# JORDAN
# FERTILITY SURVEY
# 1976

## Principal Report

## Volume I

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## PRINCIPAL REPORT—VOLUME I

**DEPARTMENT OF STATISTICS**
Amman, Hashemite Kingdom of Jordan
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# FOREWORD

The Jordan Fertility Survey was conducted in 1976 by the Department of Statistics in association with the World Fertility Survey (WFS) of the International Statistical Institute.

The principal report of the survey consists of two volumes: this first volume presents the background, methodology and main findings of the survey, and the second volume contains the detailed tabulations. Further in-depth analysis of the data collected in the survey will still be needed, and it is hoped that this report will encourage researchers and analysts to undertake such analyses.

The successful implementation of the Jordan Fertility Survey would not have been possible without the active and dedicated efforts of a large number of persons. I wish to thank the staff of the Department of Statistics for their incessant efforts throughout the various stages of the project.

I am also grateful to the WFS Project Director Sir Maurice Kendall, and his staff. In particular, I would like to thank Mr. Christopher Scott, Mr. Mahmoud Khalil and Mr. Vijay Verma for their valuable assistance during the survey design and field work stages; Ms. Judith Rattenbury, Mr. Aqeel Ahmad and Mr. Nuri Ozsever for their help in the data processing work; and Mr. V. C. Chidambaram, Mr. Iqbal Alam and Mr. David Smith for their help during the analysis stage.

I wish also to record my special thanks to Mr. Atef Khalifa, UN expert at the Department of Statistics, for his help throughout the various stages of the survey, and for writing the first draft of the present report.

Special thanks are due to Mr. Samir Farid, WFS co-ordinator, who with the help of Mr. John Cleland, saw through the revision and finalization of the report.

Last but not least, I gratefully acknowledge the help of the women we interviewed; only their understanding and collaboration made this important project possible.

*Amman*
*19 June 1979*

Shuja El-Asad
*Director General*
*Department of Statistics*

# OVERVIEW

## 1. THE SETTING

Transjordan gained independence from the Ottoman Empire and was declared a political entity in 1923. In 1925, the districts of Ma'an and Aqaba were annexed to Transjordan. The Hashemite Kingdom of Jordan was established in 1950 and the West Bank was officially declared as part of the Kingdom.

In 1952, the population of the East Bank of Jordan was about 587,000. According to the 1961 census, the population of the East Bank was 900,776. The Israeli occupation of the West Bank and Gaza Strip in 1967 resulted in the flight of hundreds of thousands from these territories to the East Bank. The number of people living on the East Bank was estimated to be 1,952,000 in 1975.

The population of Jordan is very young; 50 percent of the population are under 15 years of age. Within the East Bank, the population is unevenly distributed. Although the geographic distribution of the population reflects the pattern of rainfall and cultivation, the prevailing state of war in the region has come to play an important role. The influx of Palestinian refugees from Palestine to Jordan in 1948 and from the West Bank and Gaza Strip to the East Bank in 1967, and the internal migration from rural areas have been important factors in the rapidly increasing population density in urban areas. In 1975, the population of the three largest cities on the East Bank — Amman, Zarqa and Irbid — represented about 54 percent of the total population of the East Bank.

There has been a rapid expansion in education; in 1975 approximately 88 percent of children aged 6–14 were enrolled in primary schools. However, in 1976 82 percent of males but only 59 percent of females aged 12 or more years were literate.

Marriage is relatively early and virtually universal. In 1975, the crude marriage rate was 7.2 per thousand, and the crude divorce rate was 1.2 per thousand. About 60 percent of females who were married in 1973–1974 were less than 20 years of age.

Jordan is characterized by a large household size. In 1976, about two-thirds of households on the East Bank consisted of 6 or more persons, and about 10 percent of total households consisted of 10 or more persons.

Rapid economic and social changes since the early 1950's have had the effect of reducing death rates sharply.

The crude death rate dropped from 21 per thousand in 1950–1954 to 18 per thousand in 1961 and to only 12 per thousand in 1975. However, birth rates being governed by conditions less flexible than those governing mortality have maintained their high level. Since 1960, crude birth rate was in the range of 45–50 per thousand. The present pattern of natural growth (about 35 per thousand) is expected to continue in the 1980's unless drastic measures are taken to lower fertility.

The use of modern means of contraception is of very recent origin in Jordan; there exist so far five private family planning clinics. Recently, the government of Jordan has been considering to offer family planning services in the Maternal and Child Health Centres run by the Ministry of Health.

Jordan, however, has no formal population policy. Nevertheless, recognizing the problems associated with rapid population growth, the Government of Jordan established in 1973 a 'National Population Commission' to take over the responsibility of planning and promoting a national population policy.

## 2. THE SURVEY

The Jordan Fertility Survey (JFS) was undertaken in 1976 under the direct responsibility of the Department of Statistics of the Government of Jordan. The survey universe covered the East Bank of Jordan. The JFS was carried out in two separate stages: the household survey and the individual survey.

The sample for the JFS was designed as an equal probability sample. It has been decided that the sample for the household survey should represent 5 percent of households in the East Bank with the object of having a sample of 14,000 to 15,000 households. For the individual survey of ever-married women in the childbearing ages, 1 out of 4 of the households selected for the household survey were subsampled and all ever-married women aged 15–49 who slept in selected households the night preceding the interview were eligible for interview. However, the procedure actually followed during selection deviated from the self-weighting design. To compensate for departures from self-weighting during sample selection and also for differential non-response, all data presented in the JFS Principal Report have been weighted appropriately.

The JFS employed three questionnaires all of which were translated into Arabic. The first was the Expanded Household Schedule which included the WFS General Mortality Module. The second was the Individual Questionnaire which was administered to ever-married women aged 15–49 with the object of obtaining information regarding their marriage and maternity histories, knowledge and use of contraception, fertility intentions and preferences, and socio-economic background. This questionnaire was based on the WFS Core, incorporating the Fertility Regulation Module and some questions from the Abortion Module. The third questionnaire was the Community Level Module which provided information on the general characteristics and socio-economic conditions at the village level.

# 3. MAIN FINDINGS

The main findings of the Jordan Fertility Survey may be summarized as follows.

## 3.1. NUPTIALITY AND EXPOSURE TO CHILD-BEARING

First marriage is relatively early and virtually universal among women in Jordan. Recently, there has been a clear trend towards later marriage and a concomitant trend for the first marriage to become spread over a wider age range. The age at which 50 per cent of each of the cohorts of women were ever married has risen from 16.7 years for women aged 45–49 to 19.4 years for women aged 20–24. The decline in teen-age marriages has been striking. Of the oldest women (aged 45–49) 31 percent married before their fifteenth birthday; of the youngest women (aged 15–19) only 5.5 percent did so.

There are striking differences in the age pattern of first marriage between urban and rural communities. For women at ages 20–24, the percentage every married increases from 58 percent in urban areas to 78 percent in rural areas.

Differentials by level of education are substantial and in the expected direction; the percentage of ever-married women at ages 20–24 years decreases from 80 percent for women with no schooling, to 76 percent for those with incomplete primary education, to 58 percent for those with preparatory education, and to only 31 percent for those with secondary education.

Differentials also exist by work status before marriage; women who worked for cash for someone outside the family married later than women who were unpaid family workers by about 1.4 years. Further, clear differentials exist by wife's occupation before first marriage; women who were engaged in technical or clerical occupations have a mean age at marriage 2.3 years higher than those who were engaged in work in the agricultural or farming sector. Only slight differentials were found where mean age of wife at first marriage was related to her husband's occupation. Muslim women tended to marry at younger ages than Christian women.

Marriage is relatively stable. Out of all ever-married women in the sample about 7 percent of first marriages have been dissolved; 3.6 percent were accounted for by death of husband while 2.9 percent were due to divorce.

The likelihood of remarriage was high; about half of the women whose first marriages were dissolved have remarried.

Out of all ever-married women in the sample, 95.7 percent were currently married; 10.8 percent reported themselves to be non-fecund and 20.3 percent were currently pregnant.

## 3.2. FERTILITY

### Current Parity

One of the principal measures of fertility derived from the JFS data is current parity, or number of children ever born. This measure makes no reference to the timing of births but summarizes the woman's fertility experience up to the time of the interview.

The overall mean number of children ever born is 5.4. This is a relatively high average. For women aged 45–49, the mean number of children ever born is 8.8.

The data on fertility according to age at first marriage suggest that first marriage at all ages below 22 has little impact on fertility. Only marriage at an age of 22 or more begins to have an impact.

Women who first married at ages 15–21 years show higher fertility than that of women who married below age 15 during the first fifteen years of marriage. This may be partially attributed to adolescent subfecundity.

### Differentials in Fertility

One of the aims of the JFS is to examine differences in fertility between various socio-economic groupings. This examination represents a first step towards an understanding of the determinants of fertility.

A clear inverse relationship between fertility and level of education is shown by the data. Women with lower education tend to have higher parities: 48 percent of women with less than primary education have 7 or more children ever born, in comparison with only 16, 8, and 5 percent for women with primary, preparatory, and secondary or more education, respectively. The mean number of children ever born is 6.3 for women with no schooling, in comparison with only 3.7, 3.0, and 2.7 for women with primary, preparatory, and secondary or more education, respectively.

Some differences are also seen in fertility by husband's occupation. The data, however, suggests that the mean number of live births within each educational level varies only moderately by husband's occupation, whereas the variations are substantial by wife's educational level within each of the husband's occupation categories. It appears that most of the differences in fertility according to husban's occupation are mainly due to age at first marriage and wife's educational level.

There are also some differences in fertility by wife's pattern of work; women who are currently working have a mean number of live births of 4.8, while those who worked earlier have a mean of 5.1 births and those who never worked have a mean of 5.5 births.

Significant differences in fertility exist between women in rural and urban areas. However, differentials within rural or within urban areas seem stronger. It is also observed that wife's pattern of work has an effect when urban/rural fertility differentials are considered. Currently working women in rural areas have much higher fertility than women in the same category in urban areas. It is also observed that Muslim women tend to have higher fertility than non-Muslims.

### Early Marital Fertility

The mean number of live births within the first five years of first marriage is lower among women who married early in their teens or later in their twenties than among other women.

No clear differences are found in the level of fertility during the first five years of marriage between women with different background. It appears that women tend to have children rapidly within the first five years of marriage regardless of their socio-economic background. Differentials in fertility emerge clearly in the years following those of early married life.

### Recent Marital Fertility

Out of all ever-married women in the sample, 75 percent were continuously in the married state for the past five years. They each had an average of 1.7 live births within the past five years. Age at first marriage does not seem to have a significant effect on that average. What seems to have a clear effect is the order of the past five years in the married life. If the past five-year period was the first in marital life, it generally yielded a higher mean number of live births; this mean gradually declined for every subsequent interval observed.

It is also observed that the overall mean number of children born in the past five years declines consistently as the number of living children a woman had at the beginning of that interval increases.

### Current Fertility

The level and pattern of current fertility in the 12-month period preceding the survey date is examined by using the total fertility rate which represents the number of live births that would occur to a woman if she were to go through her reproductive years exposed to the risk of childbearing experienced by a group of women during a particular time period — in the present case the 12-month period preceding the survey date.

Estimates of the total fertility rate show substantial differences between urban and rural areas; the rate increases from 6.5 live births for women living in cities, to 7.0 for those living in towns, and to 9.1 for rural women.

The differences in currently fertility by the woman's level of education are substantial. The total fertility rate decreases from 9.0 live births for women with no schooling, to 6.1 for those with primary education, and to 3.2 for women with secondary education.

### Trends in Fertility

The total fertility rates for the 15 years preceding the survey (1961–1976) have been estimated from the JFS data. This rate has declined from 9.04 live births for 1961–1966, to 8.54 for 1966–1971, and to 7.7 for 1971–1976. Thus the level of fertility during 1971–1976 was about 15 percent below that for the period 1961–1966. This deline of 1.34 live births per woman over the past 15 years has come from almost all age groups.

### 3.3. MORTALITY

Out of 1,000 live births of either sex, 81 males and 83 females die within the first year of life, and 95 males and 99 females die before reaching their second birthday. Infant and child mortality in rural areas is much higher than in urban areas. However, there has been a substantial reduction in the level of infant and child mortality.

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About 15 percent of the children born in the period 1945–1949 died within the first year of life; the corresponding figure for 1970–1975 was only 7 percent.

## 3.4. FERTILITY PREFERENCES

### Desire to Cease Childbearing

The analysis of the desire to cease childbearing is based on all currently married women who were pregnant or believed themselves fecund, plus currently married women who had been sterilized for contraceptive purposes (total of 3,069 out of 3,612 women).

Out of the 3,069 women considered, about 42 percent expressed an opinion that they wished to have no more children, 4 percent were undecided, while the remainder (54 percent) wanted more children.

The mean additional number of children wanted for all currently married fecund women is 1.6. The mean additional number of children wanted, when restricted to only those who declared their wish for more children and mentioned the specific number they wanted is 2.8. That latter mean is as high as 4.2 for childless women and declines gradually with family size. The proportion of women wanting to cease childbearing increases with age, even when the number of living children is controlled.

The data show that the proportion of women wanting to cease having children increases as education becomes higher. The proportion of women wanting to cease children is significantly lower in rural than in urban areas. As a result, the mean number of additional children wanted is much higher in rural than in urban areas — 2.5 compared to 1.2 children.

Religious groups show clear differences in regard to the proportion wanting to cease childbearing; only 40 percent of Muslim women expressed the desire to cease childbearing, in comparison with 58 percent and 71 percent among Catholic and other Christian women, respectively. The mean additional number of children wanted was 1.7, 0.6, 0.1 for Muslims, Catholics, and others, respectively.

No consistent differences emerge when desire to cease childbearing and additional number of children wanted is considered in relation to pattern of work. The results do not support the hypothesis that working women tend to have less desire for additional children.

### Number of Children Desired

The overall mean number of children desired for currently married women is 6.3. The majority of women (65 percent) stated a preference for five or more children.

Women in the younger age groups tend to desire a smaller number of children than older women. However, the data also show that the mean number of living children never exceeds the mean desired for any age group, even for women who have completed their fertility.

The data also suggest that women who marry early tend to have, generally speaking, preferences for larger families. Women who are more educated desire less children. Currently married women residing in rural areas seem to want a larger total number of children than those in urban areas.

### Sex Preferences

It is apparent that Jordanian women have strong preferences for sons over daughters: more women are satisfied with a sex composition biased towards sons, and accordingly they want to cease childbearing in higher proportions when these conditions are fulfilled. A balanced sex composition is not as satisfying as one with more boys. Most women prefer their next child to be a boy rather than a girl. When a women, controlling for number of living children, has more boys than girls, she desires fewer additional children on average and even her preferences for the total number of children desired are less.

## 3.5. KNOWLEDGE AND USE OF CONTRACEPTION

### Breastfeeding Practice in the Closed Interval

The analysis is restricted to women for whose closed interval was at least 33 months and whose child survived at least two full years (828 women). For these women, the overall mean length of breastfeeding was 12.2 months. The percentage of women not breastfeeding remained about the same regardless of age, up to age 44.

Generally speaking, older women had longer birth intervals; from 21.8 months for women less than 25 years of age to 30.0 months for women aged 45 or more years. That trend is the same regardless of duration of breastfeeding or ever-use of contraception. Ever-use of contraception seems to increase the mean length of closed interval for all age groups and all durations of breastfeeding.

Breastfeeding is more common among Muslim women who tend to breastfeed their babies for longer durations, and the proportion of those who did not breastfeed at all is the lowest. More educated and urban women tend to breastfeed their children for a shorter duration on the average. Currently working women breastfed their babies

the longest. Wives of men working as farmers or in agricultural or unskilled occupations breastfed for longer durations than wives of technical, clerical, or skilled husbands.

## Knowledge of Contraception

More than 95 percent of all ever-married women had heard of at least one efficient contraceptive method. The pill was the most widely known method, followed by sterilization and the IUD. Withdrawal, condom, and rhythm methods are known by approximately 50 percent of women.

## Ever-use of Contraception

It seems that a high proportion of all ever-married women had used contraception at one time or another. An overall proportion of ever-use of 46.4 percent may be considered high for Jordan, in view of the fertility level observed. Furthermore, 39.1 percent had used efficient methods. A possibility that respondents may have falsely reported ever-use should not be overlooked, since respondents may have wanted to please the interviewers, and it should also be pointed out that ever-use simply indicates some use with no distinction between women who used a method correctly and those who did not. Use-effectiveness will vary greatly between highly motivated subgroups and other segments of the population.

The proportion of ever-users increases sharply up to the age group 25 to 29, then remains roughly the same before declining for those aged 45 to 49. It seems that as a woman gets older she tends to use more reliable and effective methods rather than ineffective methods such as rhythm, withdrawal, abstention, or other folk methods.

Similarly, the proportion of ever-users increases with number of living children up to the third child; thereafter it stabilizes.

The difference between rural and urban women is substantial. While 57.3 percent of ever-married women residing in urban areas were ever-users, only 20.8 percent were so in rural areas. The differences hold for variations in number of living children and size of community.

## Current Use of Contraception

About one-fourth of the exposed women stated that they were currently using efficient contraceptives, and in addition 12 percent were using inefficient methods. The pill was the most popular method of contraception, being used by 17.6 percent of exposed women.

Both the number of living children and current age are very important determinants of contraceptive use. The proportion of current users is high when age 30 or more and family size is 5 or more children. The proportion is moderate when family size is between one and four children, and age is 20 to 29. Finally, the proportion of current users is lower when age and family size are lower.

The proportion using contraceptives rises rather uniformly with increasing level of education. The percentage of current users is lowest among Muslim women. The percentage of current users differ greatly by husband's occupation; wives of technical or clerical husbands had the highest percentages, while wives of farmers and husbands working in the agricultural sector had the lowest percentage.

## Pattern of Contraceptive Use

Out of 53.6 percent ever-married women who had never used contraception, whether efficient or inefficient, about one-fifth of them were not fecund or not married at the time of the survey, and one-third intended to use contraception in the future. The remainder (approximately one-half) thought that they would not use any contraception in the future. In other words, of all ever-married women, 27.6 percent had never used and intended no future use. These constitute the subgroup who believe that there is no need for family planning, regardless of age or parity.

## Contraceptive Use and Length of Birth Intervals

Considering exposed women with one or more live births, the relationship between contraceptive use and open birth interval length is strong. Whereas women who have used any method since the last birth report an open interval of 39.4 months, women who have not used contraception have an average interval of only 19.1 months. This strong association holds up to age 44.

## 3.6. USE OF CONTRACEPTION AS RELATED TO FERTILITY PREFERENCES

The data show that exposed women who do not want more children use in higher proportions and tend to use more efficient methods of contraception more frequently than those who want another child.

