

- There are large differences in fertility by educational attainment of women. Women who have attended higher than secondary education have 3.7 children in their lifetime, while women with less education have 4.5 or more children. In recent years, the gap in fertility by women's education has narrowed. The corresponding figures in 1990 were 4.1 children and 6.9 children, respectively.

- Further decline in fertility can be expected in the future. More than half (51 percent) of currently married women in Jordan do not want any more children or have been sterilized, and 27 percent want to delay their next birth for at least two years. If women's desired family size were achieved, the fertility rate would be only 2.9 children per woman, which is 34 percent lower than the observed rate. There has been a decline in the number of children wanted since 1990, when the desired family size was 3.9 children.

Family Planning

- Increased use of family planning, especially modern methods, has played a major role in fertility decline. Widespread knowledge of family planning is also supportive of further fertility decline.

Virtually all currently married women know a method of contraception. Women generally feel it is acceptable to have family planning messages broadcast on radio and television.

- In 1997, 53 percent of currently married women were using a method of family planning, and most of these women (38 percent of currently married women) were using a modern contraceptive method. The most popular modern methods are the IUD (23 percent), the pill (7 percent), and female sterilization (4 percent). Fifteen percent of married women are using traditional methods, including 2 percent who are using prolonged breastfeeding.

- Women age 35-44, women with 2 or more living children, and better educated women as well as urban women are more likely than other women to use a family planning method. Contraceptive prevalence is highest in the Central region (55 percent) compared with the North region (50 percent), and the South region (43 percent).

- Contraceptive use increases with parity; half of women who have 2 children and almost two-thirds of women who have three or more children are using family planning.

Other Fertility Determinants

- The 1997 JPFHS data suggest that although marriage remains universal among women in Jordan, a growing proportion of women remain single longer. The median age at first marriage for women 25-49 has increased from 19.6 years in 1990 to 21.5 years in 1997.

- There are slight regional differences in the age at which women marry; however, staying in school appears to be a motivation for delaying marriage. Women who have higher than secondary education marry almost 6 years later than women with the least education.

- In addition to marriage patterns, the risk of pregnancy is affected by *postpartum amenorrhea*, the period after childbirth when menstruation has not yet returned and *postpartum abstinence*, the period when sexual activity has not yet been resumed. On average, women start menstruating again 4 months after childbirth and resumed sexual relations a little less than 2 months after childbirth.

Future Use of Family Planning

- Two in three married women who are not currently using contraception say that they intend to adopt a family planning method some time in the future, most of them (48 percent) in the 12 months following the survey.

- Half of the women who expressed an intention to use contraception in the future said they would prefer to use the IUD, the same proportion as in 1990.

Maternal and Child Health

- In Jordan, maternal and child care is widespread, and there is little variation across subgroups. For virtually all births in the past five years, the mothers received at least one pregnancy checkup from a health professional, 90 percent from a doctor and 5 percent from a nurse or midwife.

- Almost all births in Jordan were assisted by health personnel during delivery, and 93 percent of the deliveries took place in a health facility.

- Forty percent of the births in the five years preceding the survey were to women who received at least one dose of tetanus toxoid vaccine during pregnancy. The same level was shown in 1990.

- In the 1997 JPFHS, mother's nutritional status was measured using two indices, height and body mass index (BMI). The mean height of mothers measured in the survey was 158 centimeters; only 1 percent of mothers were shorter than 145 centimeters.

- In Jordan, virtually all infants 12-23 months have been fully immunized against DPT and polio, and nine in ten have received the vaccine against measles. While BCG is recommended by the Ministry of Health to be given at school entry, one in four infants age 12-23 months has already received the vaccine against tuberculosis.

- Immunization coverage varies across regions. While nine in ten infants 12-23 months in the North region have received vaccinations against measles, diphtheria, pertussis, tetanus, and polio, the proportion in the South region is 79 percent, and in Central region 84 percent.

- In the two weeks preceding the survey, 10 percent of children under five had a cough with rapid breathing, and 18 percent had diarrhea. Among children with diarrhea, half were taken to a health facility and one in four was given oral rehydration therapy in the form of a solution prepared from ORS packets.

- In the JPFHS, all children born since January 1992 were weighed and measured. Two percent of children under five are thin for their height (wasted), 8 percent are short for their age (stunted), and 5 percent are underweight according to their age.

Infant and Child Mortality

- Twenty-nine of 1,000 infants born in the five years prior to the survey (1992-97) will not survive to their first birthday. For the same period, 34 children will not live to be 5 years old.

- Childhood mortality varies significantly by mother's residence and education. Infants in the South region have at least 50 percent higher mortality risks than those in the Central and North regions. Children of mothers with no education have twice the risk of dying of infants whose mothers have secondary education (54 deaths per 1,000 births compared with 27 deaths per 1,000 births).

CONTINUING CHALLENGES

- Despite the increased use of family planning methods, the increase in age at first marriage, and the apparent decline in fertility, the 1997 Jordan Population and Family Health Survey reveals a number of continuing challenges. While fertility levels are declining, 20 percent of births in the five years preceding the survey were mistimed, and 17 percent were not wanted at all. If these unwanted births had been prevented, women would have had an average of 2.9 births, instead of 4.4 births.

- Although it is encouraging to note that the level of unmet need for family planning services in 1997 was lower than that in the 1990 JPFHS, many women want to stop childbearing or delay the next birth for at least two years, but are not using a contraceptive method.

- Two in three births in the five years preceding the survey were high-risk births either because the interval since the previous birth was too short (less than two years), the mother was too young (under age 18), too old (age 35 and over), or had too many prior births (3 or more).

- Breastfeeding in Jordan is universal. However, the practice of breastfeeding is characterized by supplementation at an early age, and widespread use of a bottle and a nipple.

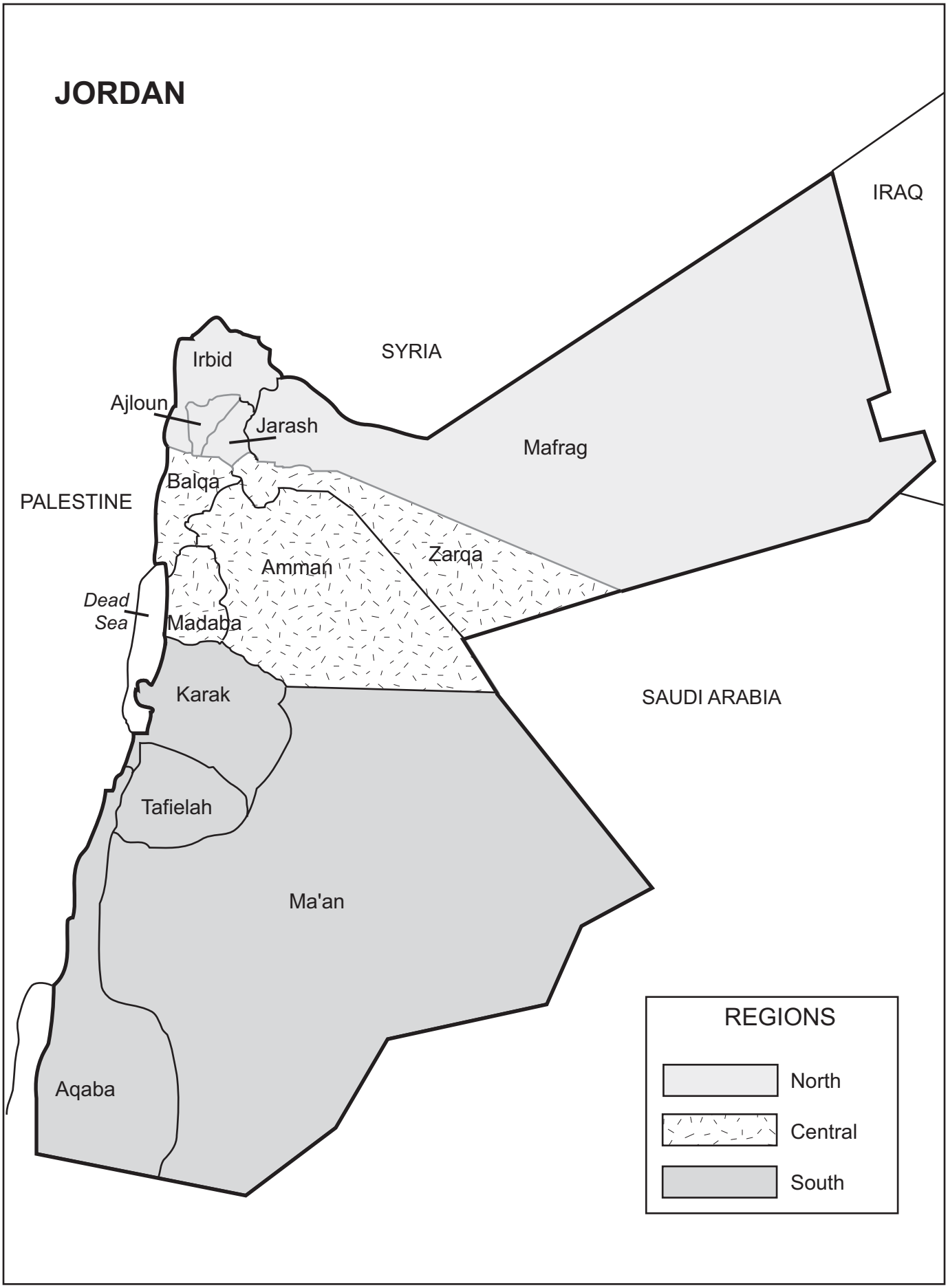
RECOMMENDATIONS

The results of the 1997 JPFHS reinforce findings from previous surveys that coverage of maternal and child health (MCH) programs in Jordan continues to improve. This is demonstrated by increased use of MCH services, along with knowledge and use of family planning. However, the survey data also note that:

- Information, education and communication programs on the benefits of adopting family planning for the purpose of delaying or limiting childbearing need to be strengthened. These programs should be specifically directed toward women with the most need for family planning, particularly less educated women, women with high parity, and women in the South region.

- Potential users of family planning should be counseled on the most appropriate method for their age, fertility desires, and personal situation.

- Emphasis should be placed on the health benefits for mothers and children of smaller families and longer birth intervals, which may be achieved by the correct use of traditional methods of family planning including periodic abstinence and prolonged breastfeeding.


JORDAN
IRAQ
SYRIA
Irbid
Ajloun
Jarash
Mafrag
Balqa
PALESTINE
Zarqa
Amman
Dead
Sea
Madaba
Karak
SAUDI ARABIA
Tafielah
Ma'an
Aqaba
REGIONS
North
Central
South

CHAPTER 1

INTRODUCTION

1.1 History, Geography, and Economy

Jordan was part of the Ottoman Empire until 1921, when it gained its independence. It was declared a political entity and became known as "Transjordan" in 1923. In 1950, Transjordan and the West Bank were united and assumed the current name of the Hashemite Kingdom of Jordan. In 1967, the occupation of the West Bank and the Gaza Strip by Israeli forces caused a massive influx of migrants to the East Bank. In 1988, in accordance with the desires of the Arab states and the Palestinian National Authority, the West Bank was administratively disengaged from the Kingdom to facilitate the establishment of the Palestinian state.

Jordan, one of the most modern countries in the Middle East, is almost entirely land-locked. The port of Aqaba in the far south is Jordan's only outlet to the sea. Palestine separates Jordan from the Mediterranean; Saudi Arabia lies to the south and east, Iraq is to the northeast, and Syria is to the north. The total area of the country is about 89,000 square kilometers.

The country is divided into 12 governorates, which are grouped into three regions—the North region (Irbid, Jarash, Ajloun, and Mafraq), the Central region (Amman, Zarqa, Balqa, and Madaba), and the South region (Karak, Tafielah, Ma'an, and Aqaba). The major cities are Amman (the capital), Zarqa, and Irbid. There are three agricultural-development regions that run from north to south. They are the Jordan Valley, the highlands, and the Badia (semi-desert).

Historically, rural-urban migration, as well as the influx of migrants from outside the country, have contributed to rapid urban growth (Hiyari, 1991). The urban population increased by about 10 percentage points between 1980 and 1994 (from 70 percent to 79 percent).

Although the national government still controls most community services, Jordan is moving towards a free-market economy. There has been a slight shift in the economic sectoral shares of gross domestic product (GDP) in favor of the service sector. The share of agriculture in GDP dropped from 8.1 percent in 1990 to 5.5 percent in 1997. Similarly, the contribution of manufacturing to GDP declined from 21.3 percent to 19.7 percent during the same period (Department of Statistics, 1994).

Per capita income rose from US$1,172 in 1990 to US$1,723 in 1997 (Central Bank of Jordan, 1995, 1998). The cost of living index increased by 20 percent in 1997 (1992=100). The balance of trade deficit rose sharply by 74 percent in 1996 from its level in 1990. However, the rate of economic growth was as low as 1.0 percent in 1997.

As a result of the worldwide economic recession, the Jordanian economy has suffered from structural disparities in recent years. To restructure economic activities in the country, the government launched a reformation program (1991-1997). Currently, the government is encouraging the privatization of certain community services as part of the program of restructuring.

1.2 Population

The first population census in Jordan was carried out in 1961. The population then totaled 901,000. As a result of the Arab-Israeli wars in 1948 and 1967, and the subsequent Israeli occupation of the West Bank and the Gaza Strip, a large number of Palestinians have moved into the East Bank. In 1979, the population numbered 2.13 million; it nearly doubled to 4.14 million in 1994. As of 1997, the population was estimated at 4.6 million. It is expected to reach 5.9 million in the year 2005 (Adlakha and Fowler, 1998).

Population growth averaged 4.8 percent during the period 1961-1979 (Hiyari, 1984), and 4.4 percent between 1979 and 1994. The high rates of growth were caused by the influx of immigrants to the East Bank from the West Bank and the Gaza Strip in the late 1960s, the inflow of large numbers of guest workers, the high rate of natural increase (Hiyari, 1991), and the return of about 300,000 Jordanian nationals as a result of the 1990 Gulf War. The sudden increases in population have created several problems for the country—namely, shortages in food, housing, and employment opportunities and strains on the education system and the urban infrastructure.

Results of the 1994 census indicate that the age structure of the population has changed considerably since 1979—primarily as a result of changes in fertility, mortality, and migration. The proportion of the population under 15 years of age declined from 51 percent in 1979 to 41 percent in 1994, while the proportion age 65 and over remained about the same (2.7 percent and 2.8 percent in 1979 and 1994, respectively).

Eighty-one percent of schools are run by governmental agencies (Department of Statistics, 1996). The illiteracy rate among the population 15 years old and over has dropped by 56 percent (from 35.5 percent in 1979 to 14.8 percent in 1994) (Department of Statistics, 1983, 1997). In addition, almost one-third of Jordan's population is currently enrolled at various educational levels.

Fertility has been declining in Jordan since the mid-1970s. Studies have found that the total fertility rate declined from 7.4 children per woman in 1976 to 5.6 in 1990, and to 4.6 in 1994. These figures indicate a decline of about three children, or 38 percent between 1976 and 1994. This decline was caused by the decrease in the crude birth rate, which dropped from 50 per thousand in 1972 to 35 in 1990, and to 30 in 1994.

Mortality has also been declining in Jordan, even faster than fertility. The crude death rate, estimated at 18 per thousand in the early 1960s, had declined to 12 in the early 1980s (Hiyari,1984). In 1990, the crude death rate was estimated at seven per thousand; by 1994 it had dropped to five. The infant mortality rate also declined from 82 per thousand in 1976 to 34 in 1990, to 32 in 1994. In 1994, life expectancy was estimated at 68.2 years for both sexes, 67.2 for males and 69.1 for females (Adlakha and Fowler, 1998).

1.3 Population and Family Planning Policies and Programs

Until recently, Jordan had no explicit and official population policy. In 1973, the National Population Commission (NPC) was established, with the mandate to formulate and implement a national population policy and to address all population-related activities (Hiyari,1985). However, the designing of a satisfactory population policy was controversial. Because of the sensitive nature of the problem, the NPC took no distinct actions or steps. The commission was revitalized in the late 1980s to represent several agencies working in the population field. During that period, and prior to 1993, both the public and private sectors have made efforts to provide family planning services. The Ministry of Health and Health Care (MOHHC), through its Maternal and Child Health Centers (MCH), provided optional and predominantly free family planning services as an unofficial and indirect intervention in the population policy (Hiyari, 1985). The efforts made by the Jordan Family Planning and Protection Association (JFPPA), as well as by some voluntary nongovernmental organizations, were invaluable in this regard.

In 1991, the NPC adopted the Birth Spacing National Program (originally launched by the MOHHC), prepared an integrated proposal, and submitted the proposal to the government and to the public as a suggested population policy (Hiyari and Saleh, 1996). This program was discussed nationwide, and in 1993 the government approved the program as an official population policy, taking into consideration the religious, social, national, and free-choice dimensions of Jordanian society.

1.4 Health Priorities and Programs

The MOHHC is committed to making health services available, accessible, and acceptable in all communities, and seeks to ensure equitable distribution of these services. The government has given priority to the health sector and has developed a national health strategy. This strategy is aimed at creating a comprehensive health care system, utilizing both public and private service providers, and covering all levels of care, from preventive care to tertiary and rehabilitative care.

The MOHHC developed short-term and long-term plans to improve the health care system and the delivery of services to the population. The plans focused on the following areas:

1. Coordination of primary, secondary, and tertiary health service delivery, in order to improve the efficiency of the health system and to avoid duplication among health providers and waste of resources.

2. Health manpower development to raise standards in all health manpower categories and to maintain quality standards throughout the system.

3. Facility development by upgrading the existing health centers and hospitals, and building new facilities as needed.

1.5 Objectives of the Survey

The 1997 Jordan Population and Family Health Survey (JPFHS) is a national sample survey carried out by the Department of Statistics (DOS) as part of its National Household Surveys Program (NHSP). The JPFHS was specifically aimed at providing information on fertility, family planning, and infant and child mortality. Information was also gathered on breastfeeding, on maternal and child health care and nutritional status, and on the characteristics of households and household members. The survey will provide policymakers and planners with important information for use in formulating informed programs and policies on reproductive behavior and health.

1.6 Methodology and Organization of the Survey

The JPFHS is designed to collect data on ever-married women of reproductive age. The areas covered include demographic and socioeconomic characteristics, marriage and reproduction, antenatal care, breastfeeding and child care, fertility preferences, and nutritional status of children under five years of age. The survey was funded primarily by the U.S. Agency for International Development (USAID) as part of the worldwide DHS program. Macro International Inc. assisted in the sample and questionnaire design, the training activities, the computer processing of survey data, and the preparation of reports. A national advisory committee, headed by the Director General of Statistics, was established to provide guidelines for the planning and implementation stages of the survey. The committee consisted of representatives from various government and nongovernment agencies involved in population and health issues.

The survey was executed in three stages; the first was the preparatory stage, which involved mapping, listing of housing units, and design and implementation of sampling procedures. At the same time, the

survey questionnaires and instruction manuals were developed, pretested, and finalized. All of these activities were completed in April 1997. The second stage encompassed interviewing and collection of data. This was carried out by eight teams, each consisting of one supervisor, one field editor, and three interviewers. Data collection took place from June through October 1997. The next stage involved data entry, which started soon after the beginning of fieldwork and continued until November 1997. Data entry was followed by data cleaning, evaluation, and analysis.

1.6.1 Sample Design and Implementation

The 1997 JPFHS sample was designed to produce reliable estimates of major survey variables for the country as a whole, for urban and rural areas, for the three regions (each composed of a group of governorates), and for the three major governorates, Amman, Irbid, and Zarqa.

The 1997 JPFHS sample is a subsample of the master sample that was designed using the frame obtained from the 1994 Population and Housing Census. A two-stage sampling procedure was employed. First, primary sampling units (PSUs) were selected with probability proportional to the number of housing units in the PSU. A total of 300 PSUs were selected at this stage. In the second stage, in each selected PSU, occupied housing units were selected with probability inversely proportional to the number of housing units in the PSU. This design maintains a self-weighted sampling fraction within each governorate. The sample design is described in Appendix A; the sampling errors are presented in Appendix B.

1.6.2 Updating of Sampling Frame

Prior to the main fieldwork, mapping operations were carried out and the sample units/blocks were selected and then identified and located in the field. The selected blocks were delineated and the outer boundaries were demarcated with special signs. During this process, the numbers on buildings and housing units were updated, listed and documented, along with the name of the owner/tenant of the unit or household and the name of the household head. These activities took place between January 7 and February 28, 1997.

1.6.3 Questionnaires

The 1997 JPFHS used two questionnaires, one for the household interview and the other for eligible women (see Appendix D). Both questionnaires were developed in English and then translated into Arabic. The household questionnaire was used to list all members of the sampled households, including usual residents as well as visitors. For each member of the household, basic demographic and social characteristics were recorded and women eligible for the individual interview were identified. The individual questionnaire was developed utilizing the experience gained from previous surveys, in particular the 1983 and 1990 Jordan Fertility and Family Health Surveys (JFFHS).

The 1997 JPFHS individual questionnaire consists of 10 sections:

- Respondent's background
- Marriage
- Reproduction (birth history)
- Contraception
- Pregnancy, breastfeeding, health and immunization
- Fertility preferences
- Husband's background, woman's work and residence
- Knowledge of AIDS
- Maternal mortality
- Height and weight of children and mothers.

1.6.4 Pretest

The household and individual questionnaires were pretested in April and March 1997 in a number of urban and rural clusters outside of those selected for the actual survey. All senior staff members of the survey participated in this activity. The field staff for the pretest consisted of highly qualified and experienced female interviewers.

Pretest training, which lasted three weeks, included class discussions, role playing, and field practice. Staff from the MOHHC and the JFPPA were invited to give lectures on their respective areas of expertise. In addition, the pretest teams were trained to carry out supervisory tasks, since they were expected to act as supervisors or field editors during the main fieldwork. The pretest revealed some minor phrasing problems in the questionnaire, which were corrected.

1.6.5 Recruitment and Training of Staff

Different supervisory and executive levels of survey staff members were recruited, according to certain criteria such as experience, educational and personal qualifications, and familiarity with geographic areas. Fieldworkers for the main survey were recruited from among those who participated in the 1994 census as well as those who took part in other demographic surveys conducted by the DOS. The interviewers were all highly qualified females. Supervisors and field editors were selected from those who participated in the pretest. They were retained by the DOS after the pretest to assist in sampling activities.

The training of interviewers, field editors, and supervisors for both the household and the individual questionnaires lasted three weeks, from May 10 to June 5, 1997. Six staff members versed in specific aspects pertaining to family planning, maternal health, child health, and AIDS, participated in this activity. Much of the training consisted of lectures on how to conduct the interviews and how to fill out the questionnaires. Practice interviewing was done in the third week of training. Staff from the MOHHC and the JFPPA were invited to speak on issues related to their activities.

1.6.6 Main Fieldwork

The survey fieldwork was organized in such a way as to ensure control over field logistics by DOS field offices all over the country. The workload, the dispersion of sample units, and transportation facilities served as criteria for identifying the number of field staff in each area. Field staff consisted of five controllers (males), eight supervisors, eight field editors, and eight teams of five interviewers each. Fieldwork was carried out between June 7 and October 31, 1997.

To facilitate data collection, each interviewing team was assigned a number of blocks in the sample

area. Each supervisor divided his team so as to ensure that all adjacent sampled households were completed by one interviewer. To ensure good data quality, interviewers were asked to conduct fewer interviews during the first three days of data collection. The questionnaires were spot-checked by the field editor and/or the supervisor. Errors were corrected by the interviewers, discussions with the editor or, in some cases, by callbacks to the respective households. To maintain consistency, information on common errors or unusual cases were passed to all supervisors in the area. The field editor and/or the supervisor conducted spot-checks by randomly visiting some sampled households and completing some parts of the same questionnaire (previously filled in by the interviewer). Both questionnaires were then matched and any differences were discussed. Interviewers made repeated attempts by calling back to interview eligible respondents who were not home at the time of the first visit or to persuade eligible women who were reluctant to be interviewed.

1.6.7 Data Processing

Fieldwork and data processing activities overlapped. After a week of data collection, and after field editing of questionnaires for completeness and consistency, the questionnaires for each cluster were packaged together and sent to the central office in Amman where they were registered and stored. Special teams were formed to carry out office editing and coding.

Data entry started after a week of office data processing. The process of data entry, editing, and cleaning was done by means of the ISSA (Integrated System for Survey Analysis) program DHS has developed especially for such surveys. The ISSA program allows data to be edited while being entered. Data entry was completed on November 14, 1997. A data processing specialist from Macro made a trip to Jordan in November and December 1997 to identify problems in data entry, editing, and cleaning, and to work on tabulations for both the preliminary and final reports.

1.7 Results of the Household and Individual Interviews

Table 1.1 is a summary of the results from both the household and the individual interviews. A total of 7,924 occupied housing units were selected for the survey; from among those, 7,592 households were found. Of the occupied households, 7,335 (97 percent) were successfully interviewed. In those households, 5,765 eligible women were identified, and complete interviews were obtained with 5,548 of them (96 percent of all eligible women). Thus, the overall response rate of the 1997 JPFHS was 93 percent. The principal reason for nonresponse among the women was the failure of interviewers to find them at home despite repeated callbacks.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews and response rates, Jordan 1997

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households sampled	6,281	1,643	7,924
Households found	6,029	1,563	7,592
Households interviewed	5,811	1,524	7,335
Household response rate	96.4	97.5	96.6
Individual interviews			
Number of eligible women (EW)	4,604	1,161	5,765
Number of EW interviewed	4,417	1,131	5,548
Eligible woman response rate	95.9	97.4	96.2

CHAPTER 2

HOUSEHOLD CHARACTERISTICS AND WOMEN'S SITUATION

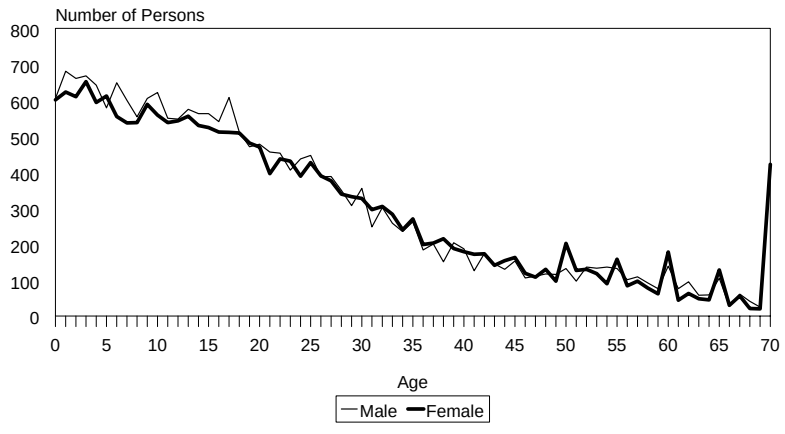
This chapter describes the general characteristics of the sample population, including composition by age and sex, residence, education, housing facilities, and exposure to mass media. The data are presented for various subgroups of the population. Another purpose of this chapter is to provide a brief description of the situation of children and women of reproductive age. The main background characteristics, which are highlighted in this chapter, are those that particularly influence nuptiality, fertility, contraceptive behavior, maternal care, and child morbidity and mortality. In addition, information is also provided on women's employment, work status, child care, domestic living arrangements, and reasons for leaving school.

The questionnaire for the 1997 Jordan Population and Family Health Survey (JPFHS) included two questions distinguishing between the *de jure* population (persons who usually live in the selected household) and the *de facto* population (persons who spent the night before the interview in the household). It was found, however, that the difference between them was small, and since sample selection for the JPFHS was based on the de facto population, as it had been in past demographic surveys, tabulations for the JPFHS household data were carried out on the basis of the de facto population only.

2.1 Population by Age and Sex

In many developing countries, data on age are affected by errors such as misstatement and preference for or avoidance of certain digits. In general, that was not the case in Jordan. The survey results indicated that not only age, but month and year of birth, are widely recognized. Also, the distribution of the population by single years of age (see Figure 2.1) indicates that although there is some preference for ages ending in 0 or 5, the problem is limited.

Figure 2.1
Male and Female Population
by Single Years of Age



JPFHS 1997

Table 2.1 shows the percent distribution of the population by age and sex, according to urban-rural residence. The table serves two purposes. The first is to show the effects of past demographic trends on the population and to give an indication of future trends. The second is to describe the context in which various demographic processes are operating.

The figures in Table 2.1 show that 41 percent of the population is under 15 years of age, an indicator of high fertility (see Figure 2.2). The proportion is higher in rural (44 percent) than in urban areas (40 percent). The percentage of the population in the younger age groups (less than 20 years old) is higher in rural than in urban areas. The opposite is true in the broad age category of 20-44 years old (35 percent and 31 percent in urban and rural areas, respectively). The latter difference is due to rural-urban migration, especially of males, as well as the influx of migrants from abroad, to urban areas in search of employment.

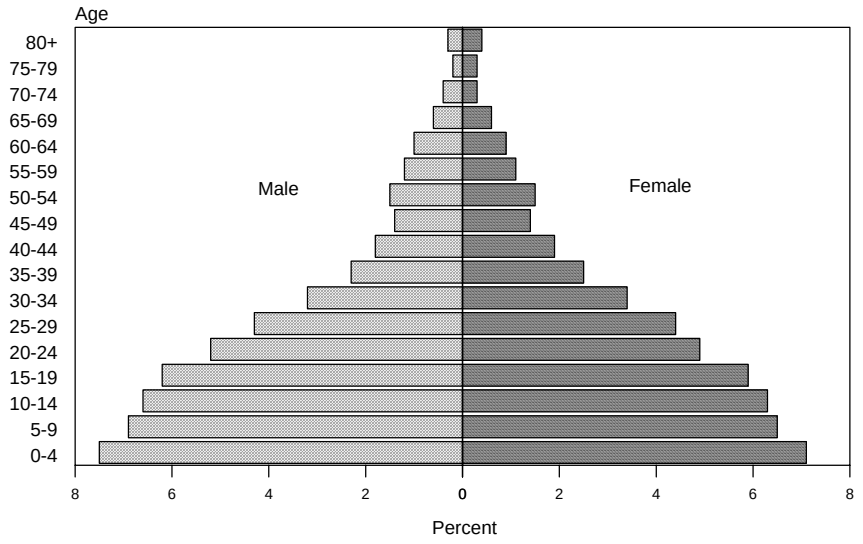
Table 2.1 Household population by age, residence and sex

Percent distribution of the de facto household population by five-year age groups, according to sex and urban-rural residence, Jordan 1997

Age group	Urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	14.5	14.3	14.4	16.7	14.9	15.8	14.9	14.4	14.7
5-9	13.5	13.0	13.2	14.2	14.7	14.4	13.6	13.3	13.5
10-14	12.7	12.7	12.7	14.5	13.3	13.9	13.0	12.8	12.9
15-19	12.1	11.8	12.0	13.3	12.2	12.8	12.3	11.9	12.1
20-24	10.4	10.0	10.2	9.2	9.9	9.6	10.2	9.9	10.1
25-29	8.8	8.9	8.8	7.6	8.6	8.1	8.6	8.8	8.7
30-34	6.5	6.9	6.7	5.7	6.3	6.0	6.4	6.8	6.6
35-39	4.7	5.1	4.9	4.0	4.7	4.3	4.6	5.0	4.8
40-44	3.6	4.0	4.8	3.1	3.0	3.0	3.5	3.8	3.7
45-49	2.8	2.9	2.9	2.5	2.8	2.7	2.8	2.9	2.8
50-54	3.1	3.2	3.1	2.2	2.6	2.4	2.9	3.1	3.0
55-59	2.4	2.3	2.4	2.0	2.0	2.0	2.3	2.2	2.3
60-64	2.0	1.9	1.9	1.8	1.4	1.6	1.9	1.8	1.9
65-69	1.2	1.1	1.2	1.2	1.5	1.4	1.2	1.2	1.2
70-74	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.8
75-79	0.4	0.5	0.5	0.6	0.7	0.6	0.5	0.5	0.5
80+	0.5	0.8	0.6	0.8	0.8	0.8	0.6	0.8	0.7
Missing/ don't know	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	18,027	17,620	35,647	3,878	3,727	7,606	21,906	21,347	43,253

As in many other countries, there are more males than females in Jordan. The overall ratio is 103 males for every 100 females. The sex ratio varies by age. In the younger and older age groups (under 25 years and 60 years and older), the overall sex ratio ranges between 104 and 106. In the middle age groups (25-59 years old), however, the sex ratio drops far below 100 (for example, 94 in the age group 35-44 years). The low ratio reflects the emigration of Jordanian males to the Gulf states and Saudi Arabia during the past three decades.

Figure 2.2
Population Pyramid of Jordan



JPFHS 1997

2.2 Population by Age From Other Sources

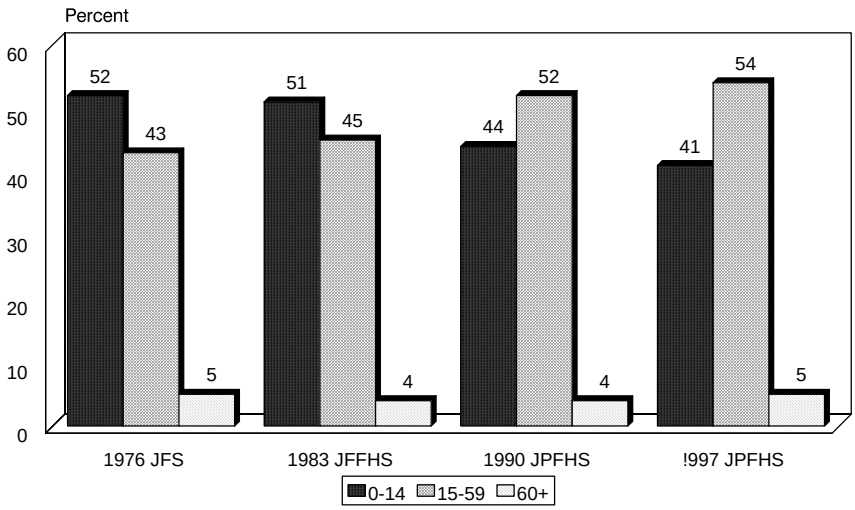
The percentage of the population under 15 years of age declined substantially from 52 percent in 1976 to 41 percent in 1997, with a resultant increase in the 15-59 age group (Table 2.2 and Figure 2.3). That pattern is typical of populations that are experiencing a fertility decline. The change in the age structure is favorable in economic terms. The dependency ratio, calculated as the ratio of persons in the "dependent" ages (under 15, and 60 and over) to those in the working-age category (15-59) on the basis of those figures, fell from 130 in 1976 to 94 in 1990, and to 85 in 1997.

Table 2.2 Population by age from other sources

Percent distribution of the population by broad age groups at different dates, Jordan 1976-1997

Age group	1976 JFS	1983 JFFHS	1990 JPFHS	1997 JPFHS
<15	52.0	51.2	44.0	41.0
15-59	43.4	44.8	51.6	54.0
60+	4.5	4.0	4.3	5.0
Total	100.0	100.0	100.0	100.0

Figure 2.3
Population by Broad Age Groups
1976-1997



2.3 Household Size

Table 2.3 provides information on the size of the sampled households. Household characteristics affect the social and economic well-being of the members of the household. Large household size may be associated with crowding, which can lead to unfavorable health conditions. Single-parent families, especially if they are headed by females, usually have limited financial resources.

Large households are common in Jordan. The average number of members (usual residents) in a household is six. Household size is slightly smaller in urban areas (5.9) than in rural areas (6.3). Nineteen percent of households, on average, are composed of nine or more persons. The figure is higher in rural areas (25 percent) than in urban areas (18 percent). The table shows that 10 percent of households in urban areas are headed by females, compared with 9 percent in rural areas.

Table 2.3 Household composition

Percent distribution of households by sex of head of household and household size, according to urban-rural residence, Jordan 1997

Characteristic	Residence		
	Urban	Rural	Total
Household headship			
Male	90.3	91.0	90.4
Female	9.7	9.0	9.6
Number of usual members			
1	4.1	7.1	4.6
2	8.3	7.2	8.2
3	9.0	9.8	9.1
4	12.9	9.9	12.4
5	14.2	10.7	13.6
6	12.7	10.8	12.4
7	11.3	9.8	11.1
8	8.7	9.6	8.8
9+	18.4	24.7	19.4
Total	100.0	100.0	100.0
Mean size	5.9	6.3	6.0

Results shown in Table 2.4 indicate that the majority of children under 15 years of age (94 percent) are living with both parents. The range is between 98 percent for children age 0-2 years and 91 percent for children 10-14 years. The overall proportion holds true regardless of sex, urban-rural residence, or region.

Table 2.4 Foster children and orphans

Percent distribution of de jure children under age 15 by survival status of parents and child's living arrangements, according to selected background characteristics, Jordan 1997

Characteristic	Living with both parents	Living with mother but not father		Living with father but not mother		Living with neither parent	Total	Number of children
		Father alive	Father dead	Mother alive	Mother dead			
Age								
<2	97.8	1.4	0.4	0.3	0.1	0.1	100.0	3,668
3-5	95.5	2.3	1.0	0.4	0.3	0.5	100.0	3,678
6-9	93.6	2.6	2.0	0.8	0.2	0.7	100.0	4,567
10-14	90.9	3.2	3.2	1.0	0.8	0.8	100.0	5,529
Sex								
Male	94.2	2.4	1.9	0.6	0.3	0.5	100.0	8,964
Female	93.9	2.6	1.8	0.7	0.4	0.6	100.0	8,478
Residence								
Urban	93.8	2.8	1.7	0.8	0.4	0.6	100.0	14,105
Rural	95.0	1.2	2.6	0.3	0.5	0.5	100.0	3,337
Region								
North	93.6	3.2	2.1	0.4	0.0	0.6	100.0	5,106
Central	94.2	2.3	1.7	0.8	0.5	0.5	100.0	11,061
South	94.4	1.1	2.5	0.6	0.8	0.7	100.0	1,274
Total	94.1	2.5	1.8	0.7	0.4	0.5	100.0	17,442

2.4 Level of Education of the Household Population

Education is an important variable affecting demographic behavior. Higher education is usually associated with greater knowledge and use of health practices and family planning methods. The education system in Jordan has been in place for a long time. Basic education is free and compulsory, starting at age six and lasting for 10 years. A further two-year period, known as the secondary cycle, is virtually free. In the JPFHS, questions on education were asked for persons six years of age and older, to be used to calculate rates of school enrollment.

Tables 2.5.1 and 2.5.2 present data on the educational composition of the population reported in the household questionnaire. In the 1997 JPFHS, information on educational attainment refers to the highest level of education attended, and the highest grade completed at that level. An important observation is that women have less education than men. More than 92 percent of males in Jordan have had some schooling; about 85 percent of females have attended school. Furthermore, men are likely to stay in school longer than women.

The figures for median number of years of schooling indicate that education has a long history in Jordan. Men age 50-54 have had a median of eight years of education, while women in the same age cohort have had less than one year. Among persons age 40-44, the median for men is more than eight years of education, compared with about seven years for females. For persons age 25-34, the gap has narrowed; it finally disappears for persons under 25 years of age.

Table 2.5.1 Educational level of the male household population

Percent distribution of the de facto male household population age six and over by highest level of education attended, and median number of years of schooling, according to selected background characteristics, Jordan 1997

Background characteristic	No education	Primary	Secondary	Higher	Don't know/ Missing	Total	Number	Median years of schooling
Age								
6-9	15.1	84.8	0.1	0.0	0.0	100.0	2,409	1.3
10-14	0.6	54.7	44.6	0.0	0.0	100.0	2,859	5.7
15-19	1.1	7.6	86.4	4.8	0.1	100.0	2,695	9.6
20-24	2.4	8.8	54.6	33.9	0.2	100.0	2,230	10.6
25-29	4.6	7.4	53.8	34.0	0.3	100.0	1,878	8.5
30-34	5.3	8.7	52.9	32.8	0.3	100.0	1,399	8.4
35-39	6.0	12.5	44.1	37.3	0.1	100.0	1,000	8.4
40-44	5.8	19.9	39.6	34.5	0.2	100.0	762	8.3
45-49	9.4	19.2	41.3	30.0	0.2	100.0	603	8.1
50-54	10.1	25.8	35.0	28.9	0.3	100.0	635	7.8
55-59	17.3	30.2	29.0	23.3	0.2	100.0	510	6.3
60-64	27.9	39.6	22.0	10.3	0.3	100.0	427	4.1
65+	49.9	33.4	10.5	5.5	0.7	100.0	662	0.0
Residence								
Urban	6.9	29.2	44.5	19.2	0.2	100.0	14,949	7.6
Rural	11.5	32.3	46.1	9.8	0.2	100.0	3,120	6.7
Region								
North	8.8	31.3	45.0	14.8	0.1	100.0	4,849	7.1
Central	6.9	28.7	45.0	19.3	0.2	100.0	12,051	7.7
South	11.5	33.5	42.7	11.7	0.6	100.0	1,169	6.6
Total	7.7	29.7	44.8	17.6	0.2	100.0	18,069	7.5

Table 2.5.2 Educational level of the female household population

Percent distribution of the de facto female household population age six and over by highest level of education attended, and median number of years of schooling, according to selected background characteristics, Jordan 1997

Background characteristic	No education	Primary	Secondary	Higher	Don't know/ Missing	Total	Number	Median years of schooling
Age								
6-9	14.1	85.8	0.1	0.0	0.0	100.0	2,218	1.5
10-14	0.8	55.4	43.8	0.0	0.0	100.0	2,726	5.7
15-19	1.1	6.3	85.2	7.3	0.1	100.0	2,537	9.8
20-24	1.5	6.6	56.6	35.2	0.1	100.0	2,124	11.0
25-29	3.8	7.9	54.1	34.1	0.1	100.0	1,884	8.4
30-34	5.8	13.0	49.9	31.3	0.1	100.0	1,451	8.2
35-39	10.3	18.0	47.2	24.2	0.2	100.0	1,075	7.8
40-44	18.7	27.1	35.6	18.6	0.0	100.0	819	6.6
45-49	30.6	27.0	27.9	14.1	0.4	100.0	617	5.2
50-54	52.1	24.9	17.1	5.8	0.1	100.0	668	0.0
55-59	68.9	17.1	11.1	2.9	0.0	100.0	478	0.0
60-64	78.0	11.3	8.9	1.5	0.3	100.0	378	0.0
65+	88.1	9.2	2.0	0.6	0.2	100.0	678	0.0
Residence								
Urban	13.1	27.4	43.3	16.1	0.1	100.0	14,605	7.2
Rural	21.8	32.1	38.2	7.8	0.0	100.0	3,049	5.5
Region								
North	17.9	28.4	41.2	12.5	0.0	100.0	4,842	6.4
Central	12.7	28.0	43.3	15.9	0.1	100.0	11,700	7.2
South	20.0	30.2	38.4	11.3	0.1	100.0	1,113	5.9
Total	14.6	28.2	42.4	14.7	0.1	100.0	17,654	6.9

The level of education is closely associated with residence. In urban areas and in the Central region (Amman, Zarqa, Balqa, and Madaba), a greater proportion of the population has attained higher education than in the rest of the country. Furthermore, Tables 2.5.1 and 2.5.2 show that 62 percent of males and 57 percent of females have attended secondary education or higher. The median number of years of schooling is 7.5 years for males and 6.9 years for females.

2.5 School Enrollment

Table 2.6 shows the proportion of the household population age 6-24 years enrolled in school, by age, sex, and residence. Although the differentials are small, the data support the association of school enrollment with residence. Urban areas have a slightly higher level of school enrollment than rural areas across all age groups.

School enrollment differentials by sex vary according to age. For boys and girls 6-15 years there is virtually no difference in enrollment. In fact, a higher percentage of girls are enrolled in the age group 16-20. Nevertheless, the gap between males and females widens at 21-24 years, where the enrollment rate for females is much lower than that for males.

Table 2.6 School enrollment

Percentage of the de facto household population age 6-24 years enrolled in school, by age group, sex, and urban-rural residence, Jordan 1997

	Male			Female			Total		
Age group	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
6-10	87.5	88.1	87.6	88.6	85.6	88.1	88.0	86.9	87.8
11-15	94.1	95.4	94.4	94.9	92.4	94.5	94.5	94.0	94.4
6-15	90.7	91.7	90.9	91.8	88.8	91.2	91.2	90.3	91.0
16-20	57.2	53.9	56.6	60.7	53.2	59.3	58.9	53.5	57.9
21-24	17.0	13.6	16.5	11.0	9.2	10.7	14.1	11.5	13.7

2.6 Housing Characteristics

In the JPFHS, information on housing characteristics was collected in the individual questionnaire rather than in the household questionnaire. Thus, a sampled household is represented by the number of eligible women interviewed in the household. Households for which no individual interview was completed are, therefore, not included in the analysis.

Table 2.7 presents the distribution of households by housing characteristics. The figures indicate that all households in urban areas have electricity, compared with 94 percent in rural areas. Piped-in water is widely available—particularly in urban areas (97 percent), but less often (81 percent) in rural areas. About 7 percent of rural dwellings use water that may be unsafe for drinking and other purposes. The problem is further aggravated if households using tankers to obtain water (another 11 percent) are added. The figures indicate that all households can reach a water source within fifteen minutes, regardless of their place of residence.

Table 2.7 Housing characteristics

Percent distribution of households by housing characteristics, according to urban-rural residence, Jordan 1997

Characteristic	Residence		
	Urban	Rural	Total
Electricity			
Yes	99.8	94.4	98.9
No	0.2	5.6	1.1
Total	100.0	100.0	100.0
Source of drinking water			
Piped into residence	97.1	81.4	94.4
Public tap	0.0	0.3	0.1
Well in residence	1.1	3.7	1.6
Public well	0.0	0.4	0.1
Spring	0.0	2.3	0.4
Rainwater	0.3	0.6	0.3
Tanker truck	1.0	10.6	2.7
Bottled water	0.3	0.1	0.3
Other	0.1	0.5	0.2
Total	100.0	100.0	100.0
Time to water source (in minutes)			
<15 minutes	99.9	97.5	99.5
Type of salt used for cooking			
Salt not used	0.1	0.1	0.1
Packaged salt, iodized	95.8	91.3	95.0
Packaged salt, noniodized	3.8	8.4	4.6
Other	0.2	0.2	0.2
Total	100.0	100.0	100.0
Sanitation facility			
Own flush toilet	94.0	70.8	90.1
Shared flush toilet	1.6	2.4	1.8
Traditional pit toilet	4.2	24.0	7.5
No facility	0.1	2.8	0.6
Total	100.0	100.0	100.0
Type of sewage system			
Public network	70.5	4.4	59.2
Dug hole	29.3	92.4	40.1
No sewage	0.1	3.1	0.6
Missing	0.1	0.0	0.1
Total	100.0	100.0	100.0
Main floor material			
Earth/sand	0.1	1.4	0.3
Wood planks	0.0	0.1	0.0
Vinyl/asphalt strips	0.6	0.3	0.5
Ceramic tiles	86.2	61.8	82.1
Cement	13.1	36.3	17.0
Total	100.0	100.0	100.0
Persons per sleeping room			
1-2	50.4	40.6	48.7
3-4	39.1	41.8	39.5
5-6	8.4	13.0	9.2
7+	2.1	4.7	2.5
Missing/Don't know	0.1	0.0	0.1
Total	100.0	100.0	100.0
Mean	3.0	3.4	3.0
Number of households	6,086	1,249	7,335

Table 2.7 also shows that a large majority of households (95 percent) use packaged iodized salt for cooking. Ninety percent of households have a flush toilet (with marked differences between urban and rural households). Seventy-one percent of urban households have access to a public sewage network, in contrast with only 4 percent of rural households.

About four-fifths of dwellings (82 percent) have floors made of ceramic tile; another 17 percent have cement floors. The proportions differ reciprocally by urban-rural residence; urban households are more likely to have ceramic flooring, while rural households tend to have cement flooring.

The large size of households in Jordan is reflected in Table 2.7. The mean number of persons per sleeping room is three for the country as a whole, with little difference between urban and rural areas. Almost two-fifths of the households have 3-4 persons per sleeping room, and one in 10 households has 5-6 persons per sleeping room. Those figures indicate the extent of crowding in the household.

2.7 Presence of Durable Goods in the Household

Jordan is a modern society, and most of the population enjoys the convenience of electrical appliances (see Table 2.8). Ninety-two percent of households have television sets, 85 percent have a refrigerator, and 82 percent have a radio. There are some differences between urban and rural areas, particularly regarding the presence of a refrigerator. Eighty-eight percent of households in urban areas have a refrigerator, compared with 71 percent in rural areas. One in four households owns a private car. The proportion in urban areas is more than twofold that in rural areas (26 and 12 percent, respectively). One in five households possesses a solar heater, and about one in 10 owns a bicycle.

Table 2.8 Household durable goods

Percentage of households possessing various durable consumer goods, by urban-rural residence, Jordan 1997

Possessions	Residence		Total
	Urban	Rural	
Radio	84.1	73.0	82.2
Television	93.0	84.7	91.5
Telephone	41.6	19.7	37.9
Refrigerator	87.5	70.8	84.7
Bicycle	9.5	6.3	8.9
Motorcycle	0.1	0.4	0.2
Private car	25.7	11.9	23.4
Video	28.2	8.4	24.8
Air conditioning	4.3	2.2	4.0
Solar heater	21.4	11.7	19.8
None of the above	2.1	6.4	2.8
Number of households	6,086	1,249	7,335

2.8 Respondents' Background Characteristics

Table 2.9 presents the distribution of respondents by selected background characteristics, including age, marital status, residence, educational level, and religion. Most respondents know their date of birth (by year and month) because 90 percent of households in Jordan possess a Family Booklet (a record of birth dates, marriages, and birth histories). The distribution of ever-married women shows that 18 percent are under age 25 compared with 22 percent in 1990. Despite the similar proportion of women under age 35 in both years, the proportion of women age 40-49 was slightly lower in 1997 than in 1990.

Among ever-married women, the percent distribution by marital status has remained constant since 1976. More than 96 percent are currently married; the rest are either divorced or widowed.

The population of Jordan is highly urbanized (see Table 2.9). Eighty-four percent of the sample population reside in urban areas (localities with 5,000 or more). The distribution of the population by region emphasizes the degree of urbanization. Only 6 percent of all ever-married women reside in the governorates of the South region (Karak, Tafielah, Ma'an, and Aqaba), which are largely rural.

Table 2.9 also presents the weighted and unweighted numbers of women in the sample. The unweighted numbers of women in the Central region (Amman, Zarqa, Balqa, and Madaba) are smaller than the weighted numbers. The opposite is true in the South region (because of oversampling). For example, in the South region, although the weighted number of women is 340, in reality data were collected from 755 women. The South region was oversampled to obtain enough women to yield statistically reliable estimates.

The figures in Table 2.9 also indicate that almost one in 10 ever-married women (9 percent) have never received formal education, whereas three in four (76 percent) ever attended secondary or higher education. Less than half a percent were attending school at the time of the survey. The majority of ever-married women are Moslems (97 percent).

Table 2.9 Background characteristics of respondents

Percent distribution of women by selected background characteristics, Jordan 1997

Background characteristic	Weighted percent	Number of ever-married women	
		Weighted	Un-weighted
Age			
15-19	3.7	207	206
20-24	14.3	795	798
25-29	21.4	1,185	1,195
30-34	20.3	1,126	1,145
35-39	16.8	931	923
40-44	13.2	734	724
45-49	10.3	570	557
Marital status			
Married	96.2	5,337	5,340
Widowed	2.2	124	122
Divorced	1.6	87	86
Residence			
Urban	83.6	4,636	4,417
Rural	16.4	912	1,131
Region			
North	26.7	1,479	1,490
Central	67.2	3,729	3,303
South	6.1	340	755
Educational level attended			
No education	9.1	504	594
Primary	15.3	850	866
Secondary	53.3	2,957	2,885
Higher	22.3	1,237	1,203
Currently attending school			
Yes	0.4	24	24
No	99.5	5,521	5,522
Religion			
Islam	97.0	5,381	5,383
Christian	2.8	156	156
Other	0.1	6	5
Missing	0.1	5	4
Total	100.0	5,548	5,548

2.9 Respondents' Level of Education

Table 2.10 shows the relationship between level of education and selected background characteristics. As expected, the percentage of women with no formal education increases with age. Conversely, younger women are likely to be better educated than older women. For example, 82 percent of women age 15-19 have had some secondary education, compared with only 29 percent of women in the age group 45-49.

Table 2.10 Level of education

Percent distribution of ever-married women by the highest level of education attended, according to selected background characteristics, Jordan 1997

Background characteristic	Highest level of education				Total	Number of women
	No education	Primary	Secondary	Higher		
Age						
15-19	2.9	14.6	82.1	0.5	100.0	207
20-24	1.5	7.8	73.7	17.0	100.0	795
25-29	2.7	8.0	60.2	29.1	100.0	1,185
30-34	5.0	12.8	52.4	29.8	100.0	1,126
35-39	9.8	17.1	49.9	23.2	100.0	931
40-44	18.1	27.5	36.5	18.0	100.0	734
45-49	30.6	27.6	29.0	12.9	100.0	570
Residence						
Urban	6.4	14.4	54.9	24.2	100.0	4,636
Rural	22.6	19.8	45.2	12.4	100.0	912
Region						
North	11.7	15.7	51.7	20.9	100.0	1,479
Central	7.0	15.0	54.8	23.2	100.0	3,729
South	20.6	16.6	44.2	18.6	100.0	340
Total	9.1	15.3	53.3	22.3	100.0	5,548

Women in urban areas are more likely to have had higher education than their rural counterparts. There are pronounced regional differences in women's educational attainment. In the Central region, 7 percent of women have no education, whereas in the South region, the proportion is 21 percent. The gap is narrower for higher education. The larger percentage of women with higher education in certain governorates may be due partly to the greater availability of higher education facilities there.

Women 15-24 years were also asked whether they were attending school at the time of the survey and, if not, their reason for leaving school (Table 2.11). The survey findings indicate that 98 percent of women are not attending school. More than half (54 percent) reported that they stopped their schooling to get married; 14 percent stopped because they did not like attending school.

Table 2.11 School attendance and reasons for leaving school

Percent distribution of ever-married women 15-24 by whether they are attending school and, if not, the reason for leaving school, according to highest level of education attended, Jordan 1997

School attendance/ Reason for not attending school	Educational attainment					Total
	Primary incomplete	Primary complete	Secondary incomplete	Secondary complete	Higher secondary	
Still attending school	1.9	(4.0)	1.2	1.1	10.0	2.5
Reason not attending school						
Got pregnant	0.0	(0.0)	1.4	1.2	1.8	1.3
Got married	10.7	(8.7)	63.9	71.2	20.2	54.3
Take care of younger children	0.0	(7.8)	1.5	1.2	0.9	1.4
Family need help	7.0	(4.7)	3.9	2.1	0.0	3.2
Could not pay school fees	4.9	(4.0)	1.5	5.0	2.2	2.6
Need to earn money	0.0	(0.0)	0.6	1.0	2.5	0.9
Graduated/Enough school	0.0	(0.0)	0.6	4.5	58.7	9.4
Did not pass exams	0.0	(0.0)	2.1	0.3	0.0	1.2
Did not like school	50.6	(30.0)	14.2	7.7	1.9	14.0
School not accessible	4.6	(17.1)	1.7	1.5	0.0	2.0
Repeated failure	11.9	(10.1)	4.8	0.5	0.8	4.0
Parents' refusal	3.4	(11.8)	1.7	2.6	0.0	2.1
Other	4.3	(1.7)	0.8	0.0	0.0	0.8
Don't know/missing	0.7	(0.0)	0.2	0.0	0.9	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	65	27	556	200	136	985

Note: Figures in parentheses are based on 25-49 unweighted cases.

2.10 Exposure to Mass Media

The exposure of women to television, radio, and newspapers is shown in Table 2.12. Eighty-nine percent of women in the sample watch television frequently, 44 percent listen to the radio, and 43 percent read newspapers frequently. Although exposure to mass media varies little across age groups, younger women are slightly less likely to be exposed to mass media than older women. As expected, there is a positive association between education and newspaper reading, a higher proportion of women with at least secondary education read newspapers than those with less education. The relationship holds true for television viewing and listening to the radio.

The relationship between residence and exposure to mass media varies depending on the type of media. Women in urban areas are more likely to read the newspaper (46 percent) than women in rural areas (27 percent). The extent to which women listen to the radio or view television does not vary substantially by urban-rural residence or by region.

