THE HASHEMITE KINGDOM OF JORDAN

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ICF Macro
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The JPFHS is part of the worldwide Demographic and Health Surveys Program, which is designed to collect data on fertility, family planning, and maternal and child health. Additional information about the Jordan survey may be obtained from the Department of Statistics, P.O. Box 2015, Amman 11181, Jordan (Telephone (962) 6-5-300-700; Fax (962) 6-5-300-710; e-mail stat@dos.gov.jo). Additional information about the MEASURE DHS program may be obtained from ICF Macro, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705 (Telephone 301-572-0200; Fax 301-572-0999; e-mail reports@measuredhs.com).

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PREFACE

The Department of Statistics (DoS) takes pleasure in presenting the principal report of the 2009 Jordan Population and Family Health Survey (JPFHS), which was conducted from October through December 2009. The 2009 JPFHS is the fifth Population and Family Health Survey to be conducted in Jordan over the last 19 years. Like the first four surveys, conducted respectively in 1990, 1997, 2002, and 2007, the 2009 survey was carried out by the DoS. The main objective of the survey is to provide comprehensive information on fertility, family planning, fertility preferences, mortality, and nutrition as a tool to evaluate existing population and health policies and programs.

The survey sample is nationally representative and was designed to produce estimates of major survey variables at the national level, for urban and rural areas, for each of the three regions (Central, North, and South) and 12 governorates, and for the Badia and non-Badia areas. Almost 15,000 households and 10,000 ever-married women age 15 to 49 were interviewed.

The 2009 JPFHS was funded by the government of Jordan. Additional funding was provided by the U.S. Agency for International Development (USAID) and the United Nations Population Fund (UNFPA). ICF Macro provided technical assistance through the worldwide MEASURE Demographic and Health Surveys (DHS) program.

It is hoped that the 2009 JPFHS data will meet its objective of facilitating important government policies and programs that promote family planning and maternal and child health. Furthermore, the survey will also be useful to those interested in the fields of population, family planning, and nutrition, and in particular, researchers, scientists, students, and other interest groups.

The Jordan DoS would like to express its appreciation to all individuals and organizations that contributed to the success of the survey. The timely, high-quality data are the result of hard work from all the survey staff. Thanks go to all of the households interviewed during the survey for their time and willingness to provide the required information. Acknowledgment also goes to the Ministry of Health for its technical and logistic assistance. Thanks are also due to the USAID and the UNFPA missions in Amman for their financial support, and to the ICF Macro team: Mohamed Ayad and Bernard Barrère, DHS coordinators, who assisted in all stages of the survey, Ruilin Ren for his recommendations on the sampling design, and Noureddine Abderrahim for his valuable assistance in data processing. Special thanks are also due to the local and international experts who prepared the present report.

Director General
Dr. Haidar Fraihat

SUMMARY OF FINDINGS

The 2009 Jordan Population and Family Health Survey (JPFHS) was designed to provide data for monitoring the population and health situation in Jordan. The 2009 JPFHS is the fifth Population and Family Health Survey conducted in Jordan as part of the Demographic and Health Surveys program. The objective of the survey is to provide up-to-date information on fertility, family planning, childhood mortality, and nutrition among women and children.

A nationally representative sample of 13,577 households and 10,109 ever-married women age 15-49 were interviewed. This represents a response rate of 97 percent for households and 97 percent for women. This sample provides estimates for Jordan as a whole, for urban and rural areas, the Badia and non-Badia areas, for the North, Central, and South regions, and for each of the 12 governorates. Fieldwork for the 2009 JPFHS was carried out between October and December 2009.

HOUSEHOLD CHARACTERISTICS

Household Composition. Jordanian households consist of an average of 5.1 persons. Only 11 percent of households in Jordan are headed by a woman.

Housing Conditions. Most households have the basic necessities. Ninety-nine percent of households have electricity, and 99 percent have an improved sanitation facility, that is, either a flush toilet, a ventilated improved pit latrine, or a pit latrine with a slab. Almost all households (98 percent) have access to improved drinking water, and 99 percent of households have an independent bathroom.

Education of Household Members. About half of the population has attended secondary school or beyond. Females are slightly more likely than males to be uneducated, especially in the older age groups. The median number of years of schooling completed is 9.2 years for men and 8.9 years for women. As expected, older women and men and those living in rural areas and Badia areas are least likely to be educated.

Ownership of Goods. Almost all households own a television (98 percent), and 97 percent own a mobile phone. Almost half (45 percent) of households own a computer, and 95 percent own a washing machine. Almost five in ten households own a car or pickup truck. Urban households are more likely to own goods than rural households.

FERTILITY AND ITS DETERMINANTS

Total Fertility Rate (TFR). Although fertility dropped dramatically between 1983 and 2002, it has remained almost constant since 2002. Currently, women in Jordan have an average of 3.8 children compared with 3.7 in 2002.

Fertility is almost identical in urban and rural areas, but it does vary by governorate. Fertility is the lowest in Madaba, at 3.6 children per woman, compared with 4.5 in Jarash. Fertility is much higher in the Badia areas than in the non-Badia areas (4.5 compared to 3.8).

Fertility increases as the wealth of the respondent's household decreases. Women living in the poorest households, in general, have almost twice as many children as women who live in the wealthiest households (4.9 compared with 2.7 children per woman).

Birth Intervals. The interval between births is relatively long in Jordan. The median number of months since the preceding birth is 31.3. One-third of births occur within 24 months of a previous birth, while two-fifths of infants are born at least three years after their siblings.

Desired Family Size. Women report a mean ideal family size of 4.2 children. Ideal family size is slightly higher among women in rural areas than in urban areas (4.4 compared with 4.1). Ideal family size decreases as women's education increases: women with no education would like to have 4.9

children compared with only 4.2 children among those with higher education.

Age at First Marriage and First Birth. In Jordan, half of women are married by age 22.4. Only 16 percent are married by age 18. The median age at first marriage ranges from 21.7 in Zarqa to 23.6 in Karak. Women with higher education get married almost five years later than those with no education (median age of 24.7 compared with 20.2).

Childbearing begins at a relatively late age in Jordan. Over half of women have their first birth by age 24.0. Only 8 percent of women have had their first birth by age 18. Urban and rural women have their first birth at the same age (24.0 versus 24.1 years). Women in the wealthiest households wait much longer to have their first child than women in the poorest households (24.7 years versus 23.8 years).

Teenage Fertility. Teenage childbearing is rare in Jordan. Only 3 percent of teenage girls (age 15-19) have already had a birth, and another 1 percent is pregnant with their first child. In general, teenage childbearing is much more common among women with no education (18 percent) and among those in the poorest households (5 percent).

FAMILY PLANNING

Knowledge of Family Planning. Knowledge of family planning methods in Jordan is universal: 100 percent of ever-married women age 15-49 know at least one modern method of family planning. The most commonly known methods are the IUD and the pill (100 percent each).

Use of Family Planning. Although contraception use increased greatly between 1990 and 2002, it has since stabilized. According to the 2009 JPFHS, 59 percent of married women are currently using a contraception method, and 42 percent are using a modern method. The IUD is the most popular method, with 23 percent of married women using it, followed by use of the pill (8 percent).

Use of modern family planning does not vary significantly by residence or governorate. Modern methods are used by 43 percent of married women in urban areas compared with 36 percent in rural areas. Modern contraceptive use ranges from a low of 28 percent of married women in Ma'an to a high of 45 percent in Madaba.

Modern contraceptive use increases as women's education increases, from 24 percent of women with no education to 41 percent among those with higher education. Use of modern methods also increases with wealth—49 percent of married women in the wealthiest households use a modern method compared with only 37 percent of married women in the poorest households.

Seventeen percent of married women use a traditional method of family planning. Withdrawal is used by 13 percent, and 4 percent use periodic abstinence.

Source of Family Planning Methods. Public sources such as government hospitals, health centers, public MCH, and the Royal Medical Services currently provide contraceptives to about 46 percent of current users, while private hospitals and clinics provide various methods to 54 percent of users. Pills and IUDs are most frequently obtained from private sources, while injectables and female sterilization are usually obtained through public sources.

Unmet Need for Family Planning. Unmet need for family planning is defined as the percentage of married women who want to space their next birth or stop childbearing entirely but are not using contraception. The 2009 JPFHS reveals that 11 percent of married women have an unmet need for family planning—5 percent have a need for spacing and 7 percent have a need for limiting. Unmet need is highest among those with no education, and among those in the poorest households. Unmet need varies by governorate, ranging from only 9 percent in Jarash to 13 percent in Karak.

NUTRITION

Children's Nutritional Status. Using recently developed WHO Child Growth Standards, the 2009 JPFHS found that 8 percent of children showed evidence of chronic malnutrition or stunting, of which one in four (2 percent) are severely stunted. Seven percent of children were classified as overweight, with boys more frequently being overweight than girls (8 percent versus 5 percent).

Stunting is strongly associated with residence. Rural children are more likely to be chronically malnourished than are urban children (12 percent versus 7 percent). The prevalence of stunting ranges from 6 percent in Amman and Zarqa to 13 percent in Karak and Aqaba and 14 percent in Ma'an. In general, children with uneducated mothers and those living in the poorest households are most likely to be malnourished.

Women's Nutritional Status. The mean BMI of all women age 15-49 is 27.0. Over half of Jordanian women have a BMI of 25.0 or higher and are considered overweight (28 percent) or obese (29 percent). Only 4 percent are thin (body mass index <18.5), which indicates chronic energy deficiency. Older women and women with no education or elementary education are most likely to be overweight or obese.

ANEMIA

Prevalence of Anemia among Children. One-third (34 percent) of children age 6-59 months have some degree of anemia. In 15 percent of the cases the anemia was moderate. Prevalence of anemia is higher in rural areas (40 percent) than in urban areas (33 percent). Anemia prevalence is also high among children living in Badia areas (38 percent). The prevalence of anemia varies from 24 percent in Madaba governorate to 43 percent in Ma'an governorate and to 45 percent in Karak governorate.

Prevalence of Anemia among Women. Twenty-five percent of women have some degree of anemia, of which 21 percent have mild anemia. Women age 40-49 have the highest prevalence of anemia (32 percent). The prevalence of anemia is highest in Balqa and Aqaba governorates (35 percent).

Among ever-married women, 30 percent have some degree of anemia. About 24 percent have mild and 6 percent have moderate forms of anemia. The prevalence of anemia among ever-married women increases as a woman gives birth to more children.

CHILDHOOD MORTALITY

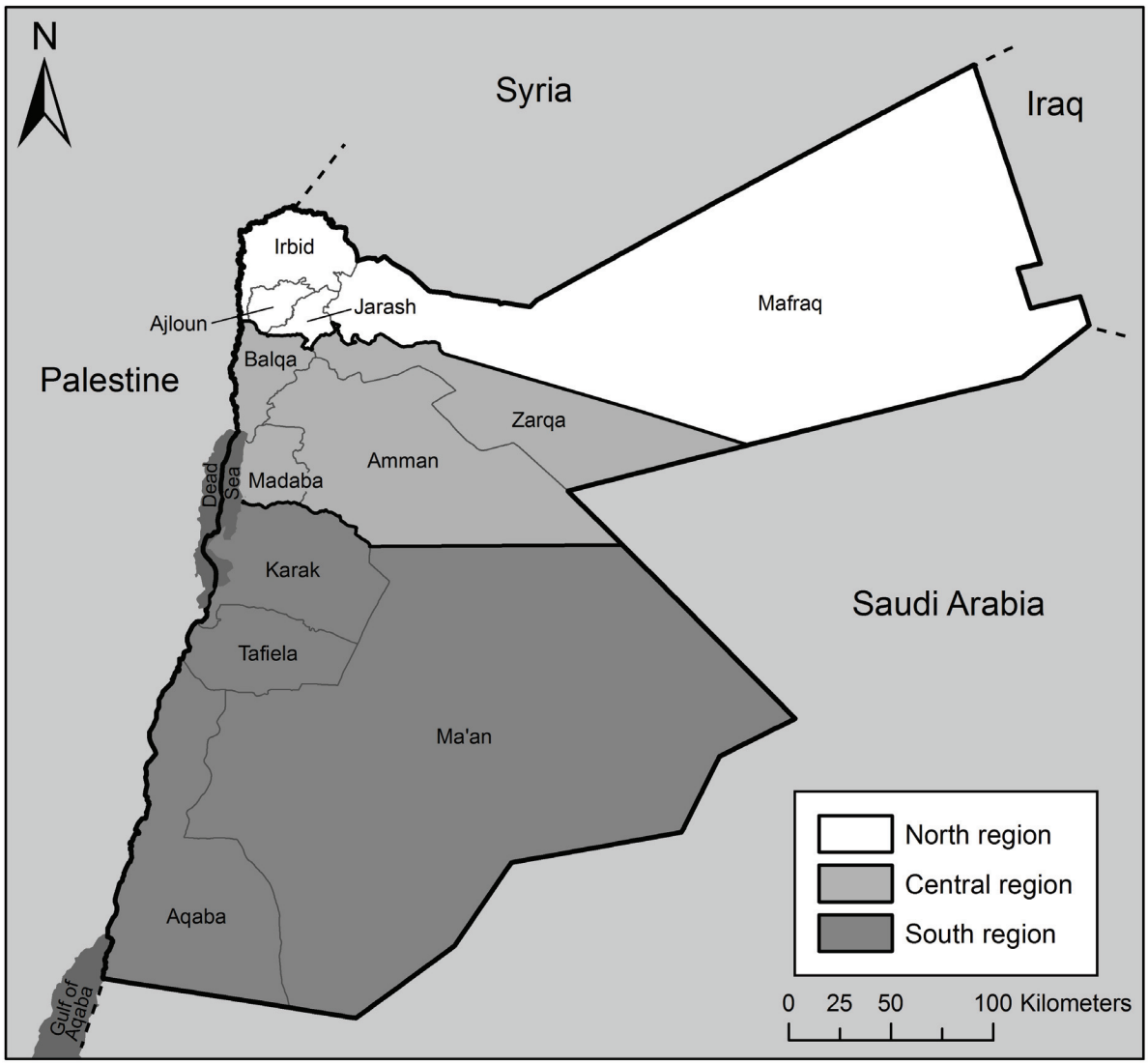
Levels and Trends. Childhood mortality is quite low in Jordan and has remained stable since 2002. Currently, one in every 36 children in Jordan dies before his or her fifth birthday.

The infant mortality rate for the five years before the survey (2004-2009) is 23 deaths per 1,000 live births, and the under-five mortality rate is 28 deaths per 1,000 live births.

Mortality rates are consistently higher in urban than in rural areas, and they differ markedly by governorate. Under-five mortality ranges from only 17 deaths per 1,000 live births in Zarqa to 39 deaths per 1,000 live births in Amman and Jarash (for the 10 years before the survey). Childhood mortality also decreases as women's education increases. Infant mortality is more than three times higher among children whose mothers have an elementary education compared with mothers with higher education (49 compared with 15).

Birth Intervals and Childhood Mortality. Spacing children at least 36 months apart reduces the risk of infant death. In Jordan, the average birth interval is 31.3 months. Infants born less than two years after a previous birth have a particularly high infant mortality rate (35 deaths per 1,000 live births compared with only 22 deaths per 1,000 live births for infants born more than four years after the previous birth). One-third of infants in Jordan are born less than two years after a previous birth. These infants are at particularly high risk of death.

JORDAN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INTRODUCTION 1

1.1 HISTORY, GEOGRAPHY, AND ECONOMY

Jordan, one of the most modern countries in the Middle East, was part of the Ottoman Empire until the end of World War I. It was declared a political entity known as Transjordan under the mandate of the British government in 1921, and remained so until it gained independence and was declared a kingdom in 1946. In 1950, the Kingdom of Transjordan and the West Bank were united and assumed the current name of the Hashemite Kingdom of Jordan. The next major change for the Kingdom came in 1967, when the occupation of the West Bank and Gaza Strip by Israeli forces caused a massive wave of migrants to flow into 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 in order to facilitate the establishment of the Palestinian state.

Geographically, Jordan is almost entirely landlocked. The port of Aqaba in the far south is Jordan's only outlet to the sea, as Palestine and Israel separate Jordan from the Mediterranean. Saudi Arabia lies to the south and east, Iraq to the northeast, and Syria to the north. Three climatic zones characterize Jordan, running from west to east in the country. These include the Jordan Valley, which is largely below sea level and considered semitropical; the highlands east of the Jordan Valley, which range in elevation from 100 to 1,500 meters above sea level, and can be considered to have a Mediterranean climate; and the low-lying desert to the east of the highlands. The total area of Jordan is about 89,000 square kilometers, of which over 80 percent is characterized by semi-desert conditions; however, there do exist some wetlands, including the Azraq Basin.

Administratively, the country is divided into 12 governorates, which are then 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, Tafiela, Ma'an, and Aqaba) (see map). The major cities are Amman (the capital), Zarqa, and Irbid.

With regard to the economy, the government of Jordan controls most community services; however, Jordan is moving towards a free market economy. There has been a slight shift in the economic sectoral shares of gross domestic product (GDP). The share of agriculture in GDP at constant prices dropped from 7.3 percent in 1992 to 3.8 percent in 1997, then to 3.3 percent in 2002, and to 3 percent in 2008. The contribution of wholesale and retail trade, restaurants, and hotels to the GDP has not changed significantly; these sectors made up 9.3 percent of the GDP in 1992, 9.9 percent in 2006, and 10 percent in 2008. There was a concomitant rise in the share of the manufacturing sector, rising from 12.4 percent in 1992 to 16.3 percent in 2002 and reaching about 17 percent in 2008. The share of the community and personal services sector also rose slightly during this period, from 2.4 percent in 1992 to 3.9 percent in 2008. The contribution of the transportation, storage, and communication sector to the GDP has changed little over the past 15 years, rising about 2.1 percentage points between 1992 and 2002, and reaching about 15 percent in 2008.

The GDP per capita at current prices has demonstrated a steady increase over time, rising from US$ 1,326 in 1992, to US$ 1,610 in 1997, to US$ 1,882 in 2002, to an average of US$ 2,646 in 2008. The cost of living index increased by 20 percent between 1992 and 1997, and increased by 8 percent between 1997 and 2002, and by about 19 percent between 2006 and 2008. The balance of trade deficit rose sharply, by 72 percent between 1990 and 1996, but declined by 14 percent between 1997 and 2001. The

deficit rose by 86 percent between 2002 and 2004 and remained stable between 2006 and 2007; it reached about 43 percent between 2006 and 2008. The rate of economic growth at constant prices has increased steadily over time: growth was 3.3 percent for 1997, 5.8 percent for 2002, and 8.8 percent for 2008.

To restructure economic activities in the country, the government began a progressive reform program in the early 1990s. Since the mid-1990s, the government has actively encouraged the privatization of certain community services as part of the program, and in 2000 it issued the Privatization Act No. 25 for 2000 to establish the legal and institutional framework for privatization in Jordan. The government launched the process of integration and consolidation in the world economy by joining the World Trade Organization, signing a free trade agreement with the United States, a partnership agreement with the European Union, the Greater Arab Free Trade Agreement, and the Qualified Industrial Zones Agreement. The government has also established several development areas, such as the Aqaba Special Economic Zone Authority. The government has launched the Socioeconomic Transition Program, the E-government Initiative, the National Agenda, and All of Us the Jordan Gathering. In addition economic zones have been created in some governorates in order to fairly distribute development outcomes among all citizens. Thus, private local and foreign investments have significantly increased, reaching levels never previously achieved, as a result of the continuity of implementing privatization programs and a good environment for investment. The government, in response to the directives of His Majesty King Abdullah II, has expanded the provision of decent housing for tens of thousands of poor households and those with limited and low income in Jordan.

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 moved into the East Bank of Jordan. In 1979, the population of Jordan numbered 2.13 million; it nearly doubled to 4.14 million by 1994. As of the end of 2004, the population was estimated at about 5.35 million, and it further rose to 5.72 million in 2007 and 6 million in February 2010.

Population growth averaged 4.8 percent during the period 1961-1979 and 4.4 percent between 1979 and 1994. The high rates of growth have been due to the influx of immigrants to the East Bank from the West Bank and Gaza Strip in the late 1960s, the inflow of large numbers of foreign workers, the high rate of natural increase, the return of about 300,000 Jordanians from the Gulf States as a result of the 1990 Gulf Crisis, as well as the return of some tens of thousands of Jordanians and the migration of hundreds of thousands of Iraqis as a result of the 2003 Second Gulf War. The rapid increases in population have created several problems for the country—namely, shortages in food, water, housing, and employment opportunities, as well as strains on the education system, health services, and urban infrastructure. Fertility declines in Jordan have contributed to slowing the population growth rate down to 3.2 percent in the second half of the 1990s, and to 2.2 percent in 2009. The average size of a private household decreased from 6.7 persons in 1979 to 6.0 persons in 1994 and to 5.4 persons in 2004. In 2009, the average household size is estimated at about 5.2 persons.

Urbanization is a particularly important topic in Jordan. Historically, internal rural-to-urban migration, as well as immigration, has contributed to rapid urban growth. Recent international crises have also affected flows of migration into Jordan. The population living in urban areas increased by 14 percent between 1980 and 1994 (from 70 to 79 percent), and rose to 83 percent in 2004, which is about a 4 percentage point increase compared with 1994.

Results of the 2004 census indicate that the age structure of the population has changed considerably since 1979—the result of changes in fertility, mortality, and migration dynamics. The

proportion of the population under age 15 declined from 51 percent in 1979 to 37 percent by 2004 and to 36.5 in 2009, while the proportion of those age 60 and over has been rising, from 4.1 percent in 1979 to 6 percent in 2009.

Fertility has been declining in Jordan since the mid-1970s. Surveys have found that the total fertility rate declined from 7.4 children per woman in 1976 to 5.6 in 1990, 4.4 in 1997, and 3.7 in 2002, thereafter increasing slightly to reach 3.8 children in 2009. These figures indicate a 40 percent decline (about three children fewer per woman) between 1976 and 1997; fertility fell another 19 percent, or by one child more, between 1997 and 2002. The rise was insignificant between 2002 and 2009 (about 3 percent); however, it indicates that the decline in the TFR has stopped in Jordan.

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 by the early 1980s. In 2007, the crude death rate was estimated at seven per thousand. The infant mortality rate also declined from 82 per thousand in 1976 to 22 in 2002, and slightly increased to 23 per thousand in 2009. Drops in mortality, particularly infant mortality, have translated into an increased life expectancy for the population: in 2002, life expectancy in Jordan was 68 years for males and 71 years for females, increasing to 72 years for males and 74 years for females in 2009.

With regard to the education of the population, the illiteracy rate among those age 15 years and over has dropped by 70 percent since 1979, from 36 percent to 10 percent in 2002, reaching about 7 percent in 2009 (4 percent among males compared with 11 percent among females). In addition, almost one-third of Jordan's population is currently enrolled in school at various educational levels. Seventy-one percent of all students attend schools run by the government, which comprised 58 percent of all schools in Jordan in 2008. This percentage has been fairly constant during the last ten years.

1.3 Population and Family Planning Policies and Programs

Until the 1990s, 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. However, the design of a satisfactory population policy was controversial. Because of the sensitive nature of the topic, the NPC took no distinct actions or steps. The Commission was revitalized in the late 1980s to backstop several agencies working in the population field. From then until 1993, both the public and private sectors made efforts to provide family planning services. The Ministry of Health (MOH), 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. The efforts made by the Jordan Association of Family Planning and Protection (JAFPP), as well as by some voluntary nongovernmental organizations, were invaluable in this regard.

The first initiative for proposed population policy was adopted in 1993, when the NPC adopted the Birth Spacing National Program, in an effort to promote better maternal and child health and to reduce fertility through advocating increased birth intervals. 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.

The NPC created the National Population Strategy for Jordan, which was approved by the cabinet in 1996 and was updated in 2000 in light of regional and international recommendations and national surveys. The strategy document comprised four main dimensions—namely, reproductive health; population and sustainable development; gender equality and equity and empowerment of women; and population and enhancing advocacy and media.

In 2002 the Higher Population Council (HPC) was established to address population and development challenges and to implement the National Population Strategy work plan. The council is headed by the Prime Minister and is comprised of concerned ministers and members of both the public and private sectors. The HPC is to continue the work of the NPC, as it is the higher authority, commissioned with proposing and formulating national population policies, and with following up, presenting, updating, and providing a supportive environment for achieving its objectives. This is to be in line with the national socioeconomic plans, the socioeconomic transition program, and the national agenda of Jordan.

The HPC works toward the promotion of public awareness in population and development issues and enhance advocacy in these areas. The HPC also collaborates and coordinates with regional and international bodies interested in population issues, in addition to building national capacities for officials from different institutions working in these areas.

In 2009 the prime minister's cabinet approved a policy document by HPC, which addresses the concept of a 'demographic opportunity'. The demographic opportunity occurs when the percentage of the population who are working (age 15-64) is significantly higher than those who are dependent (children under 15 and adults over age 65). The importance of this document stems from the expectation that Jordan--like other countries that have witnessed a recent decline in their high fertility rates--is on the verge of a historic demographic change that holds a "Demographic Opportunity" or "Demographic Window of Opportunity". This opportunity is usually accompanied by various social and economic changes, which if not handled appropriately can take the form of challenges. Prior preparation, planning, and monitoring of these changes creates opportunities that occur in conjunction with the continued decline in fertility rates. Unlike developed countries, which closed the demographic window several decades ago, the demographic window of many developing countries, including Jordan, is yet to occur. The HPC policy document includes policies for achieving and investing in the population opportunity and maximizing the benefits from the accompanying changes. These policies have been made to include three main topics which are (1) the policy of accelerating the demographic shift to reach the demographic opportunity period, (2) the policy of benefiting from the proceeds of the demographic opportunity, and (3) the social protection and post-demographic opportunity policies.

1.4 Health Priorities and Programs

The Ministry of Health (MOH) is responsible for all health affairs in the Hashemite Kingdom of Jordan according to Health Law No. 47 for 2008. Its tasks include the provision of preventive health services and curative care. Additionally, the MOH organizes health services provided by the public and private sectors, provides health insurance for Jordanian citizens with available human and financial resources, and establishes educational and health training institutes.

Health services have been the main concern of the Hashemite leadership for improving its level of services and for coping with rapid changes at local, regional, and international levels. This requires the development of health polices and strategic plans by improving health services for all citizens, so that the health sector in Jordan will occupy a pioneer ranking in the region.

In light of the challenges facing the health sector, the Ministry has prepared a Health Strategy (2008-2012), based on a vision, a mission and goals attainable which maintain the acquired profits, and achieves the comprehensive development goals stated in the National Agenda Document and the National Health Strategy. Executive plans, programs and policies from these strategy documents mainly focus on the following topic areas:

- ***Primary Healthcare***

  The main goals include the enhancement of healthy lifestyle patterns (such as physical activity, tobacco prevention, and following safe nutrition patterns), enhancement of reproductive health services and child health, decreasing chronic disease prevalence and its complications, improvement of mother and child nutrition status, and improvement of first aid and emergency care.

  Its goals also include maintaining a low prevalence of HIV/AIDS and sexuality-transmitted infection; programs for screening hereditary diseases among newborns; adding micronutrients to flour (flour fortification); fighting prevailing diseases and maintaining high vaccination coverage; introducing new vaccines to vaccination programs; and providing early diagnosis, evaluation, and health insurance coverage to those with special needs.

- ***Human Resources Management***

  Capacity building of staff is receiving considerable attention by the MOH. Activities include training courses (both internal and external) and on the job training and scholarships aimed at maintaining the provision of high quality services.

- ***Secondary and Tertiary Care***

  Ministry of Health hospitals located in the governorates and districts provide basic curative care services, such as medication disbursement, rehabilitation, and blood transfusions through the National Blood Bank.

  The positive effects of these services are reflected in the decreases seen in the child mortality and maternal mortality rates and the increases in the life expectancy at birth for both sexes. Both of these positive health outcomes reflect positively on the socioeconomic level of the population.

- ***Monitoring and Control***

  The MOH monitors health professionals and other health institutions in the public and private sectors and monitors these institutions by participating in the drafting of their laws and regulations related to clinics, hospitals, and medical laboratories.

- ***Financial Management***

  Jordan is characterized as a medium income country, with good infrastructure and modern health services. The average health expenditure represents about 10 percent of the Gross Domestic Product (GDP). Per capita health expenditures were 250 JD in 2007, and the expenditure on primary health care amounted to 20 percent of the budget of the MOH. Expenditures on secondary and tertiary health care have increased in Jordan. This increased spending contradicts international directives, particularly those of the World Health

Organization (WHO). The WHO recommends an increase in expenditures on primary health care because those health services maintain and protect the health of citizens.

The MOH would like to provide health insurance coverage to all of its citizens in the coming years. Currently, 85 percent of the population has health insurance.

- ***Knowledge Management***

  Introducing the concept of knowledge management into the strategies of the Ministry will form a future methodology that will benefit from available knowledge assets. These include information, skills, and experiences.

  The MOH is computerizing and developing a geographic information system (GIS) for all affiliated health facilities. Most central directorates in the Ministry have established electronic websites. The Health Insurance Directorate has also been computerized and linked to all governorates. Additionally, some central directorates and hospitals have been computerized.

  Scientific research provides information that can be used for planning and decision making purposes. The MOH has prepared a document that includes national priorities in the field of health research. Additionally, several studies have been conducted jointly between the MOH and various international agencies and Jordanian universities.

1.5 OBJECTIVES OF THE SURVEY

As in the previous Demographic and Health Surveys (DHS) conducted in 1990, 1997, 2002 and 2007 in Jordan, the primary objective of the 2009 Jordan Population and Family Health Survey (JPFHS) is to provide reliable estimates of demographic parameters, such as fertility, family planning, fertility preferences, and child mortality as well as the nutritional status of women and children. The data from these surveys can be used by program managers and policy makers to evaluate and improve existing programs. In addition, the JPFHS data will be useful to researchers and scholars interested in analyzing demographic trends in Jordan, as well as those conducting comparative, regional, or cross-national studies.

The content of the 2009 JPFHS has been significantly decreased from the 2007 survey: it does not include data on mother and child health, reproductive health, women's status, domestic violence, and early childhood development. However, a sub-sample of women age 15-49 and children age 6-59 months were tested to measure the prevalence of anemia. Height and weight of all women age 15-49 and children age five and under were also measured to assess their nutritional status.

1.6 METHODOLOGY AND ORGANIZATION OF THE SURVEY

The 2009 JPFHS was designed to collect data on ever-married women of reproductive age. The areas covered include demographic and socioeconomic characteristics, reproduction, family planning, marriage, fertility preferences, woman employment, and nutritional status of all women age 15-49 and children under five years of age.

The survey was funded primarily by the Jordanian government and the U.S. Agency for International Development (USAID). Additional funding was provided by UNFPA. ICF Macro provided technical assistance through the global Demographic and Health Surveys (DHS) program, in the domain of sample and questionnaire design, training activities, processing of survey data, and preparation of reports.

The survey was implemented in three stages; the first was the preparatory stage, which involved sample design and implementation of sampling procedures, such as mapping and listing of households. At the same time, the survey questionnaires and instruction manuals were developed, pretested, and finalized. All of these activities were completed in June 2009. The second stage encompassed interviewing and the collection of data. This was carried out by 18 teams, consisting of 18 controllers, 11 field editors, 65 interviewers, and 11 female health technicians (for blood testing). Each team was provided with the required number of vehicles. The field work started on October 7, 2009, and finished on December 28, 2009. The third stage involved office editing of questionnaires, coding of open-ended questions, and ensuring data completion and data consistency. Data processing using CSPro (Census and Survey Processing) software, data entry and on line data verification started soon after the beginning of field work. Data processing operations (central editing of data, data entry, double-entry of all questionnaires, final editing, and verification of data accuracy and consistency) were completed by January 6, 2010.

1.6.1 Sample Design

The 2009 JPFHS sample was designed to produce reliable estimates of major survey variables for the country as a whole, urban and rural areas, each of the 12 governorates, and Badia and non-Badia areas. To ensure comparability with the previous surveys, the sample was also designed to provide estimates for the three regions, North, Central and South. The grouping of the governorates into the regions is as follows: the North region consists of Irbid, Jarash, Ajloun, and Mafraq; the Central region consists of Amman, Madaba, Balqa, and Zarqa; and the South region consists of Karak, Tafiela, Ma'an, and Aqaba.

The 2009 JPFHS sample was designed using the 2004 Population and Housing Census as the sampling frame. The sampling frame was stratified by governorate, major cities, other urban, and other rural within each stratum. A two-stage sampling procedure was employed. First, blocks were selected systematically as primary sampling units (PSUs) with a probability proportional to the size of the PSU. A total of 930 PSUs were selected at this stage. In the second stage, a fixed number of 16 households were selected as final sampling units in each PSU, resulting in a sample size of about 15,000 households. Blood testing (for anemia) and the measurements of height and weight were conducted among eligible individuals in the selected households in 465 PSUs (half of the sample). The sample design is described in Appendix A, and 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, housing units, and households were updated, listed, and documented, along with the name of the owner/tenant of the housing unit and the name of the household head. These activities were completed during the second quarter of 2009.

1.6.3 Questionnaires

The 2009 JPFHS used two questionnaires—namely, the Household Questionnaire and the Individual Questionnaire (See Appendix D). Both questionnaires were developed in English and Arabic, based on the questionnaires used in the 2007 survey, in collaboration with ICF Macro. The Household Questionnaire was used to list all usual members and visitors of the sampled households and to obtain information on each household member's age, sex, educational attainment, relationship to the head of household, and marital status. In addition, questions were included on the socioeconomic characteristics

of the household, such as source of water, sanitation facilities, and availability of durable goods. The Household Questionnaire was also used to identify women who were eligible for the individual interview: ever-married women age 15-49. In addition, in half of the households, all women age 15-49 and children under five years of age were measured to determine nutritional status. Children age 6-59 months and women age 15-49 were tested for anemia.

The household and women's questionnaires were based on the DHS standard questionnaire. Additions and modifications to the model questionnaire were made in order to provide detailed information specific to Jordan, using experience gained from the 1990, 1997, 2002, and 2007 JPFHS. For each ever-married woman age 15-49, information on the following topics was collected:

- Respondent's general background
- Birth history
- Family planning
- Marriage
- Fertility preferences
- Respondent's employment

In addition, information on births and pregnancies, contraceptive use and discontinuation, and marriage during the five years prior to the survey was collected using a monthly calendar for this purpose.

As previously mentioned, anthropometric data were collected during the 2009 JPFHS in a sub-sample of 50 percent of clusters. All women age 15-49 and children age 0-4 in these households were measured using Shorr height boards and weighed using electronic Seca scales. In addition, a drop of capillary blood was taken from these women and children age 6-59 months to measure, in the field, their hemoglobin level using the HemoCue system. Hemoglobin testing was used to estimate the prevalence of anemia.

1.6.4 Recruitment 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 other demographic surveys conducted by the Department of Statistics (DoS), especially the 2007 JPFHS. The interviewers were all highly qualified women. Supervisors and field editors were selected from the DoS permanent staff or from those with good past experience in such surveys.

1.6.5 Training and Pretest

Training of the interviewers took place in Amman for three weeks in September and October 2009. The training course consisted of instructions regarding interviewing techniques and field procedures, a detailed review of items on the questionnaires, instructions and practice in weighing and measuring children and women, anemia testing, mock interviews between participants in the classroom, and practice interviews. After the training, pretest fieldwork was conducted over a one-week period in 15 urban clusters and 4 rural clusters.

Field practice in anemia testing was carried out during the pretest by the assigned team health technicians. In addition, team members practiced weighing and measuring the height of women and children. Also during this period, field editors and team supervisors were provided with additional training in methods of field editing, data quality control procedures, and fieldwork coordination. Training was conducted in the Ministry of Health centers, as the interviewers who were assigned to take measurements of height and weight and conduct blood testing for anemia were able to practice with out-patients in these centers. Debriefing sessions were held with the pretest field staff, and modifications to the questionnaires and instructions were made based on lessons drawn from the exercise. The survey technical staff and experts from ICF Macro participated and lectured in the training program.

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. The field staff consisted of 18 teams that consisted of 18 controllers, 11 editors, 65 interviewers, and 11 female health technicians (for blood testing). All teams were supervised by three supervisors. During field work, these teams were combined or reformulated as necessary. Fieldwork was carried out between October 7 and December 28, 2009.

To facilitate data collection, each interviewing team was assigned a number of blocks in the sample area. Each supervisor, in collaboration with the controller, divided the 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 completed questionnaires were then checked by the field editor, the supervisor, or both to ensure completeness and consistency of data. Under the supervision of controllers and supervisors, the field editor, the controller, or both conducted spot checks by randomly visiting some sampled households and re-interviewing some respondents. The original questionnaires were then matched to the re-interview questionnaires, and any differences were discussed.

Interviewers made repeated attempts to obtain the responses of eligible respondents by calling back to interview eligible women who were not home at the time of the first visit or by attempting to persuade eligible women who were reluctant to be interviewed. Once a cluster was finished, the questionnaires were delivered to the central office in Amman for processing.

1.6.7 Data Processing

Fieldwork and data processing activities overlapped. After two weeks 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 of the open-ended questions.

Data entry and verification started after two weeks of office data processing. The process of data entry, including one hundred percent re-entry, editing, and cleaning, was done by using PCs and the CSPro computer package, developed specially for such surveys. The CSPro program allows data to be edited while being entered. Data processing operations were completed by the end of January 2010. A data processing specialist from ICF Macro made a trip to Jordan in January 2010 to follow up on data editing and cleaning and to work on the tabulation of results for the survey preliminary report. The preliminary report was then published in February 2010. The tabulations for the present final report were completed in March 2010.

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 14,872 households were selected for the survey from the sampling frame; among those selected households, 13,959 households were found. Of those households, 13,577 (97 percent) were successfully interviewed. In those households, 10,401 eligible women were identified, and complete interviews were obtained with 10,109 of them (97 percent of all eligible women). The overall response rate (the household's response rate multiplied by the eligible woman response rate) was about 95 percent.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence, Jordan 2009

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households selected	10,184	4,688	14,872
Households occupied	9,550	4,409	13,959
Households interviewed	9,250	4,327	13,577
Household response rate[1]	96.9	98.1	97.3
Interviews with women age 15-49			
Number of eligible women	7,134	3,267	10,401
Number of eligible women interviewed	6,918	3,191	10,109
Eligible women response rate[2]	97.0	97.7	97.2

[1] Households interviewed/households occupied.
[2] Respondents interviewed/eligible respondents.

HOUSEHOLD CHARACTERISTICS 2

This chapter describes the general characteristics of the sample population, including composition by age and sex, residence, household size, education, housing facilities, and presence of durable goods in the household.

The questionnaire for the 2009 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). The differences between these populations are small. Therefore, since past demographic surveys have generally been based on *de facto* populations, the tabulations for the JPFHS household data have been carried out using the *de facto* population only, unless otherwise specified.

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 indicate that not only a respondent's age but also the month and year of their birth were usually recorded. Also, the distribution of the population by single years of age (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 Year of Age, 2009

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, and the second is to describe the context in which various demographic processes are operating.

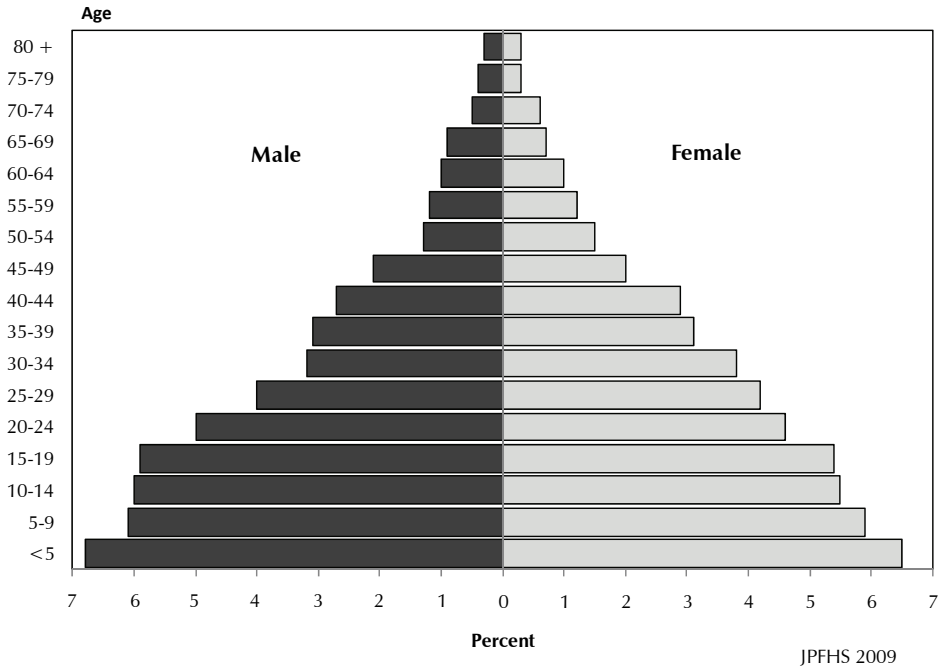
Table 2.1 Household population by age, sex, and residence

Percent distribution of the *de facto* household population by five-year age groups, according to sex and residence, Jordan 2009

	Urban			Rural					
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	13.4	13.0	13.2	14.1	13.4	13.8	13.5	13.1	13.3
5-9	12.1	11.9	12.0	12.5	12.0	12.3	12.2	11.9	12.0
10-14	11.8	10.8	11.3	12.5	12.7	12.6	11.9	11.2	11.6
15-19	11.4	10.8	11.1	12.7	11.1	11.9	11.6	10.8	11.2
20-24	10.1	9.2	9.7	9.6	9.2	9.4	10.0	9.2	9.6
25-29	7.9	8.6	8.3	8.3	8.0	8.1	8.0	8.5	8.2
30-34	6.5	7.6	7.1	6.0	7.6	6.8	6.4	7.6	7.0
35-39	6.2	6.1	6.2	5.9	6.5	6.2	6.1	6.2	6.2
40-44	5.4	6.1	5.8	4.9	5.1	5.0	5.3	5.9	5.6
45-49	4.3	4.2	4.3	3.4	3.6	3.5	4.1	4.1	4.1
50-54	2.6	2.9	2.8	2.4	3.1	2.8	2.6	3.0	2.8
55-59	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.3
60-64	2.0	2.2	2.1	1.6	1.5	1.6	2.0	2.1	2.0
65-69	1.7	1.5	1.6	1.4	1.4	1.4	1.7	1.5	1.6
70-74	1.1	1.2	1.1	1.1	1.2	1.2	1.1	1.2	1.1
75-79	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.7
80 +	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	28,594	28,068	56,662	5,841	5,763	11,604	34,435	33,831	68,266

The population pyramid shown in Figure 2.2 was constructed using the sex and age distribution of the 2009 JPFHS household population. The pyramid has a wide base. This pattern is typical of countries that have experienced relatively high fertility in the recent past. Table 2.1 and Figure 2.2 show that 37 percent of the population is under 15 years of age, an indicator that fertility remains high. The proportion under age 15 is slightly higher in rural areas (39 percent) than it is in urban areas (37 percent); this relationship holds for those under age 20 as well. The opposite is true in the broad age category of 20-44 years old (37 percent and 36 percent in urban and rural areas, respectively). However, differences in the age composition of the urban and rural populations tend to disappear as age increases.

Figure 2.2 Population Pyramid, 2009

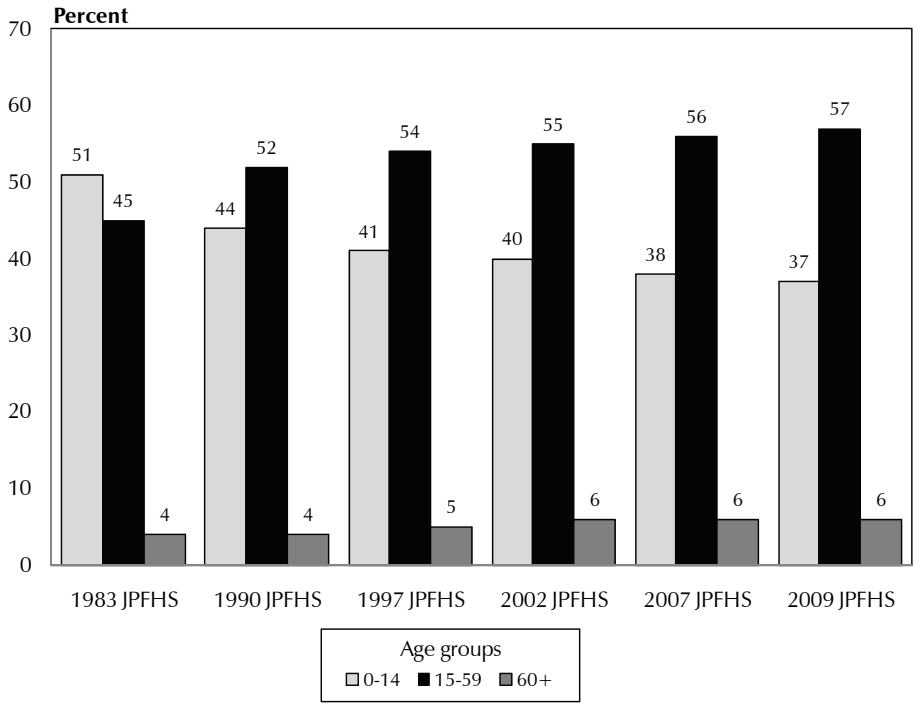


There are more males than females in Jordan with an overall sex ratio of 102 males for 100 females. The sex ratio varies by age: from 105 among those under 30 years of age, to 94 among the middle age group (30-59 years), and about 107 among people age 60 and above.

2.2 Population by Age from Other Sources

The percentage of the population under 15 years of age has declined substantially, from 51 percent in 1983, to 44 percent in 1990, 40 percent in 2002, 38 percent in 2007 and to its current level of 37, with proportional increases in the 15-59 age group (Figure 2.3). This pattern is typical of populations that are experiencing a fertility decline (see Chapter 4 for more discussion on fertility in Jordan). The change in the age structure is favorable in economic terms. The dependency ratio, defined as the ratio of the non-productive population (persons under age 15 and age 60 and over) to the population age 15-59, is calculated based of these figures. The ratio fell from 122 in 1983, to 86 in 1997, to 82 in 2002, to 78 in 2007, and to 75 in 2009.

Figure 2.3 Population by Broad Age Groups, Various Surveys, 1983-2009



2.3 HOUSEHOLD SIZE

Table 2.2 presents the distribution of households in the 2009 JPFHS sample by sex of the head of the household and by the number of *de jure* household members. These characteristics are important because they can 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. In addition, single-parent families, especially if they are headed by females, usually have limited financial resources.

Table 2.2 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans and foster children under 18, according to residence, Jordan 2009

Characteristic	Residence		Total
	Urban	Rural	
Household headship			
Male	88.6	88.5	88.6
Female	11.4	11.5	11.4
Total	100.0	100.0	100.0
Number of usual members			
1	4.6	4.4	4.6
2	10.6	9.7	10.5
3	11.9	11.2	11.8
4	15.3	13.5	15.0
5	16.8	14.0	16.3
6	15.1	13.3	14.8
7	12.3	12.2	12.2
8	7.2	9.1	7.5
9+	6.2	12.5	7.2
Total	100.0	100.0	100.0
Mean size of households	5.0	5.4	5.1
Percentage of households with orphans and foster children under 18 years of age			
Foster children[1]	1.6	1.6	1.6
Double orphans	0.1	0.2	0.2
Single orphans	3.1	3.4	3.1
Foster and/or orphan children	4.4	4.6	4.4
Number of households	11,377	2,200	13,577

Note: Table is based on *de jure* household members, i.e., usual residents.
[1] Foster children are those under age 18 living in households with neither their mother nor their father present.

The average 2009 JPFHS household had 5.1 persons per household. Seven percent of households, on average, are composed of nine or more persons. In general, rural households are larger than urban households. For example, only 6 percent of urban households had nine or more members compared with 13 percent of rural households. The table shows that 11 percent of households in urban and rural areas are headed by females. The table also shows that almost 2 percent of households have at least one child under age 18who does not live with both parents. A very low percentage of households (0.2 percent) include double orphans (both parents deceased), and 3 percent include single orphans (one parent deceased).

More than nine out of ten children under age 18 are living with both parents: this proportion increases to 95 percent for children under age 15 years (Table 2.3). Among children age 0-4 years, 98 percent are living with both parents; this decreases to 92 percent for children age 10-14 years. No variations were noted according to sex, urban-rural residence, region, or Badia area. Slight variations in percentage of children living with both parents were seen by governorate, ranging from 92 percent in Ma'an and Zarqa to 95 percent in Jarash, Ajloun, and Tafiela governorates. In addition, 3 percent of children under the age of 18 have experienced the death of one or both parents. No variations in percentage of children with one or both parents dead were seen according to sex and urban-rural residence. Meanwhile, variations were noted according to governorates (3 percent in Amman, Irbid, Mafraq, Jarash, Ajloun, Tafiela, and Aqaba to 5 percent in Balqa and Ma'an governorates), according to region (from 3 percent in the North to 4 percent in the Central and South regions), and according to residence in Badia areas (4 percent). The percentage of children with one or both parents dead was lower in households located in the second, middle, and fourth wealth quintiles (3 percent) compared with children in the highest wealth quintile (5 percent).

Table 2.3 Children's living arrangements and orphanhood

Percent distribution of *de jure* children under age 18 by living arrangements and survival status of parents, the percentage of children not living with a biological parent, and the percentage of children with one or both parents dead, according to background characteristics, Jordan 2009

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent					Total	Percentage not living with a biological parent	Percentage with one or both parents dead	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Missing information on father/mother				
Age														
0-4	97.5	1.4	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.0	100.0	0.2	0.7	8,847
<2	98.3	1.3	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.2	3,564
2-4	97.0	1.5	0.8	0.2	0.3	0.2	0.0	0.0	0.0	0.0	100.0	0.2	1.1	5,282
5-9	95.5	1.6	1.4	0.6	0.4	0.2	0.0	0.0	0.1	0.0	100.0	0.4	2.0	8,186
10-14	91.6	2.2	3.7	0.9	0.9	0.3	0.1	0.1	0.2	0.0	100.0	0.7	4.9	7,850
15-17	84.5	3.0	6.4	1.2	1.3	2.7	0.2	0.3	0.3	0.2	100.0	3.5	8.4	4,900
Sex														
Male	93.3	2.1	2.6	0.7	0.6	0.5	0.1	0.0	0.1	0.0	100.0	0.7	3.4	15,443
Female	93.2	1.8	2.5	0.6	0.6	0.8	0.1	0.1	0.2	0.1	100.0	1.2	3.5	14,340
Residence														
Urban	93.1	2.1	2.5	0.7	0.7	0.7	0.1	0.1	0.1	0.1	100.0	0.9	3.4	24,423
Rural	94.1	1.3	3.0	0.6	0.3	0.5	0.1	0.1	0.1	0.0	100.0	0.8	3.6	5,359
Governorates														
Amman	92.7	2.4	2.5	0.5	0.7	0.9	0.0	0.1	0.2	0.1	100.0	1.1	3.3	10,827
Balqa	92.8	1.1	3.4	0.7	1.0	0.5	0.4	0.0	0.1	0.0	100.0	1.0	4.9	1,947
Zarqa	92.3	2.0	2.7	0.9	0.8	0.7	0.1	0.0	0.2	0.2	100.0	1.1	3.9	4,370
Madaba	93.1	1.6	3.2	0.6	0.7	0.5	0.2	0.1	0.0	0.0	100.0	0.8	4.2	720
Irbid	94.4	1.6	2.1	0.8	0.3	0.3	0.0	0.1	0.1	0.0	100.0	0.6	2.8	5,770
Mafraq	93.3	2.6	2.4	0.4	0.4	0.7	0.1	0.2	0.0	0.0	100.0	1.0	3.1	1,535
Jarash	95.1	1.3	2.0	0.4	0.5	0.5	0.1	0.0	0.0	0.1	100.0	0.6	2.6	1,058
Ajloun	94.6	1.9	1.7	0.4	1.0	0.3	0.0	0.0	0.2	0.0	100.0	0.4	2.9	739
Karak	94.0	1.1	3.5	0.8	0.2	0.2	0.0	0.0	0.1	0.0	100.0	0.3	3.8	1,199
Tafiela	95.4	0.9	2.7	0.3	0.5	0.2	0.0	0.0	0.0	0.0	100.0	0.3	3.2	468
Ma'an	92.3	1.2	4.7	0.6	0.4	0.5	0.0	0.1	0.1	0.0	100.0	0.7	5.3	524
Aqaba	93.4	1.7	2.7	0.9	0.3	0.7	0.2	0.1	0.0	0.0	100.0	1.1	3.3	627
Region														
Central	92.6	2.1	2.7	0.6	0.7	0.8	0.1	0.1	0.2	0.1	100.0	1.1	3.7	17,863
North	94.3	1.8	2.1	0.7	0.4	0.4	0.1	0.1	0.1	0.0	100.0	0.7	2.8	9,102
South	93.8	1.2	3.4	0.7	0.3	0.4	0.1	0.0	0.1	0.0	100.0	0.6	3.9	2,817
Badia area														
Badia	92.7	2.0	3.3	0.5	0.6	0.5	0.2	0.1	0.1	0.0	100.0	0.8	4.3	2,839
Other	93.3	1.9	2.5	0.7	0.6	0.7	0.1	0.1	0.1	0.1	100.0	0.9	3.4	26,944
Wealth quintile														
Lowest	92.5	2.3	3.0	0.9	0.6	0.4	0.2	0.1	0.1	0.0	100.0	0.7	3.9	6,541
Second	94.2	1.1	2.0	0.6	0.6	0.9	0.0	0.1	0.4	0.1	100.0	1.4	3.1	6,525
Middle	94.2	1.5	2.2	0.6	0.6	0.8	0.1	0.0	0.0	0.0	100.0	0.9	2.8	6,177
Fourth	93.2	2.6	2.0	0.6	0.6	0.6	0.1	0.1	0.1	0.0	100.0	0.9	3.0	5,780
Highest	91.9	2.4	4.0	0.4	0.6	0.4	0.0	0.0	0.0	0.2	100.0	0.5	4.6	4,760
Total <15	95.0	1.7	1.8	0.6	0.5	0.2	0.1	0.0	0.1	0.0	100.0	0.4	2.5	24,883
Total <18	93.3	1.9	2.6	0.7	0.6	0.6	0.1	0.1	0.1	0.0	100.0	0.9	3.4	29,783

Note: Table is based on *de jure* members, i.e., usual residents.