About 42 percent of women who want no more children are currently using efficient methods; the remaining 58 percent constitute the target population for family planning efforts in Jordan. These are the women who are motivated to take steps to prevent a conception that would be considered, according to their own intentions, unwanted.
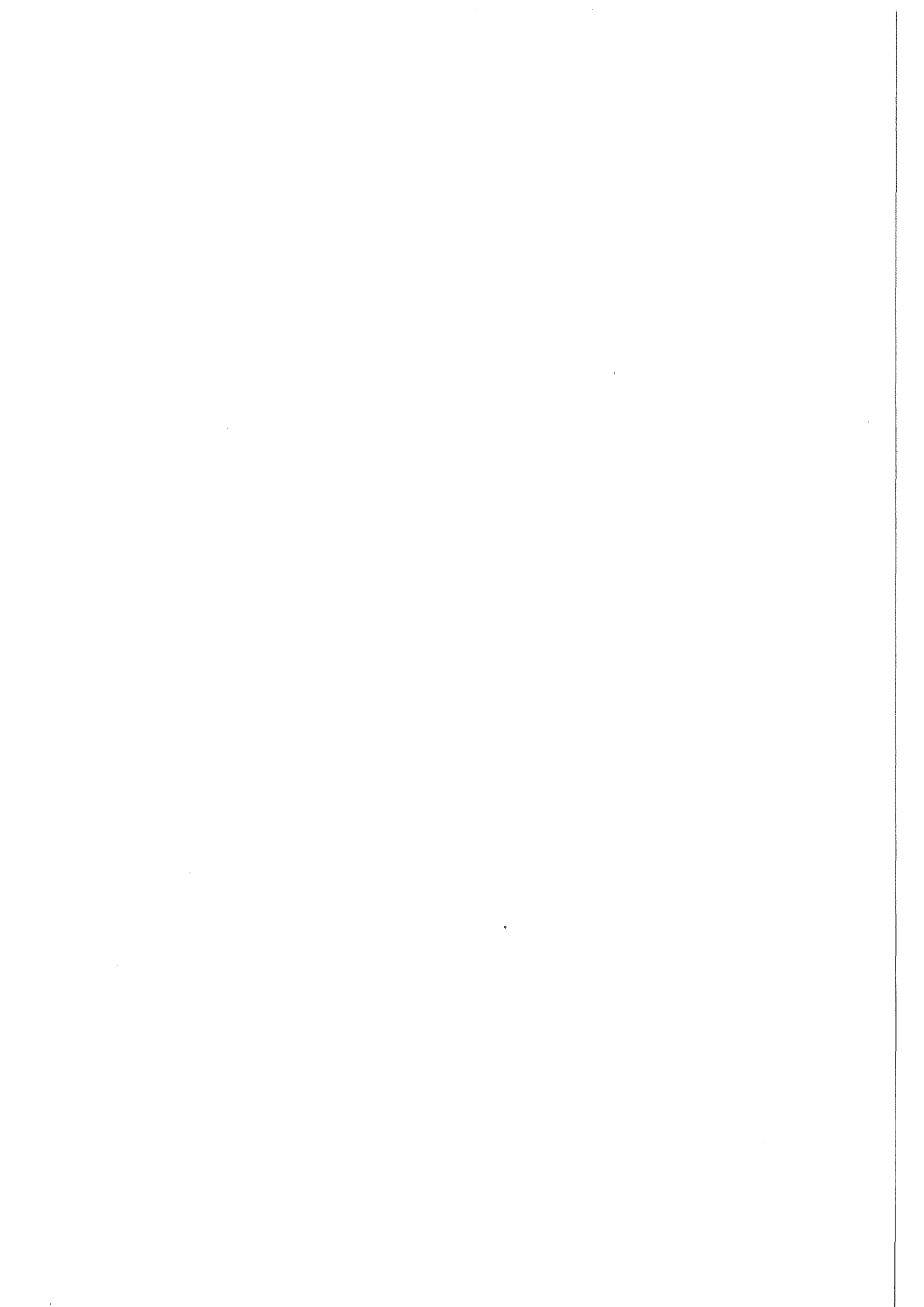
PART I

BACKGROUND AND METHODOLOGY

CHAPTER 1

# THE SETTING

## 1.1. INTRODUCTION

Transjordan gained independence from the Ottoman Empire and was declared a political entity in 1923. In 1925, the districts of Ma'an and Aqaba were annexed to Transjordan. In 1950, the Hashemite Kingdom of Jordan was established and the West Bank was officially declared as part of the Kingdom.

In 1922, the Government of Transjordan undertook a population count and the number of inhabitants in the area was estimated at about 250,000. This count obviously did not include the population of Ma'an and Aqaba. In 1928, the population of all Transjordan was officially estimated to be in the range of 300,000 and 350,000 persons.

As a result of the establishment of the Hashemite Kingdom of Jordan in 1950, about 460,000 inhabitants of the West Bank were integrated with Jordan along with 350,000 others who fled from Palestine to Jordan. According to the 1961 census, the population of the Hashemite Kingdom of Jordan amounted to 1,706,226, of whom 900,776 were living on the East Bank. The Israeli occupation of the West Bank and Gaza Strip in 1967 resulted in the flight of hundreds of thousands of persons to the East Bank.

These major events since independence have had considerable effects on the demography of Jordan. In the meantime, rapid economic and social changes since the early 1950's have had the effect of reducing death rates sharply. However, birth rates, being governed by conditions less flexible than those governing mortality, have maintained their high level. The present pattern of natural growth (35 per thousand of the population) will continue during the 1980's unless drastic reductions in fertility occur.

Recognizing the problems associated with rapid population growth, the Department of Statistics of the Government of Jordan conducted in 1972 a national fertility sample survey. The survey was designed to obtain information from selected ever-married women in the reproductive ages (15–49) about their maternity history, the extent of respondents' knowledge and use of contraception, and their attitudes and practices regarding the size of their families. The survey also attempted to determine factors affecting levels of fertility. Marriage customs and their relation to fertility were also explored.

### 1.1.1. Population Distribution

The geographic distribution of Jordanians reflects the pattern of rainfall and cultivation, but recently other factors have also come to play a role. The inflow of several hundred thousand refugees as well as the speeding course of urbanization, both influenced regional population growth. Yet, climate and topography have continued to be prevailing determinants of population distribution.

In general, about 87 percent of the population are concentrated in less than one-eighth of land area, in the north-west uplands. Most of the rest of the population live in scattered areas in various places of the country. 'The influx of Palestinian refugees and displaced persons has intensified the density of urban areas. For example, in 1967, 70 percent of the displaced were concentrated in camps situated around Amman city.'[1]

### 1.1.2. Marriage and Divorce

The crude marriage rate in Jordan was 7.2 per thousand in 1975, whereas the crude divorce rate was 1.2 per thousand of population in the same year. According to marriage records, about 60 percent of females who were married in 1973 and 1974 were less than 20 years old. The age of the groom is, on average, 6 years more than that of the bride.

Jordan is characterized by a large household size. According to the 1961 census the average size of household was 6.6 persons. No change was observed in that average until 1975. The findings of the Multi-Purpose Household Survey for 1976 showed that about two-thirds of households on the East Bank consist of 6 or more persons, and that about 16 percent of total households consist of 10 or more persons.[2]

Internal migration from rural areas is an important factor in rapidly increasing population density in urban areas, particularly in the two largest cities of Amman and Zarqa. The size and location of these two cities have little

[1] El-Asad and Khalifa, Family Structure in Relation to Fertility in Jordan (MS), p. 30.
[2] Department of Statistics, The Multi-Purpose Household Survey, (Jan.–April 1974), Amman, Dept. of Statistics Press, Feb., 76, p. 10.

relation to the agricultural pattern. Amman as the nation's capital is not only the administrative centre of the country, but the most commercial and industrial centre as well, and has even been supporting industrial development in nearby Zarqa. Another reason for the high population density in Amman and Zarqa is the increasing number of primary educated boys and girls and the preference of young men returning from military service to live in cities in search of convenient work. Consequently, the inhabitants of the three larges cities in Jordan — Amman, Zarqa and Irbid — increased during the decade of 1961–1971, by 111, 116 and 123 percent respectively. In 1975, the population in these three cities composed about 54 percent of the total population of the East Bank of Jordan. Furthermore, 57 percent of the total population has been living in the governorate of the capital, Amman.

### 1.1.3. Education

The findings of the Multi-Purpose Household Survey for 1976 showed that the illiteracy ratio in Jordan (for those 12 years of age and over) reached 29.3 percent of the total population in the sample. This ratio varied greatly between females and males, that is 40.9 percent and 17.8 percent, respectively. Furthermore, the total ratio was only 26.0 percent in urban areas in contrast to 44.3 percent in rural areas. The highest ratio existed among rural females, that is 61.4 percent of their total.

In 1975, approximately 88 percent of all children 6–14 were enrolled in primary schools, and 35 percent of youth 15–17 were enrolled in secondary schools. In addition, vocational programmes to help fill the country's need for skilled labour are being emphasized in recent years. In sum, it could be said that Jordan has a relatively literate population whether compared to other Arab countries in particular or to developing countries in general.

### 1.1.4. Economy

Jordan has a carefully organized development programme with specific priorities. A Three Year Plan was carried out during 1973–1975. At present, Jordan is implementing a Five Year Plan (1976–1980). The various social and economic goals of this plan are designed to accelerate the rate of economic growth to 12 percent per annum in GDP and to reduce the trade deficit from Jordanian dinars (JD) 184 million in 1975 to JD 131 million in 1980. Other goals include augmenting and improving the labour force and maintaining high employment of labour. Social goals are expected to improve educational progress, reduce rapid urban population growth, and improve health conditions.

Jordan's national exports rose from JD 12.2 million in 1970 to JD 69.5 million in 1976. The main exports were vegetables, fruits, phosphate rocks, cigarettes, medicines, and varnishes. As regards imports, these rose from JD 65.9 million in 1970 to JD 339.5 million in 1976. The main imports were sugar, rice, different types of motor cars and spare parts, electrical apparatus, tools, iron and steel.

Because of Jordan's rapid population growth, expenditures on social services have increased significantly over the past five years. These expenditures (health, education, and other social benefits) amounted to JD 11.9 million in 1973, i.e. 15 percent of the total public expenditure for that year. By 1977 such expenditure was JD 35.2 million, or 20 percent of that year's total public expenditure.

At the same time, rapid population growth is putting mounting pressure on the land. At present, only 6 percent of the land area is under cultivation, with the resulting density of population per hectare of arable land at an already high level of 4 persons per hectare.

### 1.1.5. Population Policy

Jordan has no formal population policy. Nevertheless, in March 1973 a 'National Population Commission' was established to take over the responsibility of planning and promoting a national policy.

Population problems are clearly recognized by the Jordanian government, as reflected in its 1975 report entitled 'Country Statement Concerning Population Change and Development':

'Despite the marked increase in recent years in per capita Gross National Product and the ambitious goals of the 3 year programme (1973–1975), an important consideration is whether, in the face of the present and future prospects of population growth in Jordan, increase in GNP may be continued to realize a decent level of living to the common man, and to achieve the high aspirations of the Three Year Plan ... The Population element must be realized to such goals as better education, full employment, and improvement of the general well being of the population, including the health of mothers and children.'

Though completely aware of the interrelationship between the population factor and the economic and social development plans and its recognitions of the right of parents to determine freely and responsibly the number of, and spacing of children, and consequently the size of their families, the National Population Commission has not yet established a definite population policy.

As regards family planning, there exist so far in Jordan, five private 'Family Planning Clinics'. Only recently has the government of Jordan begun considering offering family planning services in the Ministry of Health's Maternal and Child Health (MCH) Centres. This is apart from ten MCH Centres run by UNRWA to provide medical services for the refugees.

The findings of the 1972 survey marked a turning point in the attitude towards the population problems. A National Population Commission was established in 1973. If a flexible and effective population policy is to be established, it will have to be based on a continual collection of detailed information on the various factors affecting fertility in Jordan.

## 1.2. STATEMENT OF THE MAIN OBJECTIVES

The Jordan Fertility Survey (JFS) was carried out by the Department of Statistics in Jordan under The World Fertility Survey (WFS) Programme. The information derived from the survey will provide a portion of the body of social and demographic data being accumulated by WFS to provide internationally comparable data on human reproductive behaviour. The JFS was the first WFS survey to be conducted in the Arab Region. The JFS was funded by a grant from the ISI/WFS (UNFPA).

### 1.2.1. Long Range Objectives

The survey aims at providing the governmental agencies concerned with up-to-date data needed to plan, evaluate, and monitor their social programmes. In general, the findings will provide a wealth of basic information for measures to be adopted in the field of population activities.

The survey will also serve as a model for future surveys in other specific areas of population. Furthermore, the survey has definitely served as an effective mechanism in training personnel of various levels to carry out future surveys.

### 1.2.2. Immediate Objectives

(1) To compare the findings of this survey with those of the 1972 survey, and thus to trace trends and changes in fertility and family planning knowledge, attitudes, and practice.

(2) To provide accurate and reliable data on the trend and pattern of fertility as well as on factors affecting fertility.

(3) To provide information on contraceptive knowledge and practice and on fertility norms in order to

identify policy measures needed for various sub-populations in Jordan. This information should help the National Population Commission in Jordan to be more able to formulate a population policy for Jordan on a factual basis.

(4) To provide a base for reliable population projections and thus make possible appropriate planning for future population needs.

## 1.3. POPULATION CHARACTERISTICS

According to the results of the Housing Census in 1952, the population of the East Bank of Jordan amounted to 587,000. According to the 1961 population census the population amounted to 900,776. By 1975, it was estimated to be 1,952,000, which means that the population has more than tripled in 23 years. At the current growth rate of 3.5 percent the population will double again in 20 years.

This high rate of growth is ascribed to two main reasons. First, the Israeli occupation of major parts of Palestine in 1948, and of the West Bank of Jordan and Gaza Strip in 1967 resulted in a massive influx of migrants to the East Bank. It is estimated that 173,000 displaced persons from the West Bank and Gaza Strip moved to the East Bank after 1967. This influx of the Palestinian refugees and other displaced persons to the East Bank has been a major factor in the high growth witnessed in Jordan since 1950.

Second, there has been a widening gap between birth and death rates. The death rate dropped because of marked progress in preventative and curative medicine, and the expansion of health and sanitary services. This improvement largely explains the drop of the crude death rate from 21 per thousand population in 1950–1954 to 18 per thousand in 1961, and to only 12 per thousand in 1975. Life expectancy at birth now exceeds 55 years for the first time. While the death rate has been decreasing, the reported birth rate has remained very high and, in fact, increased slightly from 47.3 per thousand population in 1960 to its present level of about 50 per thousand population.

### 1.3.1. Age Composition

In common with many other developing countries, the population of Jordan is very young; over 50 percent of the population are under 15 years of age. This young age composition of the population of Jordan is largely responsible for a very high ratio of child dependency. The ratio of dependents to 100 persons in the working age

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group (15–60) in Jordan is as high as 117. This means that, on the average, each adult has to support at least one child. This exceptionally high ratio, compared to either developed or other developing countries, places a heavy burden on the adult population and also on the national resources.

The problem of the dependency ratio is aggravated by the fact that labour force participation among women in the working age groups is low in Jordan. The total participation of women (at ages 12–64) in 1974 was 3.5 percent, with the highest participation, 19 percent, occurring in the group 20–24 years of age. This may indicate that participation of women in economic activities is increasing among the younger generation. However, the total participation rate for both sexes to the total population in 1974 was 19.6.[1]

[1] El-Asad, S. and A. Khalifa (1977), Family Structure in Relation to Fertility in Jordan. (Manuscript), Amman.

# CHAPTER 2

# ORGANIZATION AND METHODOLOGY OF THE SURVEY

## 2.1. ORGANIZATION AND EXECUTION OF THE STUDY

The JFS was executed under the direct responsibility of the Department of Statistics in Jordan. The permanent staff of the Department provided the major part of personnel. However, technical expertise has been provided by the WFS during the different stages of the project. Furthermore, two United Nations demographic experts attached to the Department of Statistics assisted at different stages of the survey. The survey headquarters were based in a separate office that belonged to the Department of Statistics.

Figure 2.1 shows the organizational structure, the line of authority of the project and personnel engaged in the survey (staff adjustments were made at different phases of the survey as required). The JFS was carried out in two separate stages; namely, the household survey and the individual interview. The general organization for both stages was basically the same.

Figure 2.1. Organizational Structure of the Jordan Fertility Survey
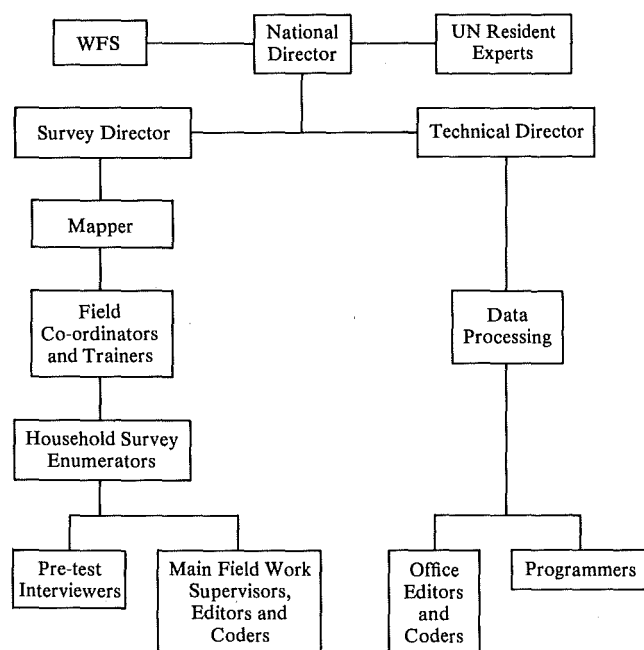


## 2.2. SAMPLE DESIGN AND OUTCOME

### 2.2.1. Size

According to the 1975 Agricultural Census, there were a total of 292,000 households in Jordan (East Bank), the average household size being 6.48 persons. It had been decided to have a 5 percent equal probability sample, giving a sample of 14,000 to 15,000 households. For the individual survey of ever-married women in the child-bearing ages, 1 out of 4 of the households was subsampled (overall sampling fraction 1.25 percent), and all ever-married women aged 15 to 49 in selected households were interviewed with the object of obtaining approximately 3,500 individual interviews. The subsampling for the individual survey was done at the survey headquarters.

### 2.2.2. Stratification

For the purpose of sample selection, the country was divided into 7 explicit strata designed by size of the localities as follows:

Strata 1–3   Amman, Zarka and Irbid (the major cities, each with 100,000 or over).

Strata 4   Towns with population of 10,000 to less than 100,000.

Strata 5   Large villages, with population of 5,000 to less than 10,000.

Strata 6   Medium villages, with population of 1,000 to less than 5,000.

Strata 7   Small villages, with population under 1,000.

Strata 4 and 5 were each subdivided explicitly into the five governorates in the country. In other strata, stratification by governorate was provided implicitly by systematic selection from a geographical ordering of the area units.

### 2.2.3. Clustering and Stages of the Sample

In the urban areas, the last area stage units for which maps were generally available consisted of blocks of 50 households on the average. This was considered to be a

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satisfactory cluster size for the Household Schedule Sample. Hence, selected blocks could be completely enumerated for this sample. In the rural areas, sectors of similar size could be created by a special mapping operation where required. A total of 231 clusters were enumerated. For the individual interview, 1 out of 4 households was selected from every sample cluster, and an average of just 1.06 eligible woman was found per household. This gave an average cluster size of around 15 individual interviews.

The sample consisted of a single area stage in all strata except for strata 4 and 5 (towns and large villages). In these two strata, a second area stage was introduced for the following practical reasons:

(1) For the 14 towns in the frame, no block maps were available at the time of the planning of the present study. As it was felt that it would be difficult to map more than 5 towns by the time this frame was required for the selection of blocks, 5 towns, one in each governorate, were selected for the mapping operation. Blocks in the selected towns were subsampled to yield the required overall selection probability.

(2) The 15 large villages in the frame also required a special mapping operation. To limit the work involved, 6 villages were selected. Each of the selected villages was mapped and divided into 16 more or less equal parts. These parts were ranked according to estimated size then paired — the largest with the smallest, the next largest with the next smallest, and so on. One pair of clusters was then selected for complete enumeration for the Household Schedule Sample, giving a 5 percent sample as for other strata. This procedure resulted in good control over sample size.

Mapping was also required for stratum 6 which consisted of 157 medium sized villages. Thirty-one villages were selected and mapped to divide each village into 4 more or less equal clusters; since only one cluster per sample village was selected, the sample was effectively a single area stage sample of 'quarter villages'.

In stratum 7, 26 small villages were selected and completely enumerated. Hence no mapping was required for these units. In all strata, clusters were selected systematically from geographical ordered lists.

As has been mentioned, the sample was designed to be an equal probability sample. However, the procedure actually followed during selection deviated from this, resulting in departure from a self-weighting design. While it is difficult to assess accurately the increased sampling variance associated with departures from an equal probability sample, it should be noted that significant departures occurred mainly in certain areas of stratum 4 (towns) and 5 (large villages) where weights varying from 0.5 to 2.5 were introduced. Furthermore, these areas comprise only about 10 percent of the whole. In any case, the problems resulting from the certain inadequacies of the frame discussed below are, by far, the more serious ones.