Table 2.12 Access to mass media

Percentage of women and men who usually read a newspaper once a week, watch television once a week, or listen to radio once a week, by selected background characteristics, Jordan 1997

Background characteristic	No mass media	Mass media: Read newspaper once a week	Mass media: Watch television once a week	Mass media: Listen to radio once a week	Mass media: All three media	Number of women
Age						
15-19	6.9	37.9	90.5	39.6	18.7	207
20-24	5.3	41.3	90.2	39.7	17.6	795
25-29	5.6	42.0	88.8	40.9	19.6	1,185
30-34	5.2	44.8	90.1	43.4	23.2	1,126
35-39	6.6	46.5	86.5	47.5	25.3	931
40-44	7.4	43.1	87.1	50.6	25.9	734
45-49	8.4	34.6	87.9	47.2	21.2	570
Residence						
Urban	6.1	45.6	88.9	43.9	23.4	4,636
Rural	6.8	26.6	87.4	45.9	14.6	912
Region						
North	6.9	32.0	88.9	40.7	16.4	1,479
Central	5.8	47.3	88.7	45.4	24.5	3,729
South	8.0	35.5	86.3	46.6	18.2	340
Educational level attended						
No education	16.0	1.5	79.8	36.2	0.5	504
Primary	7.6	20.4	86.0	43.7	10.6	850
Secondary	5.5	45.0	89.6	44.7	23.8	2,957
Higher	3.0	68.5	91.8	46.7	34.0	1,237
Total	6.2	42.5	88.6	44.2	21.9	5,548

2.11 Respondents' Employment Characteristics

In the 1997 JPFHS, respondents were asked a number of questions about their employment, including whether they were currently working and, if not, whether they had worked during the year before the survey. Women who were currently working were then asked a number of questions about the kind of work they were doing and whether or not they were paid in cash. Those who earned cash for their work were asked who made the decision about how their earnings were used. If they had small children, they were asked about the arrangements they had for child care when they were working.

2.11.1 Employment Status

The majority of women (86 percent) are not working, nor have they worked during the last 12 months (Table 2.13). Only one in 10 women was employed throughout the year. The proportion of women not working ranges from 98 percent among those age 15-19 to 79 percent among those age 35-39.

Table 2.13 Women's employment

Percent distribution of women by employment status and continuity of employment, according to selected background characteristics, Jordan 1997

Background characteristic	Not currently employed		Currently employed					
	Did not work in last 12 months	Worked in last 12 months	All year		Season-ally	Occasion-ally	Total	Number of women
			5+ days per week	<5 days per week				
Age								
15-19	97.7	1.1	0.0	0.5	0.0	0.6	100.0	207
20-24	93.1	1.7	2.9	0.3	0.4	1.6	100.0	795
25-29	86.8	2.5	8.8	0.3	0.6	1.0	100.0	1,185
30-34	83.2	1.9	12.1	0.3	1.1	1.4	100.0	1,126
35-39	78.9	2.7	15.0	0.1	1.3	1.8	100.0	931
40-44	82.8	1.3	11.9	0.6	1.1	2.3	100.0	734
45-49	86.9	1.1	8.3	0.1	2.4	1.3	100.0	570
Residence								
Urban	85.4	1.9	10.0	0.3	0.8	1.6	100.0	4,636
Rural	86.1	2.3	8.2	0.1	2.3	1.0	100.0	912
Region								
North	84.3	1.8	11.2	0.6	1.5	0.7	100.0	1,479
Central	86.7	1.9	8.5	0.2	0.8	1.9	100.0	3,729
South	78.8	2.7	16.2	0.0	1.4	0.9	100.0	340
Educational level attended								
No education	86.8	2.2	5.2	0.5	3.4	1.8	100.0	504
Primary	92.5	0.9	2.8	0.1	1.6	2.1	100.0	850
Secondary	93.2	1.1	3.5	0.3	0.5	1.5	100.0	2,957
Higher	62.1	4.6	31.2	0.4	0.8	0.9	100.0	1,237
Total	85.5	1.9	9.7	0.3	1.0	1.5	100.0	5,548

Differentials in employment status by urban-rural residence and region are small; however, women in the South region seem to have better opportunities for continuous work (16 percent are permanently employed) compared with women in other regions.

Educational attainment affects the likelihood of a woman's being employed. The percentage of women not working decreases from 93 percent for those with primary and secondary education to 62 percent for those with higher education. The continuity of employment is also affected by level of education. About one in three women (31 percent) with higher education works throughout the year, compared with only 5 percent of women with no education.

2.11.2 Occupation

Table 2.14 shows a high proportion of women engaged in professional and technical occupations (64 percent), and one in five employed in sales work. Slightly less than 6 percent of women work in various agricultural activities. The percentages vary considerably by background characteristics of women. For example, older women, women living in rural areas and in less urbanized regions (the North and South regions), and those with less education are more likely to work in the agricultural sector than other women.

Table 2.14 Occupation

Percent distribution of currently employed women by occupation and type of agricultural land worked or type of non-agricultural employment, according to selected background characteristics, Jordan 1997

	Agriculture				Nonagricultural employment						
Background characteristic	Own land	Family land	Rented land	Other's land	Prof. tech./ manag.	Sales/ services	Unskilled manual	Other	Missing	Total	Number of women
Age											
15-19	*	*	*	*	*	*	*	*	*	100.0	2
20-24	(1.1)	(2.5)	(0.0)	(0.0)	(46.5)	(41.0)	(6.1)	(0.0)	(2.6)	100.0	41
25-29	0.9	0.4	0.4	2.9	75.8	11.6	8.1	0.0	0.0	100.0	127
30-34	0.0	0.7	0.6	1.2	72.4	20.2	3.3	0.3	1.4	100.0	167
35-39	0.8	0.3	1.3	1.9	70.0	16.8	8.6	0.0	0.2	100.0	171
40-44	0.0	3.8	0.3	5.3	53.9	25.3	11.4	0.0	0.0	100.0	117
45-49	5.2	2.8	1.0	6.0	37.7	29.4	14.6	0.0	3.5	100.0	68
Residence											
Urban	0.2	0.5	0.2	1.7	67.2	21.2	8.0	0.0	1.1	100.0	589
Rural	5.0	6.5	3.2	9.0	46.6	19.2	10.2	0.4	0.0	100.0	106
Region											
North	1.4	2.4	1.0	5.7	62.7	17.7	7.5	0.0	1.6	100.0	207
Central	0.3	0.8	0.3	1.2	64.2	23.4	9.1	0.0	0.6	100.0	425
South	3.9	1.5	2.2	3.5	68.0	14.1	5.6	0.7	0.6	100.0	63
Educational level attended											
No education	7.5	9.3	5.8	18.4	0.8	31.4	24.5	0.0	2.3	100.0	56
Primary	2.3	1.1	1.2	13.0	1.8	47.2	32.8	0.7	0.0	100.0	57
Secondary	0.6	1.6	0.6	1.0	33.8	49.2	12.7	0.0	0.6	100.0	171
Higher	0.0	0.3	0.0	0.0	93.7	4.1	0.9	0.0	0.9	100.0	412
Total	0.9	1.4	0.7	2.8	64.1	20.9	8.3	0.1	0.9	100.0	695

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk means that the figure is based on less than 25 unweighted cases, and has been suppressed.

2.11.3 Employer and Type of Earnings

Table 2.15 shows that 15 percent of working women are self-employed, 7 percent work for a relative, and an overwhelming majority (77 percent) work for someone who is a nonrelative. Most women (95 percent) earn cash for their work.

There is no marked difference by age in terms of cash earnings. As expected, urban work is more likely to be compensated with cash than work in rural areas. It is also not surprising that educated women are more likely to receive cash compensation than less educated women.

Table 2.15 Employer and form of earnings

Percent distribution of currently employed women by employer and form of earnings, according to selected background characteristics, Jordan 1997

Background characteristic	Self-employed		Employed by a nonrelative		Employed by a relative		Total	Number of women
	Earns cash	Does not earn cash	Earns cash	Does not earn cash	Earns cash	Does not earn cash		
Age								
15-19	*	*	*	*	*	*	100.0	2
20-24	(30.7)	(2.5)	(63.1)	(0.0)	(3.7)	(0.0)	100.0	41
25-29	12.1	0.7	79.0	3.3	2.1	2.7	100.0	127
30-34	10.6	0.8	83.3	0.6	3.3	1.3	100.0	167
35-39	11.7	1.5	80.1	0.6	4.4	1.6	100.0	171
40-44	17.2	0.0	69.5	0.9	8.1	4.3	100.0	117
45-49	20.9	0.8	59.8	2.8	13.0	2.7	100.0	68
Residence								
Urban	14.9	0.8	78.3	0.9	3.8	1.3	100.0	589
Rural	12.0	1.4	62.7	3.9	12.4	7.5	100.0	106
Region								
North	11.0	0.0	76.8	1.6	5.8	4.9	100.0	207
Central	17.3	1.1	74.6	1.4	4.7	0.9	100.0	425
South	6.7	2.4	82.2	0.7	5.7	2.4	100.0	63
Educational level attended								
No education	24.4	1.0	44.3	3.9	16.3	10.1	100.0	56
Primary	35.6	0.0	43.3	6.4	13.6	1.1	100.0	57
Secondary	31.1	2.7	53.4	2.1	7.4	3.3	100.0	171
Higher	3.3	0.3	94.0	0.0	1.5	0.8	100.0	412
Total	14.4	0.9	75.9	1.4	5.1	2.2	100.0	695

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk means that the figure is based on less than 25 unweighted cases, and has been suppressed.

Women earning cash for their work were asked who mainly decides how their earnings will be used. Table 2.16 shows that 59 percent of women reported that they and their husband jointly decide on how the money is to be spent, and 36 percent of women stated that it is their sole decision. Older women, women in urban areas, and women who reside in the Central region are more likely than women in other categories to make independent decisions on spending their earnings. Surprisingly, education does not necessarily confer more power in decisionmaking for women, although the percentages should be interpreted with caution because some of the numbers are too small to be statistically meaningful.

Table 2.16 Decision on use of women's earnings

Percent distribution of women receiving cash earnings by person who decides how earnings are used, according to selected background characteristics, Jordan 1997

Background characteristic	Person who decides how earnings are used						Total	Number of women
	Woman	Husband/ partner	Jointly with husband/ partner	Someone else	Jointly with someone else	Missing		
Age								
15-19	*	*	*	*	*	*	100.0	2
20-24	(51.2)	(3.8)	(41.9)	(0.0)	(0.0)	(3.2)	100.0	40
25-29	27.1	1.8	70.6	0.0	0.4	0.0	100.0	119
30-34	32.2	1.9	66.0	0.0	0.0	0.0	100.0	163
35-39	34.4	3.0	61.2	0.8	0.6	0.0	100.0	165
40-44	39.0	6.8	53.7	0.4	0.0	0.0	100.0	111
45-49	54.2	5.8	38.3	0.0	1.7	0.0	100.0	64
Residence								
Urban	38.2	2.7	58.1	0.3	0.5	0.2	100.0	572
Rural	24.9	9.2	65.9	0.0	0.0	0.0	100.0	92
Region								
North	27.5	4.3	67.6	0.0	0.6	0.0	100.0	193
Central	42.3	2.8	54.1	0.3	0.3	0.3	100.0	411
South	23.9	7.3	67.2	0.8	0.8	0.0	100.0	60
Educational level attended								
No education	59.4	17.2	21.1	0.0	2.3	0.0	100.0	47
Primary	56.9	2.1	41.0	0.0	0.0	0.0	100.0	52
Secondary	49.1	2.8	46.7	1.1	0.3	0.0	100.0	157
Higher	26.1	2.6	70.8	0.0	0.3	0.3	100.0	407
Marital status								
Not married	92.9	0.0	0.0	1.1	6.0	0.0	100.0	44
Currently married	32.4	3.9	63.4	0.2	0.0	0.2	100.0	620
Total	36.3	3.6	59.2	0.3	0.4	0.2	100.0	664

Note: Figures in parentheses are based on 25 to 49 unweighted cases. An asterisk means that the figure is based on less than 25 unweighted cases, and has been suppressed.

2.11.4 Child Care While Mother is Working

Table 2.17 presents information on who provides child care for children under age six of working mothers. The data show that one in three employed women sends her young children to school or a day care facility. Thirty percent of women have relatives to mind their children. Among parents, 18 percent of women and 18 percent of their husbands look after their own children. That percentage varies markedly by background characteristics. Institutional care is more popular among women residing in urban areas, women with higher education, women working for a nonrelative, and women working in nonagricultural activities. Self-employed women and women with seasonal or occasional employment usually look after their own children while working.

Table 2.17 Child care while working

Percent distribution of currently employed women by whether they have a child under six years of age at home, and the percent distribution of employed mothers who have a child under six by person who cares for child while mother is at work, according to selected background characteristics, Jordan 1997

Background characteristic	Women with children 0-6 yr at home		Child's caretaker while mother is at work							
	No children home	One or more	Re-spon-dent	Husband/ Servant/ Neighbor	Other rela-tive	School/ Insti-tutional care	Not worked since birth	Other	Total	Number of women
Residence										
Urban	33.6	66.4	16.3	16.7	28.2	37.5	0.9	0.4	100.0	589
Rural	32.1	67.9	24.5	22.9	39.3	13.3	0.0	0.0	100.0	106
Region										
North	31.2	68.8	14.6	17.8	30.2	35.1	1.5	0.9	100.0	207
Central	35.3	64.7	19.3	19.0	28.9	32.3	0.5	0.0	100.0	425
South	27.1	72.9	17.0	9.0	35.2	37.9	0.0	0.9	100.0	63
Educational level attended										
No education	59.1	40.9	29.0	50.3	15.1	5.6	0.0	0.0	100.0	56
Primary	44.9	55.1	51.5	35.5	11.1	0.0	0.0	2.0	100.0	57
Secondary	37.9	62.1	44.5	16.5	24.9	13.5	0.0	0.6	100.0	171
Higher	26.4	73.6	3.9	13.8	34.8	46.4	1.1	0.1	100.0	412
Employer										
Relative	51.8	48.2	60.0	24.3	11.3	4.5	0.0	0.0	100.0	51
Nonrelative	31.1	68.9	3.8	18.9	35.3	40.8	0.9	0.3	100.0	537
Self-employed	35.9	64.1	77.0	8.6	7.5	6.0	0.0	0.9	100.0	107
Occupation										
Agricultural	42.9	57.1	33.1	45.0	21.9	0.0	0.0	0.0	100.0	40
Nonagricultural	32.5	67.5	16.9	16.3	30.0	35.7	0.8	0.4	100.0	648
Employment status										
All year, full week	32.7	67.3	6.3	16.6	33.8	41.9	0.9	0.5	100.0	538
All year, part week	24.5	75.5	27.8	36.7	26.7	8.9	0.0	0.0	100.0	16
Seasonal	38.5	61.5	59.3	20.0	17.5	3.2	0.0	0.0	100.0	56
Occasional	35.0	65.0	64.4	18.4	13.0	4.3	0.0	0.0	100.0	83
Total	33.4	66.6	17.6	17.6	29.9	33.7	0.7	0.4	100.0	695

Note: Total includes six women for whom information on occupation was not available.

CHAPTER 3

FERTILITY

Fertility measures in this chapter are based on the reported birth histories of ever-married women age 15 to 49 who were interviewed in the 1997 Jordan Population and Family Health Survey (JPFHS). Data were collected in two sections. First, each woman was asked a series of questions on the number of her sons and daughters living with her, the number living elsewhere, and the number who had died. Next, for each live birth, she was asked to report the sex, date of birth, whether the birth was single or multiple, and whether the child was living in the household or elsewhere. The survival status of each live birth was also asked. For deceased children, the age at death was recorded. As an indicator of future fertility, information was collected on whether married women were pregnant at the time of the interview.

Experience in using birth histories to estimate fertility levels and trends has found that underreporting of children ever born and displacement of children's dates of birth are common in many countries. Underreporting of children affects estimates of fertility levels, whereas misreporting of children's date of birth distorts fertility trends over time. Regarding the latter, one of the characteristics of the 1997 JPFHS is the high quality of age and date reporting. Virtually all women knew their age, their age at marriage and their date of marriage. For children's age and date of birth reporting, both month and year of birth are documented for all births recorded in the birth history (see Table C.3). This information lends confidence to the quality of basic data used in the estimation of fertility measures.

Because fertility rates presented in this chapter are based on direct measures derived from the birth history section of the JPFHS, two potential drawbacks require some attention. First, only surviving women were interviewed in the survey. This would bias the rates if mortality of women of childbearing age were high and if fertility of surviving and nonsurviving women differed significantly— neither of which is the case in Jordan. Limiting the survey respondents to ever-married women presents another potential bias. The number of births to single women in Jordan is negligible. Although information on fertility was obtained only from ever-married women, estimates can be made for all women (regardless of marital status) based on information in the household questionnaire; these estimates assume that women who have never been married have had no children.

This chapter also analyzes levels of fertility by background characteristics of women, which include age, residence, and education level. Factors related to fertility—including the mean age at birth, birth intervals, and teenage fertility—are also analyzed.

3.1 Fertility Levels and Trends

Age-specific fertility rates and total fertility rates (TFR) for the three-year period preceding the survey are shown in Table 3.1, along with data from three previous surveys for comparison—the 1976 Jordan Fertility Survey (JFS), the 1983 Jordan Fertility and Family Health Survey (JFFHS), and the 1990 JPFHS. Data for the 1976 survey are calculated based on the two years preceding the survey (1975-1976), while those for 1983, 1990 and 1997 refer to the three years preceding the survey (1981-1983, 1988-1990, and 1995-1997, respectively). Comparison of the findings from the four surveys shows the trends in fertility levels over a 22-year period.

The TFR is the sum of the age-specific fertility rates; it represents the average number of children a woman in Jordan would have at the end of her reproductive years if she were subject to the observed age-specific rates. At current levels, a woman would give birth to an average of 4.4 children in her lifetime. That is 40 percent lower than the rate recorded in 1976 (7.4 births per woman). Data in Table 3.1 indicate that the pace of fertility decline has been faster in the more recent period. For example, it was 11 percent between 1976 and 1983 (dropping from 7.4 to 6.6 births per woman), 15 percent between 1983 and 1990 (dropping from 6.6 to 5.6 births per woman), and 21 percent between 1990 and 1997 (dropping from 5.6 to 4.4 births per woman).

In comparison with fertility levels in the neighboring countries for which data are available from DHS surveys, the TFR in Jordan is moderate; countries with lower TFR include Turkey (2.7 births in 1991-1993), Morocco (3.3 births in 1993-1995), Egypt (3.6 births in 1993-1995), and Tunisia (3.0 births in 1993-1995). Countries with higher TFR are Pakistan (5.4 births in 1988-1991) and Yemen (7.7 births in 1989-1992).

Table 3.1 Current fertility according to selected surveys

Age-specific fertility rates and total fertility rates from selected surveys, Jordan, 1976, 1983, 1990, and 1997

Age group	JFS 1976[1]	JFFHS 1983[2]	JPFHS 1990[2]	JPFHS 1997[2]
15-19	71	49	49	43
20-24	300	228	219	172
25-29	367	335	296	246
30-34	332	305	264	206
35-39	240	233	188	144
40-44	112	127	79	48
45-49	47	40	19	11
TFR 15-49	7.4	6.6	5.6	4.4
TFR 15-44	7.1	6.4	5.5	4.3

TFR: Total fertility rates, expressed per woman
[1] Based on the two years preceding the survey
[2] Based on the three years preceding the survey

The decline occurred at all ages; however, the most significant decline is observed among teenagers—dropping from 71 births in the 1976 JFS to 43 births per 1,000 women in the 1997 JPFHS. Figure 3.1 shows that most of the decline since 1990 is due to lower age-specific fertility rates for women age 30 and older. At the same time, the age-specific fertility rates in all of the surveys peak in the 25-29 age group.

Figure 3.1
Age-Specific Fertility Rates from Various Data Sources, 1976-1997

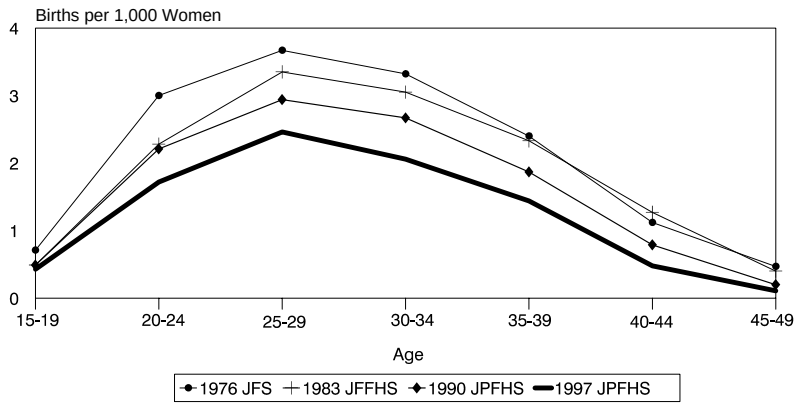


Table 3.2 and Figure 3.2 present the age-specific fertility rates and cumulative fertility for the three-year period preceding the survey by urban-rural residence. In Table 3.2, the general fertility rate (GFR) is the annual number of live births per 1,000 women age 15-44 in the three years preceding the survey. The crude birth rate (CBR) is the annual number of live births per 1,000 population for the same period. In general, women in rural areas have almost one child more than urban women (5.0 births compared with 4.2 births). The most significant differences are found in the middle of the women's reproductive period (age 30-34), where rural women have an average 0.047 births more than urban women.

Table 3.2 Current fertility

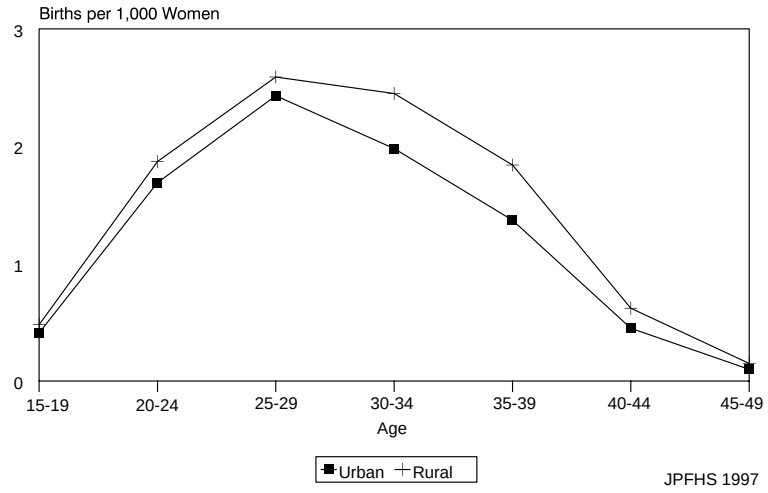
Age-specific and cumulative fertility rates and the crude birth rate for the three years preceding the survey, by urban-rural residence, Jordan 1997

	Residence		
Age group	Urban	Rural	Total
Age			
15-19	41	48	43
20-24	169	187	172
25-29	243	259	246
30-34	198	245	206
35-39	137	184	144
40-44	45	62	48
45-49	10	15	11
TFR 15-49	4.22	5.00	4.35
TFR 15-44	4.17	4.93	4.30
General fertility rate	140	160	144
Crude birth rate	32.5	35.5	33.1

Note: Rates are for the period 1-36 months preceding the survey. Rates for age group 45-49 may be slightly biased due to truncation. Total fertility rate expressed per woman. General fertility rate (births divided by number of women 15-44), expressed per 1,000 women. Crude birth rate expressed per 1,000 population.

The fertility differentials according to background characteristics of women are shown in Table 3.3. Column one shows the total fertility rates for the three years preceding the survey (1995-1997); column two, the percentage of married women who were pregnant at the time of the fieldwork; and column three, the mean number of children ever born (CEB) to women age 40-49. CEB is an indicator of cumulative fertility and reflects the fertility of older women who are nearing the end of their reproductive years, representing completed fertility. When fertility remains constant over time, TFR and CEB will be the same or almost the same. In the 1997 JPFHS, however, the fact that the completed fertility rate (6.8 children per woman) is much higher than the total fertility rate (4.4 children per woman) indicates a considerable decline in fertility.

Figure 3.2
Age-Specific Fertility Rates by Urban-Rural Residence
Jordan, 1995-1997



The TFR is about 4.8 births per woman in the North and South regions, while in the Central region (which comprises the most urbanized areas of the country, including Amman governorate) the TFR is 4.1 births per woman (see Table 3.3). Among women who have had no formal education and those who have had up to secondary education, fertility varies little (about 4.5 children). However, women who have had higher education have 0.7 birth less than other women. These figures suggest that as educational opportunities for women improve above the secondary-school level, the level of fertility declines, and the differentials in fertility will narrow among women according to education.

Table 3.3 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage currently pregnant and mean number of children ever born to women age 40-49, by selected background characteristics, Jordan 1997

Background characteristic	Total fertility rate[1]	Percentage currently pregnant[1]	Mean number of children ever born to women age 40-49
Residence			
Urban	4.22	7.40	6.54
Rural	5.00	7.75	8.33
Region			
North	4.85	8.43	7.73
Central	4.11	6.90	6.37
South	4.80	9.49	7.81
Educational level attended			
No education	4.59	5.49	8.09
Primary	4.54	7.10	7.77
Secondary	4.53	7.41	6.39
Higher	3.66	8.28	4.15
Total	4.35	7.46	6.81

[1] Rate for women age 15-49 years

The 1997 JPFHS data show that 7 percent of women of reproductive age were pregnant at the time of the survey. The geographical variation in the proportion of pregnant women follows a pattern similar to that of fertility. Rural women and those living in the South region are more likely to be pregnant than women in other areas. Better educated women are more likely to be pregnant than women with less education.

Comparing data from previous surveys is but one means of studying trends in fertility (Table 3.4). Trends can also be investigated by using retrospective data from a single survey. The birth history information collected in the JPFHS is used for this purpose. Figures in brackets represent partial fertility rates caused by truncation; women age 50 and older were not included in the survey. Also, the further back in time that rates are calculated, the more severe the truncation. For example, rates cannot be

Table 3.4 Age-specific fertility rates

Age-specific fertility rates (per 1,000) for five-year periods preceding the survey, by mother's age at the time of birth, Jordan 1997

Mother's age	Number of years preceding the survey			
	0-4	5-9	10-14	15-19
15-19	45	50	61	90
20-24	184	209	261	301
25-29	246	282	340	371
30-34	215	251	302	[351]
35-39	146	177	[225]	U
40-44	55	[87]	U	U
45-49	[13]	U	U	U

Note: Age-specific fertility rates are per 1,000 women. Estimates enclosed in brackets are truncated.
U = Unknown (no information)

calculated for women in the age group 45-49 years for the period 5-19 years before the survey, because these women would have been over age 50 at the time of the survey and, thus, were not interviewed. Data in Table 3.4 indicate that the fertility rate has been declining in all age groups.

Table 3.5 presents fertility for ever-married women according to the length of time since first marriage for four five-year periods preceding the survey. The table is similar to Table 3.4 except that it is confined to ever-married women and age is replaced by duration of marriage. Data in Table 3.5 confirm the findings presented in Table 3.4: fertility has declined for all marriage durations.

Table 3.5 Fertility by marital duration

Fertility rates by duration since first marriage in years, for five-year periods preceding the survey, Jordan 1997

Marriage duration at birth	Number of years preceding the survey			
	0-4	5-9	10-14	15-19
0-4	425	444	478	463
5-9	310	344	393	424
10-14	235	255	329	393
15-19	153	211	284	[375]
20-24	85	141	[241]	U
25-29	40	[88]	U	U

Note: Fertility rates per 1,000 women. Estimates enclosed in brackets are truncated.
U = Unknown (no information)

3.2 Children Ever Born

Table 3.6 presents the distribution of all women and currently married women by the number of children they have had. In the 1997 JPFHS, since the respondents are ever-married women, information on the reproductive history of never-married women was not collected. However, since almost no births in Jordan take place before marriage, it can be assumed that never-married women have had no births. The data represent the accumulation of births over time. The difference in fertility between all women and currently married

Table 3.6 Children ever born and living

Percent distribution of all women and of currently married women age 15-49 by number of children ever born (CEB) and mean number ever born and living, according to five-year age groups, Jordan 1997

Age group	Number of children ever born											Total	Number of women	Mean number of CEB	Mean number of living children
	0	1	2	3	4	5	6	7	8	9	10+				
ALL WOMEN															
15-19	96.0	2.6	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2,523	0.06	0.06
20-24	69.2	10.3	12.3	5.9	1.9	0.3	0.0	0.0	0.0	0.0	0.0	100.0	2,050	0.62	0.60
25-29	38.6	8.5	16.7	16.2	11.1	5.1	2.5	1.0	0.3	0.0	0.0	100.0	1,789	1.85	1.78
30-34	23.5	3.8	8.8	14.0	15.0	14.9	8.8	5.5	3.1	2.0	0.6	100.0	1,395	3.38	3.26
35-39	14.6	2.6	4.7	7.8	12.5	13.4	14.1	9.5	7.6	4.9	8.4	100.0	1,036	4.99	4.78
40-44	8.6	1.6	2.3	5.6	8.9	11.4	10.1	11.5	10.9	9.9	19.2	100.0	778	6.51	6.17
45-49	7.1	2.7	2.1	4.9	6.8	8.1	9.1	9.7	11.4	9.0	29.0	100.0	593	7.19	6.72
Total	50.4	5.3	7.7	7.5	6.8	5.7	4.4	3.3	2.7	2.1	4.1	100.0	10,165	2.30	2.25
CURRENTLY MARRIED WOMEN															
15-19	50.8	31.8	14.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	203	0.70	0.69
20-24	20.2	26.4	31.9	15.4	5.1	0.9	0.0	0.1	0.0	0.0	0.0	100.0	777	1.62	1.56
25-29	7.1	12.4	25.5	24.6	16.8	7.8	3.9	1.5	0.4	0.0	0.0	100.0	1,168	2.81	2.70
30-34	4.6	4.6	10.9	17.4	18.7	18.8	11.0	6.9	3.9	2.5	0.7	100.0	1,099	4.23	4.09
35-39	4.6	2.2	4.5	8.3	14.0	15.7	16.0	10.7	8.7	5.5	9.8	100.0	880	5.66	5.43
40-44	2.9	1.3	2.1	5.6	9.4	12.0	10.8	12.3	12.0	10.6	20.8	100.0	690	7.00	6.64
45-49	3.0	2.1	2.1	5.2	6.7	7.8	9.5	9.4	11.6	10.2	32.3	100.0	520	7.69	7.19
Total	8.8	9.4	14.3	13.9	12.5	10.6	8.1	6.0	5.0	3.8	7.6	100.0	5,337	4.34	4.14

women is due to the proportion of women who were not married at the time of the survey (i.e., single, divorced, or widowed). On average, women have given birth to 1.9 children by their late twenties, 5 children by their late thirties, and more than 7 children by the end of their reproductive period.

Differences in the mean number of children born and living are notable only after women have reached the age of 40. Caution should be exercised in interpreting the data for women in the oldest age groups because of possible recall problems; older women are more likely to omit a child, particularly if the child died at a young age or is living away from the mother.

3.3 Birth Intervals

A birth interval is the period of time between two successive live births. Research has shown that children born soon after a previous birth are at greater risk of illness and death. The percent distribution of births in the five years before the survey is shown in Table 3.7.

Table 3.7 Birth intervals

Percent distribution of births in the five years preceding the survey by number of months since previous birth, according to demographic and socioeconomic characteristics, Jordan 1997

Background characteristic	Number of months since previous birth					Total	Median number of months since previous birth	Number of births
	7-17	18-23	24-35	36-47	48+			
Age of mother								
15-19	46.5	39.7	10.7	3.2	0.0	100.0	18.8	40
20-29	28.4	29.4	29.8	7.9	4.6	100.0	22.3	2,172
30-39	17.3	18.8	29.9	14.0	20.0	100.0	28.5	2,396
40 +	9.7	11.5	26.0	15.3	37.6	100.0	37.8	473
Birth order								
2-3	29.0	26.8	27.9	8.3	8.0	100.0	22.6	2,234
4-6	16.5	20.5	30.3	13.6	19.2	100.0	27.8	1,836
7 +	14.3	18.1	30.8	14.5	22.2	100.0	29.9	1,011
Sex of prior birth								
Male	20.9	21.7	29.4	11.4	16.6	100.0	26.1	2,620
Female	22.2	24.0	29.2	11.5	13.0	100.0	24.9	2,461
Survival of prior birth								
Dead	45.8	22.2	16.8	10.7	4.4	100.0	18.8	171
Living	20.7	22.8	29.8	11.5	15.3	100.0	25.8	4,909
Residence								
Urban	21.0	22.4	28.5	11.6	16.5	100.0	25.9	4,087
Rural	23.7	24.3	32.9	10.8	8.3	100.0	24.5	994
Region								
North	23.0	25.2	28.9	11.1	11.8	100.0	24.4	1,517
Central	20.9	21.7	29.1	11.6	16.7	100.0	26.3	3,209
South	20.8	22.3	33.8	11.8	11.3	100.0	25.6	355
Educational level attended								
No education	16.3	18.4	35.3	15.4	14.6	100.0	27.8	392
Primary	19.1	21.2	30.3	11.2	18.2	100.0	26.4	685
Secondary	22.1	24.0	28.5	10.9	14.5	100.0	25.0	2,884
Higher	23.5	22.1	28.9	11.5	14.0	100.0	25.3	1,120
Total	21.5	22.8	29.3	11.4	14.9	100.0	25.5	5,081

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

Women in Jordan favor relatively long birth intervals: the median birth interval among children born in the five years preceding the survey is 25.5 months—1.5 months longer than that recorded in the 1990 JPFHS. More than half of all children (56 percent) are born at least two years after their siblings, and one in four is born after an interval of three years or longer. As expected, children born to younger women and low-parity women have shorter birth intervals than those born to older women and high-parity women. The birth interval following a child who has died is shorter than the interval following the birth of a surviving child (19 months, compared with 26 months). The length of birth intervals varies little according to urban-rural residence and region. However, there is a negative association between women's education and length of birth interval; better educated women have shorter intervals between births—presumably in part because they marry later. Since these women are starting their families later, they may have shorter birth intervals to "catch up" with women who started childbearing earlier. Another reason may be the length of breastfeeding; educated women breastfeed their children for a shorter duration than uneducated women (see Table 9.3).

3.4 Age at First Birth

The onset of childbearing is an important indicator of fertility. In Jordan, the postponement of first births (reflecting a later age at first marriage) has made a large contribution to the overall decline in fertility. Table 3.8 shows the distribution of women by age at first birth. Women under age 25 were not included in the calculation of median age at first birth because most had not given birth. Figures in the last column suggest an increase across age cohorts. Women age 25-29 give birth for the first time two years after women age 35-39, and 3.6 years later than women age 45-49.

Table 3.8 Age at first birth

Percent distribution of women 15-49 by age at first birth, according to current age, Jordan 1997

Current age	Women with no births	Age at first birth						Total	Number of women	Median age at first birth
		<15	15-17	18-19	20-21	22-24	25+			
15-19	96.0	0.2	2.8	1.0	NA	NA	NA	100.0	2,523	a
20-24	69.2	0.1	5.9	10.8	9.8	4.1	NA	100.0	2,050	a
25-29	38.6	0.1	6.6	10.5	15.0	19.7	9.5	100.0	1,789	24.7
30-34	23.5	0.2	9.0	14.1	15.0	18.9	19.3	100.0	1,395	23.9
35-39	14.6	1.1	15.0	14.8	14.4	17.3	22.9	100.0	1,036	22.7
40-44	8.6	1.4	17.5	18.9	18.0	18.6	17.1	100.0	778	21.3
45-49	7.1	1.2	16.3	20.3	22.4	15.2	17.6	100.0	593	21.1

NA = Not applicable
[a] Omitted because less than 50 percent of the women in the age group *x* to *x+4* have had a birth by age *x*.

Table 3.9 presents the differentials in age at first birth among women age 25-49 by background characteristics. Overall, the median age at first birth is 23.2 years. Urban women begin childbearing more than a year later than rural women (23.3 years compared with 22.2 years). There are no significant differences in the median age at first birth by region. Differentials by education are more marked and follow an unusual pattern. Women with secondary education have the highest median age at first birth (21.9 years), followed by women with no education. The lowest median age at first birth is for women who have attended primary school (20.7 years).

Table 3.9 Median age at first birth by background characteristics

Median age at first birth among women 25-49, by current age and selected background characteristics, Jordan 1997

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	24.8	24.1	23.1	21.5	21.2	23.3
Rural	24.3	22.8	21.0	20.6	20.8	22.2
Region						
North	24.1	24.2	23.1	20.8	20.7	23.1
Central	25.0	23.8	22.7	21.5	21.3	23.2
South	24.8	23.3	21.7	20.7	20.5	22.7
Educational level attended						
No education	a	25.0	21.0	20.3	20.6	21.3
Primary	23.6	20.9	20.8	19.9	20.2	20.7
Secondary	22.8	22.1	21.3	20.7	21.0	21.9
Higher	a	25.8	26.2	25.4	25.8	a
Total	24.7	23.9	22.7	21.3	21.1	23.2

Note: The medians for cohort 15-24 could not be determined because some women may still have a birth before reaching age 45.

[a] Omitted because less than 50 percent of the women in the age group *x* to *x+4* have had a birth by age *x*.

3.5 Teenage Fertility

Table 3.10 examines the extent of fertility among women age 15-19. This issue is a major social and health concern because teenage mothers and their children usually have higher risk of illness and death. At the same time, women who become mothers in their teens are more likely to curtail their education. Data from this survey indicate that more than half of women age 15-19 said that they left school to get married.

Among teenagers in Jordan, the level of fertility is low. Only 6 percent of women began childbearing during their teens. Levels of teenage pregnancy vary little by place of residence; the most significant differentials are age and education. At age 15, only 1 percent of women have started childbearing. By age 19, one in seven will have become a mother or will be pregnant with her first child. Women's education plays an important part in determining the onset of childbearing. The proportion bearing their first child at a young age declines as women's level of education increases—from 13 percent among women with primary schooling to less than 1 percent among women with higher education.

Table 3.10 Teenage pregnancy and motherhood

Percentage of teenagers 15-19 who are mothers or pregnant with their first child, by selected background characteristics, Jordan 1997

Background characteristic	Percentage of teenagers who are: Already mothers	Pregnant with first child	Percentage who have begun child-bearing	Number of teenagers
Age				
15	0.5	0.5	1.0	531
16	1.7	0.3	2.0	507
17	2.4	1.8	4.2	513
18	5.9	2.5	8.5	500
19	10.1	3.8	13.9	472
Residence				
Urban	3.9	1.9	5.7	2,070
Rural	4.6	1.3	5.9	452
Region				
North	4.5	1.6	6.1	681
Central	3.9	1.8	5.7	1,689
South	3.0	1.8	4.8	153
Educational level attended				
No education	*	*	*	25
Primary	7.8	4.8	12.7	158
Secondary	3.9	1.7	5.6	2,154
Higher	0.6	0.0	0.6	181
Total	4.0	1.8	5.7	2,523

Note: An asterisk means that the figure is based on fewer than 25 unweighted cases, and has been suppressed.

CHAPTER 4

FERTILITY REGULATION

The National Population Commission (NPC) prepared a National Population Strategy for Jordan, which the cabinet approved in 1993. One of the principal elements of the strategy is "the reinforcement of the right of families to have the appropriate number of children and to have access to information and family planning methods in order to make their decisions freely, albeit in line with religious and cultural values." Through the Ministry of Health and Health Care, the Jordan Family Planning and Protection Association, civil and voluntary organizations, and rural development projects, women are receiving information about family health, breastfeeding, and child spacing.

This chapter considers a number of indicators from the 1997 Jordan Population and Family Health Survey (JPFHS) relating to knowledge, attitudes, and use of family planning. This chapter also presents information on intended future use of contraception and exposure to mass media messages about family planning. Whenever possible, comparison is made with the results of other DHS or PAPCHILD surveys carried out in other Arab countries; time trends are examined by comparing the JPFHS findings with those of three earlier surveys: the 1976 Jordan Fertility Survey (JFS) (Department of Statistics, 1979), the 1983 Jordan Fertility and Family Health Survey (JFFHS) (Department of Statistics, 1984), and the 1990 Jordan Population and Family Health Survey (JPFHS) (Zou'bi et al., 1992).

4.1 Knowledge of Family Planning Methods

Determining the level of knowledge of contraceptive methods was a major objective of the 1997 JPFHS, since knowledge of specific methods is a precondition for using them. Information about women's knowledge of contraceptive methods was collected by first asking the respondents an open-ended question about which contraceptive methods they had heard of. All methods named in response to this question were recorded as spontaneous knowledge. When a respondent failed to mention any of the listed methods, the interviewer would describe a method and ask whether the respondent had heard of it. All methods recognized by the respondent after hearing a description of it were recorded as probed knowledge.

Information on knowledge was collected for eight modern methods: the pill, the IUD, injectables, implants, vaginal methods (foam, jelly, sponge, or diaphragm), the condom, female sterilization, and male sterilization, and three traditional methods: periodic abstinence, withdrawal, and prolonged breastfeeding).[1] In addition, provision was made in the questionnaire to record any other methods that respondents named without any prompting.

In this analysis, only the overall levels of knowledge are presented—that is, respondents are classified as knowing a method regardless of whether they named it spontaneously or after probing. It should be noted that knowledge of a family planning method in the JPFHS and all DHS surveys is defined simply as having heard of a method. No questions were asked to elicit depth of knowledge, such as how a specific method is used.

[1] Jordan, Egypt, and Yemen were the only three Arab countries to include prolonged breastfeeding as a family planning method in the knowledge section of the DHS questionnaire.

The JPFHS results indicate that all married women in Jordan know at least one method of family planning (see Table 4.1). Among modern methods, the pill and IUD are the best known (100 percent), followed by female sterilization (96 percent). Knowledge of the condom, vaginal methods, and injectables ranges from 72 percent to 92 percent. The least recognized methods, male sterilization and implants, are known to only 31 percent and 32 percent of married women, respectively. As expected, prolonged breastfeeding is known to nearly all married women. Periodic abstinence and withdrawal are also well known (91 percent and 90 percent, respectively).

Since knowledge of any family planning method or any modern method is universal, there is almost no variation among subgroups on the basis of background characteristics (Table 4.2).

Table 4.2 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women who know at least one contraceptive method and at least one modern method by selected background characteristics, Jordan 1997

Background characteristic	Knows any method	Knows modern method	Number of women
Age			
15-19	100.0	100.0	203
20-24	100.0	100.0	777
25-29	100.0	100.0	1,168
30-34	100.0	100.0	1,099
35-39	99.9	99.9	880
40-45	100.0	100.0	690
45-49	99.8	99.8	520
Residence			
Urban	100.0	100.0	4,469
Rural	99.8	99.8	868
Region			
North	100.0	100.0	1,428
Central	100.0	100.0	3,582
South	99.6	99.6	327
Educational level attended			
No education	99.7	99.7	467
Primary	99.9	99.9	804
Secondary	100.0	100.0	2,866
Higher	100.0	100.0	1,200
Total	100.0	100.0	5,337

Table 4.1 Knowledge of contraceptive methods

Percentage of all women and of currently married women who know specific contraceptive methods, Jordan 1997

Contraceptive method	Ever-married women	Currently married women
Any method	100.0	100.0
Any modern method	100.0	100.0
Pill	99.8	99.8
IUD	99.9	99.9
Injectables	91.5	91.9
Diaphragm/Foam/Jelly	71.0	71.5
Condom	83.5	84.4
Female sterilization	96.2	96.2
Male sterilization	30.8	30.9
Implants	31.3	31.8
Any traditional method	99.2	99.3
Periodic abstinence	90.4	90.7
Withdrawal	89.7	90.2
Prolonged breastfeeding	97.4	97.5
Other methods	5.3	5.3
Number of respondents	5,548	5,337
Mean number of methods	8.9	8.9

4.2 Ever Use of Contraception

All ever-married women interviewed in the JPFHS who said they had heard of a method of family planning were asked whether they ever used it. Table 4.3 shows the percentage of women who have ever used a contraceptive method. Almost eight in 10 ever-married women (78 percent) reported that they had used a contraceptive method at some time, including 15 percent who had used prolonged breastfeeding. Ever use among married women (79 percent) is almost the same as for ever-married women. Modern methods are used by two-thirds of married ever-users (66 percent). The IUD is the most popular method (46 percent), followed by the pill (41 percent). The percentage reporting ever use of other modern methods, with the exception of implants,[2] varies from 3 percent for injectables to 16 percent for condoms.

[2]Since implants are a new method in Jordan, the use of implants is still very limited (0.1 percent).

Table 4.3 Ever use of contraception

Percentage of all women and of currently married women who have ever used any contraceptive method, by specific method, according to age, Jordan 1997

		Modern method								Traditional method					
Age	**Any method**	**Any modern method**	Pill	IUD	Inject-ables	Diaphragm/ Foam/ Jelly	Condom	Female steri-liza-tion	Im-plants	**Any trad. method**	Periodic absti-nence	With-drawal	Prolonged breast-feeding	Other methods	Number of women
ALL WOMEN															
15-19	32.9	19.1	12.8	7.3	1.2	0.5	3.6	0.0	0.0	20.5	5.3	15.0	3.8	0.2	207
20-24	61.4	40.8	20.2	22.9	1.1	2.9	11.1	0.0	0.1	40.9	16.5	25.4	10.4	0.4	795
25-29	80.4	63.2	36.8	41.4	1.6	4.4	15.7	0.4	0.0	51.5	24.9	31.9	14.6	0.6	1,185
30-34	83.6	73.4	44.1	55.9	3.1	7.7	18.1	2.1	0.3	53.8	28.6	33.9	17.4	0.6	1,126
35-39	83.1	75.7	47.9	55.0	3.2	9.3	17.7	6.3	0.0	51.0	29.0	31.6	16.3	0.9	931
40-44	84.7	77.4	49.9	58.0	3.6	13.1	15.7	9.2	0.2	49.5	28.2	29.1	16.1	1.6	734
45-49	82.5	71.3	54.4	43.1	4.6	14.8	14.7	13.5	0.0	51.1	26.3	28.3	18.5	2.9	570
Total	77.8	65.2	40.4	45.1	2.7	7.8	15.3	4.2	0.1	48.9	25.0	29.9	15.0	1.0	5,548
CURRENTLY MARRIED WOMEN															
15-19	33.2	19.0	12.5	7.4	1.3	0.5	3.7	0.0	0.0	21.0	5.4	15.4	3.9	0.2	203
20-24	62.0	41.3	20.3	23.5	1.1	3.0	11.4	0.0	0.1	41.3	16.7	25.7	10.5	0.4	777
25-29	80.8	63.4	36.9	41.6	1.7	4.4	15.8	0.4	0.0	52.1	25.2	32.3	14.8	0.6	1,168
30-34	84.4	74.1	44.7	56.4	3.2	7.9	18.5	2.1	0.3	54.4	29.0	34.2	17.5	0.7	1,099
35-39	84.5	77.2	48.7	56.8	3.4	9.6	18.5	6.3	0.0	52.4	29.7	32.4	16.9	1.0	880
40-44	87.0	79.5	51.3	60.1	3.8	13.8	16.3	9.7	0.2	51.4	29.3	30.3	16.7	1.7	690
45-49	83.5	72.2	55.3	44.8	4.6	15.3	14.7	14.0	0.0	52.5	27.1	29.1	19.1	2.8	520
Total	78.7	65.9	40.8	45.9	2.7	7.9	15.6	4.2	0.1	49.8	25.5	30.5	15.3	1.0	5,337

The level of ever use of traditional contraceptive methods is fairly high in Jordan. Withdrawal, the most frequently adopted traditional method, has been used by 31 percent of currently married women, followed by periodic abstinence (26 percent) and prolonged breastfeeding (15 percent).

Compared with the findings of the 1976 JFS and the 1990 JPFHS, the level of ever use among ever-married women increased by 68 percent between 1976 and 1997, and by 23 percent between 1990 and 1997. The overall increase in ever use of modern methods between the last two surveys is slightly higher (28 percent) than the increase for all methods.

4.3 Current Use of Contraception

The level of current use of contraception is one of the indicators most frequently used to assess the success of family planning activities. It is also widely used as a measure in analyzing the determinants of fertility.

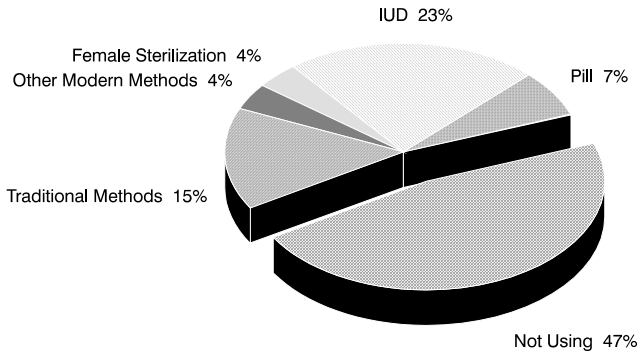
Results from the 1997 JPFHS indicate that 53 percent of married women are using a contraceptive method, including 2 percent of women who are using prolonged breastfeeding (see Table 4.4 and Figure 4.1). Nearly four in ten current users rely on modern methods. The IUD is the most widely adopted modern method (23 percent), followed by the pill (7 percent) and female sterilization (4 percent). Less than 4 percent rely on other modern methods, such as the condom, vaginal methods, and injectables. Fifteen percent of currently married women are using a traditional method, principally withdrawal (8 percent) and periodic abstinence (5 percent). Prolonged breastfeeding is practiced by 2 percent of married women.

Table 4.4 Current use of contraception

Percentage of currently married women who are using a contraceptive method, by specific method, according to age, Jordan 1997

		Modern method								Traditional method							
Age	**Any method**	**Any modern method**	Pill	IUD	In-ject-ables	Dia-phragm/ Foam/ Jelly	Con-dom	Female steri-liza-tion	Im-plants	**Any trad. method**	Periodic absti-nence	With-drawal	Pro-longed breast-feeding	Other methods	Not currently using	Total	Number of women
15-19	19.0	12.4	6.0	5.2	0.6	0.0	0.5	0.0	0.0	6.7	0.5	5.3	0.8	0.0	81.0	100.0	203
20-24	36.6	23.7	4.9	15.7	0.1	0.4	2.4	0.0	0.1	12.8	2.2	7.6	3.0	0.1	63.4	100.0	777
25-29	51.9	34.9	7.6	23.1	0.7	0.6	2.6	0.4	0.0	16.9	3.9	9.3	3.6	0.1	48.1	100.0	1,168
30-34	57.9	43.2	8.1	27.8	1.2	0.3	3.3	2.1	0.3	14.7	4.8	7.0	2.9	0.0	42.1	100.0	1,099
35-39	62.6	47.0	7.4	29.2	0.9	0.5	2.7	6.3	0.0	15.5	6.8	6.9	1.8	0.1	37.4	100.0	880
40-44	63.6	48.3	5.5	29.1	1.0	0.9	1.8	9.7	0.2	15.1	7.4	7.0	0.7	0.2	36.4	100.0	690
45-49	48.4	33.2	3.5	13.4	0.2	0.7	1.4	14.0	0.0	14.7	6.9	7.5	0.4	0.4	51.6	100.0	520
Total	52.6	37.7	6.5	23.1	0.7	0.5	2.4	4.2	0.1	14.8	4.9	7.6	2.3	0.1	47.4	100.0	5,337

Figure 4.1
Current Use of Contraceptive Methods
Currently Married Women 15-49



Overall, the level of contraceptive use has increased substantially in the last 20 years, from 23 percent in the 1976 JFS survey to 35 percent in the 1990 JPFHS survey, and to 50 percent in the 1997 JPFHS survey[3] (Table 4.5 and Figure 4.2). The relative increase in use during the seven years preceding the 1997 JPFHS is more than 44 percent for all methods, and 40 percent for all modern methods.

[3] To maintain comparability with data from previous surveys, prolonged breastfeeding is not included as a family planning method.

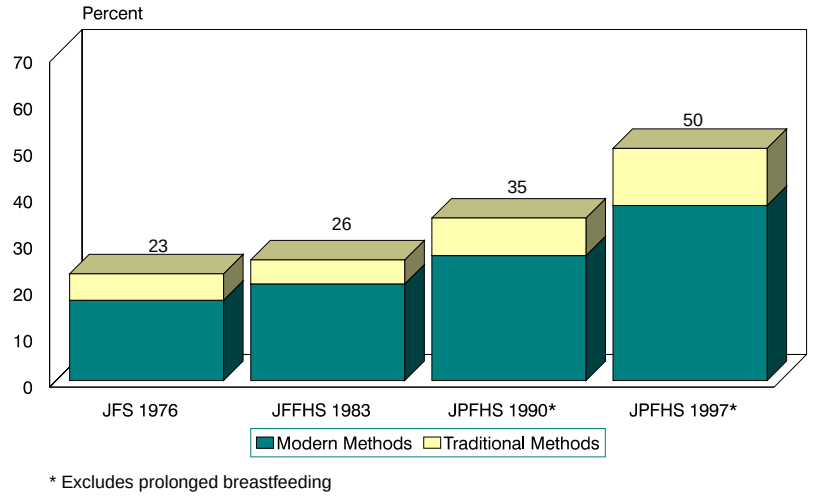
Table 4.5 Trends in contraceptive use

Percentage of currently married women who are using specific contraceptive methods, Jordan, 1976 JFS, 1983 JFFHS, 1990 JPFHS, and 1997 JPFHS

Contraceptive method	JFS 1976	JFFHS 1983	JPFHS 1990	JPFHS 1997
Any method	22.8	26.0	35.0	50.3
Any modern method	17.3	20.8	26.9	37.7
Pill	11.9	7.8	4.6	6.5
IUD	2.0	8.3	15.3	23.1
Injection	U	0.2	0.0	0.7
Vaginal methods	0.1	0.1	0.6	0.5
Condom	1.4	0.6	0.8	2.4
Female sterilization	1.9	3.8	5.6	4.2
Any traditional method[a]	5.4	5.3	8.1[b]	12.5[b]
Periodic abstinence	2.1	2.9	3.9	4.9
Withdrawal	3.3	2.4	4.0	7.6
Number of women	3,445	3,735	6,184	5,337

U = Unknown (not available)
[a] Other methods are excluded because of non-comparability among the four surveys.
[b] Prolonged breastfeeding is excluded as a contraceptive method because no question was asked about this method in the two earlier surveys.
Source: Department of Statistics (1979; 1984); and Zou'bi et al., 1992

Figure 4.2
Current Use of Contraception among Currently Married Women
1976 to 1997



* Excludes prolonged breastfeeding

Comparing specific methods, there was considerable change in the use of specific contraceptive methods in the period between 1976 and 1997. Most noticeable is the shift from the pill to the IUD. Whereas 12 percent and 8 percent of married women were using the pill in 1976 and 1983 respectively, only 5 percent were using it in 1990 and 7 percent in 1997. On the other hand, IUD use increased from 2 percent in 1976 to 15 percent in 1990, and to 23 percent in 1997. Use of female sterilization also increased substantially between 1976 and 1990; it then declined by 25 percent during the past seven years.

Table 4.6 Use of contraception in selected countries

Use of contraception among currently married women, selected DHS and PAPCHILD surveys, 1992-1997

Country	Any method	Any modern method	Traditional method
Algeria 1992 (PAPCHILD)	46.6	42.9	3.7
Egypt 1995 (DHS)	46.9	45.5	1.4
Jordan 1997 (DHS)	50.3	37.7	12.5
Morocco 1995 (DHS)	50.3	42.4	7.9
Syria 1994 (PAPCHILD)	36.1	28.3	7.8
Tunisia 1994-95 (PAPCHILD)	59.7	49.4	10.3

Note: Prolonged breastfeeding is excluded from data for all countries.
Source: Farid, 1996; El-Zanaty et al., 1996; Azelmat et al., 1996

The JPFHS findings on use of contraception are among the highest in the countries in which DHS or PAPCHILD surveys have been conducted, and in countries with well-established family planning activities. The findings from Jordan are most similar to those from Algeria, Egypt, and Morocco (Table 4.6).

Use of contraceptive methods differs according to basic characteristics. With regard to age patterns, the use of contraception increases steadily up to age 40-44 and declines thereafter (Table 4.4); use among currently married women is lowest among those age 15-19 (19 percent), peaks among women age 40-44 (64 percent), then declines sharply among those age 45-49 (48 percent). Most women in the younger cohorts use contraception for spacing births, relying on the pill, the IUD, and traditional methods. Women age 40-49 are more likely to use female sterilization in order to limit (stop) childbearing.