2.4 LEVEL OF EDUCATION OF THE HOUSEHOLD POPULATION

The educational level of household members is among the most important characteristic of the household because it is 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 of cost and compulsory, starting at age six and lasting for 10 years. A further two-year period, known as the secondary cycle, is virtually cost-free. In the 2009 JPFHS, questions on education were asked for persons age six and older, in order to calculate rates of school enrollment as well as overall education levels of the population.

Table 2.4 presents data on educational attainment as reported in the Household Questionnaire. In the 2009 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: 97 percent of males in Jordan have had some schooling, whereas about 92 percent of females have attended school. Furthermore, men tend to stay in school slightly longer than women.

Table 2.4 Educational attainment of the household population

Percent distribution of the *de facto* household populations age six and over by highest level of schooling attended or completed and median grade completed, according to sex and background characteristics, Jordan 2009

Background characteristic	No education	Elementary	Preparatory	Secondary	Higher	Total	Number	Median years completed
				MALE				
Age								
6-9	1.0	99.0	0.0	0.0	0.0	100.0	3,321	1.0
10-14	0.6	59.8	39.4	0.2	0.0	100.0	4,112	5.5
15-19	0.7	4.8	29.4	53.2	11.9	100.0	4,002	9.7
20-24	1.2	4.5	7.2	43.6	43.5	100.0	3,438	11.2
25-29	1.8	8.0	7.6	46.9	35.7	100.0	2,741	10.9
30-34	2.4	9.8	12.7	48.6	26.6	100.0	2,199	10.6
35-39	2.9	7.6	18.9	41.4	29.1	100.0	2,108	10.7
40-44	3.8	8.6	19.1	38.2	30.3	100.0	1,840	10.8
45-49	3.9	10.7	17.5	29.1	38.7	100.0	1,425	11.1
50-54	4.2	17.7	19.9	19.3	38.8	100.0	890	10.9
55-59	6.0	15.9	16.1	26.4	35.5	100.0	798	10.9
60-64	12.3	25.5	16.3	15.6	30.3	100.0	672	8.4
65+	28.9	31.3	11.2	12.9	15.7	100.0	1,379	5.1
Residence								
Urban	3.0	27.1	17.3	29.4	23.2	100.0	24,067	9.3
Rural	5.5	28.2	19.0	32.1	15.1	100.0	4,859	8.6
Governorates								
Amman	2.7	25.4	16.1	28.7	27.0	100.0	11,277	9.8
Balqa	5.4	25.6	18.7	29.0	21.3	100.0	1,908	9.0
Zarqa	3.1	31.2	19.9	30.2	15.7	100.0	4,204	8.4
Madaba	4.1	26.7	18.1	31.3	19.6	100.0	704	9.1
Irbid	2.9	27.2	17.8	30.2	21.7	100.0	5,284	9.3
Mafraq	6.0	29.2	19.2	31.9	13.7	100.0	1,320	8.4
Jarash	3.1	28.1	20.5	32.0	16.3	100.0	890	8.8
Ajloun	3.8	29.0	18.2	32.7	16.3	100.0	650	8.9
Karak	5.0	27.0	17.0	31.3	19.6	100.0	1,181	9.1
Tafiela	3.7	28.9	17.5	33.4	16.6	100.0	403	9.0
Ma'an	4.7	29.9	18.8	30.3	16.3	100.0	493	8.5
Aqaba	4.7	30.0	17.7	31.7	15.9	100.0	612	8.7
Region								
Central	3.2	26.8	17.3	29.2	23.5	100.0	18,094	9.3
North	3.5	27.8	18.4	30.9	19.4	100.0	8,144	9.0
South	4.7	28.5	17.6	31.5	17.7	100.0	2,689	8.9
Badia area								
Badia	5.8	32.6	18.5	30.2	12.8	100.0	2,535	8.1
Other	3.2	26.7	17.5	29.9	22.7	100.0	26,392	9.3
Total	3.4	27.3	17.6	29.9	21.8	100.0	28,927	9.2

Continued…

Table 2.4—*Continued*

Background characteristic	No education	Elementary	Preparatory	Secondary	Higher	Total	Number	Median years completed
				FEMALE				
Age								
6-9	1.5	98.3	0.2	0.0	0.0	100.0	3,217	1.1
10-14	0.6	57.4	41.7	0.3	0.0	100.0	3,773	5.6
15-19	1.0	1.7	26.5	50.6	20.2	100.0	3,657	10.0
20-24	3.2	4.5	7.7	32.6	52.0	100.0	3,120	12.1
25-29	3.4	6.2	7.7	38.3	44.3	100.0	2,885	11.5
30-34	2.9	7.2	12.7	43.3	34.0	100.0	2,582	10.9
35-39	2.9	5.7	17.3	43.8	30.3	100.0	2,101	10.7
40-44	4.3	9.8	17.9	34.8	33.2	100.0	2,005	10.9
45-49	8.6	13.7	17.9	29.6	30.1	100.0	1,390	10.4
50-54	18.4	21.1	22.7	19.4	18.3	100.0	1,003	7.6
55-59	29.3	25.0	18.9	12.1	14.6	100.0	800	5.5
60-64	49.5	21.1	10.4	8.7	10.3	100.0	716	1.7
65+	71.4	14.7	4.8	4.9	4.3	100.0	1,355	0.0
Residence								
Urban	7.4	24.5	17.0	26.7	24.3	100.0	23,759	9.2
Rural	12.8	27.5	16.5	24.7	18.4	100.0	4,846	7.8
Governorates								
Amman	6.8	23.3	16.3	27.2	26.3	100.0	11,246	9.7
Balqa	9.5	26.9	17.0	23.2	23.2	100.0	1,822	8.5
Zarqa	8.0	27.2	19.9	27.8	17.1	100.0	3,956	8.4
Madaba	10.5	25.4	16.1	26.7	21.3	100.0	681	8.7
Irbid	8.0	24.6	16.6	26.4	24.3	100.0	5,432	9.1
Mafraq	13.6	29.6	16.3	23.4	17.2	100.0	1,331	7.3
Jarash	8.8	27.9	17.9	25.4	20.0	100.0	910	8.3
Ajloun	9.6	23.5	15.5	26.5	24.8	100.0	665	9.3
Karak	12.1	23.9	14.9	25.0	24.1	100.0	1,164	8.8
Tafiela	12.0	26.0	16.3	23.2	22.6	100.0	410	8.3
Ma'an	13.1	27.6	14.2	24.0	21.1	100.0	462	8.2
Aqaba	9.4	28.4	17.4	25.4	19.4	100.0	525	8.2
Region								
Central	7.5	24.6	17.2	26.9	23.7	100.0	17,706	9.1
North	9.1	25.7	16.6	25.8	22.7	100.0	8,337	8.8
South	11.7	25.8	15.5	24.6	22.4	100.0	2,562	8.5
Badia area								
Badia	14.3	31.0	15.4	25.6	13.6	100.0	2,428	6.9
Other	7.8	24.5	17.0	26.5	24.2	100.0	26,177	9.1
Total	8.3	25.0	16.9	26.4	23.3	100.0	28,605	8.9

Note: Education categories refer to the highest level of education attended, whether or not that level was completed. Elementary education corresponds to the first six years of school, preparatory corresponds to the next three years, and secondary to the last three years, for a total of 12 years of schooling.

In Jordan, about half of males and females (52 and 50 percent, respectively) have attended secondary education or higher. Overall education levels have increased for both men and women; in 2007 50 percent of males and 49 percent of females had at least a secondary education. Variations were noted in the percentage of both sexes who had at least a secondary education according to urban-rural residence (educational attainment is higher in urban than in rural areas) and governorates. Among females the percentage varies from 41 percent in Mafraq to 54 percent in Amman; for males, it ranges from 46 percent in Zarqa and Mafraq to 56 percent in Amman. The variation is quite large between Badia and non-Badia areas; 39 percent of women have at least a secondary education in Badia areas compared with 51 percent in non-Badia areas. The difference in education level is the same for men, 43 percent who live in Badia areas have at least a secondary education compared with 53 percent of men in non-Badia areas.

An examination of the education distributions for successive cohorts indicates that there have been changes over time in the educational attainment of both men and women. For example, the median number of years of schooling has increased from 8.6 for men and 8.0 for women in 2002 to 9.1 and 8.8, respectively in 2007 and to 9.2 for males and 8.9 for females in 2009.

The gap in the educational attainment between males and females has almost disappeared among younger cohorts. For example, the differential in the median number of years of schooling is 3.3 years between men and women age 50-54. By ages 35-39, however, the median number of years of education is the same for males and females (10.7 years). Above the age of 54, the median age of schooling is considerably higher for males than females, indicating an important gender gap in the oldest generation.

Level of education is associated with residence, although differences by residence and by region are not great. In urban areas and in the Central region, the median years of education attained for both sexes are higher than in the rest of the country. The largest difference is seen in Badia areas, where the median number of years of schooling is 6.9 years for women compared with 9.1 years for women in non-Badia areas.

2.5 SCHOOL ATTENDANCE

Table 2.5 and Figure 2.4 show the proportion of the household population age 6-24 years attending school, by age and sex. The data reflect the fact that school attendance in Jordan is very high; 99 percent of both sexes that are ages 8 through 13 atten

Beyond the age of 13, attendance rates start to decline, especially for males. Among both sexes up to age 15 the overall rate exceeds 92 percent. Age 15 marks the beginning of a gender-based divergence in attendance, where 95 percent of females and 93 percent of males are attending school. This gender gap continues through age 21, with 48 percent of females attending school compared with 43 percent of males. More females attend school than males in the age group 16-21.

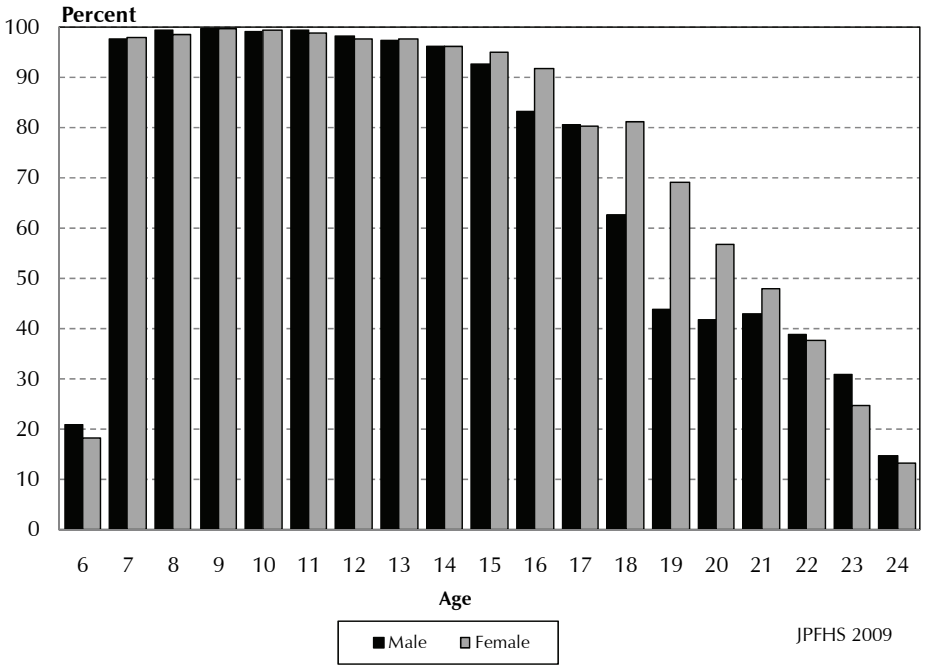
Table 2.5 Age-specific attendance rates of the *de jure* population 6 to 24 years

Percentage of the *de jure* household population age 6-24 years attending school, by age and sex, Jordan 2009

Age	Percentage attending	Number
MALE		
6	20.9	883
7	97.7	841
8	99.4	822
9	99.5	777
10	99.0	817
11	99.4	779
12	98.2	829
13	97.2	890
14	96.2	788
15	92.5	874
16	83.2	903
17	80.5	841
18	62.6	755
19	43.9	704
20	41.6	740
21	42.9	772
22	38.7	779
23	31.0	717
24	14.8	735
FEMALE		
6	18.1	910
7	97.8	718
8	98.5	766
9	99.5	807
10	99.4	644
11	98.7	807
12	97.7	736
13	97.7	797
14	96.1	761
15	95.0	812
16	91.8	720
17	80.3	749
18	81.2	695
19	69.2	704
20	56.7	662
21	47.9	635
22	37.7	613
23	24.7	601
24	13.3	590

Figure 2.4 **Age-Specific Attendance Rates, 2009**

(Percentage of the Population Age 6-24 Years Attending School)



2.6 HOUSING CHARACTERISTICS

In the 2009 JPFHS, information on housing characteristics was collected in the Household Questionnaire. Table 2.6 indicates that three-quarters of housing units (74 percent) in urban areas are apartments compared with nearly one-third (31 percent) in rural areas. *Dars* account for 69 percent of the dwellings in rural areas compared with only 25 percent in urban areas. In general, 99 percent of total housing units in Jordan are either apartments or *dars*.

About 45 percent of housing units consist of two or three rooms, and 47 percent consist of four or five rooms. The remaining 10 percent consist of six or more rooms (5 percent) or one room (4 percent). There are slight differences in number of rooms according to the place of residence. One in four housing units (25 percent) has one sleeping room, more than two-fifths (44 percent) have two, and little more than a quarter (28 percent) have three sleeping rooms, with slight differences according to place of residence.

Table 2.6 also indicates that seven in ten dwellings have walls built from cement bricks with the remaining dwellings built from clean cut stone or from clean cut stone and concrete (30 percent). Dwellings in urban areas are more likely to be built from clean cut stone or cut stone and concrete than those in rural areas (33 percent versus 9 percent). Conversely, dwellings in rural areas are more likely to be built from cement bricks than those in urban areas (88 percent versus 66 percent). More than four-fifths of housing units in both urban and rural areas have tile floors (84 percent); the remainder have either marble/ceramic tiles or cement floors. Housing units in urban areas (12 percent) are more likely to have marble or ceramic tiles than housing units in rural areas (3 percent).

Almost all households in urban and rural areas have an independent kitchen (98 percent) and an independent bathroom (99 percent).

Table 2.6 Household characteristics

Percent distribution of households and *de jure* population by housing characteristics, according to residence, Jordan 2009

Housing characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Type of housing unit						
Apartment	74.0	30.5	67.0	71.0	27.9	63.5
Dar	24.9	68.5	32.0	27.9	71.2	35.4
Villa	0.9	0.5	0.9	0.9	0.6	0.9
Other	0.1	0.4	0.2	0.1	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Electricity						
Yes	99.6	98.5	99.4	99.5	98.8	99.4
No	0.4	1.5	0.6	0.5	1.2	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material						
Tile	83.7	84.1	83.8	85.0	85.2	85.0
Marble/Ceramic tiles	11.8	2.5	10.3	10.9	2.8	9.5
Cement	4.4	13.0	5.8	4.1	11.5	5.4
Parquet, polished wood	0.1	0.1	0.1	0.1	0.0	0.1
Earth	0.0	0.4	0.1	0.0	0.5	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Main wall material						
Cement bricks	65.5	88.2	69.1	67.3	87.7	70.8
Cut stone	22.5	3.9	19.5	20.9	4.3	18.0
Cut stone and concrete	10.9	5.3	10.0	10.8	5.5	9.8
Concrete	0.9	2.1	1.1	0.9	2.1	1.1
Other	0.2	0.6	0.3	0.2	0.5	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of rooms						
One	3.4	3.6	3.5	1.9	1.7	1.9
Two	11.6	13.1	11.9	9.6	10.4	9.7
Three	33.0	31.4	32.8	31.7	30.5	31.5
Four	29.8	32.5	30.2	31.1	34.5	31.6
Five	17.2	14.3	16.7	19.7	16.5	19.1
Six or more	4.9	5.2	5.0	6.1	6.4	6.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	24.3	27.9	24.9	13.9	15.2	14.1
Two	43.7	44.1	43.7	44.8	46.3	45.1
Three	28.7	24.9	28.1	36.3	33.4	35.8
Four or more	3.4	3.1	3.3	5.0	5.1	5.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Household has separate room used as kitchen						
Yes	98.2	97.6	98.1	98.7	98.4	98.7
No	1.8	2.4	1.9	1.3	1.6	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Own an independent bathroom						
Yes	98.7	97.5	98.5	98.7	97.7	98.6
No	1.3	2.5	1.5	1.3	2.3	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Cooking fuel						
LPG/natural gas	99.5	99.7	99.5	99.7	99.7	99.7
Other	0.5	0.3	0.5	0.3	0.3	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	11,377	2,200	13,577	57,145	11,969	69,114

LPG = Liquid petroleum gas

Table 2.6 indicates that almost all households in Jordan have electricity (99 percent). Moreover, nearly all households use natural gas for cooking regardless of the place of residence.

Table 2.7 indicates that 58 percent of households in urban areas use piped-in water for drinking compared with 67 percent in rural areas. Five percent of households in urban areas use rainwater compared with 13 percent of households in rural areas. About 35 percent of urban households and only 14 percent of rural households use bottled water for drinking. Overall, the majority of households in urban areas (99 percent) and in rural areas (94 percent) use safe water for drinking. Some households treat their water to make it safe for drinking. Table 2.7 indicates that 2 percent of households in urban areas and 3 percent in rural areas boil water, whereas 22 percent of households in urban areas and 14 percent in rural areas use water filters for water purification. The results also indicate that three-quarters of households do not do anything to treat their water (83 percent in rural areas compared with 75 percent in urban areas).

Table 2.7 Household drinking water

Percent distribution of households and *de jure* population by source of drinking water, percentage of households and *de jure* population by treatment of drinking water, and percent distribution of households and *de jure* population by type of toilet/latrine facilities, according to residence, Jordan 2009

	Households			Population		
Characteristic	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	63.7	79.9	66.3	66.8	81.3	69.3
Piped water into dwelling/yard/plot	58.4	66.5	59.7	61.3	68.7	62.5
Rainwater	5.3	13.4	6.6	5.5	12.6	6.7
Tanker truck	1.2	5.2	1.8	1.2	5.6	2.0
Bottled water, improved source for cooking/washing[1]	34.9	13.6	31.5	31.8	11.9	28.4
Other	0.2	1.3	0.4	0.2	1.3	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using any improved source of drinking water	98.6	93.5	97.8	98.6	93.1	97.6
Water treatment prior to drinking[2]						
Boiled	2.2	2.7	2.3	2.2	2.5	2.3
Bleach/chlorine	0.4	0.2	0.4	0.4	0.3	0.4
Ceramic, sand or other filter	22.3	13.9	21.0	23.4	15.1	21.9
Other	0.2	0.1	0.2	0.2	0.1	0.2
No treatment	74.9	83.1	76.2	73.8	82.1	75.3
Percentage using an appropriate treatment method[3]	24.9	16.8	23.6	26.0	17.8	24.6
Number	11,377	2,200	13,577	57,145	11,969	69,114
SANITATION FACILITIES						
Improved, not shared facility						
Flush to piped sewer system	68.5	4.0	58.0	66.5	4.0	55.7
Flush to pit latrine	29.4	91.8	39.5	31.5	92.0	42.0
Ventilated improved pit (VIP) latrine	0.0	0.3	0.1	0.0	0.3	0.1
Pit latrine with slab	0.6	2.3	0.8	0.5	2.2	0.8
Non-improved facility						
Any facility shared with other households	1.5	1.4	1.5	1.4	1.3	1.4
Pit latrine without slab/open pit	0.0	0.0	0.0	0.0	0.0	0.0
No facility/field	0.0	0.1	0.0	0.0	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	11,377	2,200	13,577	57,145	11,969	69,114

[1] Because the quality of bottled water is not known, households using bottled water for drinking are classified as using an improved or non-improved source according to their water source for cooking and washing.
[2] Respondents may report multiple treatment methods so the sum of treatment may exceed 100 percent.
[3] Appropriate water treatment methods include boiling, bleaching, straining, filtering, and solar disinfecting.

Table 2.7 also shows that nearly all households (98 percent) have a private flush toilet, with no marked differences between urban and rural households (98 and 96 percent, respectively). Only 2 percent of households share toilets with other households.

2.7 PRESENCE OF DURABLE GOODS

Jordan is a modern society, and most of the population enjoys the convenience of electrical appliances (Table 2.8). Ninety-eight percent of households have television sets, 97 percent have a refrigerator, 95 percent have a washing machine, and 96 percent have a satellite.

Table 2.8 Household durable goods

Percentage of households and *de jure* population possessing various household effects and means of transportation by residence, Jordan 2009

	Households			Population		
Possession	Urban	Rural	Total	Urban	Rural	Total
Bed or sofa bed	83.8	65.5	80.8	81.8	61.9	78.3
Radio/tape recorder	50.4	38.7	48.5	50.3	37.7	48.1
Television	98.7	96.7	98.4	99.2	97.9	99.0
Satellite	96.6	92.5	96.0	97.7	94.3	97.1
Mobile telephone	97.3	96.2	97.1	98.7	97.8	98.6
Land telephone	25.6	12.2	23.5	24.9	12.6	22.8
Refrigerator	97.2	95.1	96.8	98.0	96.6	97.8
Washing machine	95.7	92.4	95.1	97.4	95.2	97.0
Solar heater	14.7	7.6	13.5	14.2	7.8	13.1
Air conditioner	18.6	7.2	16.8	18.1	7.6	16.3
Fan	87.9	80.5	86.7	88.8	81.3	87.5
Water cooler	30.7	9.4	27.3	30.6	10.4	27.1
Microwave	41.5	17.3	37.6	40.5	16.8	36.4
Digital camera	11.2	3.4	10.0	11.1	3.5	9.8
Computer	47.6	31.6	45.0	52.7	36.7	49.9
Internet access at home	15.4	4.7	13.6	15.6	5.3	13.8
Credit cards	9.9	2.2	8.7	9.8	2.3	8.5
Car/truck	46.7	45.3	46.5	50.4	51.1	50.5
Number	11,377	2,200	13,577	57,145	11,969	69,114

As further testament to the level of development in Jordan, 97 percent of households possess a mobile phone. Almost half of households own a computer (45 percent), and 14 percent have Internet access. The possession of computer-related assets varies considerably between urban and rural areas: ownership of a computer in urban areas is 1.5 times that in rural areas, and Internet access is about 3.3 times higher in urban than in rural areas.

Of further interest is the ownership of a private car; 47 percent of households own one, regardless of their urban or rural residence. Fourteen percent of households have a solar heater. One in six households owns an air conditioner, with differences according to urban-rural residence. Eighty one percent of households possess beds or a sofa bed for sleeping, with significant variations according to urban-rural residence (84 percent for urban areas compared with 66 percent in rural areas).

Urban households were more likely to have most items than rural households. For example, households in urban areas are more likely to have a water cooler (31 percent), a microwave (42 percent), a digital camera (11 percent), and a credit card (10 percent) than those in rural areas (9 percent, 17 percent 3 percent and 2 percent respectively). The percentage of household owning these apparatuses and services has increased in 2009 compared with 2007. For example, the percentage of household possessing a satellite has increased by nine percentage points (from 87 percent in 2007 to 96 percent in 2009), mobile phone ownership has increased by seven percentage points (from 90 percent to 97 percent), air conditioner possession has increased by seven percentage points (from 10 percent to 17 percent), and

presence of a water cooler has increased by eight percentage points (19 percent to 27 percent). The possession of a microwave has seen the largest increase, (from 22 percent to 38 percent), followed by computer ownership (from 36 percent to 45 percent), and Internet access (from 8 percent to 14 percent).

Possession of a few items has decreased, such as the fixed line telephone (24 percent in 2009 versus 36 percent in 2007), radio and tape recorder (49 percent in 2009 versus 59 percent in 2007), and credit cards (9 percent in 2009 versus 13 percent in 2007).

2.8 HOUSEHOLD WEALTH

Information on household assets and property was used to create an index representing the wealth of households interviewed in the 2009 JPFHS. The wealth index is a proxy for long-term standard of living of the household (Rutstein and Johnson, 2004).

The wealth index is constructed using household assets, such as the ownership of a television or a private car, as well as dwelling characteristics, such as the source of drinking water, type of toilet, type of dwelling floor and other characteristics. Each asset is assigned a weight (factor score) generated through principal components analysis, and the resulting asset scores were standardized. Each household was then assigned a score for each asset and the scores were summed for each household; individuals were ranked according to the score of the household in which they resided. The sample was then divided into quintiles from one (lowest) to five (highest). A single asset index was developed for the whole sample; no separate indices were prepared for the urban and rural population. This classification of population by quintiles is used as a background variable in the following sections to assess the demographic and health outcomes in relation to socioeconomic status.

Table 2.9 shows the distribution of the household population by wealth quintile and residence. Almost half (46 percent) of household members in urban areas fall into either the fourth or the highest wealth quintiles (compared with 44 percent in 2007); in contrast, seven in ten households in rural areas fall into either the lowest or the second quintiles (compared with six in ten in 2007).

The table also indicates that there is significant variation in the distribution of the population by governorates according to the wealth index. Whereas, about three-fifths of household members (59 percent) fall into either the fourth or the highest quintiles in Amman, more than half of the household members in Madaba (52 percent), Ajloun (60 percent), Ma'an (61 percent), Karak (63 percent), Tafiela (65 percent), Jarash (66 percent), and Mafraq (73 percent) fall in the lowest or second quintiles.

Table 2.9 Wealth quintiles

Percent distribution of the *de jure* population by wealth quintiles according to residence and region, Jordan 2009

Residence/ region	Wealth quintile					Total	Number of population
	Lowest	Second	Middle	Fourth	Highest		
Residence							
Urban	14.7	18.8	21.0	22.2	23.4	100.0	57,145
Rural	45.3	26.0	15.5	9.4	3.8	100.0	11,969
Governorates							
Amman	9.1	13.4	18.2	24.4	35.0	100.0	26,661
Balqa	25.3	21.7	19.1	21.2	12.7	100.0	4,433
Zarqa	17.3	22.3	26.0	22.0	12.4	100.0	9,803
Madaba	26.1	25.5	18.7	17.3	12.4	100.0	1,662
Irbid	22.6	25.5	22.3	17.0	12.6	100.0	12,947
Mafraq	47.9	25.2	13.3	9.0	4.5	100.0	3,304
Jarash	38.6	27.1	17.8	10.9	5.7	100.0	2,208
Ajloun	29.6	30.6	20.7	13.3	5.9	100.0	1,615
Karak	39.5	23.7	17.7	12.2	6.8	100.0	2,882
Tafiela	38.3	26.7	19.3	10.6	5.0	100.0	1,027
Ma'an	36.4	24.4	20.0	13.4	5.7	100.0	1,191
Aqaba	24.5	14.3	20.3	27.0	13.9	100.0	1,381
Region							
Central	13.3	16.8	20.1	23.2	26.6	100.0	42,560
North	29.1	26.1	20.2	14.7	10.0	100.0	20,074
South	35.6	22.3	19.0	15.3	7.8	100.0	6,481
Badia area							
Badia	50.4	23.4	15.4	7.6	3.2	100.0	6,153
Other	17.0	19.7	20.5	21.2	21.6	100.0	62,961
Total	20.0	20.0	20.0	20.0	20.0	100.0	69,114

RESPONDENTS' BACKGROUND CHARACTERISTICS 3

This chapter highlights the basic characteristics of ever-married women age 15-49 who were interviewed in the survey. It also presents data on employment status and use of smoking tobacco.

3.1 GENERAL CHARACTERISTICS

Table 3.1 presents the distribution of respondents by background characteristics, including age, marital status, residence, educational level completed, and household wealth. The distribution of ever-married women shows that, in 2009, 13 percent were under age 25 compared with 14 percent in 2007, 15 percent in 2002, and 22 percent in 1990. It is noteworthy that the proportion of women in the youngest age group (15-19) has dropped to 2.5 percent, whereas in 1990, women in this age group made up 6 percent of respondents. This decline in the proportion of young ever-married women is the consequence of increasing age at first marriage (see Chapter 6). Despite the decrease in the proportion of women age 25-34 between 2002 and 2009 (from 42 percent to 39 percent), the proportion of women age 40-49 was slightly higher in 2009 than it was in 2002 (30 percent compared with 25 percent). Among ever-married women, the percentage distribution by marital status indicates that 96 percent are currently married; the rest are either divorced (2 percent) or widowed (2 percent). The proportion of those currently married has remained the same since 2002.

Table 3.1 shows that 84 percent of respondents reside in urban areas (defined as localities with a population of 5,000 or more, as stated in the 2004 Census). Only 9 percent of all ever-married women live in the governorates of the South region (Karak, Tafiela, Ma'an, and Aqaba) compared with 63 percent in the Central region and 28 percent in the North region. Two-fifths of women live in Amman, 19 percent in Irbid, and 15 percent in Zarqa, compared with 1.4 percent in Tafiela and 1.6 percent in Ma'an. About 9 percent of women live in Badia areas.

Table 3.1 also presents the weighted and unweighted numbers of women in the sample. The unweighted numbers of women in the Central region

Table 3.1 Background characteristics of respondents

Percent distribution of ever-married women by background characteristics, Jordan 2009

Background characteristic	Number of women		
	Weighted percent	Weighted	Unweighted
Age			
15-19	2.5	249	229
20-24	10.9	1,107	1,184
25-29	18.8	1,903	1,930
30-34	20.3	2,053	2,018
35-39	17.5	1,771	1,925
40-44	17.3	1,751	1,636
45-49	12.6	1,274	1,187
Marital status			
Married	95.5	9,651	9,639
Divorced	2.1	217	214
Widowed	2.4	241	256
Residence			
Urban	84.0	8,490	6,918
Rural	16.0	1,619	3,191
Governorates			
Amman	39.6	3,998	1,177
Balqa	6.2	625	781
Zarqa	14.7	1,491	985
Madaba	2.2	226	811
Irbid	18.7	1,894	844
Mafraq	4.5	456	845
Jarash	3.0	301	839
Ajloun	2.2	218	805
Karak	3.8	389	769
Tafiela	1.4	142	789
Ma'an	1.6	167	760
Aqaba	2.0	202	704
Region			
Central	62.7	6,340	3,754
North	28.4	2,870	3,333
South	8.9	899	3,022
Badia area			
Badia	8.5	855	1,513
Other	91.5	9,254	8,596
Education			
No education	2.8	287	527
Elementary	7.1	718	912
Preparatory	15.5	1,567	1,528
Secondary	42.8	4,329	4,037
Higher	31.7	3,208	3,105
Wealth quintile			
Lowest	19.2	1,942	3,029
Second	20.9	2,113	2,485
Middle	21.0	2,119	2,052
Fourth	20.8	2,098	1,609
Highest	18.2	1,836	934
Total	100.0	10,109	10,109

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.

(Amman, Zarqa, Balqa, and Madaba) are smaller than the weighted numbers. The opposite is true in the South and North regions (because of oversampling). For example, in the South region, although the weighted number of women is 899, in reality, data were collected from 3,022 women. The South region was oversampled to obtain sufficient women to yield statistically reliable estimates. The same also applies to the weighted and unweighted numbers in the governorates; for example, although the weighted number of women in Jarash is 301 women, in reality, data were collected from 839 women. This also applies to the Badia areas where data were collected from about twice the weighted number of women (1,513 women).

Table 3.1 indicates that in 2009, 3 percent of ever-married women had not received any formal education compared with 4 percent in 2007, 6 percent in 2002, 9 percent in 1997, and 24 percent in 1990. It is clear the degree to which access to education has spread in Jordanian society in a relatively short period of time. Education has spread deeply as well as broadly over time in Jordan: only 54 percent of women had ever attended preparatory or higher levels of schooling in 1990; the corresponding figure in 1997 was 76 percent and in 2002 it was 83 percent. By 2007, it had increased to 89 percent of women who had attained preparatory or higher education and by 2009 to 90 percent. The table also indicates the semi-equal distribution of women according to household wealth. About 18 percent of women are concentrated in the highest quintile compared with 21 percent in the second quintile. In 2007, there was no significant difference in the distribution of women according to household wealth (19 percent and 21 percent respectively).

3.2 Respondents' Level of Education

Table 3.2 presents the distribution of ever-married women by the level of education attended, according to background characteristics. Broad-based access to education for the Jordanian population has received greater emphasis over the past sixty years. The data indicate that older women are less likely to have had education than younger women; 8 percent of women age 45-49 have had no education, while 1 percent of women between the ages of 15 and 29 have had no education.

The median number of years of schooling is similar across age groups except among women age 25-29. The median number of years of education for all women is 10.8 years. Women age 25-29 have a median of about 11.4 years of education; those age 45-49 have a median of 10.4 years of education. The median number of years of education for all women has not changed since 2007 (10.8 years).

Women in urban areas are more likely to have had some education, as well as higher education, than their rural counterparts; two percent of women in urban areas have no education, compared with 8 percent of women in rural areas. There are no differences in terms of the median number of years of schooling according to urban-rural residence. There are pronounced differences in women's educational attainment by region and governorate. In the Central region, 2 percent of women have no education, whereas in the South region, the proportion is 8 percent. Only 1 percent of women in Amman have no education compared with 12 percent in Ma'an. In Badia areas, 10 percent of women have no education compared with 2 percent in non-Badia areas.

Regional differences also persist with regard to secondary or higher education: a greater proportion of women in the North region attained secondary or higher education (76 percent) than in either the Central (74 percent) or South (70 percent) regions. Significant differences also exist in terms of higher education by governorate; the percentage of women who have attained higher education is 37 percent in Ajloun and Karak, 36 percent in Irbid and Tafiela, about 33 percent in Amman, Balqa, and Jarash, and then drops to 25 percent in Zarqa and Mafraq.

Table 3.2 Educational attainment

Percent distribution of ever-married women age 15-49 by highest level of schooling attended, and median years completed, according to background characteristics, Jordan 2009

Background characteristic	Education					Total	Median years completed	Number of women
	No education	Elementary	Preparatory	Secondary	Higher			
Age								
15-24	1.3	5.0	17.0	54.6	22.1	100.0	10.5	1,356
15-19	2.9	7.0	32.0	56.9	1.2	100.0	9.4	249
20-24	1.0	4.5	13.6	54.1	26.8	100.0	10.7	1,107
25-29	1.0	4.3	9.1	45.2	40.6	100.0	11.4	1,903
30-34	1.5	6.0	13.2	45.4	33.9	100.0	10.9	2,053
35-39	2.6	5.3	18.1	44.3	29.7	100.0	10.8	1,771
40-44	3.8	10.2	19.1	36.1	30.8	100.0	10.8	1,751
45-49	8.3	13.7	18.7	29.9	29.4	100.0	10.4	1,274
Residence								
Urban	1.8	6.4	15.4	43.7	32.6	100.0	10.9	8,490
Rural	8.2	10.7	15.9	38.2	27.0	100.0	10.4	1,619
Governorates								
Amman	1.4	6.1	15.2	45.2	32.1	100.0	11.0	3,998
Balqa	4.7	10.4	16.2	35.1	33.6	100.0	10.8	625
Zarqa	2.2	7.7	20.8	44.9	24.5	100.0	10.5	1,491
Madaba	4.3	9.1	15.5	39.9	31.1	100.0	10.9	226
Irbid	1.8	4.9	12.8	44.4	36.0	100.0	11.0	1,894
Mafraq	8.1	12.6	18.1	36.5	24.7	100.0	10.2	456
Jarash	2.6	8.8	17.9	37.2	33.4	100.0	10.6	301
Ajloun	2.3	5.8	10.9	43.5	37.5	100.0	10.9	218
Karak	7.5	8.9	10.9	35.7	37.0	100.0	10.8	389
Tafiela	7.1	8.7	15.1	32.8	36.3	100.0	10.7	142
Ma'an	11.8	12.8	10.8	34.7	29.8	100.0	10.4	167
Aqaba	7.4	8.4	14.0	43.0	27.3	100.0	10.7	202
Region								
Central	2.0	7.0	16.6	43.9	30.4	100.0	10.9	6,340
North	2.9	6.6	14.0	42.3	34.1	100.0	10.8	2,870
South	8.2	9.5	12.2	36.7	33.4	100.0	10.7	899
Badia area								
Badia	10.4	14.0	15.3	41.0	19.3	100.0	10.1	855
Other	2.1	6.5	15.5	43.0	32.9	100.0	10.9	9,254
Wealth quintile								
Lowest	8.9	13.4	20.5	43.0	14.2	100.0	9.9	1,942
Second	3.5	9.1	18.9	47.2	21.2	100.0	10.4	2,113
Middle	1.1	6.2	16.2	46.4	30.1	100.0	10.7	2,119
Fourth	0.5	4.4	13.9	42.8	38.4	100.0	11.3	2,098
Highest	0.3	2.3	7.4	33.4	56.6	100.0	13.1	1,836
Total	2.8	7.1	15.5	42.8	31.7	100.0	10.8	10,109

Note: Education categories refer to the highest level of education attended, whether or not that level was completed. Elementary education corresponds to the first six years of school, preparatory corresponds to the next three years, and secondary to the last three years, for a total of 12 years of schooling.

There is also a significant and notable difference for the women residing in Badia areas: the percentage of women attaining higher education in non-Badia areas is about twofold that of women in Badia areas (33 and 19 percent, respectively).

The table also shows a higher proportion of women with no education in the lowest wealth quintile (9 percent) than in either the fourth or the highest quintiles (less than 1 percent each). The proportion of women who have attained higher education is highest in the wealthiest households (57 percent) and lowest in the poorest households (14 percent).

3.3 RESPONDENTS' EMPLOYMENT CHARACTERISTICS

In the 2009 JPFHS, respondents were asked a number of questions about their employment, including whether they were currently working or not. Women who were currently working were then asked a number of questions about the type of work they do and their employment status.

3.3.1 Working Status

The majority of women (85 percent) have not worked during the last seven days preceding the survey (Table 3.3) while only 15 percent of women were working during the seven days preceding the survey. The proportion of women who were not working ranges from 100 percent among those age 15-19 to 82 percent among those age 30-44. The percentage of ever-married women currently working has increased compared with the 2007 survey (from 12 to 15 percent): this increase affects all age groups.

There are no major differences in work status according to urban-rural residence (15 percent in urban compared with 14 percent in rural). However, a higher proportion of women in the South region report being currently working (22 percent) compared with other regions. This finding seems contrary to the conventional wisdom that higher education increases the likelihood of employment, as women in the South region have the lowest levels of education. The table indicates also that there are notable variations in work status by governorates. Women in Balqa, Madaba, Irbid, Karak, Tafiela, and Ma'an are more likely to work than woman residing in the other governorates. In addition, women in Badia areas are less likely than women residing in non-Badia areas to work. Women with post-secondary education are much more likely to report working in the 7 days preceding the survey (35 percent) than women at any other educational level.

Marital status seems to have a bearing on working status. The proportion of working women rises from 15 percent among those married to 22 percent among widowed or

Table 3.3 Working status

Percent distribution of ever-married women by working status, according to background characteristics, Jordan 2009

Background characteristic	Worked in the 7 days preceding the survey[1]	Did not work in the 7 days preceding the survey	Total	Number of women
Age				
15-19	0.1	99.9	100.0	249
20-24	6.2	93.8	100.0	1,107
25-29	15.3	84.7	100.0	1,903
30-34	18.3	81.7	100.0	2,053
35-39	18.0	82.0	100.0	1,771
40-44	17.6	82.4	100.0	1,751
45-49	13.4	86.6	100.0	1,274
Marital status				
Married	14.9	85.1	100.0	9,651
Divorced/ widowed	21.8	78.2	100.0	458
Number of living children				
0	19.6	80.4	100.0	975
1-2	17.0	83.0	100.0	2,756
3-4	17.0	83.0	100.0	3,203
5+	10.4	89.6	100.0	3,175
Residence				
Urban	15.4	84.6	100.0	8,490
Rural	14.2	85.8	100.0	1,619
Governorates				
Amman	13.7	86.3	100.0	3,998
Balqa	18.4	81.6	100.0	625
Zarqa	8.2	91.8	100.0	1,491
Madaba	18.9	81.1	100.0	226
Irbid	19.0	81.0	100.0	1,894
Mafraq	14.8	85.2	100.0	456
Jarash	15.0	85.0	100.0	301
Ajloun	16.9	83.1	100.0	218
Karak	25.0	75.0	100.0	389
Tafiela	20.8	79.2	100.0	142
Ma'an	22.5	77.5	100.0	167
Aqaba	16.8	83.2	100.0	202
Region				
Central	13.0	87.0	100.0	6,340
North	17.8	82.2	100.0	2,870
South	22.0	78.0	100.0	899
Badia area				
Badia	10.6	89.4	100.0	855
Other	15.6	84.4	100.0	9,254
Education				
No education	6.9	93.1	100.0	287
Elementary	10.2	89.8	100.0	718
Preparatory	4.1	95.9	100.0	1,567
Secondary	5.9	94.1	100.0	4,329
Higher	35.0	65.0	100.0	3,208
Wealth quintile				
Lowest	8.4	91.6	100.0	1,942
Second	13.6	86.4	100.0	2,113
Middle	12.9	87.1	100.0	2,119
Fourth	17.2	82.8	100.0	2,098
Highest	24.5	75.5	100.0	1,836
Total	15.2	84.8	100.0	10,109

[1] "Worked" is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

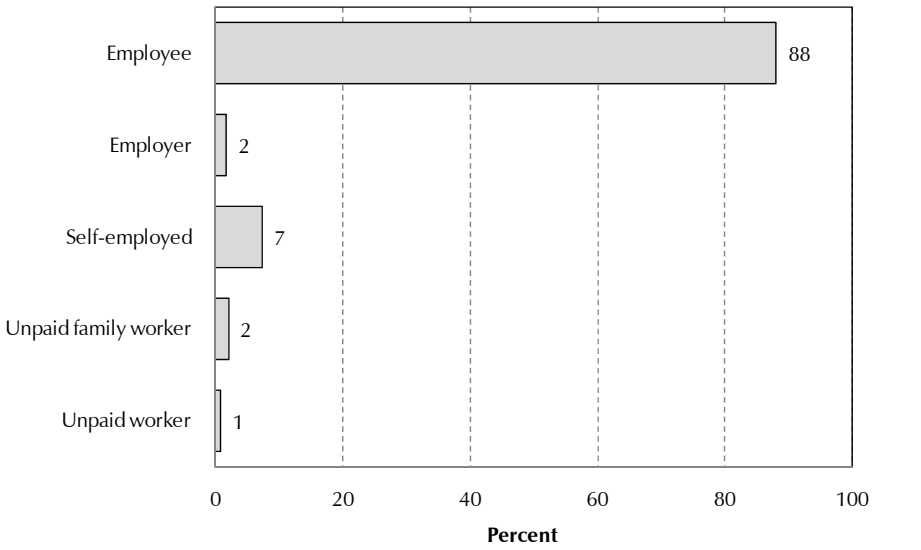
divorced women. The number of living children a woman has also affects working status. The percentage of working women decreases from 20 percent for those with no children to 17 percent for those with 1-4 children, to a low of 10 percent for those with five or more children.

Table 3.3 shows that there is a clear variation in work status of women according to wealth index. Women in the highest wealth quintile are much more likely to work than those in other wealth quintiles (25 percent in the highest wealth quintile compared with 13 percent in the middle quintile and 8 percent in the lowest wealth quintile).

3.3.2 Occupation

Table 3.4 shows that among women who report employment in the seven days preceding the survey, the majority engaged in professional (44 percent) and technical occupations (27 percent). Eleven percent are employed in sales, 4 percent as clerks, and 3 percent are craft and related trade workers. The percentages vary considerably by background characteristics of women, particularly by marital status, education, and household wealth. The data also indicate that 88 percent of employed women are paid employees, and 7 percent are self-employed (Figure 3.1).

Figure 3.1 **Percent Distribution of Women Who Worked in the 7 Days Preceding the Survey, by Employment Status, 2009**



JPFHS 2009

It is of interest to note that while the data reflect expected urban-rural differences for those working in services and in sales (12 percent and 3 percent, respectively), there are not pronounced urban-rural differences in the professional and technical-managerial sectors (Table 3.4). The proportion of women employed in these two sectors has risen steadily from 64 percent in 1997 to 73 percent in 2007 and has declined slightly to 71 percent in 2009.

Table 3.4 Occupation

Percent distribution of ever-married women who worked in the 7 days preceding the survey by occupation, according to background characteristics, Jordan 2009

Background characteristic	Professionals	Technicians and associate professionals	Clerks	Service workers, shop, and market sales workers	Skilled agricultural workers	Craft and related trades workers	Plant and machine operators and related occupations	Elementary occupations	Total	Number of women
Age										
20-24	44.4	15.3	3.3	10.9	0.0	0.2	0.0	25.8	100.0	68
25-29	59.9	22.7	1.9	10.1	0.0	0.1	0.0	5.4	100.0	292
30-34	54.8	26.9	3.9	5.6	0.2	2.2	0.0	6.4	100.0	375
35-39	33.1	29.0	6.9	15.6	0.2	2.2	0.0	13.0	100.0	320
40-44	29.2	33.4	3.9	13.4	0.2	5.0	0.6	14.2	100.0	309
45-49	40.2	25.1	5.7	11.6	0.0	3.8	0.0	13.4	100.0	171
Marital status										
Married	46.2	28.2	3.5	10.0	0.1	2.3	0.1	9.5	100.0	1,435
Divorced/widowed	11.7	11.4	16.6	25.9	0.2	4.1	0.0	30.0	100.0	100
Number of living children										
0	44.9	27.1	2.5	12.9	0.0	3.1	0.0	9.5	100.0	191
1-2	52.5	23.3	5.4	9.0	0.0	1.4	0.0	8.4	100.0	469
3-4	45.9	28.9	5.3	9.7	0.0	2.2	0.0	8.0	100.0	544
5+	28.3	29.7	2.1	15.0	0.5	4.2	0.6	19.5	100.0	331
Residence										
Urban	43.1	27.4	4.2	12.4	0.0	2.6	0.1	10.1	100.0	1,305
Rural	48.9	25.6	5.2	3.2	0.7	1.6	0.0	14.7	100.0	230
Governorates										
Amman	42.9	23.9	5.3	16.3	0.0	3.6	0.0	7.9	100.0	547
Balqa	42.9	24.7	5.0	11.4	1.2	2.1	0.0	12.6	100.0	115
Zarqa	31.3	37.8	4.0	13.4	0.0	4.1	1.6	7.8	100.0	122
Madaba	47.3	26.8	6.3	9.3	0.0	3.1	0.0	6.2	100.0	43
Irbid	45.6	29.5	0.5	7.8	0.0	1.1	0.0	15.5	100.0	360
Mafraq	56.1	22.0	3.0	1.2	0.0	2.3	0.0	15.5	100.0	68
Jarash	55.0	24.7	3.7	4.5	0.0	2.5	0.0	9.6	100.0	45
Ajloun	49.4	23.8	2.1	3.6	0.0	4.9	0.0	16.1	100.0	37
Karak	37.2	33.3	9.4	8.5	0.0	0.0	0.0	11.5	100.0	97
Tafiela	61.7	21.4	6.8	4.6	0.0	0.6	0.0	4.8	100.0	30
Ma'an	47.5	25.9	8.0	6.4	0.7	1.1	0.0	10.4	100.0	37
Aqaba	45.1	30.5	10.2	5.9	0.7	1.1	0.0	6.5	100.0	34
Region										
Central	41.4	26.2	5.1	14.8	0.2	3.4	0.2	8.5	100.0	827
North	48.1	27.6	1.2	6.3	0.0	1.7	0.0	15.1	100.0	510
South	44.2	29.7	8.9	7.1	0.2	0.5	0.0	9.5	100.0	198
Badia area										
Badia	50.2	25.7	2.4	1.6	0.5	1.2	0.0	18.4	100.0	90
Other	43.6	27.2	4.4	11.6	0.1	2.5	0.1	10.3	100.0	1,444
Education										
No education	(0.0)	(0.0)	(0.0)	(4.7)	(4.9)	(0.0)	(0.0)	(90.4)	100.0	20
Elementary	0.3	0.0	1.0	24.6	1.3	13.2	0.0	59.6	100.0	74
Preparatory	0.0	2.4	7.1	44.5	0.0	4.8	0.0	41.2	100.0	64
Secondary	3.2	9.1	21.2	34.1	0.0	6.9	0.0	25.4	100.0	253
Higher	59.3	34.9	0.6	3.1	0.0	0.7	0.2	1.2	100.0	1,124
Wealth quintile										
Lowest	23.4	16.0	4.1	14.3	0.7	4.2	0.0	37.4	100.0	164
Second	36.8	25.9	3.7	13.8	0.2	5.5	0.0	14.1	100.0	288
Middle	40.8	34.9	3.6	11.4	0.0	1.6	0.0	7.7	100.0	274
Fourth	39.2	35.6	6.3	11.8	0.0	2.8	0.5	3.8	100.0	361
Highest	61.9	20.5	3.6	7.2	0.0	0.2	0.0	6.5	100.0	449
Total	44.0	27.1	4.3	11.0	0.1	2.5	0.1	10.8	100.0	1,535

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

3.4 SMOKING TOBACCO

Tobacco use is widely regarded as the most preventable cause of death and disease among adults. In general, chronic exposure to nicotine may cause an acceleration of coronary artery disease, peptic ulcer disease, reproductive disturbances, esophageal reflux, and hypertension. Tobacco and its various components have been associated with an increased risk of cancer of various body organs. Smoking is the most important contributor to the development of chronic bronchitis and chronic abstractive pulmonary disease, which are characterized by chronic cough, phlegm production, and airflow obstruction. Smoking is well established as the cause of the majority of cases of pulmonary emphysema. Smoking among women also creates particular risks for their offspring. Poor pregnancy outcomes, including low birth weight and intrauterine growth retardation, are more frequent among women who smoke than among those who do not smoke.

Table 3.5 shows the percentage of women who use tobacco for smoking. Overall, 9 percent of women smoke cigarettes and 6 percent smoke nargila (compared with 11 percent and 5 percent in 2007).

Differentials by age and residence are seen among women who smoke cigarettes. Women 40-49 years old are more likely to smoke cigarettes than younger women. Women living in urban areas are more likely to smoke cigarettes (9 percent) than women living in rural areas (5 percent), with women in the Central region more likely to smoke cigarettes than women living in other regions. Women living in Amman and Aqaba governorates and in non-Badia areas are more likely to smoke cigarettes than other women. Differences are also significant among governorates: 3 percent of women in Tafiela smoke cigarettes compared with 11 percent of those living in Amman and Aqaba.

In general nargila use is lower among women than cigarette use. Nargila use is the same across age groups, except among 25-29 year olds where the percent of women smoking nargila is higher. Similar to smoking, there are significant differences with regard to women who smoke nargila according to governorates and residence in Badia area. Women living in Badia areas are less likely to smoke nargila (3 percent) than women in non-Badia areas (6 percent).

Table 3.5 indicates that there is an evident and significant variation in woman smoking cigarettes and nargila according to the wealth index. Women in the lowest wealth quintile (6 and 2 percent, respectively) are less likely to smoke cigarettes and nargila than woman in the highest quintile (14 and 12 percent respectively).

Table 3.5 Use of tobacco: Women

Percentage of ever-married women who smoke cigarettes or nargila, according to background characteristics, Jordan 2009

Background characteristic	Cigarettes	Nargila	Number of women
Age			
15-19	0.9	4.8	249
20-24	4.6	4.9	1,107
25-29	5.9	7.4	1,903
30-34	7.6	5.1	2,053
35-39	8.7	5.0	1,771
40-44	13.0	5.4	1,751
45-49	13.8	4.4	1,274
Residence			
Urban	9.3	6.3	8,490
Rural	5.4	1.1	1,619
Governorates			
Amman	10.9	8.0	3,998
Balqa	8.3	3.9	625
Zarqa	8.7	5.9	1,491
Madaba	6.3	4.9	226
Irbid	7.4	3.9	1,894
Mafraq	6.3	1.2	456
Jarash	5.0	1.9	301
Ajloun	4.6	2.6	218
Karak	4.9	1.6	389
Tafiela	2.9	0.8	142
Ma'an	5.1	1.0	167
Aqaba	10.4	3.3	202
Region			
Central	10.0	7.0	6,340
North	6.8	3.2	2,870
South	5.9	1.7	899
Badia area			
Badia	7.7	2.6	855
Other	8.8	5.7	9,254
Education			
No education	8.7	0.2	287
Elementary	9.3	3.0	718
Preparatory	10.7	5.2	1,567
Secondary	9.3	6.5	4,329
Higher	6.8	5.2	3,208
Maternity status			
Pregnant	2.9	4.1	1,136
Breastfeeding (not pregnant)	5.4	2.8	1,899
Neither	10.5	6.4	7,074
Wealth quintile			
Lowest	6.2	2.0	1,942
Second	6.1	2.7	2,113
Middle	7.5	4.7	2,119
Fourth	10.5	6.3	2,098
Highest	13.7	12.2	1,836
Total	8.7	5.5	10,109

Women with preparatory education are more likely to smoke cigarettes (11 percent) than women who have higher education (7 percent). However, a different pattern is observed among women who smoke nargila; less than 1 percent of women with no education compared with 6 percent of women with secondary education smoke nargila. The proportion of women smoking cigarettes and/or nargila decreases during pregnancy and lactation. However, 3 percent of women smoke cigarettes during pregnancy and 5 percent smoke during lactation. Levels of nargila use are similar, 4 percent of women smoke nargila during pregnancy and 3 percent smoke nargila during lactation.

FERTILITY 4

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 2009 JPFHS. Data were collected in two parts. First, each woman was asked a series of questions about 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 the name, sex, date of birth, age, and survival status of each birth. For deceased children, the age at death was recorded. As an indicator of future fertility, information was also collected on whether she was pregnant at the time of the interview.