### 2.2.4. Shortcomings of the Sampling Frame

In the urban strata, the frame for selection of blocks was based on small-scale town planning maps.[1] The main problem resulted from the lack of correspondence between these plans and current reality. Blocks were often based not on the present population distribution, but on distribution as expected in the future. In a few cases (particularly in Zarka, where the problem was compounded by extremely small scale maps) even features like roads showing block boundaries were planned rather than actual. The more serious consequences of the defects in the frame were the following:

(a) Very considerable variation in the block size. In fact, nearly one quarter of the blocks in the frame were completely empty. Increased sampling variability resulted from the fact that empty blocks had not been removed from the frame prior to selection, and that no explicit or implicit stratification by block size had been done.

(b) Uncertainty about block boundaries in certain areas. In some towns, individual blocks had not been demarcated on the maps, which showed only 'sub-units' consisting of 5 to 10 planned blocks. Once a block had been selected from a sub-unit, its boundaries were usually chosen in an attempt to obtain a block of 50 households, which was not necessarily the average block size in the sub-unit.

(c) As the town planning work was itself in progress, the frame initially utilized for the largest stratum — Amman — was later found to be incomplete. (This was subsequently corrected by selecting a supplementary sample from the area previously left out.)

(d) In the town of Aqaba, special problems existed due to recent movements of the population and a great deal of new construction. It was not possible, due to

[1] The scale of available maps was as follows: Amman and Irbid 1:2,500; Zurka 1:25,000; the 5 sample towns 1:10,000.

practical constraints, to update the frame of Aqaba. It is likely that a certain undercoverage has occurred, particularly in the port areas.

To correct for the above-mentioned shortcomings in the urban sample it was decided to weight the urban sample by locality according to results of the 1975 Agricultural Census.

Table 2.1 shows close agreement between the actual number of sample households obtained in the rural sector and the numbers enumerated in the same areas during the Agricultural Census (the latter are multiplied by design sampling fractions to facilitate comparison). The close agreement suggests not only the very good coverage during the Agricultural Census, but also the good quality of mapping of villages during the Fertility Survey. It gives confidence in accepting the Agricultural Census data as a basis for determining sample weights for the urban sector where the frame was of inadequate quality.

Table 2.1. Number of Sample Households Compared with Agricultural Census Figures

| Sampled Villages | Number of Sample Households (Household Schedule Sample) | Number of Households Enumerated in the Agricultural Census 1975 |
| --- | --- | --- |
| 6 Sampled Large Villages | 860 | 735 |
| 31 Sampled Medium Villages | 2,449 | 2,465 |
| 26 Sampled Villages | 1,250 | 1,362 |

The weights are 'normalized' such that the average weight for the achieved sample is 1.0. In this way the overall difference between weighted and unweighted frequencies is minimized for various sample categories. In presentation of results in this report, only weighted frequencies are shown. Most of the sample cases have a weight between 0.8 to 1.3, notable exceptions being 2 towns and 6 large villages which together comprise around 10 per cent of the unweighted sample.

**2.2.5. Weighting of the Sample**

To compensate for departures from self-weighting during sample selection, for shortcoming of the sampling frame discussed above, and also for differential non-response, the sample cases were assigned appropriate weights. The resulting weights are shown in Table 2.2, separately for the household schedule and the individual interview samples.[1]

**2.2.6. Response Rates**

Generally, non-response with rural sector was lower than in the urban sector, and the former is shown below. Overall, response rates achieved were fairly high, except for the small-village stratum.

| | Response Rates in Rural Sector | | |
| --- | --- | --- | --- |
| Stratum | Household Schedule | Individual Interview (Within Completed Households) | Overall for the Individual Interview |
| Large Villages | | | |
| Irbid | 98.7 | 92.6 | 91.4 |
| Other Governorates | 99.7 | 96.3 | 96.0 |
| Medium Villages | 98.8 | 96.6 | 95.6 |
| Small Villages | | | |
| Amman | 87.1 | 88.4 | 77.0 |
| Irbid | 80.0 | 96.4 | 77.1 |
| Other Governorates | 73.3 | 96.2 | 70.5 |
| All Rural | 94.7 | 95.6 | 90.9 |

**2.3. THE QUESTIONNAIRES**

Three questionnaires were used in the Jordan Fertility Survey: Exapnded Household Schedule, the Individual Questionnaire, and Community Level Questionnaire. These were phrased in Arabic. The questionnaires are reproduced in Appendix I.

[1] The two sets of weights differ slightly due to non-response for the individual interview following a successful household interview.

Table 2.2. Sample Weights (A) and Number of Interviews (B)

| | Urban | | | | | Rural | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Locality | HH Schedule | | Individual Interview | | Stratum | HH Schedule | | Individual Interview | |
| | (A) | (B) | (A) | (B) | | (A) | (B) | (A) | (B) |
| Amman 1 | 0.833 | 4977 | 0.932 | 1160 | Large Villages | | | | |
| Amman 2* | 0.983 | 822 | 1.089 | 194 | Irbid | 1.597 | 521 | 0.445 | 436 |
| Zarka | 1.243 | 1498 | 1.399 | 353 | Others | 0.396 | 331 | 0.428 | 77 |
| Irbid | 1.006 | 952 | 1.165 | 206 | Medium Villages | 1.010 | 2420 | 1.078 | 560 |
| Wadi Es Sir | 2.579 | 259 | 2.772 | 63 | Small Villages | | | | |
| Ramtha | 1.163 | 441 | 1.302 | 104 | Amman | 1.134 | 350 | 1.161 | 70 |
| Salt | 0.835 | 636 | 0.978 | 117 | Irbid | 1.234 | 457 | 1.071 | 106 |
| Karak | 0.529 | 308 | 0.584 | 70 | Others | 1.345 | 203 | 1.073 | 55 |
| Aqaba | 0.626 | 318 | 0.911 | 55 | | | | | |

* 'Amman 2' refers to the additional stratum created to supplement the sample from Amman, since the original frame was found to be incomplete.

## 2.3.1. The Expanded Household Schedule

The Expanded Household Schedule used in the JFS included the General Mortality Module developed by the WFS. The following items were included in the Expanded Household Schedule:

(1) Household Members

(2) Relationship to the Head of Household

(3) Residence

(4) Sex

(5) Age

(6) Mortality Information (Orphanhood)

(7) Educational Status

(8) Marital Status

(9) Number of Live Births

(10) Information on Last Live Birth

(11) Characteristics of the Dwelling

(12) Household Members Who Died During the Last 24 Months

The interviewer first listed all usual residents of the household, starting with the head (as defined by the respondent). This was followed by special probes to list children or infants, non-family members, such as servants, friends or lodgers, and temporary visitors. In this way, the population covered was both on a *de jure* and on a *de facto* basis. This provided a comparison of the two coverage definitions.

## 2.3.2. The Individual Questionnaire

This questionnaire consisted of two parts: Short Household Schedule and the Individual Questionnaire, both bound together to form one document and given in Appendix I of this report. This questionnaire was administered to one-fourth of the sample households selected for the Expanded Household Schedule. The Short Household Schedule was primarily an instrument for listing the household members, which was required to identify the repondents that would be eligible for the individual interview. This was necessary because the household and individual surveys were conducted as separate operations, with an interval of 4–6 weeks between the two. Eligibility for the individual interview depended on three criteria. First, the woman had to be between 15 and 49 years of age. Second, she had to be ever-married, that is, married currently or previously. Third, she should have slept in the household on the night

prior to the interview, i.e. eligibility for the individual interview was defined on a *de facto* basis. Only women who satisfied all three conditions were eligible for the individual interview. It should be noted that women who had been legally married but whose marriages had not been consummated were not considered eligible for the individual interview.

The Individual Questionnaire consisted of the following seven sections:

(1) Respondent's Background

(2) Marriage History

(3) Maternity History

(4) Contraceptive Knowledge and Use

(5) Fertility Regulation

(6) Work History

(7) Current (Last) Husband's Background

The Individual Questionnaire was an adaptation of the WFS Core, with some modifications and expansions of contents to meet national requirements. In section 5, the Fertility Regulation Module was used.

## 2.3.3. Community Level Module

In view of the importance of the community setting and services in influencing the views and actions of couples, this survey sought to provide data on the general characteristics and socio-economic conditions at the village level.

The Community Level Module contained the following items (see Appendix I–C):

(1) Distance from City or Town

(2) Means of Transport

(3) Communications

(4) Health and Family Planning Services

(5) Educational Services

(6) The Availability of Municipal or Village Council

This schedule was applied to each of the 62 villages in the sample and was completed by the field supervisor himself or by a responsible man in the village.

## 2.4. THE PRE-TEST

The training for the pre-test was carried out in close collaboration with two WFS training officers. The training

for the pre-test extended over a period of two weeks and included definition of survey objectives, role of the interviewer and organization of the survey, demonstration interviews, detailed familiarization with the questionnaire, section-by-section review of the questionnaire, 'role-playing' exercises, and talks on physiology of reproduction and contraceptive methods.

Twenty-two males and females attended the training course. The last two days of the training period were used to do actual interviews in the field. At the end of the training course, each trainee was evaluated and 20 out of the 22 candidates were selected.

The pre-test was carried out in three non-sample areas: urban, rural, and Bedouin. The number of the individual questionnaires completed was 64, 60, and 30 for the urban, rural, and Bedouin areas, respectively. On the basis of the pre-test results, minor modifications to the Individual Questionnaire were made.

## 2.5. TRAINING OF FIELD STAFF

The training courses for the Expanded Household Schedule and the Individual Questionnaire were given in Amman. The training was conducted by the local technical staff together with two WFS training officers.

### 2.5.1. Household Survey

An announcement in the local newspapers was made for recruiting enumerators of both sexes to work on the household survey. Twenty-four females and 55 males were selected to attend the training course for the Household Survey which lasted for one week. On the last day of the training course, candidates sat for an examination using an imaginary case. In the light of the results of this examination, 60 enumerators (24 females and 36 males) were selected out of the 79 candidates.

### 2.5.2. Individual Questionnaire

Another announcement in the local newspapers was made expressing the desire of the Department of Statistics for recruiting female interviewers with certain qualifications to work on the survey and 52 candidates (47 females and 5 males) were recruited. An additional 21 candidates (16 females and 5 males) from the previous trainees in the first stage were retained making a total of 73 candidates for training.

The training in this stage lasted for two weeks. In the first week 73 interviewers were trained, 21 of whom had additional training in the afternoon so as to begin the field

work first in the Ghor areas before the people there moved to the highlands. These 21 staff started field work after one week of training.

In the second week 6 more females joined the 52 remaining trainees, thus making a total of 58 trainees (53 females and 5 males). The training programme included an orientation for the survey, provision of all materials and manuals of training, explanation of the questionnaire question by question, demonstration of model cases in the form of role-playing for each section of the questionnaire. In addition, a female doctor lectured (for females only) on physiology of conception and reproductivity, contraceptive use, and abortion, in both stages of pre-test and main field work.

Once the explanation of the questionnaire was over, 8 respondents were hired to be interviewed by trainees. Also, other model cases were performed in front of the whole class for the whole questionnaire. As for Section 5 of the Individual Questionnaire (i.e. Fertility Regulation Module), five different model cases were designed to illustrate the five different types of respondents.

Two days before the training programme was over, the interviewers were taken to non-sample areas to fill in questionnaires (including tape-recorded interviews) as part of their training programme. These questionnaires and tape-recordings were checked and evaluated and all mistakes were described for the whole class.

By the end of the training programme an examination was held for the whole class. The result was that 13 trainees (11 females and 2 males) were dropped. Thus the final number of interviewers and supervisors who participated in the main field work was 66, of them 58 females and 8 males.

## 2.6. FIELD WORK

### 2.6.1. Field Work Facilities

Before starting field work, some necessary arrangements were made, such as:

(1) Announcements about the survey and its objectives were broadcasted through radio, T.V., and in local newspapers. Great emphasis was laid upon the confidentiality of information obtained.

(2) Each supervisor, enumerator, and interviewer had an identity card and a letter of introduction (in Arabic and in English) addressed to the housewives in Jordan.

(3) Official letters were sent to the local administrative governors seeking possible facilities for the field staff. This procedure was of great help and use.

(4) Official contacts were made with the Ministry of Education and Ministry of Tourism and Antiquities to provide sleeping places either in boarding schools or teachers' colleges at no cost or in tourist resthouses at lower prices. Appreciated assistance was provided in this respect.

### 2.6.2. Field Work Organization

The field work for the Jordan Fertility Survey was carried out in two separate stages as outlined below. The field work for both stages was supervised by four co-ordinators from the staff of the Department of Statistics.

#### 1. *Household Survey*

The 60 selected enumerators were divided into 12 teams, each team consisted of 4 enumerators plus a supervisor. The 24 females began field work in Amman city, the capital, and the 36 males worked in other areas of the sample outside Amman.

The enumerators listed all households found in the sample area. The questions of the H.H. schedule were answered by the head of H.H. or either spouse or any grown up member of the household.

Once the schedules from all sampled areas were compiled, the names and addresses of households were transferred onto separate sheets to draw the individual sample in the offices of the Department of Statistics.

#### 2. *Individual Interview*

The field work of the individual interview was carried out by 8 teams, each consisting of 4 females plus a female editor and a male supervisor. Each team was provided with a tape recorder.

Once the interviewer was at the dwelling of the household, the first thing she had to do was to complete the Short Household Schedule to identify and then interview each eligible woman immediately.

Originally 15,000 Expanded Household Schedules and 3,750 (i.e. 24 percent) Individual Questionnaires were to be obtained. However, in the end 15,067 households were surveyed, and only 3,610 women were individually interviewed.

Three interviewers were dismissed at an early stage, and their work had to be redone; this was carried out mainly by the field editor or by other interviewers.

Teams working in Amman city used public transportation while 11 cars were provided to teams working in other areas.

### 2.6.3. Field Staff Duties

#### 1. *Co-ordinator's Duties*

(A) To draw a work plan in the areas assigned to him, with any necessary modifications, and to deliver the plan to the supervisor he is responsible for.

(B) To assign the daily duty to the interviewers of each supervisor, according to the assignment forms, and deliver these forms in the day before the interviews to the supervisors for whom he is responsible.

(C) To do a quick final check on questionnaires, to approve the correct and completed ones, to reject the wrong ones (making sure to write down the errors), and then to deliver all questionnaires to the supervisors.

(D) To specify in advance the interviews which must be checked, reinterviewed and tape recorded.

(E) To participate, after the daily field work, with the supervisor, the field editor, and the interviewers in listening to the tape recorded cases and compare them with the related questionnaire, pointing out any errors or defects during the interview.

(F) To make a list of finished villages and deliver it to the survey director with all required control sheets.

(G) To keep a sufficient number of blank questionnaires and other materials to be delivered to the supervisors when needed.

(H) To receive all completed and cancelled questionnaires from the supervisors, insuring that he receives the same number he delivered to them.

(I) To manage to solve all problems reported to him from the supervisors, and to report to the survey director all problems he cannot solve.

#### 2. *Supervisor's Duties*

(A) To receive the work plan for his team from his co-ordinator.

(B) To deliver the 'assignment forms' to his interviewers and show them the addresses assigned to them.

(C) To collect the completed questionnaires from the interviewers as soon as they finish the interviews, to

begin editing immediately, to accept the completed ones and reject wrong ones.

(D) To fill in the required control sheets step by step and deliver them with the completed and edited questionnaires to his co-ordinator in the evening of the same day.

(E) To participate in listening to the tape recorded interviewers and the consequent discussion.

(F) To inform his co-ordinator about any problems he may encounter.

### 3. *Female Field Editor's Duties*

(A) To accompany the interviewers on some of their visits for the purpose of spot checking.

(B) To perform a limited number of re-interviews.

(C) To receive the questionnaire from the interviewer as soon as she ends the interview and check the following:

(1) The identification information is correct,
(2) The writing is clear,
(3) The boxes are marked correctly,
(4) The skipping is right, and
(5) The applicable questions have been completed.

(D) To complete editing of the questionnaires, accept the correct and completed ones and reject the wrong ones.

(E) To participate in listening to the tape recorded interviews and the consequent discussion.

(F) To report immediately to her co-ordinator any problems she may face.

### 4. *Interviewer's Duties*

(A) To fill the Short Household Schedule for the assigned households and fill in the Individual Questionnaire for all eligible women in these households.

(B) To tape record the pre-specified interviews and insert the identification information on tape, and to deliver the tape and the individual questionnaire to the supervisor.

(C) To listen to the tape recorded interviews and participate in the consequent discussion.

(D) To report immediately to her supervisor or field editor any problem she may face.

## 2.7. EDITING, CODING, AND DATA PROCESSING

Documents received were registered and their completeness was checked against the sample list for each cluster. Record was made in a master control log. At the same time responses to the open-ended questions were tallied for the purpose of developing the codes. Documents for each cluster were kept together in a labelled box. The labels showed identification number of households and the number of eligible respondents in the cluster.

Detailed manuals for editing and coding were prepared at the Department of Statistics, based on guidelines provided by the WFS.

### 2.7.1. The Expanded Household Schedule

For the Expanded Household Schedule, a one-week training course was given to 16 editors and coders. As soon as schedules from a sufficient number of clusters were edited and coded, the documents were sent for key punching.

All punched cards went through machine editing on the computer. The editing rules were constructed by the technical staff based on guidelines provided by the WFS. There were four types of checks on the expanded household data: file structure, range checks, completeness checks, and consistency of information in the schedule. The editing, coding, punching, and the tabulation of the expanded household schedule data were done at the Department of Statistics.

### 2.7.2. The Individual Questionnaire

A two-week training course was given to 16 persons who worked on editing and coding the Short Household Schedule and the Individual Questionnaire. As soon as questionnaires from sufficient number of clusters were edited and coded, the documents were sent for key punching. The editing, coding, key punching, and partial machine editing of the Individual Questionnaire data were done at the Department of Statistics. However, further machine editing and the tabulation of the Individual Questionnaire data were done at the WFS Headquarters in London. Checks on the data obtained from the individual questionnaire involved: format checks, file structure, range checks, filter and skip checks, logical range checks for the marriage history and maternity history sections, and consistency checks. To simplify the tabulation process various recoded variables were constructed. Machine editing was done by using the CONCOR package program. Tabulations were prepared mainly by using the COCENTS package program.