The level of contraceptive use is higher by 20 percent among women living in urban areas (54 percent) than among women in rural areas (45 percent). The percentage using modern methods among women living in urban areas is 27 percent higher than the percentage among those living in rural areas (39 percent and 31 percent, respectively) (Table 4.7 and Figure 4.3).

There is also regional variation in current use of family planning. The Central region (which includes the capital, Amman) has the highest level of contraceptive use (55 percent), followed by the North region (50 percent). The lowest level is the South region (43 percent). Differentials in the use of modern methods are similar to those for the use of any method.

Current use of contraception varies primarily between women who have received formal education and those with no education. Differences among the three levels of education are relatively small. This pattern also holds for the current use of modern methods. It should be noted, however, that use of the IUD increases with level of education, while use of female sterilization is negatively correlated with level of educational attainment. Those correlations could be due in part to the fact that women with no education tend to be older and have more children than women who have received formal education, and thus the former are more likely to want to stop childbearing altogether. The use of traditional methods also increases with level of education.

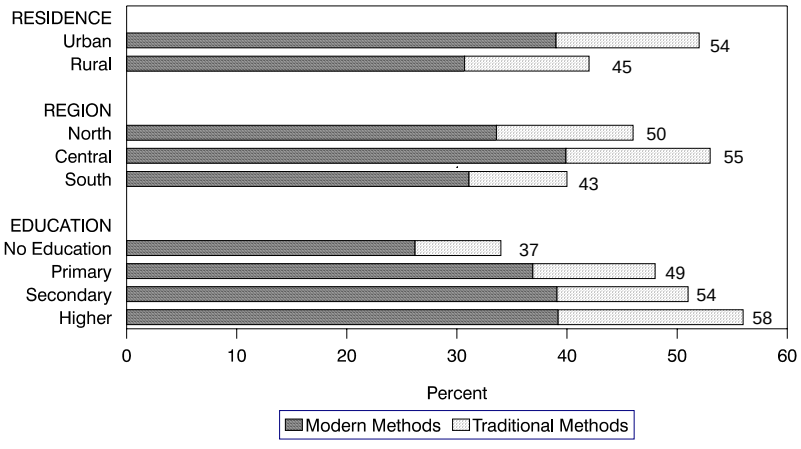
Use of contraception increases with the number of living children, from 1 percent among currently married women with no children to 64 percent among women with four or more children.

Table 4.7 Current use of contraception by background characteristics

Percent distribution of currently married women by contraceptive method currently used, according to selected background characteristics, Jordan 1997

Background characteristic	Any method	Any modern method	Modern method: Pill	Modern method: IUD	Modern method: Injectables	Modern method: Diaphragm/ Foam/ Jelly	Modern method: Condom	Modern method: Female sterilization	Any trad. method	Traditional method: Periodic abstinence	Traditional method: Withdrawal	Traditional method: Prolonged breastfeeding	Traditional method: Other methods	Not currently using	Total	Number of women
Residence																
Urban	54.0	39.0	6.4	24.5	0.6	0.5	2.6	4.2	14.8	5.2	7.6	2.0	0.1	46.0	100.0	4,469
Rural	45.3	30.7	7.1	15.9	1.2	0.5	1.7	4.2	14.4	3.5	7.4	3.5	0.2	54.7	100.0	868
Region																
North	49.5	33.6	5.3	20.1	0.8	0.6	2.3	4.5	15.8	4.1	8.5	3.3	0.1	50.5	100.0	1,428
Central	54.6	39.9	7.1	24.9	0.6	0.5	2.6	4.0	14.6	5.5	7.3	1.8	0.1	45.4	100.0	3,582
South	43.4	31.1	5.6	17.1	1.8	0.3	1.4	4.9	12.1	2.8	6.2	3.0	0.3	56.6	100.0	327
Educational level attended																
No education	37.0	26.2	4.2	12.2	1.6	0.6	1.0	6.7	10.2	1.9	5.5	2.9	0.5	63.0	100.0	467
Primary	49.0	36.9	5.9	19.3	0.5	1.1	1.0	8.9	11.9	2.7	8.0	1.2	0.2	51.0	100.0	804
Secondary	53.7	39.1	7.1	24.7	0.7	0.4	2.5	3.5	14.6	4.6	7.5	2.5	0.0	46.3	100.0	2,866
Higher	58.3	39.2	6.5	26.2	0.6	0.4	3.7	1.6	19.0	8.4	8.3	2.3	0.1	41.7	100.0	1,200
No. of living children																
0	1.3	0.6	0.0	0.1	0.0	0.3	0.0	0.3	0.7	0.0	0.7	0.0	0.0	98.7	100.0	479
1	26.6	10.4	4.3	3.5	0.5	0.0	2.1	0.0	16.3	4.1	9.5	2.7	0.0	73.4	100.0	538
2	51.6	36.1	9.0	23.3	0.3	0.6	2.9	0.0	15.2	3.3	9.7	2.2	0.2	48.4	100.0	777
3	62.2	44.9	8.8	30.9	0.7	0.5	3.4	0.6	17.4	6.8	7.3	3.3	0.0	37.8	100.0	749
4+	64.1	47.8	6.8	28.7	1.0	0.7	2.5	7.8	16.1	5.9	7.9	2.3	0.2	35.9	100.0	2,793
Total	52.6	37.7	6.5	23.1	0.7	0.5	2.4	4.2	14.8	4.9	7.6	2.3	0.1	47.4	100.0	5,337

Figure 4.3
Current Use of Contraception among Currently Married Women by Background Characteristics



JPFHS 1997

4.4 Number of Children at First Use of Contraception

Table 4.8 shows the number of living children at the time of first use of contraception by age among ever-married women. With the increasing adoption of family planning—particularly among younger women—the average parity of women at first use of contraception has been declining. Just under half of women age 40-49 used any family planning method before having four or more children, compared with about 75 percent of women age 25-29. Women are adopting family planning fairly early in the family building process. The proportion who started using contraception after marriage to delay the first birth has increased from 2 percent among women age 45-49 to 8 percent among those age 15-19. Overall, 30 percent of ever-married women (39 percent of ever-users), began using a contraceptive method when they had one child, and another 18 percent began after they had had two children.

Table 4.8 Number of children at first use of contraception

Percent distribution of ever-married women by number of living children at the time of first use of contraception according to current age, Jordan 1997

Current age	Never used contra-ception	Number of living children at time of first use of contraception						Total	Number of women
		0	1	2	3	4+	Missing		
15-19	67.1	8.0	21.4	3.5	0.0	0.0	0.4	100.0	207
20-24	38.6	5.9	34.6	16.2	4.1	0.6	0.7	100.0	795
25-29	19.6	3.9	41.7	20.8	9.3	4.6	0.9	100.0	1,185
30-34	16.4	2.9	31.5	21.9	13.0	14.3	1.3	100.0	1,126
35-39	16.9	1.7	23.5	17.9	13.6	26.3	1.9	100.0	931
40-44	15.3	1.5	23.2	16.6	8.8	34.6	2.1	100.0	734
45-49	17.5	2.3	19.6	14.8	10.2	35.5	2.4	100.0	570
Total	22.2	3.3	30.1	18.1	9.7	16.6	1.3	100.0	5,548

When the Jordan findings were compared with those of the two Arab countries in which a DHS survey had been conducted during the prior three years (Egypt and Morocco), it was found that parity at first use of contraception in Jordan was lower than in Egypt (El-Zanaty et al., 1996), but higher than in Morocco (Azelmat et al., 1996).

4.5 Knowledge of the Fertile Period

A basic knowledge of reproductive physiology provides a useful background for the successful practice of coitus-dependent methods (such as withdrawal, condom, or barrier methods), and even more so for the practice of periodic abstinence, or the *safe-period method*. As noted earlier, periodic abstinence has been used by 25 percent of currently married women at some time, and it is currently being used by 5 percent of recently surveyed women. Since the failure rate for using the safe period method is high, it is important to find out if women who are practicing the method know when during the ovulatory cycle they should avoid having sexual intercourse.

Table 4.9 presents the distribution of ever-married women who are currently using periodic abstinence, categorized by the time during the ovulatory cycle when they think a woman is most likely to get pregnant (perceived fertile period). To obtain these data, the respondents were asked when during the monthly cycle a woman has the greatest chance of becoming pregnant. The results indicate that the

ovulatory cycle is well known to ever-married women, as well as to women who have used the safe period method. Two-thirds of ever-married women can correctly identify the safe period. Among women using periodic abstinence, 87 percent answered correctly, while 11 percent gave the response "after the period ended."

Despite the relatively large proportion of women who can correctly identify the fertile period, it should be noted that one-third of ever-married women said they did not know the fertile period or gave the wrong answer. Since periodic abstinence is being used by a substantial number of women, family planning workers need to provide more information on the physiology of reproduction, with emphasis on the ovulatory cycle.

Table 4.9 Knowledge of fertile period

Percent distribution of all women and of women who have ever used periodic abstinence by knowledge of the fertile period during the ovulatory cycle, Jordan 1997

Perceived fertile period	Ever users of periodic abstinence	Calendar/ rhythm	All women
During period	*	*	*
After period ends	10.9	10.6	19.8
Middle of the cycle	86.8	86.9	66.3
Before period begins	1.4	1.5	1.6
At any time	0.9	1.0	2.6
Don't know	0.0	0.0	9.5
Total	100.0	100.0	100.0
Number[1]	263	240	5,548

Note: An asterisk indicates that the figure is based on less than 25 unweighted cases, and has been suppressed.
[1] Includes 7 women who use the sympto-thermal method.

4.6 Contraceptive Effect of Breastfeeding

Knowledge of the effect of breastfeeding on the risk of pregnancy is important for postpartum contraceptive programs that promote the use of the lactational amenorrheic method (LAM). The effective use of breastfeeding as a contraceptive method depends on a number of criteria: that the woman be postpartum amenorrheic (menstruation has not returned since the last birth); that she be exclusively or almost exclusively breastfeeding; and that less than six months have passed since the birth. To satisfy all the requirements for use of LAM, a woman should also know that if any of the preceding criteria no longer hold, she is at an increased risk of pregnancy and should no longer rely on breastfeeding for contraception.

Table 4.10 shows that almost half of currently married women (45 percent) believe that breastfeeding decreases the risk of pregnancy; 24 percent of women believe that breastfeeding has no effect; and 28 percent of women say that it depends on how breastfeeding is practiced. Only 1 percent of women believe that breastfeeding increases the risk of pregnancy. There are no significant differences by background characteristics in the perceived effect of breastfeeding on the risk of pregnancy.

Although almost 15 percent of currently married women have at some time relied on breastfeeding to avoid pregnancy, less than 3 percent were using breastfeeding as a contraceptive method at the time of the survey,[4] and less than 2 percent meet the LAM criteria.

[4]The slight discrepancy between data in this section and data in sections 4.2 and 4.3 is due to the fact that data on contraceptive effect of breastfeeding come from questions 440-441, and data on ever use and current use come from questions 403 and 408 (see questionnaire in Appendix D). No adjustment was made to the data to make these figures consistent.

Table 4.10 Perceived contraceptive effect of breastfeeding

Percent distribution of currently married women by perceived risk of pregnancy associated with breastfeeding and percentage of currently married women who previously relied and who currently rely on breastfeeding to avoid pregnancy and percentage who meet lactational amenorrheic method (LAM) criteria, according to selected background characteristics, Jordan 1997

Background characteristic	Perceived risk of pregnancy associated with breastfeeding						Reliance on breastfeeding to avoid pregnancy			
	Un-changed	In-creased	De-creased	Depends	Don't know/ Missing	Total	Previ-ously	Cur-rently	Meet LAM criteria[1]	Number of women
Age										
15-19	19.0	3.0	45.9	19.5	12.7	100.0	3.4	1.4	2.3	203
20-24	21.5	2.0	46.2	27.5	2.8	100.0	9.9	3.9	2.2	777
25-29	22.1	0.7	48.4	27.0	1.9	100.0	14.7	4.1	3.2	1,168
30-34	24.3	1.1	45.3	28.0	1.3	100.0	17.7	3.2	0.9	1,099
35-39	25.9	1.6	43.7	27.3	1.5	100.0	16.3	2.2	0.6	880
40-44	25.4	1.2	39.8	30.3	3.2	100.0	15.3	0.8	0.6	690
45-49	25.3	1.3	43.1	27.8	2.6	100.0	17.8	0.7	0.1	520
Residence										
Urban	24.6	1.4	44.3	27.4	2.2	100.0	14.5	2.4	1.3	4,469
Rural	19.2	0.9	48.0	28.1	3.8	100.0	16.4	4.5	2.4	868
Region										
North	18.7	0.7	48.3	29.6	2.6	100.0	18.4	3.9	1.7	1,428
Central	25.7	1.6	44.0	26.4	2.3	100.0	13.4	2.2	1.3	3,582
South	23.3	1.1	41.1	30.8	3.7	100.0	14.3	3.3	2.3	327
Educational level attended										
No education	25.2	1.1	39.9	28.9	4.8	100.0	19.4	3.0	1.0	467
Primary	22.7	1.6	44.5	27.3	3.8	100.0	15.3	1.4	1.1	804
Secondary	23.6	1.6	45.7	26.9	2.3	100.0	14.1	2.9	1.7	2,866
Higher	24.0	0.7	45.5	28.6	1.2	100.0	14.5	3.2	1.5	1,200
Total	23.7	1.3	44.9	27.5	2.5	100.0	14.8	2.7	1.5	5,337

[1] Includes women who are breastfeeding a child under 6 months of age, are still postpartum amenorrheic, and are not feeding the child anything but breast milk and plain water.

4.7 Timing of Sterilization

Although current use of female sterilization decreased between 1990 and 1997, it still represents more than 11 percent among users of modern methods; therefore, the age at which the operation takes place is of particular interest to family planning officials (Table 4.11). Overall, women's age at sterilization remained about the same in Jordan between 1990 and 1997; the median age for women under age 40 is age 35.[5] Women who were sterilized when they were less than 30 years of age are more likely to have had the operation performed in the distant past; older women (age 40 and over) tend to have had the operation more recently.

[5] The median is calculated for women under 40 years of age in order to minimize problems of censoring.

Table 4.11 Timing of sterilization

Percent distribution of sterilized women by age at the time of sterilization, according to the number of years since the operation, Jordan 1997

Years since operation	Age at time of sterilization						Total	Number of women	Median age[1]
	<25	25-29	30-34	35-39	40-44	45-49			
<2	2.1	9.7	27.4	34.2	23.0	3.6	100.0	61	34.8
2-3	0.0	5.7	26.5	40.5	24.5	2.8	100.0	45	35.7
4-5	(0.0)	(8.0)	(16.3)	(53.9)	(20.3)	(1.4)	100.0	30	36.9
6-7	(0.0)	(6.6)	(24.4)	(44.6)	(24.4)	(0.0)	100.0	29	35.4
8-9	(2.3)	(11.2)	(25.0)	(57.3)	(4.1)	(0.0)	100.0	27	35.8
10+	(3.1)	(20.3)	(47.4)	(29.1)	(0.0)	(0.0)	100.0	40	a
Total	1.4	10.4	28.7	41.0	16.9	1.7	100.0	231	35.0

Note: Figures in parentheses are based on 25-49 unweighted cases
[1] Median age was calculated only for women less than 40 years of age to avoid problems of censoring
[a] Not calculated due to censoring

4.8 Source of Supply for Modern Methods

In addition to information about the level of contraceptive use, program officials need to know where users obtain their methods. As in the 1990 JPFHS, the 1997 survey included a question for current users of modern methods regarding the source of their method. Family planning clinics, private doctors, and pharmacies are the major private sources of supply for modern contraceptive methods (Table 4.12 and Figure 4.4). Together, those sources serve almost three-fourths of current users (72 percent), almost the same level as in 1990.

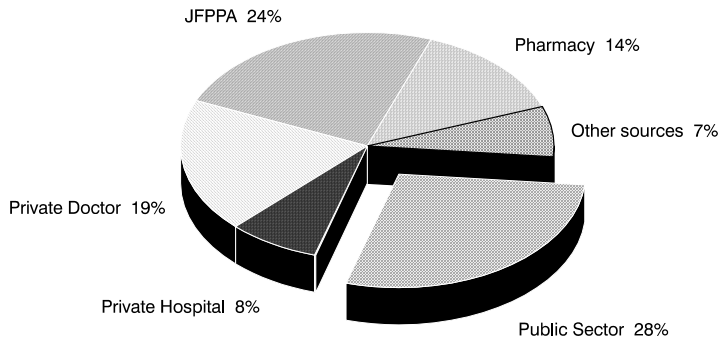
Table 4.12 Source of supply for modern contraceptive methods

Percent distribution of current users of modern contraceptive methods by most recent source of supply, according to specific methods, Jordan 1997

Source of supply	Pill	IUD	Injec-tion	Vaginal methods	Con-dom	Female sterili-zation	Total
Public	21.2	24.3	(29.5)	(6.3)	29.1	59.2	28.1
Government hospital	0.7	2.7	(7.0)	(0.0)	1.0	40.7	6.9
Government health center	8.7	7.1	(2.8)	(3.9)	10.9	0.0	6.7
Government MCH	10.9	12.9	(9.3)	(2.4)	17.2	0.0	11.1
Univerisity hospital, clinic	0.4	0.3	(3.3)	(0.0)	0.0	1.4	0.5
Royal medical services	0.5	1.3	(7.1)	(0.0)	0.0	17.1	3.0
Medical private	78.4	75.6	(70.5)	(3.7)	70.9	40.8	71.7
Private hospital	2.2	5.5	(0.0)	(0.0)	0.0	34.8	7.7
Private doctor	12.1	26.2	(20.0)	(20.4)	0.0	0.0	18.8
Pharmacy	51.9	1.1	(16.7)	(58.6)	51.5	0.0	14.1
JFPPA	5.4	35.7	(31.1)	(10.7)	7.5	0.0	24.0
UN HCR	5.6	3.3	(0.0)	(3.9)	11.2	0.0	3.8
Other nongovernment org.	0.4	2.5	(2.7)	(0.0)	0.0	0.0	1.7
Other private	0.8	1.4	(0.0)	(0.0)	0.8	5.9	1.7
Other private	0.4	0.1	(0.0)	(0.0)	0.0	0.0	0.1
Friends/relatives	0.4	0.1	(0.0)	(0.0)	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women[1]	349	1,235	39	28	130	231	2,019

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes 5 women who are using implants

Figure 4.4
Sources of Family Planning Methods
Current Users of Modern Methods



JFPPA = Jordan Family Planning and Protection Association

JPFHS 1997

The sources relied on by users vary by method used. Pharmacies are the primary source for users of methods that require resupply, including the pill (52 percent), vaginal methods (59 percent), and condoms (52 percent). Family planning clinics (JFPPA) are the primary source for IUDs (36 percent) and injections (31 percent). In the public sector, government hospitals are the major source for most female sterilizations (41 percent).

4.9 Contraceptive Discontinuation

A key concern of family planning officials is the extent to which women discontinue use of contraceptive methods, and their reasons for doing so. Life-table discontinuation rates based on information collected in the calendar are presented in Table 4.13. Discontinuation rates were calculated for each method based on use during the first 12 months after beginning the method. The reasons for discontinuation were examined, then classified into three main categories: method failure, desire to become pregnant, and other reasons (including problems related to the use of a particular method, husband's disapproval, and absence of need to use a family planning method). Fourteen percent of users stopped using before the end of the first year because the method failed; 8 percent said they stopped because they wanted to become pregnant; and 11 percent stopped because of side effects and health concerns.[6] These rates are similar to those found in the 1990 JPFHS.

[6] Discontinuation rates presented in Table 4.13 refer to *all episodes* of contraceptive use in the period of time covered by the calendar, not just *the episodes that began* during the period. They are cumulative one-year discontinuation rates that represent the proportion of users discontinuing a method by 12 months after the start of use. The rates are calculated by dividing the number of discontinuations for each reason at each duration of use in single months by the number of months of exposure at that duration. The single-month rates are then cumulated to produce a one-year rate. The reasons for discontinuation are treated as competing risks (net rates).

Table 4.13 First-year discontinuation rates for contraception

First-year contraceptive discontinuation rates due to method failure, desire for pregnancy, health reasons, or other reasons, according to specific method, Jordan 1997

Contraceptive method	Reason for discontinuing contraception				Total
	Method failure	Desire to become pregnant	Side effects/ health reasons	All other reasons	
Pill	9.6	7.6	31.5	19.2	67.9
IUD	2.2	3.5	9.2	2.7	17.7
Diaphragm/Foam/Jelly	25.0	3.2	26.6	27.6	82.4
Condom	21.0	6.7	5.3	34.5	67.6
Periodic abstinence	30.3	13.1	0.9	18.1	62.4
Withdrawal	23.1	12.0	0.9	20.2	56.3
Prolonged breastfeeding	17.1	6.8	1.3	26.2	51.3
Total	14.2	7.6	10.7	16.3	48.9

Note: Figures are based on life-table calculations.

First-year discontinuation rates due to method failure are highest for periodic abstinence and vaginal methods (Figure 4.5). Three of ten women who used periodic abstinence and 25 percent of women who used a vaginal method (diaphragm, foam, or jelly) became pregnant while using the method. Discontinuation rates due to method failure are also high for withdrawal (23 percent) and condoms (21 percent).

Figure 4.5
Contraceptive Discontinuation Rates
by Reason and Method

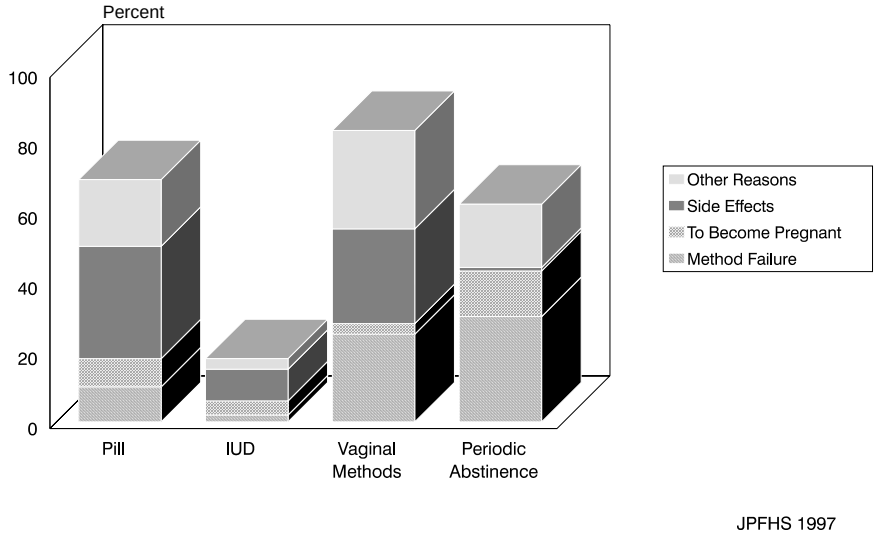


Table 4.14 provides information about women's reasons for discontinuing contraception. The table includes all discontinuations in the five years before the survey, regardless of whether they occurred during the first 12 months of use or later. The reason given most frequently for discontinuation was method failure (27 percent), followed by desire to get pregnant (23 percent), and side effects or health concerns (23 percent). The other reasons women cited for discontinuation were the desire to have a more effective method (9 percent) and infrequent sexual relations or menopause (5 percent). Opposition to family planning by the husband represents less than 4 percent. Discontinuation due to method failure is particularly high for traditional methods: periodic abstinence (50 percent) and withdrawal (39 percent). Among modern methods, method failure was the main reason given for discontinuation of vaginal methods and condoms (33 percent each), both coitus-dependent methods. Side effects and health concerns were especially evident among women who had been relying on injectables (52 percent), the pill (43 percent), and the IUD (40 percent).

Table 4.14 Reasons for discontinuation

Percent distribution of discontinuations of contraceptive methods in the last five years by main reason for discontinuation, according to specific method, Jordan 1997

Reason for discontinuation	Pill	IUD	Injec-tion	Diaphragm/ Foam/ Jelly	Condom	Periodic absti-nence	With-drawal	Absti-nence	Total
Became pregnant	15.9	10.5	(2.8)	33.1	32.8	50.2	39.3	32.4	26.6
To become pregnant	16.2	33.4	(2.3)	5.6	16.8	24.4	27.3	16.9	23.2
Husband disapproved	1.2	0.7	(0.0)	6.1	21.2	1.4	9.8	0.0	3.8
Side effects	31.6	27.9	(37.3)	21.0	6.1	0.2	1.6	0.5	15.9
Health concerns	11.1	12.4	(15.1)	8.3	0.5	0.9	1.4	2.9	6.7
Access/Availability	0.1	0.0	(0.0)	0.9	0.0	0.3	0.0	0.0	0.1
More effective method	3.7	1.4	(10.1)	12.2	9.6	15.0	12.8	21.8	8.9
Inconvenient to use	3.8	3.2	(12.0)	7.2	4.8	0.8	0.8	0.3	2.5
Infrequent sex	9.3	2.7	(5.2)	3.7	3.8	3.5	2.6	0.0	4.2
Cost	0.0	0.0	(0.0)	0.0	1.1	0.0	0.0	0.0	0.1
Fatalistic	0.2	0.0	(2.8)	0.0	0.0	0.0	0.1	0.0	0.1
Menopause	0.7	0.1	(1.5)	0.0	0.0	0.3	0.6	0.2	0.4
Marital dissolution	0.2	0.2	(0.0)	0.0	0.0	0.1	0.0	0.1	0.1
Other	2.8	4.0	(11.0)	0.9	3.0	1.8	2.4	15.7	4.3
Period returned	0.2	0.0	(0.0)	0.0	0.0	0.4	0.3	9.0	1.1
Rest	3.1	3.4	(0.0)	1.1	0.3	0.7	0.8	0.2	1.9
Don't know	0.0	0.1	(0.0)	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	1,330	1,327	45	118	331	783	952	575	5,477

Note: Includes 18 women who had used prolonged breastfeeding. Figures in parentheses are based on 25-49 unweighted cases.

4.10 Future Use of Family Planning

To obtain information about potential demand for family planning services, all currently married women who were not using contraception at the time of the survey were asked about their intention to use family planning in the future. Those who responded in the affirmative were also asked which method they would prefer to use and whether they intended to use that method during the next 12 months.

Table 4.15 presents the distribution of currently married women who were not using contraception, by intention to use in the future, according to number of living children. Nearly two-thirds of nonusers (65 percent) said that they intend to use family planning in the future—most of them within the next 12 months

Table 4.15 Future use of contraception

Percent distribution of currently married women who are not currently using any contraceptive method by intention to use in the future, according to number of living children, Jordan 1997

Future intentions	Number of living children[1] 0	1	2	3	4+	Total
Intend to use in next 12 months	14.0	44.2	63.3	61.0	50.4	48.1
Intend to use later	41.4	28.7	18.5	13.6	6.9	17.3
Unsure as to timing	4.1	4.2	1.9	1.9	1.5	2.4
Unsure as to intention	10.2	4.2	1.5	3.2	2.9	3.9
Do not intend to use	30.3	18.7	14.6	19.9	38.3	28.3
Missing	0.0	0.0	0.2	0.4	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	326	386	381	336	1,101	2,531

[1] Includes current pregnancy

(48 percent). Only 28 percent of nonusers said they do not intend to use in the future. In the 1990 JPFHS, the proportion of women who did not plan to do anything to avoid a pregnancy in the future was 43 percent.

Intention to use contraception in the future appears not to have a strong positive association with the number of living children a woman has; women with two children are more likely to want to use contraception in the future than those with fewer or more children. Specifically, 82 percent of women with two children said they intend to use a method of family planning, compared with 55 percent of childless women and 57 percent of women with four or more children.

The reasons women choose not to use family planning are of particular interest to family planning program officials. Table 4.16 gives the distribution of women who are not using contraception by their reason for not using. The primary reason given is infecundity or menopause; 32 percent of women say it is difficult for them to get pregnant. The next most common reason for not using is the desire to get pregnant; 25 percent of nonusers say they are not using because they want to have children. Other reasons mentioned are health concerns or fear of side effects (14 percent), and infrequent sexual relations or husband's sickness (12 percent). Another 8 percent mention husband's or respondent's disapproval of contraception. In the 1990 JPFHS, 13 percent of nonusers who did not intend to use contraception cited factors related to religious concerns or fatalism such as "God's will." In the 1997 JPFHS, only 3 percent of women mentioned religion or fatalism as reasons for nonuse.

Table 4.16 Reasons for not using contraception

Percent distribution of currently married women who are not using a contraceptive method and who do not intend to use in the future, by main reason for not intending to use, according to age, Jordan 1997

Reason for not using contraception	Age 15-29	30-49	Total
Formerly married	0.0	0.2	0.1
Infrequent sex	1.1	6.2	5.5
Menopausal, hysterectomy	0.0	13.9	12.0
Subfecund, infecund	9.3	21.9	20.2
Wants more children	50.6	20.7	24.7
Husband sick, subfecund	1.0	6.8	6.0
Respondent opposed	5.0	2.4	2.8
Husband opposed	7.8	4.8	5.2
Religious prohibition	1.6	0.9	1.0
Rumors	1.0	0.0	0.1
Knows no source	0.0	0.2	0.2
Health concerns	4.8	6.6	6.3
Fear side effects	13.4	7.1	8.0
Inconvenient to use	0.4	0.4	0.4
Interfere with body	0.0	0.4	0.3
God's will	0.4	2.5	2.2
Other	3.6	4.9	4.7
Don't know	0.0	0.2	0.1
Total	100.0	100.0	100.0
Number	97	618	716

Women under age 30 are more likely than older women to mention the desire to have children, while infecundity and menopause are more often reported by older women. Husband's or respondent's disapproval of contraception is mentioned more often by younger women than by women age 30 and over. Fear of side effects is also cited more often by younger women than older women.

An important indicator of the changing demand for family planning is the extent to which nonusers of contraception plan to use contraception in the future. Married women who were not using contraception at the time of the survey were asked if they intended to use a family planning method in the future. The results are shown in Table 4.17. The majority of women (76 percent) say they want to use a modern method of contraception; slightly less than 14 percent want to use a traditional method. Half of the women who intend to use contraception say they want to use the IUD—the same proportion as in 1990. After the IUD, the most popular modern methods are the pill (18 percent) and female sterilization (4 percent). The levels for 1997 are similar to those in 1990, except for female sterilization. There were more women in the 1990 JPFHS than in the 1997 JPFHS who said they intended to use female sterilization in the future (7 percent compared with 4 percent).

Table 4.17 Preferred method of contraception for future use

Percent distribution of currently married women who are not using a contraceptive method but who intend to use in the future by preferred method, according to timing of intended use, Jordan 1997

Preferred method of contraception	Timing of intended use: In next 12 months	Timing of intended use: After 12 months	Timing of intended use: Unsure when	All women
Pill	17.1	19.4	15.3	17.6
IUD	48.3	48.7	38.7	48.1
Injection	4.8	3.0	3.9	4.3
Diaphragm/Foam/Jelly	0.4	0.3	0.0	0.4
Condom	1.5	1.0	0.0	1.3
Female sterilization	5.0	1.8	0.0	4.0
Male sterilization	0.2	0.0	0.0	0.1
Implants	0.6	1.2	0.0	0.7
Periodic abstinence	4.4	7.3	5.0	5.2
Withdrawal	7.0	4.6	7.5	6.4
Prolonged breastfeeding	1.8	1.8	1.8	1.8
Depends on the body	1.1	1.2	2.1	1.1
Depends on doctor	2.0	1.0	4.6	1.8
Missing	5.7	8.7	21.1	7.0
Total	100.0	100.0	100.0	100.0
Number of women	1,218	438	60	1,715

Method preferences are almost identical for women who intend to use contraception during the next 12 months as for those who intend to use after 12 months.

Some programmatic implications can be drawn from the data in Table 4.17. Because of the popularity of the IUD, the pill, and female sterilization, several issues need to be considered in anticipation of women's carrying out their intentions to use those methods. First, the supply of pills must be adequate to meet the needs of women who want to use that method; second, for women who want to use the IUD or female sterilization, trained personnel must be available to provide the services.

4.11 Exposure to Family Planning Messages

Radio and television are the major sources of information about family planning in the media. To assess the effectiveness of those media for disseminating family planning information, all ever-married women were asked if they had heard or seen messages about family planning on the radio or television during the 6 months prior to the survey. The results indicate that, overall, 92 percent of ever-married women are exposed to family planning messages on radio and television, the major electronic media (Table 4.18). Television is by far the more prominent of the two. Differentials in access to family planning messages by age, place of residence, and region are generally minimal. There is somewhat greater variability by educational level: 79 percent of women with no education were reached through electronic media in the previous month, compared with 93 percent of women with secondary education.

Table 4.18 Exposure to family planning messages on radio or television

Percent distribution of women by whether they have heard a message about family planning on radio or television in the few months prior to the interview, according to selected background characteristics, Jordan 1997

Background characteristic	Heard a message about family planning on radio or television: Radio only	Tele-vision only	Both radio and TV	Heard message on neither	Total	Number of women
Age group						
15-19	2.5	51.0	36.2	10.3	100.0	207
20-24	0.9	37.8	53.1	8.3	100.0	795
25-29	1.5	38.8	54.7	5.0	100.0	1,185
30-34	1.4	36.4	56.3	5.9	100.0	1,126
35-39	2.4	33.8	54.5	9.2	100.0	931
40-44	1.9	30.0	56.7	11.4	100.0	734
45-49	1.9	26.9	56.0	15.3	100.0	570
Residence						
Urban	1.6	35.7	55.0	7.7	100.0	4,636
Rural	2.0	33.9	51.8	12.2	100.0	912
Region						
North	1.6	43.3	46.5	8.6	100.0	1,479
Central	1.7	32.4	57.5	8.3	100.0	3,729
South	1.5	33.9	55.3	9.3	100.0	340
Educational level attended						
No education	2.9	31.9	44.4	20.8	100.0	504
Primary	2.0	35.2	51.1	11.6	100.0	850
Secondary	1.5	35.6	56.0	6.9	100.0	2,957
Higher	1.2	36.5	57.3	5.0	100.0	1,237
Total	1.7	35.4	54.5	8.5	100.0	5,548

4.12 Acceptability of Media Messages on Family Planning

To determine the level of acceptability of disseminating family planning information through the media, all ever-married women were asked if they thought it was acceptable for family planning information to be provided on the radio or television. The results indicate that almost all respondents (96 percent) consider it acceptable for mass media to carry programs on family planning issues (Table 4.19). In 1990, the proportion was 84 percent.

Acceptance of the dissemination of family planning messages is uniformly high among all subgroups; it varies from 91 percent among women with no education to 97 percent among women with secondary education.

Table 4.19 Acceptability of media messages on family planning

Percent distribution of women by acceptability of messages about family planning on the radio and television, by selected background characteristics, Jordan 1997

Background characteristic	Acceptability of family planning messages on radio or television: Acceptable	Not acceptable	Unsure	Total	Number of women
Age					
15-19	93.3	6.2	0.5	100.0	207
20-24	96.7	2.9	0.4	100.0	795
25-29	96.3	3.5	0.2	100.0	1,185
30-34	97.2	2.5	0.2	100.0	1,126
35-39	95.8	3.9	0.3	100.0	931
40-44	94.2	5.5	0.3	100.0	734
45-49	92.3	6.6	1.1	100.0	570
Residence					
Urban	96.0	3.7	0.3	100.0	4,636
Rural	93.8	5.2	1.0	100.0	912
Region					
North	94.0	5.4	0.7	100.0	1,479
Central	96.4	3.4	0.2	100.0	3,729
South	95.2	3.8	1.0	100.0	340
Educational level attended					
No education	91.3	7.3	1.4	100.0	504
Primary	94.1	5.2	0.7	100.0	850
Secondary	97.1	2.7	0.2	100.0	2,957
Higher	95.1	4.7	0.2	100.0	1,237
Total	95.7	4.0	0.4	100.0	5,548

4.13 Exposure to Family Planning Messages in Print Media

Female respondents were asked if they had been exposed to a family planning message through a newspaper or magazine article, a poster, or a leaflet during the 6 months prior to the interview. The results in Table 4.20 show that 65 percent of women reported that they had been exposed to family planning information via print media. The most commonly reported source of a family planning message in the print media is posters (47 percent), followed by newspapers/magazines (41 percent), and leaflets (33 percent).

Younger women are more likely to have been exposed to family planning messages through print media than older women; for example, 71 percent of women age 20-24 have been reached through print, compared with 47 percent of women age 45-49. The level of exposure to family planning messages through print varies between urban and rural areas (68 percent vs. 54 percent). Women living in the Central region are more likely to have seen a family planning message in print than women in the other two regions. The proportion of women exposed to messages in any print media increases directly with educational level—from 21 percent among women with no formal education to 82 percent among women with higher education.

Table 4.20 Family planning messages in print

Percentage of women who received a message about family planning through the print media in the few months prior to the interview, according to selected background characteristics, Jordan 1997

Background characteristic	Type of print media containing family planning message				Number of women
	Leaflet/ brochure	Poster	News-paper/ magazine	Any print media	
Age group					
15-19	25.3	48.2	32.0	65.4	207
20-24	38.2	54.3	43.9	70.9	795
25-29	35.4	51.7	45.4	71.3	1,185
30-34	38.2	52.2	45.3	72.8	1,126
35-39	34.1	45.3	40.8	64.5	931
40-44	24.1	39.6	37.1	54.0	734
45-49	19.2	30.5	31.3	47.2	570
Residence					
Urban	34.3	48.3	44.3	67.6	4,636
Rural	24.1	41.4	26.5	54.3	912
Region					
North	26.0	45.8	31.8	60.0	1,479
Central	35.5	48.4	45.6	68.4	3,729
South	30.3	39.9	36.0	56.1	340
Educational level attended					
No education	3.6	18.5	2.3	20.9	504
Primary	19.2	35.7	21.8	46.9	850
Secondary	36.1	51.0	45.7	71.4	2,957
Higher	45.2	57.7	60.3	82.0	1,237
Total	32.6	47.2	41.3	65.4	5,548

4.14 Attitudes toward Family Planning

An indication of the acceptability of family planning is the extent to which couples discuss the topic. Although husband-wife discussion of family planning is not a precondition for adoption of a method, evidence of such discussion is an indication of interest in the subject on the part of the couple, which is presumed to precede use. Table 4.21 indicates that three out of ten women who know a contraceptive method have never talked about family planning with their husband. Twenty-six percent of women have

Table 4.21 Discussion of family planning by couples

Percent distribution of currently married non-sterilized women who know a contraceptive method by the number of times family planning was discussed with husband in the year preceding the survey, according to current age, Jordan 1997

Current age	Number of times family planning discussed with husband				Total	Number of women
	Never	Once or twice	More often	Not applicable Missing/		
15-19	29.2	28.8	42.1	0.0	100.0	203
20-24	19.9	26.6	53.1	0.4	100.0	777
25-29	18.9	27.2	53.8	0.1	100.0	1,163
30-34	22.5	29.6	47.5	0.3	100.0	1,075
35-39	31.2	25.7	42.7	0.3	100.0	824
40-44	45.0	23.0	31.6	0.4	100.0	623
45-49	65.4	14.7	18.0	1.9	100.0	447
Total	29.5	25.8	44.3	0.4	100.0	5,111

talked with their husband about the subject once or twice during the 12 months before the survey, and 44 percent of women reported having had at least three conversations with their husband during the period. As expected, husband-wife discussion of family planning is more prevalent among younger women (age 20-34) than older women.

To obtain more direct information about the acceptability of family planning, respondents were asked if they approved or disapproved of couples using a method to avoid pregnancy. The data presented in Table 4.22 indicate that, overall, 95 percent of currently married women who know a contraceptive method approve of family planning. More than four of five women say that their husband also approves of family planning; 11 percent of women say that they approve of family planning but their husband does not. Approval of family planning by married women varies little by age, except that women age 45-49 are less likely to approve than the younger cohorts. Married women who live in rural areas and those who have no formal education are also less likely than other women to approve of the use of family planning.

Table 4.22 Wives' perceptions of their husbands' attitudes toward family planning

Percent distribution of currently married non-sterilized women who know a contraceptive method by wife's attitude toward family planning and wife's perception of her husband's attitude toward family planning, according to selected background characteristics, Jordan 1997

Background characteristic	Wife approves								
	Both approve	Husband disap-proves	Husband's attitude unknown	Wife unsure	Missing	Total	Wife approves	Husband approves	Number of women
Age									
15-19	74.9	8.0	5.7	3.4	8.0	100.0	88.6	74.9	203
20-24	82.3	11.0	2.9	0.5	3.3	100.0	96.2	82.3	777
25-29	85.6	8.6	2.2	0.2	3.3	100.0	96.5	85.6	1,163
30-34	84.0	10.5	1.8	0.4	3.2	100.0	96.3	84.0	1,075
35-39	79.9	13.7	1.9	0.9	3.7	100.0	95.4	79.9	824
40-44	76.6	15.0	2.9	0.9	4.5	100.0	94.5	76.6	623
45-49	71.4	12.4	4.7	1.9	9.6	100.0	88.5	71.4	447
Residence									
Urban	81.7	11.2	2.4	0.6	4.2	100.0	95.2	81.7	4,281
Rural	77.9	11.9	3.8	1.6	4.7	100.0	93.6	77.9	830
Region									
North	79.4	11.7	3.2	1.7	4.0	100.0	94.3	79.4	1,363
Central	81.9	10.9	2.4	0.4	4.2	100.0	95.3	81.9	3,439
South	79.1	13.0	1.8	0.6	5.5	100.0	93.9	79.1	310
Educational level attended									
No education	58.2	20.1	5.6	3.4	12.7	100.0	83.9	58.2	434
Primary	72.6	16.0	3.4	1.4	6.6	100.0	92.0	72.6	732
Secondary	83.3	10.9	2.3	0.4	3.1	100.0	96.5	83.3	2,765
Higher	89.6	6.0	1.8	0.2	2.4	100.0	97.4	89.6	1,181
Total	81.1	11.3	2.6	0.8	4.2	100.0	95.0	81.1	5,111

CHAPTER 5

NUPTIALITY AND EXPOSURE TO THE RISK OF PREGNANCY

This chapter addresses the principal factors, other than contraception, that affect a woman's risk of becoming pregnant: nuptiality, postpartum amenorrhea, and secondary infertility. The questionnaire used in the Jordan Population and Family Health Survey (JPFHS) differs from the DHS core questionnaire in that questions on recent sexual activity were not included, owing to the awkwardness in addressing such questions to women in the Jordanian cultural context. However, information on sexual activity was replaced with proxy questions pertaining to whether the respondent's husband lives in the same household and the amount of time he spent in the household during the month before the survey.

Information on nuptiality is of particular interest because marriage is a primary indicator of the exposure of women to the risk of pregnancy. Marriage patterns are important for an understanding of fertility. Early age at first marriage is associated with early childbearing and high fertility. In this survey and for all data collection in Jordan, the term *marriage* refers to a legal or formal union.

5.1 Current Marital Status

Table 5.1 compares data on ever-married women from the 1997 JPFHS with the 1976 Jordan Fertility Survey (JFS), the 1983 Jordan Fertility and Family Health Survey (JFFHS), and the 1990 Jordan Population and Family Health Survey (JPFHS). During the 21 years between 1976 and 1997, the percentage of women ever married decreased from 66 to 55 percent, a drop of 17 percent. However, the decline appears to have occurred during the first 7 years, since the percentages remained nearly unchanged after 1983.

Table 5.1 Ever-married women according to selected surveys

Percentage of women 15-49 who have ever married by age, Jordan, 1976, 1983, 1990, and 1997

Age group	JFS 1976	JFFHS 1983	JPFHS 1990	JPFHS 1997
15-19	19.5	9.4	10.6	8.2
20-24	64.1	42.0	45.2	38.8
25-29	87.4	76.3	73.7	66.2
30-34	95.3	90.1	89.1	80.7
35-39	92.4	94.9	94.6	89.9
40-44	98.0	96.8	97.3	94.4
45-49	98.3	97.1	98.0	96.0
Total	65.7	56.0	56.2	54.6

In Jordan, marriage is almost universal. In 1997, only 4 percent of women have not married by the end of their reproductive years (see Figure 5.1). However, the percentage never married has increased over the years. For example, in 1976, less than 5 percent of women age 30-34 had never married. That increased to about 10 percent between 1983 and 1990, and almost doubled in 1997, rising to 19 percent. The pattern is similar for women in the younger age groups. Nevertheless, much of the decline in the age at marriage took place between 1976 and 1983.

Figure 5.1
Never-married Women 15-39 by Age
Jordan, 1976-1997

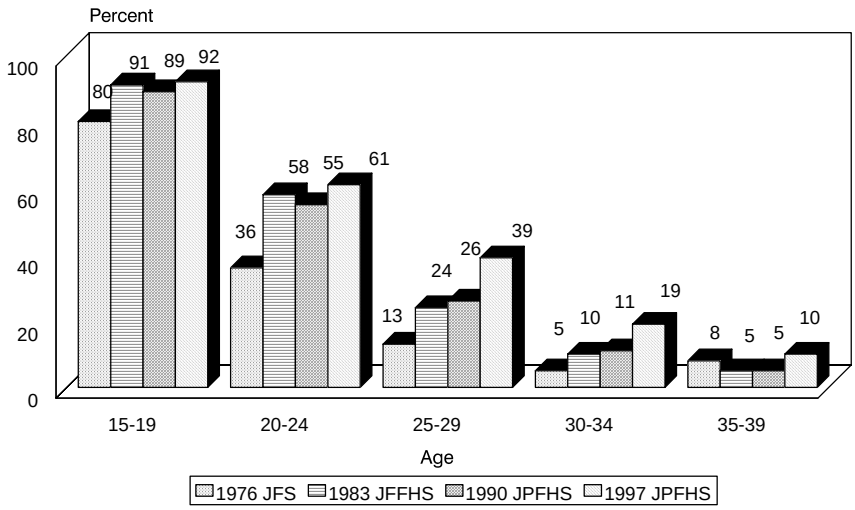


Table 5.2 presents the distribution of women by current marital status. Of the 10,165 women age 15-49 listed in the household schedule, 45 percent had never married, 53 percent were currently married, and the remaining 2 percent were either divorced or widowed.

Table 5.2 Current marital status

Percent distribution of women by current marital status, according to age, Jordan 1997

Age	Marital status				Total	Number of women
	Never married	Married	Divorced	Widowed		
15-19	91.8	8.0	0.2	0.0	100.0	2,523
20-24	61.2	37.9	0.7	0.2	100.0	2,050
25-29	33.8	65.3	0.6	0.3	100.0	1,789
30-34	19.3	78.8	1.2	0.7	100.0	1,395
35-39	10.2	84.9	2.2	2.8	100.0	1,036
40-44	5.7	88.7	1.4	4.3	100.0	778
45-49	3.9	87.7	1.3	7.0	100.0	593
Total	45.4	52.5	0.9	1.2	100.0	10,165

The proportion currently married increases steadily from 8 percent among women age 15-19 to 89 percent among those age 40-44, then declines slightly to 88 percent for women in the oldest age group. As expected, the proportion widowed increases with age, reaching 7 percent for women age 45-49. Less than 1 percent of women in Jordan are divorced.

5.2 Polygyny

Marital unions are predominantly of two types—those that are monogamous and those that are polygynous. The distinction has social significance and possible implications for fertility, although the relationship between type of union and fertility is complex and not easily understood. The proportion of currently married women in Jordan in a polygynous union is shown in Table 5.3.

Table 5.3 Polygyny

Percentage of currently married women age 15-49 in a polygynous union, by age and selected background characteristics, Jordan 1997

Background characteristic	Current age							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Residence								
Urban	2.4	2.0	3.3	6.3	9.0	9.3	8.3	5.9
Rural	2.0	3.8	8.7	12.5	9.5	14.8	12.7	9.6
Region								
North	0.0	1.2	4.7	8.0	6.9	10.9	9.9	6.3
Central	3.2	2.6	3.9	7.0	10.1	9.9	8.5	6.6
South	4.3	4.2	5.3	7.2	7.1	8.3	12.2	6.8
Educational level attended								
No education	0.0	4.0	27.7	20.6	20.8	18.5	18.8	19.3
Primary	8.3	8.0	10.4	14.2	14.7	12.0	8.7	11.7
Secondary	1.4	2.1	4.1	7.1	7.7	6.9	1.7	4.8
Higher	0.0	0.9	0.5	2.3	3.2	5.3	3.8	2.2
Total	2.3	2.4	4.2	7.3	9.1	10.1	9.1	6.5

Overall, 7 percent of currently married women in Jordan are in a polygynous union. Older women are more likely to be in a polygynous union than younger women. The incidence of polygyny is also higher among women residing in rural areas. There is little difference in type of marital union by region.

There is a strong inverse relationship between polygyny and education. Among women with no education, the proportion of married women in a polygynous union is 19 percent. The percentage decreases to 12 percent among women with primary education and to 5 percent and 2 percent, respectively, among women with a secondary or higher education.

5.3 Age at First Marriage

In Jordan, almost all births occur within marriage; thus, age at first marriage is an important indicator of exposure to the risk of pregnancy and childbirth. The Jordan Family Rights Law of 1976 sets the minimum age at marriage at 18 years for males and at 16 years for females.

Table 5.4 shows the percentage of women who have ever married by specified ages and the median age at first marriage according to their age at the time of the survey. Comparing percentages across age groups, the data point to women's age at first marriage increasing. For example, among women age 20-24, 1 percent were married by age 15, 14 percent by age 18, and 27 percent by age 20. For women age 25-29, the percentages at each specific age are all higher than those for the younger women. Older women married at even younger ages, as demonstrated by the higher proportion of women married by each specific age.

The last column in Table 5.4 provides further indications of later marriage among younger women. Median age at first marriage has steadily increased during the last 25 years, from 19.4 years old among the cohort of women age 45-49 at the time of the survey to 23.1 years old among the cohort of women age 25-29 at the time of the survey. The trend toward later marriage is supported by data showing that the proportion of women who married by age 15 has declined from 8 percent among women age 45-49 to 1 percent among women age 15-19. Overall, among Jordanian women age 20-49, one in five was married by age 18 and one in two was married by age 22.

Table 5.4 Age at first marriage

Percentage of women who were first married by exact age 15, 18, 20, 22, and 25, and median age at first marriage, according to current age, Jordan 1997

Current age	Percentage of women who were first married by exact age: 15	18	20	22	25	Percentage who were never married	Number of women	Median age at first marriage
15-19	1.2	NA	NA	NA	NA	91.8	2523	a
20-24	0.9	13.5	26.5	NA	NA	61.2	2050	a
25-29	1.7	14.4	28.4	42.6	60.1	33.8	1789	23.1
30-34	2.1	20.1	35.0	49.6	67.3	19.3	1395	22.1
35-39	5.9	28.5	43.1	56.8	72.4	10.2	1036	20.9
40-44	9.0	35.0	53.0	67.5	83.3	5.7	778	19.7
45-49	7.7	36.0	55.0	71.9	82.6	3.9	593	19.4
20-49	3.4	20.9	35.7	48.6	61.5	30.1	7642	a
25-49	4.2	23.6	39.0	53.6	69.8	18.7	5592	21.5

NA = Not applicable
[a] Omitted because less than 50 percent of women in the age group have been married.

Although there are only minor differentials in median age at first marriage by residence and region, education plays an important role in determining women's age at marriage (Table 5.5). The improvement of educational opportunities, particularly for girls, has resulted in their staying in school longer and, subsequently, has raised their age at first marriage. Women who have more than secondary education tend to

marry almost 6 years later than those with no education or with only primary education.

Table 5.5 Median age at first marriage

Median age at first marriage among women age 25-49 years, by current age and selected background characteristics, Jordan 1997

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	23.2	22.3	21.3	19.9	19.7	21.7
Rural	22.5	20.7	18.9	18.3	18.5	20.3
Region						
North	22.6	22.3	21.4	19.2	18.8	21.4
Central	23.3	22.0	20.9	20.0	19.8	21.5
South	23.4	21.2	20.4	18.7	18.2	21.1
Educational level attended						
No education	a	22.4	18.2	18.3	18.3	18.9
Primary	21.0	18.9	18.6	18.0	18.6	18.8
Secondary	21.2	20.5	19.7	19.5	19.5	20.4
Higher	a	24.3	24.9	23.8	24.5	24.7
Total	23.1	22.1	20.9	19.7	19.4	21.5

Note: The medians for cohorts 15-19 and 20-24 could not be determined because less than 50 percent of the women in each cohort have been married.
[a] Omitted because less than 50 percent of the women in the age group were first married by age x.

5.4 Recent Sexual Activity

In the absence of effective contraception, the probability of becoming pregnant is related to the frequency of intercourse. Information on sexual activity can, therefore, be used to refine measures of exposure to pregnancy. However, because of the sensitivity of asking about the time of a woman's most recent sexual intercourse in the cultural context of Jordan, the 1997 JPFHS instead asked respondents about the amount of time their husbands had spent in the household during the 30 days before the interview. That information is presented in Table 5.6.

Overall, 78 percent of women stated that they were together with their husband during the entire 30 days. These women face the greatest risk of becoming pregnant. Seventeen percent of women spent some time apart from their husbands during the last 30 days and less than 5 percent were apart during the whole month.

Table 5.6 Presence of husband in the household

Percent distribution of currently married women by amount of time spent together with husband in the household during the last 30 days, according to selected background characteristics and contraceptive method used, Jordan 1997

Background characteristic/ contraceptive method	Amount of time spent with husband in past 30 days			Total	Number of women
	Together all the time	Apart some-time	Apart all the time		
Age					
15-19	78.4	19.1	2.6	100.0	203
20-24	70.9	25.8	3.4	100.0	777
25-29	73.4	22.8	3.8	100.0	1,168
30-34	78.5	16.8	4.7	100.0	1,099
35-39	85.0	10.1	4.9	100.0	880
40-44	81.2	12.6	6.1	100.0	690
45-49	84.3	10.8	4.9	100.0	520
Martial duration (years)					
0-4	74.0	22.8	3.2	100.0	1,246
5-9	73.4	22.4	4.1	100.0	1,201
10-14	78.0	17.0	5.1	100.0	938
15-19	83.2	12.1	4.7	100.0	737
20-24	83.7	10.6	5.7	100.0	585
25-29	85.3	9.2	5.5	100.0	478
30+	85.8	9.1	5.1	100.0	151
Residence					
Urban	80.5	14.7	4.8	100.0	4,469
Rural	66.9	30.4	2.8	100.0	868
Region					
North	66.5	29.1	4.4	100.0	1,428
Central	83.7	11.6	4.7	100.0	3,582
South	70.1	27.7	2.2	100.0	327
Educational level attended					
No education	79.2	16.0	4.8	100.0	467
Primary	80.0	14.6	5.4	100.0	804
Secondary	77.9	18.0	4.1	100.0	2,866
Higher	77.5	17.9	4.6	100.0	1,200
Contraceptive method					
No method	73.7	19.0	7.2	100.0	2,531
Pill	81.6	17.5	1.0	100.0	349
IUD	83.1	14.7	2.2	100.0	1,235
Sterilization	88.0	7.6	4.3	100.0	224
Periodic abstinence	84.0	14.6	1.4	100.0	263
Other	79.1	19.2	1.7	100.0	735
Total	78.3	17.3	4.5	100.0	5,337

In general, older women, women who have been married for a longer period of time, urban women, and women residing in the Central region spent more time with their husband in the 30 days preceding the interview than other women. Time spent with the husband varies little by education. However, users of contraception were more likely than nonusers to spend time with their husband. For example, 88 percent of women who were sterilized spent the entire month with their husband, compared with 74 percent of women who were not using any method.

5.5 Postpartum Amenorrhea, Postpartum Abstinence, and Insusceptibility

The risk of pregnancy is affected by several factors besides marriage patterns. There is a low risk of becoming pregnant during the period after childbirth before the return of menstruation *(postpartum amenorrhea)* and (certainly) during the period before the resumption of sexual activity *(postpartum abstinence).*[1] The duration of amenorrhea is directly related to the duration (and intensity) of breastfeeding; the longer a woman breastfeeds, the longer she is likely to remain amenorrheic. Since breastfeeding is an important issue in childhood nutrition (see Chapter 9), only postpartum amenorrhea and postpartum abstinence are considered in this section. Women are *insusceptible* when they are not exposed to the risk of pregnancy either because they are amenorrheic or because they are abstaining from marital relations following a birth, or both. The estimates for postpartum amenorrhea, postpartum abstinence, and insusceptibility are based on current status measures—that is, the proportion of births occurring *x* months before the survey for which mothers were still amenorrheic, abstaining, or insusceptible at the time of the survey. The medians were calculated on the basis of current status proportions at each time period. The data are grouped by two-month intervals for greater stability.