Through previous experience in using birth histories to estimate fertility levels and trends, it has been found that the underreporting of children ever born and the 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 dates of birth distorts fertility trends over time. The 2009 JPFHS is notable for the quality of age and date reporting. Virtually all women were able to report their age and their date of marriage or age at 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 in Appendix C). This information lends confidence to the quality of basic data used in the estimation of fertility measures.

Fertility rates presented in this chapter are based on direct measures derived from the birth history section of the 2009 JPFHS. Therefore, it is important to note that only surviving women were interviewed in the survey. This would bias fertility rates if mortality of women of childbearing age were high and if fertility of surviving and non-surviving women differed significantly—neither of which is the case in Jordan. Limiting the survey respondents to ever-married women presents another potential bias. 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 gathered from 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, educational level, and wealth index. Factors related to fertility, including the median age at first birth, birth intervals, and teenage fertility are also analyzed.

4.1 FERTILITY LEVELS AND TRENDS

Age-Specific Fertility Rates (ASFRs) and Total Fertility Rates (TFRs) for the three-year period preceding the 2009 JPFHS are shown in Table 4.1, along with data from five previous surveys for comparison—the 1983, 1990, 1997, 2002, and 2007 JPFHS. The calculated rates for these surveys refer to the three years preceding each survey (1981-1983, 1988-1990, 1995-1997, 2000-2002, 2005-2007, and 2007-2009 respectively). Comparison of the findings from the six surveys shows trends in fertility levels over about a 28-year period.

The TFR is the sum of the ASFRs; 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 currently observed age-specific rates. At current levels, a woman would give birth to an average of 3.8 children in her lifetime; a 42 percent decline from the rate recorded in 1983 (6.6 births per woman). Table 4.1 indicates a continual decline in fertility from 1983 to 1997. Fertility declined 15 percent between 1983 and 1990 (dropping from 6.6 to 5.6 births per woman), 21 percent between 1990 and 1997 (dropping from 5.6 to 4.4 births per woman), and 16 percent between 1997 and 2002 (dropping from 4.4 to 3.7 births per woman). The level of fertility has remained almost unchanged between the years 2002 and 2009. Overall, in the past nineteen years (1990-2009), the total fertility rate in Jordan has declined by 32 percent.

Table 4.1 Trends in fertility

Age-specific fertility rates and total fertility rates, various surveys, Jordan 1983-2009

Age group	JFFHS 1983	JPFHS 1990	JPFHS 1997	JPFHS 2002	JPFHS 2007	JPFHS 2009
15-19	49	49	43	28	28	32
20-24	229	219	172	150	148	152
25-29	335	296	246	202	212	238
30-34	305	264	206	184	162	182
35-39	233	188	144	122	121	126
40-44	127	79	48	43	41	37
45-49	40	19	11	5	6	3
TFR 15-49	6.6	5.6	4.4	3.7	3.6	3.8

Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate expressed per woman

The estimated TFR based on the results of the 2009 JPFHS (3.8 births per woman) is slightly higher than its previous estimates from the 2002 and 2007 JPFHS (3.7 and 3.6 births per woman respectively). Although the differences in the estimates of the TFR for the last three surveys are not statistically significant and cannot be interpreted as an increase in fertility, these results do indicate that the decline of the TFR has temporarily stopped in Jordan. This phenomenon (stability in the TFR after a long decline) has been observed in neighboring countries, such as Egypt and Syria, as well.

A decline in fertility levels has occurred among all age groups over the last three decades; however, the most significant proportional decline has been observed among women 40-49: a 71 percent drop from 127 births per 1,000 women in 1983 to 37 births in 2009 for women age 40-44. Women age 35-39 have experienced a 46 percent decline in fertility levels (from 233 births per 1,000 women in 1983 to 126 births in 2009), and fertility rates among women under age 30 years declined by around one-third during this period.

Figure 4.1 shows that the bulk of the decline in fertility since 1997 can be attributed to the decrease in the number of births among women between the ages of 20 and 39. Among all the surveys the age-specific fertility rates are highest for the 25-29 age group. It is evident from the graph that the 2009 JPFHS data show no significant decline in fertility overall or among any age group. Additionally, the ASFRs have not changed between 2002 and 2009 for women under age 25 and over age 34 years. An increase was seen in the fertility rates of women age 25-29 (from 202 births per 1,000 women in 2002 to 212 in 2007, and to 238 births per 1,000 women in 2009). Moreover, the ASFR for the age group 30-34 years is higher in 2009 compared with 2007 but equal to that in 2002.

Figure 4.1 **Trends in Age-specific Fertility Rates, Various Sources, 1997-2009**

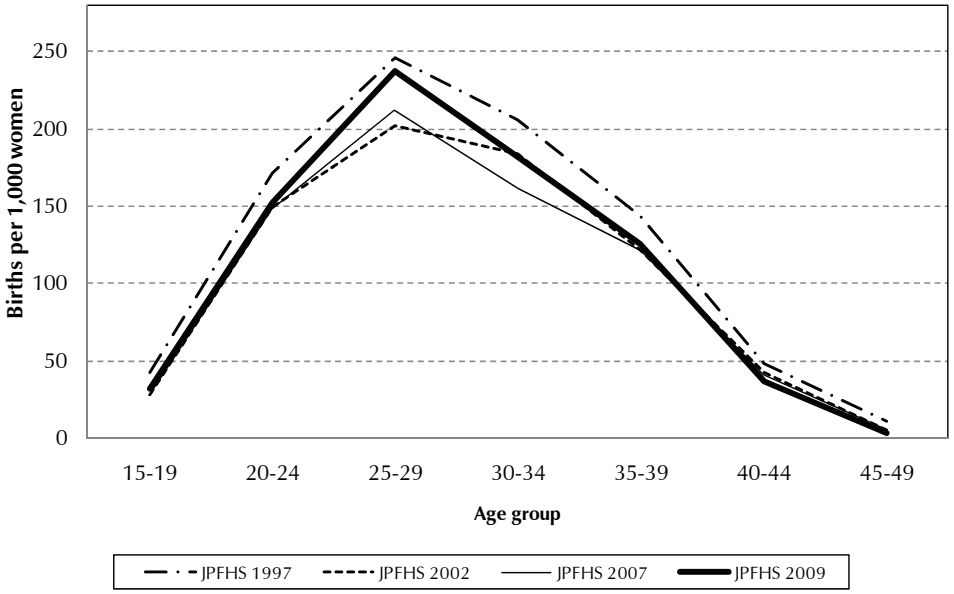


Table 4.2 presents the ASFRs and cumulative fertility by urban-rural residence for the three-year period preceding the survey. Table 4.2 also presents the General Fertility Rate (GFR), which is the annual number of live births per 1,000 women age 15-44 for the three years preceding the survey, and the Crude Birth Rate (CBR), which is the annual number of live births per 1,000 population for the Fertility levels are slightly higher in rural areas compared with urban areas (4.0 compared with 3.8 births per woman). The most significant urban-rural differences are found in the middle of the women's reproductive period (age 30-34) where rural women have an average of 0.028 more births than urban women. However, fertility rates are higher in urban areas among women age 25-29 and 15-19 years than in rural areas among women who are the same ages. For example, women age 25-29 years living in urban areas give birth to 0.04 more children than those living in rural areas. Currently, a woman in Jordan will have an average of less than one child (0.9 child) by her 25th birthday and three children (3.0) by her 35th birthday.

Table 4.2 Current fertility

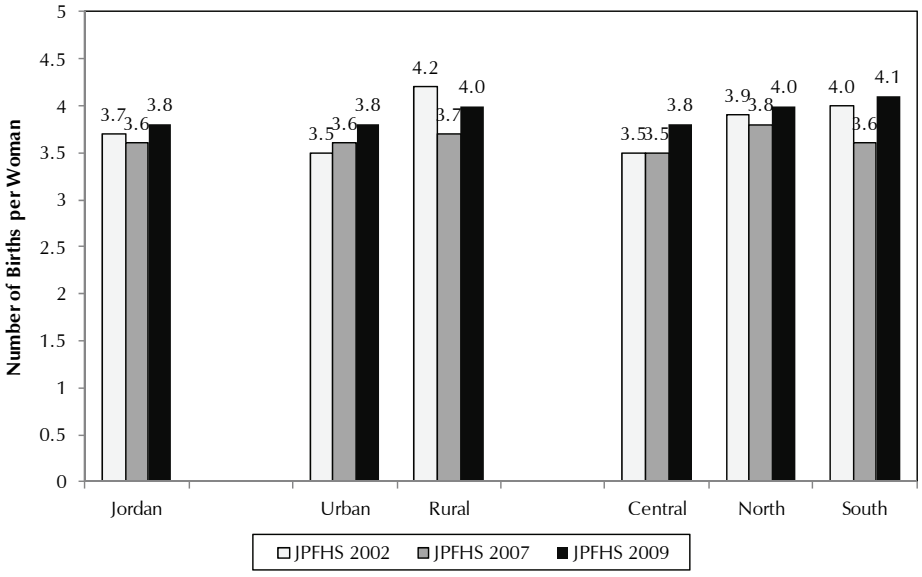
Age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Jordan 2009

	Residence		
Age group	Urban	Rural	Total
15-19	34	24	32
20-24	150	163	152
25-29	245	205	238
30-34	177	205	182
35-39	122	147	126
40-44	35	47	37
45-49	3	6	3
TFR (15-49)	3.8	4.0	3.8
GFR (15-44)	127	129	127
CBR	30.6	30.7	30.6

Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women
CBR: Crude birth rate, expressed per 1,000 population

Figure 4.2 shows that the TFR has increased slightly in urban areas since 2002 (3.8 births per woman compared with 3.6 in 2007 and 3.5 births per woman in 2002), while slightly decreasing in rural areas (4.0 compared with 4.2 births per woman in 2002). A decrease in the TFR in the South region between 2002 and 2007 (from 4.0 births per woman to 3.6 births per woman) is not confirmed by the 2009 survey (4.1 births per woman). In comparison, the TFR remains stable in the North region, while the number of live births per woman in the Central region has increased slightly from 2002 and 2007 (3.8 births per woman compared with 3.5 births per woman). Thus, the differences in fertility rates that previously existed between urban and rural residences and among the three regions have almost disappeared.

Figure 4.2 Total Fertility Rate by Residence and Region from Various Surveys, 2002-2009



Preliminary analysis of age at marriage, age at first birth, birth intervals, and use of modern contraceptive methods does not reveal any significant change in these measures. Thus, in-depth analysis of other factors and determinants of fertility is important to explain the stability of fertility in Jordan since 2002. For instance, the proportion of married women in the age group 15-29 years has increased by about 3 percentage points (34 percent in 2009 compared with 31 percent in 2002). In addition, the percentage of women who discontinued use of family planning methods during the last 12 months before the survey has also slightly increased (42 percent in 2002 compared with 45 percent in 2009).

Table 4.2 also indicates that the overall CBR is 31 per 1,000 (versus 29 per 1,000 in 2002). The GFR reached 127 births per 1,000 women age 15-44 (versus 122 in 2002). As is the case with the TFR, the CBR and the GFR do not differ by urban-rural residence.

The fertility differentials according to background characteristics of women are shown in Table 4.3. The first column shows the TFR for the three years preceding the survey; column two shows the percentage of women who were pregnant at the time of data collection; and column three shows 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 2009 JPFHS the completed fertility rate (4.9 births per woman) is higher than the total fertility rate (3.8 births per woman), indicating a considerable decline in fertility. This finding corresponds with the decline in fertility seen over time in the surveys implemented in Jordan over the past 12 years (Table 4.1 and Figure 4.1).

Fertility levels do not show considerable variations by region, although the TFR is highest in the South (4.1 children per woman). Fertility levels do vary according to governorate; the TFR ranges from 3.6 births per woman in Madaba, to 3.7 in Amman, 3.8 in Irbid and Karak, 4.2 births in Mafraq and Aqaba, and 4.5 in Jarash. In addition, women living in Badia areas have higher fertility rates than other women (4.5 versus 3.8 births per woman).

It is of interest to note that the relationship of education to fertility is not in fact linear; rather, in Jordan it has an inverted U-shape. The figures suggest that post-secondary education for women is associated with lower levels of fertility. Women with post-secondary education have had almost one fewer births than women with a preparatory level of education. TFR varies from 4.1 births among women with no education and those with elementary and secondary education to 3.5 births among women with higher education. The rate peaks at 4.7 births among women who have had a preparatory education.

The TFR for woman in Jordan also varies considerably according to wealth index. In general, women in the lowest and the second quintiles have more births than women in the other quintiles. The rate varies from 4.9 births for the lowest wealth quintile to 2.7 children for the highest quintile: in other words, women in the poorest households have, on average, 2.2 more births than women in the wealthiest households.

The 2009 JPFHS data show that about 7 percent of all 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. Looking at education differences, women with elementary and secondary education and above are more likely to be pregnant than other women (Table 4.3). Otherwise, wealth quintile variations follow a pattern similar to that of fertility.

Table 4.3 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Jordan 2009

Background characteristic	Total fertility rate	Percentage women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	3.8	6.4	4.7
Rural	4.0	7.6	5.7
Governorates			
Amman	3.7	5.8	4.6
Balqa	3.9	6.2	5.3
Zarqa	3.9	7.3	4.6
Madaba	3.6	7.5	5.3
Irbid	3.8	6.6	4.9
Mafraq	4.2	8.4	5.9
Jarash	4.5	7.3	5.8
Ajloun	4.0	7.8	5.9
Karak	3.8	7.1	4.9
Tafiela	4.3	8.2	6.0
Ma'an	4.3	7.3	5.9
Aqaba	4.2	7.9	5.3
Region			
Central	3.8	6.2	4.7
North	4.0	7.1	5.2
South	4.1	7.4	5.3
Badia area			
Badia	4.5	8.9	5.9
Other	3.8	6.4	4.8
Education			
No education	4.1	4.2	5.5
Elementary	4.1	7.7	5.7
Preparatory	4.7	5.6	5.9
Secondary	4.1	7.1	4.8
Higher	3.5	6.4	3.9
Wealth quintile			
Lowest	4.9	8.8	5.5
Second	4.4	7.7	5.6
Middle	3.9	8.3	4.8
Fourth	3.6	5.4	5.0
Highest	2.7	3.5	4.0
Total	3.8	6.6	4.9

Note: Total fertility rates are for the period 1-36 months prior to interview.

Comparing data from previous surveys is one way of studying trends in fertility. 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. Data in Table 4.4 and Figure 4.3 indicate that the fertility rate has been declining in all age groups[1], mainly during the 5-19-year period preceding the survey. For example, the age-specific fertility rate for women age 25-29 declined from 281 births per 1,000 women in the 15-19 years preceding the survey to 208 births per 1,000 women in the 5-9 year period before the survey, a 26 percent decline. More recently, between the 5-9 and 0-4 year period prior to the survey, the pace of fertility decline has drastically decreased, and the ASFR in the 25-29-year age group has increased. The TFR among women age 15-34 for which data are available for the four preceding periods, has dropped from 4.0 births per women 15-19 years before the survey, to 3.4 births 10-14 years before, and 3.0 births 5-9 years and 0-4 years prior to the survey.

[1] Omitted figures represented by dashes reflect the fact that women age 50 and older were not included in the survey: the further back in time that rates are calculated, the more severe the truncation. For example, rates cannot be calculated for women in the age group 45-49 years for the period 5-9 years before the survey, because these women would have been age 50 or older at the time of the survey and, thus, were not interviewed.

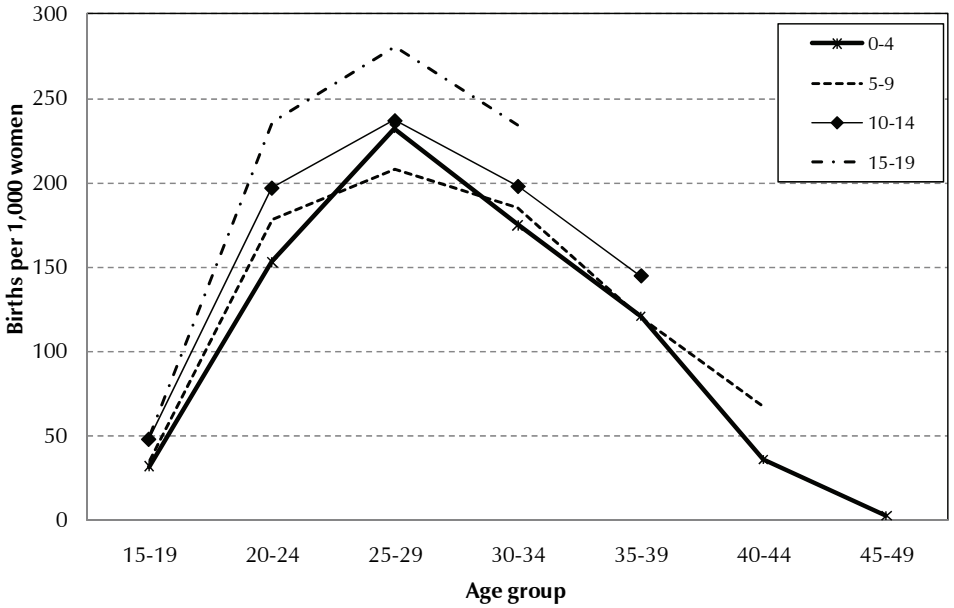
Table 4.4 Trends in age-specific fertility rates

Age-specific fertility rates for five-year periods preceding the survey, by mother's age at the time of the birth, Jordan 2009

Mother's age at birth	Number of years preceding survey			
	0-4	5-9	10-14	15-19
15-19	32	36	48	51
20-24	153	178	197	236
25-29	232	208	237	281
30-34	175	185	198	[234]
35-39	121	121	[145]	
40-44	36	[67]		
45-49	[3]			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

Figure 4.3 **Age-specific Fertility Rates for Five-year Periods Preceding the Survey, 2009**



JPFHS 2009

4.2 CHILDREN EVER BORN

Table 4.5 presents the distribution of all women and currently married women by the number of children they have had. In the 2009 JPFHS, all respondents are ever-married women; therefore information on the reproductive history of never-married women was not collected. However, since almost no births in Jordan take place before marriage, it is 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 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 1.6 children by their late twenties, 3.7 children by their late thirties, and 5.4 children by the end of their reproductive life. The data also indicate that, on average, currently married women have given birth to 2.3 children by their late twenties, 4.5 children by their late thirties, and about six children by the end of their reproductive life.

Table 4.5 Children ever born and living

Percent distribution of all women and currently married women by number of children ever born, mean number of children ever born, and mean number of living children, according to age group, Jordan 2009

Age	Number of children ever born											Total	Number of women	Mean number of children ever born	Mean number of living children
	0	1	2	3	4	5	6	7	8	9	10+				
ALL WOMEN															
15-19	96.8	2.7	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.00	3,679	0.04	0.04
20-24	71.6	12.4	11.4	3.8	0.7	0.1	0.0	0.0	0.0	0.0	0.0	100.00	2,994	0.50	0.48
25-29	35.1	13.0	24.6	15.9	8.0	2.4	0.8	0.1	0.1	0.0	0.0	100.00	2,664	1.60	1.57
30-34	22.1	7.5	12.1	21.5	17.3	11.3	5.6	1.9	0.5	0.2	0.0	100.00	2,507	2.75	2.66
35-39	19.5	2.7	5.9	11.6	19.7	17.1	11.7	6.8	3.1	1.3	0.4	100.00	2,091	3.73	3.61
40-44	15.9	2.7	3.2	9.2	14.6	17.3	14.5	9.7	7.2	3.3	2.3	100.00	1,951	4.49	4.35
45-49	14.1	2.0	3.4	6.9	10.6	13.4	13.4	10.2	9.9	6.0	10.2	100.00	1,392	5.35	5.07
Total	46.9	6.6	9.0	9.2	8.7	7.1	5.1	3.0	2.1	1.1	1.1	100.00	17,278	2.13	2.06
CURRENTLY MARRIED WOMEN															
15-19	52.7	38.5	7.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.00	242	0.57	0.56
20-24	22.4	33.2	31.7	10.6	1.9	0.2	0.0	0.0	0.0	0.0	0.0	100.00	1,078	1.37	1.33
25-29	8.1	18.2	34.8	22.6	11.4	3.4	1.1	0.2	0.2	0.0	0.0	100.00	1,860	2.28	2.23
30-34	4.0	8.7	15.0	26.3	21.6	14.1	7.0	2.4	0.6	0.2	0.0	100.00	2,000	3.41	3.30
35-39	4.8	2.6	6.8	13.5	23.5	20.5	14.2	8.3	3.7	1.6	0.5	100.00	1,704	4.45	4.31
40-44	5.5	1.9	3.2	9.7	16.2	20.3	17.1	11.1	8.5	3.9	2.5	100.00	1,628	5.14	4.97
45-49	6.2	1.6	2.2	7.9	11.5	14.9	15.1	11.7	11.6	5.7	11.5	100.00	1,139	5.94	5.62
Total	8.7	10.9	15.6	16.0	15.1	12.4	8.8	5.2	3.6	1.7	1.9	100.00	9,651	3.67	3.54

Data in Table 4.5 indicate very little variation between the mean number of children ever born and the mean number of children still living for all women age 15-49 (2.13 and 2.06 children, respectively). As expected, differences in the mean number of children ever born and living children are notable after women have reached the age of 40. However, 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. Among women currently married, the mean number of children ever born is 3.7, compared with 3.5 children still living.

4.3 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 by number of months since preceding birth is shown in Table 4.6.

Women in Jordan prefer relatively long birth intervals: the median birth interval among children born in the five years preceding the survey is 31.3 months—1.2 month longer than that recorded in the 2002 JPFHS. This slight increase in birth intervals (4 percent longer) may reflect the implementation of Jordan's National Health Program for Birth Spacing, a component of the National Population Strategy ratified by the government of Jordan in 1996.

About two-thirds of all children (67 percent) are born at least two years after their siblings. This figure is identical to that found in 2007 and 2002 but represents an increase from 1997 data (56 percent). Almost two in five children (42 percent) were born after an interval of three years or longer in 2009 compared with 37 percent in 2002 and 26 percent in 1997. 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 (21.7 months, compared with 31.6 months). The data also indicate a shorter birth interval for births following a female child (30.7 months compared with 31.7 months when the previous child is a boy).

Table 4.6 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to background characteristics, Jordan 2009

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-59	60+			
Age									
15-19	(45.0)	(32.9)	(22.1)	(0.0)	(0.0)	(0.0)	100.0	21	18.7
20-29	27.0	23.1	27.3	13.9	5.4	3.3	100.0	2,473	24.0
30-39	12.7	13.7	23.9	18.3	13.1	18.4	100.0	3,644	35.8
40-49	3.8	7.9	22.5	14.5	12.3	38.9	100.0	838	48.7
Birth order									
2-3	22.7	21.1	25.4	14.4	8.3	8.1	100.0	3,563	26.4
4-6	11.0	11.5	24.2	17.8	12.5	23.1	100.0	2,760	37.8
7+	9.0	11.1	25.4	19.4	11.5	23.6	100.0	654	38.0
Sex of preceding birth									
Male	17.3	16.0	22.5	16.1	11.3	16.9	100.0	3,464	31.7
Female	16.3	16.8	27.3	16.4	9.2	14.1	100.0	3,513	30.7
Survival of preceding birth									
Living	16.2	16.3	25.1	16.4	10.3	15.6	100.0	6,785	31.6
Dead	37.4	19.0	19.0	9.0	6.1	9.4	100.0	192	21.7
Residence									
Urban	16.8	16.0	24.3	16.2	10.5	16.2	100.0	5,751	31.7
Rural	16.6	18.3	27.6	16.5	8.8	12.1	100.0	1,226	29.6
Governorates									
Amman	19.0	14.5	24.3	16.2	10.0	16.1	100.0	2,623	31.2
Balqa	16.8	19.5	26.6	14.5	9.8	12.7	100.0	441	29.7
Zarqa	14.3	16.6	24.4	17.9	9.8	17.0	100.0	1,001	32.6
Madaba	17.3	15.3	23.9	17.6	11.8	14.1	100.0	156	32.4
Irbid	14.9	17.0	23.5	15.1	12.5	16.9	100.0	1,323	32.6
Mafraq	18.7	17.7	28.1	15.3	9.9	10.3	100.0	366	29.1
Jarash	18.7	19.4	29.5	15.4	7.0	10.1	100.0	244	27.5
Ajloun	15.2	18.3	22.7	17.2	10.4	16.1	100.0	165	31.2
Karak	14.0	17.2	27.3	18.9	8.5	14.1	100.0	271	31.4
Tafiela	15.4	16.8	29.6	16.5	9.3	12.6	100.0	109	29.6
Ma'an	15.3	19.1	26.1	16.4	8.8	14.3	100.0	126	29.1
Aqaba	13.0	19.2	26.9	16.6	8.0	16.3	100.0	151	30.9
Region									
Central	17.6	15.6	24.5	16.5	10.0	15.9	100.0	4,221	31.5
North	16.1	17.5	24.9	15.3	11.2	14.9	100.0	2,099	31.0
South	14.2	17.9	27.3	17.5	8.6	14.4	100.0	657	30.4
Badia area									
Badia	20.5	17.0	27.4	13.6	9.7	11.8	100.0	674	27.9
Other	16.4	16.3	24.7	16.5	10.3	15.9	100.0	6,303	31.7
Education									
No education	13.3	16.7	34.5	14.4	7.6	13.5	100.0	162	31.6
Elementary	22.8	12.4	27.8	15.5	7.7	13.8	100.0	409	28.4
Preparatory	15.9	13.4	24.3	15.2	10.2	21.0	100.0	1,063	33.8
Secondary	17.3	17.7	23.8	16.3	9.9	15.0	100.0	3,211	30.7
Higher	15.6	16.6	25.6	16.9	11.3	13.9	100.0	2,132	32.0
Wealth quintile									
Lowest	19.5	18.7	28.8	15.3	7.9	10.0	100.0	1,705	28.0
Second	18.4	17.5	25.4	15.9	9.3	13.5	100.0	1,622	29.4
Middle	15.9	16.2	24.1	17.5	9.4	17.0	100.0	1,461	31.7
Fourth	16.0	13.1	23.9	14.4	12.0	20.6	100.0	1,261	34.2
Highest	11.6	15.0	19.6	19.1	15.1	19.6	100.0	928	38.0
Total	16.8	16.4	24.9	16.2	10.2	15.5	100.0	6,977	31.3

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.
Figures in parenthesis are based on 25-49 unweighted cases.

There exists only a small variation in the length of birth interval by residence; the data show that women in rural areas and those living in the South region and in Jarash, Ma'an, and Mafraq as well as those women in Badia areas are more likely than other subgroups to have short birth intervals. Birth intervals in non-Badia areas are 3.8 months longer than in Badia areas. The length of birth intervals increases with the wealth quintile: in the highest quintile, the median birth interval is 10 months longer than in the lowest quintile (38.0 months versus 28.0 months) In addition, woman with elementary education have shorter birth intervals than other women.

4.4 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 4.7 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 more than half had not yet given birth. Overall, for women 25-49 years old, median age at first birth has changed little between 2002 and 2009 (from 23.5 years in 2002 to 24.0 years in 2009). Figures in the last column suggest an increasing median age at first birth across age cohorts. Women in younger cohorts are likely to have their first birth at an older age than women in older cohorts. Women age 30-34 (median age 24.4) give birth for the first time 0.6 year later than women age 35-39 (median age 23.8), and 2.1 years later than women age 45-49 (median age 22.3).

Table 4.7 Age at first birth

Percentage of women age 15-49 who gave birth by exact ages, percentage who have never given birth, and median age at first birth, according to current age, Jordan 2009

	Percentage who gave birth by exact age					Percentage who have never	Number	Median age at first
Current age	15	18	20	22	25	given birth	of women	birth
15-19	0.0	na	na	na	na	96.8	3,679	a
20-24	0.1	3.5	13.1	na	na	71.6	2,994	a
25-29	0.1	4.2	13.6	27.6	50.7	35.1	2,664	24.9
30-34	0.2	6.4	18.7	33.4	53.6	22.1	2,507	24.4
35-39	0.1	6.5	18.8	36.5	57.6	19.5	2,091	23.8
40-44	0.6	10.3	24.3	38.3	59.7	15.9	1,951	23.6
45-49	0.6	13.6	32.5	48.2	65.6	14.1	1,392	22.3
25-49	0.3	7.6	20.3	35.4	56.3	22.7	10,605	24.0
30-49	0.4	8.7	22.5	38.0	58.2	18.5	7,941	23.7

na = Not applicable
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group.

Table 4.8 presents the differentials in age at first birth among women age 25-49 by background characteristics. Overall, the median age at first birth is 24.0 years for women age 25-49. The median age at first birth has not changed much since 2002; in 2007 it was 23.9 years and in 2002 it was 23.5 years. Women in the South region begin childbearing half a year later than women in the Central region (24.4 years compared with 23.9 years). There are no significant differences in the median age at first birth by place of residence (24.0 in urban areas compared with 24.1 in rural areas), while women in Badia areas begin childbearing half a year earlier than women in non-Badia areas. There are small variations according to governorates: median age at first birth varies from 23.5 years in Aqaba and Zarqa governorates, to 24.0 years in Amman, and to 24.6 years in Madaba. Women with a secondary education had a median age at first birth of 22.9 years compared with 20.8 years for women with preparatory education. Less than half of women age 25-49 with higher education have given birth before the age of 25, so a median age could not be calculated for them. Data also revealed that women in the fourth and the highest wealth quintiles are more likely to have a higher median age at first birth than women in lower wealth quintiles.

Table 4.8 Median age at first birth

Median age at first birth among women age 25-49 years, according to background characteristics, Jordan 2009

Background characteristic	Current age					Women age 25-49	Women age 30-49
	25-29	30-34	35-39	40-44	45-49		
Residence							
Urban	24.9	24.3	23.8	23.6	22.5	24.0	23.7
Rural	a	25.2	23.8	23.2	21.1	24.1	23.7
Governorates							
Amman	24.9	24.7	24.0	23.2	22.4	24.0	23.7
Balqa	a	25.5	25.4	23.3	22.0	24.4	24.1
Zarqa	24.0	22.6	23.9	23.9	21.4	23.5	23.2
Madaba	a	25.6	24.6	23.6	21.9	24.6	23.9
Irbid	a	24.3	23.4	24.1	22.8	24.2	23.8
Mafraq	24.3	25.2	23.5	22.6	20.5	23.7	23.4
Jarash	a	23.9	22.8	23.9	21.4	23.8	23.3
Ajloun	a	24.2	23.1	23.2	22.4	23.9	23.3
Karak	a	27.4	24.2	25.0	23.6	a	25.3
Tafiela	24.7	24.4	23.6	23.0	21.3	23.9	23.5
Ma'an	24.9	23.8	23.3	22.3	21.5	23.6	22.9
Aqaba	24.5	23.3	22.9	23.0	23.0	23.5	23.0
Region							
Central	24.8	24.3	24.1	23.4	22.1	23.9	23.7
North	a	24.3	23.3	23.9	22.4	24.0	23.6
South	24.9	25.6	23.6	24.0	22.6	24.4	24.1
Badia area							
Badia	a	23.7	23.4	21.8	21.2	23.5	22.7
Other	24.9	24.5	23.8	23.7	22.4	24.0	23.7
Education							
No education	a	24.2	23.5	22.9	20.6	22.6	22.3
Elementary	22.9	24.4	21.6	20.3	20.6	21.5	21.1
Preparatory	20.9	21.9	21.1	21.3	19.2	20.8	20.8
Secondary	23.0	23.0	23.3	22.6	21.7	22.9	22.8
Higher	a	26.3	25.7	26.3	25.6	a	26.1
Wealth quintile							
Lowest	24.4	23.8	23.2	24.1	22.8	23.8	23.6
Second	24.1	23.4	23.8	23.2	20.8	23.5	23.1
Middle	24.7	23.8	23.6	22.6	22.3	23.7	23.2
Fourth	24.6	26.3	24.2	23.9	22.1	24.1	24.0
Highest	a	25.5	24.3	24.1	22.8	24.7	24.3
Total	24.9	24.4	23.8	23.6	22.3	24.0	23.7

a = Omitted because less than 50 percent of the women had a birth before reaching the beginning of the age group

4.5 TEENAGE FERTILITY

Teenage fertility is a major social and health concern because teenage mothers and their children usually have a higher risk of illness and death. Childbearing during the teenage years also frequently has adverse social consequences, particularly on female educational attainment, because women who become mothers in their teens are more likely to curtail their education. Table 4.9 shows the extent of fertility among women age 15-19.

The level of fertility among teenagers in Jordan is low. Only 5 percent of women have begun childbearing during their teens, compared with 4 percent in 2002 and 2007 and 6 percent in 1997. The percentage of teenagers who have begun childbearing increases rapidly with age, from 0.2 percent among 15-year-olds, to almost 2 percent among 16-year-olds, and to 6 percent among 17 and 18-year-olds. By age 19, one in ten will have become a mother or will be pregnant with their first child.

Levels of teenage pregnancy vary slightly by urban-rural residence (5 percent in urban and 4 percent in rural area). Teens in the Central region and Badia areas are more likely to have begun childbearing than teens in other areas. Large variations exist by governorates: the percentage of teenagers who have begun childbearing varies from less than 2 percent in Irbid, Ajloun, and Ma'an to 6 percent in Amman, Zarqa, and Jarash governorates. The level of teenage fertility was strongly associated with a woman's educational level. The proportion of women age 15-19 who had begun childbearing was highest among women with no education (18 percent). Women with secondary (5 percent) or higher (0.3 percent) levels of education were much more likely to have delayed childbearing. Results do not show a clear pattern according to wealth quintile: teenage mothers are more common in the lowest, middle, and fourth wealth quintiles (5, 7, and 5 percent respectively) than in the second and highest wealth quintiles (4 and 3 percent respectively).

Table 4.9 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child and percentage who have begun childbearing, by background characteristics, Jordan 2009

Background characteristic	Percentage who: Have had a live birth	Are pregnant with first child	Percentage who have begun childbearing	Number of women
Age				
15	0.0	0.2	0.2	787
16	1.3	0.4	1.7	733
17	4.1	2.0	6.1	747
18	4.3	1.6	5.9	704
19	6.8	3.2	9.9	709
Residence				
Urban	3.4	1.4	4.8	3,055
Rural	2.6	1.4	4.0	628
Governorates				
Amman	4.1	2.1	6.1	1,432
Balqa	3.2	1.6	4.8	255
Zarqa	4.7	1.2	5.9	464
Madaba	1.9	1.7	3.5	88
Irbid	1.4	0.4	1.8	737
Mafraq	3.3	1.5	4.8	175
Jarash	4.3	1.4	5.7	130
Ajloun	1.6	0.3	1.9	96
Karak	2.1	0.9	3.0	126
Tafiela	1.3	2.3	3.6	55
Ma'an	1.0	0.8	1.8	66
Aqaba	2.3	2.5	4.8	67
Region				
Central	4.1	1.8	5.9	2,208
North	2.1	0.7	2.7	1,138
South	1.7	1.4	3.1	329
Badia area				
Badia	3.0	2.3	5.3	302
Other	3.2	1.3	4.6	3,380
Education				
No education	15.4	2.4	17.8	36
Elementary	9.2	6.3	15.5	64
Preparatory	5.1	0.9	6.1	963
Secondary	3.1	2.0	5.0	1,889
Higher	0.1	0.2	0.3	730
Wealth quintile				
Lowest	3.0	2.0	5.0	609
Second	3.2	0.6	3.8	731
Middle	4.1	2.5	6.6	740
Fourth	3.5	1.6	5.1	862
Highest	2.1	0.6	2.6	759
Total	3.2	1.4	4.7	3,679

FERTILITY REGULATION 5

This chapter considers a number of indicators from the 2009 JPFHS related to knowledge, attitudes, and use of family planning. This chapter also presents information on intended future use of contraception. Trends over time are examined by comparing the 2009 JPFHS findings with those of four earlier surveys: the 1990, 1997, 2002 and 2007 JPFHS.

5.1 KNOWLEDGE OF FAMILY PLANNING METHODS

Determining the level of knowledge of contraceptive methods was a major objective of the 2009 JPFHS because knowledge of specific methods is a precondition for using them. Information about women's knowledge of contraceptive methods was collected by asking the respondents an open-ended question about which contraceptive methods they had heard of. 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 mentioned spontaneously or recognized by the respondent after hearing a description of it were recorded as knowledge.

Information on knowledge was collected for 10 modern methods: the pill, IUD, injectables, implants, emergency contraception, lactational amenorrhea method (LAM), the male and female condom, and female and male sterilization. Two traditional methods were also included: periodic abstinence and withdrawal. In addition, provision was made in the questionnaire to record any other methods that respondents named without any prompting.

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.

The 2009 JPFHS results indicate that all ever-married women in Jordan know at least one method of family planning (Table 5.1). Among modern methods, the pill and IUD are the best known (100 percent), followed by male condom (93 percent), lactational amenorrhea method (LAM) (92 percent), injectables (88 percent), and female sterilization (87 percent of ever-married women). The least recognized methods were the female condom and emergency contraception, with 23 percent and 16 percent, respectively, of ever-married women having knowledge of these methods. Withdrawal is also known to most ever-married women (94 percent). On average, an ever-married woman knows about nine methods of family planning.

Table 5.1 Knowledge of contraceptive methods

Percentage of ever-married women and currently married women age 15-49 who know any contraceptive method, by specific method, Jordan 2009

Method	Ever-married women	Currently married women
Any method	99.8	99.9
Any modern method	99.8	99.9
Female sterilization	86.6	86.8
Male sterilization	26.2	26.6
Pill	99.5	99.5
IUD	99.5	99.6
Injectables	88.3	88.6
Implants	68.2	68.8
Male condom	93.2	93.6
Female condom	22.5	22.5
Lactational amenorrhea (LAM)	91.7	91.9
Emergency contraception	15.7	15.7
Any traditional method	96.2	96.4
Periodic abstinence	88.6	89.0
Withdrawal	93.7	93.9
Folk method	6.7	6.8
Mean number of methods known	8.8	8.8
Number of respondents	10,109	9,651

Knowledge of any family planning method or any modern method is universal in Jordan; therefore, almost no variation in knowledge of any method or any modern method of contraception is seen among subgroups by background characteristics (varying from 98 to 100 percent—data not shown).

5.2 EVER USE OF CONTRACEPTION

All ever-married women interviewed in the 2009 JPFHS who report having heard of a method of family planning were asked whether they had ever used the method. Table 5.2 shows that eight in ten ever-married women reported use of a contraceptive method at some time in their lives. Ever use among currently married women (83 percent) is almost the same as for ever-married women (82 percent). Modern methods have been used by 75 percent of currently married women. The IUD is the most popular method (48 percent) followed by the pill (41 percent). The percentage reporting ever use of other modern methods varies from 3 percent for female sterilization, 20 percent for lactational amenorrhea method (LAM), and 27 percent for male condoms. Less than one percent of currently married women have ever used the female condom, implants, male sterilization, or emergency contraception.

The level of ever use of traditional contraceptive methods is fairly high in Jordan. Withdrawal, the most frequently used traditional method, has been used by 36 percent of currently married women, followed by periodic abstinence (20 percent).

5.3 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 2009 JPFHS (Table 5.3) indicate that 59 percent of currently married women are using a contraceptive method: 42 percent using modern methods and 17 percent using traditional methods. The IUD is the most widely adopted modern method (23 percent), followed by the pill (8 percent), male condom (6 percent), female sterilization (3 percent), and LAM (2 percent). Less than 1 percent of women rely on other modern methods. Withdrawal (13 percent) and periodic abstinence (4 percent) are the most common traditional methods.

Overall, the level of current contraceptive use among currently married women has increased substantially in the last two decades, from 40 percent of women in the 1990 JPFHS to 53 percent in the 1997 JPFHS, to 56 percent in the 2002 JPFHS, to 57 percent in the 2007 JPFHS, and to 59 percent in the 2009 JPFHS (Figure 5.1). The relative increase in current use during the seven years before the 2009 survey is 5 percent for all methods and 2 percent for all modern methods.

Figure 5.1 **Current Use of Contraception among Currently Married Women, Various Surveys, 1990-2009**

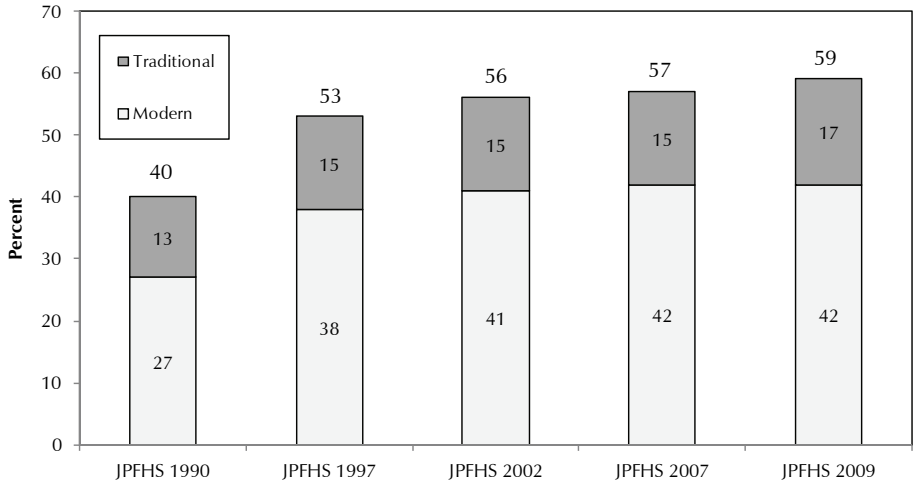


Table 5.2 Ever use of contraception: Women

Percentage of ever-married women and currently married women age 15-49 who have ever used any contraceptive method by method, according to age, Jordan 2009

			Modern method											Traditional method			
Age	Any method	Any modern method	Female sterilization	Male sterilization	Pill	IUD	Injectables	Implants	Male condom	Female condom	LAM	Emergency contraception	Any traditional method	Periodic abstinence	Withdrawal	Folk method	Number of women
EVER-MARRIED WOMEN																	
15-19	37.9	25.3	0.0	0.0	10.0	4.7	0.3	0.0	8.7	0.0	3.7	1.5	17.5	1.1	17.1	0.2	249
20-24	63.8	52.0	0.0	0.0	24.8	19.1	2.2	0.0	17.8	0.0	10.6	0.7	30.1	5.9	26.6	0.4	1,107
25-29	83.7	72.9	0.0	0.0	39.0	36.2	4.4	0.3	25.9	0.3	17.8	0.0	43.8	14.9	35.7	1.8	1,903
30-34	85.6	76.7	0.4	0.0	44.6	48.8	5.8	0.1	33.0	0.4	20.6	0.6	49.7	21.7	38.1	2.4	2,053
35-39	87.2	81.9	2.4	0.0	48.2	56.7	7.3	1.1	30.7	0.1	23.1	0.7	49.0	24.3	39.6	1.7	1,771
40-44	85.2	79.3	5.8	0.0	43.3	60.8	5.8	1.0	25.2	0.3	22.1	0.6	46.1	26.3	36.1	3.0	1,751
45-49	84.2	81.1	9.7	0.1	43.7	58.7	4.2	0.7	23.8	0.4	21.8	0.2	43.1	25.0	29.8	5.6	1,274
Total	81.7	73.9	2.8	0.0	40.8	46.8	5.1	0.5	26.5	0.3	19.4	0.5	44.1	19.8	34.7	2.4	10,109
CURRENTLY MARRIED WOMEN																	
15-19	39.0	26.0	0.0	0.0	10.3	4.9	0.4	0.0	9.0	0.0	3.9	1.6	18.0	1.2	17.5	0.2	242
20-24	65.0	52.9	0.0	0.0	25.3	19.6	2.2	0.0	17.8	0.0	10.9	0.7	30.7	6.0	27.1	0.4	1,078
25-29	84.7	73.9	0.0	0.0	39.5	36.7	4.5	0.3	26.0	0.3	17.9	0.0	44.2	15.0	36.2	1.8	1,860
30-34	86.8	77.7	0.5	0.0	45.2	49.8	5.9	0.1	33.3	0.3	20.9	0.6	51.0	22.3	39.1	2.4	2,000
35-39	87.9	82.9	2.5	0.0	49.0	57.2	7.3	1.1	31.2	0.1	23.5	0.7	49.2	24.6	39.7	1.7	1,704
40-44	86.9	80.6	6.1	0.0	44.3	63.1	5.4	1.0	25.8	0.3	22.7	0.2	48.4	27.3	37.9	3.2	1,628
45-49	85.6	82.7	8.9	0.1	44.5	61.4	4.0	0.7	24.5	0.4	20.7	0.2	43.9	26.2	29.8	5.6	1,139
Total	82.9	74.9	2.6	0.0	41.4	47.7	5.0	0.5	26.9	0.2	19.5	0.4	45.0	20.3	35.5	2.4	9,651

LAM = Lactational amenorrhea method

Table 5.3 Current use of contraception by age

Percent distribution of ever-married women and currently married women age 15-49 by contraceptive method currently used, according to age, Jordan 2009

			Modern method								Any tradi-	Traditional method					
Age	Any method	Any modern method	Female sterili- zation	Pill	IUD	Inject- ables	Implants	Male condom	Female condom	LAM	tional method	Periodic absti- nence	With- drawal	Folk method	Not currently using	Total	Number of women
EVER-MARRIED WOMEN																	
15-19	26.2	15.5	0.0	7.6	2.9	0.2	0.0	3.0	0.0	1.8	10.7	0.2	10.4	0.2	73.8	100.0	249
20-24	41.5	29.7	0.0	9.3	12.5	0.7	0.0	5.6	0.0	1.6	11.8	1.0	10.6	0.2	58.5	100.0	1,107
25-29	56.7	40.9	0.0	11.1	18.3	0.9	0.2	7.8	0.3	2.4	15.8	2.3	13.1	0.3	43.3	100.0	1,903
30-34	60.2	41.4	0.4	8.4	23.5	0.9	0.0	6.5	0.0	1.6	18.8	4.2	13.7	0.9	39.8	100.0	2,053
35-39	65.0	48.1	2.4	8.6	27.9	1.0	0.0	6.5	0.0	1.6	16.9	2.8	13.9	0.2	35.0	100.0	1,771
40-44	64.3	45.5	5.8	6.2	27.3	0.5	0.0	4.9	0.1	0.6	18.8	5.1	13.3	0.4	35.7	100.0	1,751
45-49	49.3	34.3	9.7	1.7	18.3	0.1	0.0	4.3	0.0	0.1	15.0	7.9	6.6	0.5	50.7	100.0	1,274
Total	56.8	40.4	2.8	7.8	21.6	0.7	0.1	6.0	0.1	1.4	16.5	3.8	12.2	0.4	43.2	100.0	10,109
CURRENTLY MARRIED WOMEN																	
15-19	27.0	15.9	0.0	7.8	3.0	0.2	0.0	3.0	0.0	1.9	11.0	0.2	10.7	0.2	73.0	100.0	242
20-24	42.6	30.5	0.0	9.5	12.9	0.7	0.0	5.8	0.0	1.6	12.1	1.1	10.9	0.2	57.4	100.0	1,078
25-29	58.0	41.8	0.0	11.3	18.7	0.9	0.2	7.9	0.3	2.5	16.2	2.4	13.4	0.3	42.0	100.0	1,860
30-34	61.8	42.5	0.5	8.7	24.1	0.9	0.0	6.7	0.0	1.7	19.3	4.3	14.1	0.9	38.2	100.0	2,000
35-39	67.6	50.0	2.5	9.0	29.0	1.1	0.0	6.8	0.0	1.7	17.6	2.9	14.4	0.2	32.4	100.0	1,704
40-44	69.0	48.7	6.1	6.7	29.3	0.5	0.0	5.3	0.1	0.7	20.2	5.5	14.3	0.5	31.0	100.0	1,628
45-49	53.2	36.4	8.9	1.9	20.5	0.1	0.0	4.9	0.0	0.1	16.8	8.8	7.4	0.6	46.8	100.0	1,139
Total	59.3	42.0	2.6	8.2	22.6	0.7	0.1	6.3	0.1	1.5	17.2	4.0	12.8	0.5	40.7	100.0	9,651

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhea method

There has been considerable change in the use of specific contraceptive methods between 1997 and 2009. Most noticeable is the increased use of the male condom, which rose from 2 percent in 1997 to 6 percent in 2009.

Contraceptive use differs according to age (Table 5.3). Among currently married women use is lowest among those age 15-19 (27 percent), peaks among women age 40-44 (69 percent), and then declines sharply among those age 45-49 (53 percent). Most women in the younger age cohorts use contraception for spacing births, relying on the pill and male condom, while older women use more permanent methods. Female sterilization, in particular, rises in popularity among women 35 years of age and older, with the prevalence of sterilization increasing from 3 percent among currently married women age 35-39, to 6 percent among women age 40-44, and 9 percent among women age 45-49. The use of IUDs is also very popular among older women.

Current use of contraceptive methods also differs by background characteristics (Table 5.4). The level of contraceptive use is seven percentage points higher among women living in urban areas (60 percent) than among women living in rural areas (53 percent). The percentage of women using modern methods in urban areas is 8 percentage points higher than the percentage of women using modern methods in rural areas (43 percent and 36 percent, respectively).

There are also regional variations in current use of family planning. The Central region (which includes the capital, Amman) has the highest level of any contraceptive use (61 percent), followed by the North region (58 percent) and the South region (54 percent). Differentials in the use of modern methods are similar to those for the use of any method. Current use of contraceptive methods also differs by governorates, ranging from one-half of women in Karak, to 60 percent in Irbid and 62 percent in Amman and Madaba. Currently married women in non-Badia areas are more likely to use any method of contraception than women in Badia areas (60 percent versus 51 percent).

There are also differences in current use of contraception between currently married women who have attended school and those with little or no education. Current use of contraception increases steadily with women's education; 32 percent of women with no education are currently using a method, and 61 percent of women with preparatory education or higher are currently using a contraceptive method. Moreover, it should be noted that use of the IUD increases with level of education, whereas use of female sterilization negatively correlates with level of education. The 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 attended school. 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 2 percent among currently married women with no children to 73 percent among women with five or more children (Table 5.4). As expected, contraceptive use also increases with the wealth quintile. Current use of any method or any modern method rose, from 54 percent for all methods among women in the lowest wealth quintile to 65 percent for women in the highest wealth quintile. There was a strong direct relationship between wealth and the level of IUD and male condom use. Women in the highest wealth quintile were almost two times more likely to use either the IUD or male condom than women in the lowest quintile. On the other hand, injectable and LAM use decreased with the wealth quintile.

Table 5.4 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Jordan 2009

Background characteristic	Any method	Any modern method	Modern method								Traditional method				Not currently using	Total	Number of women
			Female sterilization	Pill	IUD	Injectables	Implants	Male condom	Female condom	LAM	Any traditional method	Periodic abstinence	Withdrawal	Folk method			
Residence																	
Urban	60.4	43.3	2.5	8.2	23.8	0.7	0.1	6.6	0.1	1.4	17.1	4.1	12.6	0.4	39.6	100.0	8,102
Rural	53.2	35.5	3.1	8.1	16.3	1.1	0.0	4.9	0.0	2.0	17.7	3.1	14.1	0.5	46.8	100.0	1,549
Governorates																	
Amman	61.6	43.8	2.0	8.6	25.3	0.5	0.0	6.2	0.2	1.1	17.8	5.6	11.8	0.5	38.4	100.0	3,805
Balqa	58.0	41.7	2.2	8.2	21.9	1.1	0.1	6.1	0.0	2.1	16.2	5.2	10.9	0.1	42.0	100.0	597
Zarqa	58.2	43.9	2.4	6.9	23.9	0.7	0.1	7.2	0.1	2.6	14.3	2.8	10.8	0.7	41.8	100.0	1,411
Madaba	62.2	45.4	3.6	10.1	22.6	1.3	0.0	6.3	0.0	1.5	16.8	5.1	11.3	0.4	37.8	100.0	214
Irbid	59.5	42.1	3.8	8.8	21.2	0.6	0.1	6.7	0.0	0.8	17.4	2.2	14.7	0.5	40.5	100.0	1,831
Mafraq	53.7	33.2	2.1	7.0	14.6	1.9	0.0	5.5	0.0	2.1	20.5	3.2	17.3	0.0	46.3	100.0	434
Jarash	59.1	40.4	2.7	7.4	21.3	1.8	0.0	4.5	0.0	2.7	18.7	3.4	14.8	0.5	40.9	100.0	289
Ajloun	56.3	40.6	2.4	4.6	25.8	0.1	0.0	4.7	0.0	3.0	15.7	2.3	13.0	0.4	43.7	100.0	210
Karak	50.3	35.4	3.1	9.8	14.3	1.2	0.0	6.3	0.0	0.7	14.9	1.7	12.4	0.8	49.7	100.0	374
Tafiela	57.9	37.9	4.6	9.5	15.2	1.1	0.0	5.9	0.0	1.4	20.0	1.2	18.8	0.0	42.1	100.0	137
Ma'an	53.5	27.8	4.2	4.5	11.0	0.7	0.1	6.0	0.0	1.1	25.7	3.2	22.1	0.4	46.5	100.0	156
Aqaba	58.0	40.3	1.5	8.4	21.9	1.0	0.1	4.5	0.0	2.8	17.7	2.7	14.7	0.3	42.0	100.0	192
Region																	
Central	60.5	43.7	2.2	8.2	24.5	0.6	0.0	6.5	0.1	1.5	16.8	4.9	11.4	0.5	39.5	100.0	6,028
North	58.3	40.4	3.3	8.0	20.6	0.9	0.1	6.2	0.0	1.3	17.9	2.5	15.0	0.4	41.7	100.0	2,764
South	53.8	35.5	3.2	8.5	15.5	1.1	0.1	5.8	0.0	1.4	18.3	2.1	15.7	0.5	46.2	100.0	859
Badia area																	
Badia	50.6	32.6	2.5	7.7	13.2	1.6	0.1	5.2	0.1	2.2	18.0	3.4	14.3	0.3	49.4	100.0	808
Other	60.1	42.9	2.6	8.2	23.4	0.7	0.1	6.4	0.1	1.4	17.2	4.0	12.7	0.5	39.9	100.0	8,844
Education																	
No education	31.7	24.2	6.8	3.4	9.4	1.8	0.3	0.7	0.0	1.8	7.5	0.2	7.4	0.0	68.3	100.0	259
Elementary	50.3	33.7	5.5	4.5	18.2	1.2	0.0	1.8	0.0	2.5	16.6	2.7	13.7	0.1	49.7	100.0	646
Preparatory	61.5	46.4	5.2	9.5	22.3	0.6	0.1	6.8	0.0	2.0	15.1	2.1	11.6	1.4	38.5	100.0	1,485
Secondary	61.0	43.5	1.7	9.5	24.0	0.9	0.1	5.9	0.0	1.4	17.5	4.2	13.1	0.2	39.0	100.0	4,152
Higher	60.0	41.2	1.6	7.0	22.9	0.3	0.0	8.1	0.2	1.0	18.8	5.0	13.3	0.4	40.0	100.0	3,109
Number of living children																	
0	1.8	0.4	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	1.3	0.1	1.3	0.0	98.2	100.0	878
1-2	50.4	33.1	0.0	8.8	13.8	0.5	0.0	8.0	0.2	1.8	17.3	3.4	13.6	0.3	49.6	100.0	2,617
3-4	69.5	49.6	1.1	10.6	27.9	1.0	0.1	7.3	0.0	1.6	19.9	4.0	15.7	0.2	30.5	100.0	3,096
5+	73.0	53.9	7.1	7.5	31.3	0.9	0.0	5.6	0.0	1.5	19.1	5.5	12.6	1.0	27.0	100.0	3,059
Wealth quintile																	
Lowest	53.5	36.6	2.6	7.8	17.9	1.4	0.1	4.4	0.1	2.4	16.9	2.3	13.9	0.7	46.5	100.0	1,845
Second	58.0	42.7	2.5	8.9	22.3	1.0	0.1	6.2	0.0	1.7	15.3	2.0	12.9	0.4	42.0	100.0	2,034
Middle	58.7	41.1	2.9	7.6	20.5	0.6	0.0	7.8	0.0	1.6	17.6	2.9	14.4	0.3	41.3	100.0	2,033
Fourth	61.2	41.1	3.2	9.0	21.4	0.3	0.0	5.9	0.3	1.0	20.1	6.1	13.4	0.7	38.8	100.0	2,018
Highest	65.3	49.2	1.7	7.5	31.8	0.4	0.1	7.1	0.0	0.6	16.0	6.8	9.1	0.1	34.7	100.0	1,721
Total	59.3	42.0	2.6	8.2	22.6	0.7	0.1	6.3	0.1	1.5	17.2	4.0	12.8	0.5	40.7	100.0	9,651

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhea method

5.4 NUMBER OF CHILDREN AT FIRST USE OF CONTRACEPTION

Table 5.5 shows the number of living children at the time of first use of contraception by age among ever-married women. In general, the results show that the majority of women prefer to start using a contraceptive method after they have had one or two children (37 percent and 24 percent, respectively). In other words, 63 percent of women started using a method before having a third child. With the increasing adoption of family planning—particularly among younger women—the average parity of women at first use of contraception has been declining. Women are beginning to use family planning fairly early in the family building process. The proportion that started using contraception after marriage in order to delay the first birth has increased from less than 1 percent among women age 35-49 to 3 percent among those age 20-24. The proportion of women who started using contraception after the birth of the first child has increased sharply, from 22 percent among women 45-49, to about 45 percent of women age 20-24, and to more than half (55 percent) among women 25-29.