## 2.8. SURVEY TIMETABLE

In general the timing of the actual implementation of the probject did not differ significantly from the time schedule originally planned, except for editing, coding, and data processing. The actual timing is shown below.

| *Activities* | *Time* |
|---|---|
| (1) General preparation (translation, sample design, etc) | March–April 1976 |
| (2) Finalization of pre-test materials and printing | April 1976 |
| (3) Pre-test training, field work and evaluation | April–May 1976 |
| (4) Questionnaire finalization | May 1976 |
| (5) Printing survey material | June 1976 |
| (6) Sample selection | May–June 1976 |
| (7) Training and field work for Expanded Household Schedule | June 1976 |
| (8) Field work for Expanded Household Schedule | June–July 1976 |

| *Activities* | *Time* |
|---|---|
| (9) Training of supervisors and interviewers for the main survey | June 1976 |
| (10) Main field work | July–September 1976 |
| (11) Editing, coding and key punching for the Expanded Household Schedule | August–October 1976 |
| (12) Editing, coding and key punching of the Individual Questionnaire | November 1976–July 1977 |
| (13) Computer editing of the Expanded Household Schedule | December 1976–July 1977 |
| (14) Tabulation of the Expanded Household Schedule data | August 1977–February 1978 |
| (15) Computer editing of the Individual Questionnaire | February–May 1978 |
| (16) Variable Recoding | February 1978 |
| (17) Tabulation of the Individual Questionnaire data | June–September 1978 |
| (18) Report writing | October 1978–September 1979 |
| (19) Editing and printing | October 1979–February 1980 |

PART II

COMMENTARY ON THE MAIN FINDINGS
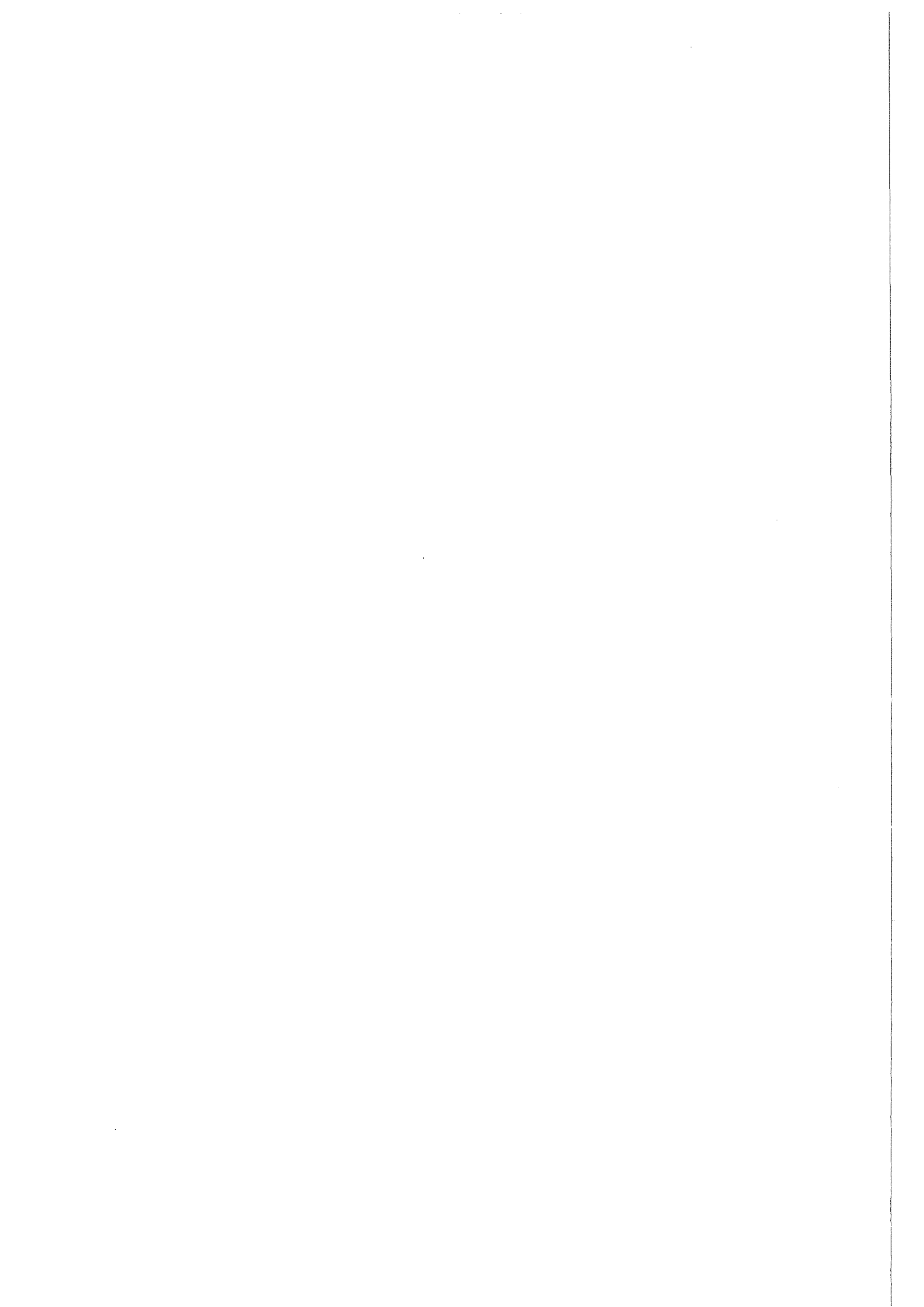
# CHAPTER 3

# BACKGROUND CHARACTERISTICS OF SURVEY RESPONDENTS

## 3.1 INTRODUCTION

Full analysis of the Jordan Fertility Survey data is likely to be a lengthy process. It will involve a detailed appraisal of the quality of the data with possible adjustments for reporting bias, and application of refined demographic and statistical techniques to elucidate inter-relationships between fertility and factors associated with it. It is important, however, not to delay the publication of the information collected in the JFS. Therefore, the commentary on the main survey findings presented in the remainder of this report takes the form of a broad and preliminary review. On some points, the present interpretation of the survey results may need revision or even reversal in the light of more detailed assessment and analysis of the data.

The survey's major findings, concerning nuptiality, fertility, mortality, fertility preferences, and contraception, will be described in the chapters to follow. Much of that description will be in the form of differentials between different subgroups of the sample. These subgroups are defined by a number of background characteristics, the explanatory variables, which have a proven capacity to capture the dimensions of the Jordanian society.

There are two sources of dates on nuptiality, fertility and mortality in the JFS: the household survey and individual survey. A few observations on the nature of the sample for the JFS and on sampling errors for the main survey estimates are reported in Section 3.2.

Section 3.3 gives a brief description of some basic characteristics of the population enumerated in the household survey.

In Section 3.4 a description of the background variables used in the analysis of the JFS data is given.

A description of the inter-relationship between the different background variables is given in Section 3.5.

Finally, a brief description of standardization techniques used in the analysis is given in Section 3.6.

## 3.2. NATURE OF THE SAMPLE FOR THE JFS

### 3.2.1. Results of Sampling Implementation

A detailed description of the sample design for the JFS was given in Chapter 2. The application in the field of the foregoing procedures yielded a sample of 14,493 households for the household survey, i.e. about 5 percent of households on the East Bank. The sample of women selected for the individual survey was a subsample of the larger sample used for the household survey. The main instrument to obtain the necessary data for the individual survey was the individual questionnaire for ever-married women at ages 15–49 years who slept in the household the night previous to the date of interview. In order to obtain a list of the respondents for the individual questionnaire a short household schedule was used. All members of the household were listed, and for each the following basic information was obtained: residence, sex, age and marital status. The sample for the individual survey resulted in 3,610 completed questionnaires.

The quality of the sample is, of course, determined by the completeness of coverage of the population in the households, and by the quality of enumeration of the basic characteristics. Further, the sample for the JFS was not an equal probability sample. Therefore, all data presented in this report have been weighted appropriately to compensate for differences in selection probabilities.

### 3.2.2. Sampling Errors

Sampling errors for estimates based on the household survey and on the individual survey are given in Appendix III. For selected important statistics the estimated standard errors are also given in the text in the form of footnotes. Standard errors have the following interpretation.

If non-sampling errors are ignored, then in two samples out of three the true value may be taken to lie within one standard error of the estimated value, and in 95 percent of the samples within two standard errors of the estimated value. Accordingly, an interval of *two standard errors on*

*either side of the sample estimate nearly always contains the true value for the population being studied.* This interval is called a '95 percent confidence interval', and is commonly chosen as giving a range of possible values for the estimated quantity consistent with the data. Standard errors for the differences between pairs of estimates are also given in the text, and these are important for determining the likelihood that an observed differential is a real one and not caused merely by sampling variation. For further details, see Appendix III.

## 3.3. POPULATION ENUMERATED IN THE HOUSEHOLD SURVEY

For the household survey, listing of household members was done on both a *de facto* and *de jure* basis. However, the tabulation of the household survey data was based on

the *de facto* population only, since the individual interview was restricted to ever-married women aged 15–49 who slept in the household the night previous to the date of interview.

The household survey population — on a *de facto* basis — numbered 94,937, with a small surplus of males over females (47,497 males and 47,440 females). The overall sex ratio is 100.1 males per 100 females. The sex ratio is, however, not uniform when age groups are considered.

### 3.3.1. Age Structure

The age structure of the persons enumerated in the household survey indicates a very young population and conforms to the pattern observed in most developing countries. This may be seen from Table 3.1 and Figure 3.1 which illustrate the age–sex composition of the survey

Figure 3.1. Age–Sex and Marital Distribution According to H.H. Schedule
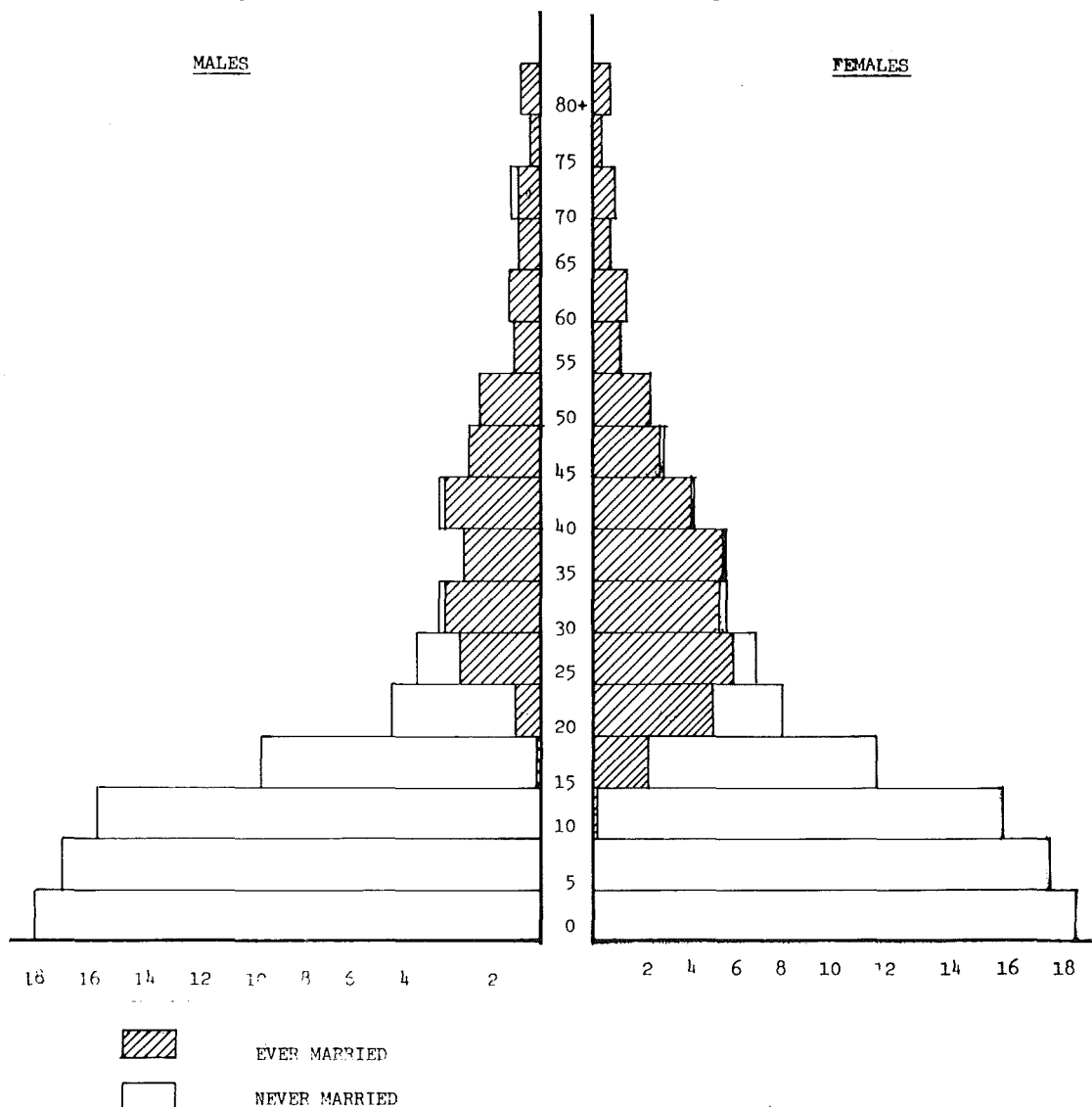
population. The table shows that more than 50 percent of the population are less than 15 years old. About 40 percent of the females are in the age group 15–49.

Table 3.1. Percent Distribution of Enumerated Population According to Age, by Sex: 1976 Household Survey

| Age | Males | Females |
|---|---|---|
| <15 | 54.7 | 51.6 |
| 15–49 | 36.6 | 40.9 |
| 50–64 | 5.4 | 4.8 |
| 65+ | 3.3 | 2.7 |
| Total | 100 | 100 |

Table 3.2 shows an index of age preference at terminal digits '0' and '5'. The figures show, separately for males and females, the ratio of population reported at a given age — ending in digit 0 or 5 — and the average population reported in the five year range centred at that age. For example, at age 25, the index is calculated as the population reported at age 25, divided by one-fifth of the total population reported at ages 23–27.

Table 3.2. Index of Age Preference at Certain Terminal Digits (0 and 5)

| | Age | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sex | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| Males | 0.98 | 1.04 | 1.34 | 2.04 | 2.40 | 2.71 | 3.24 | 3.20 | 3.30 | 4.08 |
| Females | 0.96 | 1.35 | 1.68 | 2.38 | 2.80 | 2.88 | 3.41 | 3.60 | 3.88 | 4.46 |

Very appreciable heaping at ages with terminal digits 0 and 5 is observed for both sexes. Age heaping is, however, more pronounced among females than males. Heaping at ages 20, 25, 30, etc., means that there are shifts in the age distribution of the population enumerated. The direction and magnitude of such shifts are difficult to predict. This

age heaping can have important bearings on demographic analysis employing 'conventional' five-year age groupings.

### 3.3.2. Marital Status

The distribution of the population enumerated in the household survey by age and marital status is shown in Table 3.3. Persons 15 years of age and over who are currently married represent about 60 percent of males and 65 percent of females. The percentages married at young adult ages are substantially higher for females than for males, reflecting the familiar younger female age pattern of marriage. On the other hand, the percentages married at ages 35 and over are considerably higher for males than for females, reflecting sex differentials in migration, mortality and the intensity of re-marriage.

## 3.4. BACKGROUND CHARACTERISTICS OF INDIVIDUAL SURVEY RESPONDENTS

The two most important demographic variables that must be controlled when examining the relationship of socio-economic background characteristics to fertility and family planning are age and marital duration. The age structure of the ever-married women interviewed in the individual survey is shown in Table 3.4. The distribution of these women by years since first marriage is shown in Table 3.5.

### 3.4.1. Educational Attainment

Table 3.6 shows the distribution of the population 10 years of age and over by educational attainment as recorded in the EHS. Figures in the table reflect the fact that a pattern of educating males and not educating females prevailed in Jordan in the past. However, it seems that this pattern has greatly altered in recent years. It is

Table 3.3. Percent Distribution of Enumerated Population (15 Years of Age and Over) According to Current Marital Status, by Age and by Sex: 1976 Household Survey

| | Males | | | | | Females | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | Single | Married | Widowed | Divorced | Total | Single | Married | Widowed | Divorced | Total |
| 15–19 | 99.0 | 1.0 | 0.0 | 0.0 | 100 | 80.5 | 19.0 | 0.0 | 0.5 | 100 |
| 20–24 | 77.0 | 22.7 | 0.1 | 0.2 | 100 | 35.8 | 63.2 | 0.4 | 0.6 | 100 |
| 25–29 | 35.9 | 63.1 | 0.0 | 0.5 | 100 | 12.5 | 85.8 | 0.7 | 1.0 | 100 |
| 30–34 | 10.2 | 89.0 | 0.2 | 0.6 | 100 | 4.8 | 92.6 | 2.1 | 0.5 | 100 |
| 35–39 | 2.8 | 96.9 | 0.1 | 0.2 | 100 | 2.7 | 93.1 | 3.5 | 0.7 | 100 |
| 40–44 | 1.4 | 97.7 | 0.6 | 0.3 | 100 | 2.1 | 89.8 | 7.4 | 0.7 | 100 |
| 45–49 | 0.6 | 98.7 | 0.5 | 0.2 | 100 | 1.7 | 84.7 | 12.3 | 1.3 | 100 |
| 50–54 | 1.1 | 9.7 | 0.9 | 0.3 | 100 | 1.5 | 77.2 | 20.4 | 0.9 | 100 |
| 55–59 | 0.5 | 97.8 | 1.4 | 0.3 | 100 | 2.8 | 69.7 | 26.6 | 0.9 | 100 |
| 60–64 | 0.9 | 95.1 | 3.7 | 0.3 | 100 | 1.4 | 57.5 | 39.1 | 2.0 | 100 |
| 65–69 | 0.0 | 96.3 | 3.5 | 0.2 | 100 | 1.8 | 50.1 | 47.0 | 1.1 | 100 |
| 70–74 | 2.0 | 89.5 | 8.1 | 0.4 | 100 | 1.6 | 36.9 | 59.8 | 1.7 | 100 |
| 75–79 | 2.4 | 82.2 | 13.2 | 1.2 | 100 | 0.4 | 38.4 | 59.6 | 1.6 | 100 |
| 80+ | 0.5 | 77.8 | 20.9 | 0.8 | 100 | 0.3 | 19.7 | 78.0 | 2.0 | 100 |
| Total 15+ | 38.7 | 59.9 | 1.1 | 0.3 | 100 | 26.2 | 64.8 | 8.2 | 0.8 | 100 |

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Table 3.4. Percent Distribu-
tion of Ever-Married Women
According to Current Age

| Age | Percent |
|---|---|
| 15–19 | 9 |
| 20–24 | 17 |
| 25–29 | 20 |
| 30–34 | 17 |
| 35–39 | 15 |
| 40–44 | 12 |
| 45–49 | 10 |
| Total | 100 |

Table 3.5. Percent Distribution of
Ever-Married Women According to
Years Since First Marriage

| Years since First Marriage | Percent |
|---|---|
| <5 | 20 |
| 5–9 | 19 |
| 10–14 | 17 |
| 15–19 | 16 |
| 20–24 | 13 |
| 25–29 | 9 |
| 30+ | 6 |
| All Durations | 100 |

clear that, as a result of rapid social changes that have
been taking place in the recent past, parents are becoming
more aware of the need for educating their children, both
males and females. These changes have caused much lower
illiteracy rates among younger cohorts. Keeping in mind
that the minimum age for admission in school is 6, it
appears that only a small fraction of the population in
Jordan was deprived of any education in recent times.
Such changes in education trends should have some
effects on various aspects of nuptiality and fertility.

Based on the information collected in the individual
survey on the respondent's and her husband's back-
ground, a fairly large number of variables can be
constructed for use as 'predictors' in the analysis of the
results. In the present report, however, differentials
concerning nuptiality, fertility, contraception and fertility
preferences have been studied only for a sub-set of the
background variables. With minor exceptions, the follow-
ing five variables have been used in all comparisons: type
of place of residence, region, level of education, husband's
occupation, and wife's pattern of work. Table 3.7 shows
the percent distribution of weighted frequencies for the
sample of ever-married women according to major
background variables.

### 3.4.2. Region

One of the most outstanding characteristics of the
population of the East Bank of Jordan is that it is unevenly
distributed throughout the country. For the purposes of
this survey, six regions forming basically 'domains of
analysis' have been identified: Amman, Zarka and Irbid,
Other Towns, Large Villages, Medium Villages and Small
Villages.

About 36 percent of women lived in Amman. Women
living in the three major cities in the East Bank —
Amman, Zarka and Irbid — constituted about 56 percent
of all women interviewed. It is noteworthy that these three
cities lie to the north and west of the East Bank, close to
the West Bank, and were greatly affected by population
movements from the West Bank to the East Bank
following the 1967 war.