Table 5.7 presents the distribution of births in the 36 months before the survey according to the postpartum status of mothers. Fourteen percent of mothers had not experienced the return of menstruation, and 4 percent had not resumed sexual relations. Combining the two conditions indicates that mothers of 14 percent of births were still insusceptible to the risk of pregnancy. The average duration of amenorrhea is about 6 months; the average duration of abstinence is about two months.

Table 5.7 Postpartum amenorrhea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers were postpartum amenorrheic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Jordan 1997

Months since birth	Amenor-rheic	Abstain-ing	Insuscep-tible	Number of births
< 2	92.5	81.3	96.8	134
2-3	60.6	11.4	63.7	173
4-5	38.6	0.0	38.6	189
6-7	29.9	2.2	31.1	234
8-9	24.2	2.2	25.0	216
10-11	14.8	1.0	15.3	230
12-13	9.2	0.4	9.6	216
14-15	6.0	0.6	6.6	206
16-17	3.3	1.4	4.6	219
18-19	2.9	1.5	4.4	221
20-21	1.1	0.3	1.4	236
22-23	0.6	1.1	1.7	217
24-25	0.2	0.5	0.7	240
26-27	0.0	0.0	0.0	196
28-29	0.0	0.0	0.0	171
30-31	0.0	0.6	0.6	224
32-33	0.0	0.0	0.0	251
34-35	0.0	0.2	0.2	193
Total	13.5	4.1	14.3	3,766
Median	3.6	1.7	3.8	NA
Mean	6.0	2.4	6.3	NA
Prev./Incidence mean	4.8	1.5	5.1	NA

Note: Medians and means are based on the status proportions at each

[1] In traditional Islamic societies, the parents maintain sexual abstinence for a period of a month or more after a child has been born to them.

Mothers of 93 percent of births were still amenorrheic two months following childbirth. The percentage drops to 61 between two and three months after birth, and further to 39 percent in the next two months. In Jordan, as in other Islamic societies, women observe sexual abstinence after childbirth. The period of postpartum abstinence traditionally lasts 40 days. The observance of this practice is noticeable in the 1997 JPFHS data. Mothers of 81 percent of the children born during the two months before the survey were still abstaining from sexual relations at the time of the survey. For births two and three months before the survey, only 11 percent of mothers were still abstaining, with the percentage declining to less than 3 percent in subsequent months.

Table 5.8 presents the median duration of postpartum amenorrhea (4 months), postpartum abstinence (2 months), and postpartum insusceptibility (4 months). There is little variation in the median duration of amenorrhea, abstinence, and insusceptibility by age, residence, or region.

Women's level of education has both positive and negative effects on fertility. While age at first marriage increases with education—a phenomenon that tends to reduce fertility—the duration of postpartum insusceptibility, which protects women from pregnancy, decreases with education. In Jordan, the duration of insusceptibility among women who have more than secondary education is about half that of women with no education. This relationship between education and fertility warrants further investigation.

Table 5.8 Median duration of postpartum amenorrhea, abstinence, and insusceptibility

For births in the three years preceding the survey, the median number of months mothers were postpartum amenorrheic, postpartum abstaining, and postpartum insusceptible at the time of the survey, by selected background characteristics, Jordan 1997

Background characteristic	Postpartum amenorrhea	Postpartum abstinence	Postpartum insuscep-tibility	Number of births
Age				
<30	3.7	1.7	3.9	2,167
30+	3.6	1.8	3.7	1,599
Residence				
Urban	3.6	1.8	3.8	3,055
Rural	3.9	1.6	3.9	711
Region				
North	3.8	1.8	4.0	1,102
Central	3.5	1.7	3.7	2,411
South	3.8	1.7	3.8	253
Educational level attended				
No education	6.4	1.8	6.4	224
Primary	5.3	1.5	5.7	429
Secondary	3.4	1.8	3.6	2,208
Higher	3.3	1.7	3.5	905
Total	3.6	1.7	3.8	3,766

CHAPTER 6

FERTILITY PREFERENCES

This chapter addresses questions about the need for contraception and the extent of unwanted fertility. Information collected from respondents includes whether they want more children and, if so, the gender they would prefer and how long they would want to wait before their next child. The respondents were also asked about the number of children they would like if they could start anew. Two other issues are also examined: the extent to which unwanted and mistimed births occur and the effect that preventing such births would have on fertility rates.

Survey questions on fertility preferences have often been the subject of criticism. First, it is suggested that the answers respondents give are misleading because they may reflect uninformed, ephemeral views held with little conviction. Critics also argue that the questions do not take into account the effects of social pressure or the attitudes of other family members—particularly the husband, who may exert considerable influence on the wife's reproductive decisions. The first objection is probably not relevant in Jordan, since family planning is widely used (presumably to realize fertility preferences). The second objection is correct in principle, but evidence from surveys in which both spouses are interviewed suggests that there are no significant differences between husbands and wives regarding their fertility preferences.

Women who were pregnant at the time of the survey were asked whether they would want to have another child later. Taking into account the way in which the preference variable is defined for pregnant women, a current pregnancy is treated as being equivalent to a living child. Women who have been sterilized are classified as wanting no more children.

6.1 Desire for Children

Women's preferences concerning future childbearing serve as indicators of future fertility. However, sterilized women and women who state that they are infecund (declared infecund), have no impact on future fertility, because their potential contribution to fertility has been curtailed. The data on fertility preference also provide information on the potential need for contraceptive services for spacing and limiting births.

About half of currently married women in Jordan (47 percent) want no more children, while about 44 percent want to continue childbearing (see Table 6.1 and Figure 6.1). These figures show no change since the 1990 JPFHS. Jordanians continue to favor large families. More than 55 percent of women who have three children and a substantial proportion of women who have four or five children want more (see Figure 6.2); these figures, however, are lower than those recorded in the 1990 JPFHS. More than 9 percent of childless women declared themselves infecund, probably because they were either sterile or nearing the end of their reproductive years.

Table 6.2 shows the distribution of women by their age and their desire for more children. As women age, their desire for more children decreases and the desire to stop childbearing increases. While nine of 10 women age 15-19 want more children, by age 25-29 only about two-thirds say they want more children. This proportion declines to 6 percent among women age 45-49. On the other hand, about 16 percent of women age 20-24 say they are sterilized or want to quit childbearing. This proportion increases to 53 percent among women age 30-34. Eight of ten women age 45-49 want no more children, including 14 percent who have been sterilized. Overall, 27 percent of these women are potentially unable to bear children either because they are sterilized or because they say that they are infecund.

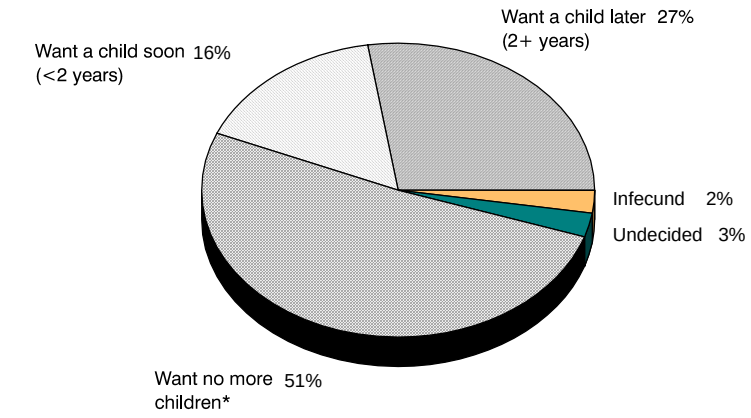
Table 6.1 Fertility preferences by number of living children

Percent distribution of currently married women by desire for more children, according to number of living children, Jordan 1997

Desire for children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Have another soon[2]	83.4	35.4	19.8	14.9	7.8	6.7	2.5	16.4
Have another later[3]	4.0	53.8	54.2	38.5	28.0	18.3	7.5	27.4
Have another, undecided when	1.7	1.8	0.7	2.0	1.0	0.4	0.7	1.1
Undecided	0.0	0.9	1.9	1.7	2.0	1.1	1.5	1.5
Want no more	1.1	6.3	22.8	41.6	56.2	65.7	74.1	47.0
Sterilized	0.4	0.0	0.0	0.6	3.4	5.7	10.1	4.2
Declared infecund	9.4	1.8	0.5	0.8	1.6	2.0	3.5	2.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	333	530	782	802	717	613	1,561	5,337

[1] Includes current pregnancy
[2] Want next birth within two years
[3] Want to delay next birth for two or more years

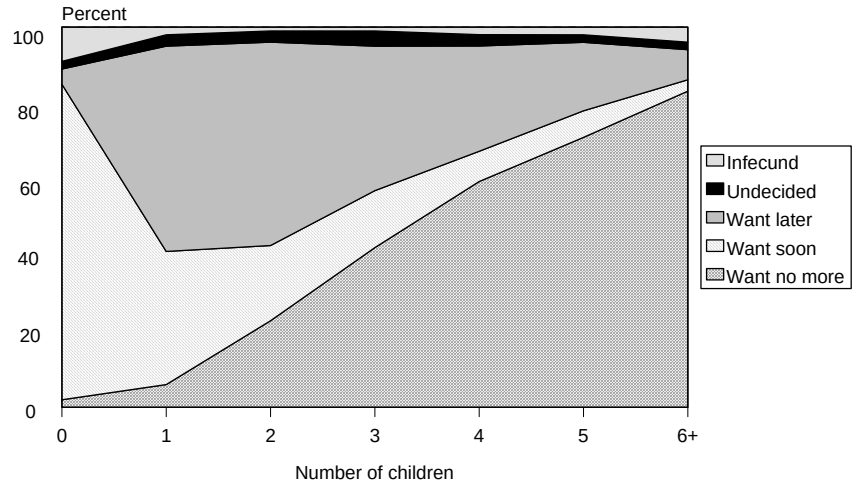
Figure 6.1
Fertility Preferences of Currently Married Women 15-49



* Includes sterilized women (4 percent)

JPFHS 1997

Figure 6.2
Fertility Preferences by Number of Living Children



JPFHS 1997

Table 6.2 Fertility preferences by age

Percent distribution of currently married women by desire for more children, according to age, Jordan 1997

Desire for children	Age of woman							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Have another soon[1]	37.2	25.0	18.8	17.0	14.3	7.1	4.5	16.4
Have another later[2]	51.8	57.0	46.4	25.8	7.8	2.0	0.7	27.4
Have another, undecided when	2.3	0.8	1.1	1.0	1.3	1.0	1.0	1.1
Undecided	0.5	0.7	2.2	2.0	2.2	0.9	0.0	1.5
Want no more	8.1	16.1	30.6	51.1	66.5	75.3	66.4	47.0
Sterilized	0.0	0.0	0.4	2.1	6.3	9.7	14.0	4.2
Declared infecund	0.0	0.5	0.4	0.9	1.6	4.0	13.4	2.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	203	777	1,168	1,099	880	690	520	5,337

[1] Want next birth within two years
[2] Want to delay next birth for two or more years

Differentials in the desire to stop childbearing are presented in Table 6.3. In general, women living in urban areas are slightly more likely to want to stop childbearing than rural women. That result is reflected in the higher percentage (53 percent) of women in the Central region (which includes the two largest cities in Jordan—Amman and Zarqa) who want no more children. The same pattern is seen when the data are analyzed on the basis of the number of living children a woman has; women in urban areas and in the Central region are consistently more likely to want to stop childbearing than women in other areas.

Table 6.3 Desire to limit childbearing

Percentage of currently married women who want no more children, by number of living children and selected background characteristics, Jordan 1997

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	1.6	7.1	23.9	44.5	62.5	74.2	85.3	52.2
Rural	1.3	1.8	16.1	27.3	43.9	55.7	79.9	46.2
Region								
North	1.3	0.9	12.2	32.8	48.1	57.7	83.0	46.9
Central	1.8	8.3	27.8	45.4	64.3	77.1	85.0	53.3
South	0.0	4.0	12.3	36.5	55.1	65.7	82.8	48.2
Educational level attended								
No education	2.4	29.8	34.2	32.0	54.4	61.6	80.1	66.0
Primary	0.0	5.0	23.6	38.4	61.7	63.9	87.1	64.3
Secondary	2.3	6.5	22.9	40.1	60.8	73.5	83.9	48.8
Higher	0.0	4.7	21.6	47.8	57.3	74.8	85.5	42.6
Total	1.5	6.3	22.8	42.1	59.6	71.5	84.2	51.2

Note: Women who have been sterilized are considered to want no more children.
[1] Includes current pregnancy

Education is negatively associated with the desire to stop childbearing. The proportion of women who want no more children decreases as the level of education increases—from 66 percent among uneducated women to 43 percent among women who have more than a secondary education. However, the fact that the effect of education diminishes when these women are analyzed by their number of living children suggests that the reason uneducated women are more likely to want to stop childbearing is that they already have more children than educated women, probably because, in general, they marry earlier than educated women.

6.2 Need for Family Planning Services

Information on fertility desires is insufficient by itself to estimate the need for family planning services. Many women who do not want to have another child soon are not exposed to the risk of pregnancy, either because they are using contraception or for other reasons. Clearly, a more detailed analysis of unmet need for family planning is needed. In this analysis, unmet need for family planning is defined as pertaining to women 1) who are pregnant or amenorrheic and whose last birth was mistimed and 2) women who are neither pregnant nor amenorrheic and who are not using any method of family planning and say either that they want to delay their next childbirth for at least two years or that they want no more children. Women who are menopausal or infertile are not included in the analysis because, although they may want another child and want to use contraception in the future, they are actually no longer exposed to the risk of becoming pregnant.

Table 6.4 presents information on the need for family planning services. The distribution of women who have an unmet need for family planning is shown in columns 1-3. Columns 4-6 show the distribution of women whose need for family planning has been met, i.e., women who are currently using a family planning method for spacing (want to wait 2 years or more for their next child) or for limiting births (want no more children).

Table 6.4 Need for family planning

Percentage of women with unmet need for family planning, met need for family planning, and the total demand for family planning services, by selected background characteristics, Jordan 1997

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning[3]			Percentage of demand satis-fied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15-19	18.3	0.0	18.3	17.3	1.8	19.0	37.5	2.4	39.9	54.1	203
20-24	14.4	1.0	15.4	28.3	8.3	36.6	49.8	9.6	59.4	74.1	777
25-29	10.4	3.3	13.7	33.7	18.2	51.9	49.8	22.6	72.4	81.1	1,168
30-34	7.5	7.2	14.7	20.9	37.0	57.9	31.7	45.9	77.5	81.0	1,099
35-39	3.7	9.6	13.3	9.0	53.6	62.6	14.1	65.6	79.7	83.3	880
40-44	1.1	13.3	14.4	2.0	61.5	63.6	3.3	76.0	79.3	81.8	690
45-49	0.2	11.6	11.8	0.5	47.9	48.4	0.8	59.8	60.6	80.5	520
Residence											
Urban	6.7	6.6	13.3	18.2	35.8	54.0	28.1	43.6	71.7	81.5	4,469
Rural	11.0	7.7	18.7	18.5	26.8	45.3	33.0	35.9	68.9	72.9	868
Region											
North	8.5	7.2	15.7	20.3	29.2	49.5	32.5	37.7	70.2	77.7	1,428
Central	6.6	6.3	13.0	17.6	37.0	54.6	27.4	44.5	71.9	82.0	3,582
South	11.2	9.8	20.9	16.3	27.2	43.4	30.5	38.7	69.2	69.7	327
Educational level attended											
No education	5.1	15.1	20.2	4.7	32.2	37.0	10.4	48.4	58.8	65.7	467
Primary	6.9	10.9	17.8	8.3	40.8	49.0	16.8	52.5	69.3	74.3	804
Secondary	7.9	5.6	13.5	19.9	33.9	53.7	31.5	41.0	72.5	81.3	2,866
Higher	7.3	3.7	11.0	26.4	31.9	58.3	38.1	36.5	74.6	85.3	1,200
Total	7.4	6.8	14.2	18.2	34.3	52.6	28.9	42.3	71.3	80.1	5,337

[1] Unmet need for *spacing* includes pregnant women whose pregnancy was mistimed, amenorrheic women whose last birth was mistimed, and women who are neither pregnant nor amenorrheic and who are not using any method of family planning but say they want to wait two or more years for their next birth. Also included in unmet need for spacing are women who are unsure whether they want another child or who want another child but are unsure when to have the birth. Unmet need for *limiting* refers to pregnant women whose pregnancy was unwanted, amenorrheic women whose last child was unwanted, and women who are neither pregnant nor amenorrheic and who are not using any method of family planning but want no more children. Excluded from the unmet need category are menopausal or infecund women.

[2] Using for *spacing* is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another. Using for *limiting* is defined as women who are using and who want no more children.

[3] Total demand includes pregnant or amenorrheic women who become pregnant while using a method (method failure). They account for less than 5 percent of all currently married women.

The total demand for family planning is shown in columns 7-9. Total demand is defined as pertaining to women who are not using a contraceptive method, women who are using a method, and women who used a method that failed. Column 10 of the table shows the percentage of the total demand for family planning that is satisfied—that is, the proportion of women using a method to the total demand.

The data in Table 6.4 indicate that 14 percent of currently married women in Jordan are in need of family planning. The need is equally split between a need for spacing births (7 percent) and a need for limiting them (7 percent). Of the 53 percent of women using contraception, 18 percent use it to delay their next birth, while 34 percent want to stop childbearing. An additional 5 percent of women (not presented in the table) need a better method, since the one they were using failed. Thus, the total demand for family planning among currently married women in Jordan is 71 percent, which means that 80 percent of the demand has been satisfied by women who are currently using contraception and women who had used it but failed.

Comparison of data from the 1997 JPFHS with findings of the 1990 JPFHS shows that the level of unmet need for family planning has declined by 36 percent (from 22 percent to 14 percent) and the proportion of total demand that is satisfied has increased by 21 percent (from 66 percent to 80 percent).

Unmet need for contraception for purposes of spacing births declines in relation to a woman's age, whereas the need for limiting births increases as a woman ages. The two are complementary in that total unmet need varies little by age of the woman.

Unmet need is related to place of residence and region. Women living in rural areas and in the South region tend to have a greater unmet need than their counterparts in urban areas and other regions. That difference is reflected by the lower level of unmet need for urban women (13 percent) and women in the Central region (13 percent), compared with 16 percent or higher in other areas. Because urban women are more likely to use contraception, a greater percentage of their total demand for family planning is satisfied.

Unmet need is also associated with education. Women with no education have a higher level of unmet need (20 percent) than women who have secondary or higher education (14 and 11 percent, respectively). Since educated women are more likely to use a contraceptive method than uneducated women, a higher proportion of their total demand for family planning is satisfied.

6.3 Ideal Number of Children

The focus of this chapter has been on the future reproductive intentions of women, implicitly taking into account their number of living children. To ascertain her ideal number of children, the respondent is asked to consider—abstractly and independently of her actual family size— the number of children she would choose if she could start again.

There is usually a correlation between actual and ideal number of children. The reason is twofold. First, to the extent that women implement their preferences, those who want larger families tend to achieve larger families. Second, women may adjust their ideal family size upwards as their actual number of children increases. It is also possible that women with large families have larger ideal family sizes, because of attitudes they acquired 20 to 30 years ago.

Despite the likelihood that some rationalization occurs in the determination of ideal family size, respondents often state ideal family sizes that are lower than their actual number of surviving children (see Table 6.5). The data in Table 6.5 can be grouped into three categories. The first group is women who have reached their ideal family size—i.e., women whose ideal number of children is exactly the same as their number of living children; it is represented by diagonal figures from 0 to 6+ children. The second group consists of women whose surviving children have exceeded their ideal family size (shown by the figures above the diagonal); the last group consists of women who have not reached their ideal family size (shown by the figures below the diagonal). The second category is of particular interest, because it permits the calculation of surplus or unwanted fertility (discussed in the next section).

The data in Table 6.5 indicate that a majority of women consider the ideal family size to be at least 4 children (67 percent). The increase in this group since the 1990 JPFHS is due to the decrease in the proportion of women who gave non-numeric responses. Only 15 percent of ever-married women state an ideal family size of two children, the number that is required for replacement level fertility. The mean ideal number of children is 4.2 among ever-married women as well as currently married women. Of concern

Table 6.5 Ideal and actual number of children

Percent distribution of all women by ideal number of children, and mean ideal number of children for all women and for currently married women, according to number of living children, Jordan 1997

Ideal number of children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
0	0.0	0.2	0.0	0.4	0.2	0.3	0.4	0.3
1	3.0	1.4	1.4	1.4	1.8	1.5	0.3	1.3
2	21.5	14.3	17.6	10.6	15.6	16.1	12.4	14.5
3	14.4	18.2	11.2	16.3	5.7	9.8	10.4	11.8
4	36.6	43.2	45.0	43.8	46.2	30.5	34.5	39.5
5	4.5	7.7	10.4	10.7	10.0	15.6	7.3	9.4
6+	11.7	10.6	11.2	14.1	17.7	22.2	26.6	18.2
Non-numeric response	8.2	4.3	3.2	2.7	2.8	4.0	8.0	5.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	370	561	804	829	738	635	1,611	5,548
Ever-married women								
Mean ideal number	3.9	3.9	3.9	4.0	4.1	4.4	4.7	4.2
Number of women	340	537	778	807	717	610	1,482	5,270
Currently married women								
Mean ideal number	3.8	3.9	3.9	4.0	4.2	4.4	4.7	4.2
Number of women	307	508	757	782	698	589	1,435	5,076

Note: The means exclude respondents who gave non-numeric responses.
[1] Includes current pregnancy

to family planning program administrators is the fact that a high proportion (about 65 percent) of women with six or more children have exceeded their ideal family size, in many cases by two or more children.

Compared with the 1990 JPFHS, the percentage of women in the 1997 JPFHS who did not give a numeric response to the hypothetical question on ideal family size declined substantially, from 31 percent to only 5 percent. Failure to give a definite answer suggests either an absence of conscious consideration given to the matter or a strong belief that family size is determined by God. Women who have two to four children are most likely to state a numeric ideal family size; childless women are less likely to do so, perhaps indicating either that they want to have as many children as possible or that they have reached the end of their reproductive years, or that they have given up hope of having a child. Women who already have five or more children may avoid specifying a number, possibly because they have exceeded their ideal family size.

Table 6.6 presents the mean ideal number of children by age and background characteristics. The mean ideal number of children in Jordan increases with age, from 4.1 children for ever-married women in the youngest age group to 4.7 children among the oldest women. In general, women living in rural areas, women in the the North and South regions, and women with less education have a slightly higher ideal family size.

Table 6.6 Mean ideal number of children by background characteristics

Mean ideal number of children for all women by age and selected background characteristics, Jordan 1997

Background characteristic	Age							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Residence								
Urban	4.1	4.1	4.1	4.0	4.3	4.5	4.6	4.2
Rural	(4.2)	4.2	4.2	4.4	4.4	4.8	5.3	4.5
Region								
North	4.2	4.5	4.4	4.2	4.6	4.8	5.3	4.5
Central	4.1	4.0	4.0	4.0	4.2	4.4	4.4	4.1
South	*	4.1	4.2	4.3	4.9	5.1	4.9	4.5
Educational level attended								
No education	*	*	(4.1)	4.5	4.4	5.3	5.0	4.8
Primary	(4.2)	3.9	4.4	4.3	4.8	4.7	4.7	4.5
Secondary	4.2	4.1	4.1	4.0	4.3	4.2	4.3	4.2
Higher	*	4.2	4.0	3.9	3.9	4.1	4.8	4.1
All women	4.1	4.1	4.1	4.1	4.3	4.5	4.7	4.2

Note: Figures in parentheses are based on 25-49 unweighted cases; an asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

6.4 Planning Status of Births

Respondents in the 1990 JPFHS and 1997 JPFHS were asked a series of questions concerning each child born in the five years preceding the survey and for any current pregnancy, to determine whether the particular pregnancy was either planned, unplanned but wanted at a later date, or unwanted. These questions yielded data that provide a powerful indicator of the degree to which couples are able to control childbearing. Additionally, the data can be used to measure the effect of preventing unwanted births on fertility for a period of time.

The questions about planning status of births are demanding. The respondent is required to accurately recall her wishes at one or more points in the preceding five years, and to report them honestly. The possibility of rationalization is present, since an unwanted conception may well turn out to be a cherished child. Despite problems of comprehension, recall, and truthfulness, the results from previous surveys indicate that the questions are effective in eliciting plausible information about the planning status of births. Although some postpartum rationalization does occur, respondents are willing to report unwanted conceptions. Overall, the estimates of unwanted fertility obtained from the data are probably low.

Table 6.7 shows that about 63 percent of births during in the five years preceding the survey were wanted when conceived, 20 percent were wanted later, and 17 percent were not wanted. The percentage of births wanted at conception is negatively associated with birth order; the percentage of unwanted births increases with birth order. In other words, higher order (later) births are more likely than first or second births to have been either mistimed or unwanted. The low percentage of first births wanted later or not wanted at all indicates that almost all first order births are wanted.

Births to young women tend to be wanted (then or later), whereas births to older women are more likely to be unwanted (see Table 6.7). Although 81 percent of births to women under 20 years of age were wanted at the time, the percentage declines to 30 percent among women age 40-44.

Another way of measuring the extent of unwanted fertility is to calculate the fertility rate if all unwanted births were avoided. This is known as the wanted fertility rate (see Table 6.8). In this analysis, a birth is considered wanted if the number of living children at the time of the pregnancy was less than the ideal number of children as reported by the respondent. In Jordan, if all unwanted births were prevented, the total wanted fertility rate would be 2.9 children per woman, or 1.5 children less than the actual total fertility rate. That theoretical rate implies that the total fertility rate is inflated by more than 50 percent because of unwanted births. Table 6.8 also shows that the gap between actual and wanted fertility rates is slightly higher among rural women, women living in the North and South regions, and women who have less than secondary education. Urban women and women who have more than a secondary education are generally more successful in narrowing the gap between wanted and actual fertility rates.

Table 6.7 Fertility planning status

Percent distribution of births in the five years preceding the survey and current pregnancies, by fertility planning status, according to birth order and mother's age, Jordan 1997

Birth order and mother's age	Planning status of birth			Total	Number of births
	Wanted then	Wanted later	Not wanted		
Birth order					
1	92.5	6.7	0.7	100.0	1,401
2	66.0	29.2	4.7	100.0	1,382
3	63.8	27.0	9.3	100.0	1,168
4+	47.7	20.1	32.2	100.0	3,168
Age at birth					
<20	81.3	16.3	2.4	100.0	558
20-24	70.7	23.7	5.5	100.0	1,972
25-29	63.2	24.3	12.5	100.0	2,178
30-34	56.2	19.0	24.8	100.0	1,453
35-39	48.8	10.3	40.9	100.0	719
40-44	29.8	6.3	63.8	100.0	219
45-49	*	*	*	100.0	19
Total	62.7	20.4	16.9	100.0	7,119

Note: Birth order includes current pregnancy. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 6.8 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by selected background characteristics, Jordan 1997

Background characteristic	Total wanted fertility rate	Total fertility rate
Residence		
Urban	2.9	4.2
Rural	3.1	5.0
Region		
North	3.1	4.8
Central	2.8	4.1
South	3.1	4.8
Educational level attended		
No education	2.9	4.6
Primary	2.8	4.5
Secondary	3.0	4.5
Higher	2.7	3.7
Total	2.9	4.4

Note: Rates are based on births to women 15-49 in the period 1-36 months preceding the survey. The total fertility rates are the same as those presented in Table 3.3.

CHAPTER 7

INFANT AND CHILD MORALITY

Estimates of levels, trends, and differentials in neonatal, postneonatal, and child mortality are important both for monitoring and evaluating ongoing health programs and for use in formulating future policies. The level of infant and child mortality is viewed as an indicator of the general standard of living in a society. In addition to addressing those issues, this chapter examines the risk factors for births in Jordan.

Five measures of infant and child mortality used in this chapter are as follows:

- **Neonatal mortality,** or the probability of dying in the first month of life
- **Postneonatal mortality,** or the probability of dying after the first month of life but before the first birthday
- **Infant mortality ($_1q_0$),** or the probability of dying before the first birthday
- **Child mortality ($_4q_0$),** or the probability of dying between the first and fifth birthday
- **Under-five mortality ($_5q_0$),** or the probability of dying before the fifth birthday.

Infant and child mortality rates are calculated from information collected in the birth history section of the individual questionnaire. In the 1997 JPFHS, each woman was asked about the number of sons and daughters living with her, the number living away, and the number who had died. Those questions were aimed at obtaining the total number of births the respondent had experienced. Next, the respondent was asked to give information on each of the children she had borne, including name, sex, date of birth, whether the birth was single or multiple, and survival status. If the child had died, the age at death was recorded. If the child was still living, questions were asked about his/her age at last birthday and whether the child lived with his/her mother. It should be noted that birth histories are often subject to inaccuracies in the reporting of events, errors that can result in biased rates and trends over time. Despite the disadvantages, birth histories provide data for analyses that would be impossible to collect by any other method of gathering data.

The reliability of the mortality data depends on women's recall about children who have died, the absence of severe differential displacement of birth dates of living and dead children, and accurate reporting of ages at death. Previous survey results have often been characterized by some heaping of age at death at exactly 12 months or 1 year. On the assumption that age at death is reported in completed months or years, deaths at 12 months are classified as child rather than infant deaths. In reality, some of those deaths may have occurred before the first birthday, so that their classification as child deaths tends to negatively bias infant mortality estimates and positively bias child mortality estimates. The analyst should be aware that that the problem may arise in DHS surveys, although the probable effect is usually modest and is unlikely to bias the estimates by as much as 5 percent.

The issue of whether or not to present mortality estimates that are adjusted for heaping of deaths at 12 months of age is difficult to resolve because any solution involves a somewhat arbitrary decision about the true distribution by age. The general DHS policy is not to present rates in the first country report on the basis of models that adjust the observed data. Accordingly, it is recommended that adjusted rates be presented only as part of the discussion of the text of the chapter. Moreover, adjusted rates should be presented only if the adjustment procedure—described by Sullivan et al. (1990)—results in an increase of at least 5 percent in the infant mortality estimate and if there is clear evidence from the distribution of reported deaths by age in months that some of the heaped deaths are actually infant deaths (see Appendix C, Table C.6).

Included in the chapter is a table indicating the distribution of children and women according to characteristics of avoidable fertility behavior that place children at greater risk of mortality. That information is useful for designing and monitoring programs designed both to discourage high-risk behavior and to cope with the elevated risks.

7.1 Levels and Trends

It is seldom possible to establish with confidence mortality levels for a period more than 15 years before a survey. Even within the recent 15-year period considered here, apparent trends in mortality rates should be interpreted with caution. First, in the completeness of death reporting there may be differences related to length of time before the survey. Second, the accuracy of reports of age at death and of date of birth may deteriorate systematically with time. Thus, without a detailed evaluation of the quality of birth history data (which is not attempted in this report), conclusions regarding changes in mortality should be considered preliminary. Also, whenever possible, external estimates should be sought for and compared with the DHS estimates; however, the quality of the external estimates must be taken into consideration.

The analysis examines the variation in neonatal, postneonatal, infant, and child mortality for successive five-year periods before the survey. The rates presented in Table 7.1 approximate the calendar periods 1992-1997, 1987-1992, and 1982-1987. Because fieldwork for the 1997 JPFHS, the 1983 JFFHS, and the 1976 JFS was carried out in the third quarter of the year whereas the 1990 JPFHS was fielded in the fourth quarter of the year, comparison between estimates derived from those surveys is not precise. However, for purposes of trend analysis, the results of the four surveys have been compared (see Figures 7.1 and 7.2). Ideally, the estimates for overlapping periods should be the same; that is not the case in Jordan because of discrepancies caused by internal biases in each of the estimates and underestimation in the 1983 survey (Department of Statistics, 1984). It is apparent, however, that infant mortality has been declining for many years.

The pace of decline in infant and child mortality varies. Neonatal and postneonatal mortality show a moderate decline, while mortality among children 1-4 years old actually shows an upward trend (see Table 7.1). This observation suggests that the factors affecting infant mortality are different from those affecting child mortality. In particular, infant health is more likely to be influenced by factors such as antenatal and postnatal care, and by the length of the birth interval (issues discussed below).

Table 7.1 Infant and child mortality

Infant and child mortality rates by three five-year periods preceding the survey, Jordan 1997

Years preceding survey	Approximate calendar-year period	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
0-4	(1992-97)	19.0	9.6	28.5	5.9	34.2
5-9	(1987-92)	17.5	12.2	29.6	4.2	33.7
10-14	(1982-87)	25.4	12.6	38.0	4.1	42.0
0-9	(1987-97)	18.3	10.8	29.0	5.1	34.0

Figure 7.1
Trends in Infant Mortality
1972-1997

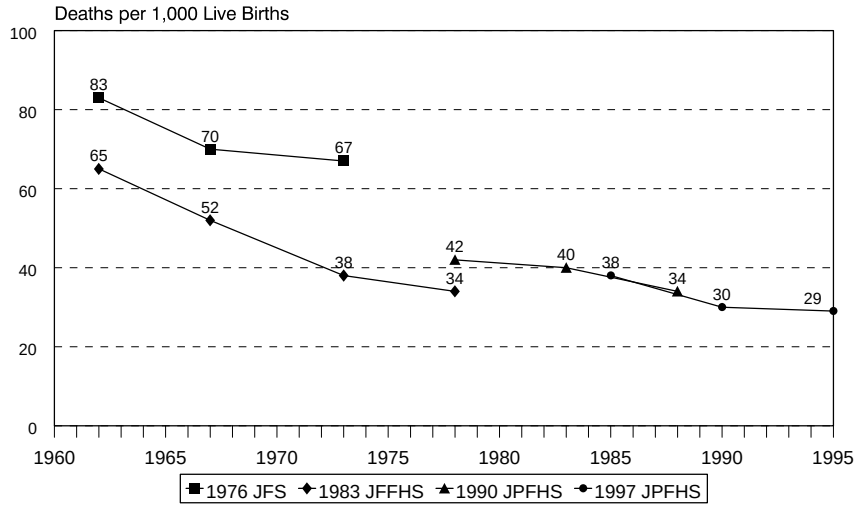
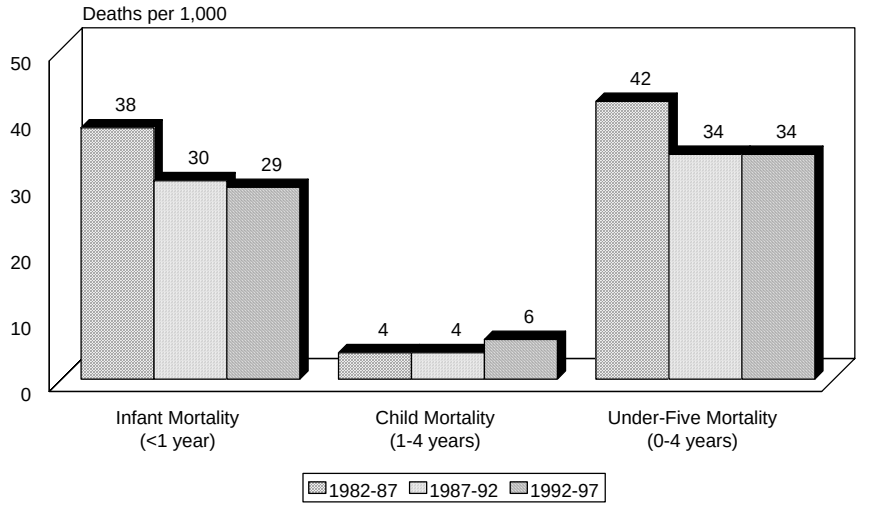


Figure 7.2
Trends in Infant and Child Mortality
by Five-Year Periods



JPFHS 1997

In Table 7.2, a comparison is made between infant and child mortality in Jordan and in some other Arab countries in which DHS surveys have been done. For each period of time presented in the table, infant and child mortality rates are lower in Jordan than in the other Arab countries.

Table 7.2 Infant and child mortality, selected countries

Infant and child mortality rates for the five-year period preceding the survey, selected countries, 1987-1997

Country	Approximate calendar-year period	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Yemen	1987-1991	82.8	42.5	121.8
Turkey	1988-1993	52.6	8.8	60.9
Morocco	1990-1994	61.6	20.0	80.4
Egypt	1991-1995	62.6	19.2	80.6
Jordan	1992-1997	28.5	5.9	34.2

Sources:
CSO, PAPCHILD and MI, 1994 (Yemen)
Ministry of Health [Turkey], Hacettepe University Institute of Population Studies and MI, 1994
Azelmat et al., 1995 (Morocco)
El Zanaty et al., 1996 (Egypt)

7.2 Differentials in Infant and Child Mortality

Differentials by Background Characteristics

Differentials in neonatal, postneonatal, infant, child, and under-five mortality by socioeconomic characteristics are shown in Table 7.3. A 10-year period is used to calculate the mortality estimates, to obtain enough cases in each category. It is expected that use of the 10-year reference period will improve the reliability of the mortality estimates.

There are substantial differences in under-five mortality by type of residence. Children in urban areas have lower mortality than their counterparts in the rural areas (31 and 46 deaths per 1,000 live births, respectively). A similar pattern is found for postneonatal mortality, but not for neonatal mortality.

Infant mortality and under-five mortality vary across regions. In the South region, infant mortality rates and under-five mortality rates are 43 and 51 deaths per 1,000 live births, respectively. In the rest of the country, under-five mortality ranges from 30 to 34 per 1,000 live births, and infant mortality ranges from 25 to 29 per 1,000 live births.

Mother's education is negatively associated with child mortality. Children of mothers who attended more than secondary education are less likely to die in the first five years of life than children of mothers with less education. Mortality is highest for children of women who either attended primary school or received no education.

Attention from medical personnel during pregnancy and at the time of delivery influences children's chances for survival. The level of under-five mortality for children who had no antenatal care or delivery

Table 7.3 Infant and child mortality by background characteristics

Infant and child mortality rates for the 10-year period preceding the survey, by selected socioeconomic characteristics, Jordan 1997

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Residence					
Urban	17.8	8.9	26.7	4.7	31.3
Rural	20.3	18.7	39.1	6.9	45.7
Region					
North	16.4	9.0	25.4	5.1	30.3
Central	18.5	10.7	29.2	4.7	33.8
South	24.1	18.9	43.0	8.6	51.2
Educational level attended					
No education	34.2	19.9	54.2	8.4	62.1
Primary	17.1	14.8	31.9	9.3	40.9
Secondary	17.8	9.0	26.9	4.6	31.3
Higher	13.7	8.3	22.0	1.7	23.7
Medical maternity care[1]					
Either antenatal or delivery care	13.9	18.8	32.8	NA	32.8
Both antenatal and delivery care	19.2	8.5	27.6	NA	37.1
Total	18.3	10.8	29.0	5.1	34.0

[1] Rates are for the five-year period preceding the survey.
NA = Not applicable

assistance from a medical professional is generally higher than for children who received such care. Having both antenatal care and delivery assistance from a medical professional also reduces the risk of dying. Neonatal mortality shows the opposite pattern, probably because problem pregnancies are more likely to be referred for medical attention.

Differentials by Biodemographic Characteristics

Differentials in mortality rates by selected biodemographic characteristics are shown in Table 7.4 and Figure 7.3. Children of teenage mothers, high-birth-order children, and children born following a short birth interval are at greater risk of dying than those in other subgroups. The difference is most pronounced when birth interval is taken into account. Children born after an interval of less than two years are about one-and-a-half times as likely to die as children born four years or more after their siblings.

Children's weight at birth is closely associated with their chances of survival, particularly during the first month of life. Children reported as "small or very small" at birth were at twice the risk of dying compared with children whose birth weight was reported as "average." Sixty-three of 1,000 children reported to be "small or very small" did not survive to their first birthday.

Table 7.4 Infant and child mortality by biodemographic characteristics

Infant and child mortality rates for the 10-year period preceding the survey, by selected biodemographic characteristics, Jordan 1997

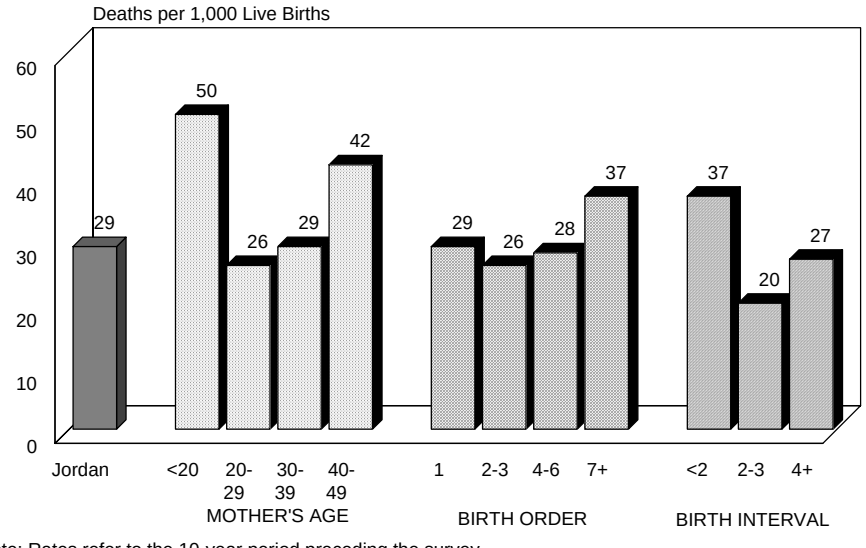
Biodemographic characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Sex of child					
Male	21.6	12.8	34.3	3.7	37.9
Female	14.8	8.6	23.4	6.6	29.9
Age of mother at birth					
< 20	26.4	23.3	49.7	5.5	54.9
20-29	16.2	9.4	25.6	4.7	30.2
30-39	18.6	10.2	28.8	5.4	34.1
40-49	34.2	8.1	42.3	8.5	50.4
Birth order					
1	17.0	11.6	28.5	4.8	33.2
2-3	16.5	9.8	26.3	4.1	30.3
4-6	17.3	10.4	27.7	5.9	33.5
7+	24.4	12.3	36.7	5.9	42.4
Previous birth interval					
< 2 yrs	24.3	12.4	36.7	6.2	42.6
2-3 yrs	11.6	8.3	19.9	3.9	23.7
4 yrs +	15.1	11.6	26.7	5.7	32.2
Size at birth[1]					
Small/very small	46.0	16.5	62.6	NA	NA
Average or larger	13.4	7.9	21.3	NA	NA

[1] Rates are for the five-year period preceding the survey
NA = Not applicable

7.3 High-risk Fertility Behavior

Table 7.5 presents the distribution of children born in the five years preceding the survey who are at increased risk of dying because of the mother's fertility characteristics. Children are at higher risk if the mother was too young or too old at time of birth, if they are of high birth order, or if they were born too soon after their next older sibling. In this report, a woman is classified as "too young" if she is less than 18 years of age and "too old" if she is over 34 years of age at the time of giving birth. A child is considered "high birth order" if the mother previously delivered three or more children. A "short birth interval" is defined as birth occurring less than 24 months after a previous birth. In the analysis of birth intervals, only children whose preceding birth interval was less than 24 months are included, even though a short birth interval also increases the risk of dying for the child at the beginning of the interval. The latter relationship is subject to reverse causality in that the death of the earlier child may cause the subsequent interval to be short. Deaths may be more likely among first-order births than higher order births; however, the distinction is not made in Table 7.5 because birth order is not considered avoidable fertility behavior.

Figure 7.3
Infant Mortality by Selected
Demographic Characteristics



Note: Rates refer to the 10-year period preceding the survey.

JPFHS 1997

Sixty-seven percent of children born during the five years preceding the survey are at elevated risk of dying; in 41 percent of the cases the risk is higher only because of a single risk category (mother's age, birth order, or birth interval), and in 26 percent of the cases the risk is higher owing to multiple risk categories. The largest group of children at risk includes those who are of a high birth order (45 percent) and those whose preceding birth interval was shorter than 24 months (32 percent). More than one of ten children was born with a preceding birth interval of less than 24 months and with birth order higher than 3. However, it should be noted that the effect of high birth order (4 or higher) outweighs the effects of factors such as length of preceding birth interval and mother's age.

Table 7.5 also shows the relative risk of dying for children born in the last five years by comparing the proportion dead in each risk category to the proportion dead among children with no risk factors. Column 2 of Table 7.5 presents the risk ratios for births during the five years preceding the survey (i.e., the ratio of the proportion dead in each risk category to the proportion dead among children who were not in any risk category). The single most detrimental factor is a short birth interval: children born less than 24 months after an older sibling are more than one-and-a-half (1.56) times as likely to die as children not in any risk category. The combination of a mother's giving birth at an older age and the child's being born with a short preceding birth interval and with a birth order higher than 3 is particularly detrimental to children's survival. Children born to mothers over 34 years of age, and born less than 24 months after a preceding birth with a birth order higher than 3 are about four (3.6) times more likely to die than children not in any risk category.

The last column of Table 7.5 presents the distribution of currently married women according to category of increased risk. Women are placed in the categories according to the status they would have at the birth of a child conceived at the time of the survey: women who were 17 years and 3 months old or younger or 34 years and 2 months old or older, women whose most recent birth was less than 15 months before the survey, and women whose most recent birth was of order 3 or higher. Many women are protected

from the risk of pregnancy by contraception, postpartum insusceptibility, and prolonged abstinence but, in this report, for the sake of simplicity, only sterilized women are classified as not being in any risk category.

About eight of ten married women are at risk of conceiving a child who will be at increased risk of dying. A little less than two-thirds of married women are at risk because of having already had 3 births; one-third are at risk because of being over age 34. The figures in Table 7.5 demonstrate the strong influence of parity (the number of children the mother has had) on the risk of dying among children under five years of age.

Table 7.5 High-risk fertility behavior

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality, and the percent distribution of currently married women at risk of conceiving a child with an elevated risk of mortality, by category of increased risk, Jordan 1997

Risk category	Births in 5 years preceding the survey		Percentage of currently married women[a]
	Percentage of births	Risk ratio	
Not in any high-risk category	15.4	1.00	15.6[b]
Single high-risk category			
First birth	17.7	1.40	7.0
Mother's age < 18	1.9	0.69	0.4
Mother's age > 34	0.6	0.67	3.4
Birth interval < 24 months	19.0	1.56	9.8
Birth order > 3	19.6	1.19	16.9
Subtotal	41.1	1.33	30.5
Multiple high-risk category			
Age <18 & birth interval <24[c] mo	0.3	0.00	0.2
Age >34 & birth interval <24 mo	0.3	0.00	0.3
Age >34 & birth order >3	9.3	1.60	29.8
Age >34 & birth interval <24 & birth order >3	3.1	3.60	4.7
Birth interval <24 & birth order >3	12.7	1.50	12.0
Subtotal	25.7	1.75	47.0
In any high-risk category	66.9	1.49	77.4
Total	100.0	-	100.0
Number of births	6,364	-	5,337

Note: Risk ratio is the ratio of the proportion dead of births in a specific high-risk category to the proportion dead of births *not in any high-risk category.*

[a] Women were assigned to risk categories according to the status they would have at the birth of a child, if the child were conceived at the time of the survey: age less than 17 years and 3 months, age older than 34 years and 2 months, latest birth less than 15 months ago, and latest birth of order 3 or higher.

[b] Includes sterilized women

[c] Includes the combined categories *Age <18 and birth order >3*

CHAPTER 8

REPRODUCTIVE AND CHILD HEALTH

To determine the extent of utilization of different types of antenatal services, women were asked whether they had seen anyone for antenatal care during any pregnancy that occurred since 1990. Antenatal care is defined according to type of provider, number of antenatal visits, stage of pregnancy at time of first visit, and number of tetanus toxoid injections received. Although the interviewer was instructed to record all responses if more than one source of antenatal care was mentioned for the same pregnancy, only the most qualified provider is considered for this report.

8.1 Antenatal Care

Table 8.1 shows the distribution of live births in the five years preceding the survey by source of antenatal care (ANC) the mother received during pregnancy. For the majority of births (95 percent), the mother received at least one pregnancy checkup from trained health personnel, 90 percent from a doctor, and

Table 8.1 Antenatal care

Percent distribution of births in the five years preceding the survey by source of antenatal care during pregnancy, according to selected background characteristics, Jordan 1997

Background characteristic	Antenatal care provider[1]					Number of births
	Doctor	Nurse/ Trained midwife	Traditional birth attendant	No one	Total	
Mother's age at birth						
< 20	89.8	7.3	0.3	2.7	100.0	509
20-34	91.0	5.0	0.2	3.7	100.0	5,000
35+	87.1	4.8	0.7	7.4	100.0	851
Birth order						
1	93.3	5.1	0.4	1.2	100.0	1,259
2-3	91.3	5.0	0.2	3.5	100.0	2,254
4-5	90.6	5.1	0.2	4.2	100.0	1,398
6+	86.5	5.6	0.4	7.5	100.0	1,449
Residence						
Urban	92.1	4.5	0.2	3.2	100.0	5,153
Rural	83.3	8.2	0.5	8.0	100.0	1,207
Region						
North	86.9	7.8	0.2	5.1	100.0	1,866
Central	92.1	4.1	0.3	3.4	100.0	4,067
South	89.2	4.4	0.0	6.4	100.0	427
Mother's educational level attended						
No education	75.8	7.8	0.9	15.5	100.0	416
Primary	84.9	7.5	0.4	7.1	100.0	768
Secondary	90.9	5.7	0.2	3.2	100.0	3,665
Higher	96.2	2.1	0.1	1.6	100.0	1,511
Total	90.4	5.2	0.3	4.1	100.0	6,360

Note: Includes births in the period 0-59 months prior to the survey.
[1] If the respondent mentioned more than one provider, only the most qualified provider is considered.

5 percent from a nurse or midwife. In the 1990 Jordan Fertility and Family Health Survey (JFFHS), 80 percent of mothers received antenatal care. Thus, antenatal care coverage increased from 80 to 95 percent of births in the space of just seven years.

The data show that there are marked differentials in antenatal care coverage among subgroups (see Table 8.1). Children of younger mothers, children of low birth order, children living in the Central region, and children whose mothers attended secondary or higher education are more likely to have received antenatal care than other children. The role of trained birth attendants in providing antenatal care in Jordan is limited. This is true for all subgroups. Overall, doctors are more likely than nurses or midwives to provide antenatal care services for births in urban areas, births to educated women, and lower order births.

8.2 Number of Antenatal Care Visits and Stage of Pregnancy

For births during the five years preceding the survey, mothers had a median of eight antenatal visits throughout pregnancy (see Table 8.2). Although mothers did not receive any antenatal care for 4 percent of births, 86 percent had four or more checkups. For half of the births, pregnancy checkups started at or before the second (2.2) month of pregnancy; for 92 percent, antenatal care began during the first five months of pregnancy.

Table 8.2 Number of antenatal care visits and stage of pregnancy

Percent distribution of live births in the last five years by number of antenatal care (ANC) visits, and by the stage of pregnancy at the time of the first visit, Jordan 1997

Number of visits and stage of pregnancy	Total
Number of visits	
None	4.1
1	2.5
2-3 visits	7.0
4+ visits	86.2
Don't know/missing	0.2
Total	100.0
Median	8.0
Timing of first antenatal check	
No antenatal care	4.1
Less than 6 months	92.0
6-7 months	2.5
8+ months	1.2
Don’t know/missing	0.2
Total	100.0
Median	2.2

8.3 Tetanus Toxoid Vaccinations

Neonatal tetanus is a major cause of neonatal mortality in many countries. For that reason, the JPFHS collected information on whether respondents had received tetanus toxoid injections for each pregnancy during the five years preceding the survey and, if so, the number of injections.

For more than half of births in the five years before the survey, the mother did not receive a tetanus toxoid vaccination during pregnancy; 24 percent had one dose, and 16 percent had two or more doses (see Table 8.3). There was no significant increase from the 1990 JPFHS, which found that 42 percent of pregnant women had received tetanus toxoid injections. There are small differentials among the various subgroups. Differentials based on mother’s education are minimal. The proportion of women who received two doses or more is less than that in the 1990 JPFHS (20 percent).

Table 8.3 Tetanus toxoid vaccinations

Percent distribution of births in the five years preceding the survey by number of tetanus toxoid injections mother received during pregnancy, according to selected background characteristics, Jordan 1997

Background characteristic	Number of tetanus toxoid injections: No injection	One dose	Two doses or more	Don't know/ Missing	Total	Number of births
Mother's age at birth						
< 20	49.4	29.8	19.6	1.1	100.0	509
20-34	59.4	24.2	14.7	1.6	100.0	5,000
35+	61.4	19.6	17.2	1.8	100.0	851
Birth order						
1	41.3	30.6	27.2	0.9	100.0	1,259
2-3	62.4	24.1	11.9	1.6	100.0	2,254
4-5	65.0	21.8	11.7	1.5	100.0	1,398
6+	62.8	20.4	14.5	2.3	100.0	1,449
Residence						
Urban	58.2	24.7	15.5	1.6	100.0	5,153
Rural	62.0	21.3	15.1	1.6	100.0	1,207
Region						
North	55.4	26.8	15.3	2.5	100.0	1,866
Central	60.4	23.1	15.2	1.3	100.0	4,067
South	60.0	20.9	18.5	0.6	100.0	427
Mother's educational level attended						
No education	64.6	20.1	12.0	3.2	100.0	416
Primary	55.2	26.4	16.4	2.0	100.0	768
Secondary	57.0	25.6	16.1	1.4	100.0	3,665
Higher	63.8	20.2	14.5	1.5	100.0	1,511
Total	58.9	24.0	15.5	1.6	100.0	6,360

8.4 Place of Delivery

Table 8.4 and Figure 8.1 provide information on the utilization of health facilities for deliveries. The data show that the majority of births (93 percent) took place in a hospital, whereas one in 14 births took place at home. In comparison with data from the 1990 JPFHS, the proportion of births delivered at home has decreased from 20 percent to 7 percent, while the proportion of births delivered in hospitals has increased, from 78 percent to 93 percent.

The use of health facilities varies among subgroups. Private hospitals are more likely to be used by young or new mothers, women living in the Central region, women with more education, and women who have more antenatal visits. Delivery at home is more likely for births to older women and women living in rural areas, high-order births, and births to women who have no education and who received no antenatal care.

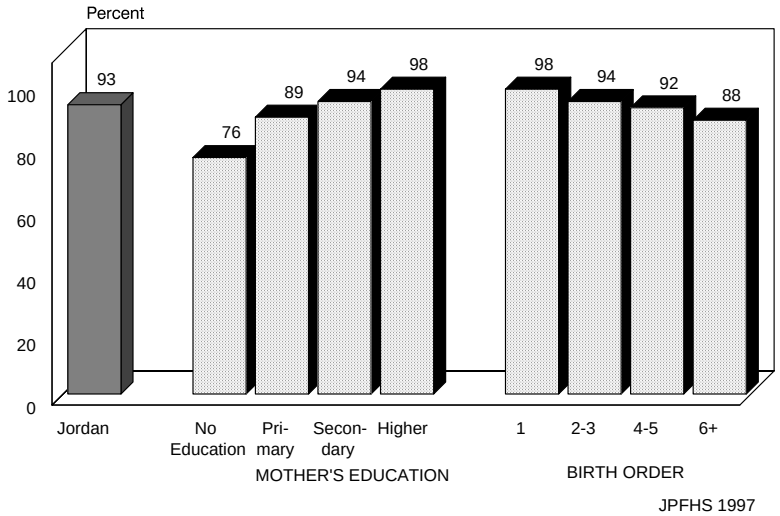
Table 8.4 Place of delivery

Percent distribution of births in the five years preceding the survey by place of delivery, according to selected background characteristics, Jordan 1997

Background characteristic	Place of delivery: At a health facility	Place of delivery: At home	Place of delivery: Other	Total	Number of births
Mother's age at birth					
< 20	96.3	3.7	0.0	100.0	509
20-34	93.0	6.8	0.1	100.0	5,000
35+	91.3	8.7	0.0	100.0	851
Birth order					
1	97.6	2.4	0.0	100.0	1,259
2-3	94.4	5.6	0.0	100.0	2,254
4-5	92.1	7.8	0.1	100.0	1,398
6+	88.1	11.6	0.3	100.0	1,449
Residence					
Urban	94.3	5.6	0.1	100.0	5,153
Rural	88.0	12.0	0.0	100.0	1,207
Region					
North	91.9	8.0	0.1	100.0	1,866
Central	94.0	5.9	0.1	100.0	4,067
South	89.0	10.8	0.2	100.0	427
Mother's educational level attended					
No education	75.6	24.4	0.0	100.0	416
Primary	88.9	11.0	0.2	100.0	768
Secondary	93.9	6.0	0.1	100.0	3,665
Higher	98.1	1.9	0.0	100.0	1,511
Antenatal care visits					
None	79.5	20.5	0.0	100.0	262
1-3 visits	87.6	12.4	0.0	100.0	603
4 or more visits	94.3	5.6	0.1	100.0	5,483
Total	93.1	6.8	0.1	100.0	6,360

Note: Total includes 12 births for whom information on number of antenatal care visits was missing.