Table 5.5 Number of children at first use of contraception

Percent distribution of ever-married women age 15-49 by number of living children at the time of first use of contraception, according to current age, Jordan 2009

Current age	Never used	Number of living children at time of first use of contraception					Total	Number of women
		0	1	2	3	4+		
15-19	62.1	6.5	28.5	2.9	0.0	0.0	100.0	249
20-24	36.2	3.3	44.9	13.5	1.8	0.2	100.0	1,107
25-29	16.3	3.6	54.9	19.3	4.0	1.8	100.0	1,903
30-34	14.4	1.7	42.9	28.7	8.1	4.2	100.0	2,053
35-39	12.8	1.0	29.6	32.5	12.0	12.2	100.0	1,771
40-44	14.8	1.4	24.9	26.5	11.4	21.0	100.0	1,751
45-49	15.8	0.4	22.2	20.7	13.8	27.1	100.0	1,274
Total	18.3	2.0	37.0	23.9	8.4	10.4	100.0	10,109

5.5 TIMING OF FEMALE STERILIZATION

Use of female sterilization has remained stable between 2002 and 2009 (about 3 percent for both years), and it represents only 6 percent of the contraceptive use among users of modern methods in 2009. The age at which the operation takes place is of particular interest to family planning officials (Table 5.6). For 5 percent of women who have been sterilized, the operation took place before they were 30 years old; 23 percent were sterilized at 30-34 years, 54 percent at 35-39 years, and 18 percent at 40-49. Overall, women's age at sterilization has increased in Jordan by about one year between 2002 and 2009: the median age in 2002 was 35.4 years, compared with 36.5 years in 2009.

Table 5.6 Timing of sterilization

Percent distribution of sterilized women age 15-49 by age at the time of sterilization and median age at sterilization, according to the number of years since the operation, Jordan 2009

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	(0.0)	(0.0)	(11.0)	(52.0)	(16.3)	(20.8)	100.0	39	38.0
2-3	0.0	8.9	7.6	59.4	24.0	0.0	100.0	52	37.2
4-5	(0.0)	(0.0)	(16.7)	(65.1)	(18.2)	(0.0)	100.0	46	37.3
6-7	(0.0)	(1.2)	(7.6)	(52.3)	(38.9)	(0.0)	100.0	28	38.3
8-9	(0.0)	(5.4)	(33.7)	(54.5)	(6.3)	(0.0)	100.0	48	36.3
10+	3.3	5.4	46.6	44.7	0.0	0.0	100.0	66	a
Total	0.8	4.0	23.3	54.3	14.7	2.9	100.0	278	36.5

Note: Figures in parenthesis are based on 25-49 unweighted cases.
a = Not calculated due to censoring
[1] Median age at sterilization is calculated only for women sterilized before age 40 at less than 40 years of age to avoid problems of censoring.

5.6 SOURCE OF SUPPLY FOR MODERN METHODS

In addition to information about levels of contraceptive use, program officials need to know where users obtain their methods. In the 2009 JPFHS, women who reported using a modern contraceptive method at the time of the survey were asked where they obtained the method the last time they acquired it. Table 5.7 and Figure 5.2 show the distribution of current users by source. Overall, current family planning users were more likely to obtain their method from a private sector source than from a public source. Private sources serve more than half (54 percent) of current users, compared with 66 percent in the 2002 JPFHS and 58 percent in the 2007 survey. The Jordanian Association of Family Planning and Protection (JAFPP), private pharmacies, and private doctors are the major private sources of supply for modern contraceptive methods (Table 5.7 and Figure 5.2). The public sector's share increased to 46 percent in 2009, compared with 34 percent in the 2002 JPFHS and 42 percent in the 2007 survey. This increase may be due to a decline in use of JAFPP, from 20 percent in 2002 to 12 percent in 2009.

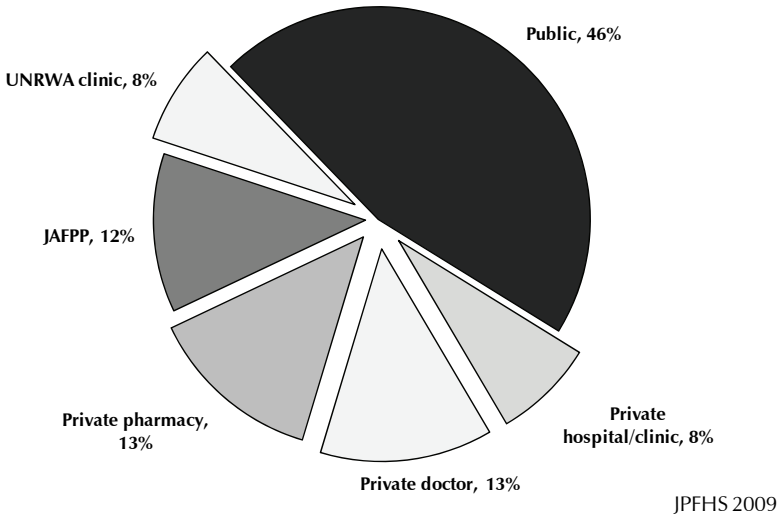
Table 5.7 Source of modern contraception methods

Percent distribution of women age 15-49 currently using a modern contraceptive method, by most recent source of method, according to method, Jordan 2009

Source	Female sterilization	Pill	IUD	Injectables	Male condom	Total[1]
Public	80.4	48.8	39.1	72.3	48.8	46.0
Public government hospital	62.5	1.3	2.5	5.5	0.1	6.2
Public government health center	0.0	28.2	13.0	35.9	23.4	17.1
Public MCH	0.0	18.2	21.4	30.6	22.8	19.6
University hospital	1.5	0.5	1.1	0.0	0.1	0.8
Royal medical services	16.3	0.5	1.0	0.4	2.4	2.2
Other public	0.0	0.0	0.2	0.0	0.0	0.1
Private medical	19.5	51.1	60.9	27.7	51.2	54.0
Private hospital/clinic	19.5	0.8	10.9	0.4	0.3	7.7
Private doctor	0.0	2.1	22.6	2.3	0.5	13.1
Private pharmacy	0.0	36.0	0.5	5.9	36.0	13.3
JAFPP	0.0	2.0	20.5	5.6	1.9	12.1
UNRWA clinic	0.0	10.1	6.3	13.5	12.5	7.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	278	789	2,180	71	609	3,940

[1] Total includes 5 users of implants and 7 users of the female condom but excludes users of the lactational amenorrhea method (LAM).

Figure 5.2 **Sources of Family Planning Methods among Current Users of Modern Methods, 2009**



JPFHS 2009

The sources of contraceptive methods vary by method used. Pharmacies are the primary source for users of methods that require resupply, including the pill and condoms (36 percent for each). Private doctors and family planning clinics (JAFPP) are the primary source for IUDs (23 percent and 21 percent, respectively). Government hospitals are the major source for most female sterilizations (63 percent), followed by private hospitals (20 percent) and Royal Medical Services (16 percent). Government health centers are the major source of injectables (36 percent), followed by public MCH (31 percent) and UNRWA clinics (14 percent).

5.7 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. Contraceptive discontinuation rates based on information collected in the calendar are presented in Table 5.8. Discontinuation rates were separately calculated for each method based on use of a method within 12 months after beginning the method. The reasons for discontinuation were examined and classified into four main categories: method failure (became pregnant while using), desire to become pregnant, switching to a more effective method, and other reasons (problems related to the use of a particular method, husband's disapproval, health reasons, cost, and absence of need to use a family planning method). Table 5.8 indicates that 8 percent of users stopped using a family planning method before the end of the first year because the method failed; 10 percent said they stopped because they wanted to become pregnant; 17 percent because they switched to a more effective method; and 11 percent for other reasons.[1]

Table 5.8 First-year contraceptive discontinuation rates

Percentage of contraceptive users who discontinued use of a method within 12 months after beginning its use, by reason for discontinuation and specific method, Jordan 2009

Method	Method failure	Desire to become pregnant	Switched to another method[1]	Other reason	Total
Pill	8.1	11.8	19.5	11.5	50.9
IUD	1.1	4.7	6.0	3.3	15.1
Injectables	1.6	5.8	32.4	24.5	64.3
Male condom	10.1	12.9	18.7	9.8	51.5
Lactational amenorrhea	6.7	10.3	40.9	41.1	99.1
Periodic abstinence	20.6	11.9	11.1	2.3	45.9
Withdrawal	12.8	11.3	11.5	4.2	39.8
Other	12.9	6.2	28.6	15.3	62.9
All methods	8.2	9.6	16.5	10.8	45.1
Number of episodes of use	845	978	1,713	1,114	4,650

Note: Table is based on episodes of contraceptive use that began 3-62 months prior to the survey.
[1] Used a different method in the month following discontinuation or said that they wanted a more effective method and started another method within two months of discontinuation.

Compared with the 2002 findings, the percentage of discontinuation due to method failure has decreased from 11 percent to 8 percent, while the percentages in the other three categories have all increased. The desire to become pregnant has increased from 9 percent to 10 percent, switched to another

[1] The rates are calculated from information collected in the calendar portion of the questionnaire. All episodes of contraceptive use between January 2004 and the date of interview are recorded in the calendar. Thus, discontinuation rates presented in this table refer only to episodes of contraceptive use that began during the period of time covered by the calendar, not all episodes that occurred during this period. Specifically, the rates presented in Table 5.8 refer to the period 3-62 months prior to the survey—the month of interview and the two months prior are not included in order to avoid the bias that may be introduced by unrecognized pregnancies.

method increased from 15 percent to 17 percent, and other reasons increased from 8 percent to 11 percent. Overall, more than two out of five women using a method of family planning (45 percent) stopped using that method within 12 months after beginning its use.

Table 5.8 also shows that discontinuation rates were highest for LAM (99 percent)—in part because, by definition, LAM can be used for a maximum of 6 months postpartum—followed by injectables (64 percent), the male condom (52 percent), pills (51 percent) and periodic abstinence (46 percent). The IUD had the lowest discontinuation rate (the most common method); only 15 percent of women discontinued the method during the first year of use, with 6 percent of those women switching to another method. Part of the reason the IUD has the lowest discontinuation rate may be because a woman has to seek the help of a medical professional to have it removed; she cannot stop using the method of her own volition. Method failure was most often mentioned as the reason for discontinuation during the first year of use for traditional methods, specifically periodic abstinence (21 percent) and withdrawal (13 percent). Discontinuation of a method in order to become pregnant was most often mentioned by those using the male condom (13 percent), periodic abstinence and the pill (12 percent each), withdrawal (11 percent), and LAM (10 percent).

Table 5.9 looks in greater detail at the reasons 2009 JFPHS respondents gave for discontinuing contraception use. The table shows the percent distribution of all discontinuations in the five-year period prior to the survey by the main reason for discontinuing, according to the specific method. More than one-third of all discontinuations during the five-year period before the 2009 JFPHS occurred because the user wanted to have a child (35 percent). Method failure accounted for 17 percent and the desire to use a more effective method accounted for 13 percent of all discontinuations. Other reasons women cited for discontinuation included side effects (12 percent), health concerns (9 percent), and inconvenience of use (2 percent). About 2 percent of currently married women report husband's disapproval of family planning as their reason for discontinuation.

Table 5.9 Reasons for discontinuation

Percent distribution of discontinuations of contraceptive methods in the five years preceding the survey by main reason reported for discontinuation, according to specific method, Jordan 2009

Reason	Pill	IUD	Injection	Condom	Lactation amen-orrhea	Periodic abstinence	Withdrawal	All methods[1]
Became pregnant while using	12.7	6.2	3.3	18.4	6.9	44.6	30.7	17.1
Wanted to become pregnant	34.4	46.2	16.3	37.4	10.0	32.5	40.1	34.7
Husband disapproved	0.5	0.9	0.2	11.0	0.3	0.6	3.2	2.3
Side effects	23.5	19.7	39.0	5.1	0.1	0.5	0.8	11.5
Health concerns	14.1	19.5	27.6	4.6	0.1	1.7	2.3	9.4
Access/availability	0.2	0.0	1.8	0.6	0.0	0.0	0.0	0.2
Wanted a more effective method	4.2	0.5	3.7	12.6	45.4	14.1	14.4	12.6
Inconvenient to use	2.9	2.3	1.8	2.0	4.2	1.3	0.9	2.3
Infrequent sex/husband away	5.9	2.1	2.4	6.7	0.4	1.7	5.8	4.0
Cost too much	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fatalistic	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1
Difficult to get pregnant/menopausal	0.2	0.6	0.2	0.2	0.0	2.3	0.6	0.5
Marital dissolution separation	0.3	0.6	1.7	1.0	0.0	0.0	0.5	0.5
Ramadan	0.0	0.2	0.2	0.0	0.2	0.0	0.0	0.1
Other	0.8	1.1	1.6	0.4	32.3	0.7	0.3	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of discontinuations	2,091	2,097	242	1,017	1,134	684	1,940	9,328

[1] Includes 1 user of implants, 2 users of female condom, and 121 users of other methods.
LAM = Lactational amenorrhea method

Method failure was most often mentioned as the reason for discontinuation of the traditional methods of periodic abstinence (45 percent) and withdrawal (31 percent). Among modern methods, method failure was also frequently a factor in discontinuation of male condoms (18 percent). Side effects were most frequently cited as the reason for discontinuation among women who had been using injectables (39 percent), the pill (24 percent), and IUD (20 percent).

5.8 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. Table 5.10 presents the distribution of currently married women who were not using contraception at the time of the survey, by their intention to use in the future, according to number of living children.

Table 5.10 Future use of contraception

Percent distribution of currently married women age 15-49 who are not using a contraceptive method by intention to use in the future, according to number of living children, Jordan 2009

	Number of living children[1]					
Intention	0	1	2	3	4+	Total
Intends to use	42.8	65.4	71.7	65.2	51.9	58.1
Unsure	10.5	6.0	3.7	3.6	2.1	4.6
Does not intend to use	46.6	28.6	24.6	31.2	46.0	37.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	636	650	649	630	1,367	3,931

[1] Includes current pregnancy

Among all currently married nonusers, 58 percent intended to use family planning in the future, 37 percent did not intend to use in the future, and the remaining nonusers were unsure of their intentions. There is no change between 2007 and 2009 in the percentage of nonusers who intended to use in the future, while in the 2002 JPFHS, the proportion of nonusers who intended to use a family planning method in the future was slightly higher (60 percent).

The intention to use contraception in the future appears to not have a strong positive association with the number of living children a woman has. Specifically, 65 percent of women with three children said they intend to use a method of family planning, compared with 43 percent of childless women and 52 percent of women with four or more children.

The reasons for nonuse are of particular interest to family planning program officials because they help to identify areas for potential interventions to support the adoption of contraception by nonusers. Table 5.11 presents the distribution of currently married nonusers who do not

Table 5.11 Reason for not intending to use contraception in the future

Percent distribution of currently married women age 15-49 who are not using contraception and who do not intend to use in the future by main reason for not intending to use, Jordan 2009

Reason	Percent distribution
Fertility-related reasons	
Infrequent sex	8.4
Menopausal, hysterectomy	11.7
Subfecund, infecund	18.8
Wants more children	25.4
Difficult to get pregnant	7.1
Opposition to use	
Respondent opposed	4.2
Husband opposed	2.4
Religious prohibition	0.9
Method-related reasons	
Health concerns	10.1
Fear side effects	7.3
Cost too much	0.1
Inconvenient to use	1.2
Interfere with body's normal process	0.5
Other	1.6
Don't know	0.4
Total	100.0
Number of women	1,467

intend to use in the future by the main reason they gave for not using. Seven in ten nonusers had various fertility-related reasons for not planning to adopt contraception. These reasons included a perceived lack of need for contraception because the woman wanted more children (25 percent), was subfecund or infecund (19 percent), was menopausal or had had a hysterectomy (12 percent), or had infrequent sexual relations (8 percent). Method-related reasons were cited by nonusers also; 10 percent had health concerns and 7 percent mentioned fear of side effects. In addition, 7 percent mentioned either their husband's or their own disapproval of contraception.

Currently married nonusers who planned to use contraception in the future were asked about the method they intend to use. The majority of women (80 percent) say they want to use a modern method of contraception, and 15 percent say they want to use a traditional method. About two-thirds of the nonusers intending to use contraception in the future expressed a preference for the IUD (45 percent) and the pill (23 percent).

Some programmatic implications can be drawn from the data in Table 5.12. Due to the popularity of the IUD, the pill, male condom, and female sterilization, several issues need to be considered in anticipation of women 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; and last, for women whose husbands desire to use condoms, they should be accessible at low prices.

Table 5.12 Preferred method of contraception for future use

Percent distribution of currently married women age 15-49 who are not using a contraceptive method but who intend to use in the future by preferred method, Jordan 2009

Method	Percent distribution
Female sterilization	1.8
Male sterilization	0.0
Pill	22.5
IUD	44.6
Injectables	3.1
Implants	1.6
Condom	5.8
Female condom	0.0
Lactation amenorrhea	0.6
Periodic abstinence	3.3
Withdrawal	11.3
Other	0.4
Unsure	4.9
Total	100.0
Number of women	2,284

NUPTIALITY AND EXPOSURE TO THE RISK OF PREGNANCY

6

This chapter addresses the principal factors, other than contraception, that affect a woman's risk of becoming pregnant: nuptiality, postpartum amenorrhea, and secondary infertility. In addition, data pertaining to the timing of respondents' most recent sexual activity were collected.

Information on nuptiality is of particular interest because marriage is a primary determinant of the exposure of women to the risk of pregnancy, particularly in countries like Jordan where premarital fertility is rare. Marriage patterns are important to fertility because an 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 formal, legal union.

6.1 CURRENT MARITAL STATUS

Table 6.1 compares data on ever-married women from the 2009 JPFHS with data from four previous surveys: the 1990, 1997, 2002, and 2007 JPFHS. Over a period of 12 years, between 1990 and 2002, the percentage of ever-married women decreased from 56 to 54 percent. However, between 2002 and 2007, the percentage of ever-married women increased from 54 to 57 percent and then to 59 percent in 2009. This increase is mainly concentrated among young women in the age groups 20-24, 25-29, and 30-34.

Table 6.1 Trends in the proportion of ever-married by age group

Percentage of women age 15-49 who have ever been married by age, according to various surveys, Jordan 1990-2009

Age	JPFHS 1990	JPFHS 1997	JPFHS 2002	JPFHS 2007	JPFHS 2009
15-19	10.6	8.2	6.2	5.8	6.8
20-24	45.2	38.8	34.1	36.7	37.0
25-29	73.7	66.2	65.3	69.3	71.5
30-34	89.1	80.7	79.6	79.4	81.9
35-39	94.6	89.9	87.3	85.4	84.7
40-44	97.3	94.4	92.6	91.6	89.8
45-49	98.0	96.0	95.4	95.9	91.5
Total 15-49	56.2	54.6	54.4	57.4	58.5

In Jordan, marriage is almost universal. In 2009, only 9 percent of women had not married by the end of their reproductive years (Table 6.2). However, the percentage of women who had never married has increased over the years. For example, 5 percent of women age 35-39 had never married in 1990; the proportion doubled in 1997 (10 percent), rose again to 13 percent in 2002, and reached 15 percent in 2007 and 2009 (Figure 6.1). The pattern is similar for women in the younger age groups. The proportion of never-married women age 20-24 increased from 55 percent in 1990 to 66 percent in 2002 but dropped to 63 percent in 2007 and 2009. Similarly, the proportion of never-married women age 25-29 increased from 26 percent in 1990 to 35 percent in 2002 and then dropped to 29 percent in 2009. Echoing this trend, the proportion of women age 15-19 who had never married increased from 89 to 94 percent between 1990 and 2007, and then slightly decreased in 2009 (93 percent). This change is the consequence of an increase of the age at first marriage among the youngest women during the period 1990-2002; since 2002, age at first marriage has remained almost unchanged.

Figure 6.1 **Percentage of Never-married Women Age 15-39 by Age Group, Various Surveys, 1990-2009**

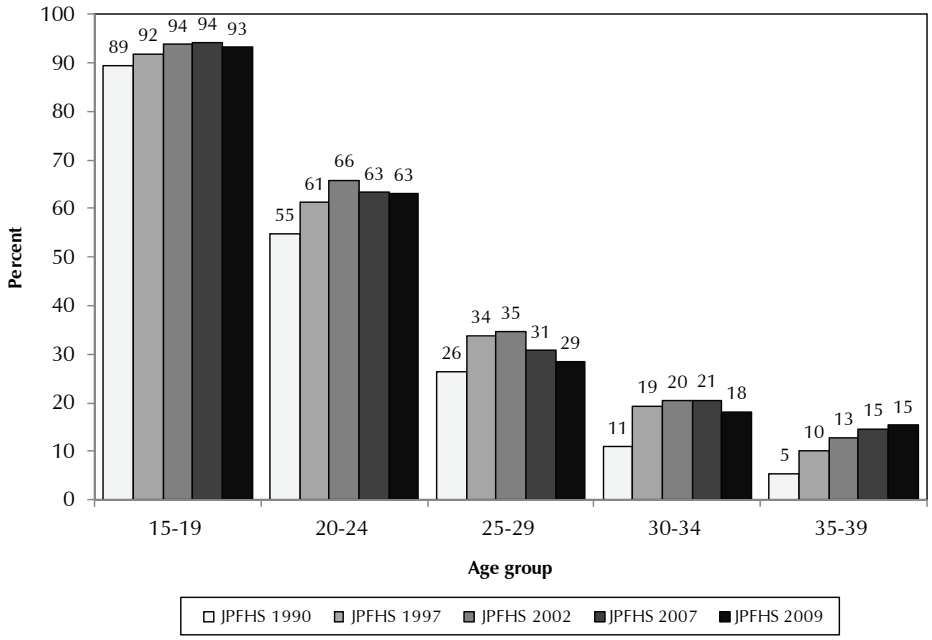


Table 6.2 Current marital status

Percent distribution of women age 15-49 by current marital status, according to age, Jordan 2009

Age	Marital status				Total	Number of women
	Never married	Married	Divorced	Widowed		
15-19	93.2	6.6	0.2	0.0	100.0	3,679
20-24	63.0	36.0	0.1	0.1	100.0	2,994
25-29	28.5	69.8	1.4	0.2	100.0	2,664
30-34	18.1	79.8	1.8	0.4	100.0	2,507
35-39	15.3	81.5	1.5	1.7	100.0	2,091
40-44	10.2	83.5	2.2	4.1	100.0	1,951
45-49	8.5	81.8	2.1	7.7	100.0	1,392
Total 15-49	41.5	55.9	1.3	1.4	100.0	17,278

Table 6.2 presents the distribution of women by current marital status. Of the 17,278 women age 15-49 listed in the household schedule, 42 percent had never married, 56 percent were currently married, and the remaining 3 percent were either divorced or widowed.

The proportion of women who are currently married increases steadily from 7 percent among women age 15-19, to 82 percent among those age 35-39, and then to 84 percent for women in the age group 40-44. As expected, the proportion of widows and divorced women (less than 2 percent each) increases with age; the proportion of widows increases from less than 1 percent among women age 15-34 to 8 percent among women 45-49.

6.2 POLYGYNY

Marital unions in Jordan 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 6.3.

Table 6.3 Number of co-wives

Percent distribution of currently married women age 15-49 by number of co-wives, according to background characteristics, Jordan 2009

Background characteristic	Number of co-wives		Total	Number of women
	0	1+		
Age				
15-19	99.6	0.4	100.0	242
20-24	98.6	1.4	100.0	1,078
25-29	97.0	3.0	100.0	1,860
30-34	95.7	4.3	100.0	2,000
35-39	93.5	6.5	100.0	1,704
40-44	93.0	7.0	100.0	1,628
45-49	89.8	10.2	100.0	1,139
Residence				
Urban	95.4	4.6	100.0	8,102
Rural	92.0	8.0	100.0	1,549
Governorates				
Amman	94.5	5.5	100.0	3,805
Balqa	94.3	5.7	100.0	597
Zarqa	95.2	4.8	100.0	1,411
Madaba	94.5	5.5	100.0	214
Irbid	96.8	3.2	100.0	1,831
Mafraq	92.3	7.7	100.0	434
Jarash	93.8	6.2	100.0	289
Ajloun	95.6	4.4	100.0	210
Karak	94.5	5.5	100.0	374
Tafiela	94.7	5.3	100.0	137
Ma'an	91.0	9.0	100.0	156
Aqaba	92.9	7.1	100.0	192
Region				
Central	94.6	5.4	100.0	6,028
North	95.7	4.3	100.0	2,764
South	93.5	6.5	100.0	859
Badia area				
Badia	88.1	11.9	100.0	808
Other	95.5	4.5	100.0	8,844
Education				
No education	79.2	20.8	100.0	259
Elementary	89.3	10.7	100.0	646
Preparatory	93.9	6.1	100.0	1,485
Secondary	95.9	4.1	100.0	4,152
Higher	96.4	3.6	100.0	3,109
Wealth quintile				
Lowest	90.7	9.3	100.0	1,845
Second	95.4	4.6	100.0	2,034
Middle	96.2	3.8	100.0	2,033
Fourth	96.6	3.4	100.0	2,018
Highest	95.0	5.0	100.0	1,721
Total	94.8	5.2	100.0	9,651

Overall, 5 percent of currently married women are in a polygynous union compared with 7 percent in 2002. More older women are in a polygynous union than younger women (8 percent of women age 40-49 compared with 1 percent of women age 15-24). The prevalence of polygyny is also higher in rural areas (8 percent versus 5 percent in urban areas). There are significant differences in type of marital

union by region and governorate (3 percent in Irbid, 7 percent in Aqaba, and 9 percent in Ma'an). In Badia areas, 12 percent of married women are in a polygynous union compared with 5 percent of married women in non-Badia areas. There are also large differences in polygynous union by household wealth quintile. The proportion of polygynous unions among women in the lowest wealth quintile is higher (9 percent) than among women in the highest wealth quintile (5 percent), showing an inverse relationship between polygyny and household wealth.

A similar inverse relationship is seen between polygyny and education. Among married women with no education, the proportion in a polygynous union is 21 percent; this decreases to 6 percent among women with preparatory education and to 4 percent among women with a secondary or higher education.

6.3 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. In Jordan, the minimum age at marriage for both sexes is 18 years.

Table 6.4 shows the percentages of women who have married by specific exact ages and the median age at first marriage, according to current age. Across age groups, the data indicate an increase in women's age at first marriage. For example, among women age 20-24, about 1 percent were married by age 15, 10 percent by age 18, and 23 percent by age 20. This same pattern is true for women age 25-29. Among women older than 29, however, the percentages of women who were married at each specific age increases; 5 percent of women age 45-49 were married by age 15 compared with less than 2 percent of women age 30-34. This holds for all other exact ages at first marriage.

Table 6.4 Age at first marriage

Percentage of women age 15-49 who were first married by specific exact ages and median age at first marriage, according to current age, Jordan 2009

	Percentage first married by exact age:					Percentage never		Median age at first
Current age	15	18	20	22	25	married	Number	marriage
15-19	0.6	na	na	na	na	93.2	3,679	a
20-24	0.7	10.2	22.6	na	na	63.0	2,994	a
25-29	0.8	10.8	23.6	39.0	61.1	28.5	2,664	23.3
30-34	1.6	13.1	28.3	44.4	62.9	18.1	2,507	22.7
35-39	1.6	15.1	33.4	49.6	67.0	15.3	2,091	22.1
40-44	3.1	19.2	34.4	49.1	69.5	10.2	1,951	22.1
45-49	4.8	28.2	45.2	58.3	72.5	8.5	1,392	20.7
20-49	1.8	14.7	29.5	na	na	27.5	13,599	a
25-49	2.1	16.0	31.5	46.7	65.7	17.5	10,605	22.4

Note: The age at first marriage is defined as the age at which the respondent began living with her first spouse.
na = Not applicable due to censoring
a = Omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

The last column in Table 6.4 provides further indications of later marriage among younger women. The median age at first marriage has steadily increased, from 20.7 years among women currently age 45-49 to 23.3 years among women currently age 25-29. The trend toward later marriage is supported, as mentioned previously, by data showing that the proportion of women who are married by age 15 has declined from 5 percent among women age 45-49 to less than 1 percent among women age 15-19. Among Jordanian women age 25-49, 16 percent of women were married by age 18, and one in three was married by age 20. Although the median age at first marriage increased significantly between 1990 and 2002

(from 19.6 to 21.8 years), there was only a slight change between 2002 and 2009 (from 21.8 to 22.4 years).

Differences in median age at first marriage by region are very minor, yet variations by governorates are significant. Median age at first marriage varies from 21.7 years in Zarqa to 23.6 years in Karak. Education plays an important role in determining a woman's age at marriage (Table 6.5). The improvement of educational opportunities, particularly for girls, has increased their age at first marriage. The median age at first marriage among women with a higher than secondary education is 24.7 years, 5 years higher than the median age among women who have never attended school (20.2 years) or who have completed elementary (19.9) and preparatory levels (18.9). The table also shows that women in the highest wealth quintile tend to get married at older ages than those in other wealth quintiles (23.3 years in the highest wealth quintile versus 21.9 years in the lowest wealth quintile).

Table 6.5 Median age at first marriage

Median age at first marriage among women by five-year age groups, age 25-49, according to background characteristics, Jordan 2009

Background characteristic	Age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	23.2	22.7	22.1	22.2	20.9	22.4
Rural	23.5	23.3	22.1	21.7	19.4	22.4
Governorates						
Amman	23.3	23.0	22.3	22.0	20.9	22.5
Balqa	23.9	23.7	22.9	22.3	20.3	22.8
Zarqa	22.5	20.8	21.9	22.2	19.9	21.7
Madaba	a	23.6	22.8	22.1	20.4	22.9
Irbid	23.5	22.7	21.9	22.5	21.2	22.6
Mafraq	22.4	23.1	21.7	21.0	19.0	21.8
Jarash	23.5	22.3	21.4	22.4	19.4	22.3
Ajloun	24.2	22.4	21.4	21.5	20.9	22.1
Karak	23.6	25.3	22.5	23.0	22.2	23.6
Tafiela	23.0	23.0	22.1	21.4	19.1	22.4
Ma'an	23.2	21.9	21.2	20.3	19.6	21.8
Aqaba	22.9	21.6	21.3	21.3	21.1	21.8
Region						
Central	23.2	22.7	22.3	22.1	20.6	22.4
North	23.4	22.7	21.7	22.2	20.8	22.4
South	23.3	23.8	21.9	22.0	20.8	22.7
Badia area						
Badia	23.5	21.8	21.3	20.3	19.8	21.6
Other	23.3	22.8	22.1	22.2	20.8	22.5
Education						
No education	22.8	21.7	21.3	21.8	18.9	20.2
Elementary	21.0	21.4	19.8	18.8	18.8	19.9
Preparatory	19.5	19.6	19.0	19.4	17.2	18.9
Secondary	21.5	21.6	21.6	21.1	20.1	21.4
Higher	a	24.5	24.1	24.6	24.0	24.7
Wealth quintile						
Lowest	22.7	21.9	21.3	22.6	20.1	21.9
Second	22.6	21.8	21.5	21.6	19.2	21.8
Middle	23.0	22.0	22.0	21.1	20.6	22.2
Fourth	22.9	24.3	22.5	22.4	20.8	22.6
Highest	a	23.7	22.7	22.9	21.9	23.3
Total	23.3	22.7	22.1	22.1	20.7	22.4

Note: The age at first marriage is defined as the age at which the respondent began living with her first spouse
a = Omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

6.4 RECENT SEXUAL ACTIVITY

In the absence of effective contraception, the probability of becoming pregnant is related to the frequency of sexual intercourse. Information on sexual activity can, therefore, be used to refine measures of exposure to pregnancy. Currently married women were asked about the timing of their most recent sexual intercourse. This information is presented in Table 6.6. Overall, about nine in ten women stated that their most recent sexual intercourse was within the four weeks prior to the day of interview, 9 percent within the year preceding the survey, and 1 percent one or more years before the survey.

Table 6.6 shows a negative relationship between recent sexual intercourse (in the four weeks preceding the interview) and age and duration of marriage. Younger women tend to have had recent sexual intercourse with their husbands more frequently than other women (97 percent for the age group 15-19 years versus 83 percent for the age group 45-49 years). No significant differences in the frequency of recent sexual intercourse were noticed according to urban-rural residence, region, governorate, or Badia areas. However, users of contraception were more likely than nonusers to have had sexual intercourse with their husbands during the four weeks prior to the interview (at least 91 percent versus 81 percent).

Women with no education and women in the higher wealth quintile tend to have recent sexual intercourse with their husbands less frequently than other women.

Table 6.6 Recent sexual activity

Percent distribution of currently married women age 15-49 by timing of last sexual intercourse, according to background characteristics, Jordan 2009

Background characteristic	Timing of last sexual intercourse: Within the last 4 weeks	Within 1 year[1]	One or more years	Missing	Total	Number of women
Age						
15-19	97.3	2.6	0.1	0.0	100.0	242
20-24	91.5	7.1	0.6	0.8	100.0	1,078
25-29	88.8	9.8	0.1	1.3	100.0	1,860
30-34	88.9	9.0	1.3	0.8	100.0	2,000
35-39	89.5	7.9	1.2	1.3	100.0	1,704
40-44	89.4	7.6	1.4	1.6	100.0	1,628
45-49	83.0	11.1	4.4	1.6	100.0	1,139
Marital duration						
0-4 years	89.4	9.4	0.3	0.9	100.0	2,076
5-9 years	89.5	8.2	1.1	1.2	100.0	1,977
10-14 years	89.8	8.1	0.6	1.5	100.0	1,581
15-19 years	89.6	7.4	1.6	1.4	100.0	1,623
20-24 years	86.6	9.8	2.0	1.6	100.0	1,155
25+ years	87.4	8.3	3.5	0.8	100.0	990
Married more than once	86.5	10.7	2.7	0.2	100.0	248
Current contraceptive method						
Not using	81.4	14.4	3.0	1.2	100.0	3,931
Pill	97.1	2.5	0.0	0.4	100.0	789
IUD	92.5	6.0	0.2	1.4	100.0	2,180
Condom	95.3	4.2	0.0	0.6	100.0	609
Female sterilization	91.4	6.0	2.1	0.5	100.0	253
Periodic abstinence	93.3	4.9	0.0	1.8	100.0	381
Withdrawal	95.9	2.3	0.0	1.8	100.0	1,238
Lactational amenorrhea	91.9	7.6	0.0	0.5	100.0	142
Other	87.5	12.5	0.0	0.0	100.0	120
Residence						
Urban	88.7	8.7	1.3	1.2	100.0	8,102
Rural	89.6	8.0	1.3	1.0	100.0	1,549
Governorates						
Amman	87.7	9.8	1.1	1.3	100.0	3,805
Balqa	87.5	9.7	2.0	0.8	100.0	597
Zarqa	90.5	7.6	1.6	0.4	100.0	1,411
Madaba	92.1	6.7	1.0	0.1	100.0	214
Irbid	88.9	7.6	1.5	2.0	100.0	1,831
Mafraq	89.1	8.6	0.9	1.3	100.0	434
Jarash	91.6	6.1	1.2	1.1	100.0	289
Ajloun	91.4	6.6	1.0	1.0	100.0	210
Karak	88.0	9.8	1.4	0.8	100.0	374
Tafiela	92.7	5.7	0.9	0.6	100.0	137
Ma'an	92.3	5.8	1.0	0.9	100.0	156
Aqaba	90.1	6.8	1.3	1.7	100.0	192
Region						
Central	88.5	9.2	1.3	1.0	100.0	6,028
North	89.4	7.5	1.4	1.7	100.0	2,764
South	90.0	7.7	1.3	1.0	100.0	859
Badia area						
Badia	87.9	9.7	1.5	1.0	100.0	808
Other	89.0	8.5	1.3	1.2	100.0	8,844
Education						
No education	77.0	13.1	9.2	0.7	100.0	259
Elementary	88.0	8.9	2.9	0.2	100.0	646
Preparatory	89.0	9.5	1.1	0.4	100.0	1,485
Secondary	90.7	7.3	1.0	1.0	100.0	4,152
Higher	87.5	9.4	1.0	2.1	100.0	3,109
Wealth quintile						
Lowest	89.0	8.3	2.1	0.6	100.0	1,845
Second	90.7	7.6	1.0	0.7	100.0	2,034
Middle	91.9	6.1	0.8	1.2	100.0	2,033
Fourth	87.9	9.6	1.7	0.9	100.0	2,018
Highest	84.3	11.7	1.2	2.8	100.0	1,721
Total	88.9	8.6	1.3	1.2	100.0	9,651

[1] Excludes women who had sexual intercourse within the last 4 weeks.

6.5 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 during the period before the resumption of sexual activity (postpartum abstinence). 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. Because breastfeeding is an important issue in childhood nutrition, only postpartum amenorrhea and postpartum abstinence are considered in this section. Women are considered to be insusceptible when they are not exposed to the risk of pregnancy, either because they are amenorrheic or because they are abstaining from sexual activity following 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 6.7 presents the proportion of births in the 36 months preceding the survey for which mothers are amenorrheic, abstaining, and insusceptible. Thirteen percent of mothers had not experienced the return of menstruation, and 5 percent had not resumed sexual relations following their last birth. Combining the two conditions indicates that for 14 percent of births, mothers were still insusceptible to the risk of pregnancy. The mean duration of amenorrhea is about six months; the mean duration of abstinence is about two months.

Table 6.7 Postpartum amenorrhea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrheic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Jordan 2009

Months since birth	Percentage of births for which the mother is:			Number of births
	Amenorrheic	Abstaining	Insusceptible[1]	
< 2	97.1	87.2	98.0	254
2-3	54.3	9.5	57.8	283
4-5	31.4	1.5	32.0	280
6-7	26.2	0.3	26.3	320
8-9	16.8	0.1	16.9	257
10-11	12.1	0.3	12.5	348
12-13	9.7	0.7	9.8	332
14-15	5.6	0.2	5.8	334
16-17	5.0	0.3	5.3	323
18-19	3.5	0.1	3.6	314
20-21	0.9	0.3	1.2	288
22-23	1.1	0.0	1.1	298
24-25	0.2	0.6	0.7	337
26-27	1.2	0.2	1.3	341
28-29	0.0	0.2	0.2	356
30-31	0.0	0.1	0.1	315
32-33	0.2	0.0	0.2	304
34-35	0.6	0.1	0.7	320
Total	13.4	4.7	13.8	5,603
Median	3.4	1.9	3.5	na
Mean	5.6	2.3	5.7	na

Note: Estimates are based on status at the time of the survey.
na = Not applicable
[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth

For 97 percent of births, mothers were still amenorrheic up to two months following childbirth. The percentage drops to 54 between two and three months after birth, and drops further to 31 percent in months four and five. 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 2009 JPFHS data. Mothers of 87 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, 10 percent of mothers were still abstaining, with the percentage declining to less than 2 percent in subsequent months.

Table 6.8 presents the median duration of postpartum amenorrhea (3.4 months), postpartum abstinence (1.9 months), and postpartum insusceptibility (3.5 months). There is no clear pattern for the three medians by background characteristics. For example, the duration of postpartum amenorrhea and, consequently, insusceptibility substantially vary by level of education, without following a clear pattern: the median duration of amenorrhea among women with no education (5.1 months) is about twice the median among women with elementary education (2.2 months). The table also shows no significant variations in these three medians according to age of the mother, place of residence, and Badia areas. However, women in Balqa, Madaba, Mafraq, Karak, and Aqaba governorates tend to have the shortest median duration of postpartum amenorrhea, postpartum abstinence, and insusceptibility.

Table 6.8 Median duration of postpartum amenorrhea, postpartum abstinence and postpartum insusceptibility

Median number of months of postpartum amenorrhea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey, by background characteristics, Jordan 2009

Background characteristic	Postpartum amenorrhea	Postpartum abstinence	Postpartum insusceptibility[1]
Mother's age			
15-29	3.3	1.9	3.3
30-49	3.5	1.9	3.7
Residence			
Urban	3.3	1.9	3.5
Rural	3.4	1.8	3.5
Governorates			
Amman	3.3	2.0	3.5
Balqa	2.9	1.9	2.9
Zarqa	3.3	1.8	3.3
Madaba	2.5	1.8	2.8
Irbid	4.1	2.1	4.1
Mafraq	2.5	1.9	2.8
Jarash	3.5	1.5	3.6
Ajloun	4.1	1.7	4.1
Karak	2.4	1.6	2.5
Tafiela	3.6	1.8	3.7
Ma'an	4.3	1.8	4.4
Aqaba	2.7	1.7	2.7
Region			
Central	3.2	1.9	3.4
North	3.8	1.9	3.8
South	3.1	1.7	3.2
Badia area			
Badia	3.4	2.0	3.5
Other	3.3	1.9	3.5
Education			
No education	5.1	2.2	5.1
Elementary	2.2	1.3	2.3
Preparatory	3.3	1.6	3.8
Secondary	3.4	1.9	3.4
Higher	3.3	2.0	3.4
Wealth quintile			
Lowest	3.5	1.8	3.6
Second	3.5	1.9	3.6
Middle	3.5	2.0	3.7
Fourth	2.4	1.8	2.6
Highest	3.8	2.2	3.8
Total	3.4	1.9	3.5

Note: Medians are based on the status at the time of the survey (current status)
[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth

6.6 MENOPAUSE

This section addresses menopause (i.e., termination of exposure to pregnancy and childbearing) for women age 30-49. Exposure to pregnancy is affected by the terminal amenorrhea of older women. Table 6.9 shows the percentage of women age 30-49 who are menopausal. For the purpose of this survey, lack of a menstrual period in the six months preceding the survey among women who are neither pregnant nor postpartum amenorrheic is taken as evidence of menopause, and therefore infecundity.

Table 6.9 shows few cases of menopausal women under the age of 40. Beyond this age, the percentage of menopausal women increases with age. The proportion rises from about 2 percent among women age 40-43 to 11 percent among those age 46-47, and then further to more than one-fifth for women ages 48-49 (22 percent).

Table 6.9 Menopause

Percentage of women age 30-49 who are menopausal, by age, Jordan 2009

Age	Percentage menopausal[1]	Number of women
30-34	0.8	2,053
35-39	0.7	1,771
40-41	2.8	770
42-43	1.9	670
44-45	8.8	581
46-47	11.0	592
48-49	21.8	412
Total	4.0	6,850

[1] Percentage of all women who are not pregnant and not postpartum amenorrheic whose last menstrual period occurred six or more months preceding the survey.

FERTILITY PREFERENCES 7

This chapter addresses questions about the need for contraception and the extent of unwanted fertility. The 2009 JPFHS collected information from respondents on whether they wanted 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 to have 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. It has been suggested that the answers that 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, given that 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.

7.1 DESIRE FOR CHILDREN

Women's preferences concerning future childbearing serve as indicators of future fertility. The data on fertility preference also provide information on the potential need for contraceptive services for spacing and limiting births. 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.

Table 7.1 and Figure 7.1 show that half (47 percent) of currently married women want no more children at any time in the future, including the 3 percent of women who are sterilized. These figures show a decrease of about three percentage points since the 2002 JPFHS (44 percent). The findings also show that about 28 percent of currently married women want to have another child later (after two or more years); a three percentage point decrease since the 2002 JPFHS (31 percent). In general, about 72 percent of currently married women in Jordan have a potential need for family planning services for limiting or spacing their births. This figure is the same as what was recorded in the 2002 JPFHS.

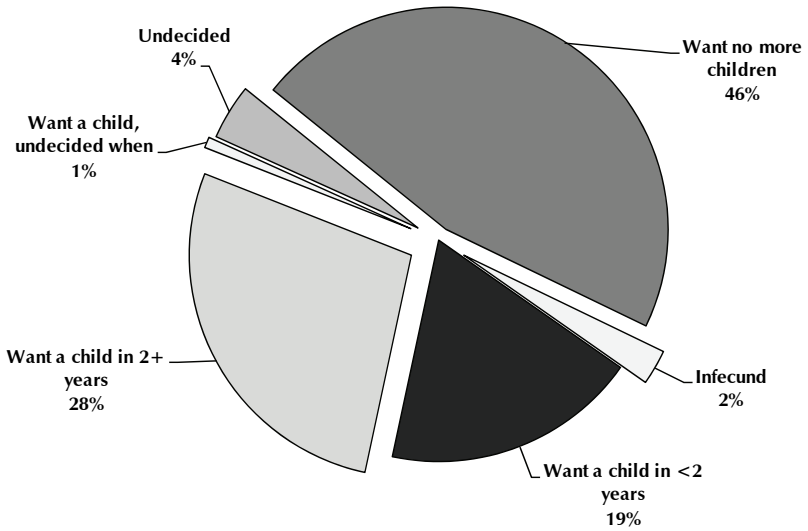
Table 7.1 Fertility preferences by number of living children

Percent distribution of currently married women age 15-49 by desire for children, according to number of living children, Jordan 2009

Desire for children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Have another soon[2]	86.3	36.2	20.3	15.5	10.1	7.2	3.3	18.9
Have another later[3]	2.0	52.3	56.5	37.6	22.6	13.0	3.7	27.5
Have another, undecided when	0.7	1.3	1.4	0.6	1.0	0.6	0.1	0.8
Undecided	0.5	4.6	3.9	7.5	4.8	2.8	2.8	4.1
Want no more	2.7	4.7	17.0	36.4	58.9	71.4	79.8	44.4
Sterilized	0.0	0.0	0.0	0.6	1.7	3.9	8.8	2.6
Declared infecund	7.9	0.9	0.8	1.8	0.8	1.0	1.4	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	651	1,032	1,586	1,648	1,549	1,267	1,917	9,651

[1] The number of living children includes current pregnancy.
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years

Figure 7.1 **Fertility Preferences of Currently Married Women 15-49, 2009**



JPFHS 2009

The desire for childbearing is strongly associated with the number of children that a woman already has. Eighty-eight percent of the women who had not started childbearing by the time of the survey want to have a child, and the majority of them (86 percent) want to have this child soon, that is, within the next two years. About 89 percent of women who have one child want to have another, but the majority (52 percent) wants to wait for at least two years before having the next child. Among those who have more than one child, the desire to stop childbearing increases rapidly with the number of children they have—from 17 percent among women who have two children to 89 percent among those with six children or more (including 9 percent who are sterilized). About 8 percent of childless women declared themselves infecund, as a result of either actual or perceived sterility. This percentage is similar to that recorded in the 2002 JPFHS.

Differentials in the desire to stop childbearing are presented in Table 7.2. In general, women living in urban areas are slightly more likely to want to stop childbearing than rural women. Women in the Central region (49 percent) are more likely to want to stop childbearing than those women in the North and South regions (44 percent and 43 percent, respectively). This preference also varies according

to governorates (ranging from 40 percent in Ma'an to 50 percent in Amman) and according to residence in Badia areas. Thirty-nine percent of women living in Badia areas want no more children compared to 48 percent of women living in other areas. The same pattern is seen when the data are analyzed on the basis of the number of living children that a woman has.

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 68 percent among uneducated women to 40 percent among women who have more than secondary education. The relationship between a woman's educational status and her 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.

Table 7.2 Desire to limit childbearing

Percentage of currently married women age 15-49 who want no more children, by number of living children, according to background characteristics, Jordan 2009

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	3.2	5.0	17.7	39.2	62.7	76.0	88.8	47.6
Rural	0.0	3.3	12.5	23.2	47.2	70.9	87.8	43.7
Governorates								
Amman	4.5	5.0	21.8	39.4	65.4	81.8	93.4	49.7
Balqa	0.0	6.5	17.9	34.4	68.1	78.3	88.6	48.9
Zarqa	2.6	5.2	14.2	43.4	62.1	73.3	87.2	46.9
Madaba	0.0	3.4	18.8	36.8	55.9	68.1	89.7	48.5
Irbid	1.8	6.4	11.2	36.4	59.7	67.7	84.8	45.5
Mafraq	0.0	1.9	7.5	24.3	38.4	69.0	84.6	40.5
Jarash	2.0	1.8	8.1	23.7	38.8	58.8	84.1	40.9
Ajloun	2.1	2.2	11.6	21.6	35.6	65.5	86.6	42.0
Karak	1.5	2.3	21.0	29.3	59.2	81.4	88.3	44.1
Tafiela	0.0	0.0	8.2	25.2	50.6	81.4	88.0	42.3
Ma'an	0.0	1.2	8.0	26.4	52.6	62.2	87.1	40.2
Aqaba	0.0	3.9	18.7	33.6	56.6	70.7	80.4	45.4
Region								
Central	3.4	5.2	19.8	39.7	64.4	78.9	91.3	48.9
North	1.5	4.7	10.3	32.8	52.4	66.8	84.8	44.0
South	0.7	2.0	15.8	29.1	56.4	75.3	86.2	43.4
Badia area								
Badia	1.6	1.8	7.6	18.9	39.7	62.9	84.6	38.5
Other	2.8	5.0	17.8	38.4	62.4	76.4	89.0	47.8
Education								
No education	0.0	8.6	22.3	59.5	72.5	85.3	92.6	67.9
Elementary	4.1	17.7	15.2	42.1	53.6	63.1	87.9	57.3
Preparatory	2.3	7.5	25.9	35.9	52.5	80.2	89.2	59.1
Secondary	0.1	2.3	13.6	34.2	62.6	75.1	86.8	44.7
Higher	5.2	4.6	18.3	39.9	60.5	74.0	90.4	40.4
Wealth quintile								
Lowest	0.5	3.9	11.7	32.0	50.5	64.4	84.6	44.0
Second	2.7	2.4	10.6	26.8	52.3	67.8	86.5	40.7
Middle	0.0	5.6	19.5	32.2	55.7	73.9	91.8	46.4
Fourth	9.1	4.4	13.5	39.4	69.3	85.7	89.7	50.5
Highest	0.0	8.0	30.3	50.5	72.6	81.9	93.9	54.1
Total	2.7	4.7	17.0	37.0	60.5	75.3	88.6	47.0

Note: Women who have been sterilized are considered to want no more children.
[1] The number of living children includes the current pregnancy.

The data presented in Table 7.2 also show a positive association between a woman's desire to stop childbearing and household wealth quintile. The percentage of women who want no more children increases as the wealth quintile increases (from 41 percent of women in the second quintile to 54 percent of women in the highest quintile). This pattern is also seen when analyzing data on the basis of number of living children.

7.2 NEED FOR FAMILY PLANNING SERVICES

Information on fertility preferences 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. A more detailed analysis of unmet need for family planning is needed. In this analysis, unmet need for family planning is divided into *unmet need for spacing* (want to wait 2 years or more for their next child) and *unmet need for limiting* (want no more children), which include the following:

- *Unmet need for spacing:* Currently married women who are fecund and not using family planning and who say they want to wait two or more years for their next birth, or who say they are unsure whether they want another child, or who want another child but are unsure when to have the child. Women in this group also include (a) pregnant women whose current pregnancy was mistimed, or whose last pregnancy was unwanted but who now say they want more children; and (b) amenorrheic women whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children.