Table 3.6. Percent Distribution of Enumerated Population (10 Years of Age and Over) According to Educational Attainment, by Age and by Sex: 1976 Household Survey

| | Educational Attainment | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Males | | | | | | | Females | | | | | | |
| Age | No schooling | Read and write | Elementary | Preparatory | Secondary | University and Institute | Total | No schooling | Read and write | Elementary | Preparatory | Secondary | University and Institute | Total |
| 10–14 | 1.2 | 58.1 | 39.4 | 1.3 | — | — | 8,060 | 4.4 | 58.5 | 35.4 | 1.5 | — | — | 7,370 |
| 15–24 | 2.3 | 7.5 | 36.4 | 37.8 | 13.1 | 13.1 | 7,818 | 15.4 | 13.2 | 32.2 | 26.7 | 10.3 | 2.2 | 8,570 |
| 25–34 | 9.1 | 15.2 | 28.5 | 13.2 | 17.7 | 16.5 | 4,352 | 46.8 | 15.6 | 16.3 | 7.3 | 9.1 | 4.9 | 5,343 |
| 35–44 | 26.7 | 23.8 | 22.7 | 8.6 | 8.7 | 9.5 | 3,761 | 72.3 | 11.5 | 8.5 | 3.3 | 3.0 | 1.3 | 4,254 |
| 45–54 | 38.1 | 28.1 | 19.7 | 5.4 | 4.9 | 3.8 | 2,620 | 79.8 | 9.0 | 6.9 | 1.8 | 2.1 | 0.3 | 2,334 |
| 55–64 | 56.5 | 22.1 | 14.1 | 2.1 | 2.1 | 1.9 | 1,396 | 87.6 | 5.3 | 4.4 | 1.0 | 1.1 | 0.5 | 1,216 |
| 65+ | 78.1 | 12.5 | 5.1 | 1.1 | 1.6 | 1.6 | 1,563 | 95.4 | 2.3 | 1.2 | 0.4 | 0.3 | 0.3 | 1,302 |
| Number of Persons | 4,673 | 8,070 | 8,891 | 4,146 | 2,311 | 1,452 | 29,570 | 11,392 | 7,074 | 6,839 | 2,985 | 1,558 | 530 | 30,398 |
| Percent | 15.8 | 27.3 | 30.1 | 14.0 | 7.8 | 4.9 | 100 | 37.6 | 23.3 | 22.5 | 9.8 | 5.1 | 1.7 | 100 |

Table 3.7. Percent Distribution of Weighted Frequencies for the Sample of Ever-Married Women According to Major Background Variables

| Total Number of Ever-Married Women | 3,612 |
|---|---|
| **Type of Place of Residence** | |
| Urban | 70.1 |
| Rural | 29.9 |
| **Region** | |
| Amman | 35.6 |
| Zarka and Irbid | 20.3 |
| Other Towns | 14.2 |
| Large Villages | 6.3 |
| Medium Villages | 16.7 |
| Small Villages | 6.9 |
| **Level of Education** | |
| No Schooling | 68.4 |
| Elementary | 19.4 |
| Preparatory | 5.7 |
| Secondary | 4.6 |
| Institute | 1.0 |
| University | 1.0 |
| **Literacy** | |
| Literate | 45.2 |
| Illiterate | 54.8 |
| **Husband's Occupation** | |
| Professional, Technical, Managerial | 11.8 |
| Clerical | 6.3 |
| Sales | 11.5 |
| Farmers | 2.1 |
| Agricultural Workers | 5.8 |
| Household and other Services | 28.3 |
| Skilled | 31.9 |
| Unskilled | 2.4 |
| Undefined | 0.1 |
| **Pattern of Work** | |
| Currently working and worked before marriage | 6.8 |
| Currently working but did not work before marriage | 3.0 |
| Worked after marriage but not now | 2.4 |
| Worked before and after marriage but not now | 1.9 |
| Worked before marriage | 9.4 |
| Never worked | 76.4 |
| **Childhood Type of Place of Residence** | |
| Desert | 1.6 |
| Village | 44.6 |
| Town | 17.5 |
| City | 36.2 |
| **Religion** | |
| Muslim | 94.2 |
| Catholic | 2.1 |
| Other | 3.7 |

### 3.4.3. Type of Place of Residence

For the individual survey, sample areas were classified as urban or rural in accordance with a standard designation employed by the Department of Statistics for the area in which each cluster was located. This classification will be referred to as Type of Place of Residence. As Table 3.7 shows, 70 percent of the women lived in urban households, and 30 percent in rural households. The percentage of women living in urban households steadily increases from 59 percent for women aged 15–19 to 79 percent for those at ages 45–49 years.

It should be noted that urban areas include the sample areas in the first three regions (Amman, Zarka and Irbid, and other Towns) and that the rural areas include the sample areas in the fourth, fifth and sixth regions (large, medium, and small villages).

For the household survey, the urban areas were further classified into two subgroups: Urban (cities) covering Amman, Zarka and Irbid; and urban (towns) covering other towns.

### 3.4.4. Level of Education

This variable refers to the highest level of schooling completed by the woman. Table 3.7 shows that 68 percent of the women did not earn any formal educational certificate. This group of women include those who never attended school and also women who might have attended primary school for some time but did not earn the certificate of primary education. The table also shows that 19 percent of the women had gone beyond the secondary education. However, 45.2 percent of the women were literate.

Detailed tabulations on the distribution of the sample women by age, marital duration and level of education show that women who reported no schooling were concentrated in the older ages and the longer marital durations.

That the better educated tend to be younger and more recently married must be taken into account when education is examined in relation to fertility and family planning. The age and marital duration effects are further confounded by the fact that the better educated tend to marry late.

### 3.4.5. Husband's Occupation

For currently married women, this variable relates to the current (or most recent if retired or not currently working) occupation of the husband; for women who are not currently married, the reference is to their last husband. The sixth and seventh groups consist of service workers and skilled workers, and amount to 28 percent, and 32 percent, respectively. Thus 3 households in 5 are in these two groups.

In this report, occupational categories will sometimes be amalgamated in order to simplify the discussion. This amalgamation is also made necessary by the smallness of sample sizes for certain categories. Details are lost by such an amalgamation, but there are in any case inherent difficulties in any occupational classification. For example, the Sales category may include a street vendor, a salesman in a modern enterprise, a property salesman, etc. The activities, requirements, and rewards associated with these jobs are widely different. Nevertheless, it is not unreasonable to expect the broad occupational classification used in this analysis to capture some socio-economic dimension of the population studied.

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### 3.4.6. Pattern of Work

The section on Work History in the JFS questionnaire obtained information on current or most recent work done by the women after marriage, as well as work done before her first marriage. 'Work' was defined as any occupation apart from ordinary housework, paid in cash or in kind or unpaid; on own-account or for a family member or for someone else; done at home or away from home.

The variable 'Pattern of Work' summarizes the women's work experience, namely whether or not she worked before and after her first marriage. The categories of this variable are as follows (Table 3.7):

(1) Those who have never worked (76·5 percent)

(2) Those who have worked before as well as after their first marriage (8·7 percent)

(3) Those who have worked after marriage but did not work before their first marriage (5·4 percent)

(4) Those who worked before their first marriage but not after marriage (9·4 percent)

It is possible to combine the four categories in different ways to produce new groups which may be more suitable for analysis. For example, the figures in Table 3.7 show that only 9.8 percent of all women are currently working — regardless of whether or not they worked before their first marriage.

### 3.4.7. Other Variables

In some of the tables presenting age at first marriage and early marital fertility, four other background variables have been used. These are: religion (Muslim, Catholic, other); the woman's occupation before first marriage (defined in the same way as her husband's occupation); her childhood type of place of residence (desert, village, town, or city—defined as the woman's subjective impression of the place); and 'work status' before first marriage.

### 3.5. ASSOCIATIONS BETWEEN BACKGROUND VARIABLES

Association between the background variables can be expected, since individuals possessing a particular characteristic are often also more likely to possess certain other characteristics. We shall, therefore, examine the background variables to see the extent to which they are statistically associated.

There are two main objectives for this examination. Firstly, it promotes a more critical understanding of the data by guarding against interpretation of differentials by

one variable as if they were unrelated to differentials by another variable. The second point is methodological. With a cross-sectional survey and only a relatively small number of explanatory variables, it is generally not possible to resolve questions of a causal nature, particularly at the relatively elementary stage of analysis to which the present report is largely confined. Nevertheless, the various explanatory variables considered are not all of the same type; some variables are more clearly definable characteristics of the individual, and the investigation of the extent to which differentials by other variables can be explained in terms of differentials by these individual level variables is an important step towards a better understanding of the data. If, for example, regional as well as educational differentials in fertility are observed, the next logical step is to investigate the extent to which regions differ in the general level of education and the extent to which regional differentials can be regarded simply as a manifestation of differences in education.

Two-way association between the main background variables is shown in Table 3.8. Within a specified category of each background variable, the table shows percent distributions according to categories of all other explanatory variables. For example, of women with no schooling, 62 percent are urban and 38 percent are rural. Similarly, of rural women 87 percent have had no schooling, 11 percent have completed the primary level, etc.

The most important conclusions from Table 3.8 may be summarized as follows:

(1) Urban women are better educated than rural women; 38 percent of urban women but only 13 percent of rural women have been to school. About 15 percent of urban women have completed preparatory school but only 2 percent of rural women have done so. Of the women who completed secondary school or more, about 97 percent live in urban areas.

(2) Husband's occupation is related to type of place of residence and wife's education, as might be expected. Among women whose husbands are 'skilled', 82 percent live in urban areas. About 78 percent of the women whose husbands are engaged in farming occupations live in rural areas.

   Women whose husbands are in professional, technical or managerial occupations are better educated than those whose husbands are in farming occupations. Only 27 percent of women in the former group against 96 percent among women in the latter have never attended school.

Table 3.8. Association between Background Variables: Within a Specified Category of Background Variable, the Percent Distribution According to Categories of Other Background Variables

| Background Variable | Type of Place | | | Region | | | | | | | Level of Education | | | | | | | Husband's Occupation | | | | | | | | | Pattern of Work | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | All | (1) | (2) | (3) | (4) | (5) | (6) | All | (1) | (2) | (3) | (4) | (5) | (6) | All | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | All | (1) | (2) | (3) | (4) | (5) | (6) | All |
| All Women | 70 | 30 | 100 | 36 | 20 | 14 | 6 | 17 | 7 | 100 | 68 | 19 | 6 | 5 | 1 | 1 | 100 | 12 | 6 | 11 | 2 | 6 | 29 | 32 | 2 | 100 | 7 | 3 | 2 | 2 | 9 | 77 | 100 |
| **Type of Place** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) Urban | — | — | — | 51 | 29 | 20 | 0 | 0 | 0 | 100 | 62 | 23 | 7 | 6 | 1 | 1 | 100 | 15 | 7 | 14 | 1 | 2 | 22 | 37 | 2 | 100 | 6 | 3 | 2 | 2 | 8 | 80 | 100 |
| (2) Rural | — | — | — | 0 | 0 | 0 | 21 | 56 | 23 | 100 | 87 | 11 | 2 | 6 | 0 | 0 | 100 | 5 | 4 | 6 | 5 | 15 | 43 | 19 | 3 | 100 | 9 | 4 | 3 | 2 | 13 | 69 | 100 |
| **Region** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) Amman | 100 | 0 | 100 | — | — | — | — | — | — | — | 55 | 25 | 8 | 8 | 2 | 2 | 100 | 18 | 7 | 14 | 1 | 1 | 15 | 42 | 3 | 100 | 6 | 3 | 3 | 2 | 9 | 77 | 100 |
| (2) Zarka and Irbid | 100 | 0 | 100 | — | — | — | — | — | — | — | 66 | 23 | 5 | 5 | 1 | 0 | 100 | 10 | 6 | 15 | 1 | 3 | 29 | 34 | 1 | 100 | 6 | 2 | 2 | 2 | 7 | 82 | 100 |
| (3) Other towns | 100 | 0 | 100 | — | — | — | — | — | — | — | 68 | 19 | 7 | 4 | 1 | 1 | 100 | 14 | 9 | 12 | 1 | 2 | 29 | 31 | 3 | 100 | 5 | 3 | 1 | 2 | 5 | 83 | 100 |
| (4) Large villages | 0 | 100 | 100 | — | — | — | — | — | — | — | 82 | 15 | 2 | 1 | 0 | 0 | 100 | 6 | 5 | 9 | 2 | 16 | 40 | 20 | 2 | 100 | 5 | 3 | 2 | 2 | 12 | 76 | 100 |
| (5) Medium villages | 0 | 100 | 100 | — | — | — | — | — | — | — | 87 | 11 | 2 | 0 | 0 | 0 | 100 | 5 | 4 | 6 | 6 | 15 | 44 | 18 | 2 | 100 | 8 | 4 | 3 | 3 | 14 | 69 | 100 |
| (6) Small villages | 0 | 100 | 100 | — | — | — | — | — | — | — | 92 | 8 | 0 | 0 | 0 | 0 | 100 | 3 | 2 | 4 | 6 | 16 | 44 | 21 | 3 | 100 | 15 | 6 | 3 | 1 | 13 | 61 | 100 |
| **Level of Education** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) No schooling | 62 | 38 | 100 | 28 | 19 | 14 | 8 | 21 | 9 | 100 | — | — | — | — | — | — | — | 5 | 5 | 12 | 3 | 8 | 32 | 32 | 3 | 100 | 5 | 3 | 2 | 2 | 10 | 78 | 100 |
| (2) Elementary | 83 | 17 | 100 | 47 | 23 | 14 | 5 | 9 | 3 | 100 | — | — | — | — | — | — | — | 15 | 9 | 12 | 2 | 1 | 24 | 39 | 1 | 100 | 3 | 2 | 2 | 1 | 8 | 85 | 100 |
| (3) Preparatory | 90 | 10 | 100 | 53 | 19 | 18 | 2 | 7 | 1 | 100 | — | — | — | — | — | — | — | 34 | 11 | 12 | 0 | 1 | 15 | 28 | 0 | 100 | 5 | 3 | 3 | 1 | 8 | 81 | 100 |
| (4) Secondary | 97 | 3 | 100 | 60 | 24 | 13 | 1 | 2 | 0 | 100 | — | — | — | — | — | — | — | 53 | 9 | 8 | 0 | 0 | 14 | 16 | 0 | 100 | 27 | 5 | 10 | 5 | 15 | 39 | 100 |
| (5) Institute | 98 | 2 | 100 | 58 | 30 | 10 | 2 | 0 | 0 | 100 | — | — | — | — | — | — | — | 62 | 14 | 7 | 0 | 0 | 9 | 8 | 0 | 100 | 71 | 8 | 10 | 3 | 0 | 8 | 100 |
| (6) University | 100 | 0 | 100 | 88 | 4 | 8 | 0 | 0 | 0 | 100 | — | — | — | — | — | — | — | 69 | 8 | 8 | 0 | 0 | 15 | 0 | 0 | 100 | 41 | 11 | 11 | 8 | 13 | 16 | 100 |
| **Husband's Occupation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) Professional, technical and managerial | 89 | 11 | 100 | 54 | 18 | 17 | 3 | 7 | 2 | 100 | 27 | 25 | 16 | 21 | 5 | 6 | 100 | — | — | — | — | — | — | — | — | — | 14 | 3 | 5 | 2 | 10 | 66 | 100 |
| (2) Clerical | 82 | 18 | 100 | 42 | 20 | 20 | 5 | 11 | 2 | 100 | 54 | 27 | 10 | 6 | 2 | 1 | 100 | — | — | — | — | — | — | — | — | — | 7 | 3 | 2 | 2 | 8 | 78 | 100 |
| (3) Sales | 84 | 16 | 100 | 42 | 27 | 15 | 5 | 9 | 2 | 100 | 70 | 20 | 6 | 3 | — | 1 | 100 | — | — | — | — | — | — | — | — | — | 5 | 2 | 1 | 2 | 7 | 84 | 100 |
| (4) Farmers | 23 | 77 | 100 | 10 | 8 | 4 | 8 | 49 | 20 | 100 | 99 | 1 | 0 | 0 | 0 | 0 | 100 | — | — | — | — | — | — | — | — | — | 21 | 6 | 1 | 1 | 13 | 57 | 100 |
| (5) Agricultural workers | 22 | 78 | 100 | 7 | 10 | 5 | 17 | 42 | 19 | 100 | 96 | 3 | 1 | 0 | 0 | 0 | 100 | — | — | — | — | — | — | — | — | — | 14 | 9 | 3 | 3 | 7 | 65 | 100 |
| (6) Household and other services | 54 | 46 | 100 | 19 | 20 | 15 | 9 | 26 | 11 | 100 | 78 | 16 | 3 | 3 | 0 | 0 | 100 | — | — | — | — | — | — | — | — | — | 6 | 2 | 2 | 1 | 11 | 78 | 100 |
| (7) Skilled | 82 | 18 | 100 | 46 | 22 | 14 | 4 | 9 | 5 | 100 | 69 | 23 | 5 | 1 | 2 | 0 | 100 | — | — | — | — | — | — | — | — | — | 4 | 3 | 2 | 2 | 9 | 80 | 100 |
| (8) Unskilled | 69 | 31 | 100 | 39 | 12 | 17 | 6 | 15 | 10 | 100 | 94 | 5 | 0 | 1 | 0 | 0 | 100 | — | — | — | — | — | — | — | — | — | 4 | 7 | 1 | 7 | 9 | 72 | 100 |
| **Pattern of Work** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) Currently working and worked before marriage | 61 | 39 | 100 | 31 | 18 | 11 | 5 | 19 | 16 | 100 | 55 | 7 | 4 | 18 | 10 | 6 | 100 | 25 | 6 | 9 | 7 | 12 | 23 | 17 | 1 | 100 | — | — | — | — | — | — | — |
| (2) Currently working but did not work before marriage | 64 | 36 | 100 | 34 | 13 | 13 | 6 | 21 | 13 | 100 | 73 | 9 | 5 | 6 | 3 | 4 | 100 | 11 | 6 | 7 | 5 | 17 | 22 | 27 | 5 | 100 | — | — | — | — | — | — | — |
| (3) Worked after marriage but not now | 61 | 39 | 100 | 43 | 16 | 6 | 6 | 20 | 9 | 100 | 53 | 13 | 8 | 18 | 4 | 4 | 100 | 24 | 4 | 3 | 1 | 7 | 28 | 32 | 1 | 100 | — | — | — | — | — | — | — |
| (4) Worked before and after marriage but not now | 70 | 30 | 100 | 34 | 19 | 13 | 6 | 23 | 4 | 100 | 69 | 10 | 4 | 12 | 1 | 4 | 100 | 15 | 7 | 9 | 1 | 7 | 21 | 31 | 9 | 100 | — | — | — | — | — | — | — |
| (5) Worked before marriage only | 59 | 41 | 100 | 34 | 15 | 8 | 8 | 25 | 10 | 100 | 71 | 17 | 4 | 7 | 0 | 1 | 100 | 12 | 6 | 9 | 3 | 4 | 32 | 32 | 2 | 100 | — | — | — | — | — | — | — |
| (6) Never worked | 73 | 27 | 100 | 36 | 23 | 15 | 6 | 15 | 5 | 100 | 70 | 22 | 6 | 2 | 0 | 0 | 100 | 10 | 6 | 12 | 2 | 5 | 30 | 33 | 2 | 100 | — | — | — | — | — | — | — |

More than two-thirds of women with education above secondary school level have husbands in professional, technical or managerial occupations. About 64 percent of women with no schooling have husbands in the 'household and other services' and 'skilled' groups.

(3) Wife's pattern of work is related to level of education and husband's occupation in ways difficult to unravel at this stage of analysis. However, a larger proportion of urban women than rural women have never worked (80 percent against 69 percent). Among the women who are currently working and who worked before marriage, 55 percent have never attended school.

The proportion of women in the 'currently working and worked before marriage' group is highest for those whose husbands are in professional, technical and managerial occupations, followed by those in the 'household and other services' group. However, the proportion of women in the 'currently working but did not work before marriage' group is highest for those whose husbands are 'skilled' followed by those in the 'household and other services' group.

## 3.6. NOTE ON STANDARDIZATION[1]

As discussed above, the background or explanatory variables define parts of the sample to be compared and contrasted in the study of differentials in fertility behaviour, preferences, and regulation. Comparisons across sub-populations are hampered by the statistical association that may exist between the variable which

[1] For a more detailed discussion of the method, see *Standardization, WFS Technical Bulletin No. 3*, International Statistical Institute, The Hague, 1978.

defines the sub-populations and some other variable. For example, in comparing mean parities of several educational categories, the conclusion will be more complex if education and marriage duration are associated. Marital duration has a clear, largely biological relationship to parity and if, say, the higher educational groups have a disproportionately high number of women with short marriage durations, then the high educational groups will have low fertility for that reason alone.

In studying differentials, it is therefore necessary to control relevant demographic and other characteristics of the categories being compared. When sample size does not permit sufficiently detailed cross-classification of the data, an alternative method of taking into account differences in composition is *direct standardization*.