Figure 8.1
Delivery in a Health Facility by Selected Characteristics



8.5 Assistance During Delivery

As in the case of antenatal care, when collecting information on type of assistance received during delivery, interviewers were instructed to record all responses if more than one person was assisting during the delivery. However, only the most qualified person in attendance at the time of delivery is considered for this report (see Table 8.5).

Assistance during delivery shows a pattern similar to that of antenatal care. The assistance of medical personnel is widely used: 65 percent of births during the five years preceding the survey were assisted by a doctor and 32 percent by a trained nurse or midwife. As in the case of data presented earlier, doctors are more likely to assist births to more educated women, births to women living in urban areas, and births to women who received more antenatal care.

Table 8.5 Assistance during delivery

Percent distribution of births in the five years preceding the survey by type of assistance during delivery, according to selected background characteristics, Jordan 1997

Background characteristic	Type of assistance during delivery[1]					Total	Number of births
	Doctor	Nurse/ Trained midwife	Traditional birth attendant	Relative/ Other	No one		
Mother's age at birth							
< 20	67.0	31.4	0.9	0.4	0.3	100.0	509
20-34	64.3	32.5	1.8	1.2	0.2	100.0	5,000
35+	67.3	27.5	3.2	1.3	0.8	100.0	851
Birth order							
1	75.1	24.2	0.5	0.1	0.0	100.0	1,259
2-3	64.3	33.0	1.6	1.0	0.2	100.0	2,254
4-5	61.9	34.7	1.5	1.6	0.3	100.0	1,398
6+	59.8	33.6	3.8	1.9	0.8	100.0	1,449
Residence							
Urban	69.3	28.4	1.4	0.6	0.2	100.0	5,153
Rural	46.2	46.0	3.8	3.3	0.5	100.0	1,207
Region							
North	46.7	49.0	2.7	1.4	0.1	100.0	1,866
Central	74.4	23.0	1.5	0.8	0.3	100.0	4,067
South	53.3	40.0	2.5	3.5	0.8	100.0	427
Mother's educational level attended							
No education	42.3	39.9	7.6	8.1	1.5	100.0	416
Primary	61.1	34.2	2.9	1.4	0.2	100.0	768
Secondary	63.2	34.2	1.6	0.7	0.3	100.0	3,665
Higher	77.1	22.4	0.4	0.2	0.0	100.0	1,511
Antenatal care visits							
None	37.6	46.0	6.9	7.3	2.2	100.0	262
1-3 visits	47.3	44.4	5.4	2.2	0.5	100.0	603
4 or more visits	68.1	29.7	1.3	0.7	0.2	100.0	5,483
Total	64.9	31.8	1.9	1.1	0.3	100.0	6,360

Note: Total includes 12 births for whom information on number of antenatal care visits was missing.
[1] If the respondent mentioned more than one attendant, only the most qualified attendant was considered.

8.6 Delivery Characteristics

Research on infant and childhood mortality has shown that birth weight is a major determinant of infant and child survival. In the 1997 JPFHS, for all births during the five years preceding the survey, the baby's birth weight was recorded in the questionnaire and respondents were asked whether the delivery was by caesarean section. Since birth weight may not be known for some babies, the mother's estimate of the baby's size at birth was also obtained. A baby is considered premature if its birth weight is less than 2.5 kg.

The results of the questions on delivery characteristics are presented in Table 8.6. Of 6,360 births during the five years preceding the survey, 11 percent were delivered by caesarean section. Birth weight was successfully obtained for 95 percent of the babies. Nine of 10 babies for whom birth weight was obtained weighed 2.5 kilograms or more; according to the mother's estimate, 84 percent were of average size or larger. These data suggest that there is little problem with premature births in Jordan. The caesarean section rate was higher in the Central region than in the North and South regions, in urban than in rural areas and among children of better educated mothers.

Table 8.6 Delivery characteristics: caesarean section, birth weight, and size

Among births in the five years preceding the survey, the percentage of deliveries by caesarean section, and the percent distribution by birth weight and by the mother's estimate of baby's size at birth, according to selected background characteristics, Jordan 1997

		Birth weight			Size of child at birth				
Background characteristic	Delivery by C-section	Less than 2.5 kg	2.5 kg or more	Don't know	Very small	Smaller than average	Average or larger	Total	Number of births
Mother's age at birth									
<20	6.5	11.7	86.0	2.3	6.6	11.0	82.4	100.0	509
20-34	9.6	9.1	86.7	4.2	5.6	10.5	83.9	100.0	5,000
35+	18.2	10.0	82.3	7.7	6.2	9.1	84.6	100.0	851
Birth order									
1	11.9	11.5	86.5	2.0	6.7	13.4	80.0	100.0	1,259
2-3	8.9	8.9	88.1	3.0	5.3	9.9	84.8	100.0	2,254
4-5	9.7	8.0	86.9	5.1	5.1	9.5	85.4	100.0	1,398
6+	12.8	9.9	81.6	8.5	6.2	9.3	84.4	100.0	1,449
Residence									
Urban	11.5	8.7	88.6	2.7	5.1	9.6	85.3	100.0	5,153
Rural	6.2	12.4	75.3	12.3	8.4	13.4	78.1	100.0	1,207
Region									
North	8.1	9.0	84.9	6.0	4.4	11.6	83.9	100.0	1,866
Central	11.6	9.2	87.7	3.0	5.7	9.9	84.3	100.0	4,067
South	10.8	12.8	75.1	12.1	11.2	9.1	79.6	100.0	427
Mother's educational level attended									
No education	8.0	11.7	61.6	26.7	10.0	11.3	78.7	100.0	416
Primary	12.0	12.7	80.0	7.4	7.6	11.5	80.8	100.0	768
Secondary	9.9	9.4	87.6	2.9	5.9	10.5	83.6	100.0	3,665
Higher	12.0	7.1	92.1	0.8	3.3	9.1	87.7	100.0	1,511
Total	10.5	9.4	86.1	4.5	5.7	10.3	83.9	100.0	6,360

8.7 Delivery Complications

Table 8.7 shows that 73 percent of deliveries had no complications. Of the 27 percent for which there were complications, 19 percent involved prolonged labor, 7 percent involved excessive bleeding, 5 percent involved vaginal infection, and 4 percent involved convulsions. Among the subgroups, vaginal infection was higher among women who did not receive antenatal or delivery care. Prolonged labor and excessive vaginal bleeding were higher among women whose offspring succumbed to early neonatal death and among women who delivered by caesarean section.

Table 8.7 Delivery complications

Percentage of live births in the five years preceding the survey with complications during delivery, according to antenatal and delivery characteristics, Jordan 1997

Characteristic	Type of complication [1]					Number of live births
	Prolonged labor	Excessive bleeding	Vaginal infection	Convul-sions	None	
Medical maternity care[2]						
No antenatal or medical care	(12.7)	(5.8)	(9.5)	(4.6)	(76.0)	46
Antenatal care only	14.5	6.1	4.3	1.1	77.1	161
Delivery care only	15.2	5.0	5.1	1.5	77.4	233
Both antenatal and delivery care	19.8	7.4	4.8	3.7	72.3	5,920
Early neonatal death						
Yes	26.3	18.2	7.9	4.6	60.1	83
No	19.3	7.1	4.8	3.6	72.8	6,277
Caesarean section						
Yes	21.1	12.9	9.1	3.4	65.6	670
No	19.2	6.6	4.4	3.6	73.4	5,690
Total	19.4	7.3	4.9	3.6	72.6	6,360

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Respondent may have more than one complication.
[2] Medical care is that given by a doctor, nurse, trained midwife or received in a hospital, clinic, health center or health post.

8.8 Vaccinations by Source of Information

Since 1980, the Ministry of Health and Health Care (MOHHC) has made the immunization card a requirement for entry into the formal school system. The card is issued by the Ministry through various service providers at the time of a child's first vaccination. Upon registering at the Maternal and Child Health Center, each child receives a health card which shows vaccinations and his or her height and weight.

In the JPFHS, information on the immunization status of children was obtained in two ways. First, women who had children under age five were asked to produce health cards for those children. From cards that were available, the interviewer copied onto the questionnaire the dates on which the child had received vaccinations for diphtheria, pertussis, tetanus (DPT), polio, measles, and tuberculosis (BCG). For DPT and polio, each dose of the vaccine was recorded separately. When a card was not available, the mother was asked whether the child had received specific vaccinations, and the number of doses for DPT and polio were recorded. Table 8.8 presents data for children 12 to 23 months old (by which time they should be fully vaccinated). The table also shows the extent to which vaccinations were received in the first year of life.

Table 8.8 Vaccinations by source of information

Percentage of children 12-23 months who had received specific vaccines at any time before the survey, by source of information about vaccination, and the percentage vaccinated by 12 months of age, Jordan 1997

Background characteristic	Percentage of children who received: BCG	DPT DPT1	DPT DPT2	DPT DPT3	Polio Polio1	Polio Polio2	Polio Polio3	Measles	All except BCG	All[1]	Percentage with a card	Number of children
Vaccinated at any time before the survey												
Vaccination card	17.9	80.7	80.3	80.0	81.2	81.0	80.4	72.9	71.9	15.9	81.2	1,036
Mother's report	6.2	18.4	18.1	15.9	18.5	17.8	15.4	17.0	13.9	4.6	18.8	239
Either source	24.1	99.1	98.4	95.9	99.7	98.8	95.7	89.9	85.7	20.5	100.0	1,275
Vaccinated by 12 months of age	23.3	98.9	97.9	93.5	99.3	98.2	93.7	82.9	78.1	17.6	-	1,275

Note: For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.
[1] BCG, measles, and three doses of DPT and polio vaccines.

Among 1,275 children age 12-23 months, information on vaccinations was obtained from health cards for 81 percent while mothers supplied information for the remaining 19 percent. Although virtually all children have received vaccinations against DPT and polio, the coverage declines slightly with successive doses. About nine of ten children had had a measles vaccination, but few (less than 18 percent) had had a BCG vaccination.

8.9 Vaccinations by Background Characteristics

Vaccination coverage for polio, DPT, and measles is high in all parts of the country and among all subgroups of children (see Table 8.9). This fact demonstrates the success of the immunization program in reaching all segments of the population. There are some differences in BCG coverage, with children in the Central region having a better chance of receiving this vaccine.

Table 8.9 Vaccinations by background characteristics

Percentage of children 12-23 months who had received specific vaccines by the time of the survey (according to the vaccination card or the mother's report), and the percentage with a vaccination card, according to selected background characteristics, Jordan 1997

Background characteristic	Percentage of children who received:											Number of children
		DPT			Polio				All except BCG	All[1]	Percentage with a card	
	BCG	DPT1	DPT2	DPT3	Polio1	Polio2	Polio3	Measles				
Child's sex												
Male	23.8	99.2	98.3	95.7	100.0	98.9	96.0	90.0	85.5	20.3	81.2	672
Female	24.4	99.1	98.5	96.2	99.3	98.7	95.5	89.7	86.1	20.8	81.3	603
Birth order												
1	22.4	98.7	97.4	94.3	99.3	97.9	94.9	88.0	84.2	20.2	84.3	228
2-3	23.5	98.8	98.0	96.0	99.7	99.1	95.8	90.5	85.6	19.2	82.1	460
4-5	24.9	99.6	99.3	97.0	100.0	100.0	96.6	90.3	87.7	22.4	77.7	313
6+	25.6	99.5	99.1	95.8	99.5	97.7	95.3	89.9	85.1	20.9	81.2	274
Residence												
Urban	27.6	99.1	98.5	96.1	99.6	98.8	95.9	89.9	85.8	23.6	80.9	1,038
Rural	9.0	99.3	98.0	95.1	100.0	99.1	95.2	89.7	85.6	7.0	82.7	237
Region												
North	18.2	100.0	100.0	98.7	100.0	99.7	98.1	92.1	90.2	16.3	84.5	395
Central	28.9	98.7	97.6	94.9	99.5	98.4	95.0	89.3	84.2	24.3	80.3	801
South	4.6	98.9	98.3	92.2	99.5	98.3	91.7	84.7	79.0	3.0	74.5	79
Mother's educational level attended												
No education	18.5	97.9	97.3	94.0	100.0	98.8	95.5	85.8	80.4	15.5	80.0	82
Primary	26.2	99.0	98.1	92.9	99.0	96.1	90.5	90.8	82.7	21.2	77.5	132
Secondary	24.4	99.1	98.1	96.0	99.7	98.8	96.1	89.0	85.2	20.8	82.0	741
Higher	24.0	99.5	99.5	97.5	99.9	99.9	97.2	92.6	89.5	21.0	81.3	321
Total	24.1	99.1	98.4	95.9	99.7	98.8	95.7	89.9	85.7	20.5	81.2	1,275

Note: For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.
[1] BCG, measles, and three doses of DPT and polio vaccines.

8.10 Vaccination in First Year of Life by Current Age

Table 8.10 presents information on vaccination coverage in the first year of life for children age one to four years (born during the five years preceding the survey). For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as that for children for whom a health card was available.

The table shows some progress in the provision of preventive health measures, especially during the past four years. Overall, coverage of vaccination cards increased from 68 percent around 1992-1993 to 81 percent in 1995-1996, although the lower percentage for older children may be due to the failure of the mother to show the health card to the interviewer. The card is generally kept at school when the child enters primary school. Coverage of polio, DPT, and measles vaccinations shows an increase from the level for children age 48-59 months to that for younger children. As mentioned earlier, the health program in Jordan does not emphasize BCG vaccinations below six years of age (school entry), a phenomenon reflected in the low proportion of children who have received that vaccination.

Table 8.10 Vaccinations in first year of life by current age

Among children age one to four years, the percentage with a vaccination card and the percentage who had received each vaccine before their first birthday, according to current age of the child, Jordan 1997

Vaccine	Current age of child in months				All children 12-59 months
	12-23	24-35	36-47	48-59	
Vaccination card shown to interviewer	81.2	78.2	76.0	68.1	76.0
Percentage vaccinated at 0-11 months[1]					
BCG	23.3	22.6	26.3	24.1	24.1
DPT 1	98.9	97.7	98.6	97.1	98.1
DPT 2	97.9	96.5	97.2	95.5	96.8
DPT 3	93.5	93.5	93.7	91.3	93.0
Polio 1	99.3	98.3	99.0	97.6	98.6
Polio 2	98.2	97.3	97.6	96.0	97.3
Polio 3	93.7	93.7	93.6	90.6	92.9
Measles	82.9	82.7	81.3	79.2	81.5
All vaccinations[2]	17.6	18.5	21.0	16.3	18.4
Number of children	1,275	1,252	1,272	1,190	4,991

[1] Information was obtained either from a vaccination card or from the mother if there was no written record. For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as that for children with a written vaccination record.
[2] BCG, measles, and three doses each of DPT and polio vaccines.

8.11 Prevalence and Treatment of Acute Respiratory Infection and Prevalence of Fever

Table 8.11 shows the prevalence of cough and rapid breathing in the two weeks before the survey. These symptoms are compatible with pneumonia among children under five years of age who are reported to have the mentioned symptoms and fever. The table also shows the proportion of children who were in contact with health services.

The table shows that 10 percent of children were ill with cough and rapid breathing, while 20 percent had fever. Males were more affected than females, and children living in urban areas were more affected than those living in rural areas. Children whose mothers are highly educated suffered less from both cough and fever, and they also had higher rates of contact with health services.

Diarrhea Prevalence

Diarrhea has been singled out for investigation in the survey for two reasons. In many countries, dehydration from watery diarrhea is a major cause of death in infancy and childhood, and the condition is amenable to treatment by oral rehydration therapy (ORT). The Jordan MOHHC includes ORT—both as a solution prepared from commercially produced oral rehydration salts (ORS packets) and as a homemade solution recommended by the World Health Organization—in its health programs.

Table 8.11 Prevalence and treatment of acute respiratory infection and prevalence of fever

Percentage of children under five years who were ill with a cough accompanied by short, rapid breathing (acute respiratory infection) during the two weeks preceding the survey, the percentage of ill children who were taken to a health facility or provider, the percentage of children with fever during the two weeks preceding the survey, by selected background characteristics, Jordan 1997

Background characteristic	Acute respiratory infection (ARI): Prevalence of ARI	Acute respiratory infection (ARI): Percentage taken to a health facility or provider	Prevalence of fever	Number of children
Child's age				
< 6 months	8.1	71.4	14.0	495
6-11 months	14.7	77.6	31.6	676
12-23 months	13.2	75.3	28.4	1,275
24-35 months	10.6	79.6	20.2	1,252
36-47 months	8.8	78.5	14.0	1,272
48-59 months	6.5	70.4	13.9	1,190
Child's sex				
Male	11.6	77.9	20.5	3,163
Female	8.7	74.0	19.8	2,999
Birth order				
1	11.2	75.2	18.9	1,222
2-3	10.1	72.8	18.8	2,190
4-5	9.6	77.8	20.3	1,360
6+	10.1	81.3	23.3	1,390
Residence				
Urban	10.5	76.0	20.2	5,002
Rural	8.7	77.8	19.9	1,160
Region				
North	9.8	79.7	21.1	1,820
Central	10.6	75.0	20.0	3,935
South	7.9	73.1	18.0	407
Mother's educational level attended				
No education	10.3	62.3	22.8	385
Primary	11.7	79.3	23.9	734
Secondary	11.0	76.2	20.5	3,573
Higher	7.5	79.2	16.7	1,470
Total	10.2	76.3	20.2	6,162

Note: Includes births in the period 1-59 months prior to the survey (excludes the month of interview).

In the 1997 JPFHS, mothers who had children under age five were asked if their children had experienced diarrhea during the two weeks before the survey. If so, they were asked if the children had been given a solution prepared from ORS packets or a homemade solution.

Eighteen percent of children under age five had had diarrhea at some time during the two weeks before the survey (see Table 8.12). There is some variation by sex of the child, residence, or mother's education. However, children under two years of age, especially those 6-11 months old, are more likely than older children to have had diarrhea. Only a small fraction of children (1 percent) were reported to have had bloody stools, a symptom of dysentery.

Table 8.12 Prevalence of diarrhea

Percentage of children under five years of age with diarrhea and diarrhea with blood during the two weeks preceding the survey, by selected background characteristics, Jordan 1997

Background characteristic	Diarrhea in the preceding 2 weeks		Number of children
	All diarrhea	Diarrhea with blood	
Child's age			
< 6 months	19.9	0.9	495
6-11 months	35.2	1.3	676
12-23 months	30.8	1.7	1,275
24-35 months	15.6	1.3	1,252
36-47 months	8.3	0.8	1,272
48-59 months	6.7	0.5	1,190
Child's sex			
Male	18.2	1.0	3,163
Female	17.8	1.3	2,999
Birth order			
1	18.3	1.0	1,222
2-3	18.6	1.2	2,190
4-5	18.3	1.1	1,360
6+	16.6	1.1	1,390
Residence			
Urban	17.7	1.1	5,002
Rural	19.4	1.1	1,160
Region			
North	18.9	1.1	1,820
Central	17.8	1.1	3,935
South	15.9	0.9	407
Mother's educational level attended			
No education	17.3	1.7	385
Primary	20.8	1.1	734
Secondary	18.5	1.3	3,573
Higher	15.7	0.6	1,470
Total	18.0	1.1	6,162

Note: Includes births in the period 1-59 months prior to the survey (excludes the month of the interview).

8.12 Knowledge of Diarrhea Care

Table 8.13 presents data on mothers' knowledge and use of ORS packets. In the survey, all women with children under age five (regardless of whether they had diarrhea in the preceding two weeks) were asked if they had ever heard of ORS packets (Aquacell) and whether they had ever used them. The responses indicated that treatment of diarrhea using ORS packets is well known. Virtually all women with children under age five (99 percent) said they knew about ORS, and there was no variation among subgroups.

Mothers were also asked whether a child with diarrhea should be given more, less, or about the same quantity of liquids and foods as usual. Nine of ten mothers said that more liquids should be given (with some variation among the subgroups). Younger mothers, those in the South region, those in rural areas, and those with no education, are less likely to give more liquids to children with diarrhea. When asked about the amount of food that should be given, 48 percent of mothers said that the same amount should be given, 25 percent said that it should be increased, and 25 percent believed that it should be decreased.

Table 8.13 Knowledge of diarrhea care

Percentage of women with births in the five years preceding the survey who know about oral rehydration packets for treatment of diarrhea and the percent distribution by opinion on appropriate feeding practices during diarrhea, according to selected background characteristics, Jordan 1997

Background characteristic	Know about oral rehydration packets for treatment of diarrhea	Compared with usual feeding practices, appropriate feeding during diarrhea: Liquids				Solid foods				Total	Number of mothers
		Less	Same	More	Don't know/ Missing	Less	Same	More	Don't know/ Missing		
Age											
15-19	98.7	11.1	13.8	71.5	3.6	21.7	48.3	24.5	5.5	100.0	101
20-24	99.0	7.2	9.1	82.0	1.7	22.2	48.1	27.3	2.4	100.0	626
25-29	99.4	2.4	7.9	89.1	0.6	24.3	47.5	26.8	1.3	100.0	1,059
30-34	99.2	2.9	8.0	88.5	0.6	27.3	47.3	24.1	1.3	100.0	917
35+	97.9	4.9	7.5	87.1	0.5	27.4	48.0	23.3	1.3	100.0	969
Residence											
Urban	99.0	3.3	7.3	88.5	0.9	25.8	47.5	25.0	1.7	100.0	3,017
Rural	98.3	8.6	12.2	78.3	0.8	23.8	48.9	26.1	1.2	100.0	654
Region											
North	99.0	5.6	9.3	84.5	0.6	22.2	49.8	26.5	1.5	100.0	1,044
Central	99.0	3.5	7.3	88.3	0.9	26.6	46.8	24.9	1.7	100.0	2,390
South	97.3	6.0	11.8	80.9	1.4	27.9	48.3	22.5	1.3	100.0	238
Educational level attended											
No education	95.0	14.2	20.8	64.3	0.7	29.3	50.5	18.3	1.9	100.0	239
Primary	98.6	5.6	12.1	80.6	1.7	28.2	44.8	24.3	2.8	100.0	456
Secondary	99.3	4.0	8.2	86.8	1.0	24.6	47.9	25.9	1.6	100.0	2,084
Higher	98.9	1.5	2.8	95.5	0.1	25.0	48.2	25.9	0.9	100.0	893
Total	98.9	4.2	8.2	86.7	0.9	25.4	47.7	25.2	1.6	100.0	3,672

8.13 Diarrhea Treatment

The 1997 JPFHS collected information about the advice and treatment mothers sought for their children with diarrhea and about what was given to treat the episode of diarrhea. The various diarrhea treatments can be classified into three major categories: antibiotics, ORS, and homemade solutions. Homemade solutions include sugar water, rice water, tea, and various herbal teas such as yansoon (anise), and meramya (sage).

Data concerning treatment of diarrhea are presented in Table 8.14. Among children under age five who had had diarrhea in the two weeks before the survey, half were taken to a health facility (such as a hospital, a health center, or a private doctor). Children 6-23 months old, children living in rural areas, children from the South region, and children of less educated mothers are more likely to have received advice and treatment from a health facility than other children.

Table 8.14 Treatment of diarrhea

Among children under five years who had diarrhea in the two weeks preceding the survey, the percentage taken for treatment to a health facility or provider, the percentage who received oral rehydration therapy (ORT) (either a solution prepared from packets of oral rehydration salts (ORS), a recommended home fluid (RHF), or increased fluids), the percentage who received neither ORT nor increased fluids, and the percentage given other treatments, according to selected background characteristics, Jordan 1997

Background characteristic	Percentage taken to a health facility or provider[1]	Oral rehydration therapy (ORT)				Did not receive ORT	Other treatments			No treatment	Missing	Number of children
		ORS packet	RHF at home	Either ORS or RHF	Increased fluids		Antibiotics	Injection	Home remedy/ Other			
Child's age												
< 6 months	47.1	21.8	5.7	25.3	49.4	41.4	23.0	0.4	15.6	33.8	0.0	99
6-11 months	51.5	29.4	9.6	34.2	70.8	23.0	41.9	2.4	13.2	14.6	0.0	238
12-23 months	53.6	24.8	9.5	30.9	76.3	18.8	42.8	0.8	17.8	11.7	0.1	392
24-35 months	46.4	19.3	6.4	24.0	69.1	25.1	42.2	1.0	17.5	13.7	0.0	195
36-47 months	41.7	25.9	3.5	28.4	82.8	10.8	38.7	4.4	13.9	8.6	0.0	106
48-59 months	46.6	15.1	4.1	19.1	73.7	18.1	40.3	3.9	20.9	11.2	0.0	80
Child's sex												
Male	51.3	23.3	7.5	28.1	74.3	19.8	40.5	1.8	17.3	13.6	0.0	577
Female	47.8	24.7	7.8	29.6	69.4	24.4	39.8	1.7	15.5	15.1	0.1	533
Birth order												
1	51.7	26.1	5.3	29.5	64.2	28.6	38.9	0.8	15.6	18.6	0.0	224
2-3	46.9	23.2	8.6	28.3	74.5	18.7	39.2	2.3	14.6	11.4	0.1	408
4-5	51.6	23.1	7.1	28.5	73.0	22.2	43.0	0.4	16.8	14.5	0.0	248
6+	50.4	24.3	9.1	29.3	73.6	21.3	40.0	2.9	20.1	15.1	0.0	231
Residence												
Urban	48.3	22.2	8.1	27.5	73.0	22.3	39.2	2.1	15.5	14.6	0.1	885
Rural	54.9	30.9	6.1	34.0	67.7	20.7	44.1	0.2	20.1	13.0	0.0	225
Region												
North	48.4	26.0	5.3	29.8	70.7	22.2	38.2	0.5	17.7	15.8	0.0	344
Central	48.6	23.1	8.4	28.1	72.7	22.0	40.6	2.4	15.2	14.0	0.0	701
South	68.1	23.2	12.5	31.7	69.5	20.4	46.3	0.6	23.3	9.6	0.7	65
Mother's educational level attended												
No education	49.3	32.6	5.1	36.7	49.3	34.0	40.3	0.0	21.3	22.6	0.0	67
Primary	48.7	27.4	10.5	32.0	65.4	27.2	35.6	2.2	14.7	18.8	0.0	153
Secondary	52.0	24.1	7.1	28.9	72.8	21.1	40.3	1.9	16.4	13.2	0.1	660
Higher	43.7	18.8	8.1	24.1	80.1	17.8	42.6	1.3	16.4	12.1	0.0	231
Total	49.7	24.0	7.7	28.8	71.9	22.0	40.2	1.7	16.4	14.3	0.0	1,110

[1] Includes hospital, health center, maternal and child health center, and clinic.

Columns 2, 3, and 4 of Table 8.14 present information on the use of oral rehydration therapy to treat diarrhea. It should be noted that the percents may add to more than 100 because more than one treatment may have been given. Of the different types of treatment administered for diarrhea, recommended home fluids were used to treat 8 percent of children, and ORS packets were used for 24 percent. Increased fluids were administered to 72 percent. Twenty-two percent of children who had diarrhea were given neither type of oral rehydration therapy. Children living in rural areas and children of women with no education are slightly more likely to have been given a solution prepared from an ORS packet than other children.

Antibiotics were administered to 40 percent of children who had had diarrhea in the two weeks preceding the survey. This is a high proportion compared with other countries participating in the DHS program.

Feeding Practices During Diarrhea

The 1997 JPFHS included questions on feeding practices for children who had diarrhea in the two weeks before the survey. Mothers were asked about changes in their feeding practices.

Table 8.15 shows that 72 percent of women increased fluids given to their child with diarrhea, while 7 percent decreased fluids, and 21 percent made no change. Forty percent of women decreased the amount of solid foods given, 15 percent increased solid foods, and 39 percent made no change.

Table 8.15 Feeding practices during diarrhea

Percent distribution of children under five years who had diarrhea in the past two weeks by amount of fluids given and amount of solid foods given, Jordan 1997

Feeding practice	Total
Amount of fluids	
Same	21.1
Increase	71.9
Decrease	6.5
Don't know/missing	0.5
Amount of solid foods	
Same	39.2
Increase	14.6
Decrease	40.1
Don't know/missing	0.2
Total	94.1
Number	1,110

CHAPTER 9

INFANT FEEDING, MATERNAL AND CHILD NUTRITION

One of the objectives of the 1997 Jordan Population and Family Health Survey (JPFHS) was to collect information to be used in evaluating ongoing health programs and in developing policies and programs that will provide better services. In this survey, data were collected from mothers regarding the feeding patterns of all their children under age five. The data are used to evaluate infant feeding practices, including breastfeeding, the introduction of complementary and supplementary weaning foods, and the use of feeding bottles. As part of the survey, the height and weight of all children under five and their mothers were also measured, so that a cross-sectional assessment of maternal and child nutritional status could be done.

9.1 Breastfeeding and Supplementation

Early childhood feeding practices and patterns are important determinants of the nutritional status of children which influence their health status. A mother's nutritional well-being before and during pregnancy influences the health of her baby at birth, her ability to breastfeed successfully, and her own general health. The health benefits of breastfeeding for both mother and child, which are undisputed, are influenced by both the duration and intensity of breastfeeding and by the age at which the child receives supplementary foods and other liquids.

Prevalence and Initiation of Breastfeeding

The data presented in Table 9.1 confirm that breastfeeding in Jordan is almost universal, with 95 percent of the children born during the five years preceding the survey having been breastfed at some time. The proportion of children ever breastfed was high across all residential areas and regions, and it did not vary significantly by other background characteristics. The results of the 1997 JPFHS are similar to those of the 1990 JPFHS.

Early initiation of breastfeeding is beneficial for mother and child. From the mother's perspective, early suckling stimulates the release of a hormone that helps her uterus to stay contracted. From the child's perspective, the first breast milk is important because it contains colostrum, which is rich in antibodies. The 1997 JPFHS data show that only about one-third of the children in Jordan were breastfed within an hour of birth, but 75 percent were breastfed in the first 24 hours after delivery. Babies in rural areas and in the South region are more likely to start breastfeeding within an hour of birth than their counterparts in urban areas and in other regions. Children are less likely to receive early breastfeeding if their mothers have secondary or higher education, if medically trained personnel assist the delivery, or if they were not delivered at home.

Age Pattern of Breastfeeding and Introduction of Supplementary Foods

In the 1997 JPFHS, children who received only breast milk in the 24 hours before the survey are defined as being *exclusively breastfed;* they are *fully breastfed* if they receive only plain water in addition to breast milk. Mothers were asked about the current breastfeeding status of all last-born children under age three and, if the child was being breastfed, whether various types of liquids or solid foods had been given to their children in the past 24 hours.

Table 9.1 Initial breastfeeding

Percentage of children born in the three years preceding the survey who were ever breastfed, and the percentage who started breastfeeding within one hour of birth and within one day of birth, by selected background characteristics, Jordan 1997

Background characteristic	Percentage ever breastfed	Percentage who started breastfeeding: Within one hour of birth	Within one day of birth[1]	Number of children
Child's sex				
Male	94.3	31.3	73.6	3,282
Female	95.2	33.1	76.2	3,078
Residence				
Urban	94.7	31.1	73.8	5,153
Rural	94.8	36.8	79.4	1,207
Region				
North	96.2	32.8	79.7	1,866
Central	94.2	31.0	72.0	4,067
South	93.5	40.8	80.2	427
Mother's educational level attended				
No education	95.4	35.2	78.3	416
Primary	94.0	37.3	78.2	768
Secondary	95.2	31.7	74.7	3,665
Higher	94.0	30.0	72.6	1,511
Assistance at delivery				
Health professional	94.7	31.7	74.6	6,146
Traditional midwife	96.4	45.1	82.4	120
Other or none	94.2	45.5	82.3	91
Place of delivery				
Health facility	94.5	31.3	74.1	5,920
At home	97.9	43.7	84.5	435
Other	100.0	57.1	80.1	6
Total	94.8	32.2	74.9	6,360

Note: Total includes three children for whom data on assistance at delivery and six children for whom information on place of delivery are missing.
[1] Includes children who started breastfeeding within one hour of birth

The timing of introduction of supplementary foods has important implications for both child and mother. Early supplementation, especially under unhygienic conditions, can result in infection with foreign organisms and may lower immunity to disease. The timing of introduction of food supplements also has an impact on the length of the mother's postpartum amenorrhea. Initiating supplementation early results in an earlier return of menstruation, since supplementation diminishes the infant's dependence on breast milk and reduces the frequency of suckling.

The Ministry of Health and Health Care recommends that infants receive breast milk only until they reach six months of age. The results shown in Table 9.2 indicate that among infants under two months of age, 96 percent were breastfed. while only one-fifth were exclusively breastfed. Another 8 percent were fully breastfed, and 68 percent were already receiving supplemental foods or liquids. By 6-7 months of age, only 77 percent of children are breastfed, and virtually all (72 percent) have received supplemental foods.

Table 9.2 Breastfeeding status

Percent distribution of living children under three years of age by current breastfeeding status, according to child's current age in months, Jordan 1997

Age in months	Not breast-feeding	Exclusively breastfed	Breastfeeding and: Plain water only	Breastfeeding and: Comple-mentary foods	Total	Number of living children
< 2	4.4	20.2	7.9	67.5	100.0	136
2-3	5.1	10.9	14.5	69.4	100.0	171
4-5	12.2	4.1	7.6	76.1	100.0	188
6-7	22.6	0.6	4.8	72.0	100.0	231
8-9	34.2	0.0	1.5	64.3	100.0	216
10-11	39.8	0.0	1.3	58.9	100.0	229
12-13	50.6	0.0	0.6	48.8	100.0	212
14-15	65.3	0.0	0.5	34.2	100.0	197
16-17	70.7	0.0	1.1	28.2	100.0	213
18-19	73.2	0.0	0.0	26.8	100.0	207
20-21	86.7	0.0	0.2	13.2	100.0	235
22-23	88.7	0.0	0.0	11.3	100.0	212
24-25	92.9	0.0	0.0	7.1	100.0	238
26-27	95.9	0.0	0.0	4.1	100.0	197
28-29	98.5	0.0	0.0	1.5	100.0	169
30-31	96.5	0.0	0.0	3.5	100.0	213
32-33	98.1	0.0	0.0	1.9	100.0	249
34-35	98.6	0.0	0.0	1.4	100.0	187
0-3 months	4.8	15.0	11.6	68.5	100.0	307
4-6 months	14.6	3.2	6.5	75.6	100.0	283
7-9 months	30.6	0.0	2.9	66.5	100.0	351

Note: Breastfeeding status refers to 24 hours preceding the survey.

Table 9.3 shows the differentials in duration and frequency of breastfeeding. At the national level, the median duration of any breastfeeding is about 12 months; however, the median duration for exclusive breastfeeding and full breastfeeding is just half a month. There is little variation in the duration of breastfeeding across subgroups; however, children of rural mothers and mothers who have had no education tend to be breastfed longer. Breastfeeding must be frequent for mothers (and children) to reap all its benefits. The data in Table 9.3 indicate that 82 percent of children under six months of age were breastfed six or more times in the 24 hours preceding the interview.

Table 9.3 Median duration and frequency of breastfeeding by background variables

Median duration of any breastfeeding, exclusive breastfeeding, and full breastfeeding among children under three years of age, and the percentage of children under six months of age who were breastfed six or more times in the 24 hours preceding the interview, according to background characteristics, Jordan 1997

Background characteristic	Median duration of breastfeeding (in months) for children under 3 years of age				Intensity of breastfeeding for children under 6 months	
	Any breast-feeding	Exclusive breast-feeding	Full breast-feeding[1]	Number of children	Breastfed 6+ times in preceding 24 hours	Number of children
Child's sex						
Male	12.6	0.5	0.5	1,984	81.6	256
Female	11.4	0.5	0.6	1,833	83.3	239
Residence						
Urban	11.6	0.5	0.5	3,097	83.1	393
Rural	13.1	0.5	0.5	720	79.9	101
Region						
North	13.4	0.5	0.5	1,113	76.0	144
Central	11.5	0.5	0.5	2,449	85.6	318
South	12.3	0.5	0.6	254	79.4	33
Mother's educational level attended						
No education	16.7	0.4	0.4	228	82.4	28
Primary	12.5	1.0	1.0	437	80.5	46
Secondary	11.8	0.5	0.5	2,229	84.7	310
Higher	11.1	0.5	0.6	924	76.8	111
Total	11.9	0.5	0.5	3,817	82.4	495
Mean	13.2	1.4	2.1	95	NA	NA
Prevalence/Incidence mean	12.1	0.5	1.2	NA	NA	NA

Note: Medians and means are based on current status and durations are in months.
NA = Not applicable
[1] Either exclusive breastfeeding or breastfeeding and plain water only

Types of Supplemental Foods

Table 9.4 presents information on the types of food received by children under age three during the 24 hours before the interview, according to whether or not the child was still being breastfed. The introduction of supplementary foods begins early; 73 percent of infants who are breastfed are also given liquids other than infant formula or other milk. Infant formula is not commonly used in Jordan. Overall, 14 percent of breastfed children are given infant formula. Meat, poultry, fish, and eggs contain protein and other nutrients that are important for growth, recovery from illness, and mental development. The proportion of children receiving these foods rises from 2 percent at two to three months of age to 61 percent at 12-13 months of age. Foods made from grains, flour, or cereals (such as porridge) are given to more than half (57 percent) of children 4-5 months old. By 8-9 months of age, more than 81 percent of infants are getting grains, flour, or cereals and 29 percent are getting tubers. Among children who are not breastfed, the introduction of supplements starts much younger.

Table 9.4 Foods received by children in preceding 24 hours

Percentage of children under three years of age who received specific foods in the 24 hours before the interview, and the percentage using a bottle with a nipple, by breastfeeding status and child's age in months, Jordan 1997

Age (in months)	Breast milk only	Liquids			Solid/mushy food				Use of bottle with a nipple	Number of children
		Infant formula	Other milk	Other liquids	Meat/ poultry/ fish/ eggs	Grain/ flour/ cereal	Tubers/ plantain	Other		
BREASTFEEDING CHILDREN										
<2	21.1	28.1	1.3	59.0	0.0	0.0	0.0	1.0	41.9	130
2-3	11.5	29.8	4.2	49.5	1.6	15.7	1.4	6.9	42.0	162
4-5	4.7	26.1	15.0	54.7	6.6	56.6	10.4	37.7	32.9	165
6-7	0.7	10.8	25.2	68.5	26.9	73.9	29.4	70.9	22.9	179
8-9	0.0	6.9	25.7	78.8	41.1	80.7	28.8	81.5	19.1	142
10-11	0.0	7.1	34.6	91.1	58.3	81.2	36.3	90.6	19.7	138
12-13	0.0	6.9	37.0	85.0	61.4	83.4	45.9	95.2	19.0	105
14-15	0.0	4.4	36.6	90.0	74.1	86.5	47.0	94.3	10.1	68
16-17	0.0	1.1	33.5	91.2	59.4	85.3	41.3	94.5	7.1	62
18-23	0.0	5.2	46.0	92.2	77.5	86.7	49.5	98.6	15.1	111
24-29	0.0	0.0	58.0	92.1	81.1	89.8	54.1	100.0	6.2	27
30-35	*	*	*	*	*	*	*	*	*	15
0-3 months	15.8	29.1	2.9	53.7	0.9	8.7	0.8	4.3	41.9	292
4-6 months	3.7	22.2	17.8	58.7	12.0	60.7	14.8	47.7	28.6	242
7-9 months	0.0	7.6	25.9	75.0	36.2	79.2	30.7	77.7	21.8	244
Total	4.2	14.1	24.6	73.4	36.3	62.2	26.4	62.5	24.8	1,304
NON-BREASTFEEDING CHILDREN										
0-3 months	*	*	*	*	*	*	*	*	*	15
4-6 months	(0.0)	(57.9)	(50.5)	(83.6)	(11.8)	(74.3)	(27.9)	(56.2)	(93.3)	41
7-9 months	0.0	28.9	74.5	88.1	45.1	88.2	34.2	88.3	86.0	107
Total	0.0	6.2	71.4	93.1	77.3	89.3	49.3	96.4	29.8	2,395

Note: Figures in parentheses are based on 25-49 children. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

On average, one-quarter of breastfed children were given a bottle with a nipple. Among children still breastfeeding, bottle feeding peaks at age 0-3 months (42 percent). The use of a bottle with a nipple is much more common among children who are not breastfed.

9.2 Nutritional Status of Children

The nutritional status of children is a composite of many interrelated factors. They include environmental, economic, biological, educational, and cultural factors, as well as issues pertaining to food security. Feeding practices and the frequency of illnesses also affect nutritional status. The nutritional status of children can thus be used as an indicator of the socioeconomic development of a community or nation.

Measures of Nutritional Status in Childhood

Evaluation of nutritional status is based on the rationale that in a well-nourished population, there is a statistically predictable distribution of children of a given age with respect to height and weight. In the 1997 JPFHS, children's nutritional status is analyzed and evaluated in comparison with the commonly used U.S. National Center for Health Statistics (NCHS) standard, which is recommended by the World Health Organization (WHO). The use of this reference population is based on the finding that well-nourished young

children of all population groups follow similar growth patterns. Although there are variations in height and weight, the NCHS standard approximates a normal distribution when the population under study is large.

Data on height and weight, as well as information on the child's age in months, are used to construct the three standard indices of physical growth that describe the nutritional status of children: height-for-age, weight-for-height, and weight-for-age. Each of these indices provides somewhat different information about the nutritional status of a population of children.

Height-for-age is a measure of linear growth. Children whose measurement falls more than two standard deviations (-2 SD) below the median of the NCHS reference population are considered short for their age or *stunted*, a condition reflecting the cumulative effect of chronic malnutrition. If the child's measurement is three standard deviations (-3 SD) below the median of the reference population, the child is considered to be severely stunted. Stunting, a condition that reflects failure to receive adequate food intake over a long period of time, is also affected by repeated episodes of illness. Height-for-age thus represents a measure of the long-term effects of malnutrition in a population and does not vary appreciably according to the season of data collection.

The weight-for-height index describes current nutritional status. Children who are below -2 SD from the median of the reference population are considered *wasted*, or too thin for their height, a condition reflecting acute or recent nutritional deficit. As with stunting, children whose weight-for-height is below -3 SD of the reference median are considered severely wasted. Wasting represents a failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of recent episodes of illness. Severe wasting, which is closely linked to mortality risk, may reflect acute shortage of food.

Weight-for-age is a composite index of weight-for-height and height-for-age and, thus, does not distinguish between acute malnutrition (wasting) and chronic malnutrition (stunting). A child can be underweight for his/her age because he/she is stunted, wasted, or both. Children whose weight-for-age is below -2 SD from the median of the reference population are classified as *underweight*, and those below -3 SD are classified as severely underweight.

Collection of Anthropometric Data

In the 1997 JPFHS, children born since January 1992 whose mothers were interviewed, were weighed and measured. Their standing height (for children age 24 months and older) or recumbent length (for children under the age of 24 months) was measured using a measuring board. Of the 6,162 children age 0-59 months at the time of the survey eligible for measurement, 91 percent were weighed and measured. Of the children who were both weighed and measured, there was a small percentage for whom age data were not usable or who were considered to have implausibly low or high values for height-for-age or weight-for-height. The following analysis focuses on the 5,492 children (or 89 percent of children) 0-59 months of age, for whom complete data on age and anthropometric data were collected.

In a population in which children are healthy and well fed, only 2 percent of children are expected to fall below -2 SD on each of the three indices, whereas less than 1 percent are expected to fall below -3 SD.

Levels of Childhood Malnutrition

Table 9.5 shows the proportions of children classified as malnourished according to each of the three measures of nutritional status according to selected demographic characteristics of the child. Table 9.6 shows the same measures according to background characteristics of the mother.

Overall, children in Jordan measure up well in terms of nutritional status. Only 2 percent are acutely malnourished (weight-for-height below –2 SD); 8 percent are chronically malnourished (height-for-age below –2 SD); and 5 percent are underweight (weight-for-age below –2 SD).

The demographic differentials in nutritional status are generally small (Table 9.5). Stunting increases sharply from 3 percent among children less than 6 months old to 11 percent among children 12-23 months of age, and low weight-for-age is most common during the second year of life (12-23 months old). The finding that wasting increases from 1 percent among children less than 6 months of age to 3 percent among children 12-23 months of age indicates that food supplementation during the weaning period may be inadequate.

Table 9.5 Nutritional status of children by demographic characteristics

Among children under five years, the percentage classified as undernourished according to three indices of anthropometric status: height-for-age, weight-for-age and weight-for-height by child's age group and other demographic characteristics, Jordan 1997

	Height-for-age		Weight-for-height		Weight-for-age		
Demographic characteristic	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage below -3 SD	Percentage below - 2 SD[1]	Number of children
Child's age							
<6 months	0.3	3.3	0.0	1.0	(0.0)	0.8	420
6-11 months	1.5	5.6	0.2	1.6	(0.9)	4.8	595
12-23 months	2.3	10.6	0.1	2.7	(0.6)	6.5	1,132
24-35 months	1.9	6.1	0.2	2.0	(0.7)	4.9	1,119
36-47 months	1.2	8.2	0.1	1.2	(0.1)	5.4	1,151
48-59 months	1.5	9.0	0.5	2.1	(0.7)	5.1	1,075
Child's sex							
Male	1.8	8.1	0.1	1.7	(0.5)	4.6	2,780
Female	1.3	7.4	0.3	2.0	(0.5)	5.5	2,712
Birth order							
1	1.4	5.4	0.0	2.0	(0.4)	4.2	1,072
2-3	1.2	7.2	0.2	2.3	(0.4)	4.0	1,943
4-5	1.5	8.3	0.4	2.1	(0.6)	6.1	1,222
6+	2.4	10.1	0.2	1.0	(0.7)	6.4	1,256
Previous birth interval							
First birth	1.4	5.6	0.0	2.0	(0.4)	4.1	1,087
< 24 months	1.9	9.9	0.4	2.0	(0.8)	6.1	1,935
24-47 months	1.6	8.3	0.2	2.0	(0.5)	5.6	1,806
48+ months	0.8	3.8	0.0	1.0	(0.0)	2.0	665
Total	1.6	7.8	0.2	1.9	(0.5)	5.1	5,492

Note: Figures in parentheses are based on 25-49 children. Figures are for children born in the period 0-59 months preceding the survey. Each index is expressed in terms of the number of standard deviation (SD) units from the median of the NCHS/CDC/WHO international reference population. Children are classified as malnourished if their Z-scores are below minus two or minus three standard deviations (-2 SD or -3 SD) from the median of the reference population.

[1] Includes children who are below -3 SD

In terms of nutritional status, girls are slightly better off than boys, high-birth-order children have a greater degree of stunting than low-birth-order children, and children who are born after a long birth interval (4 years or more) are less likely to be malnourished than children born after a short birth interval.

Stunting and wasting are strongly associated with residence. Rural children are more likely to be malnourished than urban children (Table 9.6). The mother's education has a strong relationship with her children's nutritional status. The proportion of stunted children ranges from 20 percent among children whose mothers have no education to 4 percent among those whose mothers have more than a secondary education. Prevalence of wasting and underweight are also inversely related to the educational level of the mother (Table 9.6). Children from the South region are more likely to be malnourished than children from the North and Central regions.

Table 9.6 Nutritional status of children by background characteristics

Percentage of children under five years of age who are classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by selected background characteristics, Jordan 1997

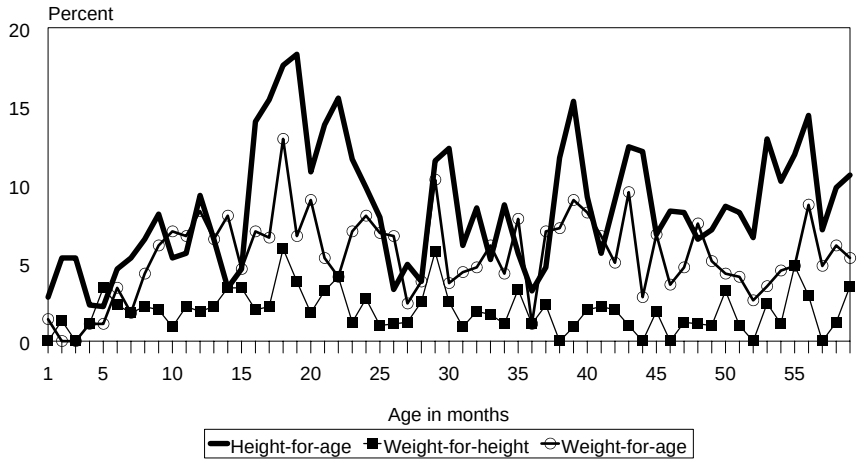
	Height-for-age			Weight-for-height			Weight-for-age			
Background characteristic	Below -3 SD	Below -2 SD[1]	Mean DHS Z-score	Below -3 SD	Below -2 SD[1]	Mean DHS Z-score	Below -3 SD	Below - 2 SD[1]	Mean DHS Z-score	Number of children
Residence										
Urban	1.2	6.4	-0.4	0.2	1.8	-0.0	0.4	4.3	-0.3	4,460
Rural	3.2	13.7	-0.9	0.1	2.1	-0.1	1.0	8.5	-0.7	1,032
Region										
North	1.6	7.2	-0.6	0.1	1.2	-0.0	0.4	5.2	-0.4	1,633
Central	1.5	7.5	-0.4	0.2	2.1	-0.1	0.5	4.7	-0.4	3,505
South	2.4	13.1	-0.8	0.2	2.7	-0.1	0.9	7.9	-0.6	355
Mother's educational level attended										
No education	4.5	20.3	-1.0	0.6	2.7	-0.2	2.6	13.3	-0.8	334
Primary	3.1	11.0	-0.7	0.2	2.1	-0.1	0.9	7.4	-0.6	674
Secondary	1.2	7.2	-0.5	0.2	1.9	-0.1	0.3	4.3	-0.4	3,189
Higher	0.9	4.1	-0.2	0.2	1.5	0.0	0.3	3.6	-0.2	1,296
Total	1.6	7.8	-0.5	0.2	1.9	-0.0	0.5	5.1	-0.4	5,492

Note: Figures are for children born in the period 0-59 months preceding the survey. Each index is expressed in terms of the number of standard deviation (SD) units from the median of the NCHS/CDC/WHO international reference population. Children are classified as malnourished if their Z-scores are below minus two or minus three standard deviations (-2 SD or -3 SD) from the median of the reference population.

[1] Includes children who are below -3 SD

Figure 9.1 shows the distribution of children by age and by the extent to which they deviate from the reference population in terms of Z-scores[1] for the three anthropometric indices. The distribution shows the deterioration in nutritional status beginning shortly after birth, continuing through the first year and a half, and then leveling off or improving slightly thereafter until the third birthday.

Figure 9.1
Malnutrition among Children Under Five by Age in Months



JPFHS 1997

Trends in Malnutrition in Jordan

The anthropometric data collected in the 1997 JPFHS are similar to those obtained during the 1990 JPFHS. Trends in the nutritional status of children under age five are presented in Table 9.7. One factor that could not be controlled was the difference in the timing of the surveys. The 1990 JPFHS fieldwork took place from October through December 1990, while the 1997 survey was conducted from June through October 1997. Nutritional status is known to be subject to seasonal variations, often deteriorating just before the peak harvest time and improving after harvest. It also varies with fluctuations in the prevalence of disease. Still, it is difficult to assess what effect, if any, the difference in timing of data collection between the two surveys might have on the results of the nutritional status of children.

Table 9.7 Trends in the nutritional status of children

Among children under five years of age, the percentage classified as malnourished according to height-for-age, weight-for-height, and weight-for-age, 1990 JPFHS and 1997 JPFHS

Index	1990 JPFHS	1997 JPFHS
Height-for-age		
< -2 SD	19.3	7.8
< -3 SD	5.3	1.6
Weight-for-height		
< -2 SD	2.8	1.9
< -3 SD	0.5	0.2
Weight-for-age		
< -2 SD	6.4	5.1
< -3 SD	0.9	0.5
Number of children	6,601	5,492

[1] A Z-score is interpreted as the number of standard deviation units above or below the mean of the standard reference population. In this case, the reference population is the NCHS/WHO/CDC standard.

Results show that the nutritional status of Jordanian children under the age of five has improved. The chronic malnutrition or stunting (low height-for-age) decreased from 19 percent to 8 percent, while acute malnutrition or wasting (low weight-for-height) declined from 3 percent to 2 percent between the time of the two surveys. The percentage of children who are underweight (low weight-for-age) also declined slightly, from 6 percent to 5 percent.

9.3 Maternal Nutritional Status

All mothers of children born since January 1992 were eligible to be weighed and measured[2] in the 1997 JPFHS. The original objective was to obtain a picture of the nutritional status of women of reproductive age but, in considering the cost and length of the survey, a decision was made to limit the anthropometric section to women with young children who would be measured anyway.[3] In reviewing the results of the maternal anthropometric data collected, it is important to remember that the sample of women is not representative of all women age 15-49 and will overrepresent high-fertility age groups—for example, women 25-34 years old.

Several measures are used to assess the nutritional status of women (Krasovec and Anderson, 1991). In this report, two are presented: height and body mass index (BMI). Maternal height is associated with past socioeconomic status and nutritional status in childhood and adolescence. It is useful in predicting the risk of difficult delivery, since small stature is frequently associated with small pelvis size. Additionally, short women run a greater risk of having low birth weight babies. The height below which a woman is considered to be at nutritional risk is in the range of 140-150 centimeters; 145 cm is the cut-off point recommended for defining maternal malnutrition. Table 9.8 shows that the mean height of mothers measured in the 1997 JPFHS is 158 cm; only 1 percent are below 145 cm.

The BMI index is commonly used to measure nutritional status in women. It is derived by dividing weight in kilograms by height squared in meters (kg/m^2). The indicator is used to assess degree of thinness or obesity. A cut-off point of 18.5 is recommended for defining moderate malnutrition, while a level below 16 classifies as severe malnutrition (James et al., 1988), which is associated with increased mortality. The results of the 1997 JPFHS indicate that the mean BMI among nonpregnant mothers is relatively high (27); only 2 percent have a BMI below 18.5.

Overall, there is little variation in measures of maternal height and body mass among women in Jordan on the basis of background characteristics. Younger women and women from the South region are, however, more likely to have a BMI below 18.5 than other women.

[2] The measuring boards and scales used to measure the mothers were the same as those used to collect anthropometric measurements of children.

[3] Interviewers were instructed to weigh and measure all women who had had a birthday since January 1992, regardless of whether or not the child was still living.

Table 9.8 Maternal nutritional status by background characteristics

Among women who had a birth in the five years preceding the survey, mean height and percentage under 145 centimenters, mean body mass index (BMI) and percentage whose BMI is less than 18.5 (kg/m^2), by selected background characteristics, Jordan 1997

Background characteristic	Height			Body mass index (kg/m^2)					
	Mean	Percentage below 145 cm	Number of women	Mean	Percentage below 18.5	Number of women	Mean DHS Z score	Percentage below -2 SD	Number of women
Age									
15-19	157.8	0.0	101	24.8	4.0	75	0.5	0.0	75
20-24	158.3	0.6	621	24.3	5.1	449	0.4	0.9	449
25-29	158.0	0.9	1,046	25.6	3.1	798	0.4	1.3	798
30-34	157.4	1.0	907	27.8	1.6	737	0.7	1.3	737
35-49	156.4	2.0	964	30.2	0.4	866	1.1	0.7	866
Residence									
Urban	157.8	1.1	2,994	27.4	2.2	2,418	0.7	0.9	2,418
Rural	155.7	1.3	646	26.9	2.7	508	0.5	1.8	508
Region									
North	157.0	1.0	1,034	27.2	2.1	802	0.6	1.2	802
Central	157.8	1.0	2,369	27.4	2.2	1,942	0.7	0.8	1,942
South	155.8	3.3	237	27.5	3.7	181	0.6	2.5	181
Educational level attended									
No education	155.3	3.2	238	29.2	2.8	200	0.9	2.1	200
Primary	156.0	2.1	454	29.3	1.3	386	1.1	0.7	386
Secondary	157.6	0.8	2,064	26.9	2.7	1,645	0.6	1.0	1,645
Higher	158.4	0.8	884	26.7	1.6	695	0.5	1.0	695
Total	157.5	1.1	3,640	27.3	2.3	2,925	0.7	1.0	2,925

Note: The BMI index excludes pregnant women and those who are less than 3 months postpartum.