- *Unmet need for limiting:* Currently married women who are fecund and not using family planning and who say they do not want another child. Women in this group also include (a) pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided about whether they want another child; and (b) amenorrheic women whose last birth was unwanted but who now say they do not want more children or who are undecided about whether they want another child.

Table 7.3 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 with a *met need for family planning*, that is, women who are currently using a family planning method for spacing or for limiting births. The *total demand for family planning* is shown in columns 7-9. Total demand is defined as the total number of women who have unmet need plus those women whose need has been met (current users).[1] Column 10 of Table 7.3 shows the percentage of the total demand for family planning that is satisfied.

Data in Table 7.3 indicate that 11 percent of currently married women in Jordan have an unmet need for family planning. The percentage is split between a need for spacing births (5 percent) and a need for limiting births (6 percent). Total unmet need in the 2009 JPFHS is similar to that recorded in 2002, when 11 percent of women had an unmet contraceptive need.

Fifty-nine percent of women have a met need for contraception; in other words, they are currently using a method. Twenty-five percent of women are using contraception to delay their next birth, while 34 percent want to stop childbearing. When the proportion of women with a met need is combined with the proportion of women who are considered to have an unmet need, it is found that the total demand for family planning among currently married women in Jordan is 73 percent, of whom 85 percent have had their demand for family planning satisfied. Comparison with findings from the 2002 JPFHS shows that the level of unmet need for family planning has not changed, even though it declined by 50 percent between 1990 and 2002 (from 22 percent to 11 percent). The proportion of total demand that is satisfied has increased by less than 1 percentage point (from 84.2 percent to 84.6 percent) between 2002 and 2009.

[1] Nonusers who are pregnant or amenorrheic and women whose pregnancy was the result of a contraceptive failure are not included in the category of unmet need, but are included in total demand for contraception (since they would have been using had their method not failed).

Table 7.3 Need and demand for family planning among currently married women

Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and the percentage for the demand for contraception that is satisfied, by background characteristics, Jordan 2009

Background characteristic	Unmet need for family planning[1]			Met need for family planning[2] (currently using)			Total demand for family planning[3]			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15-19	7.0	0.0	7.0	26.5	0.5	27.0	38.2	0.5	38.7	82.0	242
20-24	8.8	1.7	10.5	37.0	5.6	42.6	49.8	8.0	57.8	81.8	1,078
25-29	8.9	1.5	10.4	46.2	11.8	58.0	58.9	13.4	72.4	85.6	1,860
30-34	5.4	3.8	9.2	34.9	26.9	61.8	42.7	31.0	73.7	87.5	2,000
35-39	2.7	6.4	9.1	16.7	50.9	67.6	20.1	58.7	78.8	88.5	1,704
40-44	0.8	10.9	11.8	4.9	64.1	69.0	5.8	75.4	81.3	85.5	1,628
45-49	0.5	19.4	19.8	0.3	52.9	53.2	0.8	72.3	73.0	72.9	1,139
Residence											
Urban	4.6	6.5	11.0	24.8	35.6	60.4	31.3	42.5	73.9	85.1	8,102
Rural	5.2	6.8	12.0	24.3	28.9	53.2	31.5	36.4	67.8	82.3	1,549
Governorates											
Amman	4.3	7.6	11.9	24.4	37.2	61.6	30.8	45.2	76.0	84.4	3,805
Balqa	6.0	5.6	11.5	21.5	36.4	58.0	28.7	42.5	71.3	83.8	597
Zarqa	4.4	5.2	9.6	23.2	35.0	58.2	29.3	40.9	70.2	86.4	1,411
Madaba	4.0	5.7	9.7	24.6	37.5	62.2	29.4	44.0	73.4	86.8	214
Irbid	5.1	5.8	10.9	26.2	33.4	59.5	33.1	39.3	72.4	84.9	1,831
Mafraq	5.2	7.2	12.4	27.0	26.7	53.7	35.1	35.0	70.2	82.4	434
Jarash	4.1	5.0	9.1	29.5	29.6	59.1	35.9	35.6	71.4	87.3	289
Ajloun	6.0	5.4	11.4	26.7	29.7	56.3	35.7	35.6	71.3	84.1	210
Karak	5.2	7.2	12.5	21.1	29.2	50.3	28.2	37.0	65.2	80.8	374
Tafiela	5.0	5.3	10.4	28.3	29.6	57.9	34.8	36.0	70.8	85.4	137
Ma'an	4.1	6.3	10.4	26.3	27.2	53.5	32.1	33.7	65.8	84.2	156
Aqaba	4.0	7.7	11.6	28.1	29.9	58.0	33.4	38.0	71.4	83.7	192
Region											
Central	4.5	6.8	11.2	23.8	36.6	60.5	30.2	43.9	74.1	84.8	6,028
North	5.1	5.9	11.0	26.7	31.6	58.3	33.9	37.9	71.9	84.7	2,764
South	4.7	6.9	11.6	24.7	29.1	53.8	31.1	36.5	67.6	82.9	859
Badia area											
Badia	6.5	6.8	13.3	26.5	24.2	50.6	36.4	31.4	67.8	80.4	808
Other	4.5	6.5	11.0	24.6	35.5	60.1	30.9	42.5	73.4	85.0	8,844
Education											
No education	3.1	25.7	28.9	5.0	26.7	31.7	8.8	52.5	61.3	52.9	259
Elementary	4.9	11.4	16.2	13.2	37.1	50.3	18.9	48.6	67.5	76.0	646
Preparatory	5.1	7.0	12.1	15.9	45.6	61.5	22.6	53.5	76.1	84.0	1,485
Secondary	4.5	5.8	10.3	27.4	33.6	61.0	34.2	39.9	74.1	86.1	4,152
Higher	4.8	4.6	9.4	29.4	30.6	60.0	36.2	35.6	71.8	86.9	3,109
Wealth quintile											
Lowest	6.6	6.6	13.3	23.9	29.6	53.5	32.5	37.3	69.7	81.0	1,845
Second	6.1	5.8	11.8	27.8	30.2	58.0	35.9	36.3	72.3	83.6	2,034
Middle	3.6	5.5	9.0	25.1	33.5	58.7	31.2	39.5	70.8	87.2	2,033
Fourth	3.3	8.2	11.6	23.3	37.9	61.2	28.2	46.4	74.6	84.5	2,018
Highest	3.8	6.6	10.4	23.2	42.1	65.3	28.6	48.9	77.5	86.6	1,721
Total	4.7	6.5	11.2	24.7	34.5	59.3	31.4	41.5	72.9	84.6	9,651

[1] *Unmet need for spacing:* Includes women who are fecund and not using family planning and who say they want to wait two or more years for their next birth, or who say they are unsure whether they want another child, or who want another child but are unsure when to have the child. In addition, unmet need for spacing includes pregnant women whose current pregnancy was mistimed, or whose last pregnancy was unwanted but who now say they want more children. Unmet need for spacing also includes amenorrheic women whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children. *Unmet need for limiting:* Includes women who are fecund and not using family planning and who say they do not want another child. In addition, unmet need for limiting includes pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided whether they want another child. Unmet need for limiting also includes amenorrheic women whose last birth was unwanted but who now say they do not want more children or who are undecided whether they want another child.

[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. Note that the specific methods used are not taken into account here.

[3] Non-users who are pregnant or amenorrheic and women whose pregnancy was the result of a contraceptive failure are not included in the category of unmet need but are included in total demand for contraception (since they would have been using if their method had not failed).

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 needs for spacing and limiting are complementary, as evidenced by the fact that total unmet need varies little by age of the woman.

Unmet need is related to place of residence in urban-rural, region, governorate, and Badia areas. Women living in rural areas, in the South region, in Badia areas, and in Mafraq, Karak, Aqaba, and Amman tend to have a slightly greater unmet need than their counterparts in urban areas, other regions and governorates, and non-Badia areas. Eleven percent of urban women have an unmet need, compared with 12 percent for rural women. Because urban women are more likely than rural women to use contraception (60 percent and 53 percent, respectively), a greater percentage of their total demand for family planning is satisfied (85 percent versus 82 percent).

Unmet need is also associated with education. Women with no education have a higher level of unmet need (29 percent) than women who have secondary or higher education (10 and 9 percent, respectively). Educated women are more likely to use a contraceptive method than uneducated women; therefore a higher proportion of their total demand for family planning is satisfied (87 percent for women with higher than secondary education versus 53 percent for women with no education). Unmet need is negatively associated with household wealth quintile. Unmet need is slightly greater among women in the lowest wealth quintile (13 percent) than in all other wealth quintiles.

7.3 Ideal Number of Children

The discussion of fertility preferences earlier in this chapter focused on the future reproductive intentions of women, implicitly taking into account their number of living children. The 2009 JPFHS attempted to obtain a measure of fertility preferences that was less dependent on the woman's current family size by asking about the respondent's ideal number of children. To ascertain this, the respondent was asked to consider—abstractly and independently of her actual family size—the number of children she would choose if she could start childbearing again.

For two reasons, the ideal number of children tends to fairly closely correlate with the actual number of children a woman has. 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 (Table 7.4). The data in Table 7.4 can be grouped into three categories. The first group is women who have reached their ideal family size—that is, 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 7.4 indicate that two-thirds of women (66 percent) consider the ideal family size to be at least 4 children, which is less than what was recorded in the 2002 JPFHS (70 percent). Only 13 percent of ever-married women report an ideal family size of two children, the number that is required for replacement level fertility. The mean ideal number of children is the same (4.2) among ever-married women and among currently married women.

Table 7.4 Ideal number of children

Percent distribution of ever-married women 15-49 by ideal number of children, and mean ideal number of children for all ever-married women and for currently married women, according to number of living children, Jordan 2009

Ideal number of children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
0	1.9	0.0	0.7	0.5	0.2	0.2	0.4	0.5
1	4.4	2.8	2.7	1.2	1.0	0.4	0.6	1.6
2	18.2	23.0	16.8	13.6	9.6	10.2	5.9	12.9
3	16.9	19.6	14.3	14.1	6.2	4.9	5.6	10.8
4	35.7	35.9	45.5	47.2	52.3	38.0	37.9	42.6
5	5.5	8.1	6.6	7.0	8.7	15.5	7.6	8.4
6+	10.4	6.9	8.8	9.0	15.6	21.0	28.6	15.3
Non-numeric responses	7.0	3.7	4.6	7.4	6.4	9.8	13.2	7.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	747	1,116	1,643	1,700	1,604	1,301	1,999	10,109
Mean ideal number children[2] for:								
All ever-married women	3.7	3.5	3.7	3.9	4.3	4.6	4.9	4.2
Number	695	1,075	1,568	1,573	1,501	1,174	1,734	9,319
Currently married women	3.7	3.6	3.7	3.8	4.3	4.6	4.9	4.2
Number	605	999	1,516	1,523	1,450	1,141	1,677	8,911

[1] The number of living children includes current pregnancy.
[2] Means are calculated excluding respondents who gave non-numeric responses.

Compared with the 2002 JPFHS, the percentage of women in the 2009 JPFHS who did not give a numeric response to the hypothetical question on ideal family size increased substantially, from 4 percent to 8 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 one 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, have reached the end of their reproductive years, or 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. Because of the significant increase in the percentage of women who did not give a numeric answer between 2002 and 2009, comparison of the mean ideal number of children (which is based only on women who gave a numeric answer) should be made with caution (4.2 children in the two surveys).

Table 7.5 presents the mean ideal number of children for ever-married women by age and background characteristics. The mean ideal number of children in Jordan increases with age, from 3.5 children for women in the youngest age group (15-19) to 4.2 children among women aged 35-39 and to 4.7 among the oldest women (45-49). This trend indicates that the ideal family size has decreased in the younger cohorts. In general, women living in rural areas, in the North and South regions, in Badia areas, and in Mafraq, Jarash, and Ma'an have a slightly higher ideal family size.

Ideal number of children is also associated with education. Women with no education have a higher ideal number of children (4.9) than women who have secondary or higher education (4.0 and 4.2, respectively). This pattern holds true for wealth quintiles also. Women in the lowest and second quintiles want 4.3 children while women in the highest wealth quintiles express an ideal number of 4.0 children.

Table 7.5 Mean ideal number of children

Mean ideal number of children for all ever-married women age 15-49 by background characteristics, Jordan 2009

Background characteristic	Mean	Number of women[1]
Age		
15-19	3.5	240
20-24	4.0	1,035
25-29	3.8	1,825
30-34	4.0	1,903
35-39	4.2	1,619
40-44	4.4	1,594
45-49	4.7	1,103
Residence		
Urban	4.1	7,864
Rural	4.4	1,455
Governorates		
Amman	4.1	3,678
Balqa	4.2	580
Zarqa	4.1	1,444
Madaba	4.3	221
Irbid	4.2	1,727
Mafraq	4.4	400
Jarash	4.4	271
Ajloun	4.3	192
Karak	4.0	339
Tafiela	4.2	133
Ma'an	4.4	151
Aqaba	4.3	183
Region		
Central	4.1	5,923
North	4.3	2,591
South	4.2	806
Badia area		
Badia	4.5	782
Other	4.1	8,537
Education		
No education	4.9	233
Elementary	4.5	631
Preparatory	4.2	1,405
Secondary	4.0	4,022
Higher	4.2	3,029
Wealth quintile		
Lowest	4.3	1,749
Second	4.3	1,952
Middle	4.1	1,968
Fourth	4.1	1,961
Highest	4.0	1,690
Total	4.2	9,319

[1] Number of women who gave a numeric response

7.4 PLANNING STATUS OF BIRTHS

Respondents in the 2009 JPFHS were asked a series of questions concerning each child born in the five years preceding the survey, including current pregnancies, to determine whether the particular pregnancy was 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 the level of fertility for a period of time.

The questions about the 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 these 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 7.6 shows that about three-quarters (74 percent) of births during the five years preceding the survey were wanted at the time of conception, 16 percent were wanted later, and 11 percent were not wanted at all at the time of conception. The percentage of births wanted when conceived has significantly increased between 2002 and 2009 (from 67 to 74 percent), indicating that couples are exercising better reproductive control. The proportion of births that were not wanted at the time of conception increased directly with birth order. Two-fifths of all fourth and higher order births were either mistimed or unwanted, compared with a little more than a quarter of second order births. The low percentage (3 percent) of first births wanted later or not wanted at all indicates that almost all first order births are wanted.

Table 7.6 Fertility planning status

Percent distribution of births to women 15-49 in the five years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Jordan 2009

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	96.9	2.1	0.9	0.0	100.0	2,353
2	72.7	23.5	3.8	0.0	100.0	2,252
3	72.8	20.5	6.5	0.2	100.0	1,859
4+	60.1	16.8	23.1	0.0	100.0	3,844
Mother's age at birth						
<20	87.1	10.0	3.0	0.0	100.0	597
20-24	79.3	16.3	4.4	0.0	100.0	2,440
25-29	74.1	20.0	5.8	0.1	100.0	3,300
30-34	71.6	15.2	13.2	0.0	100.0	2,254
35-39	64.2	10.1	25.7	0.0	100.0	1,373
40-44	54.9	2.4	42.7	0.0	100.0	334
45-49	*	*	*	*	*	11
Total	73.5	15.6	10.8	0.0	100.0	10,309

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

Births to young women tend to be wanted, whereas births to older women are more likely to be unwanted (Table 7.6). Although 87 percent of births to women less than 20 years of age were wanted at the time of conception, the percentage declines to 55 percent among women age 40-44.

Another way of measuring unwanted fertility is to calculate what the fertility rate would be if all unwanted births were avoided. This is known as the wanted fertility rate (Table 7.7). In Jordan, if all unwanted births were prevented, the total wanted fertility rate would be 3.0 births per woman or 0.8 births less than the actual total fertility rate. Thus, the total fertility rate in Jordan is inflated by 27 percent because of unwanted births. The gap between the wanted and actual fertility rates has improved since 2002, when the TFR was inflated by 42 percent because of unwanted births (2.6 births versus 3.7 births).

Table 7.7 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Jordan 2009

Background characteristic	Total wanted fertility rates	Total fertility rate
Residence		
Urban	2.9	3.8
Rural	3.1	4.0
Governorates		
Amman	2.9	3.7
Balqa	3.0	3.9
Zarqa	3.0	3.9
Madaba	2.7	3.6
Irbid	2.9	3.8
Mafraq	3.3	4.2
Jarash	3.5	4.5
Ajloun	3.0	4.0
Karak	3.0	3.8
Tafiela	3.0	4.3
Ma'an	3.2	4.3
Aqaba	3.2	4.2
Region		
Central	2.9	3.8
North	3.1	4.0
South	3.1	4.1
Badia area		
Badia	3.3	4.5
Other	2.9	3.8
Education		
No education	2.7	4.1
Elementary	3.0	4.1
Preparatory	3.4	4.7
Secondary	3.1	4.1
Higher	2.9	3.5
Wealth quintile		
Lowest	3.6	4.9
Second	3.3	4.4
Middle	3.1	3.9
Fourth	2.8	3.6
Highest	2.3	2.7
Total	3.0	3.8

Note: Rates are calculated based on births to women age 15-49 in the period 1-36 months preceding the survey. The total fertility rates are the same as those presented in Table 4.3.

Table 7.7 also shows that the gap between actual and wanted fertility rates is slightly higher among women living in the South region, women residing in Badia areas, and women with no education or who have preparatory education. Women in the Central and North regions (0.9 births each) and those who have more than secondary education (0.6 births) are generally more successful in narrowing the gap between wanted and actual fertility rates.

Data indicate that the gap between wanted and actual fertility rates is higher among women in the lowest wealth quintile (1.3 births) than among women in the highest wealth quintile (who also have the lowest fertility) (0.4 births).

NUTRITIONAL STATUS AND PREVALENCE OF ANEMIA 8

Anthropometric data (height and weight) collected in the survey are used to assess the current nutritional status of children under age five and all women age 15-49. The chapter also considers information collected on the prevalence of anemia in children age 6-59 months and in women age 15-49 years.

8.1 NUTRITIONAL STATUS OF CHILDREN

The nutritional status of young children is a comprehensive index that reflects the level of household, community, and national development. Malnutrition (inadequate nutrition) is a direct result of insufficient food intake or repeated infection, or a combination of both. It can result in increased risk of illness and death.

8.1.1 Measurement of Nutritional Status among Young Children

In the 2009 JPFHS, anthropometric data on height and weight for children less than five years of age were collected in half of the sampled households to evaluate their nutritional status. Their standing height (for children age 24 months and older) or recumbent length (for children under age 24 months) was measured using the Shorr height board. Electronic Seca scales were used to measure the weight of children. Based on these measurements, three internationally accepted indices were constructed and are used to reflect the nutritional status of children. These are:

- Height-for-age (stunting)
- Weight-for-height (wasting)
- Weight-for-age (underweight)

In presenting anthropometric results, the nutritional status of children is compared with the recently developed WHO Child Growth standards (WHO, 2006). The WHO Child Growth standards are based on data from 8,440 children in six countries around the world and found that well-nourished children for all population groups follow very similar growth patterns before puberty. In any large population, there are natural variations in height and weight. The variations approximate a normal distribution. Children who fall below minus two standard deviations (-2 SD) from the reference median are considered malnourished, and children who fall below minus three standard deviations (-3 SD) from the reference median are considered severely malnourished. Because children's height and weight change with age, it is suggested that height and weight be assessed in relation to age and that weight be assessed in relation to height, taking the sex of the child into consideration. Each of the three indices provides information about different aspects of children's nutritional status.

For the purpose of comparison with data from the 2002 JPFHS, Appendix Table C.7 includes indices expressed in standard deviation units (SD) from the median of the new WHO Child Growth Standards.

The height-for-age index reflects long-term, cumulative effects of inadequate nutrition, poor health, or both.. Children who are below -2 SD from the median of the reference population are considered short for their age, or *stunted*. Children who are below -3 SD are *severely stunted*. Stunting of a child's growth may result from failure to receive adequate nutrition over a long period, sustained improper feeding practices, or the effects of repeated episodes of illness. Height-for-age therefore represents a measure of the outcome of malnutrition in a population over a long period and does not vary appreciably with the season of data collection.

The weight-for-height index measures body mass in relation to body length. It describes a recent and severe process that has produced substantial weight loss, usually as a consequence of acute shortage of food, severe disease, or both. Children whose weight-for-height is below -2 SD from the median of the reference population are too thin for their height, or *wasted*, while those who measure below -3 SD from the reference population median are *severely wasted*. Wasting represents the failure to receive adequate nutrition during the period immediately before the survey and usually shows marked seasonal patterns associated with changes in food availability or disease prevalence. It may be the result of recent episodes of illness, particularly diarrhea, improper feeding practices, or acute food shortage.

Weight-for-age is a composite index of height-for-age and weight-for-height. It represents body mass relative to age and takes into account both acute and chronic malnutrition. Children whose weight-for-age measures below -2 SD from the median of the reference population are *underweight* for their age, and those whose measurements are below -3 SD from the reference population median are *severely underweight*. Being underweight for one's age therefore could mean that a child is stunted or wasted or both stunted and wasted.

Overweight and obesity are becoming problems for some children in developing countries. The percentage of children more than two standard deviations above the median for weight-for-height indicates the level of this potential problem. The percentage of children more than two standard deviations above the median for weight-for-age is included here for comparison with other data sources that did not measure height.

8.1.2 Results of Data Collection

The 2009 JPFHS measured and weighed all children born in the five years prior to the survey who were listed in the Household Questionnaire. Table 8.1 shows the percentage of children under five years classified as malnourished according to background characteristics. The table also shows the nutritional status of children of mothers who were not interviewed, according to whether or not the mother lives in the household.

Among all children eligible for anthropometric measurements 92 percent had complete and valid anthropometric and age data. Eight percent of children could not be measured either because they were not at home at the time of the survey, they refused to be measured, or the mother refused to allow the child to be measured. In some cases, measurements were not taken if the child was too sick. However, the data are unlikely to be biased, since missing information on anthropometry is consistent across age groups and other background characteristics. Therefore, the results are based on 4,056 children.

Table 8.1 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Jordan 2009

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score - SD	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score - SD	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score - SD	
Age in months												
<6	0.4	5.5	0.3	0.3	1.2	7.7	0.4	0.3	1.3	3.8	0.4	378
6-8	0.4	1.2	0.4	0.3	7.2	5.6	0.1	0.3	0.6	6.0	0.2	202
9-11	0.7	2.2	0.1	0.0	2.1	9.2	0.4	0.1	0.9	6.2	0.3	223
12-17	2.7	10.0	-0.2	0.7	1.2	5.9	0.5	0.4	1.1	2.7	0.2	467
18-23	2.8	9.7	-0.5	0.6	0.9	9.1	0.5	0.1	1.4	3.9	0.2	417
24-35	2.0	10.5	-0.5	0.0	1.3	6.4	0.4	0.0	2.4	4.1	0.1	861
36-47	1.7	6.6	-0.6	0.1	0.8	5.8	0.4	0.1	1.6	2.4	-0.1	771
48-59	1.5	9.1	-0.6	0.1	1.6	5.0	0.3	0.3	3.1	1.8	-0.2	738
Sex												
Male	1.9	7.8	-0.4	0.3	1.5	7.7	0.4	0.2	1.6	3.5	0.1	2,107
Female	1.5	8.1	-0.3	0.1	1.6	5.2	0.3	0.2	2.1	3.2	0.0	1,950
Birth interval in months[2]												
First birth[3]	1.3	5.6	-0.2	0.2	2.2	8.8	0.4	0.2	2.1	4.3	0.2	945
<24	2.5	9.0	-0.5	0.4	0.7	5.3	0.4	0.3	1.8	1.8	-0.0	996
24-47	2.0	10.1	-0.5	0.1	1.5	5.0	0.4	0.1	1.7	4.0	-0.0	1,290
48+	0.8	6.1	-0.2	0.2	1.9	7.3	0.3	0.0	1.7	2.8	0.1	755
Size at birth[2]												
Very small	2.1	16.0	-0.8	0.3	2.8	6.6	0.3	0.3	4.0	0.4	-0.3	202
Small	3.1	14.3	-0.9	0.3	2.8	4.5	0.2	0.4	3.1	1.3	-0.4	446
Average or larger	1.5	6.7	-0.3	0.2	1.3	6.7	0.4	0.1	1.5	3.7	0.1	3,337
Mother's nutritional status[4]												
Thin (BMI < 18.5)	0.9	7.1	-0.4	0.0	1.7	1.3	0.0	0.0	5.2	0.0	-0.2	72
Normal (BMI 18.5-24.9)	2.2	8.1	-0.4	0.2	2.6	4.5	0.2	0.3	2.6	3.7	-0.0	1,272
Overweight/obese (BMI ≥ 25)	1.5	7.9	-0.3	0.2	1.0	7.4	0.4	0.2	1.4	3.1	0.1	2,674
Residence												
Urban	1.5	7.1	-0.3	0.2	1.5	6.5	0.4	0.2	1.8	3.5	0.1	3,331
Rural	2.6	11.9	-0.7	0.4	1.6	6.3	0.5	0.2	2.3	2.5	-0.0	726
Governorates												
Amman	1.2	5.8	-0.1	0.1	2.1	6.3	0.3	0.0	1.5	5.2	0.1	1,401
Balqa	3.7	11.9	-0.5	0.6	3.0	6.1	0.3	1.2	4.0	3.3	-0.1	259
Zarqa	1.0	5.9	-0.2	0.0	0.9	5.4	0.4	0.0	1.8	2.1	0.1	600
Madaba	2.8	12.4	-0.5	1.0	3.4	6.8	0.3	0.7	4.6	2.5	-0.0	90
Irbid	1.6	8.3	-0.5	0.2	0.7	6.6	0.4	0.0	1.1	1.8	0.0	837
Mafraq	1.9	10.5	-0.7	0.0	1.4	5.5	0.3	0.4	3.3	3.5	-0.1	213
Jarash	2.0	8.7	-0.5	0.5	1.3	6.1	0.6	0.3	1.9	1.2	0.1	144
Ajloun	1.0	8.6	-0.4	0.2	1.6	5.4	0.3	0.2	1.9	2.0	-0.0	103
Karak	3.3	13.5	-0.6	0.3	1.1	9.4	0.6	0.6	2.6	3.2	0.1	182
Tafiela	2.0	9.8	-0.6	0.7	0.7	13.7	0.7	0.2	1.5	4.3	0.2	68
Ma'an	4.1	14.4	-0.9	0.6	0.6	8.3	0.7	0.3	1.4	2.6	-0.0	77
Aqaba	4.4	12.7	-0.6	0.0	1.5	8.7	0.6	0.6	1.3	4.2	0.1	84
Region												
Central	1.5	6.7	-0.2	0.2	1.9	6.0	0.3	0.2	2.0	4.1	0.1	2,350
North	1.6	8.7	-0.5	0.2	1.0	6.3	0.4	0.1	1.6	2.0	0.0	1,296
South	3.5	12.9	-0.7	0.4	1.0	9.8	0.6	0.5	1.9	3.5	0.1	410
Badia area												
Badia	3.1	12.6	-0.6	0.4	1.8	5.5	0.3	0.5	2.9	2.6	-0.1	412
Other	1.6	7.5	-0.3	0.2	1.5	6.6	0.4	0.2	1.7	3.4	0.1	3,645

Continued…

Table 8.1—*Continued*

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score - SD	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score - SD	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score - SD	
Mother's education[5]												
No education	7.8	23.8	-1.0	2.1	3.4	6.1	0.4	3.4	4.9	0.9	-0.3	82
Elementary	3.4	13.2	-0.7	0.1	2.3	4.2	0.3	0.1	2.0	1.7	-0.2	240
Preparatory	2.6	9.6	-0.6	0.0	2.1	6.5	0.3	0.2	3.7	2.7	-0.1	618
Secondary	1.4	7.8	-0.4	0.3	1.7	6.4	0.4	0.2	1.7	3.1	0.0	1,783
Higher	1.1	5.5	-0.1	0.1	0.8	6.8	0.4	0.0	0.9	4.2	0.2	1,311
Wealth quintile												
Lowest	4.0	12.9	-0.7	0.3	1.6	5.5	0.4	0.6	2.6	1.8	-0.1	979
Second	1.4	8.4	-0.4	0.1	1.3	5.4	0.3	0.0	2.3	3.1	-0.0	1,073
Middle	1.6	6.1	-0.3	0.4	3.0	6.7	0.3	0.1	1.3	2.1	0.1	766
Fourth	0.3	7.1	-0.3	0.1	1.1	6.8	0.4	0.1	2.0	4.5	0.1	772
Highest	0.1	1.2	0.2	0.1	0.2	10.2	0.5	0.1	0.1	7.4	0.5	466
Mother's interview status												
Interviewed	1.7	8.0	-0.4	0.2	1.5	6.4	0.4	0.2	1.8	3.3	0.1	3,986
Not interviewed but in household	(2.0)	(7.2)	(0.4)	(0.0)	(1.1)	(2.5)	(0.4)	(0.0)	(2.5)	(1.1)	(0.6)	47
Not interviewed, and not in the household[6]	(3.5)	(7.6)	(-0.0)	(0.0)	(0.0)	(27.3)	(1.0)	(2.4)	(4.1)	(18.3)	(0.7)	23
Total	1.7	8.0	-0.4	0.2	1.5	6.5	0.4	0.2	1.9	3.3	0.1	4,056

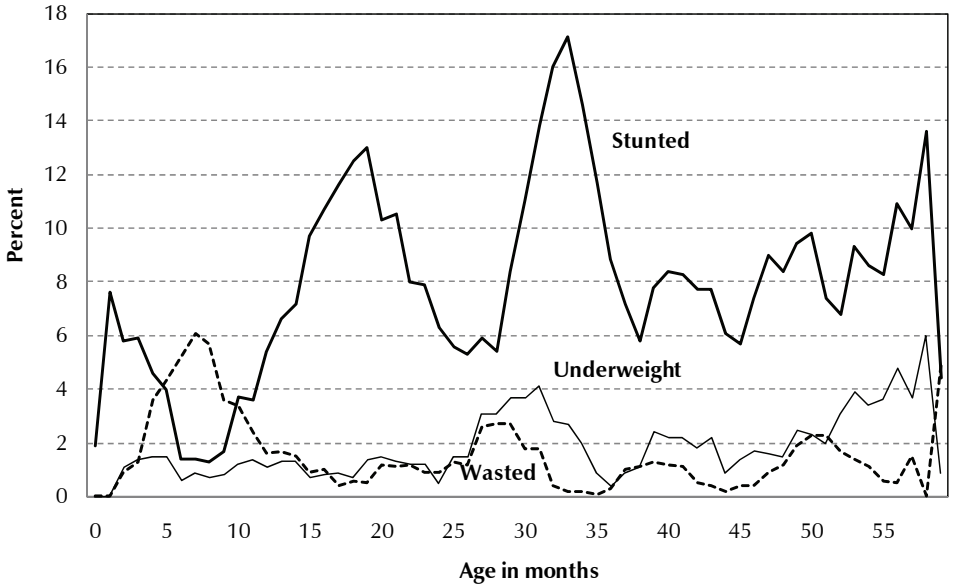
Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO reference.
Figures in parentheses are based on 25-49 unweighted cases.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
[1] Includes children who are below -3 standard deviations -SD from the WHO Child Growth standards population median.
[2] Excludes children whose mothers were not interviewed.
[3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval.
[4] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 8.2.
[5] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.
[6] Includes children whose mothers are deceased.

8.1.3 Levels of Child Malnutrition

Chronic malnutrition among Jordanian children is relatively low. Eight percent of children are stunted or chronically malnourished (height-for-age below -2 SD), of which one in four (2 percent) are severely stunted (Table 8.1). As Figure 8.1 shows, stunting levels increased rapidly with age, from only 6 percent among children less than six months of age to 10 percent among children age 12-17 months. Universally, after 17 months of age, the level of stunting remains high (9-10 percent). Children who were considered by the mother to be very small (16 percent) or smaller than average (14 percent) at birth were more than twice as likely to be stunted as children who were average or larger (7 percent). There is little difference in the level of stunting by sex.

Table 8.1 shows that stunting is strongly associated with residence. Rural children are more likely to be chronically malnourished than urban children (12 percent versus 7 percent). Children from the South (13 percent) are more likely to be chronically malnourished than children from the North (9 percent) and the Central (7 percent) regions. More children who live in Badia areas (13 percent) are stunted than children who live in other areas (8 percent). The prevalence of stunting ranges from 6 percent in Amman and Zarqa governorates to 13 percent in Karak and Aqaba governorates and to 14 percent in Ma'an governorate. Mother's education impacts children's nutritional status positively, with 6 percent of children of highly educated mothers stunted compared with 24 percent of children of mothers with no education. Stunting levels for wealth status followed the same pattern as for mother's education. There is no clear pattern between length of the birth interval and stunting or mother's nutritional status and stunting.

Figure 8.1 Nutritional Status of Children by Age, 2009



Note: Plotted values are smoothed by a five-month moving average

JPFHS 2009

Less than two percent of children under five years of age are wasted (weight-for-height below -2 SD), of which about one in ten (0.2 percent) are severely wasted. The proportion of wasted children is highest in the 6-8 month age group (7 percent) (Figure 8.1). There is little difference in the level of wasting by sex or birth interval. The prevalence of wasting varies from 2 percent in the Central region to 1 percent in the North and the South regions. The proportion of children who are wasted varies from less than 1 percent in Zarqa, Irbid, Tafiela, and Ma'an governorates to a maximum of 3 percent in Balqa and Madaba. Mother's education and wealth quintile have a positive impact on lowering wasting.

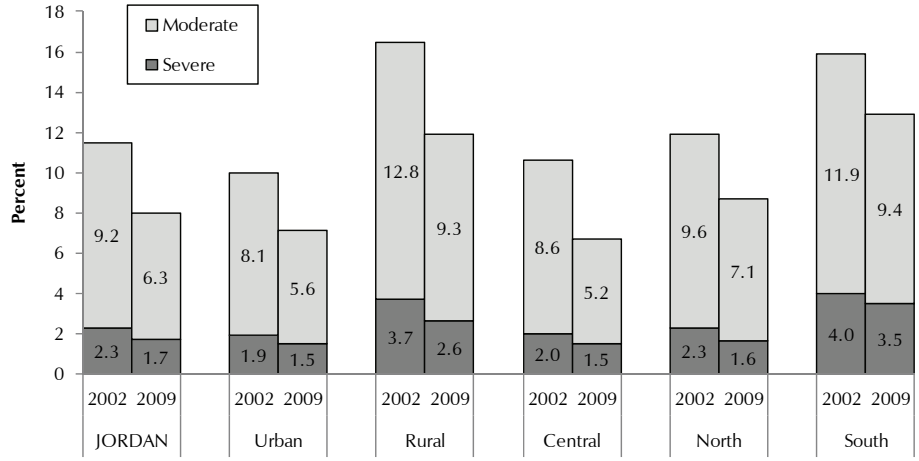
Conversely, 7 percent of children are overweight (weight-for-height above +2 SD); with boys more frequently being overweight than girls (8 percent versus 5 percent). Children whose mothers are overweight or obese are more likely to be overweight themselves (7 percent). Children from the South (10 percent) are more likely to be overweight than children from the North and Central regions (6 percent). The prevalence of overweight ranges from 14 percent in Tafiela to 8 percent in Ma'an to 5 percent in Zarqa and Ajloun.

Two percent of children are underweight (weight-for-age below -2 SD), and one in ten children (0.2 percent) is severely underweight. Differentials by background characteristics are very similar to those discussed for stunting.

8.1.4 Trends in Children's Nutritional Status

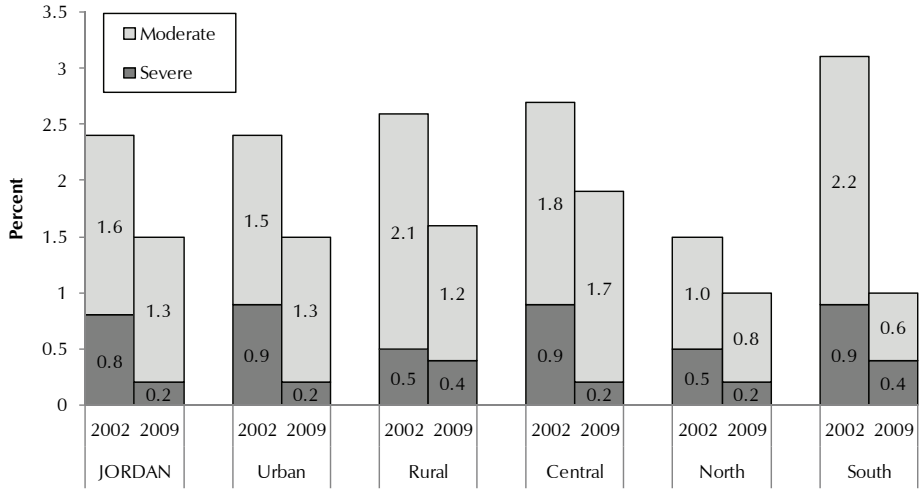
In the 2002 JPFHS, the nutritional status was determined using the International Reference Population defined by the U.S. National Center for Health Statistics (NCHS), as recommended by WHO and the U.S. Centers for Disease Control and Prevention (CDC). When the proportions of children classified as stunted and wasted are calculated according to the new WHO Child Growth Standards, the percentages are higher than those reported according to the NCHS/CDC/WHO reference from 2002. For comparison purposes in this section, data from the 2002 JPFHS was re-calculated according to the new reference population (see Table C.7). Figures 8.2 and 8.3 present the prevalence of stunting and wasting according to WHO Child Growth reference standards in 2002 and 2009.

Figure 8.2 Chronic Malnutrition (Stunting) among Children under Five, JPFHS 2002 and JPFHS 2009



Note: The 2002 and 2009 values are based on the WHO Child Growth Standards adopted in 2006

Figure 8.3 Acute Malnutrition (Wasting) among Children under Five, JPFHS 2002 and JPFHS 2009



Note: The 2002 and 2009 values are based on the WHO Child Growth Standards adopted in 2006

According to this reference, in 2009, 8 percent of children are classified as stunted compared with 12 percent in 2002. Since 2002, the prevalence of stunting has drastically decreased in the three regions. According to the WHO child growth reference standards, the prevalence of wasting has slightly decreased in Jordan (from 2.4 percent to 1.5 percent), with the most noticeable decrease in the South region (from 3.1 percent to 1.0 percent).

8.2 NUTRITIONAL STATUS OF WOMEN

In the 2009 JPFHS, data were collected on the height and weight of all women age 15-49 in half of the households sampled. Women's nutritional status is important both as an indicator of overall health and as a predictor of pregnancy outcome for both mother and child. Two indices of women's nutritional status are presented in Table 8.2: the percentage of women with very short stature (less than 145 cm) and body mass index (BMI).

Maternal height is a measure of past nutritional status and reflects in part the cumulative effect of social and economic outcomes on access to nutritional foods during childhood and adolescence. It can be used to predict the risks associated with difficult deliveries because small stature is often associated with small pelvic size and a greater likelihood of obstructed labor. Short stature also correlates with low birth weight in infants, high risk of stillbirths, and high rates of miscarriage. A woman is considered at nutritional risk if her height is 140 to 150 centimeters.

BMI is used to measure thinness and obesity. BMI utilizes both height and weight and provides a better measure of thinness than weight alone; it is defined as weight in kilograms divided by the square of the height in meters (kg/m^2). The WHO Expert Committee on Physical Growth has suggested the following classifications:

- Mild underweight (BMI = 17-18.49 kg/m^2)
- Moderate underweight (BMI = 16-16.99 kg/m^2)
- Severe underweight (BMI <16 kg/m^2)

These three groups are considered to be chronically energy deficient (CED). A body mass index of more than 25 is considered to be overweight.

Table 8.2 shows the percentage of women with height below 145 cm, the mean BMI, and the proportion of women falling into high-risk categories, according to background characteristics. Respondents for whom there was no information on height or weight and for whom a BMI could not be estimated are excluded from this analysis. To avoid bias in the measurement of women's nutritional status, pregnant women and women who had given birth in the two months preceding the survey were excluded from the calculation of weight and body mass measures. The data analysis on BMI is based on 6,666 women, while the height analysis is based on 7,308 women age 15-49 years.

The data show that less than 2 percent of women are below 145 cm in height. Short stature decreases dramatically with increasing level of education and wealth status. The proportion of women under 145 cm in height varies from 1 percent in Madaba, Irbid, and Ajloun governorates to a maximum of 3 percent in Mafraq, Tafiela, and Ma'an. There are no other major variations in height by background characteristics.

The mean BMI of women in Jordan is 27, higher than the normal BMI range of 18.5-24.9. Forty percent of women fall in the normal BMI category. Four percent of women fall below the cutoff of 18.5, indicating that the level of chronic energy deficiency is relatively low in Jordan. In general, very young women (15-19) are more likely than other women to suffer from chronic energy deficiency. However, an alarming proportion of women—more than half (57 percent)—have a BMI of 25 and over, and thus can be considered overweight or obese. Women from Mafraq (62 percent), Aqaba, Karak, and Tafiela (61 percent in each governorate) are more likely to be overweight or obese than women from Balqa governorate (50 percent). Older women and women with no education or elementary education are also more likely to be overweight or obese.

Table 8.2 Nutritional status of women

Among all women age 15-49, the percentage with height under 145 cm, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Jordan 2009

	Height		Body Mass Index[1]								
				Normal	Thin			Overweight/obese			
Background characteristic	Percentage below 145 cm	Number of women	Mean Body Mass Index (BMI)	18.5-24.9 (normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	<17 (Moderately and severely thin)	≥25.0 (Total overweight or obese)	25.0-29.9 (Overweight)	≥30.0 (Obese)	Number of women
Age											
15-19	1.4	569	23.8	64.0	6.4	5.2	1.2	29.5	19.8	9.7	523
20-29	1.5	2,086	25.4	49.2	5.6	4.9	0.8	45.1	27.6	17.6	1,767
30-39	1.1	2,351	27.7	32.4	2.5	1.8	0.7	65.1	35.3	29.8	2,101
40-49	2.3	2,301	28.4	33.2	3.3	2.8	0.5	63.5	22.9	40.6	2,275
Residence											
Urban	1.6	6,044	27.0	39.9	4.0	3.3	0.7	56.2	27.9	28.3	5,526
Rural	1.9	1,264	27.2	38.4	3.7	3.0	0.7	57.9	27.5	30.5	1,140
Governorates											
Amman	1.6	2,718	26.6	40.9	4.0	3.5	0.5	55.2	29.7	25.5	2,502
Balqa	1.8	485	26.5	43.9	6.2	3.9	2.3	49.9	20.1	29.8	451
Zarqa	1.5	983	27.3	37.1	3.9	3.3	0.7	59.0	28.0	30.9	889
Madaba	1.2	169	26.7	38.2	4.7	3.6	1.1	57.2	31.2	26.0	150
Irbid	1.2	1,507	27.1	40.8	3.3	3.0	0.3	55.9	26.0	29.9	1,367
Mafraq	3.1	358	27.7	35.1	3.3	2.6	0.7	61.6	29.2	32.4	320
Jarash	1.7	218	27.5	37.5	3.2	2.1	1.1	59.3	27.8	31.5	197
Ajloun	1.1	187	26.8	37.9	4.2	3.2	1.0	58.0	31.1	26.9	169
Karak	1.6	306	27.6	35.2	3.7	3.0	0.7	61.1	27.0	34.1	283
Tafiela	2.7	117	27.6	35.4	3.5	3.0	0.5	61.2	29.3	31.8	107
Ma'an	2.6	132	27.4	41.8	2.8	2.4	0.5	55.3	24.2	31.1	117
Aqaba	1.9	128	28.0	34.1	4.5	3.4	1.1	61.4	28.0	33.4	113
Region											
Central	1.6	4,355	26.8	40.3	4.2	3.5	0.8	55.5	28.3	27.2	3,992
North	1.6	2,269	27.2	39.3	3.4	2.9	0.5	57.3	27.1	30.2	2,053
South	2.0	683	27.6	36.3	3.6	3.0	0.7	60.1	27.1	33.0	620
Badia area											
Badia	2.7	626	27.2	38.8	4.3	3.3	1.0	56.9	26.8	30.1	557
Other	1.5	6,682	27.0	39.7	3.9	3.2	0.6	56.4	27.9	28.6	6,109
Education											
No education	7.4	177	29.1	34.0	2.0	1.4	0.6	64.0	20.1	43.9	162
Elementary	4.7	433	30.0	22.2	3.1	1.3	1.9	74.7	27.1	47.6	395
Preparatory	1.8	1,224	27.6	35.4	6.0	5.0	1.0	58.6	21.8	36.8	1,135
Secondary	1.3	3,125	26.9	40.6	3.4	2.9	0.5	56.0	29.0	27.1	2,861
Higher	0.9	2,348	26.1	44.3	3.8	3.2	0.5	52.0	30.2	21.8	2,113
Wealth quintile											
Lowest	2.0	1,313	27.3	39.2	3.5	2.8	0.7	57.3	26.5	30.8	1,166
Second	1.6	1,522	27.3	37.7	3.3	2.2	1.1	59.1	29.2	29.8	1,374
Middle	1.4	1,402	27.5	39.7	2.5	2.2	0.3	57.7	24.3	33.4	1,238
Fourth	1.7	1,428	27.0	38.2	3.4	2.8	0.7	58.4	31.8	26.6	1,334
Highest	1.4	1,644	26.1	42.8	6.2	5.6	0.6	51.0	26.8	24.1	1,553
Total	1.6	7,308	27.0	39.6	3.9	3.2	0.7	56.5	27.8	28.7	6,666

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding 2 months.

8.3 ANEMIA

Anemia is characterized by a low level of hemoglobin in the blood. Hemoglobin is necessary for transporting oxygen from the lungs to other tissues and organs in the body. Anemia can result from a deficiency of iron, foliate, vitamin B_{12}, or some other nutrients. This type of anemia is commonly referred to as iron deficiency anemia and is the most widespread form of malnutrition in the world. Young children and pregnant and postpartum women are the most severely affected because of the high iron demands of infant growth and pregnancy. Anemia can also be the result of hemorrhage and chronic disease, malaria, parasitic infection, or genetic disorders.

Levels of anemia were classified as severe, moderate, or mild according to criteria developed by the World Health Organization. Children with < 7.0 g/dl of hemoglobin are classified as having severe anemia, those with 7.0-9.9 g/dl are classified as having moderate anemia, and those with 10.0-10.9 g/dl are classified as having mild anemia. Women with < 7.0 g/dl are classified as having severe anemia, those with 7.0-9.9 g/dl are classified as having moderate anemia, and non-pregnant women with 10.0-11.9 g/dl and pregnant women with 10.0-10.9 g/dl are classified as having mild anemia.

Hemoglobin testing is the primary method of anemia diagnosis. The 2009 JPFHS included direct measurement of hemoglobin levels for children (6-59 months) and all women (15-49 years) in half of the households. Hemoglobin measurements were taken in the field using the HemoCue system (HemoCue AB, Sweden). A drop of capillary blood taken from the finger is drawn in one continuous process directly into a reagent-coated microcuvette that serves as a blood collection device. Excess blood on the outside of the microcuvette is wiped off and the filled microcuvette is inserted into a cuvette holder of a portable, battery-operated photometer. In less than a minute, hemoglobin concentration is indicated on a digital readout in grams per deciliter.

About 84 percent of eligible children and 82 percent of all women age 15-49 were tested for hemoglobin levels. The remaining eligible children and women could not be measured for various reasons such as not being available in the household at the time of the interview. Before hemoglobin testing, a separate informed consent statement was read to the respondent explaining that participation in the hemoglobin testing was completely voluntary. This too could have led to refusals of testing by the mother for herself or her child. In some cases measurements were not taken if the child was too sick. However, because missing information is almost uniform by background characteristics for both children and women, we can assume that the response rate has not caused any bias in the data.

8.3.1 Prevalence of Anemia in Children

Table 8.3 shows anemia levels for children age 6-59 months. A total of 3,454 children were tested for anemia. Anemia is common among children in Jordan; one-third of children are anemic (34 percent). Less than half of children who suffer from anemia are classified as having moderate anemia (15 percent of all children), and more than half of children who suffer from anemia are classified as having mild anemia (19 percent of all children). Almost no children are classified as having severe anemia. Among infants the prevalence of any anemia increases with age to peak at 56 percent for the age group of 9-11 months, after which it declines to 22 percent for the age group 48-59 months.

Anemia rates are the same for both boys and girls (Table 8.3). There is a substantial difference in anemia rates among children by mother's education and wealth status. The rate of anemia is higher among children born to mothers with no education than to children born to mothers with secondary or higher education (49 percent versus 30 percent). A large proportion of this difference is due to moderate anemia. The prevalence of anemia among children is higher in rural areas than in urban areas (40 percent versus 33 percent). More children from the South region (41 percent) are anemic than children from the North and Central regions (36 and 31 percent, respectively). Anemia prevalence is also high among children living in Badia areas (38 percent). The prevalence of anemia varies from 24 percent in Madaba governorate to 43 percent in Ma'an and to 45 percent in Karak governorate.

Table 8.3 Prevalence of anemia in children

Percentage of children age 6-59 months classified as having anemia, by background characteristics, Jordan 2009

Background characteristic	Anemia status by hemoglobin level			Any anemia	Number of children
	Mild (10.0-10.9 g/dl)	Moderate (7.0-9.9 g/dl)	Severe (below 7.0 g/dl)		
Age in months					
6-8	23.3	26.8	0.0	50.0	180
9-11	24.2	31.4	0.1	55.6	219
12-17	26.7	26.0	0.1	52.7	443
18-23	21.9	21.1	0.0	43.0	387
24-35	15.8	12.5	0.0	28.3	813
36-47	15.0	9.4	0.0	24.4	723
48-59	17.0	5.3	0.0	22.3	688
Sex					
Male	18.9	14.9	0.0	33.8	1,811
Female	18.9	15.2	0.0	34.1	1,643
Residence					
Urban	18.1	14.5	0.0	32.6	2,835
Rural	22.4	17.3	0.1	39.8	619
Governorates					
Amman	16.7	15.0	0.0	31.8	1,161
Balqa	21.8	17.4	0.0	39.2	225
Zarqa	16.2	12.2	0.0	28.4	513
Madaba	17.1	7.3	0.0	24.3	78
Irbid	21.8	16.5	0.0	38.3	740
Mafraq	17.1	9.8	0.0	26.9	172
Jarash	23.5	12.6	0.0	36.1	125
Ajloun	20.8	15.0	0.0	35.8	86
Karak	23.0	22.0	0.3	45.3	155
Tafiela	18.0	19.4	0.0	37.5	57
Ma'an	23.6	18.8	0.4	42.8	69
Aqaba	15.8	16.1	0.3	32.2	74
Region					
Central	17.2	14.3	0.0	31.4	1,977
North	21.2	14.9	0.0	36.1	1,123
South	20.8	19.7	0.2	40.8	354
Badia area					
Badia	22.8	15.4	0.1	38.4	343
Other	18.4	15.0	0.0	33.4	3,111
Mother's education[1]					
No education	20.7	28.8	0.0	49.4	76
Elementary	17.0	20.7	0.2	37.9	208
Preparatory	18.5	16.7	0.0	35.2	540
Secondary	19.8	15.3	0.0	35.1	1,569
Higher	17.7	12.0	0.0	29.7	1,039
Wealth quintile					
Lowest	21.7	20.7	0.1	42.5	845
Second	21.6	15.2	0.0	36.8	932
Middle	17.1	14.4	0.0	31.5	682
Fourth	17.4	11.9	0.0	29.3	646
Highest	10.6	8.2	0.0	18.9	349
Mother's interview status					
Interviewed	19.0	15.0	0.0	33.9	3,400
Not interviewed but in household	*	*	*	*	32
Not interviewed, and not in the household[2]	*	*	*	*	23
Total	18.9	15.0	0.0	33.9	3,454

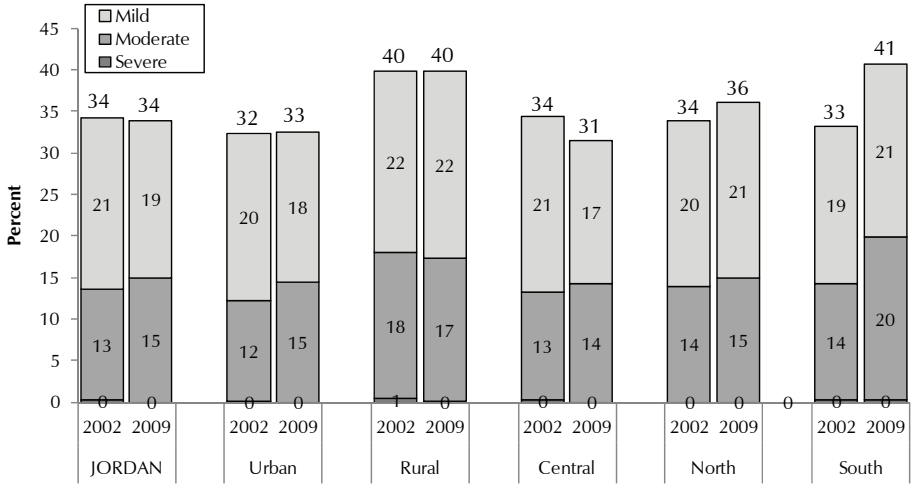
Note: Table is based on children who slept in the household the night before the interview. Prevalence of anemia, based on hemoglobin levels, is adjusted for altitude using formulas in CDC, 1998. Hemoglobin in grams per deciliter (g/dl). An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed

[1] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

[2] Includes children whose mothers are deceased.

Figure 8.4 shows that the prevalence of anemia has not changed since 2002: it has slightly decreased in the Central region (32 percent versus 34 percent), while it has slightly increased in the North region (from 34 percent to 36 percent) and significantly increased in the South (from 33 percent to 41 percent).