Standardization is applied to cross-classifications of a mean response by, say, a background variable (such as education) and a demographic variable (such as marital duration). In order to control for the latter, for each level of the background variable a weighted average of the cell means is calculated. The weights used are proportional to the grouped distribution of the demographic variable in the population as a whole. For example, in comparing parity for different educational categories, the demographic variable 'marital duration' is controlled by cross-classifying mean parity by education and marital duration, and then calculating for each educational level a weighted average of the mean parities of each marriage duration group, with weights proportional to the marginal distribution of marital duration for the whole sample. In this way the same distribution by marital duration is applied to each educational level. Except for the approximation resulting from working with grouped data, any observed differences in the 'standardized' means of each educational level are thus not the result of differences in marital duration between the categories being compared.

# CHAPTER 4

# NUPTIALITY AND EXPOSURE TO CHILDBEARING

## 4.1. INTRODUCTION

In Jordan, exposure to the risk of conception and childbearing is confined to intervals of marriage. For this reason the detailed Individual Questionnaire was only administered to women with current age 15–49 years who reported in the Short Household Schedule that they are currently married or had been married at some time in their lives. These are referred to as 'ever-married' women.

The principal reason for obtaining information on the woman's marital history is to provide a background within which fertility is likely to occur. A secondary reason for collecting and reporting on these data is that marital status, and trends therein, are of interest in their own right for both local and international analysis.

Generally, age of entry into sexual union is one of the major intermediate variables affecting fertility. Following the first entry into a marital union, the effective duration spent in the marital state is governed by the prevalence of marital dissolution and of remarriage. Within intervals of marriage, the degree of exposure to childbearing is influenced by a variety of factors of differing intensities, such as temporary separation of spouses, coital frequency, adolescent sterility, primary and secondary sterility, post partum amenorrhoea, prevalence and efficacy of contraceptive use, etc.

The following data on nuptiality were obtained in the JFS.

(a) The Expanded Household Schedule included the following four questions on marital status to all persòns aged 13 and over:

> Q14. Has (he/she) ever been married?
> If YES to Q14:
> Q15. Is (he/she) now married, divorced, widowed?
> Q16. Has (he/she) been married more than once?
> If YES to Q16:
> Q17. Is your first (wife/husband) still alive?

(b) The Short Household Schedule was used to record the marital status of each member of the household, i.e. whether the person was single, currently married, widowed, or divorced.

(c) The Individual Questionnaire was administered to ever-married women aged 15–49 years. In the

Marriage History section of this questionnaire, the current marital status was obtained in response to the question:

> Q201. '... Are you now married, widowed or divorced?'

A currently married women was asked in what month and year did she and her husband start their married life together. If the date of marriage could not be obtained, the woman was asked to state her age at marriage. If she was still unable to do so, she was asked to state how many years ago did the marriage take place. The same scheme was used to obtain the dates of beginning of previous marriages, if applicable. The date of termination of a former marriage was obtained either as calendar year and month or as the total duration of the marriage.

It should be noted that in obtaining information on date of marriage, interest was in the date when marriage was consummated and not the date of the registration of the marriage contract. In almost all Arab countries, there is a distinction between formal marriage as witnessed by the marriage contract and the social marriage which marks the consummation of marriage. The period between these two dates varies and could even extend to a few years. Though there are usually two separate ceremonies (one for each event), quite a few marriages involve writing the contract and the consummation of marriage at the same time.

This chapter begins with an analysis of the trend and pattern of age at first marriage. The analysis is based on data collected in the household and individual surveys. In the remaining sections of this chapter, data obtained in the marriage history section of the individual questionnaire will be used to investigate the following three aspects of nuptiality and exposure to childbearing: marriage; marital stability; current marital and exposure status; and proportion of time spent in the married state.

## 4.2. AGE AT FIRST MARRIAGE

### 4.2.1. Trends in Age at First Marriage

Demographic, economic, and socio-cultural factors work intricately together to determine the age at marriage in a society and the changes in that age. In a society where

marriage is, to some extent, still arranged by elders, as is the case in Jordan, age at first marriage is seen to be significantly lower than that within structures where there is a relatively free choice of marital partner.

A thorough analysis of age at marriage would require linking data collected in the household schedule on marital status with the data obtained in the marriage history section of the individual questionnaire with the aim of constructing cohort nuptiality tables. Such a detailed investigation may be undertaken in later, more detailed analyses of the JFS data.

However, data on the proportion never married, by single years of age from the household survey, may be used to construct a summary measure of the age at first marriage. This measure, proposed by Hajnal, is termed the Singulate Mean Age at Marriage (SMAM). It is interpreted to be the mean age at first marriage of those women who marry by age 50, and is estimated by adding the proportion currently single at successive ages as though they referred to a single real cohort of women. Thus, the SMAM summarizes the experience of all the persons enumerated in the different ages at a given point in time and does not refer to any cohort in the real sense of the word. When the SMAM is calculated from the household survey data of 1976 on the proportions of single women, a value of 21.7 years is obtained.

A more direct interpretation of the central age at marriage is simply the median age, i.e. that age by which half of the women have entered into a first marriage. One of the advantages of the median is that the small number of late marriages in the 30's and 40's will not carry the same weight as in an arithmetic mean. Looking at the distribution of all women in the household survey by marital status, we find that the age by which half the women were married was 19.5.

However, nuptiality as a demographic event may be characterized by its temporal age pattern and by its level as indicated by the proportions of persons who ever marry. Trends in these two characteristics of nuptiality may be examined by linking data from the household survey with the data obtained in the individual survey on nuptiality. Table 4.1 shows the percentage of women who have ever married before attaining specified ages, by current age.

The table shows a clear trend towards later marriage, and a concomitant trend for the first marriage to become spread over a wider age range, as evidenced by the substantial decreases in the proportions of young marriages. The percentage of women ever married by exact age 22 has decreased from 87 for women at ages 45–49 years to 75 for those at ages 25–29. Likewise, the percentage ever married has decreased — but more rapidly — for women less than 20 years old at marriage, and dramatically for those less than 18 years old at marriage.

The decline in teen-age marriages has in fact been striking. For women at ages 45–49, about 64 percent entered first marriage before reaching age 18. This percentage declined to 55 percent for women at ages 35–39 and to 40 percent for women at ages 20–24. There has also been a sharp decline in very early marriage (under 15 years), from 31 percent among women at ages 45–49 to only 10 percent among those at ages 20–24.

The last column in Table 4.1 shows the age at which 50 percent of each of the cohorts considered were ever married. This index shows an upward trend particularly among the younger cohorts. Thus, 50 percent of the women at ages 45–49 were ever married at age 16.7 years. The corresponding figures for women aged 25–29 and 20–24 years are 18.4 and 19.4 years, respectively.

### 4.2.2. Differentials in Age at First Marriage

As previously mentioned, age at first marriage is a product of various socio-economic and demographic factors. Although in a given society cultural as well as other social system may encourage and maintain early age at

Table 4.1. Percentage of Women Who Have Ever Married Before Attaining Specified Ages, by Current Age

| Current Age | Age at First Marriage (Exact Years)* | | | | | | | Age at Which 50% Were Ever Married |
|---|---|---|---|---|---|---|---|---|
| | 15 | 18 | 20 | 22 | 25 | 30 | 50 | |
| 15–19 | 5.5 | (17.4) | (19.5) | — | — | — | — | — |
| 20–24 | 10.1 | 40.2 | 54.3 | (61.5) | (64.1) | — | — | 19.4 |
| 25–29 | 17.0 | 47.0 | 63.9 | 74.8 | 83.6 | (87.4) | — | 18.4 |
| 30–34 | 20.2 | 54.9 | 71.1 | 80.2 | 89.1 | 94.3 | — | 17.6 |
| 35–39 | 24.1 | 54.6 | 75.2 | 84.6 | 92.3 | 96.1 | — | 17.6 |
| 40–44 | 27.3 | 57.0 | 74.6 | 85.6 | 93.4 | 96.4 | — | 17.3 |
| 45–49 | 31.0 | 63.7 | 79.5 | 86.8 | 93.4 | 97.4 | (98.3) | 16.7 |

* Figures in parentheses refer to women who have not all reached the age listed. Hence, these figures are subject to change.

marriage, differentials by various variables have always been observed within the society. The data from the household and the individual surveys permit the investigation of the existence of differences in age at first marriage, by various background variables.

Table 4.2 — based on the household survey — shows the proportions ever-married for males and for females by age according to selected background variables. The table shows significant differences in the timing of first marriage for both men and women between urban and rural communities. For men, the percentage ever married at ages 25–29 was 58 percent for urban areas and 75 for rural areas. For women at ages 20–24, the percentage ever married increases from 58 in urban areas to 78 in rural areas.

The table also shows an inverse relationship between level of education and age at first marriage. Among women aged 20–24 years, the percentage ever married decreases from 80 for those with no schooling, to 76 for women with incomplete primary education, to 58 for women with preparatory education, and to only 31 for those with secondary education.

The individual survey data permit the examination of differentials in mean age at marriage by several other background characteristics. It should be noted, however, that since the individual survey was restricted to ever-married women, genuine changes in the age at marriage from one birth cohort to the next, are not immediately

apparent. This will lead to a bias in favour of selecting women who marry young, i.e. will lead to under-estimating the mean age at first marriage of the cohorts considered. This is known as the 'censoring effect'. In order to remove some of the censoring effect, a pivotal age is selected, say age 20, and mean age at marriage is calculated for those who were at ages 20 or more and who had first married before age 20.

For Jordan, the selection of age 20 as a pivotal age is justified, for out of the total of 3,612 ever-married women, a total of 2,540 is included in that subgroup, thus accounting for over 70 percent of the total sample. Of the remaining 1,072, there were 329 women less than 20 years of age and 743 women who were married at the age of 20 or more. Attention is restricted, as mentioned above, to the examination of only the subgroup of ever-married women who married before the age of 20 and are now 20 or more. Table 4.3 shows the percent distribution of all ever-married women by age at first marriage and by current age. Table 4.4 is a recalculation of the percentage distribution of ever-married women in that subgroup.

Table 4.4 indicates a trend towards later marriage for more recent cohorts, as evidenced by the trend in the percentage who married before age 15 in the successive cohorts.

There is a considerable consensus among scholars that education has the effect of raising age at marriage, especially on the part of females, because of their new

Table 4.2. Percentage Ever Married, by Sex, by Age, and by Selected Background Variables

| Variable | Males—Age Group | | | | | | | Females—Age Group | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 15–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45–49 | 15–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45–49 |
| Total | 1.0 | 22.9 | 63.6 | 89.7 | 97.1 | 98.6 | 99.4 | 19.5 | 64.1 | 87.4 | 95.3 | 97.4 | 98.0 | 98.3 |
| Type of Place of Residence | | | | | | | | | | | | | | |
| Urban I (Cities) | 0.8 | 19.2 | 58.4 | 88.1 | 96.3 | 98.2 | 99.5 | 16.0 | 58.1 | 84.0 | 93.9 | 96.3 | 97.7 | 97.9 |
| Urban II (Towns) | 0.7 | 21.4 | 64.5 | 88.7 | 98.8 | 98.5 | 98.1 | 16.7 | 60.1 | 87.3 | 96.3 | 96.8 | 97.7 | 98.9 |
| Rural | 1.6 | 32.5 | 75.1 | 95.1 | 98.2 | 99.5 | 100.0 | 28.7 | 77.8 | 94.1 | 97.4 | 99.6 | 98.6 | 99.1 |
| Region | | | | | | | | | | | | | | |
| Amman | 0.9 | 18.1 | 57.4 | 86.8 | 96.3 | 97.4 | 98.7 | 15.6 | 58.1 | 82.6 | 93.2 | 96.0 | 96.7 | 97.8 |
| Zarka and Irbid | 0.7 | 21.1 | 59.3 | 90.6 | 96.2 | 99.7 | 99.0 | 16.7 | 58.2 | 86.9 | 95.2 | 96.9 | 99.2 | 98.1 |
| Other Towns | 0.7 | 21.4 | 64.5 | 88.7 | 98.8 | 98.5 | 98.1 | 16.7 | 60.1 | 86.3 | 96.3 | 96.8 | 97.7 | 98.9 |
| Large Villages | 1.8 | 31.9 | 75.6 | 90.9 | 97.2 | 99.7 | 100.0 | 21.3 | 72.4 | 93.1 | 99.8 | 100.0 | 98.6 | 97.9 |
| Medium villages | 1.0 | 32.1 | 75.6 | 95.5 | 98.7 | 99.1 | 100.0 | 28.9 | 77.2 | 93.1 | 96.7 | 99.1 | 98.9 | 100.0 |
| Small Villages | 2.7 | 34.0 | 73.7 | 97.9 | 98.2 | 100.0 | 100.0 | 35.8 | 83.0 | 96.7 | 96.5 | 100.0 | 98.0 | 98.5 |
| Level of Education | | | | | | | | | | | | | | |
| No Schooling | 4.1 | 38.2 | 79.8 | 91.6 | 96.3 | 98.8 | 99.6 | 39.7 | 79.9 | 94.1 | 96.6 | 98.5 | 97.9 | 98.7 |
| Incomplete Primary | 3.1 | 35.3 | 76.0 | 91.3 | 97.9 | 99.1 | 99.5 | 37.3 | 76.3 | 93.1 | 96.2 | 96.1 | 98.4 | 96.5 |
| Primary | 1.8 | 37.5 | 78.2 | 95.1 | 98.0 | 98.5 | 98.7 | 23.0 | 77.4 | 89.8 | 95.0 | 93.4 | 98.3 | 99.4 |
| Preparatory | 0.1 | 17.5 | 59.7 | 93.2 | 98.3 | 97.1 | 100.0 | 6.5 | 58.4 | 82.9 | 95.3 | 93.5 | 100.0 | 100.0 |
| Secondary | 0.0 | 7.4 | 49.7 | 83.1 | 96.5 | 98.3 | 100.0 | 5.1 | 31.2 | 71.8 | 86.3 | 96.2 | 95.2 | * |
| Institute | 0.0 | 15.0 | 65.3 | 92.2 | 100.0 | 90.0 | 100.0 | * | 18.8 | 64.2 | 91.1 | * | * | * |
| University | 0.0 | 12.1 | 36.7 | 77.2 | 94.4 | 98.5 | 98.6 | * | 12.8 | 50.4 | 83.6 | 94.0 | * | * |

* Less than 20 cases.

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Table 4.3. Percent Distribution of All Ever-Married Women According to Age at First Marriage, by Current Age

| Current Age | Age at First Marriage | | | | | | | | Total Number of Women |
|---|---|---|---|---|---|---|---|---|---|
| | <15 | 15–17 | 18–19 | 21–21 | 22–24 | 25–29 | 30+ | Mean | |
| <20 | 28.3 | 61.0 | 10.6 | 0.0 | 0.0 | 0.0 | 0.0 | 16.0 | 325 |
| 20–24 | 15.7 | 47.0 | 22.0 | 11.2 | 4.2 | 0.0 | 0.0 | 17.4 | 596 |
| 25–29 | 19.4 | 34.3 | 19.3 | 12.5 | 10.1 | 4.3 | 0.0 | 18.1 | 709 |
| 30–34 | 21.2 | 36.4 | 17.0 | 9.5 | 9.4 | 5.5 | 1.0 | 18.1 | 628 |
| 35–39 | 24.7 | 31.3 | 21.1 | 9.7 | 7.9 | 3.9 | 1.5 | 17.9 | 543 |
| 40–44 | 27.9 | 30.3 | 18.0 | 11.2 | 8.0 | 3.1 | 1.6 | 17.7 | 435 |
| 45+ | 31.5 | 33.3 | 16.1 | 7.4 | 6.7 | 4.1 | 0.9 | 17.3 | 372 |
| Total | 23.0 | 38.1 | 18.3 | 9.5 | 7.1 | 3.2 | 0.7 | 17.6* | 3,607 |

* Standard error = 0.1 year.

Table 4.4. Percent Distribution of Ever-Married Women Who First Married Before Age 20 According to Age at First Marriage, by Current Age

| Current Age | Age at First Marriage | | | | Number of Women |
|---|---|---|---|---|---|
| | <15 | 15–17 | 18–19 | Mean | |
| 20–24 | 18.5 | 55.5 | 26.0 | 16.7 | 505 |
| 25–29 | 26.6 | 47.0 | 26.4 | 16.4 | 517 |
| 30–34 | 28.4 | 48.8 | 22.8 | 16.2 | 468 |
| 35–39 | 32.0 | 40.6 | 27.4 | 16.2 | 418 |
| 40–44 | 36.6 | 39.8 | 23.6 | 15.9 | 331 |
| 45 | 38.9 | 41.2 | 19.9 | 15.8 | 301 |
| Total | 29.1 | 46.3 | 24.6 | 16.3* | 2540 |

* Standard error = 0.05 years

positive attitudes concerning choice of partners and other issues that would lead to the delay of marriage. Education alone may not, however, be enough to resist deep-rooted cultural and structural forces that maintain early marriage, especially for females. Table 4.5 shows age at first marriage of those women who first married before age 20 by current age and by level of education.

The table shows a trend towards an increase in the mean age at first marriage as the educational level rises. While the mean age is only 15.5 for those with no schooling, it reaches 16.2 for those with primary educa-

tion, 17.1 for women with preparatory education, and 17.6 for those with secondary or more. In this particular case, the ever-married women excluded were not uniform from all educational groups. Among ever-married women whose current age is 20 or more, only 31 percent of those with secondary education or more married before age 20, as compared to almost 83 percent among non-educated women. Here, it may be recalled that large proportions of women tend to delay marriage after the age of 20 as their education level increases. The differentials by education would become significantly larger if all ever-married women were included.

Table 4.5 shows, furthermore, that this inverse relationship between age at first marriage and educational level of the wife occurs regardless of age cohort. The relationship continues to persist within each age group, though the differentials are clearer as we move to the younger cohorts. However, it must be noted that most of the highly educated (secondary or more) are in the younger age cohorts, since female education has become more widespread only in the recent past. The effect of the age composition can be evaluated from the standardized mean age at first marriage controlling for the age composition (Table 4.5) where a slight decrease is witnessed in the two higher educational levels.

Table 4.5. Mean Age at First Marriage of Those Women Who First Married Before Age 20, by Current Age and by Level of Education

| Level of Education | Current Age | | | | | | Crude Mean | Standardized Mean | Percent Married Before Age 20 |
|---|---|---|---|---|---|---|---|---|---|
| | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45+ | | | |
| No Schooling | 16.4 | 16.2 | 15.9 | 16.0 | 15.8 | 15.7 | 16.0 | 16.0 | 82.7 |
| Primary | 16.7 | 16.6 | 16.9 | 17.3 | 16.8 | 16.0 | 16.7 | 16.8 | 77.7 |
| Preparatory | 17.6 | 17.8 | 18.0 | 17.2 | * | * | 17.6 | 17.4 | 67.6 |
| Secondary + | 18.4 | 18.0 | 17.9 | 18.3 | * | * | 18.1 | 18.0 | 31.2 |
| Total | 16.7 | 16.4 | 16.2 | 16.2 | 15.9 | 15.8 | 16.3 | 16.3 | 70.3 |
| Mean Number of Women | 505 | 517 | 468 | 418 | 331 | 301 | 2,540 | — | — |

* Less than 10 cases.

Table 4.6 gives the mean age at first marriage for all ever-married women age 20 years or more who were first married before age 20, by current age and by selected background variables.

Apart from education, there are many other factors which appear to have some effect on the age at first marriage. Factors that help assist in raising the status of women, such as non-family roles — especially gainful employment outside home — seem to have a considerable effect. This effect begins to be apparent if the women is outside the context of family and in the non-traditional world of wages and salaries that can really create favourable attitudes with respect to alternative life styles.

From Table 4.6 the lowest mean age at first marriage is shown for the following two cases: when a women is an unpaid family worker or did not work at all before first marriage (means 16.0 and 16.2, respectively). This mean is increased to 17.2 if her work status before first marriage was self employed and 17.6 if she was a paid worker for someone outside the family realm.