CHAPTER 10

KNOWLEDGE OF AIDS

In the 1997 Jordan Population and Family Health Survey (JPFHS), ever-married women age 15-49 were asked whether they had ever heard of AIDS. If so, they were asked for their source(s) of information concerning prevention and treatment of AIDS, as well as their personal perception about the risk of getting the disease. Married women were asked about changes they had made in sexual behavior to avoid getting AIDS, and whether they and their husbands were currently using condoms.

10.1 Source of Information About AIDS

Table 10.1 shows the percentage of ever-married women who have heard of AIDS, categorized by their source of information. Data in the table show that most ever-married women in Jordan (98 percent) have heard of AIDS and that there is some variation across subgroups. In this survey, a respondent may have reported that she had heard about AIDS from more than one source. Overall, nine of ten ever-married

Table 10.1 Knowledge of AIDS and sources of AIDS information

Percentage of women who have ever heard of AIDS, percentage who received information about AIDS from specific sources, and mean number of sources of information about AIDS, by selected background characteristics, Jordan 1997

Background characteristic	Percentage who have heard of AIDS	Source of AIDS information											Number of women	Mean number of sources
		Radio	TV	News-paper	Pamph-let	Health worker	Mosque/ church	School	Com-munity meet-ing	Friend/ Rela-tive	Work place	Other sources		
Age														
15-19	98.2	29.8	85.2	31.2	13.5	8.2	0.6	14.0	13.9	20.8	0.0	2.7	207	2.2
20-24	99.1	38.4	95.0	42.9	16.5	8.4	0.1	8.6	16.4	17.7	0.4	5.3	795	2.5
25-29	98.8	40.1	92.9	42.7	15.3	8.4	0.2	2.8	19.8	18.5	0.6	3.0	1,185	2.5
30-39	97.8	41.8	91.2	44.8	12.4	7.6	0.2	1.7	19.1	16.2	1.4	3.9	2,057	2.5
40-49	96.4	43.6	88.4	36.3	7.8	6.4	0.1	1.6	21.7	17.0	0.9	3.3	1,304	2.4
Marital status														
Currently married	98.0	41.1	91.4	41.9	12.6	7.7	0.2	3.4	19.3	17.3	0.9	3.7	5,337	2.4
Formerly married	95.9	36.6	88.1	32.4	11.6	6.2	0.0	2.4	18.1	15.5	0.6	3.8	211	2.2
Residence														
Urban	98.8	41.9	92.8	44.2	13.4	7.8	0.2	3.4	20.0	17.0	1.0	3.8	4,636	2.5
Rural	93.4	36.1	83.5	27.9	8.3	6.5	0.2	3.1	15.9	18.8	0.5	3.5	912	2.2
Region														
North	97.6	33.5	88.6	36.8	12.6	7.3	0.0	3.0	14.4	25.3	1.7	3.7	1,479	2.3
Central	98.3	44.3	92.8	44.3	12.4	7.9	0.2	3.7	21.0	15.0	0.7	3.6	3,729	2.5
South	94.6	36.3	86.0	32.1	13.9	6.2	0.4	1.9	21.7	7.1	0.2	4.7	340	2.2
Educational level attended														
No education	85.5	25.8	72.2	3.1	0.7	5.4	0.0	0.5	19.8	17.2	0.0	0.5	504	1.7
Primary	96.5	32.2	86.0	15.6	3.3	7.5	0.1	0.6	23.2	17.7	0.0	2.2	850	2.0
Secondary	99.5	41.4	93.7	43.7	12.1	8.4	0.1	3.2	18.6	18.0	0.3	2.8	2,957	2.4
Higher	100.0	51.9	96.6	69.8	24.7	6.8	0.4	6.8	18.0	15.3	3.3	8.4	1,237	3.0
Total	97.9	41.0	91.2	41.6	12.6	7.6	0.2	3.4	19.3	17.3	0.9	3.7	5,548	2.4

women received information about AIDS from television, and 41-42 percent received their AIDS information from radio or newspapers and magazines. The role of community meetings and of friends and relatives in disseminating information about AIDS is also important—they were sources for 19 percent and 17 percent of respondents, respectively. In general, women living in rural areas, women living in the South region and women with no education are less likely to have heard about AIDS. Similar patterns hold for almost all subgroups. On average, the survey respondents named 2.4 sources of information on AIDS.

10.2 Knowledge of Ways to Prevent AIDS

Virtually all women in Jordan (99 percent) who have heard of AIDS believe that there are ways to avoid it (Table 10.2). Rural women, women who live in the South region, and women with less or no education are more likely to say that AIDS is unavoidable. Women who said that AIDS was preventable were able to state more than one way to avoid it. Among those women, the most common response was that AIDS could be prevented by avoiding blood transfusions (44 percent), by having sexual relations with only one partner (31 percent), by avoiding sex with homosexuals (24 percent), or by avoiding injections (22 percent). Less than 1 percent of women said using condoms during intercourse could prevent AIDS.

Thirteen percent of respondents said that one way of avoiding AIDS was by abstaining from sexual intercourse. Married women, urban women, women living in the Central region, and women with secondary or higher education were more likely to give this response.

Overall, two of ten women who have heard of AIDS were misinformed about ways of avoiding it. The group included women who said that the ways they knew of included avoiding kissing, avoiding mosquito bites, and seeking protection from a traditional healer.

Table 10.2 Knowledge of ways to avoid AIDS

Percentage of women who have heard of AIDS and who know of specific ways to avoid AIDS and percentage with misinformation, by selected background characteristics, Jordan 1997

Background characteristic	No way to avoid AIDS	Ways to avoid AIDS: Abstain from sex	Use condoms	Have only one sexual partner	Avoid sex with prosti-tutes	Avoid homo-sexuals	Avoid trans-fusions	Avoid injec-tions	Avoid kissing	Avoid mosquito bites	Seek protection from tradi-tional healer	Other	Don't know any way	Percent-age with misin-formation[1]	Number of women
Age															
15-19	1.2	11.7	0.0	27.7	12.2	20.6	30.0	18.0	1.3	0.5	0.0	18.9	21.5	19.4	203
20-24	2.2	12.3	0.2	35.0	13.3	27.8	47.0	23.2	1.1	0.4	0.2	19.8	9.6	21.0	788
25-29	1.3	14.6	0.7	31.7	14.4	23.7	46.8	24.0	1.0	0.4	0.2	17.3	9.2	18.5	1,171
30-39	1.3	14.1	0.4	29.7	12.3	24.9	46.0	23.7	1.0	0.1	0.0	15.4	10.1	16.4	2,011
40-49	1.4	11.7	0.0	28.4	11.8	20.1	36.6	15.5	1.6	0.0	0.1	16.0	16.8	17.4	1,257
Marital status															
Currently married	1.4	13.4	0.3	30.6	12.8	23.9	43.7	21.6	1.2	0.2	0.1	16.6	11.6	17.8	5,228
Formerly married	1.3	9.7	0.6	28.2	11.4	21.2	39.9	20.8	0.7	0.0	0.0	18.4	18.3	19.1	202
Residence															
Urban	1.1	14.7	0.3	31.1	13.2	24.4	45.9	23.1	1.3	0.2	0.1	16.3	10.2	17.7	4,578
Rural	3.1	6.0	0.4	27.5	10.7	20.7	31.0	13.7	0.4	0.1	0.0	18.9	20.8	19.0	852
Region															
North	1.4	9.1	0.7	36.9	17.9	12.3	37.3	17.0	0.8	0.2	0.0	19.0	16.5	19.7	1,443
Central	1.4	15.9	0.2	27.8	11.1	27.9	46.4	23.7	1.4	0.2	0.1	15.7	9.6	17.1	3,666
South	2.3	2.7	0.2	33.0	8.3	28.6	39.7	18.2	0.7	0.3	0.2	17.8	15.8	18.5	322
Educational level attended															
No education	3.6	7.6	0.0	20.3	7.6	12.4	13.8	5.2	0.3	0.0	0.0	17.9	38.3	18.2	431
Primary	2.4	10.6	0.0	23.4	12.8	17.2	23.9	14.1	0.5	0.1	0.0	15.1	24.5	15.5	820
Secondary	1.3	14.8	0.2	31.9	12.9	24.7	45.0	22.1	1.1	0.3	0.1	16.1	8.7	17.3	2,943
Higher	0.4	13.5	0.9	35.6	14.2	29.9	63.5	31.1	2.1	0.3	0.1	18.7	1.5	20.9	1,237
Total	1.4	13.3	0.3	30.5	12.8	23.8	43.6	21.6	1.2	0.2	0.1	16.7	11.8	17.9	5,430

[1] Includes avoiding kissing, avoiding mosquito bites, seeking protection from traditional healer, and other.

10.3 Women's Perceptions of the Risk of Getting AIDS

Among 5,430 women interviewed who had heard of AIDS, 58 percent said that a healthy-looking person can have AIDS; 24 percent thought that a person with AIDS could not look healthy, and 18 percent could not give a response. Women who had heard of AIDS were divided about the fatality of the disease. A majority (68 percent) said that the disease cannot be cured; 22 percent said that it is sometimes curable, and 8 percent did not know whether AIDS could be cured (Table 10.3). The proportion of women who said that AIDS cannot be cured varies; it is lowest among women age 15-19 (60 percent) and women with no education (55 percent) and highest among women age 25-39 (70 percent or higher), in urban areas (69 percent), among women in the South region (73 percent), and among women with more than a secondary education (76 percent).

Eight of ten women believe they have no chance of contracting AIDS, 15 percent say their chance is small, and 2 percent say that they have a moderate chance. A negligible percentage believe themselves to be at great risk of contracting AIDS or said that they already have HIV. Differences in the perception of AIDS risks between subgroups are small.

Table 10.3 Perception of the risk of AIDS

Percentage of women who know of AIDS by perception of the risk of AIDS, according to background characteristics, Jordan 1997

Background characteristic	Can a healthy-looking person have the AIDS virus?			Is AIDS a fatal disease?				Perceived risk of getting AIDS				Number of women
	Yes	No	Don't know/ Missing	Almost never	Some-times	Almost always	Don't know/ Missing	No risk at all	Small	Moderate	Great	
Age												
15-19	51.9	31.5	16.6	1.7	31.1	59.8	7.4	77.3	17.4	3.5	1.8	203
20-24	59.7	28.5	11.9	2.5	25.8	65.7	6.0	82.6	13.6	3.2	0.5	788
25-29	60.9	24.6	14.5	1.5	19.4	72.6	6.4	83.0	14.3	1.7	0.8	1,171
30-39	60.2	22.7	17.1	2.1	20.9	70.1	6.9	82.3	14.8	2.1	0.8	2,011
40-49	52.3	23.3	24.4	2.6	20.8	64.6	11.9	80.8	16.0	2.2	0.8	1,257
Marital status												
Currently married	58.1	24.4	17.5	2.0	21.6	68.5	7.9	81.7	15.1	2.3	0.8	5,228
Formerly married	58.6	24.0	17.5	3.9	23.7	64.7	7.7	89.8	9.1	0.5	0.2	202
Residence												
Urban	60.1	24.0	15.9	2.1	21.6	69.1	7.2	81.6	15.0	2.4	0.8	4,578
Rural	47.4	26.9	25.8	2.0	21.8	64.6	11.6	83.8	14.1	1.5	0.7	852
Region												
North	55.4	20.5	24.1	1.3	21.7	66.6	10.4	82.3	15.1	1.8	0.8	1,443
Central	59.1	26.1	14.8	2.5	22.1	68.7	6.8	81.6	15.0	2.6	0.7	3,666
South	58.8	22.6	18.7	1.6	16.7	72.6	9.0	84.4	12.1	1.0	2.4	322
Educational level attended												
No education	35.0	22.8	42.2	2.0	23.7	54.6	19.7	81.4	14.7	2.7	1.2	431
Primary	41.1	26.5	32.4	2.3	21.1	62.8	13.8	81.1	15.5	2.3	0.8	820
Secondary	59.1	26.7	14.2	2.1	22.2	68.9	6.9	83.5	13.5	2.1	0.8	2,943
Higher	75.1	18.1	6.8	2.1	20.0	75.7	2.1	79.0	17.7	2.5	0.7	1,237
Total	58.1	24.4	17.5	2.1	21.6	68.4	7.9	82.0	14.9	2.3	0.8	5,430

10.4 Knowledge and Use of Condoms

The great majority of currently married women who have heard of AIDS also know about condoms (84 percent) (Table 10.4). The proportion is smaller for women under age 20 (60 percent), women who were formerly married (63 percent), and women with no education (62 percent). Knowledge of condoms among women who have heard of AIDS increases with level of education, reaching 94 percent among women with more than a secondary education. Urban women are more likely than rural women to know about condoms (86 percent compared with 78 percent).

Overall, only 2 percent of currently married women who know of AIDS are using condoms. The use rate increases with age and education. Urban women and women who believe that AIDS is a fatal disease and consider themselves to have a moderate or great risk of contracting AIDS are more likely to use condoms than other women.

Table 10.4 Knowledge and use of condoms

Among currently married women who have heard of AIDS, percentage who know about condoms and percentage who have ever used condoms for family planning, by perception of AIDS risk and background characteristics, Jordan 1997

Background characteristic	Know about condoms	Use condoms for family planning	Number of women
Perception of AIDS risk			
Among those who believe AIDS always fatal			
Small/no risk	86.5	2.4	3,601
Moderate/great risk/has AIDS	85.7	4.1	112
Among those who do not believe AIDS always fatal, or don't know			
Small/no risk	79.5	2.1	1,658
Moderate/great risk/has AIDS	87.2	1.8	59
Age			
15-19	60.4	0.5	203
20-24	81.3	2.4	788
25-29	89.3	2.6	1,171
30-39	88.4	2.9	2,011
40-49	79.0	1.6	1,257
Marital status			
Currently married	85.2	2.5	5,228
Formerly married	62.8	0.0	202
Residence			
Urban	85.5	2.5	4,578
Rural	78.1	1.6	852
Region			
North	83.1	2.2	1,443
Central	85.3	2.5	3,666
South	79.8	1.5	322
Educational level attended			
No education	62.2	1.1	431
Primary	75.4	0.9	820
Secondary	85.9	2.4	2,943
Higher	94.4	3.6	1,237
Total	84.4	2.4	5,430

CHAPTER 11

MATERNAL MORTALITY

11.1 Introduction

The 1997 JPFHS collected data suitable for estimating maternal mortality by both direct and indirect procedures (Graham et al., 1989; Rutenberg et al., 1991). The estimates are calculated from data on the survivorship of all live births of the respondent's natural mother (i.e., respondent's siblings).

The direct approach to estimating maternal and adult mortality makes maximum use of the available data, such as information on the age of surviving siblings, the age at death of siblings who died, and the number of years prior to the survey that the sibling(s) died. The data can be aggregated to determine the number of person-years of exposure to mortality risk and the number of sibling deaths that occurred in well-defined calendar periods. Rates of maternal mortality or adult mortality are obtained by dividing maternal deaths (or adult deaths) by person-years of exposure.

The indirect approach to the estimation of maternal mortality, i.e., the *sisterhood method*, has simpler requirements than the direct method. None of the data on dates and ages of sisters are used, and data obtained from respondents about all sisters are used to estimate the lifetime risk of dying from maternal causes. However, such an estimate does not apply to a specific reference period, since it combines the mortality experience of women during the previous 50 years. Nonetheless, as Graham et al. have pointed out, combining data from respondents age 15-49 into a single estimate narrows the reference period to about 12 years prior to the survey. The biggest drawback of this method is the uncertainty of how accurately it estimates current maternal mortality (unless one assumes that mortality has been relatively constant over the years).

11.2 The Data

Each respondent was first asked to give the total number of her mother's live births. Then she was asked to provide a list of all children born to her mother (beginning with the firstborn), and whether or not each of those siblings was still alive at the survey date. For living siblings, current age was collected; for deceased siblings, age at death and year of death (or years since death) were collected. Interviewers were instructed that when a respondent could not provide precise information on siblings' age at death or number of years since death, approximate quantitative answers were acceptable. For sisters who died at age 15 or older and were married or ever-married at the time of death, in order to determine whether the death was maternity-related, the respondent was asked: "Was [NAME OF SISTER] pregnant when she died?" If the answer was no, the respondent was then asked, "Did she die during childbirth?" If the death was neither during pregnancy nor childbirth, one additional question was asked: "Did she die within two months after the end of a pregnancy or childbirth?"

Table 11.1 shows the number of siblings reported by respondents and the completeness of the reported data on current age, age at death, and years since death. Survival status of siblings was reported for all but two siblings. The sex ratio[1] of enumerated siblings (number of brothers per 100 sisters) was 115,

[1] Sex ratio is defined as number of males per 100 females.

Table 11.1 Data on siblings

Number of siblings reported by female survey respondents and completeness of reported data on sibling age, age at death (AD) and years since death (YSD), Jordan 1997

	Sisters		Brothers		All siblings	
Sibling	Number	Percentage	Number	Percentage	Number	Percentage
All siblings	41,211	100.0	43,325	100.0	84,536	100.0
Living	36,828	89.4	38,436	88.7	75,264	89.0
Dead	4,383	10.6	4,887	11.3	9,270	11.0
Status unknown	0	0.0	2	0.0	2	0.0
Living siblings	36,828	100.0	38,436	100.0	75,264	100.0
Age reported	36,822	100.0	38,427	100.0	75,250	100.0
Age missing	6	0.0	9	0.0	14	0.0
Dead siblings	4,383	100.0	4,887	100.0	9,270	100.0
AD and YSD reported	4,331	98.8	4,840	99.0	9,172	98.9
AD missing	4	0.1	6	0.1	9	0.1
YSD missing	32	0.7	26	0.5	58	0.6
Both AD and YSD missing	16	0.4	15	0.3	31	0.3

which is the same as the ratio in the international data (i.e., sex ratio at birth of 113-115). For surviving siblings, reporting of age was complete. In the case of dead siblings, reporting of age at death and years since death was complete for 98.9 percent.

Although the type of information collected in the survey permits estimation of maternal mortality by the direct method (as indicated at the beginning of this chapter), it will not be used here because the 1997 JPFHS sample is too small. The direct method is not designed for low-mortality settings such as in a country like Jordan where the infant mortality rate is less than 30 per 1,000 births, the majority of births (93 percent) are at health facilities, and most deliveries (97 percent) are by trained medical personnel. Table 11.2 shows that among the mortality data for all sisters there were only nine maternal deaths during the period 1991-97, 11 during 1984-90, and 21 overall during 1984-97.

Table 11.2 Mortality data

Number of female deaths and maternal deaths by age and period, Jordan 1997

	1991-1997		1984-1990		1984-1997	
Age	All deaths	Maternal deaths	All deaths	Maternal deaths	All deaths	Maternal deaths
15-19	34	0	17	1	52	1
20-24	19	0	13	3	32	3
25-29	9	4	6	3	15	7
30-34	21	1	11	2	32	4
35-39	10	3	12	1	22	4
40-44	15	1	6	1	21	2
45-49	14	0	3	0	18	0
Total 15-49	122	9	68	11	192	21

11.3 Indirect Estimates of Maternal Mortality

The indirect sisterhood method is used here as an alternative to the direct method.[2] The indirect approach requires a smaller sample and provides an overall estimate of maternal mortality for sisters of all respondents combined, an estimate that pertains to approximately 12 years prior to the survey. When dealing with small samples, it is preferable to use the overall estimate because it is subject to less sampling variability. In this case, the data are aggregated by five-year age groups of respondents. For each age group, information on the number of maternal deaths among all sisters of respondents and on the number of "sister units" of risk is used to estimate lifetime risk of dying from maternal causes.

The indirect estimates of maternal mortality are given in Table 11.3. When aggregating the data over all respondents, the lifetime risk of maternal death is 0.0051 (column f). This can be transformed into an estimate of the maternal mortality ratio of 79 maternal deaths per 100,000 births, applicable to a period around 1985. This level is the lowest among the 14 countries for which the DHS program has collected maternal mortality data as of 1995 (Stanton et al., 1997). It should be emphasized that the standard errors of estimates presented here are large and the results should be interpreted with caution.

Table 11.3 Indirect estimates of maternal mortality

Estimates of maternal mortality using the indirect method, Jordan 1997

Age group	Number of respondents (a)	Number of sisters 15+ (b)	Adjust-ment factor (c)	Sister units of risk exposure (d=b×c)	Maternal deaths (e)	Lifetime risk of maternal death (f)=(e)/(d)	Proportions of dead sisters dying of maternal causes (g)
15-19	2,523	8,102[a]	0.107	867	0.0	0.0000	0.0
20-24	2,050	6,582[a]	0.206	1,356	3.1	0.0023	14.9
25-29	1,790	5,746[a]	0.343	1,971	8.9	0.0045	19.6
30-34	1,395	4,718	0.503	2,373	17.1	0.0072	33.6
35-39	1,036	3,463	0.664	2,299	10.8	0.0047	19.1
40-44	778	2,546	0.802	2,042	12.7	0.0062	23.4
45-49	593	1,723	0.900	1,551	10.2	0.0066	17.8
Total (15-49)	10,165	30,408		12,458	63.4	0.0051	19.2

Total fertility rate (TFR) 1983-87	6.4	children per woman
Maternal mortality ratio (MMR)[b]	79	per 100,000 live births

[a] The number of sisters for these age groups are inflated by a factor equal to the average number of sisters to respondents age 30+.

[b] MMR = (1 - [(1 - Lifetime risk]$^{1/TFR}$) × 100,000, where TFR represents the total fertility rate 10-14 years preceding the survey.

[2] It is recognized that the direct method has more advantages than the indirect method. Stanton et al. (1997) summarized these advantages as follows:

- it allows calculation of rates/ratios for well-defined reference periods;
- it allows monitoring of trends;
- it permits analysis of maternal mortality by parity or other characteristics;
- it permits several data quality checks.

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APPENDIX A

SAMPLE DESIGN

APPENDIX A

SAMPLE DESIGN

The primary objective of the sample design for the Jordan Population and Family Health Survey (JPFHS) was to provide reliable estimates of fertility and mortality rates, as well as estimates of the use of contraceptive methods at the national level and for major subpopulations. The major subpopulations considered were categorized as urban and rural areas, subdivided into the three regions: North (comprising Irbid, Jerash, Ajlun, and Mafraq governorates), Central (consisting of Amman, Madaba, Balqa, and Zarqa governorates), and South (consisting of Karak, Tafielah, Ma'an, and Aqaba governorates). Estimates were also provided for each of the three large governorates—Amman, Irbid and Zarqa.

A.1 Sample Design and Selection

The 1997 JPFHS sample was based on the 1994 Census of Population and Housing. For the most recent census, the country was subdivided into census blocks, having between 100 to 200 dwellings each. For the National Master Sample designed in 1995, a total of 2,400 primary sampling units (PSUs) consisting of at least one block each were selected. The PSUs were grouped into 48 replicates of 50 PSUs each. The 1997 JPFHS, a subsample of the national master sample, was selected by means of a two-stage sampling design. In the first stage, 300 PSUs were selected with probability proportional to the number of housing units in the PSU. In the second stage, occupied housing units were selected within each selected PSU. The target sample was a minimum of 400 interviews of eligible (ever-married, age 15-49) women in each domain (i.e., urban, rural, region, and the three largest governorates) to provide a total of 6,100 interviews (see Table A.1). A listing of all housing units in each selected census block, carried out in January-February 1997, showed the occupied housing units involved. A sample of occupied housing units was selected by maintaining a self-weighted sampling fraction within each governorate.

Table A.1 Sample allocation by governorate, Jordan 1997

Governorate	Number of PSUs	Housing units	Women targeted for interview
Amman	120	3,200	1,880
Madaba	6	200	120
Balqa	18	960	600
Zarqa	21	1,420	920
Irbid	54	1,500	920
Jerash	12	250	160
Ajlun	6	200	120
Mafraq	12	620	400
Karak	12	720	400
Tafielah	6	320	180
Ma'an	6	360	200
Aqaba	6	360	200
Jordan	300	10,110	6,100

A.2 Sample Implementation

The fieldwork for the household interview was carried out from June 7 through October 31, 1997. A total of 7,924 occupied housing units were selected, of which 7,592 households were found. Of those households, 7,335 were interviewed successfully, yielding a response rate of 96.6 percent. The number of women eligible for individual interview (ever-married women age 15 to 49) identified in the household interviews was 5,765, of whom 5,548 were successfully interviewed, with a response rate of 96.2 percent. Thus, the overall response rate for the 1997 JPFHS (the product of the household and the individual response rates) was 93.0 percent.

Household response rates ranged from 95.7 percent in the Central region to 98.5 percent in the South region (see Table A.2). The differentials in rate of response to individual interview is similar to that of the household interview—lowest in the Central region (95.2 percent) and highest in the South region (98.3 percent). Considering the combined household and individual response rates, the Central region shows the lowest rate (91.1 percent), while the South region has the highest (96.8 percent).

Table A.2 Sample implementation

Percent distribution of households and eligible women in the JDHS sample by results of the interviews and household, eligible women, and overall response rates, according to residence and region, Jordan 1997

	Region			Residence		
Result	North	Central	South	Urban	Rural	Total
Selected households						
Completed (C)	94.7	91.2	94.5	92.5	92.8	92.6
Household present but no competent respondent at home (HP)	1.6	3.4	1.3	2.8	2.1	2.7
Refused (R)	0.0	0.5	0.2	0.4	0.0	0.4
Dwelling not found (DNF)	0.4	0.2	0.0	0.2	0.3	0.2
Household absent (HA)	0.6	1.6	0.9	1.2	1.2	1.2
Dwelling vacant (DV)	2.6	3.0	2.9	2.7	3.5	2.9
Dwelling destroyed (DD)	0.0	0.1	0.2	0.0	0.2	0.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,007	4,828	1,089	6,281	1,643	7,924
Household response rate (HRR)[1]	97.9	95.7	98.5	96.4	97.5	96.6
Eligible women						
Completed (EWC)	97.6	95.2	98.3	95.9	97.4	96.2
Not at home (EWNH)	1.9	3.1	1.2	2.6	2.1	2.5
Postponed (EWP)	0.1	0.1	0.0	0.1	0.0	0.1
Refused (EWR)	0.1	0.3	0.1	0.2	0.2	0.2
Partly completed (EWPC)	0.0	0.1	0.0	0.0	0.2	0.1
Incapacitated (EWI)	0.1	0.1	0.0	0.1	0.2	0.1
Other (EWO)	0.1	1.2	0.4	1.0	0.0	0.8
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number	1,527	3,470	768	4,604	1,161	5,765
Eligible woman response rate (EWRR)[2]	97.6	95.2	98.3	95.9	97.4	96.2
Overall response rate (ORR)[3]	95.5	91.1	96.8	92.5	95.0	93.0

Note: The household response rate is calculated for completed households as a proportion of completed, no competent respondent, refused, and dwelling not found. The eligible woman response rate is calculated for completed interviews as a proportion of completed, not at home, postponed, refused, partially completed, incapacitated and "other." The overall response rate is the product of the household and woman response rates.

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{C}{C + HP + R + DNF} \times 100$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{EWC}{EWC + EWNH + EWR + EWPC + EWI + EWO} \times 100$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = (HRR \times EWRR) \div 100$$

APPENDIX B

ESTIMATES OF SAMPLING DESIGNS

APPENDIX B

ESTIMATES OF SAMPLING ERRORS

The estimates from a sample survey are subject to two types of errors: nonsampling errors and sampling errors. Nonsampling errors are the result of mistakes made in implementing data collection and data processing (such as failure to locate and interview the correct household, misunderstanding questions either by the interviewer or the respondent, and data entry errors). Although during the implementation of the 1997 JPFHS numerous efforts were made to minimize this type of error, nonsampling errors are not only impossible to avoid but also difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The respondents selected in the 1997 JPFHS constitute only one of many samples that could have been selected from the same population, given the same design and expected size. Each of those samples would have yielded results differing somewhat from the results of the sample actually selected. Sampling errors are a measure of the variability among all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, since the 1997 JDHS-II sample resulted from a multistage stratified design, formulae of higher complexity had to be used. The computer software used to calculate sampling errors for the 1997 JDHS-II was the ISSA Sampling Error Module, which uses the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics, such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed by using the formula given below, with the standard error being the square root of the variance:

$$var(r) = \frac{1-f}{x^2} \sum_{h=1}^{H} \left[\frac{m_h}{m_h - 1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right],$$

in which

$$z_{hi} = y_{hi} - r.x_{hi} \text{ , and } z_h = y_h - r.x_h \text{ ,}$$

where h represents the stratum, which varies from 1 to H,
m_h is the total number of clusters selected in the h^{th} stratum,
y_{hi} is the sum of the values of variable y in the i^{th} cluster in the h^{th} stratum,
x_{hi} is the sum of the number of cases in the i^{th} cluster in the h^{th} stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and it calculates standard errors for those estimates on the basis of simple formulae. Each replication considers *all but one* clusters in calculating the estimates. Pseudo-independent replications are thus created. In the 1997 JPFHS, there were 300 nonempty clusters; hence, 300 replications were created. The variance of a rate r is calculated as follows:

$$ET^2(R) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2 ,$$

in which

$$r_i = kr - (k-1)r_{(i)} ,$$

where r is the estimate computed from the full sample of 300 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 299 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

ISSA computes not only the standard error but also the design effect (DEFT) for each estimate. (DEFT is defined as the ratio between the standard error for the given sample design and the standard error that would have resulted if a simple random sample had been used). A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample; a value greater than 1.0 indicates the increase in the sampling error caused by using a more complex and less statistically efficient design. ISSA also computes the relative error and confidence limits for the estimates.

Sampling errors for the 1997 JPFHS are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for three survey regions—North, Central, and South. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 through B.7 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE) for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, since there is no known unweighted value for woman-years of exposure to childbearing.

The confidence interval (e.g., as calculated for *ideal number of children*) can be interpreted as follows: the overall average from the national sample is 4.244 and its standard error is 0.035. Therefore, to obtain the 95 percent confidence limits, the sample estimate of 4.244±2×0.035 is added and subtracted at twice the standard error. There is a high probability (95 percent) that the *true* average ideal number of children is between 4.174 and 4.314.

Sampling errors are analyzed for the national sample and for two separate groups of estimates: 1) means and proportions, and 2) complex demographic rates. The relative standard errors (SE/R) for the means and proportions range between zero percent and 16.6 percent, with an average of 3.7 percent; the highest relative standard errors are for estimates of very low values (e.g., currently using injectables). If estimates of very low values (less than 10 percent) were removed, the average would drop to 2.1 percent. So, in general, the relative standard error for most estimates for the country as a whole is small, except for estimates of very small proportions. The relative standard error for the total fertility rate is small at 1.8 percent; howerver, for mortality rates, the average relative standard error is much higher at 12.1 percent.

There are differentials in the relative standard error for the estimates of subpopulations. For example, for the variable *fully immunized*, the relative standard errors as a percentage of the estimated mean for the whole country, for the rural areas, and for the Central Region are 8.5 percent, 40.2 percent, and 9.5 percent, respectively.

For the total sample, the value of the design effect (DEFT), averaged over all variables, is 1.15. That value, owing to multistage clustering of the sample, caused variance to increase by a factor of 1.32 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Jordan 1997

Variable	Estimate	Base population
Urban residence	Proportion	Ever-married women 15-49
No education	Proportion	Ever-married women 15-49
With secondary or higher education	Proportion	Ever-married women 15-49
Currently married	Proportion	Ever-married women 15-49
Married before age 20	Proportion	Ever-married women 15-49
Children ever born	Mean	Currently married women 15-49
Children ever born to women over 40	Mean	Currently married women age 40-49
Children surviving	Mean	Currently married women 15-49
Know any contraceptive method	Proportion	Currently married women 15-49
Know any modern contraceptive method	Proportion	Currently married women 15-49
Ever used any contraceptive method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using injectabless	Proportion	Currently married women 15-49
Currently using condom	Proportion	Currently married women 15-49
Currently using female sterilization	Proportion	Currently married women 15-49
Currently using periodic abstinence	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Using public sector source	Proportion	Current users of modern method
Want no more children	Proportion	Currently married women 15-49
Want to delay at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	Ever-married women 15-49
Mothers received tetanus injection	Proportion	Births in last 5 years
Mothers received medical care at birth	Proportion	Births in last 5 years
Had diarrhea in the last 2 weeks	Proportion	Children under 5
Treated with ORS packets	Proportion	Children under 5 with diarrhea in last 2 weeks
Sought medical treatment	Proportion	Children under 5 with diarrhea in last 2 weeks
Having health card	Proportion	Children 12-23 months
Received BCG vaccination	Proportion	Children 12-23 months
Received DPT vaccination (3 doses)	Proportion	Children 12-23 months
Received polio vaccination (3 doses)	Proportion	Children 12-23 months
Received measles vaccination	Proportion	Children 12-23 months
Fully immunized	Proportion	Children 12-23 months
Weight-for-height (below -2 SD)	Proportion	Children 0-47 months
Height-for-age (below -2 SD)	Proportion	Children 0-47 months
Weight-for-age (below -2 SD)	Proportion	Children 0-47 months
Total fertility rate (3 years)	Rate	Woman-years of exposure to childbearing
Neonatal mortality rate (0-9 years)[1]	Rate	Number of births
Postneonatal mortality rate (0-9 years)[1]	Rate	Number of births
Infant mortality rate (0-9 years)[1]	Rate	Number of births
Child mortality rate (0-9 years)[1]	Rate	Number of births
Under-five mortality rate (0-9 years)[1]	Rate	Number of births

[1] For total (0-4 years)

Table B.2 Sampling errors - National sample: Jordan 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.836	0.006	5548	5548	1.114	0.007	0.824	0.847
No education	0.091	0.006	5548	5548	1.513	0.064	0.079	0.103
With secondary or higher education	0.756	0.008	5548	5548	1.473	0.011	0.739	0.773
Currently married	0.962	0.003	5548	5548	1.004	0.003	0.957	0.967
Married before age 20	0.510	0.008	5342	5341	1.234	0.017	0.493	0.527
Children ever born	4.315	0.046	5548	5548	1.102	0.011	4.222	4.408
Children ever born to women over 40	7.159	0.123	1281	1304	1.309	0.017	6.913	7.405
Children surviving	4.117	0.044	5548	5548	1.109	0.011	4.029	4.205
Know any contraceptive method	1.000	0.000	5340	5337	0.855	0.000	0.999	1.000
Know any modern contraceptive method	1.000	0.000	5340	5337	0.855	0.000	0.999	1.000
Ever used any contraceptive method	0.787	0.007	5340	5337	1.281	0.009	0.772	0.801
Currently using any method	0.526	0.008	5340	5337	1.170	0.015	0.510	0.542
Currently using a modern method	0.377	0.008	5340	5337	1.137	0.020	0.362	0.392
Currently using pill	0.065	0.004	5340	5337	1.153	0.060	0.058	0.073
Currently using IUD	0.231	0.006	5340	5337	1.072	0.027	0.219	0.244
Currently using injectables	0.007	0.001	5340	5337	1.041	0.166	0.005	0.010
Currently using condom	0.024	0.002	5340	5337	1.163	0.101	0.019	0.029
Currently using female sterilization	0.042	0.003	5340	5337	1.015	0.066	0.036	0.047
Currently using periodic abstinence	0.049	0.004	5340	5337	1.229	0.074	0.042	0.057
Currently using withdrawal	0.076	0.004	5340	5337	1.053	0.050	0.068	0.083
Using public sector source	0.281	0.013	1969	2019	1.243	0.045	0.256	0.307
Want no more children	0.470	0.007	5340	5337	1.078	0.016	0.456	0.485
Want to delay at least 2 years	0.274	0.007	5340	5337	1.094	0.024	0.260	0.287
Ideal number of children	4.244	0.035	5248	5270	1.241	0.008	4.174	4.314
Mothers received tetanus injection	0.395	0.009	6490	6360	1.249	0.023	0.377	0.413
Mothers received medical care at birth	0.966	0.003	6490	6360	1.220	0.004	0.959	0.973
Had diarrhea in the last 2 weeks	0.180	0.006	6277	6162	1.072	0.031	0.169	0.191
Treated with ORS packets	0.240	0.014	1117	1110	1.020	0.058	0.212	0.268
Sought medical treatment	0.497	0.017	1117	1110	1.068	0.035	0.462	0.531
Having health card	0.812	0.012	1290	1275	1.081	0.015	0.788	0.836
Received BCG vaccination	0.241	0.019	1290	1275	1.533	0.077	0.204	0.278
Received DPT vaccination (3 doses)	0.959	0.006	1290	1275	1.079	0.007	0.946	0.972
Received polio vaccination (3 doses)	0.957	0.007	1290	1275	1.163	0.007	0.944	0.971
Received measles vaccination	0.899	0.009	1290	1275	1.050	0.010	0.880	0.917
Fully immunized	0.205	0.017	1290	1275	1.540	0.085	0.170	0.240
Weight-for-height (below -2 SD)	0.019	0.002	5589	5492	1.037	0.102	0.015	0.023
Height-for-age (below -2 SD)	0.078	0.004	5589	5492	1.079	0.054	0.069	0.086
Weight-for-age (below -2 SD)	0.051	0.004	5589	5492	1.138	0.071	0.043	0.058
Total fertility rate (3 years)	4.350	0.077	NA	27935	1.197	0.018	4.196	4.504
Neonatal mortality rate (0-4 years)	18.990	2.131	6648	6504	1.109	0.112	14.728	23.251
Postneonatal mortality rate (0-4 years)	9.556	1.354	6652	6508	1.065	0.142	6.848	12.264
Infant mortality rate (0-4 years)	28.545	2.536	6652	6508	1.081	0.089	23.474	33.617
Child mortality rate (0-4 years)	5.864	1.074	6658	6515	1.116	0.183	3.716	8.011
Under-five mortality rate (0-4 years)	34.242	2.686	6662	6518	1.052	0.078	28.869	39.614

NA = Not available

Table B.3 Sampling errors - Urban sample: Jordan 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	1.000	0.000	4417	4636	Und	0.000	1.000	1.000
No education	0.064	0.005	4417	4636	1.364	0.078	0.054	0.074
With secondary or higher education	0.791	0.009	4417	4636	1.420	0.011	0.774	0.809
Currently married	0.964	0.003	4417	4636	0.966	0.003	0.959	0.969
Married before age 20	0.492	0.009	4251	4461	1.227	0.019	0.473	0.511
Children ever born	4.196	0.049	4417	4636	1.083	0.012	4.097	4.294
Children ever born to women over 40	6.880	0.131	1035	1104	1.289	0.019	6.618	7.143
Children surviving	4.015	0.047	4417	4636	1.084	0.012	3.922	4.109
Know any contraceptive method	1.000	0.000	4260	4469	Und	0.000	1.000	1.000
Know any modern contraceptive method	1.000	0.000	4260	4469	Und	0.000	1.000	1.000
Ever used any contraceptive method	0.799	0.008	4260	4469	1.283	0.010	0.783	0.815
Currently using any method	0.540	0.009	4260	4469	1.121	0.016	0.523	0.557
Currently using a modern method	0.390	0.008	4260	4469	1.123	0.021	0.374	0.407
Currently using pill	0.064	0.004	4260	4469	1.176	0.069	0.056	0.073
Currently using IUD	0.245	0.007	4260	4469	1.024	0.028	0.232	0.259
Currently using injectables	0.006	0.001	4260	4469	1.024	0.196	0.004	0.009
Currently using condom	0.026	0.003	4260	4469	1.153	0.109	0.020	0.031
Currently using female sterilization	0.042	0.003	4260	4469	0.990	0.072	0.036	0.048
Currently using periodic abstinence	0.052	0.004	4260	4469	1.241	0.081	0.044	0.061
Currently using withdrawal	0.076	0.004	4260	4469	1.045	0.056	0.068	0.085
Using public sector source	0.267	0.013	1644	1750	1.220	0.050	0.241	0.294
Want no more children	0.480	0.008	4260	4469	1.051	0.017	0.464	0.496
Want to delay at least 2 years	0.260	0.007	4260	4469	1.059	0.027	0.246	0.275
Ideal number of children	4.204	0.038	4218	4434	1.208	0.009	4.128	4.280
Mothers received tetanus injection	0.402	0.010	4977	5153	1.211	0.025	0.382	0.422
Mothers received medical care at birth	0.977	0.003	4977	5153	1.087	0.003	0.971	0.983
Had diarrhea in the last 2 weeks	0.177	0.006	4832	5002	1.031	0.034	0.165	0.189
Treated with ORS packets	0.222	0.016	833	885	1.061	0.072	0.190	0.254
Sought medical treatment	0.483	0.019	833	885	1.037	0.039	0.445	0.521
Having health card	0.809	0.013	1000	1038	1.007	0.016	0.783	0.834
Received BCG vaccination	0.276	0.021	1000	1038	1.479	0.077	0.233	0.318
Received DPT vaccination (3 doses)	0.961	0.007	1000	1038	1.079	0.008	0.947	0.975
Received polio vaccination (3 doses)	0.959	0.007	1000	1038	1.121	0.008	0.944	0.974
Received measles vaccination	0.899	0.010	1000	1038	1.037	0.012	0.878	0.920
Fully immunized	0.236	0.020	1000	1038	1.505	0.086	0.195	0.277
Weight-for-height (below -2 SD)	0.018	0.002	4302	4460	1.008	0.114	0.014	0.023
Height-for-age (below -2 SD)	0.064	0.004	4302	4460	1.095	0.069	0.055	0.073
Weight-for-age (below -2 SD)	0.043	0.004	4302	4460	1.129	0.087	0.035	0.050
Total fertility rate (3 years)	4.220	0.083	NA	22165	1.207	0.020	4.054	4.386
Neonatal mortality rate (0-9 years)	17.784	1.719	9547	9885	1.063	0.097	14.345	21.223
Postneonatal mortality rate (0-9 years)	8.906	1.016	9548	9886	0.992	0.114	6.875	10.938
Infant mortality rate (0-9 years)	26.691	1.985	9548	9886	1.007	0.074	22.721	30.660
Child mortality rate (0-9 years)	4.693	0.812	9553	9891	1.126	0.173	3.069	6.317
Under-five mortality rate (0-9 years)	31.258	2.052	9554	9892	0.966	0.066	27.155	35.362

NA = Not available
Und = Undefined

Table B.4 Sampling errors - Rural sample: Jordan 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.000	0.000	1131	912	Und	Und	0.000	0.000
No education	0.226	0.025	1131	912	2.007	0.110	0.176	0.276
With secondary or higher education	0.576	0.027	1131	912	1.822	0.046	0.523	0.630
Currently married	0.952	0.008	1131	912	1.178	0.008	0.937	0.967
Married before age 20	0.601	0.018	1091	880	1.239	0.031	0.564	0.638
Children ever born	4.923	0.123	1131	912	1.161	0.025	4.676	5.169
Children ever born to women over 40	8.699	0.309	246	200	1.424	0.036	8.080	9.317
Children surviving	4.634	0.118	1131	912	1.192	0.026	4.397	4.871
Know any contraceptive method	0.998	0.001	1080	868	0.953	0.001	0.995	1.000
Know any modern contraceptive method	0.998	0.001	1080	868	0.953	0.001	0.995	1.000
Ever used any contraceptive method	0.724	0.018	1080	868	1.320	0.025	0.688	0.760
Currently using any method	0.453	0.022	1080	868	1.469	0.049	0.408	0.498
Currently using a modern method	0.307	0.017	1080	868	1.211	0.055	0.273	0.341
Currently using pill	0.071	0.008	1080	868	0.963	0.106	0.056	0.086
Currently using IUD	0.159	0.015	1080	868	1.372	0.096	0.129	0.190
Currently using injectables	0.012	0.004	1080	868	1.126	0.310	0.005	0.020
Currently using condom	0.017	0.005	1080	868	1.150	0.264	0.008	0.026
Currently using female sterilization	0.042	0.007	1080	868	1.135	0.165	0.028	0.056
Currently using periodic abstinence	0.035	0.005	1080	868	0.978	0.156	0.024	0.046
Currently using withdrawal	0.074	0.008	1080	868	1.064	0.115	0.057	0.091
Using public sector source	0.374	0.036	325	269	1.328	0.095	0.303	0.445
Want no more children	0.420	0.019	1080	868	1.262	0.045	0.382	0.458
Want to delay at least 2 years	0.341	0.019	1080	868	1.330	0.056	0.303	0.379
Ideal number of children	4.455	0.097	1030	836	1.486	0.022	4.261	4.648
Mothers received tetanus injection	0.364	0.022	1513	1207	1.415	0.060	0.320	0.408
Mothers received medical care at birth	0.922	0.013	1513	1207	1.464	0.014	0.896	0.948
Had diarrhea in the last 2 weeks	0.194	0.014	1445	1160	1.255	0.074	0.166	0.223
Treated with ORS packets	0.309	0.027	284	225	0.888	0.087	0.255	0.363
Sought medical treatment	0.549	0.041	284	225	1.216	0.075	0.467	0.631
Having health card	0.827	0.032	290	237	1.434	0.038	0.764	0.890
Received BCG vaccination	0.090	0.035	290	237	2.082	0.386	0.021	0.160
Received DPT vaccination (3 doses)	0.951	0.014	290	237	1.074	0.014	0.924	0.978
Received polio vaccination (3 doses)	0.952	0.017	290	237	1.364	0.018	0.917	0.986
Received measles vaccination	0.897	0.020	290	237	1.105	0.022	0.858	0.936
Fully immunized	0.070	0.028	290	237	1.895	0.402	0.014	0.127
Weight-for-height (below -2 SD)	0.021	0.005	1287	1032	1.171	0.224	0.011	0.030
Height-for-age (below -2 SD)	0.137	0.012	1287	1032	1.160	0.089	0.113	0.162
Weight-for-age (below -2 SD)	0.085	0.011	1287	1032	1.259	0.127	0.063	0.106
Total fertility rate (3 years)	5.003	0.188	NA	5895	1.104	0.038	4.627	5.380
Neonatal mortality rate (0-9 years)	20.326	3.230	2934	2323	1.035	0.159	13.867	26.786
Postneonatal mortality rate (0-9 years)	18.744	3.717	2937	2326	1.355	0.198	11.309	26.178
Infant mortality rate (0-9 years)	39.070	4.808	2937	2326	1.142	0.123	29.454	48.686
Child mortality rate (0-9 years)	6.882	1.733	2938	2326	0.945	0.252	3.416	10.347
Under-five mortality rate (0-9 years)	45.683	5.602	2941	2330	1.210	0.123	34.478	56.888

NA = Not available
Und = Undefined

Table B.5 Sampling errors - North region sample: Jordan 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.693	0.015	1490	1479	1.255	0.022	0.663	0.723
No education	0.117	0.011	1490	1479	1.361	0.097	0.095	0.140
With secondary or higher education	0.725	0.016	1490	1479	1.360	0.022	0.694	0.757
Currently married	0.966	0.005	1490	1479	1.023	0.005	0.956	0.975
Married before age 20	0.523	0.019	1425	1417	1.445	0.037	0.485	0.561
Children ever born	4.662	0.100	1490	1479	1.118	0.021	4.463	4.861
Children ever born to women over 40	8.175	0.276	347	342	1.472	0.034	7.624	8.726
Children surviving	4.453	0.096	1490	1479	1.152	0.022	4.260	4.646
Know any contraceptive method	1.000	0.000	1441	1428	0.786	0.000	0.999	1.000
Know any modern contraceptive method	1.000	0.000	1441	1428	0.786	0.000	0.999	1.000
Ever used any contraceptive method	0.773	0.013	1441	1428	1.173	0.017	0.747	0.799
Currently using any method	0.495	0.016	1441	1428	1.240	0.033	0.462	0.528
Currently using a modern method	0.336	0.014	1441	1428	1.155	0.043	0.307	0.365
Currently using pill	0.053	0.007	1441	1428	1.119	0.124	0.040	0.067
Currently using IUD	0.201	0.012	1441	1428	1.172	0.062	0.176	0.226
Currently using injectables	0.008	0.003	1441	1428	1.124	0.327	0.003	0.013
Currently using condom	0.023	0.005	1441	1428	1.227	0.210	0.013	0.033
Currently using female sterilization	0.045	0.005	1441	1428	0.992	0.120	0.034	0.056
Currently using periodic abstinence	0.041	0.007	1441	1428	1.262	0.162	0.027	0.054
Currently using withdrawal	0.085	0.008	1441	1428	1.138	0.099	0.068	0.101
Using public sector source	0.387	0.030	478	483	1.358	0.078	0.327	0.448
Want no more children	0.423	0.015	1441	1428	1.120	0.034	0.394	0.453
Want to delay at least 2 years	0.319	0.014	1441	1428	1.165	0.045	0.291	0.348
Ideal number of children	4.514	0.078	1382	1381	1.429	0.017	4.359	4.669
Mothers received tetanus injection	0.421	0.020	1891	1866	1.413	0.046	0.382	0.460
Mothers received medical care at birth	0.958	0.007	1891	1866	1.320	0.008	0.943	0.973
Had diarrhea in the last 2 weeks	0.189	0.010	1839	1820	1.079	0.055	0.168	0.210
Treated with ORS packets	0.260	0.028	358	344	1.119	0.107	0.204	0.315
Sought medical treatment	0.484	0.032	358	344	1.124	0.067	0.419	0.549
Having health card	0.845	0.020	399	395	1.117	0.024	0.805	0.886
Received BCG vaccination	0.182	0.033	399	395	1.710	0.182	0.116	0.249
Received DPT vaccination (3 doses)	0.987	0.006	399	395	1.020	0.006	0.975	0.998
Received polio vaccination (3 doses)	0.981	0.007	399	395	1.030	0.007	0.967	0.995
Received measles vaccination	0.921	0.015	399	395	1.093	0.016	0.892	0.951
Fully immunized	0.163	0.031	399	395	1.661	0.189	0.101	0.225
Weight-for-height (below -2 SD)	0.012	0.003	1650	1633	0.979	0.220	0.007	0.017
Height-for-age (below -2 SD)	0.072	0.007	1650	1633	1.108	0.103	0.057	0.087
Weight-for-age (below -2 SD)	0.052	0.007	1650	1633	1.143	0.127	0.038	0.065
Total fertility rate (3 years)	4.846	0.134	NA	7759	1.042	0.028	4.579	5.113
Neonatal mortality rate (0-9 years)	16.380	2.675	3643	3597	1.055	0.163	11.031	21.729
Postneonatal mortality rate (0-9 years)	8.997	1.658	3647	3602	1.013	0.184	5.682	12.313
Infant mortality rate (0-9 years)	25.377	3.191	3647	3602	1.014	0.126	18.995	31.760
Child mortality rate (0-9 years)	5.072	1.382	3646	3601	1.118	0.272	2.309	7.836
Under-five mortality rate (0-9 years)	30.321	3.324	3650	3605	0.984	0.110	23.673	36.969

NA = Not available

Table B.6 Sampling errors - Central region sample: Jordan 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.912	0.005	3303	3729	0.919	0.005	0.903	0.921
No education	0.070	0.006	3303	3729	1.446	0.092	0.057	0.083
With secondary or higher education	0.780	0.010	3303	3729	1.426	0.013	0.759	0.800
Currently married	0.961	0.003	3303	3729	0.955	0.003	0.954	0.967
Married before age 20	0.504	0.010	3186	3594	1.076	0.019	0.485	0.523
Children ever born	4.149	0.054	3303	3729	1.038	0.013	4.041	4.256
Children ever born to women over 40	6.689	0.139	775	890	1.216	0.021	6.411	6.967
Children surviving	3.964	0.050	3303	3729	1.037	0.013	3.863	4.065
Know any contraceptive method	1.000	0.000	3173	3582	Und	0.000	1.000	1.000
Know any modern contraceptive method	1.000	0.000	3173	3582	Und	0.000	1.000	1.000
Ever used any contraceptive method	0.803	0.009	3173	3582	1.265	0.011	0.785	0.821
Currently using any method	0.546	0.010	3173	3582	1.087	0.018	0.527	0.566
Currently using a modern method	0.399	0.009	3173	3582	1.065	0.023	0.381	0.418
Currently using pill	0.071	0.005	3173	3582	1.114	0.071	0.061	0.081
Currently using IUD	0.249	0.008	3173	3582	0.991	0.031	0.234	0.264
Currently using injectables	0.006	0.001	3173	3582	1.017	0.231	0.003	0.009
Currently using condom	0.026	0.003	3173	3582	1.095	0.120	0.020	0.032
Currently using female sterilization	0.040	0.003	3173	3582	0.985	0.086	0.033	0.047
Currently using periodic abstinence	0.055	0.005	3173	3582	1.168	0.086	0.045	0.064
Currently using withdrawal	0.073	0.004	3173	3582	0.959	0.061	0.065	0.082
Using public sector source	0.234	0.014	1264	1434	1.148	0.058	0.207	0.262
Want no more children	0.493	0.009	3173	3582	1.029	0.019	0.474	0.511
Want to delay at least 2 years	0.251	0.008	3173	3582	1.041	0.032	0.235	0.267
Ideal number of children	4.116	0.041	3155	3568	1.133	0.010	4.033	4.198
Mothers received tetanus injection	0.383	0.011	3645	4067	1.130	0.028	0.362	0.405
Mothers received medical care at birth	0.974	0.004	3645	4067	1.147	0.004	0.966	0.982
Had diarrhea in the last 2 weeks	0.178	0.007	3529	3935	1.024	0.039	0.164	0.192
Treated with ORS packets	0.231	0.017	617	701	0.945	0.074	0.196	0.265
Sought medical treatment	0.486	0.022	617	701	1.003	0.044	0.442	0.529
Having health card	0.803	0.016	715	801	1.037	0.020	0.771	0.834
Received BCG vaccination	0.289	0.024	715	801	1.405	0.084	0.241	0.338
Received DPT vaccination (3 doses)	0.949	0.009	715	801	1.029	0.010	0.931	0.968
Received polio vaccination (3 doses)	0.950	0.010	715	801	1.122	0.010	0.930	0.969
Received measles vaccination	0.893	0.012	715	801	1.009	0.014	0.868	0.917
Fully immunized	0.243	0.023	715	801	1.429	0.095	0.197	0.290
Weight-for-height (below -2 SD)	0.021	0.003	3146	3505	1.022	0.126	0.016	0.027
Height-for-age (below -2 SD)	0.075	0.005	3146	3505	1.045	0.072	0.064	0.086
Weight-for-age (below -2 SD)	0.047	0.005	3146	3505	1.097	0.096	0.038	0.056
Total fertility rate (3 years)	4.112	0.096	NA	16639	1.170	0.023	3.921	4.304
Neonatal mortality rate (0-9 years)	18.505	1.966	6942	7764	1.036	0.106	14.573	22.436
Postneonatal mortality rate (0-9 years)	10.714	1.448	6942	7764	1.089	0.135	7.818	13.610
Infant mortality rate (0-9 years)	29.219	2.375	6942	7764	1.009	0.081	24.469	33.968
Child mortality rate (0-9 years)	4.747	0.896	6947	7769	0.999	0.189	2.955	6.539
Under-five mortality rate (0-9 years)	33.827	2.508	6947	7769	0.984	0.074	28.811	38.842

NA = Not available
Und = Undefined

Table B.7 Sampling errors - South region sample: Jordan 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.613	0.012	755	340	0.696	0.020	0.588	0.638
No education	0.206	0.042	755	340	2.820	0.202	0.123	0.289
With secondary or higher education	0.628	0.043	755	340	2.466	0.069	0.541	0.715
Currently married	0.961	0.009	755	340	1.211	0.009	0.944	0.978
Married before age 20	0.518	0.032	731	329	1.745	0.062	0.454	0.583
Children ever born	4.633	0.190	755	340	1.518	0.041	4.252	5.013
Children ever born to women over 40	8.156	0.384	159	71	1.340	0.047	7.389	8.923
Children surviving	4.334	0.166	755	340	1.437	0.038	4.002	4.667
Know any contraceptive method	0.996	0.003	726	327	1.315	0.003	0.990	1.002
Know any modern contraceptive method	0.996	0.003	726	327	1.315	0.003	0.990	1.002
Ever used any contraceptive method	0.673	0.033	726	327	1.881	0.049	0.607	0.738
Currently using any method	0.434	0.031	726	327	1.707	0.072	0.371	0.497
Currently using a modern method	0.311	0.031	726	327	1.785	0.099	0.249	0.372
Currently using pill	0.056	0.009	726	327	1.085	0.165	0.038	0.075
Currently using IUD	0.171	0.021	726	327	1.526	0.125	0.129	0.214
Currently using injectables	0.018	0.005	726	327	0.994	0.276	0.008	0.027
Currently using condom	0.014	0.004	726	327	0.930	0.287	0.006	0.023
Currently using female sterilization	0.049	0.010	726	327	1.231	0.202	0.029	0.068
Currently using periodic abstinence	0.028	0.007	726	327	1.156	0.253	0.014	0.042
Currently using withdrawal	0.062	0.012	726	327	1.335	0.192	0.038	0.086
Using public sector source	0.443	0.056	227	102	1.687	0.126	0.331	0.554
Want no more children	0.434	0.023	726	327	1.273	0.054	0.387	0.481
Want to delay at least 2 years	0.318	0.022	726	327	1.250	0.068	0.275	0.361
Ideal number of children	4.506	0.112	711	321	1.465	0.025	4.283	4.729
Mothers received tetanus injection	0.394	0.029	954	427	1.491	0.074	0.336	0.452
Mothers received medical care at birth	0.933	0.017	954	427	1.541	0.018	0.899	0.966
Had diarrhea in the last 2 weeks	0.159	0.015	909	407	1.199	0.097	0.128	0.190
Treated with ORS packets	0.232	0.033	142	65	0.865	0.141	0.167	0.298
Sought medical treatment	0.681	0.050	142	65	1.143	0.073	0.582	0.781
Having health card	0.745	0.042	176	79	1.256	0.056	0.661	0.828
Received BCG vaccination	0.046	0.015	176	79	0.943	0.324	0.016	0.076
Received DPT vaccination (3 doses)	0.922	0.033	176	79	1.603	0.035	0.857	0.987
Received polio vaccination (3 doses)	0.917	0.036	176	79	1.712	0.039	0.845	0.988
Received measles vaccination	0.847	0.030	176	79	1.116	0.036	0.786	0.908
Fully immunized	0.030	0.012	176	79	0.916	0.396	0.006	0.053
Weight-for-height (below -2 SD)	0.027	0.006	793	355	0.976	0.205	0.016	0.039
Height-for-age (below -2 SD)	0.131	0.015	793	355	1.149	0.112	0.101	0.160
Weight-for-age (below -2 SD)	0.079	0.014	793	355	1.461	0.181	0.050	0.108
Total fertility rate (3 years)	4.803	0.230	NA	3886	1.220	0.048	4.342	5.264
Neonatal mortality rate (0-9 years)	24.100	4.822	1896	847	1.051	0.200	14.456	33.745
Postneonatal mortality rate (0-9 years)	18.871	5.067	1896	847	1.481	0.269	8.737	29.004
Infant mortality rate (0-9 years)	42.971	6.889	1896	847	1.187	0.160	29.193	56.749
Child mortality rate (0-9 years)	8.593	3.349	1898	848	1.512	0.390	1.895	15.292
Under-five mortality rate (0-9 years)	51.195	8.919	1898	848	1.396	0.174	33.358	69.032

NA = Not available

APPENDIX C

DATA QUALITY TABLES

APPENDIX C

DATA QUALITY TABLES

The purpose of this appendix is to provide the data user with a perspective on the general quality of the 1997 JPFHS data. The tables herein refer to possible *nonsampling* errors: digit preference (rounding or heaping on certain ages or dates); omission of events that occurred further in the past; deliberate distortion of information by some interviewers in an attempt to lighten their workload; noncooperation by the respondent in providing information or refusing to be measured and weighed, etc. A description of the magnitude of such nonsampling errors is provided in the following paragraphs.