Figure 8.4 **Prevalence of Anemia among Children 6-59 Months, JPFHS 2002 and JPFHS 2009**



8.3.2 Prevalence of Anemia in Women

Table 8.4 shows the prevalence of anemia in women age 15-49 years.. Anemia is also common among women in Jordan; about one in four women are anemic (25 percent). About one in five women who suffer from anemia is classified as having moderate anemia (5 percent of all women), and four in five women who suffer from anemia are classified as having mild anemia (21 percent of all women). Almost no women are classified as having severe anemia.

Age is associated with anemia levels, with the highest prevalence among women age 40-49 (32 percent). The prevalence of anemia among women is higher in rural areas than in urban areas (29 percent versus 25 percent). Women from the South region (30 percent) are more likely to be anemic than women from the North and Central regions (27 and 24 percent, respectively). The prevalence of anemia among women varies from 21 percent in Madaba and 23 percent in Amman and Mafraq governorates to 35 percent in Aqaba governorates. Also, women with no education had higher levels of anemia (32 percent) than women with secondary and higher education (26 and 22 percent, respectively). In addition, the proportion of uneducated women with moderate anemia is more than twice that of women with higher education (10 percent versus 4 percent).

Among the ever-married women, 30 percent have some degree of anemia. About 24 percent have mild and 6 percent have moderate forms of anemia (Table 8.4). The prevalence of anemia in ever-married women increases as a woman gives birth to more children. One in four women with no children (26 percent) is anemic compared with about one in three women with six or more children (34 percent). Somewhat surprisingly, pregnant and breastfeeding women had lower levels of anemia than non-pregnant, non-lactating women (26 and 28 percent compared with 31 percent).

Table 8.4 Prevalence of anemia in women

Percentage of women age 15-49 with anemia, by background characteristics, Jordan 2009

Background characteristic	Anemia status by hemoglobin level: Mild anemia	Moderate anemia	Severe anemia	Any anemia	Number of women
ALL WOMEN IN HOUSEHOLD					
Age					
15-19	16.9	3.2	0.0	20.1	1,501
20-29	19.2	3.4	0.2	22.7	2,167
30-39	22.2	5.1	0.2	27.5	1,913
40-49	24.7	7.2	0.2	32.0	1,462
Residence					
Urban	20.2	4.4	0.1	24.7	5,830
Rural	23.0	5.4	0.3	28.7	1,212
Governorates					
Amman	17.9	4.8	0.0	22.7	2,607
Balqa	27.9	5.9	0.7	34.4	478
Zarqa	20.5	3.0	0.0	23.5	953
Madaba	18.6	2.8	0.0	21.4	163
Irbid	22.3	4.3	0.1	26.8	1,468
Mafraq	18.9	4.0	0.3	23.3	322
Jarash	23.1	6.1	0.4	29.6	207
Ajloun	19.4	6.2	0.5	26.1	182
Karak	24.2	5.9	0.2	30.3	298
Tafiela	19.5	4.2	0.3	24.0	114
Ma'an	21.5	6.8	0.2	28.5	128
Aqaba	29.0	6.0	0.0	35.0	124
Region					
Central	19.7	4.4	0.1	24.2	4,200
North	21.6	4.6	0.2	26.5	2,178
South	23.8	5.8	0.2	29.7	664
Badia area					
Badia	23.9	4.8	0.3	29.0	581
Other	20.4	4.6	0.1	25.1	6,462
Education[1]					
No education	21.6	10.2	0.6	32.3	172
Elementary	19.9	6.1	0.9	26.9	421
Preparatory	22.5	6.3	0.1	28.8	1,190
Secondary	21.8	3.8	0.1	25.6	3,056
Higher	18.2	4.1	0.1	22.4	2,204
Wealth quintile					
Lowest	23.8	5.8	0.1	29.7	1,274
Second	22.6	7.2	0.4	30.2	1,459
Middle	21.4	3.3	0.1	24.7	1,365
Fourth	21.8	2.7	0.1	24.6	1,398
Highest	14.6	4.1	0.0	18.6	1,547
Total	20.7	4.6	0.1	25.4	7,043
INTERVIEWED EVER-MARRIED WOMEN[2]					
Number of children ever born					
0	20.9	5.0	0.0	25.9	416
1	24.6	2.9	0.1	27.6	504
2-3	23.0	5.1	0.0	28.1	1,287
4-5	24.7	5.6	0.2	30.5	1,245
6+	26.1	7.7	0.4	34.1	1,018
Maternity status					
Pregnant	15.9	9.0	0.5	25.5	511
Breastfeeding	25.3	3.0	0.0	28.3	884
Neither	25.2	5.7	0.1	31.1	3,074
Using IUD					
Yes	29.0	4.7	0.3	34.0	1,018
No	22.7	5.8	0.1	28.7	3,451
Smoking status					
Smokes cigarettes/tobacco	22.5	4.4	0.0	26.9	537
Does not smoke	24.4	5.7	0.2	30.3	3,930
Total	24.1	5.6	0.2	29.9	4,469

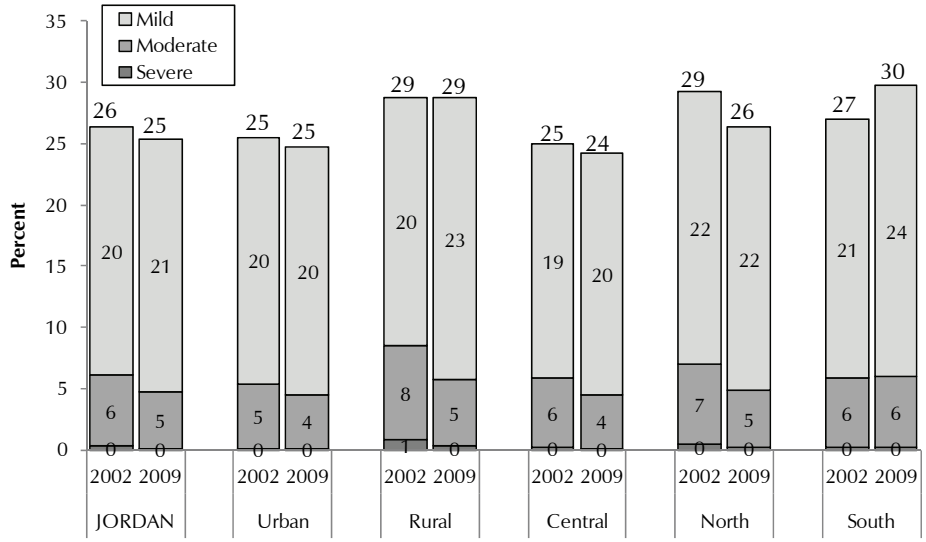
Note: Table is based on women who stayed in the household the night before the interview. Prevalence is adjusted for altitude using CDC formulas (CDC, 1998). Women with <7.0 g/dl (grams per deciliter) of hemoglobin have severe anemia, women with 7.0-9.9 g/dl have moderate anemia, and pregnant women with 10.0-10.9 g/dl and non-pregnant women with 10.0-11.9 g/dl have mild anemia.

[1] For women who are not interviewed, information is taken from the Household Questionnaire.

[2] Prevalence is adjusted for smoking status using formulas in CDC, 1998.

Figure 8.5 shows that the prevalence of anemia among women has not changed since 2002, either at the national level or in the Central region. However, it has slightly decreased in the North region (29 percent versus 26 percent), and it has slightly increased in the South region (from 27 percent to 30 percent).

Figure 8.5 **Prevalence of Anemia among All Women, JPFHS 2002 and JPFHS 2009**



INFANT AND CHILD MORTALITY 9

This chapter presents levels, trends, and differentials in neonatal, postneonatal, infant, and child mortality. Estimates of perinatal mortality are also provided. The information is relevant both for monitoring and evaluating ongoing health programs and for formulating future policies. The levels of infant and child mortality are basic indicators of a country's socioeconomic status and quality of life. Infant and child mortality rates are calculated from information collected in the birth history section of the Woman's Questionnaire. The birth history section begins with questions about the respondent's experience with childbearing (i.e., the number of sons and daughters living with the mother, the number living away, and the number who have died). These questions are followed by a retrospective birth history in which each respondent is asked to list each of her births, starting with the first birth. For each birth, data are obtained on sex, month and year of birth, survivorship status, and current age, or if the child was dead, age at death. This information is used to directly estimate the following five mortality rates:

Neonatal mortality: the probability of dying within the first month of life

Postneonatal mortality: the probability of dying after the first month of life but before the first birthday (the difference between infant and neonatal mortality rates)

Infant mortality: the probability of dying before the first birthday

Child mortality: the probability of dying between the first and fifth birthday

Under-five mortality: the probability of dying between birth and the fifth birthday

All rates are expressed per 1,000 live births, except for child mortality, which is expressed per 1,000 children surviving to 12 months of age.

The reliability of mortality estimates depends on the sampling variability of the estimates and on non-sampling errors. Sampling variability and sampling errors are discussed in Appendix B. Non-sampling errors depend on the completeness of a women's recall about children who have died, the absence of significant differences between the displacement of birth dates of living and dead children, and accurate reporting of ages at death. Previous survey results have shown some heaping of age at death at exactly 12 months or one 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 their classification as child deaths tends to negatively bias infant mortality estimates and positively bias child mortality estimates. The distribution of death by age at death in months (see Table C.6 in Appendix C) shows that there is minor heaping at 12 months for deaths reported during the most recent period (0-4 years prior to the survey) and for deaths during the preceding period (5-9 years prior to the survey). Therefore, mortality levels (0-4 and 5-9 years prior to the survey) may be very slightly affected; however, the heaping is so limited that it does not justify any adjustment.

An unusual pattern in the distribution of births by calendar years is an indication of omission of children or age displacement. However, Table C.4 in Appendix C shows that the percentage of all births for which a month and year of birth was reported remains stable over time and is close to 100 percent.

Underreporting of deaths is usually assumed to be higher for deaths that occur very early in infancy. An examination of the ratios in Tables C.5 and C.6 show that the proportion of neonatal deaths occurring in the first week of life (71 percent) and the proportion of infant deaths occurring during the

first month of life (69 percent) are entirely plausible and in-line with findings from the 2002 JPFHS survey (67 percent and 71 percent, respectively). This indicates no evidence of selective underreporting or misreporting of age at death that would compromise the quality of the 2009 JPFHS rates for childhood mortality.

9.1 LEVELS AND TRENDS

It is seldom possible to establish mortality levels with confidence for a period of 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, completeness of death reporting may be affected by the length of time before the survey. Second, the accuracy of reports of age at death and of date of birth may deteriorate with time. In Jordan the level of childhood mortality is relatively low; as a result, minor inaccuracies in reports of age at death or date of birth may have a significant impact on the mortality estimates. 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 made with caution.

Table 9.1 shows neonatal, postneonatal, infant, child, and under-five mortality rates in the 15 years preceding the survey. Under-five mortality for the period 0-4 years before the survey (which corresponds to the years 2004-2009) is 28 deaths per 1,000 live births. Most of the mortality occurs during the first year of life, as evidenced by the fact that the infant mortality rate is 23 deaths per 1,000 live births while mortality between the first and the fifth birthday is 5 per 1,000 children surviving at the first birthday. As expected, mortality during the first month, or neonatal mortality, is higher than post-neonatal mortality (15 per 1,000 versus 8 per 1,000, respectively) and accounts for 65 percent of the overall infant mortality.

Table 9.1 Early childhood mortality rates

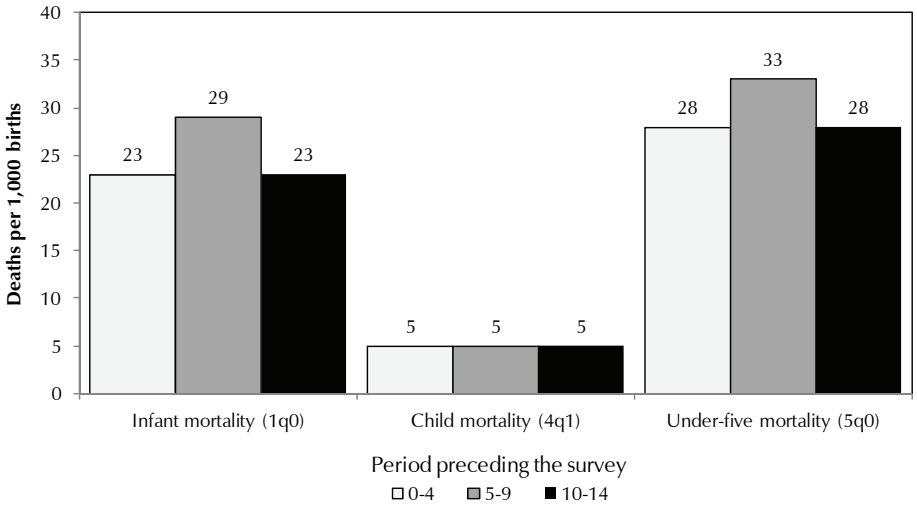
Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Jordan 2009

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
0-4	15	8	23	5	28
5-9	22	7	29	5	33
10-14	15	8	23	5	28

[1] Computed as the difference between the infant and neonatal mortality rates.

The results in Table 9.1 can be used to explore the trend in early childhood mortality in Jordan. It should be noted however that the rates in Table 9.1 are derived from retrospective data from the 2009 JPFHS. Thus, they are subject to errors of omission and misreporting of date of birth and age at death, which are usually more common for events further back in time. In addition, sampling errors associated with infant and child mortality estimates are quite large, and slight differences between two estimates should be interpreted with caution. According to the 2009 JPFHS estimates, infant mortality seems to have increased from 23 deaths per 1,000 births in the period 10-14 years before the survey (circa 1997), to 29 deaths in the period 5-9 years before the survey (circa 2002) and has declined recently to the same level as observed for the period 10-14 years ago (23 deaths per 1,000) (Figure 9.1). During the same period, child mortality has remained the same. Consequently, under-five mortality has followed the same trend as infant mortality: first an increase from 28 to 33 deaths per 1,000 and then a decrease to return to 28 deaths per 1,000. It is difficult to conclude whether the increase followed by a decrease of mortality during the past 15 years is real or simply due to data quality and sampling variability. However, it seems that childhood mortality has globally remained the same from the end of the nineties to the present.

Figure 9.1 Trends in Infant and Child Mortality by Five-year Periods Preceding the Survey, 2009

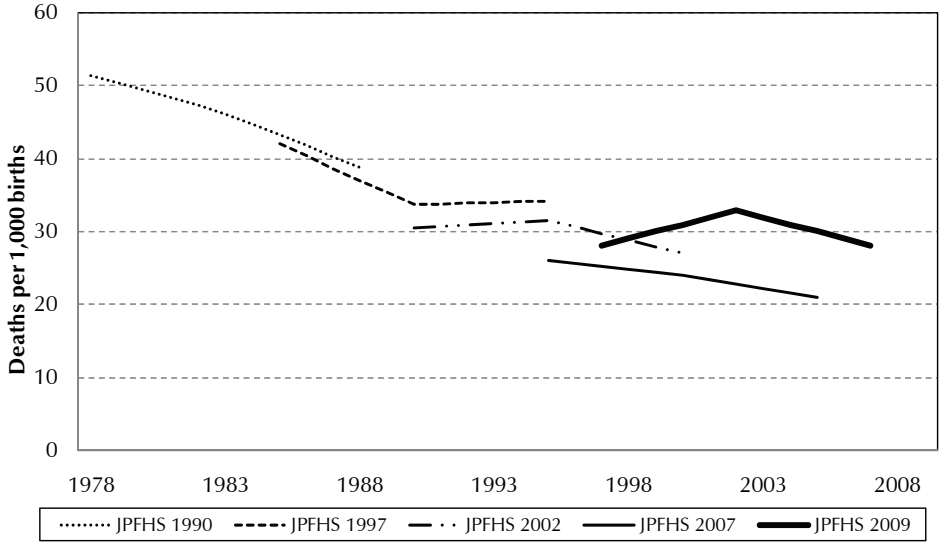


JPFHS 2009

Another approach to looking at trends in mortality levels involves the comparison of estimates from surveys conducted at different points in time. Results from the five JPFHS surveys (conducted in 1990, 1997, 2002, 2007, and 2009) show a decline in under-five mortality rates over the last 20 years (Figure 9.2). According to the 2007 JPFHS, under-five mortality had declined from 27 deaths per 1,000 in 2002 to 21 in 2007. Consequently, compared with the 2007 findings, the current survey shows an important increase of under-five mortality (from 21 to 28 deaths per 1,000). The large confidence intervals associated with both the 2007 and 2009 estimated rates overlap[1], and therefore caution should be taken when drawing conclusions. This inconsistency between the 2007 and 2009 results may also result from underestimating the infant and child mortality in the 2007 JPFHS. Further analyses would be necessary to determine whether or not the 2007 levels of mortality were underestimated and whether or not the increase in mortality revealed by the current survey around the year 2001 was real. If the 2007 levels of mortality were underestimated, then under-five mortality has remained unchanged since the 2002 JPFHS (27 per 1,000 in 2002 versus 28 per 1,000 in 2009).

[1] Tables B.1 to B.19 in Appendix B present the sampling errors. In the 2009 JPFHS, at the national level, the under-five mortality rate was estimated to be 28 per 1,000, with confidence limits of 22 and 34. This means that there is a 95 percent probability that the *true* under-five mortality rate is somewhere between 22 and 34 deaths per 1,000. In the 2002 JPFHS, the under-five mortality rate was estimated to be 21 per 1,000, and the confidence limits were 16 and 27. Because the confidence limits of the 2007 (16-27) and 2009 (22-34) estimates overlap, it is not possible to conclude that there was a statistically significant change in the level of mortality between the two surveys.

Figure 9.2 **Trends in under-Five Mortality, 1990-2009**



9.2 SOCIOECONOMIC DIFFERENTIALS IN INFANT AND CHILD MORTALITY

Mortality differentials by place of residence, region, educational level of the mother, and household wealth are presented in Table 9.2. To have a sufficient number of cases to ensure statistically reliable mortality estimates for population subgroups, mortality rates are presented for the 10-year period preceding the survey (approximately 2000 to 2009).

Mortality levels in urban areas are consistently higher than those in rural areas. In the 10-year period before the survey, neonatal mortality in urban areas was 20 deaths per 1,000 live births, compared with 13 deaths per 1,000 live births in rural areas. The under-five mortality rate during the same period was 32 deaths per 1,000 live births in urban areas and 24 deaths per 1,000 deaths in rural areas. Postneonatal and child mortality rates were similar for urban and rural areas.

Differences in mortality by region are marked. Neonatal, infant, child, and under-five mortality are all higher in the Central region than in the North and South regions. Under-five mortality varies from 17 deaths per 1,000 live births in Zarqa governorate to 39 deaths per 1,000 live births in Amman and Jarash governorates. Differentials in neonatal and infant mortality show a similar pattern. For example, infant mortality ranges from 15 deaths per 1,000 live births in Zarqa and Karak to 32 deaths per 1,000 live births in Amman. These rates are slightly higher in non-Badia areas than in Badia areas.

The data do not reveal a clear association between child mortality and mother's education. Mortality is consistently higher for children of mothers who received elementary or preparatory education, except in the case of child mortality. For all childhood mortality rates children of mothers with higher education have the lowest level of mortality. Under-five mortality ranges from 52 deaths per 1,000 live births for children of women who attended elementary school to 20 deaths per 1,000 live births for children of women with higher than secondary education.

There is no clear association between infant and under-five mortality rates and households' wealth quintile. Children in the lowest (36 per 1,000) and fourth wealth quintiles (35 per 1,000) are more likely to die during the first five years of age than children of mothers in other wealth quintiles. The under-five mortality rate reaches its lowest level in the second wealth quintile (23 per 1,000).

Table 9.2 Early childhood mortality rates by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by background characteristic, Jordan 2009

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Residence					
Urban	20	7	27	5	32
Rural	13	8	21	4	24
Governorates					
Amman	25	7	32	7	39
Balqa	18	10	28	5	33
Zarqa	11	5	15	2	17
Madaba	16	14	30	7	37
Irbid	12	9	21	3	24
Mafraq	18	11	29	5	34
Jarash	25	5	30	9	39
Ajloun	19	7	26	4	30
Karak	10	5	15	3	18
Tafiela	16	7	23	2	25
Ma'an	13	8	21	4	25
Aqaba	20	2	22	8	29
Region					
Central	21	7	28	6	33
North	15	8	24	4	28
South	14	5	19	4	23
Badia area					
Badia	12	6	18	3	21
Other	19	7	27	5	32
Education					
No education	16	9	24	8	32
Elementary	39	10	49	2	52
Preparatory	25	11	37	4	41
Secondary	20	7	27	5	32
Higher	10	5	15	5	20
Wealth quintile					
Lowest	19	13	32	4	36
Second	12	6	19	4	23
Middle	18	6	24	4	28
Fourth	20	6	26	9	35
Highest	25	4	29	3	32
Total	19	7	26	5	31

[1] Computed as the difference between the infant and neonatal mortality rates

9.3 DEMOGRAPHIC DIFFERENTIALS IN INFANT AND CHILD MORTALITY

The demographic characteristics of both mother and child have been found to play an important role in the survival chances of young children. Table 9.3 presents early childhood mortality rates by demographic characteristics (i.e., sex of child, mother's age at birth, birth order, length of previous birth interval, and birth size).

Childhood mortality is higher for males than females, except for child mortality where the rates are higher for females than for males. Infant mortality shows the biggest difference in mortality rates for males (30 deaths per 1,000 live births) and females (22 births per 1,000 births). The under-five mortality rates for male and female children are 32 and 29 deaths per 1,000 live births, respectively.

Table 9.3 Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by demographic characteristics, Jordan 2009

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Child's sex					
Male	22	7	30	3	32
Female	15	7	22	7	29
Mother's age at birth					
<20	15	6	20	4	25
20-29	15	7	22	6	28
30-39	23	7	30	3	33
40-49	(41)	(11)	(51)	(0)	51
Birth order					
1	18	5	23	4	27
2-3	15	8	24	5	29
4-6	16	7	23	5	28
7+	44	9	53	5	58
Previous birth interval[2]					
<2 years	24	11	35	6	41
2 years	22	6	28	3	32
3 years	9	2	11	4	15
4+ years	14	8	22	7	29
Birth size[3]					
Small/very small	32	19	51	na	na
Average or larger	11	4	15	na	na

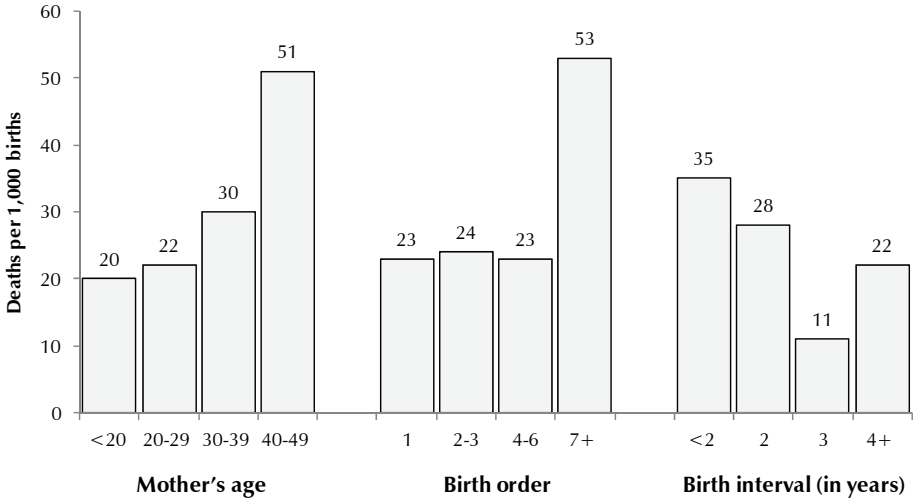
na = Not applicable
Note: Rates in parentheses are based on 250 to 499 unweighted exposed persons.
[1] Computed as the difference between the infant and neonatal mortality rates
[2] Excludes first-order births
[3] Rates for the five-year period before the survey

In general, childhood mortality rates increase as mother's age at birth increases: infant mortality among children born to mothers 40-49 is more than twice the mortality among children born to mothers age 20-29 (Figure 9.3). This pattern is not true for child mortality, where children born to women age 20-29 had an increased risk of dying compared with children of mothers who were less than age 20 or more than age 30 at the time of birth. Levels of under-five mortality increase with birth order, from a minimum of 27 per 1,000 among first births to a maximum of 58 per 1,000 among seventh order and higher births (Figure 9.3).

Childhood mortality rates are described as having a U-shaped relationship with previous birth interval, with children born less than two years after a previous birth experiencing higher risk of death than children born two to three years after a previous birth. Under-five mortality decreases sharply from a high of 41 per 1,000 for children born less than two years after a previous birth to 15 per 1,000 live births for children born three years after a previous birth. It then increases to 29 per 1,000 live births for children born four years or more after a previous birth.

Children's weight at birth is also 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 three times the risk of dying compared with children whose size at birth was reported as "average or larger." Of children reported to be "small or very small," 51 per 1,000 did not survive to their first birthday compared with 15 per 1,000 children reported to be medium or large.

Figure 9.3 Infant Mortality by Selected Demographic Characteristics, 2009



JPFHS 2009

9.4 PERINATAL MORTALITY

Pregnancy losses occurring after seven completed months of gestation (stillbirths) plus deaths to live births within the first seven days of life (early neonatal deaths) constitute perinatal deaths. The distinction between a stillbirth and an early neonatal death may be a fine one, depending often on the observed presence or absence of some faint signs of life after delivery. The causes of stillbirths and early neonatal deaths are overlapping, and examining just one or the other can understate the true level of mortality around delivery. For this reason, it is suggested that both event types be combined and examined together. The perinatal mortality rate is calculated by dividing the total number of perinatal deaths by the total number of pregnancies reaching seven months' gestation.

Table 9.4 presents the number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey. Overall, the perinatal mortality rate is 19 perinatal deaths per 1,000 pregnancies, a slight increase from the level observed in 2007 (15 deaths per 1,000 pregnancies). The perinatal mortality rate is highest among teenage mothers and mothers age 40-49 (26 and 27 deaths per 1,000 pregnancies, respectively). Pregnancies with a short preceding interval are also at high perinatal risk (28 per 1,000 for an interpregnancy interval of less than 15 months).

Perinatal mortality is also higher among women in rural areas (24 per 1,000) than those in urban areas (17 per 1,000), with the highest perinatal mortality rates found in Mafraq governorate (30 per 1,000) and Badia areas (28 per 1,000). There is no clear relationship between perinatal mortality and women's level of education or household wealth status.

Table 9.4 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by background characteristics, Jordan 2009

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	3	11	26	539
20-29	36	48	16	5,181
30-39	37	28	20	3,219
40-49	5	4	27	315
Previous pregnancy interval in months				
First pregnancy	8	8	9	1,903
<15	9	33	28	1,504
15-26	32	20	22	2,406
27-38	9	11	14	1,351
39+	23	19	20	2,090
Residence				
Urban	59	75	17	7,641
Rural	22	17	24	1,613
Governorates				
Amman	21	38	17	3,505
Balqa	4	11	27	575
Zarqa	17	5	16	1,322
Madaba	1	2	16	203
Irbid	19	15	19	1,756
Mafraq	8	6	30	480
Jarash	3	4	23	324
Ajloun	1	2	16	214
Karak	2	3	12	365
Tafiela	1	2	20	147
Ma'an	3	2	26	170
Aqaba	1	2	15	192
Region				
Central	43	56	18	5,605
North	31	27	21	2,775
South	7	8	17	874
Badia area				
Badia	17	8	28	891
Other	64	84	18	8,363
Education				
No education	3	2	28	185
Elementary	8	8	31	509
Preparatory	14	19	25	1,303
Secondary	34	53	21	4,216
Higher	21	9	10	3,042
Wealth quintile				
Lowest	24	20	20	2,191
Second	24	21	21	2,195
Middle	24	29	27	1,942
Fourth	9	19	16	1,708
Highest	0	2	2	1,218
Total	81	91	19	9,254

[1] Stillbirths are fetal deaths in pregnancies lasting seven or more months.
[2] Early neonatal deaths are deaths at age 0-6 days among live-born children.
[3] The sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months' duration, expressed per 1000.

9.5 HIGH-RISK FERTILITY BEHAVIOR

Findings from scientific studies have confirmed that there is a strong relationship between children's chances of dying and certain fertility behaviors. Typically, the probability of dying in early childhood is much greater if children are born to mothers who are too young or too old, if they are born after a short preceding birth interval, or if they are high-parity births. Very young mothers may experience difficult pregnancies and deliveries because of their physical immaturity. Older women may also experience age-related problems during pregnancies and delivery. In this analysis, a mother is considered young if she is less than 18 years and old if she is more than 34 years at the time of delivery. A short birth interval is a birth occurring within 24 months of a previous birth.

Table 9.5 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.

Table 9.5 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 risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Jordan 2009

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[1]
	Percentage of births	Risk ratio	
Not in any high risk category	20.9	1.00	15.4[a]
Unavoidable risk category			
First order births between ages 18 and 34 years	21.5	1.59	5.7
Single high-risk category			
Mother's age <18	1.4	1.28	0.4
Mother's age >34	2.0	1.01	5.8
Birth interval <24 months	16.3	2.63	9.9
Birth order >3	16.6	1.50	13.4
Subtotal	36.2	1.97	29.5
Multiple high-risk category			
Age <18 & birth interval <24 months[2]	0.2	*	0.1
Age >34 & birth interval <24 months	0.6	1.11	0.6
Age >34 & birth order >3	12.4	1.62	36.4
Age >34 & birth interval <24 months & birth order >3	2.0	3.00	4.1
Birth interval <24 months & birth order >3	6.2	2.80	8.2
Subtotal	21.4	2.21	49.4
In any avoidable high-risk category	57.6	2.06	78.9
Total	100.0	na	100.0
Number of births/women	9,173	na	9,651

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births not in any high-risk category. An asterisk indicates that the figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth less than 15 months ago, or latest birth being of order 3 or higher.
[2] Includes the category age <18 and birth order >3
[a] Includes sterilized women

Fifty-eight percent of the children born during the five years preceding the survey were at an elevated and avoidable risk of dying. In 36 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 21 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 and those whose preceding birth interval was shorter than 24 months. Six percent of children were born with a preceding birth interval of less than 24 months and with birth order higher than three.

Table 9.5 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 9.5 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 factors are short birth intervals and a birth order greater than three. Children born less than 24 months after the previous birth and children born from a woman who has had three or more children are more (2.6 more and 1.5 more, respectively) 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 birth order higher than three and birth interval less than 24 months is detrimental to children's survival (risk ratio of 3.0), as is the combination of a short birth interval and a high birth order (2.8).

The last column of Table 9.5 examines the potential for high-risk births among currently married women. A woman's current age, time elapsed since the last birth, and parity are used to determine the risk categories in which any birth she conceived at the time of the survey would fall. 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.

Overall, eight in ten married women (79 percent) have the potential to give birth to a child at increased risk of death. Almost one in three married women has the potential for having a birth in a single high-risk category (mainly high birth order), and half of all women have the potential for having a birth in a multiple high-risk category (mainly those older than 34 with a high birth order). The figures in Table 9.5 demonstrate the strong influence of parity (the number of children the mother has had) on the risk of death among children under five years of age.

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SAMPLE DESIGN

Appendix A

A.1 OBJECTIVES OF THE SURVEY

The main objectives of the 2009 JPFHS survey are to provide up-to-date information on fertility and childhood mortality levels; fertility preferences; awareness, approval, and use of family planning methods; and women's and child's nutrition. All ever-married women age15-49 who slept in the selected households the night before the survey interview were eligible for the survey. The sample is designed to produce representative results for the country as a whole, for the urban and rural areas, for regions, for Badia and non-Badia areas, and for each of the 12 governorates.

A.2 SAMPLING FRAME

Administratively, Jordan is divided into 12 governorates. Each governorate is subdivided into districts; each district into sub-districts; each sub-district into localities; and each locality into areas and then sub-areas. In addition to these administrative units, during the 2004 Jordan Population and Housing Census (JPHC 2004), each sub-area was subdivided into convenient area units called census blocks. An electronic file of a complete list of all the census blocks was created. This list contains census information on households, population, geographical locations, and socioeconomic characteristics of each block. Based on this list, the census blocks were then regrouped to form a general statistical unit of moderate size (30 households or more), called a cluster, which could be widely used in various surveys. The sample of the 2009 JPFHS was selected from the frame of cluster units provided by the Department of Statistics (DoS). The frame excluded the population living in remote areas (most of whom are nomads), as well as those living in collective housing units, such as hotels, hospitals, work camps, prisons, and the like. Table A.1 gives the distribution of the clusters and their average size, by governorate and by urban-rural residence.

Table A.1 Distribution of clusters by governorate and by type of residence

	Number of clusters			Average cluster size		
Governorate	Urban	Rural	Total	Urban	Rural	Total
Amman	4,657	329	4,986	77	61	76
Balqa	549	248	797	82	68	77
Zarqa	1,875	128	2,003	72	51	71
Madaba	234	112	346	70	56	65
Irbid	1,931	422	2,353	71	66	70
Mafraq	224	353	577	72	63	67
Jarash	217	142	359	75	66	72
Ajloun	222	80	302	71	59	68
Karak	176	373	549	66	64	65
Tafiela	152	61	213	63	56	61
Ma'an	133	121	254	64	55	60
Aqaba	249	38	287	62	57	62
Total	10,619	2,407	13,025	74	62	72

Source: 2004 Population and Housing Census

In total, there are 13,025 clusters in Jordan. The average size of a cluster is 72 households. In the urban areas, the average is 74 households, and the average is 62 in the rural areas. For the 2009 JPFHS a sample of 16 households was taken per cluster. Table A.2 and Table A.3 present the distribution of household population and the number of households by governorate and by urban-rural residence. In Jordan, 83 percent of the population live in urban areas (a locality with a population of 5,000 or more), occupying 84 percent of the households, according to the sampling frame. The urban-rural distribution was modified following the 2004 census.

Table A.2 Population distribution by governorate and by type of residence

	Household population			Proportion	
Governorate	Urban	Rural	Total	Urban	Governorate
Amman	1,790,064	115,035	1,905,099	0.940	0.380
Balqa	247,080	94,800	341,880	0.723	0.068
Zarqa	717,841	34,924	752,765	0.954	0.150
Madaba	91,760	37,347	129,107	0.711	0.026
Irbid	757,960	158,787	916,747	0.827	0.183
Mafraq	95,077	140,274	235,351	0.404	0.047
Jarash	95,371	57,242	152,613	0.625	0.030
Ajloun	89,954	28,834	118,788	0.757	0.024
Karak	65,553	135,199	200,752	0.327	0.040
Tafiela	53,616	20,482	74,098	0.724	0.015
Ma'an	49,618	40,340	89,958	0.552	0.018
Aqaba	81,467	13,622	95,089	0.857	0.019
Total	4,135,361	876,886	5,012,247	0.825	1.000

Source: 2004 Population and Housing Census

Table A.3 Distribution of households by governorate and by type of residence

	Number of households			Proportion	
Governorate	Urban	Rural	Total	Urban	Governorate
Amman	357,977	19,980	377,957	0.947	0.404
Balqa	44,805	16,827	61,632	0.727	0.066
Zarqa	135,770	6,578	142,348	0.954	0.152
Madaba	16,344	6,245	22,589	0.724	0.024
Irbid	137,550	27,668	165,218	0.833	0.177
Mafraq	16,234	22,150	38,384	0.423	0.041
Jarash	16,352	9,351	25,703	0.636	0.027
Ajloun	15,733	4,698	20,431	0.770	0.022
Karak	11,541	23,993	35,534	0.325	0.038
Tafiela	9,566	3,437	13,003	0.736	0.014
Ma'an	8,529	6,609	15,138	0.563	0.016
Aqaba	15,510	2,173	17,683	0.877	0.019
Total	785,911	149,709	935,620	0.840	1.000

Source: 2004 Population and Housing Census

A.3 SAMPLE ALLOCATION AND SAMPLE SELECTION

The sample for the 2009 JPFHS is the same stratified sample selected in two stages from the 2004 census frame that was used in the 2007 JPFHS. Stratification is achieved by separating each governorate into urban and rural areas. The rural areas of each governorate form a single stratum. The urban areas of each governorate form a single stratum if the governorate has no cities having a population of 100,000 or more; otherwise, the urban areas are further stratified in such a way that each city having a population of 100,000 or more forms a single stratum, and the rest of the urban areas together form another stratum. Therefore, the number of urban strata in a governorate depends on the number of cities having a population of 100,000 or more. In three governorates, there are cities having a population of 100,000 or more: Amman, Zarqa, and Irbid. In total, 30 sampling strata have been constructed. Samples were selected independently in each stratum, by a two-stage selection process. By using a probability

proportional to size selection during the first sampling stage, an implicit stratification and proportional allocation was achieved at each of the lower administrative levels. This was done by sorting the clusters within each sampling stratum, according to the administrative levels and then by their socioeconomic characteristics.

In the first stage, 890 clusters were selected with a probability proportional to the cluster size and with an independent selection in each sampling stratum. The cluster size is the number of residential households residing in the cluster given in the sampling frame. The sample allocation was designed to take the governorate level into account. The ideal sample would allocate the 10,000 completed women interviews proportionally to each sampling stratum according to the stratum size. But the proportional allocation would allocate too small a sample size for certain governorates (Tafiela, Ma'an, and Aqaba, with less than 200 completed interviews each). DHS surveys in other countries show that in order to get a reasonable precision for most indicators at the regional level, at least 800 completed interviews of women age 15-49 are needed. This means that a proportional allocation cannot meet the precision request for the small governorates. To assure that the survey precision is comparable across the governorates, it was decided to use an equal size allocation with an adjustment for the governorates of Amman, Zarqa, and Irbid as they represent 38 percent, 15 percent, and 18 percent, respectively, of the population in the kingdom. After the sample allocation by governorate, the samples were proportionally allocated to each sampling stratum within each governorate. Table A.4 shows the sample allocation by governorate and by urban-rural areas within each governorate. The proportional allocation is also presented.

Table A.4 Sample allocation of completed women interviews by governorate and by type of residence

	Proportional allocation			Final allocation		
Governorate	Urban	Rural	Total	Urban	Rural	Total
Amman	3,571	230	3,801	977	68	1,045
Balqa	493	189	682	591	227	818
Zarqa	1,432	70	1,502	807	46	853
Madaba	183	75	258	580	238	818
Irbid	1,512	317	1,829	693	160	853
Mafraq	190	280	470	330	488	818
Jarash	190	114	304	511	307	818
Ajloun	179	58	237	624	194	818
Karak	131	270	401	273	545	818
Tafiela	107	41	148	591	227	818
Ma'an	99	80	179	455	363	818
Aqaba	163	27	190	704	113	818
Total	8,250	1,750	10,000	7,136	2,976	10,112

Table A.5 shows the sample allocation of households and clusters to be selected in the urban and rural areas of each governorate based on the final allocation given in Table A.4. The parameters used to convert the number of completed women interviews to number of households and then to number of clusters were obtained by referencing the survey results of the 2002 JPFHS: 16 households were selected per cluster; the household response rate was assumed to be 95 percent; the individual response rate was assumed to be 95 percent; and there are 0.795 ever-married women 15-49 per household. Both the household response rate and the women's individual response rate were down-modified compared with the 2002 JPFHS survey to reflect the situation changes in the country. Since 2003, for example, a lot of foreigners, such as Egyptians and Iraqis, have come to Jordan to work. These people usually live in groups in ordinary housing units and form households of only men, as shown in the 2004 Population and Housing Census.

After the sample had been selected, it was decided to oversample the Badia Area located in the Central region. In total, 40 complementary clusters were selected in Amman and Zarqa: 2 urban clusters and 25 rural clusters in Amman; 7 urban clusters and 6 rural clusters in Zarqa. This oversampling increased the total number of clusters to 930, with 637 urban clusters and 293 rural clusters.

Table A.5 Sample allocation of households and clusters by governorate and by type of residence

	Allocation of households			Allocation of clusters		
Governorate	Urban	Rural	Total	Urban	Rural	Total
Amman	1,366	99	1,465	86	6	92
Balqa	826	317	1,142	52	20	72
Zarqa	1,169	70	1,240	71	4	75
Madaba	812	330	1,142	51	21	72
Irbid	1,014	225	1,240	61	14	75
Mafraq	461	681	1,142	29	43	72
Jarash	714	428	1,142	45	27	72
Ajloun	865	277	1,142	55	17	72
Karak	373	769	1,142	24	48	72
Tafiela	827	316	1,142	52	20	72
Ma'an	630	512	1,142	40	32	72
Aqaba	979	164	1,142	62	10	72
Total	10,036	4,189	14,225	628	262	890

Before the main survey, an updated household listing operation was carried out in all of the selected clusters. The resulting updated lists of households served as the sampling frame for the selection of households in the second stage. Household selection in the second stage was an equal probability systematic selection of fixed size: 16 households per cluster. With a fixed second stage sample size, it is easy to allocate the fieldwork load to different interviewers and easy to control the fieldwork quality.

A spreadsheet was prepared for the household selection with selected household numbers highlighted for each cluster. The survey interviewer was asked to interview only the pre-selected households. In order to prevent bias, no replacements and no changes of the pre-selected households were allowed in the implementing stages. All ever-married women age 15-49 who slept in the selected households the night before the survey interview were eligible for the survey.

A.4 SELECTION PROBABILITY AND SAMPLING WEIGHT

Sampling probabilities were calculated separately for each sampling stage and for each cluster. The following notations are used:

P_{1hi}: first-stage sampling probability of the i^{th} cluster in stratum h
P_{2hi}: second-stage sampling probability within the i^{th} cluster (household selection)

Let a_h be the number of clusters selected in stratum h, M_{hi} the number of households according to the sampling frame in the i^{th} cluster, and $\sum M_{hi}$ the total number of households in the stratum. The probability of selecting the i^{th} cluster in the 2009 JPFHS sample is calculated as follows:

$$\frac{a_h M_{hi}}{\sum M_{hi}}$$

Let L_{hi} be the number of households listed in the household listing operation in cluster i in stratum h, and let g_{hi} be the number of households selected in the cluster. The second stage's selection probability for each household in the cluster is calculated as follows:

$$P_{2hi} = \frac{g_{hi}}{L_{hi}}$$

The overall selection probability of each household in cluster *i* of stratum *h* is therefore the product of the two stage selection probabilities:

$$P_{hi} = P_{1hi} \times P_{2hi}$$

Because of the non-proportional allocation of the sample to the different governorates, sampling weights are required to ensure the actual representativity of the sample at the national level and at the governorate level as well. The sampling weight for each household in cluster *i* of stratum *h* is the inverse of its overall selection probability:

$$W_{hi} = 1 / P_{hi}$$

A spreadsheet containing all sampling parameters and selection probabilities was prepared to facilitate the calculation of sampling weights. Sampling weights were adjusted for household non-response and for individual non-response. Therefore, two sets of weight were calculated: one set for the households and one set for the individual women. The difference of the household weight and the individual weight was introduced by the women's non-response. The final weights were normalized in order to give the total number of unweighted cases equal to the total number of weighted cases at national level, for both household weights and individual weights.

A.5 SAMPLE IMPLEMENTATION

Table A.6 presents the sample implementation results by giving the number of households selected and interviewed and the number of ever-married women found and interviewed. According to the definition of each category, the response rates for household survey and woman survey were calculated based on the following formulas. The household response rate was calculated by:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

In a similar way, the woman individual response rate was calculated by:

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

Table A.6 Sample implementation

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to urban-rural residence and region, Jordan 2009

	Residence		Region			
Result	Urban	Rural	Central	North	South	Total
Selected households						
Completed (C)	90.8	92.3	90.5	93.1	90.4	91.3
Household present but no competent respondent at home (HP)	1.9	1.2	2.0	0.9	2.0	1.7
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.9	0.5	1.1	0.5	0.7	0.8
Dwelling not found (DNF)	0.1	0.0	0.1	0.1	0.1	0.1
Household absent (HA)	0.2	0.3	0.1	0.2	0.5	0.2
Dwelling vacant/address not a dwelling (DV)	5.7	5.5	6.0	5.0	5.7	5.6
Dwelling destroy (DD)	0.2	0.0	0.1	0.0	0.4	0.2
Other (O)	0.1	0.2	0.1	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	10,184	4,688	5,616	4,656	4,600	14,872
Household response rate (HRR)[1]	96.9	98.1	96.5	98.3	97.1	97.3
Eligible women						
Completed (EWC)	97.0	97.7	96.2	98.2	97.3	97.2
Not at home (EWNH)	1.3	1.3	1.7	1.1	1.0	1.3
Postponed (EWP)	0.0	0.0	0.1	0.0	0.0	0.0
Refused (EWR)	0.3	0.3	0.4	0.2	0.4	0.3
Incapacitated (EWI)	1.4	0.7	1.6	0.5	1.3	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	7,134	3,267	3,901	3,395	3,105	10,401
Eligible women response rate (EWRR)[2]	97.0	97.7	96.2	98.2	97.3	97.2
Overall response rate (ORR)[3]	93.9	95.9	92.9	96.5	94.5	94.5

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

$$\frac{100 * C}{C + HP + P + R + DNF}$$

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

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

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

$$ORR = HRR * EWRR/100$$

ESTIMATES OF SAMPLING ERRORS

Appendix B

The estimates from a sample survey are affected by two types of errors: non-sampling errors and sampling errors. Non-sampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2009 Jordan Population and Family Health Survey (JPFHS) to minimize this type of error, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2009 JPFHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample 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, the 2009 JPFHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the 2009 JPFHS is a Macro SAS procedure. This procedure used 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 using the formula given below, with the standard error being the square root of the variance:

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

in which

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

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 weighted values of variable y in the i^{th} cluster in the h^{th} stratum,
x_{hi} is the sum of the weighted 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 calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* clusters in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2009 JPFHS, there were 930 non-empty clusters. Hence, 930 replications were created. The variance of a rate r is calculated as follows:

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

in which

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

where r is the estimate computed from the full sample of 930 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 929 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, the design effect (DEFT) for each estimate is calculated, which is defined as the ratio between the standard error using the given sample design and the standard error that would result 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, while a value greater than 1.0 indicates the increase in the sampling error is due to the use of a more complex and less statistically efficient design. The relative standard error and confidence limits for the estimates are also calculated.

Sampling errors for the 2009 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, for the three geographical regions, and for each of the 12 governorates. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 to B.19 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, as there is no known unweighted value for woman-years of exposure to child-bearing.

The confidence interval (e.g., as calculated for *children ever born to women aged 40-49*) can be interpreted as follows: the overall average from the national sample is 4.851, and its standard error is 0.086. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 4.851±2×0.086. There is a high probability (95 percent) that the *true* average number of children ever born to all women age 40 to 49 is between 4.678 and 5.023.