Furthermore, clear differentials are found in the mean age at first marriage if wife's occupation before first marriage is considered. As hypothesized, mean age at first marriage is the highest (18.3) for those who were engaged in technical or clerical work and still relatively high (17.3) for those who were employed in skilled work; it drops to only 16.0 if that work is in the traditional sector of agriculture or farming.

These differentials by work status and occupation of wife before first marriage show that women who work outside home in the modern sector, and are paid by someone other than family, or are even self-employed have a tendency towards postponement of marriage. Thus it would seem that they were more able to break the

Table 4.6. Mean Age at First Marriage of Those women Who First Married Before Age 20, by Current Age and by Selected Background Variables

| Background Variable | Current Age | | | | All Ages | Number of Women | Percent Married Before Age 20 |
|---|---|---|---|---|---|---|---|
| | 20–24 | 25–29 | 30–39 | 40+ | | | |
| Type of Place | | | | | | | |
| Urban | 17.0 | 16.6 | 16.3 | 15.9 | 16.4 | 1742 | 74.5 |
| Rural | 16.3 | 16.1 | 15.9 | 15.5 | 15.9 | 798 | 84.4 |
| Region | | | | | | | |
| Amman | 17.1 | 16.7 | 16.3 | 16.0 | 16.4 | 869 | 72.9 |
| Zarka and Irbid | 16.7 | 16.7 | 16.3 | 15.9 | 16.3 | 507 | 75.7 |
| Other Towns | 17.4 | 16.1 | 16.5 | 16.0 | 16.4 | 366 | 76.9 |
| Large Villages | 16.6 | 16.6 | 16.3 | 15.6 | 16.1 | 161 | 78.2 |
| Medium Villages | 15.9 | 16.3 | 15.8 | 16.1 | 15.9 | 452 | 85.3 |
| Small Villages | 16.6 | 15.6 | 15.6 | 15.3 | 15.8 | 186 | 88.6 |
| Religion | | | | | | | |
| Muslim | 16.7 | 16.4 | 16.1 | 15.8 | 16.2 | 2428 | 78.9 |
| Catholic and Other | 17.1 | 17.9 | 17.4 | 16.7 | 17.2 | 111 | 54.4 |
| Husband's Occupation | | | | | | | |
| Technical and Clerical | 17.1 | 16.9 | 17.0 | 16.0 | 16.8 | 386 | 63.9 |
| Sales | 16.4 | 16.6 | 16.5 | 16.6 | 16.2 | 309 | 74.6 |
| Farmers and Agricultural | 16.8 | 15.8 | 15.5 | 15.2 | 15.5 | 222 | 78.3 |
| Household and Other Services | 16.4 | 16.1 | 16.1 | 16.2 | 16.2 | 746 | 73.2 |
| Skilled | 16.8 | 16.6 | 16.0 | 16.0 | 16.3 | 803 | 78.0 |
| Unskilled | * | 16.9 | 16.1 | 14.8 | 15.8 | 74 | 92.5 |
| Work Status Before First Marriage | | | | | | | |
| Family Unpaid | 16.2 | 15.9 | 15.9 | 15.9 | 16.0 | 171 | NA |
| For Someone — Cash | | 17.1 | 17.7 | 17.7 | 17.6 | 66 | NA |
| Self-Employed | 18.4 | 16.6 | 17.0 | 17.4 | 17.2 | 77 | NA |
| Did Not Work | 16.6 | 16.5 | 16.1 | 15.8 | 16.2 | 2207 | NA |
| Wife's Occupation Before First Marriage | | | | | | | |
| Technical and Clerical | * | * | 18.1 | * | 18.3 | 32 | NA |
| Farmers and Agricultural | 16.2 | 16.0 | 16.1 | 15.8 | 16.0 | 209 | NA |
| Skilled | 18.1 | 16.9 | 17.0 | 17.5 | 17.3 | 83 | NA |
| Did Not Work | 16.6 | 16.5 | 16.1 | 15.8 | 16.2 | 2205 | NA |
| Total | | | | | | | |
| Mean | 16.7 | 16.4 | 16.2 | 15.9 | 16.3 | — | 70.4 |
| Number of Women | 505 | 517 | 886 | 632 | 2540 | — | — |

* Less than 10 cases.
NA = Not available.

control of elders over mate-choice, which in turn may lead to a higher age at marriage.

It must be noticed that both work status and occupation before first marriage are highly related to educational level and may not be investigated without taking that into consideration. Another limitation is that it is not possible to study these differentials for different age cohorts due to the small numbers involved which might lead to mis-interpretation.

Only slight differentials were found when mean age of wife at first marriage was related to her first husband's occupation. Table 4.6 also shows differences in age at first marriage between Muslims and non-Muslims. It seems that Muslims tended to marry at younger ages (a mean age at first marriage of 16.2), while the Catholics and other Christians tended to marry later, at an average age of 17.2. Of course, these mean ages are for those who married before age 20, but as mentioned in the case of education above, there is selective exclusion in this case; only 54 percent of Catholics and other Christians married for the first time before age 20, in comparison with 79 percent of Muslims.

Obviously then, there exists a clear difference in age at first marriage by religious group. However, such a difference must be taken with caution, for it could be due to other factors, such as education. In fact, a much higher proportion of Catholics and other Christians were in the higher educational groups, and these have already been shown to marry for the first time at a higher age.

There exist also some differences in age at first marriage by type of place of residence and by region of residence. There is a slight difference, evident in all age groups, between the mean age at first marriage in rural and urban areas. There is no difference within urban areas, i.e. metropolitan Amman, Zarka and Irbid, as compared to towns. Furthermore, differences within rural areas, i.e. by size of villages, were also small.

## 4.3. MARITAL STABILITY

In this section, two aspects of marital stability will be discussed: (a) dissolution of first marriage; and (b) remarriage and number of times married.

Marriage stability is an important intermediate variable affecting fertility. Exposure of women to the risk of conception does not depend solely on the mean age at which women marry. It is also affected by the incidence of divorce, separation, and death of spouse, by the extent to which divorcees and widows remarry and separated persons became reunited, and the amount of time elapsing before remarriage.

The impact of such factors on fertility depends on the extent of their presence and their inter-relationships. For example, although divorce could have a depressing effect on fertility since it reduces the proportion of the reproductive period spent in exposure, the magnitude of its effect depends on the extent of remarriage, and the amount of time elapsing before remarriage.

### 4.3.1. Dissolution of First Marriage

Table 4.7 shows the percent distribution of all ever-married women according to status of first marriage, by years since first marriage and age at first marriage. The figures show a high level of marital stability. Overall, 92.8 percent of the ever-married women are still in their first marriage, and as may be seen from Table 4.7 this percentage decreases from the youngest to the oldest marriage cohorts.

The percentage of women who had been widowed shows the steady rise with duration of marriage that would be expected simply on the basis of accumulated risk. For women who first married 30 or more years ago, about 17 percent had been widowed.

Women who were divorced or separated represent about 3.5 percent of all ever-married women. The 22 women (0.6 percent) whose first marriage is in a state of separation are, in fact, still married; a separated wife being simply one who is living apart from her husband who may or may not intend to remain apart. However, since the proportion separated is negligible, separation will be treated in this report to be equivalent of divorce.

As Table 4.7 shows, divorce is a more important cause of dissolution in the early years of marriage, but for women who first married 15 or more years ago, the leading cause of dissolution is death of husband, this being true both for those who first married before or after the age of 20.

### 4.3.2. Remarriage and Number of Times Married

Widowed and divorced women constitute a small part of the sample population. This may be seen from Table 4.8 which shows the percent distribution of ever-married women by the number of times married and years since first marriage.

The first point to note is that most women (96.6 percent) married only once, only 3.4 percent married

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Table 4.7. Percent Distribution of All Ever-Married Women According to Status of First Marriage, by Years Since Marriage and by Age at First Marriage

| Age at First Marriage | Years Since First Marriage | Married | Cause of Dissolution | | | | Number of Women |
|---|---|---|---|---|---|---|---|
| | | | Widowed | Divorced | Separated | Total | |
| Total | <5 | 97.5 | 0.5 | 1.5 | 0.6 | 2.5 | 725 |
| | 5–9 | 96.1 | 1.1 | 2.7 | 0.2 | 3.9 | 696 |
| | 10–14 | 94.0 | 1.8 | 3.1 | 3.1 | 6.0 | 596 |
| | 15–19 | 92.1 | 4.6 | 3.0 | 0.3 | 7.9 | 574 |
| | 20–24 | 92.8 | 3.8 | 2.5 | 0.9 | 7.2 | 471 |
| | 25–29 | 85.3 | 10.2 | 3.9 | 0.7 | 14.7 | 333 |
| | 30+ | 76.1 | 16.7 | 6.1 | 1.1 | 23.9 | 216 |
| | Total | 92.8 | 3.8 | 2.9 | 0.6 | 7.2* | 3,612 |
| <20 | <5 | 97.3 | 0.2 | 1.9 | 0.6 | 2.7 | 500 |
| | 5–9 | 96.5 | 1.2 | 2.1 | 0.2 | 3.5 | 508 |
| | 10–14 | 94.1 | 1.8 | 3.2 | 0.9 | 5.9 | 481 |
| | 15–19 | 93.2 | 3.8 | 2.8 | 0.2 | 6.8 | 460 |
| | 20–24 | 93.3 | 3.2 | 2.8 | 0.7 | 6.7 | 389 |
| | 25–29 | 85.3 | 10.2 | 3.7 | 0.7 | 14.7 | 314 |
| | 30+ | 76.1 | 16.7 | 6.1 | 1.1 | 23.9 | 216 |
| | Total | 92.5 | 4.0 | 2.9 | 0.6 | 7.5 | 2,869 |
| 20+ | <5 | 98.0 | 1.1 | 0.5 | 0.4 | 2.0 | 225 |
| | 5–9 | 95.0 | 0.5 | 4.4 | 0.0 | 5.0 | 187 |
| | 10–14 | 93.7 | 1.6 | 2.9 | 1.7 | 6.3 | 115 |
| | 15–19 | 87.7 | 7.8 | 3.7 | 0.8 | 12.3 | 114 |
| | 20–24 | 90.2 | 6.8 | 1.3 | 1.7 | 9.8 | 82 |
| | 25–29 | 83.7 | 10.0 | 6.3 | 0.0 | 16.3 | 19 |
| | 30+ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | — |
| | Total | 93.8 | 2.9 | 2.6 | 0.7 | 6.2 | 743 |

* Standard error = 0.5 percent.

Table 4.8. Percent Distribution of Ever-Married Women According to Number of Times Married, by Years Since First Marriage

| Years Since First Marriage | Percent Married | | | Number of Women | Percent Remarried of Those Whose First Marriage Was Dissolved | |
|---|---|---|---|---|---|---|
| | Once | Twice | Total | | Percent | Number of Women |
| <5 | 99.6 | 0.4 | 100.0 | 725 | 17.6 | 18 |
| 5–9 | 97.5 | 2.5 | 100.0 | 696 | 64.0 | 27 |
| 10–14 | 96.1 | 3.9 | 100.0 | 596 | 65.1 | 36 |
| 15–19 | 96.2 | 3.6 | 100.0 | 574 | 47.9 | 45 |
| 20–24 | 96.7 | 3.3 | 100.0 | 471 | 45.0 | 34 |
| 25–29 | 94.3 | 5.7 | 100.0 | 333 | 38.5 | 49 |
| 30+ | 89.7 | 10.3 | 100.0 | 216 | 43.2 | 52 |
| Total | 96.6 | 3.4 | 100.0 | 3,612 | 46.7 | 261 |

twice, and one woman in the whole sample reported a third marriage. Thus, about 7 percent of women have experienced a dissolution of their first marriage, and approximately half of those have remarried.

Table 4.8 also shows that the proportion remarried increased from 17.6 percent for women who first married less than five years ago to 64 and 65 percent for those whose first marriage was 5–9 and 10–14 years ago, respectively. Thereafter, the proportion remarried decreased gradually to 38.5 percent for those whose first

marriage was 25–34 years ago. This pattern suggests that younger widows or divorcees have higher prospects of remarrying compared with women in their late thirties or forties. This suggestion should, however, be taken with caution since the figures in Table 4.8 do not tell when dissolution of marriage took place nor when remarriage occurred during the period between first marriage and the date of the survey.

Differentials by certain background variables in the proportion remarried is shown in Table 4.9. It should be

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noted, however, that the very small number of frequencies makes interpretation quite limited. Age at first marriage seems to be negatively related to the incidence of remarriage; among women with dissolved first marriage, 49.3 percent of those who first married under age 20 had remarried, but only 30.7 percent of those who first married at age 20 or more had remarried. This may be a direct effect of age at dissolution of marriage, i.e. those who married younger may have had their marriage dissolved when they were still young, thus making their prospects for remarriage higher.

Table 4.9. Percentages of Those Who Are Remarried of Ever-Married Women Whose First Marriage Was Dissolved, by Selected Background Variables

| Background Variable | Number Whose First Marriage Was Dissolved | Percent Who Remarried |
|---|---|---|
| Total | 261 | 46.7 |
| Education | | |
| No Schooling | 228 | 48.2 |
| Primary + | 33 | 37.6 |
| Place of Residence | | |
| Urban | 174 | 42.2 |
| Rural | 87 | 56.0 |
| Pattern of Work | | |
| Currently Working (Worked Before Marriage) | 21 | 60.3 |
| Currently Working (Did Not Work Before Marriage) | 31 | 37.9 |
| Worked Before or After Marriage or Both (Not Currently Working) | 29 | 40.7 |
| Never Worked | 179 | 47.5 |
| Age at First Marriage | | |
| <20 | 215 | 49.3 |
| 20+ | 46 | 30.7 |

Table 4.9 also shows that among women with dissolved first marriages, the proportion remarried among non-educated women was higher (48 percent) than that among women with primary education or more (37.6 percent). Again, this may be a reflection of the young marriage pattern for the non-educated women.

The highest proportion remarried was found among women currently working and who had also worked before first marriage; yet, in contrast, the lowest proportion of remarriage occurred among women who were presently working but had not worked before marriage. The relationship is reciprocal in the sense that working either before or since marriage but not currently, or never at all, had intermediate proportions. Finally, the proportion remarried was found to be higher in rural than in urban areas.

## 4.4. CURRENT MARITAL STATUS AND EXPOSURE STATUS

The term marital status as used here classifies ever-married women into four categories: married, widowed, divorced (but not married at the time of the survey), separated (still married legally, but living apart from their husbands).

Exposure status is a variable constructed to define the sub-populations which comprise the bases for analysis in some subsequent chapters. Exposure status classifies only currently married women into categories of risk of conception on the basis of certain characteristics. First, it singles out women who have been sterilized, or those whose husbands have been sterilized, for contraceptive purposes. Any woman who is not fecund for other impairments was considered sterile simply because she believed herself unable to have (more) children. In addition, an important category of that variable is women who are currently pregnant and who are therefore considered not currently at risk. Obviously then, this variable does not reflect an objective or physiological assessment of exposure to risk of conception but depends mainly upon the woman's own judgement concerning her ability to have (more) children or concerning her present pregnancy status.

From the preceding discussion, it is apparent that marital status is highly related to exposure status, assuming, as previously mentioned, that no births occur out of wedlock. Exposure status classifies currently married into exposed and not exposed.[1]

Current marital status is the main indicator of current exposure to risk of conception. Table 4.10 shows that apart from the 4.3 percent who were widowed or divorced women, 10.8 percent reported impairment to childbearing and 20.3 percent were already pregnant. Current marital status as well as exposure status are highly associated with years since first marriage. The proportion currently married decreased from about 98 percent for those with a marriage duration less than 5 years, to 84.4 percent for those with 30 years or more of marital duration, mainly due to the percentage of widows who did not remarry.

[1] All pregnant women in the Jordanian sample were currently married, i.e. not one was in any other marital status. This is highly improbable since a woman may get divorced or become a widow while she is pregnant. One possible explanation may be that interviewers did not carefully follow the instructions to ask the question 'Are you pregnant now?' to widows or divorcees as well, and confined this question to currently married women. This could lead to under-estimating those who are currently pregnant, but since the percentage of widows and divorcees is very small (4.3) and even smaller in the younger ages, the resultant under-estimation will be negligible.

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Table 4.10. Percent Distribution of Ever-Married Women According to Current Marital Status and Exposure Status, by Years Since First Marriage

| Marriage Years Since First Marriage | Widowed | Divorced or Separated | Currently Married | | | | | | Total | Number of Women |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Pregnant | Sterilized | Other Impairments | Fecund | Total | Total | | |
| <5 | 0.5 | 1.6 | 29.8 | 0.0 | 1.1 | 67.1 | 97.9 | 100.0 | 725 |
| 5–9 | 0.6 | 1.0 | 29.6 | 0.4 | 2.7 | 65.7 | 98.4 | 100.0 | 696 |
| 10–14 | 1.0 | 1.6 | 20.3 | 1.2 | 4.1 | 71.8 | 97.4 | 100.0 | 596 |
| 15–19 | 3.8 | 0.8 | 20.4 | 2.9 | 8.4 | 63.7 | 95.4 | 100.0 | 574 |
| 20–24 | 2.8 | 1.3 | 11.3 | 3.4 | 19.4 | 61.8 | 95.9 | 100.0 | 471 |
| 25–29 | 8.4 | 1.6 | 4.0 | 5.4 | 28.5 | 52.1 | 90.1 | 100.0 | 333 |
| 30+ | 12.3 | 3.3 | 2.4 | 2.3 | 47.6 | 32.1 | 84.4 | 100.0 | 216 |
| Total | 2.9 | 1.4 | 20.3 | 1.8 | 10.8 | 62.9 | 95.7* | 100.0 | 3,612 |

\* Standard error = 0.04 percent.

A sharper decline in the percentage of fecund currently exposed women is observed: from 67.1 percent for women married for less than 5 years, to 32.1 percent for those married 30 years or more. This may be due to two factors:

(a) A rapid decline in the percentage of those who are currently pregnant, from almost 30 percent for those married less than five years to only 2.4 percent for older women married 30 or more years ago. This is natural, since being pregnant depends on age and parity.

(b) This is overshadowed by a sharper and stronger increase in the percentage of women reporting sterility, from only one percent among newly married (five years) to about 48 percent among those married 30 years or more. This is expected due to the fact that childless women have to accept that they are sterile as time passes and that secondary sterility increases with age.

The proportion of women, regardless of parity, who report themselves sterile increases sharply with increase in age. This is particularly so for childless women and is obviously natural, for as a woman grows older without having any children, the more she will believe herself unable to have any (Table 4.11). On the other hand, the proportions of fecund or currently pregnant decline rapidly with age. In other words, while being pregnant is the main cause for being unexposed among younger women, other factors, such as widowhood and other reported impairments, become more important in determining fecundity in older ages.

A similar pattern is observed by number of living children. This is due to its high association with age as may be seen from Table 4.12.

Table 4.13 shows the distribution of ever-married women by marital status, by exposure status, and by educational levels. Unadjusted data are shown, but due to the different age composition within each educational level, it is necessary to standardize for age. Using the overall age composition, the standardized figures are more reasonable and show very slight differences in the percentage of currently married by educational levels.

A downward trend is observed in the percentage reporting some impairment to having (more) children, from 11.6 percent for those with no education to only 3.6 percent for those with secondary or more education. As observed earlier, this percentage is related to parity and childlessness, and may partly account for the differentials by educational status.