The distribution of the de facto household population by single year of age is presented in Table C.1. The data show a shortage of males and an excess of females at age 5 in relation to children in the adjoining ages. The data also show that there is generally no "heaping" or digit preference except after age 50, which shows that age is well known. As expected, there is a smooth transition from one age to the next. However, there is evidence that interviewers "displaced" some 49-year-old women to years outside the eligible age range (15-49), presumably to avoid interviewing them. For example, the number of women age 49 is much lower than the number of women age 50, 51, and 52, respectively.

Table C.2 presents the age distribution of the female population (as recorded in the household roster), the age distribution of women eligible for the individual interview (ever-married women age 15-49), and the distribution of women who were interviewed in the survey. The last column in Table C.2 shows that response rates vary little according to the age of female respondents.

Information on the completeness of reporting on selected important variables is provided in Table C.3. Overall, complete data are available for virtually all cases. Month of birth was missing for less than 1 percent of births that occurred in the 15-year period before the survey. There were no cases in which both month and year were missing. Children's age at death, women's age, and date of marriage were complete in almost all cases. Anthropometric measurements were missing for 8 to 9 percent of births in the previous 59 months.

According to Table C.4, the information on birth dating is of extremely good quality: both month and year of birth were provided for 99 percent of births. As expected, information on birth dates is more complete for children who were still living at the time of the survey (99 percent) than for those who had died. Still, both month and year of birth were provided for 93 percent of dead children. Sex ratios are somewhat on the high side; the expected value would be 102 to 103, while those from the 1997 JPFHS are often more than 105, reaching 123 for births in 1990. The sex ratios for living children born in 1989 and 1990 are worth noting; 1989 is unusually low (98) while 1990 is unusually high (124), which may indicate some possible undercounting of female births, especially of females who did not survive long after birth and who were born earlier.

There is little evidence of transference of births from 1992 to earlier years. In fact, the ratio of births in 1992 to the average of the two adjoining years is 98, which shows fewer births in 1992 than the average births of the two adjoining years.

Table C.5 shows the distribution of deaths under one month of age by age at death in days; Table C.6 shows the distribution of deaths under two years of age by age at death in months. Data in Table C.5 show heaping for age at death of seven days and possible underreporting for age at death of six days among births in the 20 years prior to the survey. This phenomenon holds for all of the five-year periods. The data also show the proportion of early neonatal deaths among all neonatal deaths fluctuating between 64 and 75 but, in general, staying around 70 percent. Table C.6 shows heaping in age at death in multiples of six months.

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Jordan 1997

	Males		Females			Males		Females	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
<1	605	2.8	601	2.8	37	200	0.9	203	1.0
1	681	3.1	623	2.9	38	151	0.7	215	1.0
2	661	3.0	610	2.9	39	204	0.9	188	0.9
3	668	3.1	652	3.1	40	187	0.9	179	0.8
4	642	2.9	594	2.8	41	126	0.6	172	0.8
5	579	2.6	612	2.9	42	174	0.8	173	0.8
6	649	3.0	555	2.6	43	145	0.7	141	0.7
7	600	2.7	537	2.5	44	130	0.6	154	0.7
8	554	2.5	538	2.5	45	153	0.7	163	0.8
9	605	2.8	589	2.8	46	106	0.5	119	0.6
10	622	2.8	559	2.6	47	111	0.5	108	0.5
11	550	2.5	538	2.5	48	117	0.5	130	0.6
12	548	2.5	543	2.5	49	116	0.5	97	0.5
13	575	2.6	556	2.6	50	132	0.6	202	0.9
14	563	2.6	530	2.5	51	97	0.4	127	0.6
15	563	2.6	524	2.5	52	136	0.6	130	0.6
16	541	2.5	512	2.4	53	133	0.6	118	0.6
17	608	2.8	511	2.4	54	136	0.6	90	0.4
18	512	2.3	509	2.4	55	132	0.6	158	0.7
19	471	2.1	481	2.3	56	101	0.5	84	0.4
20	478	2.2	470	2.2	57	109	0.5	97	0.5
21	456	2.1	396	1.9	58	92	0.4	78	0.4
22	453	2.1	437	2.0	59	76	0.3	62	0.3
23	406	1.9	431	2.0	60	139	0.6	178	0.8
24	437	2.0	389	1.8	61	76	0.3	44	0.2
25	447	2.0	427	2.0	62	95	0.4	63	0.3
26	387	1.8	390	1.8	63	58	0.3	48	0.2
27	388	1.8	376	1.8	64	59	0.3	45	0.2
28	350	1.6	359	1.7	65	105	0.5	128	0.6
29	307	1.4	332	1.6	66	27	0.1	30	0.1
30	355	1.6	327	1.5	67	61	0.3	56	0.3
31	248	1.1	296	1.4	68	41	0.2	21	0.1
32	302	1.4	305	1.4	69	25	0.1	20	0.1
33	258	1.2	283	1.3	70+	403	1.8	422	2.0
34	235	1.1	240	1.1	Don't know/				
35	262	1.2	270	1.3	Missing	0	0.0	1	0.0
36	184	0.8	199	0.9					
					Total	21,906	100.0	21,347	100.0

Note: The de facto population includes all residents and nonresidents who slept in the household the night before the interview.

Table C.2 Age distribution of eligible and interviewed women

Percent distribution of the de facto household population of women age 10-54, of ever-married women age 15-49, and of interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted) by five-year age groups, Jordan 1997

Age	Household population		Ever-married women		Interviewed women		Percentage of eligible women interviewed (weighted)
	Number	Percent	Number	Percent	Number	Percent	
10-14	2,726	NA	NA	NA	NA	NA	NA
15-19	2,537	24.1	210	3.6	207	3.7	98.6
20-24	2,124	20.2	826	14.3	795	14.3	96.4
25-29	1,884	17.9	1,244	21.5	1,185	21.4	95.3
30-34	1,451	13.8	1,173	20.3	1,128	20.3	96.2
35-39	1,075	10.2	964	16.7	928	16.7	96.4
40-44	819	7.8	771	13.3	736	13.3	95.4
45-49	617	5.9	593	10.3	569	10.3	95.9
50-54	668	NA	NA	NA	NA	NA	NA
15-49	10,507	-	5,781	-	5,550	-	96.0

Note: The de facto population includes all residents and nonresidents who slept in the household the night before interview.
NA = Not applicable

Table C.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Jordan 1997

Subject	Reference group	Percentage missing information	Number of cases
Birth date	Births in last 15 years		
Month only		0.5	16,987
Month and year		0.0	16,987
Age at death	Deaths to births in last 15 years	0.2	629
Age/date at first union[1]	Ever-married women	0.1	5,548
Respondent's education	All women	0.1	5,548
Child's size at birth	Births in last 35 months	1.1	6,138
Anthropometry[2]	Living children age 0-35 months		
Height missing		9.2	6,162
Weight missing		8.1	6,162
Height or weight missing		9.3	6,162
Diarrhea in last 2 weeks	Living children age 0-35 months	0.5	6,162

[1] Both year and age missing
[2] Child not measured

Table C.4 Births by calendar years

Distribution of births by Western calendar years for living (L), dead (D), and all (T) children, according to reporting completeness, sex ratio at birth, and ratio of births by calendar year, Jordan 1997

	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar ratio[3]			Male			Female		
Year	L	D	T	L	D	T	L	D	T	L	D	T	L	D	T	L	D	T
97	606	10	616	100.0	100.0	100.0	105.1	507.8	107.3	-	-	-	311	8	319	296	2	297
96	1,273	47	1,320	100.0	100.0	100.0	102.5	116.6	102.9	136.1	198.7	137.6	644	25	669	629	22	650
95	1,264	38	1,302	100.0	100.0	100.0	112.2	178.5	113.7	98.8	81.7	98.2	668	24	693	596	14	609
94	1,287	46	1,333	100.0	97.2	99.9	104.9	139.0	105.9	103.8	116.3	104.2	659	27	685	628	19	647
93	1,215	41	1,256	100.0	100.0	100.0	102.4	176.4	104.2	99.3	92.4	99.1	615	26	641	600	15	615
92	1,160	42	1,202	100.0	100.0	100.0	101.1	142.2	102.3	97.9	104.8	98.1	583	25	608	577	17	594
91	1,154	40	1,194	99.6	91.4	99.3	104.4	104.4	104.4	101.9	91.9	101.5	590	20	610	565	20	584
90	1,106	45	1,151	99.4	90.4	99.0	123.6	105.7	122.9	98.6	106.1	98.9	611	23	634	495	22	516
89	1,089	44	1,134	99.5	92.9	99.3	98.4	172.4	100.6	101.2	114.3	101.7	540	28	568	549	16	565
88	1,047	33	1,079	99.7	93.3	99.5	100.7	175.5	102.4	-	-	-	525	21	546	521	12	533
93-97	5,645	181	5,826	100.0	99.3	100.0	105.4	155.7	106.7	-	-	-	2,897	110	3,007	2,748	71	2,819
88-92	5,556	204	5,760	99.6	93.6	99.4	105.3	134.8	106.2	-	-	-	2,850	117	2,967	2,706	87	2,793
83-87	4,804	222	5,027	99.3	94.6	99.1	104.5	168.3	106.6	-	-	-	2,454	139	2,594	2,350	83	2,433
78-82	3,616	205	3,821	98.6	92.3	98.3	109.8	105.6	109.6	-	-	-	1,892	105	1,998	1,723	100	1,823
< 78	3,220	286	3,506	99.1	87.9	98.2	103.8	127.0	105.5	-	-	-	1,640	160	1,800	1,580	126	1,706
All	22,841	1,099	23,940	99.4	93.0	99.1	105.6	135.6	106.8	-	-	-	11,734	632	12,366	11,108	466	11,574

NA = Not applicable

[1] Both year and month of birth given

[2] $(B_m/B_f)*100$, where B_m and B_f are the numbers of male and female births, respectively

[3] $[2B_x/(B_{x-1}+B_{x+1})]*100$, where B_x is the number of births in calendar year *x*

Table C.5 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods preceding the survey (unweighted), Jordan 1997

Age at death (in days)	Number of years preceding the survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1	25	14	23	11	73
1	30	21	36	24	111
2	6	13	13	5	38
3	6	7	9	10	32
4	8	6	8	4	26
5	7	1	5	3	15
6	2	1	0	3	6
7	11	9	12	10	42
8	1	1	3	1	6
9	2	0	0	0	2
10	3	4	4	2	13
11	3	1	2	1	7
12	3	1	0	0	4
13	0	1	0	0	2
14	5	1	2	2	10
15	1	3	3	2	9
16	2	0	1	0	3
17	1	1	0	0	2
18	0	1	0	3	4
19	0	1	0	0	1
20	2	3	2	4	10
21	0	2	0	0	2
22	0	0	0	1	1
23	0	1	0	0	1
25	1	2	1	0	4
27	1	1	2	0	3
Missing	0	1	0	0	1
Total 0-30[1]	120	98	126	86	429
Percent early neonatal[2]	69.9	63.5	74.9	70.0	70.0

[1] Includes cases for which age at death (in exact days) is not known
[2] (0-6 days/0-30 days) * 100

Table C.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at ages under one month, for five-year periods preceding the survey (unweighted), Jordan 1997

Age at death (in months)	Number of years preceding the survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1[a]	120	99	126	86	430
1	15	17	16	18	65
2	12	4	12	10	37
3	4	14	8	7	33
4	5	8	6	15	34
5	4	4	3	7	18
6	8	5	2	7	22
7	1	6	2	2	12
8	0	3	3	5	12
9	3	4	6	5	18
10	1	1	2	2	6
11	1	1	0	1	3
12	6	7	4	5	22
13	0	0	1	0	1
14	1	0	0	0	1
15	0	1	0	0	1
16	1	0	0	1	2
18	1	2	0	0	4
19	1	0	0	0	1
20	1	0	0	0	1
23	1	0	1	0	3
1 year	4	0	4	1	9
Total 0-11[b]	174	167	186	164	690
Percent neonatal[c]	68.8	59.2	67.7	52.4	62.3

[a] Includes deaths under 1 month reported in days
[b] Includes cases for which age at death (in exact months) is not known
[c] (under 1 month/under 1 year) * 100

APPENDIX D

QUESTIONNAIRES

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THE HASHEMITE KINGDOM OF JORDAN ←&dDJORDAN POPULATION AND FAMILY HEALTH←&d@
Department of Statistics ←&dDSURVEY (JPFHS-II), 1996←&d@
National Household Survey Division
←&dDHOUSEHOLD QUESTIONNAIRE←&d@

IDENTIFICATION

1. GOVERNORATE.....
2. DISTRICT.....
3. SUBDISTRICT.....
4. LOCALITY.....
5. STRATUM NUMBER.....
6. CENSUS BLOCK NUMBER.....
7. JPFHS-II CLUSTER NUMBER.....
8. HOUSEHOLD NUMBER.....
9. URBAN/RURAL (urban=1, rural=2).....
10. AMMAN/LARGE CITY/MEDIUM CITY/TOWN/COUNTRYSIDE.....
    (Amman=1, medium city=2, small city=3, town=4, countryside=5)
    Amman almost 1,000,000;
    Medium city (Zarqa, Russaifa, Irbid, Salt, Madaba) 50,000 - 500,0000
    Small city 20,000 - 49,999; Town 5,000 - 19,999
    Countryside < 5,000
11. NAME OF HOUSEHOLD HEAD_____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY ☐☐ MONTH ☐☐ YEAR 1997
INTERVIEWER'S NAME	_____	_____	_____	NAME ☐☐
RESULT*	_____	_____	_____	RESULT ☐
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS ☐
TIME	_____	_____		

*RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____ (specify)

TOTAL IN HOUSEHOLD ☐☐
TOTAL ELIGIBLE WOMEN ☐☐
LINE NO. OF RESP. TO HOUSE-HOLD SCHEDULE ☐☐

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____ ☐☐	NAME _____ ☐☐	☐☐	☐☐
DATE _____	DATE _____		

HOUSEHOLD SCHEDULE

Now we would like some information about the people who usually live in your household or who are staying with you now.

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD*	RESIDENCE		SEX	AGE	EDUCATION		
							IF AGE 5 YEARS OR OLDER		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?	Does (NAME) usually live here?	Did (NAME) stay here last night?	Is (NAME) male or female?	How old is (NAME)?	Has (NAME) ever been to scho-ol?	IF ATTENDED SCHOOL: What is the highest level of school (NAME) attended? What is the highest grade (NAME) completed at that level?**	IF AGE LESS THAN 25 YEARS: Is (NAME) still in school?
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			YES NO	YES NO	M F	IN YEARS	YES NO	GRADE LEVEL	YES NO
01			1 2	1 2	1 2		1 2		1 2
02			1 2	1 2	1 2		1 2		1 2
03			1 2	1 2	1 2		1 2		1 2
04			1 2	1 2	1 2		1 2		1 2
05			1 2	1 2	1 2		1 2		1 2
06			1 2	1 2	1 2		1 2		1 2
07			1 2	1 2	1 2		1 2		1 2
08			1 2	1 2	1 2		1 2		1 2
09			1 2	1 2	1 2		1 2		1 2
10			1 2	1 2	1 2		1 2		1 2
11			1 2	1 2	1 2		1 2		1 2
12			1 2	1 2	1 2		1 2		1 2
13			1 2	1 2	1 2		1 2		1 2
14			1 2	1 2	1 2		1 2		1 2

TICK HERE IF CONTINUATION SHEET USED ☐ ENTER THE TOTAL NUMBER OF ELIGIBLE:

Just to make sure that I have a complete listing:

1) Are there any other persons such as small children or infants that we have not listed?
2) In addition, are there any other people who may not be members of your family, such as domestic servants, lodgers or friends who usually live here?
3) Are there any guests or temporary visitors staying here, or anyone else who slept here last night that have not been listed?

HOUSEHOLD SCHEDULE

PARENTAL SURVIVORSHIP AND RESIDENCE ***				MARITAL STATUS IF AGE 15 YEARS OR OLDER	ELIGIBILITY	
					WOMAN	HUSBAND
Is (NAME)'s natural mother alive? IF NO OR DK GO TO COL. 13 (11)	IF ALIVE: Does (NAME)'s natural mother live in this household? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER (12)	Is (NAME)'s natural father alive? IF NO OR DK GO TO COL. 13 (13)	IF ALIVE: Does (NAME)'s natural father live in this household? IF YES: What is his name? RECORD FATHER'S LINE NUMBER (14)	What is (NAME) current marital status? 1 SINGLE/SIGNED CONTRACT 2 MARRIED 3 DIVORCED 4 WIDOWED 5 SEPARATED (15)	CIRCLE LINE NUMBER OF EVER MARRIED WOMEN AGE 15-49 YEARS WHO ARE USUAL RESIDENTS OR STAYED THERE ON THE NIGHT BEFORE INTERVIEW (16)	CIRCLE LINE NUMBER OF MEN ELIGIBLE FOR INTERVIEW (I.E., MEN WHOSE WIVES ARE ELIGIBLE) (17)
YES NO DK		YES NO DK				
1 2 8		1 2 8			01	01
1 2 8		1 2 8			02	02
1 2 8		1 2 8			03	03
1 2 8		1 2 8			04	04
1 2 8		1 2 8			05	05
1 2 8		1 2 8			06	06
1 2 8		1 2 8			07	07
1 2 8		1 2 8			08	08
1 2 8		1 2 8			09	09
1 2 8		1 2 8			10	10
1 2 8		1 2 8			11	11
1 2 8		1 2 8			12	12
1 2 8		1 2 8			13	13
1 2 8		1 2 8			14	14

WOMEN ☐☐ MEN ☐☐

YES ☐ → ENTER EACH IN TABLE NO ☐

YES ☐ → ENTER EACH IN TABLE NO ☐

YES ☐ → ENTER EACH IN TABLE NO ☐

* CODES FOR Q.3
RELATIONSHIP TO HEAD OF HOUSEHOLD:
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = GRANDFATHER/GRANDMOTHER
10 = OTHER RELATIVE
11 = ADOPTED/STEP CHILD
12 = NOT RELATED
96 = DON'T KNOW

** CODES FOR Q.9
EDUCATION LEVEL:
01 = ELEMENTARY
02 = PREPARATORY
03 = BASIC
04 = VOCATIONAL SECONDARY
05 = ACADEMIC SECONDARY
06 = INTERMEDIATE DIPLOMA
07 = UNIVERSITY
08 = HIGHER STUDIES
98 = DON'T KNOW

EDUCATION GRADE:
00 = <1 YEAR COMPLETED
98 = DON'T KNOW

*** Q.11 THROUGH Q.14:
These questions refer to the biological parents of the person. Record 00 if parent not member of household.

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NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
18	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 →20 PUBLIC TAP.....12 WELL WATER WELL IN RESIDENCE/YARD/PLOT..21 →20 PUBLIC WELL.....22 SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34 RAINWATER.....41 →20 TANKER TRUCK.....51 →20 BOTTLED WATER.....61 →20 OTHER_____ 96 (SPECIFY)	
19	How long does it take to go there, get water, and come back?	MINUTES..... ☐☐☐ ON PREMISES.....996	
20	What kind of sewage system do you have in your house?	PUBLIC NETWORK.....1 DUG HOLE.....2 OTHER_____ 3 (SPECIFY) NO SEWAGE.....4	
20A	What kind of toilet facility does your household have?	FLUSH TOILET OWN FLUSH TOILET.....11 SHARED FLUSH TOILET.....12 PIT TOILET/LATRINE TRADITIONAL PIT TOILET.....21 NO FACILITY/BUSH/FIELD.....31 OTHER_____ 96 (SPECIFY)	
21	Does your household have: Electricity? A radio? A television? A video? A telephone? A refrigerator? An air conditioner? Solar water heater? Satelite dish?	YES NO ELECTRICITY.....1 2 RADIO THAT WORKS.....1 2 TELEVISION THAT WORKS.....1 2 VIDEO.....1 2 TELEPHONE.....1 2 REFRIGERATOR.....1 2 AIR CONDITIONER.....1 2 SOLAR WATER HEATER.....1 2 SATELITE DISH.....1 2	
22	How many rooms in your household are used for sleeping?	ROOMS..... ☐☐	
23	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND.....11 RUDIMENTARY FLOOR WOOD PLANKS.....21 FINISHED FLOOR PARQUET OR POLISHED WOOD.....31 VINYL OR ASPHALT STRIPS.....32 CERAMIC TILES.....33 CEMENT.....34 CARPET.....35 OTHER_____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
24	Does any member of your household own: A bicycle? A motorcycle? A private car? A commercial car? A pickup? An agricultural tractor? An other mode of transportation	YES NO BICYCLE.....1 2 MOTORCYCLE.....1 2 PRIVATE CAR.....1 2 COMMERCIAL CAR.....1 2 PICKUP.....1 2 AGRICULTURAL TRACTOR.....1 2 OTHER MODE OF TRANSPORT....1 2	
25	What type of salt is usually used for cooking in your household? (ASK TO SEE SALT PACKAGE).	PACKAGED SALT (IODIZED).....1 PACKAGED SALT (NOT IODIZED).....2 OTHER_____ 6 (SPECIFY)	

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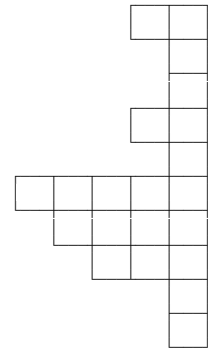
THE HASHEMITE KINGDOM OF JORDAN
Department of Statistics
National Household Survey Division

←&dDJORDAN POPULATION AND FAMILY HEALTH←&d@
←&dDSURVEY (JPFHS-II), 1996←&d@

←&dDWOMAN QUESTIONNAIRE←&d@

IDENTIFICATION

1. GOVERNORATE.....
2. DISTRICT.....
3. SUBDISTRICT.....
4. LOCALITY.....
5. STRATUM NUMBER.....
6. CENSUS BLOCK NUMBER.....
7. JPFHS-II CLUSTER NUMBER.....
8. HOUSEHOLD NUMBER.....
9. URBAN/RURAL (urban=1, rural=2).....
10. AMMAN/LARGE CITY/MEDIUM CITY/TOWN/COUNTRYSIDE.....
    (Amman=1, medium city=2, small city=3, town=4, countryside=5)
    Amman almost 1,000,000;
    Medium city (Zarqa, Russaifa, Irbid, Salt, Madaba) 50,000 - 500,0000
    Small city 20,000 - 49,999; Town 5,000 - 19,999
    Countryside < 5,000
11. NAME OF HOUSEHOLD HEAD_____
12. NAME AND LINE NUMBER OF WOMAN_____



INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY
				MONTH
				YEAR 1 9 9 7
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS
TIME	_____	_____		

*RESULT CODES:
1 COMPLETED
2 NOT AT HOME
3 POSTPONED
4 REFUSED
5 PARTLY COMPLETED
6 INCAPACITATED
7 OTHER _____ (specify)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

←&dDSECTION 1. RESPONDENT'S BACKGROUND←&d@

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR..... ☐☐ MINUTES..... ☐☐	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in Amman, in another city, in the countryside, or outside Jordan?	AMMAN.....1 ANOTHER CITY.....2 COUNTRYSIDE/VILLAGE.....3 OUTSIDE JORDAN.....4	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)?	YEARS..... ☐☐ ALWAYS.....95 VISITOR.....96 →105	
104	Just before you moved here, did you live in Amman, in another city, in the countryside, or outside Jordan?	AMMAN.....1 ANOTHER CITY.....2 COUNTRYSIDE/VILLAGE.....3 OUTSIDE JORDAN.....4	
105	In what month and year were you born?	MONTH..... ☐☐ DON'T KNOW MONTH.....98 YEAR..... 1 9 ☐☐ DON'T KNOW YEAR.....9998	
106	How old were you at your last birthday? COMPARE 105 AND 106, AND CORRECT IF INCONSISTENT.	AGE IN COMPLETED YEARS..... ☐☐	
107	Have you ever attended school?	YES.....1 NO.....2 →114	
108	What is the highest (grade/form/year) you completed at that level?	GRADE..... ☐☐	
109	What is the highest level of school you attended: basic, elementary, preparatory, vocational secondary, academic secondary, intermediate diploma, the university or higher studies?	ELEMENTARY.....01 PREPARATORY.....02 BASIC.....03 VOCATIONAL SECONDARY.....04 ACADEMIC SECONDARY.....05 INTERMEDIATE DIPLOMA.....06 UNIVERSITY.....07 HIGHER STUDIES.....08	
110	CHECK 106: AGE 24 OR BELOW ☐ ↓ AGE 25 OR ABOVE ☐	→113	
111	Are you currently attending school?	YES.....1 →113 NO.....2	
112	What was the main reason you stopped attending school?	GOT PREGNANT.....01 GOT MARRIED.....02 TO CARE FOR YOUNGER CHILDREN...03 FAMILY NEEDED HELP ON FARM OR IN BUSINESS.....04 COULD NOT PAY SCHOOL FEES.....05 NEEDED TO EARN MONEY.....06 GRADUATED/HAD ENOUGH SCHOOLING.07 DID NOT PASS ENTRANCE EXAMS....08 DID NOT LIKE SCHOOL.....09 SCHOOL NOT ACCESSIBLE/TOO FAR..10 FREQUENTLY FAILED.....11 OTHER_____ 96 (SPECIFY) DON'T KNOW.....98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
113	CHECK 108: ELEMENTARY/ BASIC 1-6 ☐ ABOVE ELEMENTARY ☐		→115
114	Can you read and understand a letter or newspaper easily, with difficulty, or not at all?	EASILY.....1 WITH DIFFICULTY.....2 NOT AT ALL.....3	→116
115	How often do you read a newspaper or a magazine? Would you say: Every day 3-5 times a week Once or twice a week Once a month Few times a year Never Don't know	EVERY DAY.....1 3-5 TIMES A WEEK.....2 ONCE OR TWICE A WEEK.....3 ONCE A MONTH.....4 FEW TIMES A YEAR.....5 NEVER.....6 DON'T KNOW.....8	
116	How often do you listen to the radio? Would you say: Every day or almost every day At least once a week At least once a month Hardly ever Never Other, specify_____ Don't know	EVERY DAY.....1 AT LEAST ONCE A WEEK.....2 AT LEAST ONCE A MONTH.....3 HARDLY EVER.....4 NEVER.....5 OTHER.....6 DON'T KNOW.....8	
117	How often do you watch television? Would you say: Every day or almost every day At least once a week At least once a month Hardly ever Never Other, specify_____ Don't know	EVERY DAY.....1 AT LEAST ONCE A WEEK.....2 AT LEAST ONCE A MONTH.....3 HARDLY EVER.....4 NEVER.....5 OTHER.....6 DON'T KNOW.....8	
118	What is your religion?	ISLAM.....1 CHRISTIAN.....2 OTHER_____3 (SPECIFY)	
119	CHECK Q.4 IN THE HOUSEHOLD QUESTIONNAIRE THE WOMAN INTERVIEWED IS NOT A USUAL RESIDENT ☐ THE WOMAN INTERVIEWED IS A USUAL RESIDENT ☐		→201
120	Now I would like to ask about the place in which you usually live. What is the name of the place in which you usually live? _____ (NAME OF PLACE) Is that Amman, another city, the countryside or outside Jordan?	AMMAN.....1 ANOTHER CITY.....2 COUNTRYSIDE/VILLAGE.....3 OUTSIDE JORDAN.....4	→122
121	In which governorate is that located? _____	GOVERNORATE CODE..... ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
122	Now I would like to ask about the household in which you usually live. What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 PUBLIC TAP.....12 WELL WATER WELL IN RESIDENCE/YARD/PLOT..21 PUBLIC WELL.....22 SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34 RAINWATER.....41 TANKER TRUCK.....51 BOTTLED WATER.....61 OTHER_____ 96 (SPECIFY)	→124 →124 →124 →124 →124
123	How long does it take to go there, get water, and come back?	MINUTES..... ☐☐☐ ON PREMISES.....996	
124	What kind of sewage system do you have in your house?	PUBLIC NETWORK.....1 DUG HOLE.....2 OTHER_____ 3 (SPECIFY) NO SEWAGE.....4	
124A	What kind of toilet facility does your household have?	FLUSH TOILET OWN FLUSH TOILET.....11 SHARED FLUSH TOILET.....12 PIT TOILET/LATRINE TRADITIONAL PIT TOILET.....21 NO FACILITY/BUSH/FIELD.....31 OTHER_____ 96 (SPECIFY)	
125	Does your household have: Electricity? A radio? A television? A video? A telephone? A refrigerator? An air conditioner? Solar water heater? Satelite dish?	YES NO ELECTRICITY.....1 2 RADIO THAT WORKS.....1 2 TELEVISION THAT WORKS.....1 2 VIDEO.....1 2 TELEPHONE.....1 2 REFRIGERATOR.....1 2 AIR CONDITIONER.....1 2 SOLAR WATER HEATER.....1 2 SATELITE DISH.....1 2	
126	Could you describe the main material of the floor of your home?	NATURAL FLOOR EARTH/SAND.....11 RUDIMENTARY FLOOR WOOD PLANKS.....21 FINISHED FLOOR PARQUET OR POLISHED WOOD.....31 VINYL OR ASPHALT STRIPS.....32 CERAMIC TILES.....33 CEMENT.....34 OTHER_____ 96 (SPECIFY)	
127	Does any member of your household own: A bicycle? A motorcycle? A private car? A commercial car? A pickup? An agricultural tractor? An other mode of transportation	YES NO BICYCLE.....1 2 MOTORCYCLE.....1 2 PRIVATE CAR.....1 2 COMMERCIAL CAR.....1 2 PICKUP.....1 2 AGRICULTURAL TRACTOR.....1 2 OTHER MODE OF TRANSPORT....1 2	

←&dSECTION 2. MARRIAGE←&d@

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	PRESENCE OF OTHERS AT THIS POINT.	YES NO CHILDREN UNDER 10.....1 2 HUSBAND.....1 2 OTHER MALES.....1 2 OTHER FEMALES.....1 2	
202	What is your marital status now: are you married, divorced, separated or widowed?	MARRIED.....1 DIVORCED.....2 WIDOWED.....3 →205 SEPARATED.....4	
203	Does your husband have another wife (other wives) besides you?	YES.....1 NO.....2 →205	
204	How many wives does he have besides you?	NUMBER.....[ ] DON'T KNOW.....8	
205	Have you been married only once or more than once?	ONCE.....1 MORE THAN ONCE.....2	
206	CHECK 205: MARRIED WITH A MAN ONLY ONCE → In what month and year did you start living with your husband (consummate your marriage)? MARRIED WITH A MAN MORE THAN ONCE → Now we will talk about your first husband. In what month and year did you start living with him (consummate your marriage)?	MONTH.....[ ][ ] DON'T KNOW MONTH.....98 YEAR.....[1][9][ ][ ] →208 DON'T KNOW YEAR.....9998	
207	How old were you when you started living with him (consummate your marriage)?	AGE.....[ ][ ]	
208	What is (was) the type of relationship between you and your (first) husband?	FIRST COUSIN FROM BOTH FATHER AND MOTHER'SIDE.....01 FIRST COUSIN FROM BOTH MOTHER AND FATHER'SIDE.....02 FIRST COUSIN FROM FATHER'SIDE (IBN AL AMM).....03 FIRST COUSIN FROM MOTHER'SIDE (IBN AL KHAL).....04 FIRST COUSIN FROM FATHER'SIDE (IBN AL AMMA).....05 FIRST COUSIN FROM MOTHER'SIDE (IBN AL KHALA).....06 SECOND COUSIN (FATHER'SIDE).....07 SECOND COUSIN (MOTHER'SIDE).....08 RELATIVE.....09 NO RELATION.....10 DON'T KNOW.....98	

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NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
209	DETERMINE MONTHS MARRIED SINCE JANUARY 1992. ENTER 'X' IN COLUMN 3 OF CALENDAR FOR EACH MONTH MARRIED, AND ENTER '0' FOR EACH MONTH NOT MARRIED, SINCE JANUARY 1992. FOR WOMEN MARRIED MORE THAN ONCE: PROBE FOR DATE WHEN CURRENT MARRIAGE STARTED AND, IF APPROPRIATE, FOR STARTING AND TERMINATION DATES OF ANY PREVIOUS UNIONS. FOR WOMEN NOT CURRENTLY MARRIED: PROBE FOR DATE WHEN LAST UNION STARTED AND FOR TERMINATION DATE AND, IF APPROPRIATE, FOR THE STARTING AND TERMINATION DATES OF ANY PREVIOUS UNIONS.		
210	CHECK 202: CURRENTLY MARRIED/ SEPARATED → ↓ DIVORCED/ WIDOWED → 301		
211	Does your husband live with you in this household or is he staying elsewhere?	LIVES WITH HER.....1 STAYING ELSEWHERE.....2	
212	WRITE THE LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE FOR HER HUSBAND. IF HE IS NOT LISTED IN THE HOUSEHOLD, WRITE '00'.	[ ][ ]	
213	In the last month were you and your husband living together all the time, or were you apart some of the time, or apart all of the time?	TOGETHER ALL THE TIME.....1 →301 APART SOME OF THE TIME.....2 APART ALL OF THE TIME.....3 →215	
214	How many days was he away in the last month?	DAYS.....[ ][ ] →301	

215	Did he ever come to visit you in the last month?	YES.....1 NO.....2	

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←&dDSECTION 3. REPRODUCTION←&d@

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES.....1 NO.....2	→306
302	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES.....1 NO.....2	→304
303	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME..... DAUGHTERS AT HOME.....	
304	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES.....1 NO.....2	→306
305	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE..... DAUGHTERS ELSEWHERE.....	
306	Have you ever given birth to a boy or a girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but survived only a few hours or days?	YES.....1 NO.....2	→308
307	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD..... GIRLS DEAD.....	
308	SUM ANSWERS TO 303, 305, AND 307, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL.....	
309	CHECK 308: Just to make sure that I have this right: you have had in TOTAL ____ births during your life. Is that correct? YES ☐ NO ☐ → PROBE AND CORRECT 301-308 AS NECESSARY.		
310	CHECK 308: ONE OR MORE BIRTHS ☐ NO BIRTHS ☐		→327

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311 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.
RECORD NAMES OF ALL THE BIRTHS IN 312. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

	312 What name was given to your (first/next) baby? (NAME)	313 Were any of these births twins?	314 Is (NAME) a boy or a girl?	315 In what month and year was (NAME) born? PROBE: What is his/her birthday?	316 Is (NAME) still alive?	317 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	318 IF ALIVE Is (NAME) living with you?	319 IF DEAD: How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	320 FROM YEAR OF BIRTH OF (NAME) SUBTRACT YEAR OF PREVIOUS BIRTH. IS THE DIFFERENCE 4 OR MORE?	321 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME)?
01		SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 → (NEXT BIRTH)	DAYS....1 MONTHS..2 YEARS...3		
02		SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 → (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 → (NEXT BIRTH)	YES..1 NO...2
03		SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 → (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 → (NEXT BIRTH)	YES..1 NO...2
04		SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 → (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 → (NEXT BIRTH)	YES..1 NO...2
05		SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 → (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 → (NEXT BIRTH)	YES..1 NO...2
06		SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 → (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 → (NEXT BIRTH)	YES..1 NO...2
07		SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 → (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 → (NEXT BIRTH)	YES..1 NO...2

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312 What name was given to your next baby? (NAME)	313 Were any of these births twins?	314 Is (NAME) a boy or a girl?	315 In what month and year was (NAME) born? PROBE: What is his/ her birthday?	316 Is (NAME) still alive?	317 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	318 IF ALIVE Is (NAME) living with you?	319 IF DEAD: How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	320 FROM YEAR OF BIRTH OF (NAME) SUBTRACT YEAR OF PREVIOUS BIRTH. IS THE DIFFERENCE 4 OR MORE?	321 Were there any other live births between (NAME OF PREVIOUS BIRTH) and NAME)?
08	SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 (NEXT BIRTH)	YES..1 NO...2
09	SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 (NEXT BIRTH)	YES..1 NO...2
10	SING..1 MULT..2	BOY...1 GIRL..2	MONTH.. YR 1 9	YES..1 NO...2 → 319	AGE IN YEARS	YES...1 NO....2 (GO TO 320)	DAYS....1 MONTHS..2 YEARS...3	YES....1 NO.....2 (GO TO 322)	YES..1 NO...2

322	FROM YEAR OF INTERVIEW SUBTRACT YEAR OF LAST BIRTH. IS THE DIFFERENCE 4 YEARS OR MORE?	YES.....1 → GO TO 323 NO.....2 → GO TO 324
323	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES.....1 NO.....2

324 COMPARE 308 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND PUT A TICK MARK:

NUMBERS ARE SAME ☐ ↓ NUMBERS ARE DIFFERENT ☐ → (PROBE AND RECONCILE)

CHECK: FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED. ☐

FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED. ☐

FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED. ☐

FOR AGE AT DEATH 12 MONTHS OR 1 YR.: PROBE TO DETERMINE EXACT NUMBER OF MONTHS. ☐

325 CHECK 315 AND ENTER THE NUMBER OF BIRTHS SINCE JANUARY 1992.
IF NONE, RECORD '0'. ☐

326 FOR EACH BIRTH SINCE JANUARY 1992, ENTER 'B' IN THE MONTH OF BIRTH IN COLUMN 1 OF THE CALENDAR AND 'P' IN IN EACH OF THE 8 PRECEDING MONTHS. WRITE NAME TO THE LEFT OF THE 'B' CODE.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
327	Are you pregnant now?	YES.....1 NO.....2 UNSURE.....8	→330
328	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN COLUMN 1 OF CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS.....	
329	At the time you became pregnant, did you want to become pregnant ←&dDthen←&d@, did you want to wait until ←&dDlater←&d@, or did you ←&dDnot want←&d@ to have any more children at all?	THEN.....1 LATER.....2 NOT WANT MORE CHILDREN.....3	
330	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES.....1 NO.....2	→336
331	When did the last such pregnancy end?	MONTH..... YEAR..... 1 9	
332	CHECK 331: LAST PREGNANCY ENDED SINCE JAN. 1992 LAST PREGNANCY ENDED BEFORE JAN. 1992		→336
333	How many months pregnant were you when the last pregnancy ended? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN COLUMN 1 OF CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	MONTHS.....	
334	Have you ever had any other pregnancies which did not result in a live birth?	YES.....1 NO.....2	→336
335	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER PREGNANCY BACK TO JANUARY 1992. ENTER 'T' IN COLUMN 1 OF CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
336	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO.....1 WEEKS AGO.....2 MONTHS AGO.....3 YEARS AGO.....4 IN MENOPAUSE.....994 BEFORE LAST BIRTH.....995 NEVER MENSTRUATED.....996	
337	Between the first day of a woman's period and the first day of her ←&dDnext←&d@ period, are there certain times when she has a greater chance of becoming pregnant than other times?	YES.....1 NO.....2 DON'T KNOW.....8	→401
338	During which times of the monthly cycle does a woman have the greatest chance of becoming pregnant?	DURING HER PERIOD.....01 RIGHT AFTER HER PERIOD HAS ENDED.....02 IN THE MIDDLE OF THE CYCLE.....03 JUST BEFORE HER PERIOD BEGINS..04 OTHER_____ 96 (SPECIFY) DON'T KNOW.....98	

←&dDSECTION 4. CONTRACEPTION←&d@

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy.
CIRCLE CODE 1 IN 401 FOR EACH METHOD MENTIONED SPONTANEOUSLY.
THEN PROCEED DOWN COLUMN 402, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 2 IF METHOD IS RECOGNIZED, AND CODE 3 IF NOT RECOGNIZED.
THEN, FOR EACH METHOD WITH CODE 1 OR 2 CIRCLED IN 401 OR 402, ASK 403.

	401 Which ways or methods have you heard about?	SPONTANEOUS YES	402 Have you ever heard of (METHOD)? PROBED YES	NO	403 Have you ever used (METHOD)?
01	PILL Women can take a pill every day.	1	2	3	YES.....1 NO.....2
02	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	1	2	3	YES.....1 NO.....2
03	INJECTIONS Women can have an injection by a doctor or nurse which stops them from becoming pregnant for several months.	1	2	3	YES.....1 NO.....2
04	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for several years.	1	2	3	YES.....1 NO.....2
05	DIAPHRAGM,FOAM,JELLY Women can place a sponge, suppository, diaphragm, jelly, or cream inside themselves before intercourse.	1	2	3	YES.....1 NO.....2
06	CONDOM Men can put a rubber sheath on their penis during sexual intercourse.	1	2	3	YES.....1 NO.....2
07	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	1	2	3	Have you ever had an operation to avoid having any more children? YES.....1 NO.....2
08	MALE STERILIZATION Men can have an operation to avoid having any more children.	1	2	3	Have you ever had a husband who had an operation to avoid having children? YES.....1 NO.....2
09	RHYTHM,PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid having sexual intercourse on the days of the month she is most likely to get pregnant.	1	2	3	YES.....1 NO.....2
10	WITHDRAWAL Men can be careful and pull out before climax.	1	2	3	YES.....1 NO.....2
11	PROLONGED BREASTFEEDING Women can breastfeed for longer period to avoid getting pregnant.	1	2	3	YES.....1 NO.....2
12	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	1 _____ (SPECIFY) _____ (SPECIFY)		3	YES.....1 NO.....2 YES.....1 NO.....2

404 CHECK 403:
NOT A SINGLE "YES" (NEVER USED) ☐ ↓
AT LEAST ONE "YES" (EVER USED) ☐ → SKIP TO 408

←&l0O←&a1L
←(s0p16.67h8.5v0s0b0T←&l8D

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
405	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES.....1 NO.....2	→407
406	ENTER "0" IN COLUMN 1 OF CALENDAR IN EACH BLANK MONTH.		→433
407	What have you used or done? CORRECT 403 AND 404 (AND 402 IF NECESSARY).	_____	
408	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. What was the first method you ever used?	PILL.....01 IUD.....02 INJECTIONS.....03 IMPLANTS.....04 DIAPHRAGM/FOAM/JELLY.....05 CONDOM.....06 FEMALE STERILIZATION.....07 MALE STERILIZATION.....08 PERIODIC ABSTINENCE.....09 WITHDRAWAL.....10 PROLONGED BRESTFEEDING.....11 OTHER_____ 96 (SPECIFY)	
409	How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN.....	
410	CHECK 403: WOMAN NOT STERILIZED ☐ WOMAN STERILIZED ☐		→413A
411	CHECK 327: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐		→424
412	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES.....1 NO.....2	→424
413	Which method are you using?	PILL.....01 IUD.....02 INJECTIONS.....03 IMPLANTS.....04 DIAPHRAGM/FOAM/JELLY.....05 CONDOM.....06 FEMALE STERILIZATION.....07 MALE STERILIZATION.....08 PERIODIC ABSTINENCE.....09 WITHDRAWAL.....10 PROLONGED BREASTFEEDING.....11 OTHER_____ 96 (SPECIFY)	→416A →416B →416C →423 →416D →416E →422 →423
413A	CIRCLE '07' FOR FEMALE STERILIZATION.		
414	May I see the package of pills you are now using? RECORD NAME OF BRAND IF PACKAGE IS SEEN.	PACKAGE SEEN.....1 BRAND NAME_____ PACKAGE NOT SEEN.....2	→416
415	Do you know the brand name of the pills you are now using? RECORD NAME OF BRAND.	BRAND NAME _____ DON'T KNOW.....98	
416	How much does one packet (cycle) of pills cost you?	DINAR PIASTRE COST..... FREE.....99996 DON'T KNOW.....99998	→423

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
416A 416B 416C 416D	IUD: How much did the intertion of IUD cost you, including transportation, pap smear and IUD device? INJECTIONS: How much did this injection cost you, including transportation and medical check up? IMPLANTS: How much did the implants cost you, including transportation and medical checkup? CONDOM: How much did a package of three cost you, including transportation?	DINAR PIASTRE COST..... ☐☐☐ ☐☐ FREE.....99996 DON'T KNOW.....99998	→423
416E	FEMALE STERILIZATION: How much did the operation cost you including transportation and medical check up?	DINAR PIASTRE COST..... ☐☐☐ ☐☐ FREE.....99996 DON'T KNOW.....99998	
417	Where did the sterilization take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL.....11 UNIVERSITY HOSPITAL.....12 ROYAL MEDICAL SERVICES (ARMED FORCES).....13 OTHER PUBLIC_____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC.....21 OTHER PRIVATE MEDICAL_____ 26 (SPECIFY) DON'T KNOW.....98	
418	Do you regret that (you/your husband) had the operation not to have any (more) children?	YES.....1 NO.....2	→420
419	Why do you regret the operation?	RESPONDENT WANTS ANOTHER CHILD..01 PARTNER WANTS ANOTHER CHILD.....02 SIDE EFFECTS.....03 CHILD DIED.....04 OTHER_____96 (SPECIFY)	
420	In what month and year was the sterilization performed?	MONTH..... ☐☐ YEAR..... 1 9 ☐☐	
421	CHECK 420: STERILIZED BEFORE JANUARY 1992 ☐ ENTER CODE FOR STERILIZATION IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND EACH MONTH BACK TO JANUARY 1992. THEN SKIP TO →429A	STERILIZED AFTER JANUARY 1992 ☐ ENTER CODE FOR STERILIZATION IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND IN EACH MONTH BACK TO THE DATE OF THE OPERATION. THEN SKIP TO →424	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
422	How do you determine which days of your monthly cycle not to have sexual relations?	BASED ON CALENDAR.....01 BASED ON BODY TEMPERATURE.....02 BASED ON CERVICAL MUCUS (BILLINGS METHOD).....03 BASED ON BODY TEMPERATURE AND CERVICAL MUCUS.....04 NO SPECIFIC SYSTEM.....05 OTHER_____ 96 (SPECIFY)	
423	ENTER METHOD CODE FROM 413 IN CURRENT MONTH IN COLUMN 1 OF CALENDAR. THEN DETERMINE WHEN SHE STARTED USING METHOD THIS TIME. ENTER METHOD CODE IN EACH MONTH OF USE. ILLUSTRATIVE QUESTIONS: · When did you start using continuously? · How long have you been using this method continuously?		
424	I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years. USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO JANUARY 1992. USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. IN COLUMN 1, ENTER CODE IN EACH MONTH OF METHOD USE OR '0' FOR NONUSE. ILLUSTRATIVE QUESTIONS: COLUMN 1: · When was the last time you used a method? Which method was that? · When did you start using that method? How long after the birth of (NAME)? · How long did you use the method then? IN COLUMN 2, ENTER CODES FOR DISCONTINUATION NEXT TO LAST MONTH OF USE. NUMBER OF CODES IN COL.2 MUST BE SAME AS NUMBER OF INTERRUPTIONS OF METHOD USE IN COLUMN 1. ASK WHY SHE STOPPED USING THE METHOD. IF A PREGNANCY FOLLOWED, ASK WHETHER SHE BECAME PREGNANT UNINTENTIONALLY WHILE USING THE METHOD OR DELIBERATELY STOPPED TO GET PREGNANT. ILLUSTRATIVE QUESTIONS: COLUMN 2: · Why did you stop using the (METHOD)? · Did you become pregnant while using (METHOD), or did you stop to get pregnant, or did you stop for some other reason? IF DELIBERATELY STOPPED TO BECOME PREGNANT, ASK: · How many months did it take you to get pregnant after you stopped using (METHOD)? AND ENTER '0' IN EACH SUCH MONTH IN COLUMN 1.		
425	CHECK 413: CIRCLE METHOD CODE:	NOT USING.....00 ——→431 PILL.....01 IUD.....02 INJECTIONS.....03 IMPLANTS.....04 DIAPHRAGM/FOAM/JELLY.....05 CONDOM.....06 FEMALE STERILIZATION.....07 MALE STERILIZATION.....08 PERIODIC ABSTINENCE.....09 WITHDRAWAL.....10 PROLONGED BREASTFEEDING.....11 OTHER METHOD.....96	
426A	Did you talk to your husband about (CURRENT METHOD) before starting to use it?	YES.....1 NO.....2	
426B	Did your husband encourage or discourage your use of (CURRENT METHOD) before starting to use it?	ENCOURAGE.....1 DISCOURAGE.....2 NEITHER.....3 DON'T KNOW.....8	
426C	Did you talk to your husband about (CURRENT METHOD) after starting to use it?	YES.....1 NO.....2	
426D	Did your husband encourage or discourage your use of (CURRENT METHOD) after starting to use it?	ENCOURAGE.....1 DISCOURAGE.....2 NEITHER.....3 DON'T KNOW.....8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
427	CHECK 413: CIRCLE METHOD CODE:	PILL.....01 IUD.....02 INJECTIONS.....03 IMPLANTS.....04 DIAPHRAGM/FOAM/JELLY.....05 CONDOM.....06 FEMALE STERILIZATION.....07 MALE STERILIZATION.....08 PERIODIC ABSTINENCE.....09 WITHDRAWAL.....10 PROLONGED BREASTFEEDING.....11 OTHER METHOD.....96	→429A →432
428	Where did you obtain (METHOD) the last time? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL.....11 GOVERNMENT HEALTH CENTER.....12 GOVERNMENT MCH.....13 UNIVERSITY HOSPITAL/CLINIC....14 ROYAL MEDICAL SERVICES (ARMED FORCES.....15 OTHER PUBLIC_____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC.....21 PRIVATE DOCTOR.....22 PHARMACY.....23 JORDANIAN ASSOCIATION OF FP AND PROTECTION (JAFPP).....24 UN RELIEF AGENCY HC.....25 OTHER NGOs.....26 OTHER P. MEDICAL_____ 27 (SPECIFY) OTHER SOURCE FRIENDS/RELATIVES.....31 OTHER_____ 36 (SPECIFY)	
429	Do you know another place where you could have obtained (METHOD) the last time?	YES.....1 NO.....2	→434
429A	At the time of the sterilization operation, did you know another place where you could have received the operation?		
430	People select the place where they get family planning services for various reasons. What was the main reason you went to (NAME OF PLACE IN Q.430 OR Q.417) instead of the other place you know about? RECORD RESPONSE AND CIRCLE CODE. _____	ACCESS-RELATED REASONS CLOSER TO HOME.....11 CLOSER TO MARKET/WORK.....12 AVAILABILITY OF TRANSPORT....13 SERVICE-RELATED REASONS STAFF MORE COMPETENT/ FRIENDLY.....21 CLEANER FACILITY.....22 OFFERS MORE PRIVACY.....23 SHORTER WAITING TIME.....24 LONGER HRS. OF OPERATION.....25 USE OTHER SERVICES AT THE FACILITY.....26 FEMALE PHYSICIAN.....27 LOWER COST/CHEAPER.....31 WANTED ANONYMITY.....41 OTHER_____ 96 (SPECIFY) DON'T KNOW.....98	→434

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
431	What is the main reason you are not using a method of contraception to avoid pregnancy?	FERTILITY-RELATED REASONS NOT HAVING SEX.....21 INFREQUENT SEX.....22 MENOPAUSAL/HYSTERECTOMY.....23 SUBFECUND/INFECUND.....24 POSTPARTUM/BREASTFEEDING.....25 WANTS (MORE) CHILDREN.....26 PREGNANT.....27 OPPOSITION TO USE RESPONDENT OPPOSED.....31 HUSBAND OPPOSED.....32 OTHER HH MEMBERS OPPOSED.....33 OTHERS OPPOSED.....34 RELIGIOUS PROHIBITION.....35 RUMORS.....36 LACK OF KNOWLEDGE KNOWS NO METHOD.....41 KNOWS NO SOURCE.....42 METHOD-RELATED REASONS HEALTH CONCERNS.....51 FEAR OF SIDE EFFECTS.....52 LACK OF ACCESS/TOO FAR.....53 COST TOO MUCH.....54 INCONVENIENT TO USE.....55 INTERFERES WITH BODY'S NORMAL PROCESSES.....56 OTHER_____ 96 (SPECIFY) DON'T KNOW.....98	
432	Do you know of a place where you can obtain a method of family planning?	YES.....1 NO.....2 ⟶434	
433	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL.....11 GOVERNMENT HEALTH CENTER.....12 GOVERNMENT MCH.....13 ROYAL MEDICAL SERVICES (ARMED FORCES.....14 OTHER PUBLIC_____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC.....21 PRIVATE DOCTOR.....22 JORDANIAN ASSOCIATION OF FP AND PROTECTION (JAFPP).....23 UN RELIEF AGENCY HC.....24 OTHER NGOs.....25 OTHER P. MEDICAL_____ 26 (SPECIFY) OTHER SOURCE FRIENDS/RELATIVES.....31 OTHER_____ 36 (SPECIFY)	

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←(s0p16.67h8.5v0s0b0T←&l8D

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
434	Have you visited a health facility for any reason in the last 12 months?	YES.....1 NO.....2	→ 436
435	Did any staff member at the health facility speak to you about family planning methods?	YES.....1 NO.....2	
436	Do you think that breastfeeding can affect a woman's chance of becoming pregnant?	YES.....1 NO.....2 DON'T KNOW.....8	→ 501
437	Do you think a woman's chance of becoming pregnant is increased or decreased by breastfeeding?	INCREASED.....1 DECREASED.....2 DEPENDS.....3 DON'T KNOW.....8	→ 501 → 439 → 439
438	For how many months?	NUMBER OF MONTHS..... ☐☐ DON'T KNOW.....98	
439	CHECK 310: ONE OR MORE BIRTHS ☐ NO BIRTHS ☐		→ 501
440	Have you ever relied on breastfeeding as a method of avoiding pregnancy?	YES.....1 NO.....2	→ 501
441	CHECK 327 AND 410: NOT PREGNANT OR UNSURE AND NOT STERILIZED ☐ EITHER PREGNANT OR STERILIZED ☐		→ 501
442	Are you currently relying on breastfeeding to avoid getting pregnant?	YES.....1 NO.....2	

←&dDSECTION 5A. PREGNANCY AND BREASTFEEDING←&d@

501 CHECK 325:
ONE OR MORE BIRTHS SINCE JAN. 1992 ☐ → continue
NO BIRTHS SINCE JAN. 1992 ☐ → (SKIP TO 565)

502 ENTER THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1992 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS, USE ADDITIONAL QUESTIONNAIRES).