For the total sample, the value of the DEFT, averaged over all variables, is 1.66. This means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 1.66 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Jordan 2009

Variable	Estimate	Base population
Urban residence	Proportion	Ever-married women
No education	Proportion	Ever-married women
Secondary education or higher	Proportion	Ever-married women
Currently married	Proportion	Ever-married women
Married before age 20	Proportion	Ever-married women
Currently pregnant	Proportion	All women
Children ever born	Mean	All women
Children surviving	Mean	All women
Children ever born to women over 40-49	Mean	All women age 40-49
Knowing any contraceptive method	Proportion	Currently married women
Ever used any contraceptive method	Proportion	Currently married women
Currently using any contraceptive method	Proportion	Currently married women
Currently using pill	Proportion	Currently married women
Currently using IUD	Proportion	Currently married women
Currently using female sterilization	Proportion	Currently married women
Currently using periodic abstinence	Proportion	Currently married women
Using public sector source	Proportion	Current users of modern method
Want no more children	Proportion	Currently married women
Want to delay birth at least 2 years	Proportion	Currently married women
Ideal number of children	Mean	Ever-married women
Height-for-age (-2 SD)	Proportion	Children 0-59 months
Weight-for-height(-2 SD)	Proportion	Children 0-59 months
Weight-for-age (-2 SD)	Proportion	Children 0-59 months
Anemia among children	Proportion	Children 6-59 months
Total fertility rate (3 years)	Rate	All women
Neonatal mortality	Rate	Children exposed to the risk of mortality
Postneonatal mortality	Rate	Children exposed to the risk of mortality
Infant mortality	Rate	Children exposed to the risk of mortality
Child mortality	Rate	Children exposed to the risk of mortality
Under-five mortality	Rate	Children exposed to the risk of mortality
Anemia among women	Proportion	All women
BMI <18.5	Proportion	All women

Table B.2 Sampling errors: Total sample, Jordan 2009

Variable label	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	0.840	0.004	10109	10109	1.223	0.005	0.831	0.849
No education	0.028	0.002	10109	10109	1.473	0.086	0.024	0.033
With secondary education or higher	0.901	0.005	10109	10109	1.692	0.006	0.890	0.911
Currently married	0.955	0.003	10109	10109	1.658	0.004	0.948	0.962
Married before age 20	0.315	0.008	10586	10605	1.899	0.026	0.298	0.331
Currently pregnant	0.066	0.003	17103	17278	1.489	0.050	0.059	0.072
Children ever born	2.130	0.072	17103	17278	1.464	0.034	1.986	2.275
Children surviving	2.056	0.070	17103	17278	1.472	0.034	1.916	2.196
Children ever born to women over 40	4.851	0.086	3119	3343	1.894	0.018	4.678	5.023
Knowing any contraceptive method	0.999	0.001	9639	9651	2.451	0.001	0.997	1.001
Ever used any contraceptive method	0.829	0.006	9639	9651	1.511	0.007	0.817	0.840
Currently using any method	0.593	0.007	9639	9651	1.493	0.013	0.578	0.608
Currently using pill	0.082	0.004	9639	9651	1.548	0.053	0.073	0.090
Currently using IUD	0.226	0.008	9639	9651	1.827	0.034	0.210	0.241
Currently using female sterilization	0.026	0.003	9639	9651	1.540	0.096	0.021	0.031
Currently using periodic abstinence	0.040	0.004	9639	9651	1.836	0.092	0.032	0.047
Using public sector source	0.460	0.016	3657	3940	1.894	0.034	0.429	0.491
Want no more children	0.470	0.008	9639	9651	1.655	0.018	0.453	0.487
Want to delay at least 2 years	0.275	0.007	9639	9651	1.625	0.027	0.260	0.290
Ideal number of children	4.162	0.036	9254	9319	1.829	0.009	4.089	4.234
Height-for-age (below -2SD)	0.080	0.007	4421	4056	1.581	0.089	0.066	0.094
Weight-for-height (below -2SD)	0.015	0.003	4421	4056	1.522	0.193	0.009	0.021
Weight-for-age (below -2SD)	0.019	0.003	4421	4056	1.246	0.146	0.013	0.024
Anemia children	0.339	0.015	3785	3454	1.787	0.045	0.308	0.370
Total fertility rate (last 3 years)	3.849	0.065	na	48361	1.593	0.017	3.719	3.980
Neonatal mortality (last 0-4 years)	15.386	2.496	9725	9248	1.822	0.162	10.393	20.379
Post-neonatal mortality (last 0-4 years)	7.725	1.459	9686	9189	1.503	0.189	4.807	10.643
Infant mortality (last 0-4 years)	23.111	2.782	9732	9256	1.661	0.120	17.546	28.676
Child mortality (last 0-4 years)	5.071	1.399	9500	9060	1.706	0.276	2.274	7.869
Under-five mortality (last 0-4 years)	28.065	2.907	9743	9268	1.584	0.104	22.252	33.879
Anemia women	0.254	0.010	7342	7043	1.873	0.037	0.235	0.273
BMI < 18.5	0.039	0.004	6911	6666	1.767	0.105	0.031	0.047

Table B.3 Sampling errors: Urban sample, Jordan 2009

Variable label	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	6918	8490	0.000	0.000	1.000	1.000
No education	0.018	0.002	6918	8490	1.479	0.131	0.013	0.023
With secondary education or higher	0.918	0.006	6918	8490	1.680	0.006	0.907	0.929
Currently married	0.954	0.004	6918	8490	1.594	0.004	0.946	0.962
Married before age 20	0.314	0.010	7212	8864	1.841	0.031	0.295	0.333
Currently pregnant	0.064	0.004	11786	14409	1.447	0.058	0.056	0.071
Children ever born	2.114	0.078	11786	14409	1.401	0.037	1.958	2.270
Children surviving	2.040	0.076	11786	14409	1.411	0.037	1.889	2.191
Children ever born to women over 40	4.713	0.100	2178	2848	1.864	0.021	4.514	4.913
Knowing any contraceptive method	0.999	0.001	6590	8102	2.241	0.001	0.997	1.001
Ever used any contraceptive method	0.833	0.007	6590	8102	1.444	0.008	0.820	0.846
Currently using any method	0.604	0.008	6590	8102	1.409	0.014	0.587	0.621
Currently using pill	0.082	0.005	6590	8102	1.489	0.061	0.072	0.092
Currently using IUD	0.238	0.009	6590	8102	1.723	0.038	0.220	0.256
Currently using female sterilization	0.025	0.003	6590	8102	1.482	0.114	0.019	0.031
Currently using periodic abstinence	0.041	0.004	6590	8102	1.750	0.104	0.033	0.050
Using public sector source	0.438	0.018	2639	3420	1.831	0.040	0.402	0.473
Want no more children	0.476	0.010	6590	8102	1.584	0.020	0.457	0.496
Want to delay at least 2 years	0.271	0.009	6590	8102	1.561	0.032	0.254	0.288
Ideal number of children	4.123	0.042	6385	7864	1.753	0.010	4.040	4.207
Height-for-age (below -2SD)	0.071	0.008	2976	3331	1.603	0.116	0.055	0.088
Weight-for-height (below -2SD)	0.015	0.003	2976	3331	1.464	0.230	0.008	0.022
Weight-for-age (below -2SD)	0.018	0.003	2976	3331	1.204	0.179	0.011	0.024
Anemia children	0.326	0.018	2550	2835	1.731	0.056	0.290	0.363
Total fertility rate (last 3 years)	3.825	0.075	na	40357	1.542	0.020	3.675	3.975
Neonatal mortality (last 0-9 years)	19.699	3.060	12232	14557	1.999	0.155	13.579	25.819
Post-neonatal mortality (last 0-9 years)	7.080	1.188	12211	14516	1.440	0.168	4.705	9.455
Infant mortality (last 0-9 years)	26.779	3.333	12237	14563	1.943	0.124	20.114	33.444
Child mortality (last 0-9 years)	5.214	1.130	11888	14200	1.537	0.217	2.953	7.474
Under-five mortality (last 0-9 years)	31.853	3.550	12250	14576	1.907	0.111	24.753	38.953
Anemia women	0.248	0.011	4939	5830	1.802	0.045	0.225	0.270
BMI < 18.5	0.040	0.005	4649	5526	1.704	0.123	0.030	0.049

Table B.4 Sampling errors: Rural sample, Jordan 2009

Variable label	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	3191	1619	na	na	0.000	0.000
No education	0.082	0.008	3191	1619	1.664	0.098	0.066	0.098
With secondary education or higher	0.811	0.011	3191	1619	1.526	0.013	0.790	0.832
Currently married	0.957	0.004	3191	1619	1.180	0.004	0.948	0.965
Married before age 20	0.320	0.009	3401	1728	1.237	0.030	0.301	0.339
Currently pregnant	0.076	0.005	5623	2860	1.217	0.066	0.066	0.086
Children ever born	2.220	0.111	5623	2860	1.243	0.050	1.998	2.443
Children surviving	2.142	0.107	5623	2860	1.238	0.050	1.928	2.355
Children ever born to women over 40	5.681	0.114	936	492	1.306	0.020	5.452	5.910
Knowing any contraceptive method	1.000	0.000	3049	1549	0.773	0.000	0.999	1.000
Ever used any contraceptive method	0.806	0.010	3049	1549	1.373	0.012	0.786	0.825
Currently using any method	0.532	0.014	3049	1549	1.528	0.026	0.504	0.559
Currently using pill	0.081	0.006	3049	1549	1.143	0.070	0.069	0.092
Currently using IUD	0.163	0.009	3049	1549	1.389	0.057	0.145	0.182
Currently using female sterilization	0.031	0.004	3049	1549	1.381	0.139	0.023	0.040
Currently using periodic abstinence	0.031	0.004	3049	1549	1.188	0.120	0.023	0.038
Using public sector source	0.609	0.023	1018	520	1.524	0.038	0.562	0.656
Want no more children	0.437	0.012	3049	1549	1.384	0.028	0.412	0.462
Want to delay at least 2 years	0.296	0.011	3049	1549	1.348	0.038	0.273	0.318
Ideal number of children	4.369	0.057	2869	1455	1.618	0.013	4.254	4.484
Height-for-age (below -2SD)	0.119	0.011	1445	726	1.203	0.094	0.096	0.141
Weight-for-height (below -2SD)	0.016	0.004	1445	726	1.306	0.268	0.008	0.025
Weight-for-age (below -2SD)	0.023	0.004	1445	726	1.124	0.193	0.014	0.032
Anemia children	0.398	0.022	1235	619	1.500	0.055	0.354	0.441
Total fertility rate (last 3 years)	3.985	0.103	na	8137	1.105	0.026	3.780	4.190
Neonatal mortality (last 0-9 years)	12.962	1.627	6028	2987	1.044	0.126	9.707	16.216
Post-neonatal mortality (last 0-9 years)	7.596	1.412	6030	2995	1.180	0.186	4.771	10.421
Infant mortality (last 0-9 years)	20.557	2.265	6030	2987	1.126	0.110	16.028	25.087
Child mortality (last 0-9 years)	3.730	0.837	5935	2961	0.990	0.224	2.056	5.404
Under-five mortality (last 0-9 years)	24.211	2.550	6035	2989	1.145	0.105	19.111	29.310
Anemia women	0.287	0.014	2403	1212	1.523	0.049	0.259	0.315
BMI < 18.5	0.037	0.005	2262	1140	1.194	0.128	0.028	0.047

Table B.5 Sampling errors: Central sample, Jordan 2009

Variable label	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	0.920	0.005	3754	6340	1.058	0.005	0.910	0.929
No education	0.020	0.003	3754	6340	1.247	0.141	0.015	0.026
With secondary education or higher	0.910	0.007	3754	6340	1.408	0.007	0.897	0.923
Currently married	0.951	0.005	3754	6340	1.442	0.005	0.941	0.961
Married before age 20	0.321	0.012	3898	6612	1.693	0.038	0.297	0.345
Currently pregnant	0.062	0.005	6514	10738	1.296	0.072	0.053	0.071
Children ever born	2.096	0.092	6514	10738	1.176	0.044	1.912	2.280
Children surviving	2.025	0.089	6514	10738	1.187	0.044	1.846	2.204
Children ever born to women over 40	4.665	0.124	1220	2126	1.759	0.027	4.416	4.914
Knowing any contraceptive method	0.998	0.001	3562	6028	1.915	0.001	0.995	1.001
Ever used any contraceptive method	0.830	0.008	3562	6028	1.303	0.010	0.814	0.847
Currently using any method	0.605	0.010	3562	6028	1.232	0.017	0.585	0.625
Currently using pill	0.082	0.006	3562	6028	1.364	0.076	0.069	0.095
Currently using IUD	0.245	0.011	3562	6028	1.553	0.046	0.223	0.268
Currently using female sterilization	0.022	0.003	3562	6028	1.385	0.155	0.015	0.029
Currently using periodic abstinence	0.049	0.006	3562	6028	1.553	0.115	0.038	0.060
Using public sector source	0.417	0.022	1485	2564	1.692	0.052	0.374	0.461
Want no more children	0.489	0.012	3562	6028	1.406	0.024	0.465	0.512
Want to delay at least 2 years	0.261	0.010	3562	6028	1.352	0.038	0.241	0.281
Ideal number of children	4.107	0.052	3544	5923	1.588	0.013	4.003	4.210
Height-for-age (below -2SD)	0.067	0.009	1497	2350	1.302	0.137	0.049	0.086
Weight-for-height (below -2SD)	0.019	0.005	1497	2350	1.277	0.246	0.010	0.029
Weight-for-age (below -2SD)	0.020	0.004	1497	2350	1.025	0.198	0.012	0.028
Anemia children	0.314	0.023	1274	1977	1.549	0.072	0.269	0.360
Total fertility rate (last 3 years)	3.762	0.089	na	30287	1.359	0.024	3.584	3.939
Neonatal mortality (last 0-9 years)	20.889	4.017	6479	10677	1.812	0.192	12.855	28.924
Post-neonatal mortality (last 0-9 years)	6.789	1.379	6474	10657	1.244	0.203	4.032	9.547
Infant mortality (last 0-9 years)	27.679	4.338	6481	10680	1.771	0.157	19.003	36.354
Child mortality (last 0-9 years)	5.658	1.475	6350	10444	1.387	0.261	2.707	8.608
Under-five mortality (last 0-9 years)	33.180	4.608	6487	10690	1.729	0.139	23.963	42.396
Anemia women	0.242	0.014	2558	4200	1.613	0.057	0.214	0.269
BMI < 18.5	0.042	0.006	2408	3992	1.536	0.149	0.030	0.055

Table B.6 Sampling errors: North sample, Jordan 2009

Variable label	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	0.746	0.008	3333	2870	1.040	0.011	0.730	0.762
No education	0.029	0.005	3333	2870	1.681	0.167	0.020	0.039
With secondary education or higher	0.904	0.009	3333	2870	1.777	0.010	0.886	0.922
Currently married	0.963	0.004	3333	2870	1.316	0.004	0.955	0.972
Married before age 20	0.310	0.011	3485	3045	1.464	0.036	0.288	0.332
Currently pregnant	0.071	0.006	5936	4968	1.377	0.084	0.059	0.083
Children ever born	2.210	0.144	5936	4968	1.426	0.065	1.922	2.498
Children surviving	2.128	0.138	5936	4968	1.418	0.065	1.852	2.404
Children ever born to women over 40	5.153	0.127	1021	952	1.537	0.025	4.899	5.406
Knowing any contraceptive method	1.000	0.000	3199	2764	0.648	0.000	1.000	1.000
Ever used any contraceptive method	0.837	0.009	3199	2764	1.400	0.011	0.819	0.856
Currently using any method	0.583	0.014	3199	2764	1.558	0.023	0.556	0.610
Currently using pill	0.080	0.006	3199	2764	1.258	0.075	0.068	0.092
Currently using IUD	0.206	0.011	3199	2764	1.558	0.054	0.183	0.228
Currently using female sterilization	0.033	0.004	3199	2764	1.388	0.132	0.025	0.042
Currently using periodic abstinence	0.025	0.004	3199	2764	1.281	0.141	0.018	0.032
Using public sector source	0.510	0.025	1190	1081	1.701	0.048	0.461	0.560
Want no more children	0.440	0.014	3199	2764	1.614	0.032	0.411	0.468
Want to delay at least 2 years	0.298	0.014	3199	2764	1.683	0.046	0.270	0.325
Ideal number of children	4.282	0.054	2973	2591	1.607	0.013	4.173	4.391
Height-for-age (below -2SD)	0.087	0.014	1548	1296	1.807	0.157	0.060	0.115
Weight-for-height (below -2SD)	0.010	0.003	1548	1296	1.266	0.331	0.003	0.016
Weight-for-age (below -2SD)	0.016	0.005	1548	1296	1.323	0.278	0.007	0.025
Anemia children	0.361	0.024	1318	1123	1.708	0.068	0.312	0.410
Total fertility rate (last 3 years)	4.001	0.114	na	13702	1.352	0.028	3.773	4.228
Neonatal mortality (last 0-9 years)	15.313	2.317	6316	5254	1.382	0.151	10.678	19.948
Post-neonatal mortality (last 0-9 years)	8.499	1.867	6305	5240	1.473	0.220	4.764	12.234
Infant mortality (last 0-9 years)	23.812	2.937	6318	5258	1.407	0.123	17.938	29.686
Child mortality (last 0-9 years)	3.827	0.963	6172	5154	1.173	0.252	1.902	5.753
Under-five mortality (last 0-9 years)	27.549	3.163	6325	5261	1.400	0.115	21.222	33.875
Anemia women	0.266	0.015	2534	2178	1.653	0.055	0.237	0.295
BMI < 18.5	0.034	0.005	2411	2053	1.378	0.150	0.024	0.044

Table B.7 Sampling errors: South sample, Jordan 2009

Variable label	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	0.576	0.012	3022	899	1.318	0.021	0.552	0.600
No education	0.082	0.009	3022	899	1.706	0.104	0.065	0.099
With secondary education or higher	0.823	0.013	3022	899	1.858	0.016	0.797	0.849
Currently married	0.956	0.004	3022	899	1.112	0.004	0.948	0.964
Married before age 20	0.290	0.010	3147	936	1.237	0.033	0.271	0.310
Currently pregnant	0.074	0.006	5253	1555	1.197	0.077	0.063	0.085
Children ever born	2.137	0.115	5253	1555	1.117	0.054	1.907	2.367
Children surviving	2.063	0.111	5253	1555	1.121	0.054	1.840	2.286
Children ever born to women over 40	5.324	0.106	876	263	1.164	0.020	5.111	5.537
Knowing any contraceptive method	1.000	0.000	2878	859	0.000	0.000	1.000	1.000
Ever used any contraceptive method	0.787	0.009	2878	859	1.139	0.011	0.770	0.805
Currently using any method	0.538	0.012	2878	859	1.253	0.022	0.515	0.561
Currently using pill	0.085	0.006	2878	859	1.215	0.074	0.072	0.097
Currently using IUD	0.155	0.008	2878	859	1.140	0.050	0.140	0.171
Currently using female sterilization	0.032	0.003	2878	859	1.053	0.108	0.025	0.039
Currently using periodic abstinence	0.021	0.003	2878	859	1.204	0.152	0.015	0.028
Using public sector source	0.650	0.019	982	295	1.273	0.030	0.611	0.689
Want no more children	0.434	0.011	2878	859	1.168	0.025	0.412	0.455
Want to delay at least 2 years	0.303	0.011	2878	859	1.258	0.036	0.282	0.325
Ideal number of children	4.177	0.041	2737	806	1.198	0.010	4.096	4.259
Height-for-age (below -2SD)	0.129	0.012	1376	410	1.222	0.092	0.105	0.153
Weight-for-height (below -2SD)	0.010	0.003	1376	410	1.208	0.324	0.003	0.016
Weight-for-age (below -2SD)	0.019	0.004	1376	410	1.104	0.216	0.011	0.027
Anemia children	0.408	0.026	1193	354	1.803	0.065	0.355	0.461
Total fertility rate (last 3 years)	4.052	0.102	na	4370	1.180	0.025	3.848	4.257
Neonatal mortality (last 0-9 years)	13.604	1.742	5465	1612	0.995	0.128	10.119	17.089
Post-neonatal mortality (last 0-9 years)	5.352	1.279	5462	1614	1.256	0.239	2.795	7.909
Infant mortality (last 0-9 years)	18.956	2.197	5468	1613	1.077	0.116	14.563	23.349
Child mortality (last 0-9 years)	4.041	1.071	5301	1563	1.200	0.265	1.898	6.184
Under-five mortality (last 0-9 years)	22.920	2.446	5473	1614	1.104	0.107	18.029	27.812
Anemia women	0.297	0.017	2250	664	1.813	0.059	0.262	0.332
BMI < 18.5	0.036	0.006	2092	620	1.425	0.160	0.025	0.048

Table B.8 Sampling errors: Amman sample, Jordan 2009

Variable label	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	0.945	0.005	1177	3998	0.720	0.005	0.935	0.954
No education	0.014	0.004	1177	3998	1.131	0.275	0.006	0.022
With secondary education or higher	0.925	0.009	1177	3998	1.144	0.009	0.908	0.943
Currently married	0.952	0.007	1177	3998	1.178	0.008	0.937	0.966
Married before age 20	0.312	0.017	1230	4247	1.382	0.056	0.277	0.347
Currently pregnant	0.058	0.007	2081	6919	1.206	0.117	0.044	0.071
Children ever born	2.036	0.142	2081	6919	1.216	0.070	1.751	2.321
Children surviving	1.965	0.139	2081	6919	1.229	0.071	1.687	2.242
Children ever born to women over 40	4.563	0.182	379	1374	1.478	0.040	4.200	4.927
Knowing any contraceptive method	0.997	0.002	1115	3805	1.366	0.002	0.993	1.002
Ever used any contraceptive method	0.839	0.012	1115	3805	1.086	0.014	0.815	0.863
Currently using any method	0.616	0.014	1115	3805	0.971	0.023	0.588	0.644
Currently using pill	0.086	0.009	1115	3805	1.110	0.108	0.067	0.104
Currently using IUD	0.253	0.016	1115	3805	1.251	0.064	0.220	0.285
Currently using female sterilization	0.020	0.005	1115	3805	1.164	0.242	0.011	0.030
Currently using periodic abstinence	0.056	0.009	1115	3805	1.241	0.153	0.039	0.073
Using public sector source	0.377	0.032	465	1643	1.408	0.084	0.314	0.441
Want no more children	0.497	0.017	1115	3805	1.162	0.035	0.462	0.532
Want to delay at least 2 years	0.256	0.014	1115	3805	1.085	0.055	0.228	0.284
Ideal number of children	4.079	0.075	1079	3678	1.271	0.018	3.929	4.230
Height-for-age (below -2SD)	0.058	0.013	459	1401	1.152	0.233	0.031	0.084
Weight-for-height (below -2SD)	0.021	0.007	459	1401	1.067	0.356	0.006	0.036
Weight-for-age (below -2SD)	0.015	0.005	459	1401	0.895	0.353	0.004	0.025
Anemia children	0.318	0.035	382	1161	1.272	0.109	0.248	0.387
Total fertility rate (last 3 years)	3.718	0.126	na	19698	1.178	0.034	3.465	3.971
Neonatal mortality (last 0-9 years)	25.390	6.175	1999	6706	1.364	0.243	13.041	37.739
Post-neonatal mortality (last 0-9 years)	6.637	2.039	1987	6672	1.031	0.307	2.558	10.716
Infant mortality (last 0-9 years)	32.027	6.643	1999	6706	1.364	0.207	18.740	45.314
Child mortality (last 0-9 years)	7.223	2.296	1928	6510	1.055	0.318	2.632	11.815
Under-five mortality (last 0-9 years)	39.019	7.005	2001	6713	1.323	0.180	25.009	53.029
Anemia women	0.227	0.020	782	2607	1.310	0.087	0.188	0.266
BMI < 18.5	0.040	0.009	753	2502	1.322	0.237	0.021	0.059

Table B.9 Sampling errors: Balqa sample, Jordan 2009

Variable label	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	0.772	0.018	781	625	1.180	0.023	0.736	0.807
No education	0.047	0.011	781	625	1.397	0.225	0.026	0.069
With secondary education or higher	0.849	0.021	781	625	1.671	0.025	0.806	0.892
Currently married	0.956	0.007	781	625	1.000	0.008	0.941	0.970
Married before age 20	0.287	0.017	808	647	1.083	0.058	0.253	0.320
Currently pregnant	0.062	0.007	1345	1098	0.977	0.114	0.048	0.076
Children ever born	2.147	0.207	1345	1098	1.184	0.096	1.733	2.560
Children surviving	2.061	0.202	1345	1098	1.203	0.098	1.657	2.464
Children ever born to women over 40	5.282	0.211	263	213	1.284	0.040	4.860	5.705
Knowing any contraceptive method	0.999	0.001	745	597	0.620	0.001	0.998	1.001
Ever used any contraceptive method	0.787	0.015	745	597	1.025	0.020	0.757	0.818
Currently using any method	0.580	0.021	745	597	1.188	0.037	0.537	0.623
Currently using pill	0.082	0.009	745	597	0.930	0.114	0.063	0.100
Currently using IUD	0.219	0.017	745	597	1.124	0.078	0.185	0.253
Currently using female sterilization	0.022	0.007	745	597	1.245	0.303	0.009	0.036
Currently using periodic abstinence	0.052	0.010	745	597	1.206	0.189	0.032	0.071
Using public sector source	0.538	0.038	302	239	1.323	0.071	0.462	0.614
Want no more children	0.489	0.020	745	597	1.073	0.040	0.450	0.528
Want to delay at least 2 years	0.255	0.019	745	597	1.184	0.074	0.217	0.293
Ideal number of children	4.212	0.092	721	580	1.228	0.022	4.027	4.396
Height-for-age (below -2SD)	0.119	0.022	318	259	1.100	0.189	0.074	0.164
Weight-for-height (below -2SD)	0.030	0.011	318	259	1.049	0.357	0.009	0.052
Weight-for-age (below -2SD)	0.040	0.013	318	259	1.148	0.324	0.014	0.066
Anemia children	0.392	0.042	275	225	1.352	0.106	0.309	0.475
Total fertility rate (last 3 years)	3.869	0.179	na	3052	1.210	0.046	3.511	4.227
Neonatal mortality (last 0-9 years)	17.849	3.874	1368	1088	1.018	0.217	10.101	25.597
Post-neonatal mortality (last 0-9 years)	10.172	3.166	1376	1094	1.025	0.311	3.840	16.504
Infant mortality (last 0-9 years)	28.021	5.515	1368	1088	1.121	0.197	16.992	39.050
Child mortality (last 0-9 years)	4.781	1.985	1343	1070	1.043	0.415	0.812	8.750
Under-five mortality (last 0-9 years)	32.668	6.137	1370	1090	1.178	0.188	20.394	44.942
Anemia women	0.346	0.023	575	478	1.155	0.066	0.300	0.392
BMI < 18.5	0.062	0.012	543	451	1.158	0.194	0.038	0.086

Table B.10 Sampling errors: Zarqa sample, Jordan 2009

Variable label	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	0.946	0.010	985	1491	1.446	0.011	0.925	0.967
No education	0.022	0.004	985	1491	0.878	0.186	0.014	0.030
With secondary education or higher	0.901	0.011	985	1491	1.183	0.013	0.878	0.924
Currently married	0.946	0.008	985	1491	1.138	0.009	0.930	0.963
Married before age 20	0.367	0.018	971	1469	1.237	0.050	0.330	0.404
Currently pregnant	0.073	0.007	1546	2351	0.985	0.096	0.059	0.087
Children ever born	2.207	0.132	1546	2351	1.094	0.060	1.943	2.472
Children surviving	2.147	0.128	1546	2351	1.089	0.059	1.892	2.402
Children ever born to women over 40	4.556	0.160	296	466	1.064	0.035	4.237	4.876
Knowing any contraceptive method	1.000	0.000	933	1411	na	0.000	1.000	1.000
Ever used any contraceptive method	0.822	0.012	933	1411	0.938	0.014	0.799	0.846
Currently using any method	0.582	0.018	933	1411	1.104	0.031	0.546	0.618
Currently using pill	0.069	0.008	933	1411	0.969	0.117	0.053	0.085
Currently using IUD	0.239	0.017	933	1411	1.216	0.071	0.205	0.273
Currently using female sterilization	0.024	0.005	933	1411	0.988	0.206	0.014	0.034
Currently using periodic abstinence	0.028	0.005	933	1411	0.972	0.187	0.018	0.039
Using public sector source	0.464	0.033	382	588	1.272	0.070	0.399	0.529
Want no more children	0.469	0.016	933	1411	1.008	0.035	0.436	0.502
Want to delay at least 2 years	0.277	0.017	933	1411	1.130	0.060	0.244	0.310
Ideal number of children	4.111	0.083	951	1444	1.363	0.020	3.945	4.277
Height-for-age (below -2SD)	0.059	0.014	401	600	1.170	0.236	0.031	0.086
Weight-for-height (below -2SD)	0.009	0.005	401	600	1.087	0.568	0.000	0.019
Weight-for-age (below -2SD)	0.018	0.006	401	600	0.942	0.347	0.006	0.031
Anemia children	0.284	0.031	340	513	1.249	0.111	0.221	0.347
Total fertility rate (last 3 years)	3.863	0.164	na	6585	1.173	0.042	3.535	4.190
Neonatal mortality (last 0-9 years)	10.862	2.685	1651	2478	1.009	0.247	5.493	16.231
Post-neonatal mortality (last 0-9 years)	4.537	1.650	1653	2486	1.025	0.364	1.238	7.836
Infant mortality (last 0-9 years)	15.398	2.969	1652	2480	0.963	0.193	9.459	21.337
Child mortality (last 0-9 years)	1.801	1.326	1637	2463	1.043	0.736	0.000	4.453
Under-five mortality (last 0-9 years)	17.172	3.127	1653	2482	0.950	0.182	10.917	23.427
Anemia women	0.235	0.023	625	953	1.342	0.097	0.189	0.280
BMI < 18.5	0.039	0.008	582	889	1.005	0.206	0.023	0.055

Table B.11 Sampling errors: Madaba sample, Jordan 2009

Variable label	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	0.712	0.017	811	226	1.076	0.024	0.678	0.746
No education	0.043	0.009	811	226	1.215	0.201	0.026	0.061
With secondary education or higher	0.865	0.015	811	226	1.287	0.018	0.834	0.896
Currently married	0.948	0.010	811	226	1.339	0.011	0.927	0.968
Married before age 20	0.294	0.016	892	249	1.096	0.054	0.262	0.326
Currently pregnant	0.075	0.008	1452	406	1.033	0.112	0.058	0.092
Children ever born	2.157	0.184	1452	406	0.966	0.085	1.790	2.524
Children surviving	2.062	0.175	1452	406	0.962	0.085	1.713	2.412
Children ever born to women over 40	5.318	0.177	269	75	1.207	0.033	4.964	5.672
Knowing any contraceptive method	1.000	0.000	769	214	na	0.000	1.000	1.000
Ever used any contraceptive method	0.852	0.013	769	214	1.025	0.015	0.825	0.878
Currently using any method	0.622	0.019	769	214	1.069	0.030	0.584	0.659
Currently using pill	0.101	0.014	769	214	1.248	0.134	0.074	0.128
Currently using IUD	0.226	0.014	769	214	0.923	0.062	0.198	0.254
Currently using female sterilization	0.036	0.006	769	214	0.967	0.182	0.023	0.048
Currently using periodic abstinence	0.051	0.008	769	214	1.054	0.163	0.035	0.068
Using public sector source	0.515	0.035	336	94	1.273	0.068	0.446	0.585
Want no more children	0.485	0.017	769	214	0.917	0.034	0.451	0.518
Want to delay at least 2 years	0.254	0.016	769	214	1.049	0.065	0.221	0.287
Ideal number of children	4.261	0.073	793	221	1.083	0.017	4.114	4.407
Height-for-age (below -2SD)	0.124	0.031	319	90	1.441	0.248	0.062	0.185
Weight-for-height (below -2SD)	0.034	0.011	319	90	1.112	0.322	0.012	0.056
Weight-for-age (below -2SD)	0.046	0.019	319	90	1.407	0.402	0.009	0.084
Anemia children	0.243	0.029	277	78	1.094	0.119	0.185	0.301
Total fertility rate (last 3 years)	3.593	0.141	na	1162	0.938	0.039	3.311	3.874
Neonatal mortality (last 0-9 years)	16.198	4.222	1461	405	1.067	0.261	7.755	24.641
Post-neonatal mortality (last 0-9 years)	14.140	3.623	1458	405	1.073	0.256	6.894	21.387
Infant mortality (last 0-9 years)	30.338	5.562	1462	406	1.092	0.183	19.214	41.462
Child mortality (last 0-9 years)	6.528	2.654	1442	401	1.117	0.407	1.220	11.835
Under-five mortality (last 0-9 years)	36.668	6.166	1463	406	1.046	0.168	24.337	48.999
Anemia women	0.214	0.020	576	163	1.152	0.092	0.174	0.253
BMI < 18.5	0.047	0.008	530	150	0.912	0.179	0.030	0.063

Table B.12 Sampling errors: Irbid sample, Jordan 2009

Variable label	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	0.848	0.009	844	1894	0.739	0.011	0.829	0.866
No education	0.018	0.007	844	1894	1.448	0.367	0.005	0.031
With secondary education or higher	0.933	0.013	844	1894	1.461	0.014	0.907	0.958
Currently married	0.967	0.006	844	1894	0.990	0.006	0.954	0.979
Married before age 20	0.290	0.015	909	2041	1.046	0.052	0.259	0.320
Currently pregnant	0.066	0.008	1457	3270	0.938	0.118	0.051	0.082
Children ever born	2.172	0.191	1457	3270	0.969	0.088	1.789	2.555
Children surviving	2.096	0.183	1457	3270	0.960	0.087	1.731	2.462
Children ever born to women over 40	4.875	0.168	301	678	1.162	0.034	4.539	5.212
Knowing any contraceptive method	1.000	0.000	816	1831	0.000	0.000	1.000	1.000
Ever used any contraceptive method	0.840	0.013	816	1831	1.013	0.015	0.814	0.866
Currently using any method	0.595	0.020	816	1831	1.147	0.033	0.556	0.635
Currently using pill	0.088	0.009	816	1831	0.883	0.100	0.070	0.105
Currently using IUD	0.212	0.016	816	1831	1.126	0.076	0.180	0.245
Currently using female sterilization	0.038	0.006	816	1831	0.961	0.168	0.026	0.051
Currently using periodic abstinence	0.022	0.005	816	1831	0.957	0.222	0.012	0.032
Using public sector source	0.539	0.034	339	757	1.253	0.063	0.471	0.607
Want no more children	0.455	0.021	816	1831	1.182	0.045	0.414	0.496
Want to delay at least 2 years	0.280	0.020	816	1831	1.261	0.071	0.240	0.319
Ideal number of children	4.236	0.079	768	1727	1.178	0.019	4.079	4.393
Height-for-age (below -2SD)	0.083	0.020	382	837	1.421	0.246	0.042	0.123
Weight-for-height (below -2SD)	0.007	0.004	382	837	0.949	0.573	0.000	0.016
Weight-for-age (below -2SD)	0.011	0.005	382	837	0.934	0.454	0.001	0.022
Anemia children	0.383	0.035	338	740	1.226	0.092	0.312	0.453
Total fertility rate (last 3 years)	3.835	0.164	na	9045	1.031	0.043	3.508	4.162
Neonatal mortality (last 0-9 years)	12.494	3.419	1502	3353	1.146	0.274	5.655	19.332
Post-neonatal mortality (last 0-9 years)	8.551	2.791	1498	3341	1.102	0.326	2.969	14.133
Infant mortality (last 0-9 years)	21.045	4.290	1503	3356	1.115	0.204	12.464	29.625
Child mortality (last 0-9 years)	2.731	1.347	1484	3304	0.960	0.493	0.037	5.424
Under-five mortality (last 0-9 years)	23.718	4.598	1503	3356	1.132	0.194	14.522	32.914
Anemia women	0.269	0.021	676	1468	1.207	0.077	0.228	0.310
BMI < 18.5	0.033	0.007	627	1367	1.021	0.221	0.018	0.048

Table B.13 Sampling errors: Mafraq sample, Jordan 2009

Variable label	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	0.401	0.018	845	456	1.083	0.046	0.364	0.437
No education	0.081	0.013	845	456	1.438	0.167	0.054	0.108
With secondary education or higher	0.793	0.020	845	456	1.431	0.025	0.753	0.833
Currently married	0.951	0.007	845	456	0.952	0.007	0.937	0.965
Married before age 20	0.373	0.019	877	473	1.203	0.050	0.336	0.410
Currently pregnant	0.084	0.009	1445	778	1.042	0.107	0.066	0.103
Children ever born	2.279	0.192	1445	778	1.141	0.084	1.895	2.662
Children surviving	2.185	0.185	1445	778	1.151	0.085	1.814	2.555
Children ever born to women over 40	5.854	0.207	227	122	1.106	0.035	5.441	6.268
Knowing any contraceptive method	1.000	0.000	803	434	0.000	0.000	1.000	1.000
Ever used any contraceptive method	0.833	0.016	803	434	1.181	0.019	0.802	0.864
Currently using any method	0.537	0.019	803	434	1.062	0.035	0.499	0.574
Currently using pill	0.070	0.009	803	434	0.986	0.127	0.052	0.088
Currently using IUD	0.146	0.015	803	434	1.217	0.104	0.116	0.177
Currently using female sterilization	0.021	0.004	803	434	0.874	0.210	0.012	0.030
Currently using periodic abstinence	0.032	0.007	803	434	1.054	0.205	0.019	0.045
Using public sector source	0.477	0.041	250	135	1.307	0.087	0.395	0.560
Want no more children	0.405	0.019	803	434	1.121	0.048	0.366	0.444
Want to delay at least 2 years	0.335	0.019	803	434	1.149	0.057	0.296	0.373
Ideal number of children	4.393	0.073	743	400	1.103	0.017	4.248	4.538
Height-for-age (below -2SD)	0.105	0.020	394	213	1.195	0.193	0.064	0.145
Weight-for-height (below -2SD)	0.014	0.009	394	213	1.513	0.647	0.000	0.032
Weight-for-age (below -2SD)	0.033	0.018	394	213	1.747	0.541	0.000	0.068
Anemia children	0.269	0.032	320	172	1.185	0.118	0.206	0.333
Total fertility rate (last 3 years)	4.247	0.168	na	2216	1.015	0.039	3.912	4.582
Neonatal mortality (last 0-9 years)	17.929	3.074	1651	896	0.928	0.171	11.781	24.078
Post-neonatal mortality (last 0-9 years)	10.957	2.909	1654	897	0.990	0.265	5.139	16.774
Infant mortality (last 0-9 years)	28.886	4.946	1652	896	1.100	0.171	18.995	38.778
Child mortality (last 0-9 years)	4.788	1.733	1605	871	0.986	0.362	1.321	8.255
Under-five mortality (last 0-9 years)	33.536	5.329	1654	897	1.078	0.159	22.877	44.194
Anemia women	0.233	0.023	604	322	1.357	0.100	0.186	0.279
BMI < 18.5	0.033	0.007	603	320	0.907	0.200	0.020	0.046

Table B.14 Sampling errors: Jarash sample, Jordan 2009

Variable label	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	0.624	0.012	839	301	0.742	0.020	0.599	0.649
No education	0.026	0.005	839	301	0.989	0.207	0.016	0.037
With secondary education or higher	0.885	0.011	839	301	0.999	0.012	0.863	0.907
Currently married	0.958	0.007	839	301	1.064	0.008	0.944	0.973
Married before age 20	0.332	0.021	855	307	1.379	0.064	0.290	0.375
Currently pregnant	0.073	0.009	1459	527	0.972	0.117	0.056	0.090
Children ever born	2.309	0.250	1459	527	1.103	0.108	1.808	2.809
Children surviving	2.216	0.240	1459	527	1.105	0.108	1.735	2.697
Children ever born to women over 40	5.786	0.220	241	86	1.199	0.038	5.346	6.225
Knowing any contraceptive method	0.999	0.001	804	289	1.004	0.001	0.996	1.001
Ever used any contraceptive method	0.830	0.014	804	289	1.056	0.017	0.802	0.858
Currently using any method	0.591	0.020	804	289	1.148	0.034	0.551	0.631
Currently using pill	0.074	0.009	804	289	0.977	0.122	0.056	0.092
Currently using IUD	0.213	0.016	804	289	1.136	0.077	0.180	0.246
Currently using female sterilization	0.027	0.006	804	289	1.092	0.230	0.015	0.040
Currently using periodic abstinence	0.034	0.007	804	289	1.124	0.212	0.020	0.048
Using public sector source	0.457	0.032	305	110	1.111	0.069	0.393	0.521
Want no more children	0.409	0.017	804	289	0.973	0.041	0.375	0.443
Want to delay at least 2 years	0.334	0.016	804	289	0.937	0.047	0.303	0.365
Ideal number of children	4.415	0.078	753	271	1.111	0.018	4.258	4.571
Height-for-age (below -2SD)	0.087	0.016	398	144	1.062	0.181	0.056	0.119
Weight-for-height (below -2SD)	0.013	0.005	398	144	0.896	0.391	0.003	0.023
Weight-for-age (below -2SD)	0.019	0.006	398	144	0.868	0.313	0.007	0.030
Anemia children	0.361	0.025	345	125	0.911	0.069	0.311	0.412
Total fertility rate (last 3 years)	4.511	0.181	na	1498	1.090	0.040	4.149	4.873
Neonatal mortality (last 0-9 years)	24.756	4.547	1644	592	1.036	0.184	15.661	33.851
Post-neonatal mortality (last 0-9 years)	5.485	1.705	1637	590	0.946	0.311	2.074	8.896
Infant mortality (last 0-9 years)	30.241	5.009	1644	592	1.042	0.166	20.223	40.258
Child mortality (last 0-9 years)	8.664	2.331	1596	574	0.986	0.269	4.002	13.326
Under-five mortality (last 0-9 years)	38.643	5.539	1648	594	1.014	0.143	27.564	49.722
Anemia women	0.298	0.021	577	207	1.117	0.072	0.255	0.340
BMI < 18.5	0.032	0.010	549	197	1.258	0.294	0.013	0.051

Table B.15 Sampling errors: Ajloun sample, Jordan 2009

Variable label	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	0.757	0.013	805	218	0.849	0.017	0.731	0.783
No education	0.023	0.006	805	218	1.149	0.261	0.011	0.036
With secondary education or higher	0.919	0.010	805	218	1.007	0.011	0.899	0.938
Currently married	0.965	0.006	805	218	0.959	0.006	0.952	0.977
Married before age 20	0.331	0.019	837	227	1.194	0.057	0.294	0.369
Currently pregnant	0.078	0.011	1490	398	1.013	0.142	0.056	0.100
Children ever born	2.223	0.245	1490	398	0.939	0.110	1.734	2.712
Children surviving	2.134	0.237	1490	398	0.950	0.111	1.659	2.609
Children ever born to women over 40	5.920	0.241	241	65	1.249	0.041	5.438	6.402
Knowing any contraceptive method	1.000	0.000	776	210	na	0.000	1.000	1.000
Ever used any contraceptive method	0.835	0.013	776	210	0.990	0.016	0.808	0.861
Currently using any method	0.563	0.019	776	210	1.056	0.033	0.525	0.601
Currently using pill	0.046	0.007	776	210	0.937	0.154	0.032	0.060
Currently using IUD	0.258	0.015	776	210	0.958	0.058	0.228	0.288
Currently using female sterilization	0.024	0.005	776	210	0.910	0.208	0.014	0.034
Currently using periodic abstinence	0.023	0.006	776	210	1.116	0.262	0.011	0.035
Using public sector source	0.367	0.024	296	79	0.864	0.066	0.318	0.415
Want no more children	0.420	0.016	776	210	0.928	0.039	0.387	0.453
Want to delay at least 2 years	0.328	0.016	776	210	0.934	0.048	0.297	0.360
Ideal number of children	4.280	0.073	709	192	1.080	0.017	4.135	4.426
Height-for-age (below -2SD)	0.086	0.017	374	103	1.017	0.192	0.053	0.120
Weight-for-height (below -2SD)	0.016	0.006	374	103	0.903	0.363	0.004	0.027
Weight-for-age (below -2SD)	0.019	0.007	374	103	1.047	0.383	0.004	0.033
Anemia children	0.358	0.031	315	86	1.135	0.088	0.295	0.421
Total fertility rate (last 3 years)	4.042	0.171	na	1106	1.063	0.042	3.699	4.384
Neonatal mortality (last 0-9 years)	18.971	3.542	1519	414	0.917	0.187	11.888	26.054
Post-neonatal mortality (last 0-9 years)	7.078	2.423	1516	413	1.032	0.342	2.233	11.923
Infant mortality (last 0-9 years)	26.049	4.323	1519	414	0.974	0.166	17.403	34.695
Child mortality (last 0-9 years)	3.891	1.550	1487	405	0.982	0.398	0.792	6.990
Under-five mortality (last 0-9 years)	29.839	4.735	1520	414	0.987	0.159	20.369	39.310
Anemia women	0.261	0.018	677	182	1.080	0.070	0.224	0.297
BMI < 18.5	0.042	0.006	632	169	0.783	0.149	0.029	0.054

Table B.16 Sampling errors: Karak sample, Jordan 2009

Variable label	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	0.361	0.021	769	389	1.205	0.058	0.319	0.402
No education	0.075	0.015	769	389	1.612	0.205	0.044	0.105
With secondary education or higher	0.836	0.026	769	389	1.916	0.031	0.784	0.887
Currently married	0.963	0.007	769	389	1.050	0.007	0.949	0.977
Married before age 20	0.237	0.016	847	429	1.118	0.067	0.206	0.269
Currently pregnant	0.071	0.009	1359	685	1.038	0.120	0.054	0.088
Children ever born	2.024	0.149	1359	685	0.904	0.074	1.727	2.322
Children surviving	1.957	0.145	1359	685	0.909	0.074	1.667	2.246
Children ever born to women over 40	4.944	0.178	246	124	1.068	0.036	4.589	5.299
Knowing any contraceptive method	1.000	0.000	739	374	0.000	0.000	1.000	1.000
Ever used any contraceptive method	0.765	0.016	739	374	1.013	0.021	0.733	0.796
Currently using any method	0.503	0.022	739	374	1.178	0.043	0.460	0.546
Currently using pill	0.098	0.012	739	374	1.115	0.125	0.073	0.122
Currently using IUD	0.143	0.012	739	374	0.941	0.085	0.119	0.167
Currently using female sterilization	0.031	0.006	739	374	1.008	0.206	0.018	0.044
Currently using periodic abstinence	0.017	0.006	739	374	1.257	0.348	0.005	0.030
Using public sector source	0.759	0.030	259	131	1.112	0.039	0.700	0.818
Want no more children	0.441	0.019	739	374	1.018	0.042	0.404	0.478
Want to delay at least 2 years	0.276	0.019	739	374	1.165	0.070	0.237	0.314
Ideal number of children	4.013	0.061	670	339	0.923	0.015	3.891	4.135
Height-for-age (below -2SD)	0.135	0.018	352	182	1.008	0.135	0.098	0.171
Weight-for-height (below -2SD)	0.011	0.006	352	182	1.033	0.530	0.000	0.022
Weight-for-age (below -2SD)	0.026	0.007	352	182	0.851	0.275	0.012	0.040
Anemia children	0.453	0.051	299	155	1.695	0.112	0.352	0.554
Total fertility rate (last 3 years)	3.848	0.186	na	1990	1.096	0.048	3.476	4.220
Neonatal mortality (last 0-9 years)	9.655	2.566	1325	673	0.906	0.266	4.523	14.787
Post-neonatal mortality (last 0-9 years)	5.101	2.568	1324	674	1.310	0.504	0.000	10.238
Infant mortality (last 0-9 years)	14.756	3.831	1325	673	1.074	0.260	7.093	22.418
Child mortality (last 0-9 years)	2.936	1.527	1284	652	0.985	0.520	0.000	5.990
Under-five mortality (last 0-9 years)	17.648	4.125	1326	674	1.063	0.234	9.399	25.898
Anemia women	0.303	0.035	588	298	1.857	0.116	0.232	0.374
BMI < 18.5	0.037	0.011	559	283	1.361	0.294	0.015	0.059

Table B.17 Sampling errors: Tafiela sample, Jordan 2009

Variable label	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	0.728	0.021	789	142	1.309	0.029	0.686	0.769
No education	0.071	0.017	789	142	1.907	0.246	0.036	0.106
With secondary education or higher	0.842	0.019	789	142	1.469	0.023	0.804	0.880
Currently married	0.962	0.007	789	142	1.084	0.008	0.947	0.977
Married before age 20	0.303	0.024	799	143	1.531	0.080	0.255	0.352
Currently pregnant	0.082	0.012	1376	247	0.991	0.141	0.059	0.105
Children ever born	2.209	0.254	1376	247	0.954	0.115	1.701	2.718
Children surviving	2.130	0.247	1376	247	0.963	0.116	1.637	2.624
Children ever born to women over 40	6.015	0.241	204	36	1.127	0.040	5.533	6.498
Knowing any contraceptive method	1.000	0.000	759	137	na	0.000	1.000	1.000
Ever used any contraceptive method	0.821	0.013	759	137	0.923	0.016	0.795	0.847
Currently using any method	0.579	0.016	759	137	0.910	0.028	0.546	0.612
Currently using pill	0.095	0.012	759	137	1.099	0.123	0.072	0.119
Currently using IUD	0.152	0.015	759	137	1.111	0.095	0.123	0.181
Currently using female sterilization	0.046	0.008	759	137	1.024	0.169	0.031	0.062
Currently using periodic abstinence	0.012	0.004	759	137	1.056	0.348	0.004	0.020
Using public sector source	0.751	0.031	283	50	1.215	0.042	0.689	0.814
Want no more children	0.423	0.020	759	137	1.110	0.047	0.383	0.462
Want to delay at least 2 years	0.372	0.021	759	137	1.203	0.057	0.330	0.415
Ideal number of children	4.212	0.093	739	133	1.458	0.022	4.026	4.398
Height-for-age (below -2SD)	0.098	0.031	371	68	1.745	0.316	0.036	0.160
Weight-for-height (below -2SD)	0.007	0.004	371	68	1.057	0.660	0.000	0.016
Weight-for-age (below -2SD)	0.015	0.007	371	68	0.950	0.459	0.001	0.029
Anemia children	0.375	0.031	309	57	1.138	0.082	0.313	0.436
Total fertility rate (last 3 years)	4.265	0.194	na	696	1.000	0.046	3.876	4.654
Neonatal mortality (last 0-9 years)	15.698	3.222	1480	269	0.959	0.205	9.253	22.143
Post-neonatal mortality (last 0-9 years)	7.154	2.049	1476	268	0.939	0.286	3.055	11.253
Infant mortality (last 0-9 years)	22.852	4.092	1482	269	1.016	0.179	14.668	31.037
Child mortality (last 0-9 years)	2.373	1.374	1417	257	1.024	0.579	0.000	5.122
Under-five mortality (last 0-9 years)	25.171	4.722	1482	269	1.114	0.188	15.727	34.616
Anemia women	0.240	0.019	620	114	1.124	0.080	0.201	0.278
BMI < 18.5	0.035	0.010	581	107	1.312	0.288	0.015	0.054

Table B.18 Sampling errors: Ma'an sample, Jordan 2009

Variable label	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	0.589	0.023	760	167	1.276	0.039	0.543	0.634
No education	0.118	0.019	760	167	1.611	0.160	0.081	0.156
With secondary education or higher	0.753	0.023	760	167	1.438	0.030	0.708	0.798
Currently married	0.938	0.008	760	167	0.919	0.009	0.922	0.954
Married before age 20	0.343	0.022	777	169	1.289	0.063	0.300	0.386
Currently pregnant	0.073	0.012	1539	293	0.702	0.166	0.049	0.097
Children ever born	2.160	0.348	1539	293	0.727	0.161	1.465	2.856
Children surviving	2.087	0.336	1539	293	0.729	0.161	1.414	2.759
Children ever born to women over 40	5.875	0.217	202	45	1.044	0.037	5.441	6.310
Knowing any contraceptive method	1.000	0.000	714	156	na	0.000	1.000	1.000
Ever used any contraceptive method	0.778	0.017	714	156	1.124	0.022	0.743	0.813
Currently using any method	0.535	0.022	714	156	1.172	0.041	0.491	0.579
Currently using pill	0.045	0.007	714	156	0.958	0.166	0.030	0.059
Currently using IUD	0.110	0.013	714	156	1.130	0.120	0.083	0.136
Currently using female sterilization	0.042	0.007	714	156	0.894	0.159	0.029	0.056
Currently using periodic abstinence	0.032	0.007	714	156	1.012	0.208	0.019	0.045
Using public sector source	0.549	0.042	192	42	1.162	0.076	0.465	0.632
Want no more children	0.401	0.021	714	156	1.151	0.053	0.359	0.443
Want to delay at least 2 years	0.306	0.020	714	156	1.130	0.064	0.267	0.345
Ideal number of children	4.419	0.070	690	151	1.130	0.016	4.280	4.559
Height-for-age (below -2SD)	0.144	0.016	348	77	0.799	0.115	0.111	0.177
Weight-for-height (below -2SD)	0.006	0.004	348	77	0.974	0.693	0.000	0.013
Weight-for-age (below -2SD)	0.014	0.006	348	77	0.978	0.433	0.002	0.026
Anemia children	0.428	0.034	311	69	1.223	0.080	0.359	0.496
Total fertility rate (last 3 years)	4.273	0.213	na	837	0.766	0.050	3.846	4.699
Neonatal mortality (last 0-9 years)	13.244	4.546	1381	303	1.061	0.343	4.153	22.335
Post-neonatal mortality (last 0-9 years)	7.937	2.781	1378	303	1.006	0.350	2.375	13.499
Infant mortality (last 0-9 years)	21.181	5.019	1382	303	0.998	0.237	11.143	31.218
Child mortality (last 0-9 years)	3.535	1.572	1327	290	0.919	0.445	0.392	6.679
Under-five mortality (last 0-9 years)	24.641	5.568	1384	304	1.062	0.226	13.506	35.777
Anemia women	0.285	0.023	582	128	1.219	0.080	0.239	0.330
BMI < 18.5	0.028	0.008	534	117	1.129	0.286	0.012	0.045

Table B.19 Sampling errors: Aqaba sample, Jordan 2009

Variable label	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	0.873	0.012	704	202	0.928	0.013	0.850	0.897
No education	0.074	0.013	704	202	1.323	0.177	0.047	0.100
With secondary education or higher	0.843	0.018	704	202	1.346	0.022	0.806	0.880
Currently married	0.952	0.009	704	202	1.128	0.010	0.934	0.970
Married before age 20	0.352	0.018	684	195	1.007	0.051	0.317	0.388
Currently pregnant	0.079	0.011	1089	314	1.167	0.136	0.058	0.101
Children ever born	2.414	0.202	1089	314	1.166	0.084	2.010	2.818
Children surviving	2.329	0.195	1089	314	1.168	0.084	1.939	2.719
Children ever born to women over 40	5.293	0.202	209	58	1.161	0.038	4.889	5.698
Knowing any contraceptive method	1.000	0.000	666	192	0.000	0.000	1.000	1.000
Ever used any contraceptive method	0.814	0.017	666	192	1.134	0.021	0.780	0.849
Currently using any method	0.580	0.021	666	192	1.083	0.036	0.539	0.621
Currently using pill	0.084	0.010	666	192	0.965	0.123	0.063	0.105
Currently using IUD	0.219	0.019	666	192	1.190	0.087	0.181	0.257
Currently using female sterilization	0.015	0.005	666	192	1.005	0.313	0.006	0.025
Currently using periodic abstinence	0.027	0.006	666	192	0.914	0.212	0.016	0.039
Using public sector source	0.442	0.036	248	72	1.129	0.081	0.371	0.513
Want no more children	0.454	0.023	666	192	1.196	0.051	0.407	0.500
Want to delay at least 2 years	0.305	0.021	666	192	1.166	0.068	0.263	0.347
Ideal number of children	4.256	0.108	638	183	1.349	0.025	4.041	4.472
Height-for-age (below -2SD)	0.127	0.031	305	84	1.404	0.244	0.065	0.189
Weight-for-height (below -2SD)	0.015	0.009	305	84	1.242	0.572	0.000	0.032
Weight-for-age (below -2SD)	0.013	0.009	305	84	1.462	0.737	0.000	0.031
Anemia children	0.322	0.037	274	74	1.257	0.114	0.248	0.396
Total fertility rate (last 3 years)	4.164	0.196	na	887	1.053	0.047	3.772	4.557
Neonatal mortality (last 0-9 years)	19.588	4.083	1279	368	1.041	0.208	11.421	27.755
Post-neonatal mortality (last 0-9 years)	2.425	1.428	1284	370	1.044	0.589	0.000	5.281
Infant mortality (last 0-9 years)	22.013	4.192	1279	368	1.015	0.190	13.628	30.397
Child mortality (last 0-9 years)	7.540	3.213	1273	364	1.306	0.426	1.115	13.965
Under-five mortality (last 0-9 years)	29.386	4.779	1281	368	1.014	0.163	19.828	38.945
Anemia women	0.350	0.025	460	124	1.128	0.072	0.299	0.400
BMI < 18.5	0.045	0.011	418	113	1.070	0.242	0.023	0.067

DATA QUALITY

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Jordan 2009

	Women		Men			Women		Men	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	801	2.4	956	2.8	36	461	1.4	453	1.3
1	947	2.8	969	2.8	37	427	1.3	388	1.1
2	1,035	3.1	982	2.9	38	422	1.2	419	1.2
3	849	2.5	905	2.6	39	411	1.2	387	1.1
4	784	2.3	831	2.4	40	457	1.4	436	1.3
5	811	2.4	866	2.5	41	425	1.3	381	1.1
6	916	2.7	878	2.6	42	398	1.2	344	1.0
7	723	2.1	837	2.4	43	365	1.1	342	1.0
8	771	2.3	830	2.4	44	359	1.1	337	1.0
9	807	2.4	775	2.3	45	285	0.8	372	1.1
10	643	1.9	817	2.4	46	352	1.0	260	0.8
11	813	2.4	794	2.3	47	313	0.9	301	0.9
12	737	2.2	822	2.4	48	182	0.5	249	0.7
13	808	2.4	888	2.6	49	258	0.8	243	0.7
14	773	2.3	791	2.3	50	215	0.6	203	0.6
15	786	2.3	871	2.5	51	267	0.8	163	0.5
16	722	2.1	909	2.6	52	176	0.5	217	0.6
17	759	2.2	831	2.4	53	186	0.6	146	0.4
18	699	2.1	736	2.1	54	160	0.5	161	0.5
19	691	2.0	655	1.9	55	199	0.6	158	0.5
20	658	1.9	691	2.0	56	202	0.6	172	0.5
21	645	1.9	669	1.9	57	155	0.5	146	0.4
22	636	1.9	726	2.1	58	126	0.4	144	0.4
23	601	1.8	665	1.9	59	118	0.4	180	0.5
24	580	1.7	688	2.0	60	157	0.5	108	0.3
25	597	1.8	689	2.0	61	206	0.6	160	0.5
26	642	1.9	581	1.7	62	122	0.4	125	0.4
27	552	1.6	525	1.5	63	115	0.3	132	0.4
28	555	1.6	510	1.5	64	116	0.3	147	0.4
29	538	1.6	437	1.3	65	174	0.5	155	0.4
30	623	1.8	575	1.7	66	85	0.3	105	0.3
31	503	1.5	438	1.3	67	100	0.3	130	0.4
32	507	1.5	415	1.2	68	79	0.2	83	0.2
33	439	1.3	392	1.1	69	62	0.2	109	0.3
34	510	1.5	380	1.1	70+	855	2.5	797	2.3
35	379	1.1	461	1.3					
					Don't know/ missing	0	0.0	1	0.0
					Total	33,831	100.0	34,435	100.0

Table C.2 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age groups, Jordan 2009

Age group	Household population of women age 10-54	Ever-married women age 10-54	Interviewed women age 15-49		Percent of women
			Number	Percent	
10-14	3,773	0	na	na	na
15-19	3,657	247	243	2.4	98.3
20-24	3,120	1,155	1,092	11.0	94.5
25-29	2,885	2,061	1,873	18.8	90.9
30-34	2,582	2,114	2,024	20.3	95.7
25-39	2,101	1,779	1,747	17.6	98.2
40-44	2,005	1,800	1,725	17.3	95.8
45-49	1,390	1,273	1,248	12.5	98.0
50-54	1,003	953	na	na	na
15-49	17,740	10,429	9,952	100.0	95.4

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.
na = Not applicable

Table C.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Jordan 2009

Subject	Percentage with missing information	Number of cases
Month Only (births in last 15 years)	0.07	24,916
Month and Year (births in last 15 years)	0.01	24,916
Age at Death (deceased children born in the last 15 years)	0.00	743
Age/date at first union[1] (ever married women)	0.00	10,109
Respondent's education (all women)	0.00	10,109
Height (living children 0-59 from Household Questionnaire)	9.29	4,520
Weight (living children 0-59 from Household Questionnaire)	8.78	4,520
Height or weight (living children 0-59 from Household Questionnaire)	9.29	4,520
Anemia (living children 6-59 months from Household Questionnaire)	15.79	4,102
Anemia (all women from the Household Questionnaire)	19.12	8,737

[1] Both year and age missing

Table C.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living (L), dead (D), and total (T) children (weighted), Jordan 2009

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2009	1,508	39	1,546	100.0	100.0	100.0	117.4	166.6	118.4	na	na	na
2008	1,883	43	1,926	100.0	100.0	100.0	110.7	264.2	112.7	na	na	na
2007	1,985	47	2,032	100.0	100.0	100.0	97.5	88.0	97.2	108.4	115.9	108.5
2006	1,781	38	1,819	100.0	100.0	100.0	104.3	342.6	106.6	99.4	76.9	98.8
2005	1,598	52	1,650	100.0	100.0	100.0	100.4	168.2	102.0	93.5	125.3	94.3
2004	1,637	45	1,682	100.0	100.0	100.0	104.4	109.2	104.5	95.9	91.4	95.7
2003	1,818	46	1,864	100.0	99.7	100.0	95.9	175.2	97.3	116.6	72.0	114.8
2002	1,481	83	1,564	100.0	88.8	99.4	116.3	142.1	117.6	87.2	205.7	90.0
2001	1,577	35	1,612	100.0	96.4	99.9	108.4	87.4	107.9	103.9	43.9	100.9
2000	1,555	75	1,631	99.9	100.0	99.9	107.9	58.3	104.9	103.3	168.6	105.2
2005-2009	8,755	217	8,972	100.0	100.0	100.0	105.4	175.8	106.7	na	na	na
2000-2004	8,069	283	8,353	100.0	96.2	99.8	105.9	104.9	105.9	na	na	na
1995-1999	7,139	239	7,378	100.0	97.8	99.9	107.0	106.6	107.0	na	na	na
1990-1994	6,029	235	6,264	99.9	96.6	99.8	108.4	106.1	108.3	na	na	na
< 1990	5,530	312	5,842	99.7	94.5	99.5	106.2	110.2	106.4	na	na	na
All	35,521	1,287	36,808	99.9	96.8	99.8	106.5	116.2	106.8	na	na	na

na = Not applicable
[1] Both year and month of birth given
[2] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively
[3] [2Bx/(Bx-1+Bx+1)]x100, where Bx 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 of birth preceding the survey (weighted), Jordan 2009

	Number of years preceding the survey				Total
Age at death (days)	0-4	5-9	10-14	15-19	0-19
<1	43	50	28	35	155
1	27	33	23	19	102
2	3	18	6	8	34
3	8	18	10	6	42
4	8	12	4	3	27
5	2	0	2	4	8
6	1	2	5	1	8
7	9	4	16	9	38
8	17	0	2	3	23
9	1	9	5	0	14
10	5	9	2	6	22
11	0	6	1	4	10
12	3	3	1	0	6
13	0	0	0	1	1
14	1	3	3	3	10
15	1	3	1	2	6
16	0	1	0	1	2
17	0	0	1	0	1
18	0	0	0	0	0
19	1	0	0	0	1
20	3	1	3	1	8
21	0	0	0	5	5
22	4	0	0	0	4
23	0	0	0	0	0
24	4	0	0	0	4
25	1	10	1	0	11
28	0	0	1	0	1
29	0	0	0	0	1
30	0	0	0	0	0
Total 0-30	142	181	113	111	547
Percent early neonatal[1]	64.4	73.2	67.9	68.2	68.8

[1] = 6 days / = 30 days

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 age under one month, for five-year periods of birth preceding the survey, Jordan 2009

	Number of years preceding the survey				Total
Age at death (months)	0-4	5-9	10-14	15-19	0-19
<1[a]	142	181	113	111	547
1	12	9	18	14	53
2	16	11	6	17	50
3	7	8	11	10	35
4	9	6	11	2	28
5	3	2	5	9	18
6	1	1	5	3	10
7	6	11	2	5	23
8	2	3	1	6	12
9	2	3	4	3	13
10	0	0	2	2	5
11	1	3	6	2	12
12	3	7	3	7	19
13	6	0	3	0	10
14	0	2	1	1	3
15	0	4	1	0	5
16	5	5	0	6	15
17	0	0	2	0	2
18	1	1	1	6	8
19	0	0	0	0	0
20	0	0	0	1	1
21	3	0	0	0	3
22	1	0	0	0	1
23	1	0	0	0	1
Total 0-11	199	239	182	184	804
Percent neonatal[1]	71.3	75.9	62.1	60.1	68.0

[a] Includes deaths under one month reported in days
[1] Under one month / under one year

Table C.7 Nutritional status of children (JPFHS 2002 based on the WHO Child Growth Standards)

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Jordan 2002

Background characteristic	Height-for-age		Weight-for-height			Weight-for-age			Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	
Age in months									
<6	2.7	9.9	3.2	6.0	10.4	2.1	5.3	4.9	405
6-8	3.6	6.3	0.1	2.4	4.7	0.1	2.5	2.3	290
9-11	2.3	10.6	0.5	4.2	5.7	0.3	2.0	3.1	283
12-17	2.7	10.1	0.3	1.6	4.7	0.3	2.2	2.4	457
18-23	3.6	14.3	0.3	3.0	4.3	0.4	4.1	1.3	472
24-35	2.8	14.5	0.7	2.0	3.0	0.3	3.4	1.2	937
36-47	1.3	11.2	1.0	1.8	3.0	0.8	3.8	0.1	848
48-59	1.3	10.7	0.5	1.5	4.3	0.6	3.6	1.2	951
Sex									
Male	2.3	11.3	1.0	2.9	4.6	0.6	3.8	1.8	2,322
Female	2.3	11.7	0.7	2.0	4.3	0.6	3.1	1.5	2,321
Residence									
Urban	1.9	10.0	0.9	2.4	4.6	0.5	2.9	1.6	3,550
Rural	3.7	16.5	0.5	2.6	4.1	0.9	5.4	1.6	1,093
Region									
Central	2.0	10.6	0.9	2.7	4.9	0.5	3.2	1.8	2,894
North	2.3	11.9	0.5	1.5	3.9	0.6	3.2	1.4	1,232
South	4.0	15.9	0.9	3.1	3.6	1.2	5.8	1.1	516
Total	2.3	11.5	0.8	2.4	4.5	0.6	3.5	1.6	4,643

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO reference.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
[1] Includes children who are below -3 standard deviations (SD) from the WHO Child Growth standards population median.