Now I would like to ask you some more questions about the health of all your children born in the past five years. (We will talk about one child at a time.)

		LAST BIRTH	NEXT-TO-LAST BIRTH
503	LINE NUMBER FROM Q312	LINE NUMBER..... ☐☐	LINE NUMBER..... ☐☐
504	FROM Q312 AND Q316	NAME _____ ALIVE ☐ DEAD ☐	NAME _____ ALIVE ☐ DEAD ☐
505	At the time you became pregnant with (NAME), did you want to become pregnant ←&dDthen←&d@, did you want to wait until ←&dDlater←&d@, or did you want ←&dDno (more)←&d@ children at all?	THEN.....1 (SKIP TO 507) LATER.....2 NO MORE.....3 (SKIP TO 507)	THEN.....1 (SKIP TO 507) LATER.....2 NO MORE.....3 (SKIP TO 507)
506	How much longer would you like to have waited?	MONTHS.....1 ☐☐ YEARS.....2 ☐☐ DON'T KNOW.....998	MONTHS.....1 ☐☐ YEARS.....2 ☐☐ DON'T KNOW.....998
507	When you were pregnant with (NAME), did you see anyone for antenatal care for this pregnancy? IF YES: Whom did you see? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	HEALTH PROFESSIONAL DOCTOR.....A NURSE/MIDWIFE.....B OTHER PERSON TRADITIONAL BIRTH ATTENDANT.....C OTHER_____ (SPECIFY) X NO ONE.....Y (SKIP TO 510)	HEALTH PROFESSIONAL DOCTOR.....A NURSE/MIDWIFE.....B OTHER PERSON TRADITIONAL BIRTH ATTENDANT.....C OTHER_____ (SPECIFY) X NO ONE.....Y (SKIP TO 510)
508	How many months pregnant were you when you first received antenatal care?	MONTHS..... ☐☐ DON'T KNOW.....98	MONTHS..... ☐☐ DON'T KNOW.....98
509	How many times did you receive antenatal care during this pregnancy?	NO. OF TIMES..... ☐☐ DON'T KNOW.....98	NO. OF TIMES..... ☐☐ DON'T KNOW.....98
510	When you were pregnant with (NAME) were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES.....1 NO.....2 (SKIP TO 512) DON'T KNOW.....8	YES.....1 NO.....2 (SKIP TO 512) DON'T KNOW.....8
511	During this pregnancy, how many times did you get this injection?	TIMES..... ☐ DON'T KNOW.....8	TIMES..... ☐ DON'T KNOW.....8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
512	Where did you give birth to (NAME)?	HOME YOUR HOME.....11 OTHER HOME.....12 PUBLIC SECTOR GOVT. HOSPITAL.....21 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC..31 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY)	HOME YOUR HOME.....11 OTHER HOME.....12 PUBLIC SECTOR GOVT. HOSPITAL.....21 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC..31 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY)
513	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING.	HEALTH PROFESSIONAL DOCTOR.....A NURSE/MIDWIFE.....B OTHER PERSON TRADITIONAL BIRTH ATTENDANT.....C RELATIVE/FRIEND.....D OTHER_____ X (SPECIFY) NO ONE.....Y	HEALTH PROFESSIONAL DOCTOR.....A NURSE/MIDWIFE.....B OTHER PERSON TRADITIONAL BIRTH ATTENDANT.....C RELATIVE/FRIEND.....D OTHER_____ X (SPECIFY) NO ONE.....Y
514	Upto 42 days after the birth of (NAME), did you have any of the following problems:	YES NO	YES NO
	Long labor, that is, did your regular contractions last more than 12 hours?	LABOR MORE THAN 12 HOURS...1 2	LABOR MORE THAN 12 HOURS...1 2
	Excessive bleeding that was so much that you feared it was life threatening?	EXCESSIVE BLEEDING.....1 2	EXCESSIVE BLEEDING.....1 2
	A high fever with bad smelling vaginal discharge?	FEVER/BAD SMELLING VAG. DISCHARGE.....1 2	FEVER/BAD SMELLING VAG. DISCHARGE.....1 2
	Convulsions not caused by fever?	CONVULSIONS.....1 2	CONVULSIONS.....1 2
515	Was (NAME) delivered by caesarian section?	YES.....1 NO.....2	YES.....1 NO.....2
516	When (NAME) was born, was he/she: very large, larger than average, average, smaller than average, or very small?	VERY LARGE.....1 LARGER THAN AVERAGE.....2 AVERAGE.....3 SMALLER THAN AVERAGE.....4 VERY SMALL.....5 DON'T KNOW.....8	VERY LARGE.....1 LARGER THAN AVERAGE.....2 AVERAGE.....3 SMALLER THAN AVERAGE.....4 VERY SMALL.....5 DON'T KNOW.....8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
517	Was (NAME) weighed at birth?	YES.....1 NO.....2 (SKIP TO 519)	YES.....1 NO.....2 (SKIP TO 520)
518	How much did (NAME) weigh? RECORD WEIGHT FROM HEALTH CARD, IF AVAILABLE.	GRAMS FROM CARD.....1 ☐☐☐☐ GRAMS FROM RECALL.....2 ☐☐☐☐ DON'T KNOW.....99998	GRAMS FROM CARD.....1 ☐☐☐☐ GRAMS FROM RECALL.....2 ☐☐☐☐ DON'T KNOW.....99998
519	Has your period returned since the birth of (NAME)?	YES.....1 (SKIP TO 521) NO.....2 (SKIP TO 522)	
520	Did your period return between the birth of (NAME) and your next pregnancy?		YES.....1 NO.....2 (SKIP TO 524)
521	For how many months after the birth of (NAME) did you ←&dDnot←&d@ have a period?	MONTHS..... ☐☐ DON'T KNOW.....98	MONTHS..... ☐☐ DON'T KNOW.....98
522	CHECK 327: RESPONDENT PREGNANT?	NOT PREGNANT ☐ PREGNANT OR UNSURE ☐ (SKIP TO 524)	
523	Have you resumed sexual relations since the birth of (NAME)?	YES.....1 NO.....2 (SKIP TO 525)	
524	For how many days/months after the birth of (NAME) did you ←&dDnot←&d@ have sexual relations?	IF LESS THAN 30 DAYS DAYS.....1 ☐☐ MONTHS.....2 ☐☐ DON'T KNOW.....998	IF LESS THAN 30 DAYS DAYS.....1 ☐☐ MONTHS.....2 ☐☐ DON'T KNOW.....998
525	Did you ever breastfeed (NAME)?	YES.....1 NO.....2 (SKIP TO 531)	YES.....1 NO.....2 (SKIP TO 531)
526	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY.....000 HOURS.....1 ☐☐ DAYS.....2 ☐☐	IMMEDIATELY.....000 HOURS.....1 ☐☐ DAYS.....2 ☐☐
527	CHECK 504: CHILD ALIVE?	ALIVE ☐ DEAD ☐ (SKIP TO 529)	ALIVE ☐ DEAD ☐ (SKIP TO 529)
528	Are you still breastfeeding (NAME)?	YES.....1 (SKIP TO 532) NO.....2	YES.....1 (SKIP TO 532) NO.....2
529	For how many months did you breastfeed (NAME)?	MONTHS..... ☐☐ DON'T KNOW.....98	MONTHS..... ☐☐ DON'T KNOW.....98

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
530	Why did you stop breastfeeding (NAME)?	MOTHER ILL/WEAK.....01 CHILD ILL/WEAK.....02 CHILD DIED.....03 NIPPLE/BREAST PROBLEM...04 NOT ENOUGH MILK.....05 MOTHER WORKING.....06 CHILD REFUSED.....07 WEANING AGE/AGE TO STOP.08 BECAME PREGNANT.....09 STARTED USING CONTRACEPTION.....10 OTHER_____ 96 (SPECIFY)	MOTHER ILL/WEAK.....01 CHILD ILL/WEAK.....02 CHILD DIED.....03 NIPPLE/BREAST PROBLEM...04 NOT ENOUGH MILK.....05 MOTHER WORKING.....06 CHILD REFUSED.....07 WEANING AGE/AGE TO STOP.08 BECAME PREGNANT.....09 STARTED USING CONTRACEPTION.....10 OTHER_____ 96 (SPECIFY)
531	CHECK 504: CHILD ALIVE?	ALIVE ☐ → (SKIP TO 534) DEAD ☐ → (GO BACK TO 505 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 540)	ALIVE ☐ → (SKIP TO 534) DEAD ☐ → (GO BACK TO 505 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 540)
532	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS..... ☐☐	NUMBER OF NIGHTTIME FEEDINGS..... ☐☐
533	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS..... ☐☐	NUMBER OF DAYLIGHT FEEDINGS..... ☐☐
534	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
535	At any time yesterday or last night, was (NAME) given any of the following:	YES NO DK	YES NO DK
	Plain water?	PLAIN WATER.....1 2 8	PLAIN WATER.....1 2 8
	Sugar water?	SUGAR WATER.....1 2 8	SUGAR WATER.....1 2 8
	Juice?	JUICE.....1 2 8	JUICE.....1 2 8
	Herbal tea?	HERBAL TEA.....1 2 8	HERBAL TEA.....1 2 8
	Anise drink (yansoon)?	YANSOON.....1 2 8	YANSOON (DILL).....1 2 8
	Baby formula?	BABY FORMULA.....1 2 8	BABY FORMULA.....1 2 8
	Tinned or powdered milk?	TINNED/POWDR'D MLK..1 2 8	TINNED/POWDR'D MLK..1 2 8
	Fresh milk?	FRESH MILK.....1 2 8	FRESH MILK.....1 2 8
	Any other liquids?	OTHER LIQUIDS.....1 2 8	OTHER LIQUIDS.....1 2 8
	Any food made from grain?	FOOD MADE FROM GRAIN.....1 2 8	FOOD MADE FROM GRAIN.....1 2 8
	Any food made from tuber such as potato?	FOOD MADE FROM TUBER.....1 2 8	FOOD MADE FROM TUBER.....1 2 8
	Vegetable?	VEGETABLE.....1 2 8	VEGETABLE.....1 2 8
	Fruit?	FRUIT.....1 2 8	FRUIT.....1 2 8
	Eggs, fish, or poultry?	EGGS/FISH/POULTRY...1 2 8	EGGS/FISH/POULTRY...1 2 8
	Meat?	MEAT.....1 2 8	MEAT.....1 2 8
	Any other solid or semi-solid foods?	OTHER SOLID/ SEMI-SOLID FOODS..1 2 8	OTHER SOLID/ SEMI-SOLID FOODS..1 2 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
536	CHECK 535: FOOD OR LIQUID GIVEN YESTERDAY?	"YES" TO ONE OR MORE ☐ "NO/DK" TO ALL ☐ (SKIP TO 538)	"YES" TO ONE OR MORE ☐ "NO/DK" TO ALL ☐ (SKIP TO 538)
537	(Aside from breastfeeding,) how many times did (NAME) eat yesterday, including both meals and snacks? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES..... ☐☐ DON'T KNOW.....8	NUMBER OF TIMES..... ☐☐ DON'T KNOW.....8
538	On how many days during the last seven days was (NAME) given any of the following: Plain water? Any kind of milk (other than breast milk)? Liquids other than plain water or milk? Food made from grain? Food made from tuber? Vegetable? Fruit? Eggs, fish, or poultry? Meat? Any other solid or semi-solid foods? IF DON'T KNOW, RECORD '8'	RECORD THE NUMBER OF DAYS. PLAIN WATER..... ☐☐ MILK..... ☐☐ OTHER LIQUIDS..... ☐☐ FOOD MADE FROM GRAIN..... ☐☐ FOOD MADE FROM TUBER..... ☐☐ VEGETABLE..... ☐☐ FRUIT..... ☐☐ EGGS/FISH/POULTRY..... ☐☐ MEAT..... ☐☐ OTHER SOLID/SEMI-SOLID FOODS..... ☐☐	RECORD THE NUMBER OF DAYS. PLAIN WATER..... ☐☐ MILK..... ☐☐ OTHER LIQUIDS..... ☐☐ FOOD MADE FROM GRAIN..... ☐☐ FOOD MADE FROM TUBER..... ☐☐ VEGETABLE..... ☐☐ FRUIT..... ☐☐ EGGS/FISH/POULTRY..... ☐☐ MEAT..... ☐☐ OTHER SOLID/SEMI-SOLID FOODS..... ☐☐
539		GO BACK TO 505 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 540.	GO BACK TO 505 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 540.

540 ENTER LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1992 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS USE ADDITIONAL QUESTIONNAIRES).

		LAST BIRTH	NEXT-TO-LAST BIRTH
541	LINE NUMBER FROM Q312	LINE..... ☐☐	LINE..... ☐☐
542	FROM Q312 AND Q316	NAME _____ ALIVE ☐ DEAD ☐ (GO TO 542 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 565.)	NAME _____ ALIVE ☐ DEAD ☐ (GO TO 542 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 565.)
543	Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN.....1 (SKIP TO 545) YES, NOT SEEN.....2 (SKIP TO 547) NO CARD.....3	YES, SEEN.....1 (SKIP TO 545) YES, NOT SEEN.....2 (SKIP TO 547) NO CARD.....3
544	Did you ever have a vaccination card for (NAME)?	YES.....1 (SKIP TO 547) NO.....2	YES.....1 (SKIP TO 547) NO.....2

545 (1) COPY VACCINATION DATES FOR EACH VACCINE FROM THE CARD.

(2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.

	LAST BIRTH DAY	LAST BIRTH MO	LAST BIRTH YR	NEXT-TO-LAST BIRTH DAY	NEXT-TO-LAST BIRTH MO	NEXT-TO-LAST BIRTH YR
BCG	BCG....			BCG....		
Polio 1	P1.....			P1.....		
Polio 2	P2.....			P2.....		
Polio 3	P3.....			P3.....		
Polio 4	P4.....			P4.....		
Polio 5	P5.....			P5.....		
Polio booster 1	PB1....			PB1....		
Polio booster 2	PB2....			PB2....		
Polio booster 3	PB3....			PB3....		
DPT 1	D1.....			D1.....		
DPT 2	D2.....			D2.....		
DPT 3	D3.....			D3.....		
DPT booster 1	DB1....			DB1....		
DPT booster 2	DB2....			DB2....		
DPT booster 3	DB3....			DB3....		
Measles 1	MEA1...			MEA1...		
Measles 2	MEA2...			MEA2...		
Hepatitis 1	B1.....			B1.....		
Hepatitis 2	B2.....			B2.....		
Hepatitis 3	B3.....			B3.....		

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
546	Has (NAME) received any vaccinations that are not recorded on this card? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 1-5, DPT 1-3, AND/OR MEASLES VACCINE(S).	YES.....1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 545) NO.....2 DON'T KNOW.....8 (SKIP TO 549)	YES.....1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 545) NO.....2 DON'T KNOW.....8 (SKIP TO 549)
547	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases?	YES.....1 NO.....2 (SKIP TO 549) DON'T KNOW.....8	YES.....1 NO.....2 (SKIP TO 549) DON'T KNOW.....8
548	Please tell me if (NAME) received any of the following vaccinations:		
548A	A BCG vaccination against tuberculosis, that is, an injection in the left arm or shoulder that caused a scar?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
548B	Polio vaccine, that is, drops in the mouth?	YES.....1 NO.....2 (SKIP TO 548E) DON'T KNOW.....8	YES.....1 NO.....2 (SKIP TO 548E) DON'T KNOW.....8
548C	How many times?	NUMBER OF TIMES.....	NUMBER OF TIMES.....
548D	When was the first polio vaccine given, just after birth or later?	JUST AFTER BIRTH.....1 LATER.....2	JUST AFTER BIRTH.....1 LATER.....2
548E	DPT vaccination, that is, an injection usually given at the same time as polio drops?	YES.....1 NO.....2 (SKIP TO 548G) DON'T KNOW.....8	YES.....1 NO.....2 (SKIP TO 548G) DON'T KNOW.....8
548F	How many times?	NUMBER OF TIMES.....	NUMBER OF TIMES.....
548G	An injection to prevent measles?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
549a	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
549b	Has (NAME) been ill with measles?	YES.....1 NO.....2 (SKIP TO 550) DON'T KNOW.....8	YES.....1 NO.....2 (SKIP TO 550) DON'T KNOW.....8
549c	How old was (NAME) when s/he had measles?	AGE.....	AGE.....
550	Has (NAME) been ill with a cough at any time in the last 2 weeks?	YES.....1 NO.....2 (SKIP TO 554) DON'T KNOW.....8	YES.....1 NO.....2 (SKIP TO 554) DON'T KNOW.....8
551	When (NAME) was ill with a cough, did he/she breathe faster than usual with short, fast breaths?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
552	Did you seek advice or treatment for the cough?	YES.....1 NO.....2 (SKIP TO 554)	YES.....1 NO.....2 (SKIP TO 554)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
553	Where did you seek advice or treatment? Anywhere else? RECORD ALL MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL.....A ROYAL MEDICAL SERVICES ARMED FORCES.....B GOVT. HEALTH CENTER....C GOVT. HEALTH POST.....D MOBILE CLINIC.....E COMM. HEALTH WORKER....F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...H PHARMACY.....I PRIVATE DOCTOR.....J MOBILE CLINIC.....K COMM. HEALTH WORKER....L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP.....N TRAD. PRACTITIONER.....O OTHER_____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL.....A ROYAL MEDICAL SERVICES ARMED FORCES.....B GOVT. HEALTH CENTER....C GOVT. HEALTH POST.....D MOBILE CLINIC.....E COMM. HEALTH WORKER....F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...H PHARMACY.....I PRIVATE DOCTOR.....J MOBILE CLINIC.....K COMM. HEALTH WORKER....L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP.....N TRAD. PRACTITIONER.....O OTHER_____ X (SPECIFY)
554	Has (NAME) had diarrhea in the last two weeks?	YES.....1 NO.....2 (SKIP TO 564) DON'T KNOW.....8	YES.....1 NO.....2 (SKIP TO 564) DON'T KNOW.....8
555	Was there any blood in the stools?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
556	On the worst day of the diarrhea, how many bowel movements did (NAME) have?	NUMBER OF BOWEL MOVEMENTS..... ☐☐ DON'T KNOW.....98	NUMBER OF BOWEL MOVEMENTS..... ☐☐ DON'T KNOW.....98
557	Was he/she given the same amount to drink as before the diarrhea, or more, or less?	SAME.....1 MORE.....2 LESS.....3 DON'T KNOW.....8	SAME.....1 MORE.....2 LESS.....3 DON'T KNOW.....8
557A	CHECK 528: LAST CHILD STILL BREASTFED?	YES ☐ NO ☐ (SKIP TO 558)	
557B	During (NAME)'s diarrhea, did you change the frequency of breastfeeding?	YES.....1 NO.....2 (SKIP TO 564)	
557C	Did you increase the number of feeds or reduce them, or did you stop completely?	INCREASED.....1 REDUCED.....2 STOPPED COMPLETELY.....3	
558	Was he/she given the same amount of food to eat as before the diarrhea, or more, or less?	SAME.....1 MORE.....2 LESS.....3 DON'T KNOW.....8	SAME.....1 MORE.....2 LESS.....3 DON'T KNOW.....8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
559	When (NAME) had diarrhea, was he/she given any of the following to drink: A fluid made from a special packet called Aquacell or Paralait? Thin watery gruel made from rice, carrots wheat, etc. Soup? Home-made sugar-salt-water solution? Milk or infant formula? Yoghurt-based drink? Water? Any other liquids?	YES NO DK FLUID FROM ORS PKT..1 2 8 THIN WATERY GRUEL...1 2 8 SOUP.....1 2 8 SUG.-SALT-WAT. SOL..1 2 8 MILK/INFANT FORMULA.1 2 8 YOGHURT-BASED DR....1 2 8 WATER.....1 2 8 OTHER LIQUID.....1 2 8	YES NO DK FLUID FROM ORS PKT..1 2 8 THIN WATERY GRUEL...1 2 8 SOUP.....1 2 8 SUG.-SALT-WAT. SOL..1 2 8 MILK/INFANT FORMULA.1 2 8 YOGHURT-BASED DR....1 2 8 WATER.....1 2 8 OTHER LIQUID.....1 2 8
560	Was anything (else) given to treat the diarrhea?	YES.....1 NO.....2 (SKIP TO 562) DON'T KNOW.....8	YES.....1 NO.....2 (SKIP TO 562) DON'T KNOW.....8
561	What was given to treat the diarrhea? Anything else? RECORD ALL MENTIONED.	PILL OR SYRUP.....A INJECTION.....B (I.V.) INTRAVENOUS.....C HOME REMEDIES/ HERBAL MEDICINES.....D OTHER_____ X (SPECIFY)	PILL OR SYRUP.....A INJECTION.....B (I.V.) INTRAVENOUS.....C HOME REMEDIES/ HERBAL MEDICINES.....D OTHER_____ X (SPECIFY)
562	Did you seek advice or treatment for the diarrhea?	YES.....1 NO.....2 (SKIP TO 564)	YES.....1 NO.....2 (SKIP TO 564)
563	Where did you seek advice or treatment? Anywhere else? RECORD ALL MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL.....A ROYAL MEDICAL SERVICES ARMED FORCES.....B GOVT. HEALTH CENTER....C GOVT. HEALTH POST.....D MOBILE CLINIC.....E COMM. HEALTH WORKER....F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...H PHARMACY.....I PRIVATE DOCTOR.....J MOBILE CLINIC.....K COMM. HEALTH WORKER....L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP.....N TRAD. PRACTITIONER.....O OTHER_____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL.....A ROYAL MEDICAL SERVICES ARMED FORCES.....B GOVT. HEALTH CENTER....C GOVT. HEALTH POST.....D MOBILE CLINIC.....E COMM. HEALTH WORKER....F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...H PHARMACY.....I PRIVATE DOCTOR.....J MOBILE CLINIC.....K COMM. HEALTH WORKER....L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP.....N TRAD. PRACTITIONER.....O OTHER_____ X (SPECIFY)
564		GO BACK TO 542 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 565.	GO BACK TO 542 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 565.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
565	When a child has diarrhea, should he/she be given less to drink than usual, about the same amount, or more than usual?	LESS TO DRINK.....1 ABOUT SAME AMOUNT TO DRINK.....2 MORE TO DRINK.....3 DON'T KNOW.....8	
566	When a child has diarrhea, should he/she be given less to eat than usual, about the same amount, or more than usual?	LESS TO EAT.....1 ABOUT SAME AMOUNT TO EAT.....2 MORE TO EAT.....3 DON'T KNOW.....8	
567	When a child is sick with diarrhea, what signs of illness would tell you that he or she should be taken to a health facility or health worker? RECORD ALL MENTIONED.	REPEATED WATERY STOOLS.....A ANY WATERY STOOLS.....B REPEATED VOMITING.....C ANY VOMITING.....D BLOOD IN STOOLS.....E FEVER.....F MARKED THIRST.....G NOT EATING/NOT DRINKING WELL....H GETTING SICKER/VERY SICK.....I NOT GETTING BETTER.....J OTHER_____ X (SPECIFY) DON'T KNOW.....Z	
568	When a child is sick with a cough, what signs of illness would tell you that he or she should be taken to a health facility or health worker? RECORD ALL MENTIONED.	FAST BREATHING.....A DIFFICULT BREATHING.....B NOISY BREATHING.....C FEVER.....D UNABLE TO DRINK.....E NOT EATING/NOT DRINKING WELL....F GETTING SICKER/VERY SICK.....G NOT GETTING BETTER.....H OTHER_____ X (SPECIFY) DON'T KNOW.....Z	
569	CHECK 559, ALL COLUMNS: NO CHILD RECEIVED ORS ☐ ANY CHILD RECEIVED ORS ☐		→601
570	Have you ever heard of a special product called Aquacell or Paralait you can get for the treatment of diarrhea?	YES.....1 NO.....2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	CHECK 413: NEITHER STERILIZED ☐ — HE OR SHE STERILIZED ☐		→611
602	CHECK 327: NOT PREGANT OR UNSURE ☐ — PREGNANT ☐		
	Now I have some questions about the future. Would you like to have (a/another) child or would you prefer not to have any (more) children?	HAVE (A/ANOTHER) CHILD.....1 NO MORE/NONE.....2 SAYS SHE CAN'T GET PREGNANT.....3 →606 UNDECIDED/DON'T KNOW.....8 →604	
	Now I have some questions about the future. After the child you are expecting now, would you like to have another child or would you prefer not to have any more children?		
603	CHECK 327: NOT PREGANT OR UNSURE ☐ — PREGNANT ☐		
	How long would you like to wait from now before the birth of (a/another) child?	MONTHS.....1 ☐☐ YEARS.....2 ☐☐ SOON/NOW.....993 SAYS SHE CAN'T GET PREGNANT...994 →606 OTHER_____ 996 (SPECIFY) DON'T KNOW.....998	
	After the child you are expecting now, how long would you like to wait before the birth of another child?		
604	CHECK 327: NOT PREGNANT OR UNSURE ☐ — PREGNANT ☐		→607
605	If you became pregnant in the next few weeks, would you be ←&dDhappy←&d@, ←&dDunhappy←&d@, or would it ←&dDnot matter←&d@ very much?	HAPPY.....1 UNHAPPY.....2 WOULD NOT MATTER.....3	
606	CHECK 412: USING A METHOD? NOT ASKED ☐ — NOT CURRENTLY USING ☐ — CURRENTLY USING ☐		→611
607	Do you think you will use a method to delay or avoid pregnancy within the next 12 months?	YES.....1 →609 NO.....2 DON'T KNOW.....8	
608	Do you think you will use a method at any time in the future?	YES.....1 NO.....2 DON'T KNOW.....8 →610	
609	Which method would you prefer to use?	PILL.....01 IUD.....02 INJECTIONS.....03 IMPLANTS.....04 DIAPHRAGM/FOAM/JELLY.....05 CONDOM.....06 FEMALE STERILIZATION.....07 MALE STERILIZATION.....08 PERIODIC ABSTINENCE.....09 WITHDRAWAL.....10 PROLONGED BREASTFEEDING.....11 OTHER_____ 96 (SPECIFY) UNSURE.....98	→611

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
610	What is the main reason that you think you will never use a method?	FERTILITY-RELATED REASONS INFREQUENT SEX.....22 MENOPAUSAL/HYSTERECTOMY.....23 SUBFECUND/INFECUND.....24 WANTS MORE CHILDREN.....26 OPPOSITION TO USE RESPONDENT OPPOSED.....31 HUSBAND OPPOSED.....32 OTHER HH MEMBERS OPPOSED.....33 OTHERS OPPOSED.....34 RELIGIOUS PROHIBITION.....35 RUMORS.....36 LACK OF KNOWLEDGE KNOWS NO METHOD.....41 KNOWS NO SOURCE.....42 METHOD-RELATED REASONS HEALTH CONCERNS.....51 FEAR OF SIDE EFFECTS.....52 LACK OF ACCESS/TOO FAR.....53 COST TOO MUCH.....54 INCONVENIENT TO USE.....55 INTERFERES WITH BODY'S NORMAL PROCESSES.....56 OTHER_____ 96 (SPECIFY) DON'T KNOW.....98	→611
611	CHECK 316: HAS LIVING CHILDREN ☐ → If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ → If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NUMBER..... ☐☐ OTHER_____ 96 (SPECIFY)	→613
612	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter?	BOYS NUMBER..... ☐☐ OTHER_____ 96 (SPECIFY) GIRLS NUMBER..... ☐☐ OTHER_____ 96 (SPECIFY) EITHER NUMBER..... ☐☐ OTHER_____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
613	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE.....1 DISAPPROVE.....2 NO OPINION.....3	
614	Is it acceptable or not acceptable to you for information on family planning to be provided: On the radio? On the television?	ACCEPT-ABLE / NOT ACCEPT-ABLE / DON'T KNOW RADIO.....1 2 8 TELEVISION.....1 2 8	
615	In the last six months have you heard about family planning: On the radio? On the television? In a newspaper or magazine? From a poster? From leaflets or brochures? From lectures	YES NO RADIO.....1 2 TELEVISION.....1 2 NEWSPAPER OR MAGAZINE.....1 2 POSTER.....1 2 LEAFLETS OR BROCHURES.....1 2 LECTURES.....1 2	
616	From what sources do you receive information about family planning? (CIRCLE ALL RESPONSES MENTIONED) (PROBE: Any others?) Government health worker Private doctor or nurse JAFPP staff Husband Friends/relatives Radio Television Print materials (newspapers, posters, etc.) School, library or other academic source Community or public meetings Lectures? Other, Specify Don't know	YES NO NO SOURCE.....1 2 INTERPERSONNEL GOV'T HEALTH WORKER.....1 2 PRIVATE DOCTOR OR NURSE...1 2 JAFPP STAFF.....1 2 HUSBAND.....1 2 FRIENDS/RELATIVES.....1 2 MEDIA RADIO.....1 2 TV.....1 2 PRINT MATERIALS.....1 2 SCHOOL, LIBRARY/ACADEMIC..1 2 COMMUNITY/PUBLIC MEETING..1 2 LECTURES 1 2 OTHER_____ 1 2 (SPECIFY) DON'T KNOW.....1 2	
617	CHECK 613: YES, APPROVE F P ☐ NO, DISAPPROVE FP ☐		→622
617A	Where or from whom would you prefer to get information about family planning? (CIRCLE ONLY ONE ANSWER) Government health worker Private doctor or nurse JAFPP staff Husband Other relatives Friends Radio Television Print materials (newspapers, posters, etc.) School, library or other academic source Community or public meetings Lectures? Other, Specify Don't know	INTERPERSONNEL GOVER'T HEALTH WORKER.....01 PRIVATE DOCTOR OR NURSE.....02 JAFPP STAFF.....03 HUSBAND.....04 OTHER RELATIVES.....05 FRIENDS.....06 MEDIA RADIO.....07 TV.....08 PRINT MATERIALS.....09 SCHOOL, LIBRARY/ACADEMIC.....10 COMMUNITY/PUBLIC MEETING.....11 LECTURES 12 OTHER_____ 96 (SPECIFY) DON'T KNOW.....98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
618	In the last few months have you discussed the practice of family planning with your friends, neighbors, or relatives?	YES.....1 NO.....2	→621
619	With whom? Anyone else? RECORD ALL MENTIONED.	HUSBAND.....A MOTHER.....B FATHER.....C SISTER(S).....D BROTHER(S).....E DAUGHTER.....F MOTHER-IN-LAW.....G FRIENDS/NEIGHBORS.....H OTHER_____ X (SPECIFY)	
619A	Have you tried to encourage or persuade anyone to use family planning?	YES.....1 NO.....2	
620	CHECK 202: YES, CURRENTLY MARRIED ☐ NO, NOT MARRIED ☐		→701
621	Spouses do not always agree on everything. Now I want to ask you about your husband's views on family planning. Do you think that your husband approves or disapproves of couples using a method to avoid pregnancy?	APPROVE.....1 DISAPPROVE.....2 DON'T KNOW.....8	
621A	In your opinion, who should make the decision whether to use a family planning method, your husband, you, or you and your husband?	HUSBAND.....1 WOMAN.....2 BOTH TOGETHER.....3 DON'T KNOW.....8	
621B	In your family, who does make the decision whether to use a family planning method, your husband, you or you and your husband?	HUSBAND.....1 WOMAN.....2 BOTH TOGETHER.....3 DON'T KNOW.....8	
622	How often have you talked to your husband about family planning in the past year?	NEVER.....1 ONCE OR TWICE.....2 MORE OFTEN.....3 NOT APPLICABLE.....4	→622B →622B
622A	Who usually starts the discussion about family planning, you or your husband?	WOMAN.....1 HUSBAND.....2 BOTH EQUALLY.....3 OTHER _____4 (SPECIFY)	
622B	Do you approve or disapprove the following statements: A. RELIGION: According to my religion family planning is permitted. B. MOTHER'S HEALTH: Using family planning methods helps a mother regain her strength before having her next baby. C. ECONOMICS: Having a small family will improve one's standard of living. D. RELATIONSHIP TO PARTNERS: The use of family planning will bring the relationship of a couple closer. E. CHILDREN'S HEALTH: Spacing out births protects the health of children	SA A D SD DK NR A. RELIGION.....1 2 3 4 8 9 B. MOTHER'S HEALTH.....1 2 3 4 8 9 C. ECONOMICS.....1 2 3 4 8 9 D. RELATIONSHIP TO PARTNERS..1 2 3 4 8 9 E. CHILDREN'S HEALTH....1 2 3 4 8 9	

SA = Strongly Approve, A = Approve; D = Disapprove, SD = Strongly Disapprove, DK = Don't Know
NR = No Response

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
622C	Do you think that the following people would approve or disapprove of you using a family planning method? (READ LIST)	YES NO DK NA	
	Husband	HUSBAND.....1 2 8 9	
	Mother	MOTHER.....1 2 8 9	
	Father	FATHER.....1 2 8 9	
	Mother-in-law	MOTHER-IN-LAW.....1 2 8 9	
	Father-in-law	FATHER-IN-LAW.....1 2 8 9	
	Your child	YOUR CHILD.....1 2 8 9	
	Your friend	YOUR FRIEND.....1 2 8 9	
	Health care worker	HEALTH CARE WORKER.....1 2 8 9	
	Your religious leader	YOUR RELIGIOUS LEADER..1 2 8 9	
	Local community leaders	COMMUNITY LEADERS.....1 2 8 9	
	Other, specify	OTHER_____1 2 8 9	
	Other, specify	OTHER_____1 2 8 9	
623	Do you think your husband wants the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER.....1 MORE CHILDREN.....2 FEWER CHILDREN.....3 DON'T KNOW.....8	

←&dDSECTION 7. HUSBAND'S BACKGROUND, WOMAN'S WORK AND RESIDENCE←&d@

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 202: CURRENTLY MARRIED ☐ FORMERLY MARRIED/SEPARATED ☐		→703
702	How old was your husband on his last birthday?	AGE..... ☐☐	
703	Did your (last) husband ever attend school?	YES.....1 NO.....2	→706
704	What was the highest level of school he attended: basic, elementary, preparatory, vocational secondary, academic secondary, intermediate diploma, the university or higher studies?	ELEMENTARY.....01 PREPARATORY.....02 BASIC.....03 VOCATIONAL SECONDARY.....04 SECONDARY.....05 INTERMEDIATE DIPLOMA.....06 UNIVERSITY.....07 HIGHER STUDIES.....08 DON'T KNOW.....98	→706
705	What was the highest (grade/form/year) he completed at that level?	GRADE..... ☐☐ DON'T KNOW.....98	
706	What is (was) your (last) husband's occupation? That is, what kind of work does (did) he mainly do?	_____ ☐☐ _____	
707	CHECK 706: WORKS (WORKED) IN AGRICULTURE ☐ DOES (DID) NOT WORK IN AGRICULTURE ☐		→709
708	(Does/did) your husband/partner work mainly on his own land or on family land, or (does/did) he rent land, or (does/did) he work on someone else's land?	HIS LAND.....1 FAMILY LAND.....2 RENTED LAND.....3 SOMEONE ELSE'S LAND.....4	
709	Aside from your own housework, are you currently working?	YES.....1 NO.....2	→712
710	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any of these things or any other work?	YES.....1 NO.....2	→712
711	Have you done any work in the last 12 months?	YES.....1 NO.....2	→726
712	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____	
713	CHECK 712: WORKS IN AGRICULTURE ☐ DOES NOT WORK IN AGRICULTURE ☐		→715
714	Do you work mainly on your own land or on family land, or do you rent land, or work on someone else's land?	OWN LAND.....1 FAMILY LAND.....2 RENTED LAND.....3 SOMEONE ELSE'S LAND.....4	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
715	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER.....1 FOR SOMEONE ELSE.....2 SELF-EMPLOYED.....3	
716	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR.....1 →718 SEASONALLY/PART OF THE YEAR.....2 ONCE IN A WHILE.....3 →719	
717	During the last 12 months, how many months did you work?	NUMBER OF MONTHS..... ☐☐	
718	(In the months you worked,) How many days a week did you usually work?	NUMBER OF DAYS..... ☐	→720
719	During the last 12 months, approximately how many days did you work?	NUMBER OF DAYS..... ☐☐☐	
720	Do you earn cash for your work? PROBE: Do you make money for working?	YES.....1 NO.....2 →723	
721	How much do you usually earn for this work? PROBE: Is this by the day, by the week, or by the month?	DINAR / PIASTRE PER HOUR....1 ☐☐☐ ☐☐ PER DAY.....2 ☐☐☐ ☐☐ PER WEEK....3 ☐☐☐ ☐☐ PER MONTH...4 ☐☐☐ ☐☐ PER YEAR....5 ☐☐☐ ☐☐ OTHER_____ 999996 (SPECIFY)	
722	CHECK 202: YES, CURRENTLY MARRIED ☐ → Who mainly decides how the money you earn will be used: you, your husband, you and your husband jointly, or someone else? NO, NOT MARRIED ☐ → Who mainly decides how the money you earn will be used: you, someone else, or you and someone else jointly?	RESPONDENT DECIDES.....1 HUSBAND DECIDES.....2 JOINTLY WITH HUSBAND.....3 SOMEONE ELSE DECIDES.....4 JOINTLY WITH SOMEONE ELSE.....5	
723	Do you usually work at home or away from home?	HOME.....1 AWAY.....2	
724	CHECK 316 AND 318: IS A CHILD LIVING AT HOME WHO IS AGE 5 OR LESS? YES ☐ NO ☐		→726
725	Who usually takes care of (NAME OF YOUNGEST CHILD AT HOME) while you are working?	RESPONDENT.....01 HUSBAND.....02 OLDER FEMALE CHILD.....03 OLDER MALE CHILD.....04 OTHER RELATIVES.....05 NEIGHBORS.....06 FRIENDS.....07 SERVANTS/HIRED HELP.....08 CHILD IS IN SCHOOL.....09 INSTITUTIONAL CHILDCARE.....10 HAS NOT WORKED SINCE LAST BIRTH.....95 OTHER_____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
726	Have you lived in only one community or in more than one community since January 1992?	ONE COMMUNITY.....1 MORE THAN ONE COMMUNITY.....2	→728
727	IN COLUMN 4 OF CALENDAR, ENTER THE APPROPRIATE CODE FOR CURRENT COMMUNITY, ('1' AMMAN, '2' ANOTHER CITY, '3' COUNTRYSIDE/VILLAGE, '4' OUTSIDE JORDAN). BEGIN IN THE MONTH OF INTERVIEW AND CONTINUE WITH ALL PRECEDING MONTHS BACK TO JANUARY 1992. THEN SKIP TO →		801
728	In what month and year did you move to (NAME OF COMMUNITY OF INTERVIEW)? IN COLUMN 4 OF CALENDAR, ENTER 'X' IN THE MONTH AND YEAR OF THE MOVE. IN SUBSEQUENT MONTHS ENTER THE APPROPRIATE CODE FOR TYPE OF COMMUNITY, ('1' AMMAN, '2' ANOTHER CITY, '3' COUNTRYSIDE/VILLAGE, '4' OUTSIDE JORDAN). CONTINUE PROBING FOR PREVIOUS COMMUNITIES, AND RECORD MOVES AND TYPES OF COMMUNITIES ACCORDINGLY. ILLUSTRATIVE QUESTIONS: · Where did you live before.....? · In what month and year did you arrive there? · Is that place in Amman, a medium city, a small city, a town, or in the countryside?		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Have you ever heard of an illness called AIDS?	YES.....1 NO.....2	→901
802	From which sources of information have you learned most about AIDS? Any other sources? RECORD ALL MENTIONED.	RADIO.....A TV.....B NEWSPAPERS/MAGAZINES.....C PAMPHLETS/POSTERS.....D HEALTH WORKERS.....E LECTURES.....F MOSQUES/CHURCHES.....G SCHOOLS/TEACHERS.....H COMMUNITY MEETINGS.....I FRIENDS/RELATIVES.....J WORK PLACE.....K OTHER_____ X (SPECIFY)	
803	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	YES.....1 NO.....2 DON'T KNOW.....8	→807
804	What can a person do? Any other ways? RECORD ALL MENTIONED.	SAFE SEX.....A ABSTAIN FROM SEX.....B USE CONDOMS.....C HAVE ONLY ONE SEX PARTNER.....D AVOID SEX WITH PROSTITUTES.....E AVOID SEX WITH HOMOSEXUALS.....F AVOID BLOOD TRANSFUSIONS.....G AVOID INJECTIONS.....H AVOID KISSING.....I AVOID MOSQUITO BITES.....J SEEK PROTECTION FROM TRADITIONAL HEALER.....K OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DON'T KNOW.....Z	
805	Is it possible for a healthy-looking person to have the AIDS virus?	YES.....1 NO.....2 DON'T KNOW.....8	
806	Do you think that persons with AIDS almost never die from the disease, sometimes die, or almost always die from the disease?	ALMOST NEVER.....1 SOMETIMES.....2 ALMOST ALWAYS.....3 DON'T KNOW.....8	
807	Do you think your chances of getting AIDS are small, moderate, great, or no risk at all?	SMALL.....1 MODERATE.....2 GREAT.....3 NO RISK AT ALL.....4 HAS AIDS.....5	

901 Now I would like to ask you some questions about your brothers and sisters, that is, all of the children who were born to your natural mother, including those who are living with you, those living elsewhere, and those who have died. How many children did your mother give birth to, including yourself?

NUMBER OF BIRTHS TO NATURAL MOTHER ☐☐

IF '01' OR ONLY CHILD ☐ → 915

902 How many of these births did your mother have before you were born?

NUMBER OF PRECEDING BIRTHS..... ☐☐

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
903	What was the name given to your oldest (next oldest) brother or sister?	.....	.....	.....	.....	.....	.....	.....
904	Is (NAME) male or female	MALE.....1 FEMALE...2	MALE....1 FEMALE..2	MALE.....1 FEMALE...2	MALE.....1 FEMALE...2	MALE.....1 FEMALE...2	MALE.....1 FEMALE...2	MALE....1 FEMALE..2
905	Is (NAME) still alive?	YES.....1 NO.....2 → TO 907 DK.....8 → TO (2)	YES.....1 NO.....2 → TO 907 DK.....8 → TO (3)	YES.....1 NO.....2 → TO 907 DK.....8 → TO (4)	YES.....1 NO.....2 → TO 907 DK.....8 → TO (5)	YES.....1 NO.....2 → TO 907 DK.....8 → TO (6)	YES.....1 NO.....2 → TO 907 DK.....8 → TO (7)	YES.....1 NO.....2 → TO 907 DK.....8 → TO (8)
906	How old is (NAME)?	☐☐ GO TO (2)	☐☐ GO TO (3)	☐☐ GO TO (4)	☐☐ GO TO (5)	☐☐ GO TO (6)	☐☐ GO TO (7)	☐☐ GO TO (8)
907	In what year did (NAME) die?	19☐☐	19☐☐	19☐☐	19☐☐	19☐☐	19☐☐	19☐☐
908	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 15 YEARS GO TO (2)	☐☐ IF MALE OR DIED BEFORE 15 YEARS GO TO (3)	☐☐ IF MALE OR DIED BEFORE 15 YEARS GO TO (4)	☐☐ IF MALE OR DIED BEFORE 15 YEARS GO TO (5)	☐☐ IF MALE OR DIED BEFORE 15 YEARS GO TO (6)	☐☐ IF MALE OR DIED BEFORE 15 YEARS GO TO (7)	☐☐ IF MALE OR DIED BEFORE 15 YEARS GO TO (8)
909	Had (NAME) ever been married?	YES.....1 NO.....2 → TO (2)	YES.....1 NO.....2 → TO (3)	YES.....1 NO.....2 → TO (4)	YES.....1 NO.....2 → TO (5)	YES.....1 NO.....2 → TO (6)	YES.....1 NO.....2 → TO (7)	YES.....1 NO.....2 → TO (8)
910	Was (NAME) pregnant when she died?	YES.....1 → TO 913 NO.....2	YES.....2 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2
911	Did (NAME) die during childbirth?	YES.....1 → TO 913 NO.....2	YES.....2 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2	YES.....1 → TO 913 NO.....2
912	Did (NAME) die within two months after the end of a pregnancy or birth?	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2
913	Did (NAME) die due to complications of pregnancy or delivery?	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2
914	How many children had (NAME) given birth to (before that pregnancy)?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐

		(8))	(9)	(10)	(11)	(12)	(13)	(14)
903	What was the name given to your oldest (next oldest) brother or sister?	.....	.....	.....	.....	.....	.....	.....
904	Is (NAME) male or female	MALE.....1 FEMALE...2	MALE....1 FEMALE..2	MALE.....1 FEMALE...2	MALE.....1 FEMALE...2	MALE.....1 FEMALE...2	MALE.....1 FEMALE...2	MALE....1 FEMALE..2
905	Is (NAME) still alive?	YES.....1 NO.....2 TO 907 DK.....8 TO (9)<	YES.....1 NO.....2 TO 907 DK.....8 TO (10)<	YES.....1 NO.....2 TO 907 DK.....8 TO (11)<	YES.....1 NO.....2 TO 907 DK.....8 TO (12)<	YES.....1 NO.....2 TO 907 DK.....8 TO (13)<	YES.....1 NO.....2 TO 907 DK.....8 TO (14)<	YES.....1 NO.....2 TO 907 DK.....8 TO (15)<
906	How old is (NAME)?	GO TO (9)	GO TO(10)	GO TO (11)	GO TO (11)	GO TO (11)	GO TO (11)	GO TO(15)
907	In what year did (NAME) die?	19	19	19	19	19	19	19
908	How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 15 YEARS GO TO (9)	IF MALE OR DIED BEFORE 15 YEARS GO TO (10)	IF MALE OR DIED BEFORE 15 YEARS GO TO (11)	IF MALE OR DIED BEFORE 15 YEARS GO TO (12)	IF MALE OR DIED BEFORE 15 YEARS GO TO (13)	IF MALE OR DIED BEFORE 15 YEARS GO TO (14)	IF MALE OR DIED BEFORE 15 YEARS GO TO (15)
909	Had (NAME) ever been married?	YES.....1 NO.....2 TO (9)<	YES.....1 NO.....2 TO (10)<	YES.....1 NO.....2 TO (11)<	YES.....1 NO.....2 TO (12)<	YES.....1 NO.....2 TO (13)<	YES.....1 NO.....2 TO (14)<	YES.....1 NO.....2 TO (15)<
910	Was (NAME) pregnant when she died?	YES.....1 TO 913 NO.....2	YES.....2 TO 913 NO.....2	YES.....1 TO 913 NO.....2	YES.....1 TO 913 NO.....2	YES.....1 TO 913 NO.....2	YES.....1 TO 913 NO.....2	YES.....1 TO 913 NO.....2
911	Did (NAME) die during childbirth?	YES.....1 TO 913 NO.....2	YES.....2 TO 913 NO.....2	YES.....1 TO 913 NO.....2	YES.....1 TO 913 NO.....2	YES.....1 TO 913 NO.....2	YES.....1 TO 913 NO.....2	YES.....1 TO 913 NO.....2
912	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2
913	Did (NAME) die due to complications of pregnancy or delivery?	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2
914	How many children had (NAME) given birth to (before that pregnancy)?							
915	RECORD THE TIME.	HOUR..... MINUTES.....						

←&dDSECTION 10. HEIGHT AND WEIGHT←&d@

1001	CHECK 315: ONE OR MORE BIRTHS SINCE JAN. 1992 ☐	NO BIRTHS SINCE JAN. 1992 ☐ → END

IN 1002 (COLUMNS 2 AND 3) RECORD THE LINE NUMBER FOR EACH CHILD BORN SINCE JANUARY 1991 AND STILL ALIVE. IN 1003 AND 1004 RECORD THE NAME AND BIRTH DATE FOR THE RESPONDENT AND FOR ALL LIVING CHILDREN BORN SINCE JANUARY 1992. IN 1006 AND 1008 RECORD HEIGHT AND WEIGHT OF THE RESPONDENT AND THE LIVING CHILDREN. (NOTE: ALL RESPONDENTS WITH ONE OR MORE BIRTHS SINCE JANUARY 1992 SHOULD BE WEIGHED AND MEASURED EVEN IF ALL OF THE CHILDREN HAVE DIED. IF THERE ARE MORE THAN 2 LIVING CHILDREN BORN SINCE JANUARY 1992, USE ADDITIONAL QUESTIONNAIRES).

		1 RESPONDENT	2 YOUNGEST LIVING CHILD	3 NEXT-TO-YOUNGEST LIVING CHILD
1002	LINE NO. FROM Q.312		☐☐	☐☐
1003	NAME FROM Q.312 FOR CHILDREN	(NAME) _____	(NAME) _____	(NAME) _____
1004	DATE OF BIRTH FROM Q.315, AND ASK FOR DAY OF BIRTH		DAY..... ☐☐ MONTH..... ☐☐ YEAR.. 1 9 ☐☐	DAY..... ☐☐ MONTH..... ☐☐ YEAR.. 1 9 ☐☐
1005	BCG SCAR ON TOP OF LEFT SHOULDER		SCAR SEEN.....1 NO SCAR.....2	SCAR SEEN.....1 NO SCAR.....2
1006	HEIGHT (in centimeters)	☐☐☐.☐	☐☐☐.☐	☐☐☐.☐
1007	WAS LENGTH/HEIGHT OF CHILD MEASURED LYING DOWN OR STANDING UP?		LYING.....1 STANDING.....2	LYING.....1 STANDING.....2
1008	WEIGHT (in kilograms)	☐☐☐.☐	0☐☐.☐	0☐☐.☐
1009	DATE WEIGHED AND MEASURED	DAY..... ☐☐ MONTH..... ☐☐ YEAR.. 1 9 ☐☐	DAY..... ☐☐ MONTH..... ☐☐ YEAR.. 1 9 ☐☐	DAY..... ☐☐ MONTH..... ☐☐ YEAR.. 1 9 ☐☐
1010	RESULT	MEASURED.....1 NOT PRESENT.....3 REFUSED.....4 OTHER.....6 _____ (SPECIFY)	CHILD MEASURED....1 CHILD SICK.....2 CHILD NOT PRESENT.....3 CHILD REFUSED.....4 MOTHER REFUSED....5 OTHER.....6 _____ (SPECIFY)	CHILD MEASURED....1 CHILD SICK.....2 CHILD NOT PRESENT.....3 CHILD REFUSED.....4 MOTHER REFUSED....5 OTHER.....6 _____ (SPECIFY)
1011	NAME OF MEASURER: _____ ☐☐		NAME OF ASSISTANT: _____ ☐☐	

←&dDINTERVIEWER'S OBSERVATIONS←&d@

Comments
about Respondent: _____

_____

_____

Comments on
Specific Questions: _____

_____

_____

Any Other Comments: _____

_____

_____

←&dDSUPERVISOR'S OBSERVATIONS←&d@

_____

_____

_____

Name of Supervisor: _____ Date: _____

←&dDEDITOR'S OBSERVATIONS←&d@

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Name of Editor: _____ Date: _____

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INSTRUCTIONS:

ONLY ONE CODE SHOULD APPEAR IN ANY BOX.

FOR COLUMNS 1, 3, AND 4, ALL MONTHS SHOULD BE FILLED IN.

INFORMATION TO BE CODED FOR EACH COLUMN

COL.1: Births, Pregnancies, Contraceptive Use

B BIRTHS

P PREGNANCIES

T TERMINATIONS

0 NO METHOD

1 PILL

2 IUD

3 INJECTIONS

4 IMPLANTS

5 DIAPHRAGM/FOAM/JELLY

6 CONDOM

7 FEMALE STERILIZATION

8 MALE STERILIZATION

9 PERIODIC ABSTINENCE

A WITHDRAWAL

Y PROLONGED BREASTFEEDING

X OTHER_____

(SPECIFY)

COL.2: Discontinuation of Contraceptive Use

0 INFREQUENT SEX/HUSBAND AWAY

1 BECAME PREGNANT WHILE USING

2 WANTED TO BECOME PREGNANT

3 HUSBAND DISAPPROVED

4 WANTED MORE EFFECTIVE METHOD

5 HEALTH CONCERNS

6 SIDE EFFECTS

7 LACK OF ACCESS/TOO FAR

8 COST TOO MUCH

9 INCONVENIENT TO USE

F FATALISTIC

A DIFFICULT TO GET PREGNANT/MENOPAUSE

D MARITAL DISSOLUTION/SEPARATION

X OTHER_____

(SPECIFY)

Z DON'T KNOW

			1	2	3	4		
	12 DEC	01					01 DEC	
	11 NOV	02					02 NOV	
	10 OCT	03					03 OCT	
	09 SEP	04					04 SEP	
1	08 AUG	05					05 AUG	1
9	07 JUL	06					06 JUL	9
9	06 JUN	07					07 JUN	9
7	05 MAY	08					08 MAY	7
	04 APR	09					09 APR	
	03 MAR	10					10 MAR	
	02 FEB	11					11 FEB	
	01 JAN	12					12 JAN	
	12 DEC	13					13 DEC	
	11 NOV	14					14 NOV	
	10 OCT	15					15 OCT	
	09 SEP	16					16 SEP	
1	08 AUG	17					17 AUG	1
9	07 JUL	18					18 JUL	9
9	06 JUN	19					19 JUN	9
6	05 MAY	20					20 MAY	6
	04 APR	21					21 APR	
	03 MAR	22					22 MAR	
	02 FEB	23					23 FEB	
	01 JAN	24					24 JAN	
	12 DEC	25					25 DEC	
	11 NOV	26					26 NOV	
	10 OCT	27					27 OCT	
	09 SEP	28					28 SEP	
1	08 AUG	29					29 AUG	1
9	07 JUL	30					30 JUL	9
9	06 JUN	31					31 JUN	9
5	05 MAY	32					32 MAY	5
	04 APR	33					33 APR	
	03 MAR	34					34 MAR	
	02 FEB	35					35 FEB	
	01 JAN	36					36 JAN	
	12 DEC	37					37 DEC	
	11 NOV	38					38 NOV	
	10 OCT	39					39 OCT	
	09 SEP	40					40 SEP	
1	08 AUG	41					41 AUG	2
9	07 JUL	42					42 JUL	9
9	06 JUN	43					43 JUN	9
4	05 MAY	44					44 MAY	4
	04 APR	45					45 APR	
	03 MAR	46					46 MAR	

COL.3: Marriage

X MARRIED

0 NOT MARRIED

COL.4: Moves and Types of Communities

X CHANGE OF COMMUNITY

1 AMMAN

2 ANOTHER CITY

3 COUNTRYSIDE/VILLAGE

4 OUTSIDE JORDAN

			02	FEB	47					47 FEB
			01	JAN	48					48 JAN
			12	DEC	49					49 DEC
			11	NOV	50					50 NOV
			10	OCT	51					51 OCT
			09	SEP	52					52 SEP
1			08	AUG	53					53 AUG 1
9			07	JUL	54					54 JUL 9
9			06	JUN	55					55 JUN 9
3			05	MAY	56					56 MAY 3
			04	APR	57					57 APR
			03	MAR	58					58 MAR
			02	FEB	59					59 FEB
			01	JAN	60					60 JAN
			12	DEC	61					61 DEC
			11	NOV	62					62 NOV
			10	OCT	63					63 OCT
			09	SEP	64					64 SEP
1			08	AUG	65					65 AUG 1
9			07	JUL	66					66 JUL 9
9			06	JUN	67					67 JUN 9
2			05	MAY	68					68 MAY 2
			04	APR	69					69 APR
			03	MAR	70					70 MAR
			02	FEB	71					71 FEB
			01	JAN	72					72 JAN

←E