QUESTIONNAIRES

Appendix ***D***

Department of Statistics
Household Survey Directorate

The Hashemite Kingdom of Jordan
JORDAN POPULATION AND
FAMILY HEALTH INTERIM SURVEY 2009

HOUSEHOLD QUESTIONNAIRE

Survey Contents Confidential by Statistical Law

IDENTIFICATION

QUESTIONNAIRE No.: . . . . . .

GOVERNORATE: _____
DISTRICT: _____
SUB-DISTRICT: _____
LOCALITY: _____
AREA: _____
SUB-AREA: _____
STRATUM: _____
URBAN/RURAL (Urban=1; Rural=2)

BLOCK No.: . . . . . .
BUILDING No.: _____
HOUSING UNIT No.: _____
CLUSTER No.: . . . . . .
HOUSEHOLD No.: . . . . . .

TELEPHONE/
MOBILE No.
(if available)

HOUSEHOLD SELECTED FOR ANTHROPOMETRY AND ANEMIA TESTING (YES = 1; NO = 2)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR 2009
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER 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 OF TIME
4 POSTPONED
5 REFUSED
6 HOUSING UNIT VACANT OR ADDRESS NO MORE A DWELLING
7 HOUSING UNIT DESTROYED
8 HOUSING UNIT NOT FOUND
9 OTHER _____ (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

LINE NO. OF RESPONDENT HOUSEHOLD QUESTIONNAIRE

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME	NAME		
DATE	DATE		

Introduction and Consent

Hello. My name is _____ and I am working with the Department of Statistics. We are conducting a national survey about various health issues. We would very much appreciate your participation in this survey. The interview usually takes between 10 and 15 minutes to complete.

As part of the survey we would first like to ask some questions about your household.
Whatever information you provide will be keptstrictly confidential, and will not be shared with anyone other than members of our survey team. Participation in the survey is completely voluntary. If we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope you will participate in the survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . 1 RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

HOUSEHOLD SCHEDULE

									IF AGE 15 OR OLDER			
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		DATE OF BIRTH	AGE	NATIONALITY	MARITAL STATUS	ELIGIBILITY		
										INDIVIDUAL INTERVIEW	CHECK COVER PAGE IF THIS HOUSEHOLD IS SELECTED FOR ANTHROPOMETRY AND ANEMIA	
											ANTHROPOMETRY AND ANEMIA MEASUREMENTS	
	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. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-18 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	In what month and year was (NAME) born? IF DON'T KNOW MONTH, RECORD 98' FOR MONTH. IF DON'T KNOW YEAR, RECORD 9998' FOR YEAR.	How old is (NAME)? IF AGE =95+, RECORD 95. COMPARE AND CORRECT 6A AND/OR 6 IF INCONSISTENT.	What is (NAME'S) nationality? 1 = JORDANIAN 2 = EGYPTIAN 3 = SYRIAN 4= IRAQI 5 = OTHER ARAB 6 = NOT ARAB 8= DON'T KNOW	What is (NAME'S) current marital status? 1 = NEVER-MARRIED 2 = MARRIED 3 = DIVORCED 4 = WIDOWED 5 = SEPARATED	CIRCLE LINE NUMBER OF WOMEN ELIGIBLE FOR INDIVIDUAL SURVEY (EVER-MARRIED WOMEN AGE 15-49).	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49.	CIRCLE LINE NUMBER OF ALL CHILDREN BORN IN 2004 OR LATER, OR CHILDREN AGE 0-5 YEARS (IF DATE OF BIRTH NOT KNOWN).
(1)	(2)	(3)	(4)	(5)	(5A)	(6)	(6A)	(7)	(8)	(9)	(10)	(11)
			M F	Y N	Y N	MONTH YEAR	IN YEARS					
01			1 2	1 2	1 2					01	01	01
02			1 2	1 2	1 2					02	02	02
03			1 2	1 2	1 2					03	03	03
04			1 2	1 2	1 2					04	04	04
05			1 2	1 2	1 2					05	05	05
06			1 2	1 2	1 2					06	06	06
07			1 2	1 2	1 2					07	07	07

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = STEPSON OR STEPDAUGHTER
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = GRAND FATHER/MOTHER
10 = OTHER RELATIVE
11 = ADOPTED/ FOSTERED CHILD
12 = NOT RELATED
98 = DON'T KNOW

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		DATE OF BIRTH	AGE	NATIONALITY	IF AGE 15 OR OLDER: MARITAL STATUS	ELIGIBILITY: INDIVIDUAL INTERVIEW	ELIGIBILITY: CHECK COVER PAGE IF THIS HOUSEHOLD IS SELECTED FOR ANTHROPOMETRY AND ANEMIA	
											ANTHROPOMETRY AND ANEMIA MEASUREMENTS	
	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. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-18 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	In what month and year was (NAME) born? IF DON'T KNOW MONTH, RECORD 98' FOR MONTH. IF DON'T KNOW YEAR, RECORD 9998' FOR YEAR.	How old is (NAME)? IF AGE =95+, RECORD 95. COMPARE AND CORRECT 6A AND/OR 6 IF INCONSISTENT.	What is (NAME'S) nationality? 1 = JORDANIAN 2 = EGYPTIAN 3 = SYRIAN 4= IRAQI 5 = OTHER ARAB 6 = NOT ARAB 8= DON'T KNOW	What is (NAME'S) current marital status? 1 = NEVER-MARRIED 2 = MARRIED 3 = DIVORCED 4 = WIDOWED 5 = SEPARATED	CIRCLE LINE NUMBER OF WOMEN ELIGIBLE FOR INDIVIDUAL SURVEY (EVER-MARRIED WOMEN AGE 15-49).	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49.	CIRCLE LINE NUMBER OF ALL CHILDREN BORN IN 2004 OR LATER, OR CHILDREN AGE 0-5 YEARS (IF DATE OF BIRTH NOT KNOWN).
(1)	(2)	(3)	(4)	(5)	(5A)	(6)	(6A)	(7)	(8)	(9)	(10)	(11)
			M F	Y N	Y N	MONTH YEAR	IN YEARS					
08			1 2	1 2	1 2					08	08	08
09			1 2	1 2	1 2					09	09	9
10			1 2	1 2	1 2					10	10	10
11			1 2	1 2	1 2					11	11	11
12			1 2	1 2	1 2					12	12	12
13			1 2	1 2	1 2					13	13	13
14			1 2	1 2	1 2					14	14	14

TICK HERE IF CONTINUATION SHEET USED ☐

2A) Just to make sure that I have a complete listing. Are there any other persons such as small children or infants that we have not listed? YES ☐ → ADD TO TABLE NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? YES ☐ → ADD TO TABLE NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES ☐ → ADD TO TABLE NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD	06 = PARENT	11 = ADOPTED/ FOSTERED CHILD
02 = WIFE OR HUSBAND	07 = PARENT-IN-LAW	12 = NOT RELATED
03 = SON OR DAUGHTER	08 = BROTHER OR SISTER	98 = DON'T KNOW
04 = STEPSON OR STEPDAUGHTER	09 = GRAND FATHER/MOTHER	
05 = GRANDCHILD	10 = OTHER RELATIVE	

IF AGE 0-17 YEARS					IF AGE 5 YEARS OR OLDER				IF AGE 5-24 YEARS
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL				
	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was she a guest last night? IF YES: What is her name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	Can (NAME) read and write?	What is the highest level of school (NAME) has attended? SEE CODES.	What is the highest grade (NAME) completed at that level? SEE CODES.	Did (NAME) attend school at any time during the (2008 - 2009) school year?
	(12)	(13)	(14)	(15)	(16)	(16A)	(17)	(17A)	(18)
	Y N DK		Y N K		Y N	Y N	LEVEL	GRADE	Y N
01	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
02	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
03	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
04	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
05	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
06	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
07	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2

CODES FOR EDUCATION LEVEL (Q.17)

OLD SYSTEM

01 = OLD ELEMENTARY
02 = OLD PREPARATORY
03 = OLD SECONDARY

NEW SYSTEM

04 = NEW BASIC
05 = NEW SECONDARY
06 = INTERMEDIATE DIPLOMA
07 = BACHELOR
08 = HIGHER EDUCATION
98 = DON'T KNOW

CODES FOR GRADE (Q.17A)

00 = LESS THAN ONE YEAR COMPLETED
98 = DON'T KNOW

IF AGE 0-17 YEARS					IF AGE 5 YEARS OR OLDER				IF AGE 5-24 YEARS
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL				
	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was she a guest last night? IF YES: What is her name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	Can (NAME) read and write?	What is the highest level of school (NAME) has attended? SEE CODES.	What is the highest grade (NAME) completed at that level? SEE CODES.	Did (NAME) attend school at any time during the (2008 - 2009) school year?
	(12)	(13)	(12)	(13)	(16)	(16A)	(17)	(17A)	(18)
	Y N DK		Y N K		Y N	Y N	LEVEL	GRADE	Y N
08	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
09	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
10	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
11	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
12	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
13	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2
14	1 2 8 → GO TO 14		1 2 8 → GO TO 16		1 2 → GO TO 17	1 2 → NEXT LINE			1 2

CODES FOR EDUCATION LEVEL (Qs.17)

OLD SYSTEM

01 = OLD ELEMENTARY
02 = OLD PREPARATORY
03 = OLD SECONDARY

NEW SYSTEM

04 = NEW BASIC
05 = NEW SECONDARY
06 = INTERMEDIATE DIPLOMA
07 = BACHELOR
08 = HIGHER EDUCATION
98 = DON'T KNOW

CODES FOR GRADE (Qs.17A)

00 = LESS THAN ONE YEAR COMPLETED
98 = DON'T KNOW

HOUSING UNIT AND HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
100	TYPE OF HOUSING UNIT. RECORD OBSERVATION.	APARTMENT . . . . . 1 DAR . . . . . 2 VILLA . . . . . 3 HUT/BARRACK . . . . . 4 OTHER _____ 6 (SPECIFY)	
101	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO HOUSING UNIT . . . . . 11 PIPED TO YARD . . . . . 12 SPRING . . . . . 21 RAINWATER . . . . . 31 TANKER TRUCK . . . . . 41 BOTTLED WATER . . . . . 51 OTHER _____ 96 (SPECIFY)	
101A	Is water normally available all day from this source?	YES . . . . . 1 NO 2	
101B	In the last two weeks, was water unavailable for an entire day or longer?	YES . . . . . 1 NO 2	
106	Do you do anything to the water to make it safer to drink?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 108
107	What do you usually do to make the water safer to drink? Anything else? RECORD ALL MENTIONED.	BOIL . . . . . A ADD BLEACH/CHLORINE . . . . . B USE WATER FILTER . . . . . C OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
108	What kind of toilet facility do members of your household usually use? IF FLUSH TOILET: Is your toilet connected to a public sewer system, a pit latrine or somewhere else?	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM . . . . . 11 FLUSH TO PIT LATRINE . . . . . 12 FLUSH TO SOMEWHERE ELSE . . . 13 PIT LATRINE VENTILATED IMPROVED PIT LATRINE . . . . . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/ OPEN PIT . . . . . 23 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ 96 (SPECIFY)	→ 110A
109	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	
110A	Is your house connected with electricity?	YES . . . . . 1 NO 2	
110B	Does your household have a bed or sofa bed? IF YES: How many beds or sofa beds does your household have? IF NONE, RECORD '0'. IF 7 OR MORE, RECORD 7.	NUMBER OF BEDS	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
111	Does your household have:		YES	NO	
	A radio/tape recorder?	RADIO/TAPE RECORDER .	1	2	
	A television?	TELEVISION	1	2	
	Satellite?	SATELLITE	1	2	
	A land telephone?	LAND TELEPHONE	1	2	
	A refrigerator?	REFRIGERATOR	1	2	
	A washing machine?	WASHING MACHINE	1	2	
	Solar heater?	SOLAR HEATER	1	2	
	Air conditioner?	AIR CONDITIONNER	1	2	
	Fan?	FAN	1	2	
	Water cooler?	WATER COOLER	1	2	
	Microwave?	MICROWAVE	1	2	
	Digital camera?	DIGITAL CAMERA	1	2	
111A	Does your household have a computer? IF YES: How many? IF NONE, RECORD '0'. IF 7 OR MORE, RECORD 7.	NUMBER OF COMPUTERS			
111B	Does your household have a mobile? IF YES: How many? IF NONE, RECORD '0'. IF 7 OR MORE, RECORD 7.	NUMBER OF MOBILES			
111C	CHECK 111A and 111B: 111A OR 111B = 1 OR MORE ☐ 111A AND 111B = 0 ☐ → 112				
111D	Do you have internet access at home?	YES . . . . . 1 NO 2			
112	What type of fuel does your household mainly use for cooking?	ELECTRICITY . . . . . 1 NATURAL GAS . . . . . 2 KEROSENE . . . . . 3 COAL/WOOD . . . . . 4 OTHER _____ 6 (SPECIFY)			
116	Do you have a separate room which is used as a kitchen?	YES . . . . . 1 NO 2			
116A	Do you have an independent bathroom?	YES . . . . . 1 NO 2			
117	MAIN MATERIAL OF THE FLOOR.	NATURAL FLOOR EARTH . . . . . 11 FINISHED FLOOR PARQUET OR POLISHED WOOD . . . . . 31 TILE . . . . . 32 MARBLE/CERAMIC TILES . . . . . 33 CEMENT . . . . . 34 OTHER _____ 96 (SPECIFY)			
119	MAIN MATERIAL OF THE EXTERIOR WALLS. RECORD OBSERVATION.	RUDIMENTARY MUD BRICKS . . . . . 21 MUD BRICKS WITH STONES . . . . . 22 ASBESTOS/WOOD/ZINC . . . . . 23 FINISHED CEMENT BRICKS . . . . . 31 CUT STONE . . . . . 32 CUT STONE AND CONCRETE . . . . . 33 CONCRETE . . . . . 34 HAIR/WOOL/CLOTH . . . . . 41 OTHER _____ 96 (SPECIFY)			
119A	How many rooms do you have in your house?	NUMBER OF ROOMS			
120	How many rooms in this household are used for sleeping?	ROOMS FOR SLEEPING . . .			
120A	Does your household own a private car or pickup? IF YES: How many? IF NONE, RECORD '0'. IF 7 OR MORE, RECORD 7.	NUMBER OF CARS/PICKUPS			
126A	Does any member of this household have a credit card?	YES . . . . . 1 NO 2			

WEIGHT, HEIGHT AND HEMOGLOBIN MEASUREMENT FOR CHILDREN AGE 0-5

201	CHECK COLUMN 11. RECORD THE LINE NUMBER AND AGE FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 202. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S). A FINAL OUTCOME MUST BE RECORDED FOR THE WEIGHT AND HEIGHT MEASUREMENT IN 208 AND FOR THE ANEMIA PROCEDURE IN 213			
		CHILD 1	CHILD 2	CHILD 3
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . NAME _____	LINE NUMBER . . . NAME _____	LINE NUMBER . . . NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . . MONTH . . . . . YEAR 2 0 0	DAY . . . . . . MONTH . . . . . YEAR 2 0 0	DAY . . . . . . MONTH . . . . . YEAR 2 0 0
204	CHECK 203: CHILD BORN IN JANUARY 2004 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)
205	WEIGHT IN KILOGRAMS	KG.	KG.	KG. . . . .
206	HEIGHT IN CENTIMETERS	CM.	CM.	CM. . . . .
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2
208	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
209	CHECK 203: IS CHILD AGE 0-5 MONTHS, I.E., WAS CHILD BORN IN MONTH OF INTERVIEW OR FIVE PREVIOUS MONTHS?	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2
210	LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR THE CHILD (COLUMN 1) RECORD '00' IF NOT LISTED.	LINE NUMBER . . .	LINE NUMBER . . .	LINE NUMBER . . .
211	READ CONSENT STATEMENT TO PARENT/OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)
212	RECORD HEMOGLOBIN LEVEL HERE AND IN THE ANEMIA PAMPHLET	G/DL	G/DL	G/DL . . . . .
213	RECORD RESULT CODE OF HEMOGLOBIN MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
214		GO BACK TO 203 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE ADDITIONAL QUESTIONNAIRE(S); IF NO MORE CHILDREN, GO TO 215.		

CONSENT STATEMENT FOR ANEMIA FOR CHILDREN

As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia.

We request that all children born in 2004 or later participate in the anemia testing part of this survey and give a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

The blood will be tested for anemia immediately, and the result told to you right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Do you have any questions?

You can say yes to the test, or you can say no. It is up to you to decide.
Will you allow (NAME(S) OF CHILD(REN) to participate in the anemia test?

WEIGHT, HEIGHT AND HEMOGLOBIN MEASUREMENT FOR CHILDREN AGE 0-5

		CHILD 4	CHILD 5	CHILD 6
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . [ ][ ] NAME _____	LINE NUMBER . . . [ ][ ] NAME _____	LINE NUMBER . . . [ ][ ] NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . [ ][ ] MONTH . . . . . [ ][ ] YEAR [2][0][0][ ]	DAY . . . . . [ ][ ] MONTH . . . . . [ ][ ] YEAR [2][0][0][ ]	DAY . . . . . [ ][ ] MONTH . . . . . [ ][ ] YEAR [2][0][0][ ]
204	CHECK 203: CHILD BORN IN JANUARY 2004 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)
205	WEIGHT IN KILOGRAMS	KG. . . . [ ][ ].[ ]	KG. . . . [ ][ ].[ ]	KG. . . . [ ][ ].[ ]
206	HEIGHT IN CENTIMETERS	CM. [ ][ ][ ].[ ]	CM. [ ][ ][ ].[ ]	CM. [ ][ ][ ].[ ]
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2
208	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
209	CHECK 203: IS CHILD AGE 0-5 MONTHS, I.E., WAS CHILD BORN IN MONTH OF INTERVIEW OR FIVE PREVIOUS MONTHS?	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2
210	LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR THE CHILD (COLUMN 1) RECORD '00' IF NOT LISTED.	LINE NUMBER . . . [ ][ ]	LINE NUMBER . . . [ ][ ]	LINE NUMBER . . . [ ][ ]
211	READ CONSENT STATEMENT TO PARENT/OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)
212	RECORD HEMOGLOBIN LEVEL HERE AND IN THE ANEMIA PAMPHLET	G/DL . [ ][ ].[ ]	G/DL . [ ][ ].[ ]	G/DL . [ ][ ].[ ]
213	RECORD RESULT CODE OF HEMOGLOBIN MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
214		GO BACK TO 203 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE ADDITIONAL QUESTIONNAIRE(S); IF NO MORE CHILDREN, GO TO 215.		

WEIGHT, HEIGHT AND HEMOGLOBIN MEASUREMENT TESTING FOR WOMEN AGE 15-49

215	CHECK COLUMN 10. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE WOMEN IN 216. IF THERE ARE MORE THAN THREE WOMEN, USE ADDITIONAL QUESTIONNAIRE(S). A FINAL OUTCOME MUST BE RECORDER FOR THE WEIGHT AND HEIGHT MEASUREMENT IN 219 AND FOR THE ANEMIA TEST PROCEDURE IN 227			
		WOMAN 1	WOMAN 2	WOMAN 3
216	LINE NUMBER (COLUMN 10) NAME (COLUMN 2)	LINE NUMBER . . . . [ ][ ] NAME ________	LINE NUMBER . . . . [ ][ ] NAME ________	LINE NUMBER . . . . [ ][ ] NAME ________
217	WEIGHT IN KILOGRAMS	KG. . . . . [ ][ ][ ] . [ ]	KG. . . . . . [ ][ ][ ] . [ ]	KG. . . . . . [ ][ ][ ] . [ ]
218	HEIGHT IN CENTIMETERS	CM. . . . . [ ][ ][ ] . [ ]	CM. . . . . . [ ][ ][ ] . [ ]	CM. . . . . . [ ][ ][ ] . [ ]
219	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . 1 NOT PRESENT . . . . 2 REFUSED . . . . 3 OTHER 6	MEASURED . . . . 1 NOT PRESENT . . . . 2 REFUSED . . . . 3 OTHER 6	MEASURED . . . . 1 NOT PRESENT . . . . 2 REFUSED . . . . 3 OTHER 6
220	AGE: CHECK COLUMN 6A.	15-17 YEARS . . . . 1 18-49 YEARS . . . . 2 (GO TO 223)	15-17 YEARS . . . . 1 18-49 YEARS . . . . 2 (GO TO 223)	15-17 YEARS . . . . 1 18-49 YEARS . . . . 2 (GO TO 223)
221	MARITAL STATUS: CHECK COLUMN 8.	CODE 1 (NEVER MARRIED . . . . . 1 CODES 2-5 (EVER MARRIED) . . . 2 (GO TO 223)	CODE 1 (NEVER MARRIED . . . . . 1 CODES 2-5 (EVER MARRIED) . . . 2 (GO TO 223)	CODE 1 (NEVER MARRIED . . . . 1 CODES 2-5 (EVER MARRIED) . . . . . 2 (GO TO 223)
222	FROM COLUMN 1 RECORD LINE NUMBER OF PARENT/OTHER ADULT RESPON-SIBLE FOR ADOLESCENT. RECORD '00' IF NOT LISTED.	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . [ ][ ]	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . [ ][ ]	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . [ ][ ]
223	READ ANEMIA TEST CONSENT STATEMENT. FOR NEVER-IN-UNION WOMEN AGE 15-17, ASK CONSENT FROM PARENT/OTHER ADULT IDENTIFIED IN 222 BEFORE ASKING RESPON-DENT'S CONSENT.	GRANTED . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . 2 RESPONDENT REFUSED . . . . 3 ________ (SIGN) (IF REFUSED, GO TO 227).	GRANTED . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . 2 RESPONDENT REFUSED . . . . 3 ________ (SIGN) (IF REFUSED, GO TO 227).	GRANTED . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . 2 RESPONDENT REFUSED . . . . 3 ________ (SIGN) (IF REFUSED, GO TO 227).

CONSENT STATEMENT FOR ANEMIA TEST

READ CONSENT STATEMENT TO EACH RESPONDENT. CIRCLE CODE '1' IN 223 IF RESPONDENT CONSENTS TO THE ANEMIA TEST AND CODE '3' IF SHE REFUSES.

FOR NEVER-IN-UNION WOMEN AGE 15-17, ASK CONSENT FROM THE PARENT OR OTHER ADULT IDENTIFIED AS RESPONSIBLE FOR THE ADOLESCENT (SEE QUESTION 222) BEFORE ASKING THE ADOLESCENT FOR HER CONSENT. CIRCLE CODE '2' IN 223 IF THE PARENT (OTHER ADULT) REFUSES. CONDUCT THE TEST ONLY IF BOTH THE PARENT (OTHER ADULT) AND THE ADOLESCENT CONSENT.

As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia.

For the anemia testing, we will need a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

The blood will be tested for anemia immediately, and the result told to you right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Do you have any questions?

You can say yes to the test, or you can say no. It is up to you to decide.
Will you (allow NAME OF ADOLESCENT to) take the anemia test?

		WOMAN 1	WOMAN 2	WOMAN 3
	LINE NUMBER (COLUMN 10) NAME (COLUMN 2)	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
224	PREGNANCY STATUS: CHECK COLUMN 8: IF EVER MARRIED (CODES 2-5), ASK: Are you pregnant? IF NEVER MARRIED (CODE 1), CIRCLE '3'	YES . . . . . 1 NO/DK . . . . . 2 NEVER MARRIED 3	YES . . . . . 1 NO/DK . . . . . 2 NEVER MARRIED 3	YES . . . . . 1 NO/DK . . . . . 2 NEVER MARRIED 3
225	CHECK 223 AND PREPARE EQUIPMENT AND SUPPLIES FOR THE TEST FOR WHICH CONSENT HAS BEEN OBTAINED AND PROCEED WITH THE TEST. A FINAL OUTCOME FOR THE THE ANEMIA TEST PROCEDURE MUST BE RECORDED IN 227 FOR EACH ELIGIBLE WOMAN EVEN IF SHE WAS NOT PRESENT, REFUSED, OR COULD NOT BE TESTED FOR SOME OTHER REASON.			
226	RECORD HEMO-GLOBIN LEVEL HERE AND IN ANEMIA PAMPHLET	G/DL . . . . . ☐☐.☐	G/DL . . . . . ☐☐.☐	G/DL . . . . . ☐☐.☐
227	RECORD RESULT CODE OF HEMO-GLOBIN MEASURE-MENT.	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
228	GO BACK TO 217 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE ADDITIONAL QUESTIONNAIRE(S); IF NO MORE WOMEN, END			

Department of Statistics
Household Survey Directorate

The Hashemite Kingdom of Jordan
JORDAN POPULATION AND
FAMILY HEALTH INTERIM SURVEY 2009

WOMAN'S QUESTIONNAIRE

Survey Contents Confidential by Statistical Law

IDENTIFICATION

QUESTIONNAIRE No.: . . . . . .

GOVERNORATE: _____
DISTRICT: _____
SUB-DISTRICT: _____
LOCALITY: _____
AREA: _____
SUB-AREA: _____
STRATUM: _____
URBAN/RURAL (Urban=1; Rural=2)

BLOCK No.: . . . . . .
BUILDING No.: _____
HOUSING UNIT No.: _____
CLUSTER No.: . . . . . .
HOUSEHOLD No.: . . . . . .

TELEPHONE/
MOBILE No.
(if available)

NAME AND LINE NUMBER OF WOMAN: _____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY
				MONTH
				YEAR 2009
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1	COMPLETED	4	REFUSED	7	OTHER _____ (SPECIFY)
2	NOT AT HOME	5	PARTLY COMPLETED		
3	POSTPONED	6	INCAPCITATED		

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

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____ and I am working with the Department of Statistics. We are conducting a national survey that asks women about the health of women and their children. We would very much appreciate your participation in this survey. This information will help the government to plan health services. The interview usually takes about 40 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your views are important.
At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . [ ][ ] MINUTE . . . . . [ ][ ]	
101A	What is your marital status now: are you married, widowed, divorced, or separated? IF THE WOMAN IS NOT MARRIED, WIDOWED, DIVORCED OR SEPARATED, END THE INTERVIEW, AND CORRECT MARITAL STATUS AND ELIGIBILITY IN THE HOUSEHOLD QUESTIONNAIRE	MARRIED . . . . . 1 DIVORCED . . . . . 2 WIDOWED . . . . . 3 SEPARATED . . . . . 4 NEVER MARRIED 5	→ END
104	In what month and year were you born?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
105	How old were you at your last birthday? COMPARE AND CORRECT 104 AND/OR 105 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
106	Have you ever attended school?	YES . . . . . 1 NO 2	→ 201
107	What is the highest level of school you attended: Old elementary, old preparatory, old secondary, new basic, new secondary, intermediate diploma, bachelor, or higher?	OLD SYSTEM ELEMENTARY . . . . . 1 PREPARATORY . . . . . 2 SECONDARY . . . . . 3 NEW SYSTEM BASIC . . . . . 4 SECONDARY . . . . . 5 INTERMEDIATE DIPLOMA . . . . . 6 BACHELOR . . . . . 7 HIGHER 8	
108	What is the highest grade you completed at that level?	GRADE . . . . . [ ][ ]	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	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	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	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	→ 206
205	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 . [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL . . . . . [ ][ ]	
209	CHECK 208: 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 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐ →		→ 226

211 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 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.
(IF THERE ARE MORE THAN 12 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS. IF LESS THAN 1 YEAR, RECORD '00'	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 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.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
01	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (NEXT BIRTH)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	
02	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
03	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
04	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
05	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
06	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
07	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

212 What name was given to your next baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS. IF LESS THAN 1 YEAR, RECORD '00'	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 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.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
08	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
09	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
10	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
11	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
12	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)? IF YES, RECORD BIRTH(S) IN TABLE.	YES . . . . . 1 NO 2

223 COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK:

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

CHECK:
- FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED. ☐
- FOR EACH BIRTH SINCE JANUARY 2004: MONTH AND YEAR OF BIRTH ARE 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 YEAR: PROBE TO DETERMINE EXACT NUMBER OF MONTHS. ☐

224 CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN 2004 OR LATER. IF NONE, RECORD '0' AND SKIP TO 226. ☐

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	FOR EACH BIRTH SINCE JANUARY 2004, ENTER 'B' IN THE MONTH OF BIRTH IN COLUMN 1 OF THE CALENDAR. WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE. FOR EACH BIRTH, ASK THE NUMBER OF MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.)		
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	→ 229
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN COULMN 1 OF THE CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS	
228	At the time you became pregnant, did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN . . . . . 1 LATER . . . . . 2 NOT AT ALL 3	
229	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES . . . . . 1 NO 2	→ 237
229A	The last time you had a such pregnancy, did the pregnancy end in a miscarriage, an induced abortion or a stillbirth?	MISCARRIAGE . . . . . 1 INDUCED ABORTION . . . . . 2 STILLBIRTH 3	
230	When did the last such pregnancy end?	MONTH . . . . . YEAR	
231	CHECK 230: LAST PREGNANCY ENDED IN JAN. 2004 OR LATER ↓ LAST PREGNANCY ENDED BEFORE JAN. 2004 →		→ 237
232	How many months pregnant were you when the last such pregnancy ended? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN COL. 1 OF THE CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	NUMBER OF MONTHS	
233	Since January 2004, have you had any other pregnancies that did not result in a live birth?	YES . . . . . 1 NO 2	→ 235
233A	Since January 2004, how many other pregnancies that did not result in a live birth have you had?	NUMBER OF PREGNANCIES .	
234	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO JANUARY 2004. ENTER 'T' IN COLUMN 1 OF THE CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
235	Did you have any miscarriages, abortions or stillbirths that ended before 2004?	YES . . . . . 1 NO 2	→ 237
236	When did the last such pregnancy that terminated before 2004 end?	MONTH . . . . . YEAR	
237	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO . . . . . 1 WEEKS AGO . . . . . 2 MONTHS AGO . . . . . 3 YEARS AGO . . . . . 4 IN MENOPAUSE/ HAS HAD HYSTERECTOMY . . . 994 BEFORE LAST BIRTH . . . . . 995 NEVER MENSTRUATED 996	

SECTION 3. CONTRACEPTION

301	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. Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had an operation to avoid having any more children? YES . . . . . 1 NO 2
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had a husband who had an operation to avoid having any more children? YES . . . . . 1 NO 2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
04	IUD Women can have a loop or coil placed inside them by a doctor or a midwife.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
05	INJECTABLES Women can have an injection by a health provider that stops them from becoming pregnant usually for 3 months.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy usually for 3 years.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
09	LACTATIONAL AMENORRHEA METHOD (LAM)	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
10	PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
11	WITHDRAWAL Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
12	EMERGENCY CONTRACEPTION As an emergency measure after unprotected sexual intercourse, women can take special pills at any time within five days to prevent pregnancy.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
13	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES . . . . . 1 NO . . . . . 2 YES . . . . . 1 NO 2
303	CHECK 302: NOT A SINGLE "YES" (NEVER USED) →	AT LEAST ONE "YES" (EVER USED) → 307	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 306
305	ENTER '0' IN COLUMN 1 OF THE CALENDAR IN EACH BLANK MONTH.		→ 401
306	What have you used or done? CORRECT 302 AND 303 (AND 301 IF NECESSARY).		
307	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN . . . . . ☐☐	
308	CHECK 302 (01): WOMAN NOT STERILIZED ☐ → WOMAN STERILIZED ☐		→ 311A
309	CHECK 226: NOT PREGNANT OR UNSURE ☐ → PREGNANT ☐		→ 322
310	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 322
311 311A	Which method are you using? CIRCLE ALL MENTIONED. IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD IN LIST. CIRCLE 'A' FOR FEMALE STERILIZATION.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B PILL . . . . . C IUD . . . . . D INJECTABLES . . . . . E IMPLANTS . . . . . F CONDOM . . . . . G FEMALE CONDOM . . . . . H DIAPHRAGM . . . . . I FOAM/JELLY . . . . . J LACTATIONAL AMEN. METHOD . . . K PERIODIC ABSTINENCE . . . . . L WITHDRAWAL . . . . . M OTHER _____ X (SPECIFY)	→ 319A
316	In what facility did the sterilization take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC MEDICAL SECTOR** GOVT. HOSPITAL . . . . . 11 UNIVERSITY HOSPITAL . . . . . 12 ROYAL MEDICAL SERVICES 13 OTHER PUBLIC _____ 16 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC . . . 21 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) DON'T KNOW 98	
319 319A	In what month and year was the sterilization performed? Since what month and year have you been using (CURRENT METHOD) without stopping? PROBE: For how long have you been using (CURRENT METHOD) now without stopping?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
320	CHECK 319/319A, 215 AND 230: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 319/319A — YES ☐ / NO ☐ GO BACK TO 319/319A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION).		
321	CHECK 319/319A: YEAR IS 2004 OR LATER ☐ — ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND IN EACH MONTH BACK TO THE DATE STARTED USING. YEAR IS 2003 OR EARLIER ☐ — ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN COL. 1 OF THE CALENDAR AND EACH MONTH BACK TO JANUARY 2004 THEN SKIP TO → 331		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
322	I would like to ask you some questions about the times you or your husband 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 2004. USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. **IN COULMN 1**: ENTER METHOD USE CODE OR '0' FOR NONUSE IN EACH BLANK MONTH. 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 COL.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		
331	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . 11 PERIODIC ABSTINENCE . . . . . 12 WITHDRAWAL . . . . . 13 OTHER METHOD 96	→ 401 → 401
332	Where did you obtain (CURRENT METHOD) the last time? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC MEDICAL SECTOR** GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. MCH . . . . . 13 UNIVERSITY HOSPITAL/CLINIC 14 ROYAL MEDICAL SERVICES 15 OTHER PUBLIC _____ 16 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC . . . 21 PRIVATE DOCTOR . . . . . 22 PHARMACY . . . . . 23 JORDANIAN AS. OF FP AND PROTECTION (JAFPP) . . . . . 24 UNRWA CLINIC . . . . . 25 OTHER NON-GOV ORGANIZATION 26 OTHER PRIVATE MEDICAL _____ 27 (SPECIFY) **OTHER SOURCE** FRIEND/RELATIVE . . . . . 33 OTHER _____ 96 (SPECIFY)	→ 401

SECTION 4. PREGNANCY AND POSTNATAL CARE

401	CHECK 224: ONE OR MORE BIRTHS IN 2004 OR LATER ☐ ↓ / NO BIRTHS IN 2004 OR LATER ☐ → 601			
402	CHECK 215: ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2004 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately.)			
403	LINE NUMBER FROM 212	LAST BIRTH LINE NO. ☐☐	NEXT-TO-LAST BIRTH LINE NO. ☐☐	SECOND-FROM-LAST BIRTH LINE NO. ☐☐
404	FROM 212 AND 216	NAME ________ LIVING ☐ DEAD ☐	NAME ________ LIVING ☐ DEAD ☐	NAME ________ LIVING ☐ DEAD ☐
405	At the time you became pregnant with (NAME), did you want to become pregnant <u>then</u>, did you want to wait until <u>later</u>, or did you <u>not want</u> to have any (more) children at all?	THEN . . . . 1 (SKIP TO 426) LATER . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 426)	THEN . . . . 1 (SKIP TO 426) LATER . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 426)	THEN . . . . 1 (SKIP TO 426) LATER . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 426)
406	How much longer would you have liked to wait?	MONTHS . . 1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998	MONTHS . . 1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998	MONTHS . . 1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998
426	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	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8
427	Was (NAME) weighed at birth?	YES . . . . 1 NO . . . . 2 (SKIP TO 448) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 449) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 449) DON'T KNOW 8
428	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 ☐ . ☐☐☐ KG FROM RECALL 2 ☐ . ☐☐☐ DON'T KNOW . 99998	KG FROM CARD 1 ☐ . ☐☐☐ KG FROM RECALL 2 ☐ . ☐☐☐ DON'T KNOW . 99998	KG FROM CARD 1 ☐ . ☐☐☐ KG FROM RECALL 2 ☐ . ☐☐☐ DON'T KNOW . 99998
448	Has your menstrual period returned since the birth of (NAME)?	YES . . . . 1 (SKIP TO 450) NO . . . . 2 (SKIP TO 451)		
449	Did your period return between the birth of (NAME) and your next pregnancy?		YES . . . . 1 NO . . . . 2 (SKIP TO 453)	YES . . . . 1 NO . . . . 2 (SKIP TO 453)
450	For how many months after the birth of (NAME) did you <u>not</u> have a period?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98

451	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREG-NANT → PREGNANT OR UNSURE (SKIP TO 453)		
452	Have you begun to have sexual intercourse again since the birth of (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 454)		
453	For how many months after the birth of (NAME) did you not have sexual intercourse? IF LESS THAN 1 MONTH, RECORD '00'	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98
454	Did you ever breastfeed (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 465)	YES . . . . . 1 (SKIP TO 460) NO . . . . . 2 (SKIP TO 465)	YES . . . . . 1 (SKIP TO 460) NO . . . . . 2 (SKIP TO 465)
455	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 ☐☐		
456	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 458)		
457	What was (NAME) given to drink? Anything else? RECORD ALL LIQUIDS MENTIONED.	MILK (OTHER THAN BREAST MILK) . A PLAIN WATER . . . B SUGAR OR GLUCOSE WATER . . . C GRIPE WATER . . . D SUGAR-SALT-WATER SOLUTION . . . . . E FRUIT JUICE . . . . . F INFANT FORMULA . G TEA/INFUSIONS . . . H HONEY . . . . . I OTHER _____ X (SPECIFY)		
458	CHECK 404: IS CHILD LIVING?	LIVING → ☐ DEAD ☐ (SKIP TO 460)		
459	Are you still breastfeeding (NAME)?	YES . . . . . 1 (SKIP TO 465) NO 2		
460	For how many months did you breastfeed (NAME)?	MONTHS . . . ☐☐ DON'T KNOW . . . 98	MONTHS . . . ☐☐ STILL BF . . . . . 95 DON'T KNOW . . . 98	MONTHS . . . ☐☐ STILL BF . . . . . 95 DON'T KNOW . . . 98
465		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601.	GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 601.

SECTION 6. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	CHECK 101A: CURRENTLY MARRIED/ ↓ WIDOWED/ SEPARATED/ DIVORCED ☐ →		606
602	Is your husband living with you now or is he staying elsewhere?	LIVING WITH HER . . . . . 1 STAYING ELSEWHERE 2	
603	RECORD THE HUSBAND'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO. . . . . ☐☐	
604	Does your husband have another wife (other wives) besides you?	YES . . . . . 1 NO 2	→ 606
605	Including yourself, in total, how many wives does your husband have?	TOTAL NUMBER OF WIVES . . ☐ DON'T KNOW 8	
606	Have you been married only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
607	CHECK 606: MARRIED ONLY ONCE ↓: In what month and year did you start living with your husband (consummate mariage)? MARRIED MORE THAN ONCE ↓: Now I would like to ask about your first husband. In what month and year did you start living with him (consummate mariage)?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	→ 612
608	How old were you when you first started living with him?	AGE . . . . . ☐☐	
612	When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 ☐☐ WEEKS AGO . . . . . 2 ☐☐ MONTHS AGO . . . . . 3 ☐☐ YEARS AGO . . . . . 4 ☐☐	→ 700
613	The last time you had sexaul intercourse, was a condom used?	YES . . . . . 1 NO 2	

SECTION 7. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
700	CHECK 101A: CURRENTLY MARRIED CURRENTLY WIDOWED, DIVORCED, OR SEPARATED		→ 713
701	CHECK 311/311A: NEITHER STERILIZED HE OR SHE STERILIZED		→ 713
702	CHECK 226: NOT PREGNANT OR UNSURE: 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? PREGNANT: 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?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 SAYS SHE CAN'T GET PREGNANT . 3 UNDECIDED/DON'T KNOW AND PREGNANT . . . . . 4 UNDECIDED/DON'T KNOW AND NOT PREGNANT OR UNSURE 5	 → 704 → 713 → 709 → 708
703	CHECK 226: NOT PREGNANT OR UNSURE: How long would you like to wait from now before the birth of (a/another) child? PREGNANT: After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 YEARS . . . . . 2 SOON/NOW . . . . . 993 SAYS SHE CAN'T GET PREGNANT 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	 → 708 → 713 → 708
704	CHECK 226: NOT PREGNANT OR UNSURE PREGNANT		→ 709
705	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED NOT CURRENTLY USING CURRENTLY USING		→ 713
706	CHECK 703: NOT ASKED 24 OR MORE MONTHS OR 02 OR MORE YEARS 00-23 MONTHS OR 00-01 YEAR		→ 709

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
707	CHECK 702 AND 703: WANTS TO HAVE A/ANOTHER CHILD BUT NOT BEFORE 2 YEARS → You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. Can you tell me why you are not using a method? Any other reason? WANTS NO MORE/ NONE → You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. Can you tell me why you are not using a method? Any other reason? RECORD ALL REASONS MENTIONED.	FERTILITY-RELATED REASONS NOT HAVING SEX . . . . . A INFREQUENT SEX . . . . . B MENOPAUSAL/HYSTERECTOMY . C SUBFECUND/INFECUND . . . . . D POSTPARTUM AMENORRHEIC . . . E BREASTFEEDING . . . . . F DIFFICULT TO GET PREGNANT . . . G OPPOSITION TO USE RESPONDENT OPPOSED . . . . . H HUSBAND OPPOSED . . . . . I OTHERS OPPOSED . . . . . J RELIGIOUS PROHIBITION . . . . . K RUMORS . . . . . L LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . M KNOWS NO SOURCE . . . . . N METHOD-RELATED REASONS HEALTH CONCERNS . . . . . O FEAR OF SIDE EFFECTS . . . . . P LACK OF ACCESS/TOO FAR . . . . . Q COSTS TOO MUCH . . . . . R INCONVENIENT TO USE . . . . . S INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . T OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
708	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED → NO, NOT CURRENTLY USING → YES, CURRENTLY USING		→ 713
709	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 711 → 713
710	Which contraceptive method would you prefer to use?	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD/PERIOD. ABSTIN. . 12 WITHDRAWAL . . . . . 13 OTHER _____ 96 (SPECIFY) DK/UNSURE 98	→ 713

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
711	What is the main reason that you think you will not use a contraceptive method at any time in the future?	FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX . . . 11 MENOPAUSAL/HYSTERECTOMY 12 SUBFECUND/INFECUND . . . . . 13 WANTS AS MANY CHILDREN AS POSSIBLE . . . . . 14 OPPOSITION TO USE RESPONDENT OPPOSED . . . . . 21 HUSBAND OPPOSED . . . . . 22 OTHERS OPPOSED . . . . . 23 RELIGIOUS PROHIBITION . . . . . 24 RUMORS 25 LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . 31 KNOWS NO SOURCE . . . . . 32 METHOD-RELATED REASONS HEALTH CONCERNS . . . . . 41 FEAR OF SIDE EFFECTS . . . . . 42 LACK OF ACCESS/TOO FAR . . . 43 COSTS TOO MUCH . . . . . 44 INCONVENIENT TO USE . . . . . 45 INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . 46 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
713	CHECK 216: 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.	NONE . . . . . 00 → 811 NUMBER . . . . . ☐☐ OTHER _____ 96 → 811 (SPECIFY)	
714	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	

SECTION 8. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
811	Have you done any work in the last seven days, even for one hour? By “work”, I mean any paid work, any work in a business completely or partially owned by yourself, any work in a business owned by the household without payment, or work in other business?	YES . . . . . 1 NO 2	→ 813
812	Do you have any job, but you did not practice it during the last seven days for a reason such as vacation, travel, or illness?	YES . . . . . 1 NO 2	→ 830
813	What is your current occupation, that is, what kind of work do you mainly do?	_____ ☐☐☐ _____ _____	
814	What is your employment status: are you an employee, an employer, are you self-employed, are you working for your family without payment, or are you working for someone else without payment?	EMPLOYEE . . . . . 1 EMPLOYER . . . . . 2 SELF-EMPLOYED . . . . . 3 UNPAID FAMILY WORKER . . . . . 4 UNPAID WORKER 5	
830	Do you smoke: Cigarettes? Nargila?	YES NO CIGARETTE 1 2 NARGILA 1 2	
1210	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTE . . . . . ☐☐	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
IN COLUMN 1, 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 FEMALE STERILIZATION
- 2 MALE STERILIZATION
- 3 PILL
- 4 IUD
- 5 INJECTABLES
- 6 IMPLANTS
- 7 CONDOM
- 8 FEMALE CONDOM
- 9 DIAPHRAGM
- J FOAM OR JELLY
- K LACTATIONAL AMENORRHEA METHOD
- L PERIODIC ABSTINENCE
- M WITHDRAWAL
- X OTHER _____ (SPECIFY)

NOTE: In case of a multiple birth which ended with live and non-live birth outcomes record BIRTH to the calendar

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 COSTS TOO MUCH
- 9 INCONVENIENT TO USE
- F FATALISTIC
- A DIFFICULT TO GET PREGNANT/MENOPAUSAL
- D WIDOW/DIVORCE/SEPARATION
- R RAMADAN
- X OTHER _____ (SPECIFY)
- Z DON'T KNOW

				COL. 1	COL.2				
	12	DEC	01			01	DEC	12	
	11	NOV	02			02	NOV	11	
	10	OCT	03			03	OCT	10	
	09	SEP	04			04	SEP	09	
2	08	AUG	05			05	AUG	08	2
0	07	JUL	06			06	JUL	07	0
0	06	JUN	07			07	JUN	06	0
9	05	MAY	08			08	MAY	05	9
	04	APR	09			09	APR	04	
	03	MAR	10			10	MAR	03	
	02	FEB	11			11	FEB	02	
	01	JAN	12			12	JAN	01	
	12	DEC	13			13	DEC	12	
	11	NOV	14			14	NOV	11	
	10	OCT	15			15	OCT	10	
	09	SEP	16			16	SEP	09	
2	08	AUG	17			17	AUG	08	2
0	07	JUL	18			18	JUL	07	0
0	06	JUN	19			19	JUN	06	0
8	05	MAY	20			20	MAY	05	8
	04	APR	21			21	APR	04	
	03	MAR	22			22	MAR	03	
	02	FEB	23			23	FEB	02	
	01	JAN	24			24	JAN	01	
	12	DEC	25			25	DEC	12	
	11	NOV	26			26	NOV	11	
	10	OCT	27			27	OCT	10	
	09	SEP	28			28	SEP	09	
2	08	AUG	29			29	AUG	08	2
0	07	JUL	30			30	JUL	07	0
0	06	JUN	31			31	JUN	06	0
7	05	MAY	32			32	MAY	05	7
	04	APR	33			33	APR	04	
	03	MAR	34			34	MAR	03	
	02	FEB	35			35	FEB	02	
	01	JAN	36			36	JAN	01	
	12	DEC	37			37	DEC	12	
	11	NOV	38			38	NOV	11	
	10	OCT	39			39	OCT	10	
	09	SEP	40			40	SEP	09	
2	08	AUG	41			41	AUG	08	2
0	07	JUL	42			42	JUL	07	0
0	06	JUN	43			43	JUN	06	0
6	05	MAY	44			44	MAY	05	6
	04	APR	45			45	APR	04	
	03	MAR	46			46	MAR	03	
	02	FEB	47			47	FEB	02	
	01	JAN	48			48	JAN	01	
	12	DEC	49			49	DEC	12	
	11	NOV	50			50	NOV	11	
	10	OCT	51			51	OCT	10	
	09	SEP	52			52	SEP	09	
2	08	AUG	53			53	AUG	08	2
0	07	JUL	54			54	JUL	07	0
0	06	JUN	55			55	JUN	06	0
5	05	MAY	56			56	MAY	05	5
	04	APR	57			57	APR	04	
	03	MAR	58			58	MAR	03	
	02	FEB	59			59	FEB	02	
	01	JAN	60			60	JAN	01	
	12	DEC	61			61	DEC	12	
	11	NOV	62			62	NOV	11	
	10	OCT	63			63	OCT	10	
	09	SEP	64			64	SEP	09	
2	08	AUG	65			65	AUG	08	2
0	07	JUL	66			66	JUL	07	0
0	06	JUN	67			67	JUN	06	0
4	05	MAY	68			68	MAY	05	4
	04	APR	69			69	APR	04	
	03	MAR	70			70	MAR	03	
	02	FEB	71			71	FEB	02	
	01	JAN	72			72	JAN	01	