Table 4.11. Percent Distribution of Childless Women According to Exposure Status, by Current Age

| Current Age | Exposure Status | | | | | Total | Number of Women |
|---|---|---|---|---|---|---|---|
| | Impairment | Pregnant | Fecund | Divorced or Widowed | Sterilized | | |
| <25 | 2.8 | 39.3 | 55.8 | 2.1 | 0.0 | 100.0 | 217 |
| 25–34 | 27.2 | 14.9 | 53.2 | 4.7 | 0.0 | 100.0 | 43 |
| 35–44 | 53.3 | 3.5 | 31.0 | 7.2 | 5.0 | 100.0 | 28 |
| 45+ | 70.8 | 0.0 | 19.5 | 9.7 | 0.0 | 100.0 | 10 |
| Total | 13.2 | 31.2 | 50.6 | 3.2 | 1.8 | 100.0 | 298 |

Table 4.12. Percent Distribution of Ever-Married Women According to Exposure Status, by Number of Living Children and by Current Age

| | | Exposure Status | | | | | |
|---|---|---|---|---|---|---|---|
| | Widowed or Divorced | Currently Married | | | | | Number of Women |
| Variable | | Pregnant | Sterilized | Sterile | Fecund | Percent | |
| 1. Number of Living Children | | | | | | | |
| 0 | 3.2 | 31.2 | 0.5 | 13.2 | 51.9 | 100.0 | 297 |
| 1 | 6.6 | 29.4 | 0.0 | 4.4 | 59.7 | 100.0 | 333 |
| 2 | 4.9 | 24.5 | 0.4 | 2.5 | 67.8 | 100.0 | 386 |
| 3 | 3.6 | 24.7 | 0.7 | 3.8 | 67.3 | 100.0 | 380 |
| 4 | 5.1 | 20.9 | 0.5 | 7.9 | 65.6 | 100.0 | 405 |
| 5+ | 3.8 | 14.8 | 3.2 | 15.4 | 62.8 | 100.0 | 1,810 |
| 2. Current Age | | | | | | | |
| <25 | 1.7 | 32.0 | 0.0 | 1.1 | 65.2 | 100.0 | 926 |
| 25 | | | | | | | |
| 25–34 | 2.5 | 23.3 | 1.0 | 4.5 | 68.8 | 100.0 | 1,336 |
| 35–44 | 5.6 | 11.5 | 3.9 | 16.0 | 62.9 | 100.0 | 977 |
| 45+ | 13.5 | 3.1 | 3.9 | 43.4 | 36.2 | 100.0 | 372 |
| Total | 4.3 | 20.3 | 1.8 | 16.8 | 62.9 | 100.0 | 3,612 |

Table 4.13. Percent Distribution of Ever-Married Women According to Marital Status, by Exposure Status and by Level of Education (Adjusted and Unadjusted)

| | | Exposure Status | | | | | |
|---|---|---|---|---|---|---|---|
| | Widowed or Divorced | Currently Married | | | | | Number of Women |
| Level of Education | | Pregnant | Sterilized | Sterile | Fecund | Percent | |
| Unadjusted | | | | | | | |
| No Schooling | 5.3 | 18.9 | 2.1 | 13.9 | 59.8 | 100.0 | 2,470 |
| Primary | 1.8 | 24.4 | 0.8 | 4.8 | 68.2 | 100.0 | 701 |
| Preparatory | 1.7 | 19.4 | 2.3 | 3.8 | 72.9 | 100.0 | 204 |
| Secondary or more | 3.0 | 23.0 | 1.3 | 2.1 | 70.6 | 100.0 | 235 |
| Adjusted | | | | | | | |
| No Schooling | 4.7 | 20.8 | 1.8 | 11.7 | 61.0 | 100.0 | 2,470 |
| Primary | 2.7 | 17.8 | 1.7 | 9.1 | 68.9 | 100.0 | 701 |
| Preparatory | 2.8 | 13.7 | 3.6 | 7.9 | 72.1 | 100.0 | 204 |
| Secondary or more | 2.8 | 20.0 | 2.2 | 3.6 | 71.4 | 100.0 | 235 |

Sterilization for contraceptive purposes shows no pattern by education; as shown earlier it is related more to age, parity, and marital duration. The percentage of currently pregnant women has shown, contrary to expectation, no pattern with education; the proportion currently pregnant was high for both least and highly educated, yet sharply lower for the middle categories. (The percentages used were standardized by controlling for age.) One possible explanation will become more apparent in the next chapter which deals with fertility. Another explanation may stem from the fact that underreporting is higher among the least educated because they are less able and more reluctant to report a pregnancy than an educated woman, who may also be more capable of knowing earlier about a pregnancy she might have.

Table 4.14 shows the distribution of ever-married women by marital status, by exposure status, and by selected background variables. Only slight variations are observed in marital and exposure status by religious affiliations, the only noticeable observation being the lower percentage of widowed and divorced women among Catholics and the higher percentage of those currently pregnant among Muslim women.

When considering pattern of work, women who are currently working and did not work before marriage had a different pattern compared with other groups. They are characterized by a very high proportion of divorced and widowed women.

Furthermore, that same subgroup had a lower proportion of currently married women and a higher proportion of women reporting other impairment to childbearing. The final consequence of this pattern is a considerably lower proportion of fecund women in that subgroup.

Table 4.14. Percent Distribution of Ever-Married Women According to Marital Status and Exposure Status, by Selected Background Variables

| | | Exposure Status | | | | | |
|---|---|---|---|---|---|---|---|
| | | Currently Married | | | | | |
| Background Variable | Widowed or Divorced | Pregnant | Sterilized | Sterile | Fecund | Percent | Number of Women |
| Place of Residence | | | | | | | |
| Urban | 4.3 | 18.8 | 2.1 | 11.5 | 63.4 | 100.0 | 2,533 |
| Rural | 4.1 | 23.8 | 1.2 | 9.1 | 61.9 | 100.0 | 1,079 |
| Religion | | | | | | | |
| Muslim | 4.3 | 20.6 | 1.7 | 10.7 | 62.8 | 100.0 | 3,403 |
| Catholic | 2.5 | 18.9 | 4.7 | 9.5 | 64.4 | 100.0 | 75 |
| Other Christians | 5.2 | 13.6 | 3.7 | 12.0 | 65.4 | 100.0 | 134 |
| Pattern of Work | | | | | | | |
| Currently Working — Worked Before Marriage | 3.9 | 19.8 | 1.0 | 9.0 | 66.4 | 100.0 | 244 |
| Currently Working — Did Not Work Before Marriage | 20.7 | 12.9 | 2.3 | 16.4 | 47.8 | 100.0 | 110 |
| Worked Before or After Marriage or Both (Not Currently Working) | 3.7 | 17.7 | 1.9 | 10.2 | 66.5 | 100.0 | 497 |
| Never Worked | 3.7 | 21.1 | 1.8 | 10.8 | 62.6 | 100.0 | 2,761 |
| Total | 4.3 | 20.3 | 1.8 | 10.8 | 62.9 | 100.0 | 3,612 |

Variations by type of place of residence were small, and it was only the percentage of currently pregnant women that seemed to be relatively larger in rural than in urban areas.

## 4.5. PROPORTION OF TIME IN THE MARRIED STATE

It has been observed that marriage in Jordan is highly stable, and the proportion of women who have remained in the married state since they were first married is noticeably high. Therefore, it would be expected that time spent in married state for all ever-married women is also high.

The measure used to estimate the period of exposure is the total woman-months spent in the married state since the date of first marriage, divided by total woman-months

since first marriage, which gives the proportion of time spent in married state since first marriage. It is assumed that this is a more refined measure of the length of exposure to the risk of conception rather than simply years since first marriage.

Table 4.15 indicates that proportions of time spent in married state are uniformly high and do not vary significantly or substantially with either current age or age at first marriage. Therefore, the use of years since marriage as an indicator of exposure is justified.

In addition, the average percentage of time spent in the married state does not show substantial or significant differences by the various background characteristics, namely education, religion, and husband's occupation. The only exception was observed among women who are currently working but did not work before marriage,

Table 4.15. Average Percentage of Time Spent by Ever-Married Women in Married State Since First Marriage, by Current Age and by Age at First Marriage

| Current Age | Age at First Marriage | | | | | Number of Women |
|---|---|---|---|---|---|---|
| | <15 | 15–19 | 20–24 | 25+ | Total | |
| <20 | 99.0 | 98.0 | — | — | 98.5 | 329 |
| 20–24 | 99.1 | 99.2 | 99.8 | — | 99.2 | 596 |
| 25–29 | 97.8 | 98.3 | 97.5 | 100.0 | 98.1 | 709 |
| 30–34 | 98.2 | 99.6 | 98.8 | 100.0 | 98.8 | 628 |
| 35–39 | 97.9 | 98.0 | 97.3 | 98.3 | 97.9 | 543 |
| 40–44 | 95.7 | 97.7 | 96.6 | 99.2 | 96.9 | 435 |
| 45+ | 97.1 | 93.6 | 95.3 | 99.2 | 95.2 | 372 |
| Total | 97.3 | 97.4 | 97.1 | 98.9 | 97.4* | 3,612 |

* Standard error = 0.2 percent.

where the average percentage of time spent in the married state did not exceed 88.4 percent which is the lowest observed. That group is characterized by early marriage coupled with the highest rate of marriage dissolution, 28.3 percent. The proportion remarried was below the overall average. In addition, as seen from Table 4.14 the proportion of women in a state of widowhood or divorce (21 percent) was the highest observed. The characteristics of this subgroup are self-explanatory as to why they have the lowest percentage of time spent in the married state.

Chapter 5

# FERTILITY

## 5.1. INTRODUCTION

The estimation of levels, differentials, and trends in fertility is a primary objective of all fertility surveys. In addition to its descriptive utility, the identification of the direction and magnitude of fertility differentials is an essential first step towards an understanding of the determinants of fertility.

The measurement of fertility may be approached in two ways: the cohort, or cumulative approach, and the period, or cross-sectional, approach. Cohort measurements express the cumulative birth performance of groups or cohorts of women as they progress through their childbearing years. Two types of cohorts, birth and marriage, have been used in this report. The period, or cross-sectional, approach of fertility measurement is concerned with the number of births which occur to a defined population during a specified calendar year or other historical time period. The crude birth rate, age specific fertility rates, and total fertility rate, are familiar examples.

There are two sources of data on births in the Jordan Fertility Survey: the Expanded Household Schedule and the Individual Questionnaire. In the EHS, the number of live births by sex regardless of age of mother at maternity, and the date of birth, sex, and survivorship of the most recent live birth were obtained. In the Individual Questionnaire, a detailed history of births and other pregnancies was obtained for each woman interviewed, covering the date of each event, the sex and survivorship of each live birth, and the date of death, if any, of the child.

These data permit the calculation of a number of fertility measures, including both cumulative measures, such as the number of children ever born or living, and current measures, such as age specific fertility rates.

This chapter begins with a discussion of the level and pattern of cumulative fertility — as measured by the number of children ever born — at the time of the interview by age, marriage duration, and age at first marriage. Section 5.3 deals with fertility differentials by various background variables. Section 5.4 considers the pattern of early or initial marital fertility. Recent fertility is discussed in Section 5.5. In Section 5.6 a description of the pattern and level of current fertility is given. Finally a brief discussion of recent trends in fertility is given in Section 5.7.

## 5.2. CUMULATIVE FERTILITY

### 5.2.1. Age of Woman

In this section, the mean number of children ever born will be our prime indication of cumulative fertility. This measure, however, suffers from some limitations. First, women who died or emigrated before the survey data are not included in the survey statistics, and a record of their fertility is lost. To the extent that they differ from the remaining women with respect to the number of children ever-born, the reported fertility for a given cohort of women will be biased.[1] This bias is usually ignored in analysis. Second, the data on number of children ever born derived from a survey may be erroneous because of faulty memory of women, especially an older woman who bore her children a long time ago.[2] Also, those live births who died shortly after birth are likely to be omitted. Nevertheless, probing by interviewers should have minimized the extent of under-reporting.

The mean numbers of children ever born to all ever-married women, obtained from the household survey and from the individual survey, are shown in Table 5.1. Corresponding figures derived from the 1972 Fertility Survey in Jordan are also shown.

Table 5.1. Mean Number of Children Ever Born to Ever-Married Women in the 1972 and 1976 Fertility Surveys

| Age | 1972 Fertility Survey | 1976 Fertility Survey | |
|---|---|---|---|
| | | Household Survey | Individual Survey |
| 15–19 | 0.8 | 1.0 | 0.9 |
| 20–24 | 2.4 | 2.5 | 2.4 |
| 25–29 | 4.4 | 4.1 | 4.2 |
| 30–34 | 6.1 | 6.0 | 5.9 |
| 35–39 | 7.5 | 7.5 | 7.3 |
| 40–44 | 8.3 | 8.3 | 8.6 |
| 45–49 | 8.2 | 8.6 | 8.8 |
| All Ages (15–49) | 6.1 | 5.6 | 5.4* |

\* Standard error = 0.1 child.

Due to the cross-sectional nature of the survey, as mentioned earlier, there is a systematic exclusion of women who had not married by the time of the survey. As a result, there is an underestimation in the mean age at

[1] Shryock and others, *The Methods and Materials of Demography*, 2nd printing, U.S. Dept. of Commerce (Washington D.C. 1973) p. 511.
[2] Ibid, p. 511.

marriage. This effect extends through the entire reproductive history of respondents and results in a downward bias in the age at entry into each parity. Therefore, caution must be observed when dealing with ever-born children classified by birth cohorts of respondents. Table 5.1, therefore, reflects the cross-sectional situation, but provides an incomplete and upwardly biased indication of the fertility of any specific birth cohort. The amount of bias decreases with age, but cannot be specified entirely.

Table 5.1 reveals that the overall average number of children ever born per woman is 5.4. This is a high average, since the sample includes young women who still anticipate long reproductive lives. Nevertheless, the average is less than that observed four years ago in the 1972 fertility survey, which was 6.1. The very small differences between the figures derived from the household survey data and those derived from the individual survey data seem reasonable and expected.

Figures indicate that the age pattern of children ever born has approximately been retained between 1972 and 1976 without significant changes. The 1972 survey shows a decline in the mean number of children ever born from 8.3 for the age group 40–44 to 8.2 for the age group 45–49; this may be attributed to memory errors. This, however, is not shown in the 1976 data. Another difference is the increase in the number of children ever born for ages 15–19, from an average of 0.8 to 0.9 during the period 1972–1976. This may seem difficult to explain because it would seem more logical that a decline should have occurred in that particular age group due to socio-economic changes in Jordan during that period.

However, a downward bias in 1972 data for this particular age group may be considered as a possibility.

An ever-married woman completed her childbearing period in 1972 with an average of 8.2 children ever born and 8.8 in 1976. By any standard, these are considered high averages. The figures show that a woman, by the time she is in the age group 35–39 has completed 7.3 live births on the average, therefore adding only one more live birth in the remaining ten years of her reproductive period. The age period 20–39 accounts for the highest fertility observed, whether in 1972 or 1976. However, it must be kept in mind that these data describe the cumulative fertility of women currently of varying ages and marital durations, and they do not refer to the reproductive behaviour of a cohort of women as it grows older.

### 5.2.2. Marriage Duration

The relationship between cumulative fertility and years since first marriage is shown in Table 5.2 which presents the percent distribution of ever-married women according to the number of children ever born, by current age and by years since first marriage. Hereafter, 'years since first marriage' will be referred to as 'duration of marriage', though this term is used loosely regardless of marital dissolution and remarriage that might have occurred.

As may be seen from Table 5.2, the mean number of children ever born increases steadily with years since first marriage. Control by marriage cohorts overcomes the bias inherent in birth cohorts due to the censoring effects. However, while marriage cohorts overcome this inherent

Table 5.2. Percent Distribution of Ever-Married Women According to Number of Children Ever Born, by Current Age and by Years Since First Marriage

| Variable | Number of Children Ever Born | | | | | | | | | | | | | Proportion Male | Number of Women |
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11+ | Mean | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Current Age** | | | | | | | | | | | | | | | |
| <20 | 42.2 | 32.7 | 19.9 | 4.7 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 45.8 | 329 |
| 20–24 | 11.3 | 17.0 | 23.3 | 23.7 | 17.2 | 4.3 | 3.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 | 49.7 | 596 |
| 25–29 | 2.9 | 6.8 | 12.0 | 14.8 | 19.5 | 15.7 | 14.1 | 8.9 | 3.6 | 1.6 | 0.0 | 0.1 | 4.2 | 51.4 | 709 |
| 30–34 | 3.2 | 3.9 | 4.4 | 6.5 | 10.6 | 11.6 | 15.7 | 16.8 | 11.9 | 8.8 | 4.0 | 2.8 | 5.9 | 50.0 | 628 |
| 35–39 | 2.4 | 2.8 | 2.2 | 4.4 | 6.0 | 7.7 | 11.5 | 15.3 | 12.5 | 10.5 | 11.7 | 13.2 | 7.3 | 51.9 | 543 |
| 40–44 | 2.4 | 0.8 | 2.9 | 3.0 | 4.1 | 4.0 | 7.5 | 8.0 | 9.4 | 15.2 | 16.0 | 26.7 | 8.6 | 52.0 | 435 |
| 45+ | 2.3 | 1.2 | 1.1 | 2.4 | 4.5 | 4.5 | 7.2 | 10.1 | 8.1 | 12.9 | 11.0 | 34.6 | 8.8 | 52.2 | 372 |
| **Years Since First Marriage** | | | | | | | | | | | | | | | |
| <5 | 29.8 | 34.9 | 23.6 | 10.5 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 49.3 | 725 |
| 5–9 | 3.5 | 2.5 | 18.1 | 26.7 | 29.5 | 11.8 | 6.8 | 0.9 | 0.0 | 0.1 | 0.0 | 0.0 | 3.4 | 49.1 | 696 |
| 10–14 | 1.9 | 2.1 | 3.7 | 7.6 | 16.1 | 18.0 | 22.0 | 15.9 | 7.7 | 3.3 | 0.7 | 0.9 | 5.4 | 51.8 | 596 |
| 15–19 | 1.5 | 1.7 | 1.7 | 2.8 | 4.7 | 11.0 | 16.8 | 21.4 | 15.2 | 10.6 | 6.8 | 5.7 | 5.9 | 50.2 | 574 |
| 20–24 | 1.0 | 1.1 | 1.6 | 4.0 | 4.5 | 3.2 | 7.2 | 12.0 | 12.9 | 19.0 | 16.9 | 16.6 | 8.2 | 52.9 | 471 |
| 25–29 | 2.8 | 1.0 | 2.1 | 0.8 | 4.3 | 4.2 | 5.0 | 9.3 | 7.6 | 11.6 | 14.6 | 36.7 | 9.1 | 52.5 | 333 |
| 30+ | 2.0 | 1.4 | 0.5 | 1.3 | 1.9 | 2.2 | 5.7 | 6.3 | 9.1 | 12.8 | 12.5 | 44.5 | 9.6 | 51.3 | 216 |
| Total | 7.7 | 8.4 | 9.5 | 9.6 | 10.4 | 7.9 | 9.4 | 9.0 | 6.6 | 6.6 | 5.6 | 9.3 | 5.4 | 51.3 | 3,612 |

bias, they are themselves subject to bias in the opposite direction. This bias is due to the under-representation of earlier cohorts who first married late in life and were thus aged 50 or over at the time of the survey. However, as observed earlier, marital duration is a very good indicator of the length of exposure. Figures show a mean number of children ever born of 1.2 for the first five years of marital life. The level of initial fertility will be considered in detail at a later stage. An average of 3.4 children ever born is shown for the second five years of marital life. The average increases gradually after that until it reaches 9.6 for those with 30 or more years duration. As mentioned earlier, that latter group consists of women married before age 20. All women with the same duration who married after the age of 20 were not included in the survey.

It is also observed that the number of children ever born increases as current age increases. Women who had one or more live births and whose current ages are less than 20 constitute 57.8 percent, yet this percentage increases to 88.7 percent among women 20–24 and to 95 percent for older women. A similar trend is observed when duration of marriage is considered. Figure 5.1 demonstrates the clear trend that as length of years of exposure increases, the percent distribution of children ever born becomes more spread and the mode tends to occur at a higher number of children ever born with a lower peak. For example, the mode for women, with less than five years of marriage is 1, with a peak of 35 percent; it increases to 4 for those with 5–9 years of marriage, with a lower peak of 30 percent; and so on until the mode for women with 30 or more years of marriage is 11, with a peak of only 18.3 percent.

Due to high marital stability and the high proportion of women who are currently married as compared to all ever-married women, the same patterns and levels are

Figure 5.1. Percent Distribution of Ever-Born Children, by Years Since First Marriage



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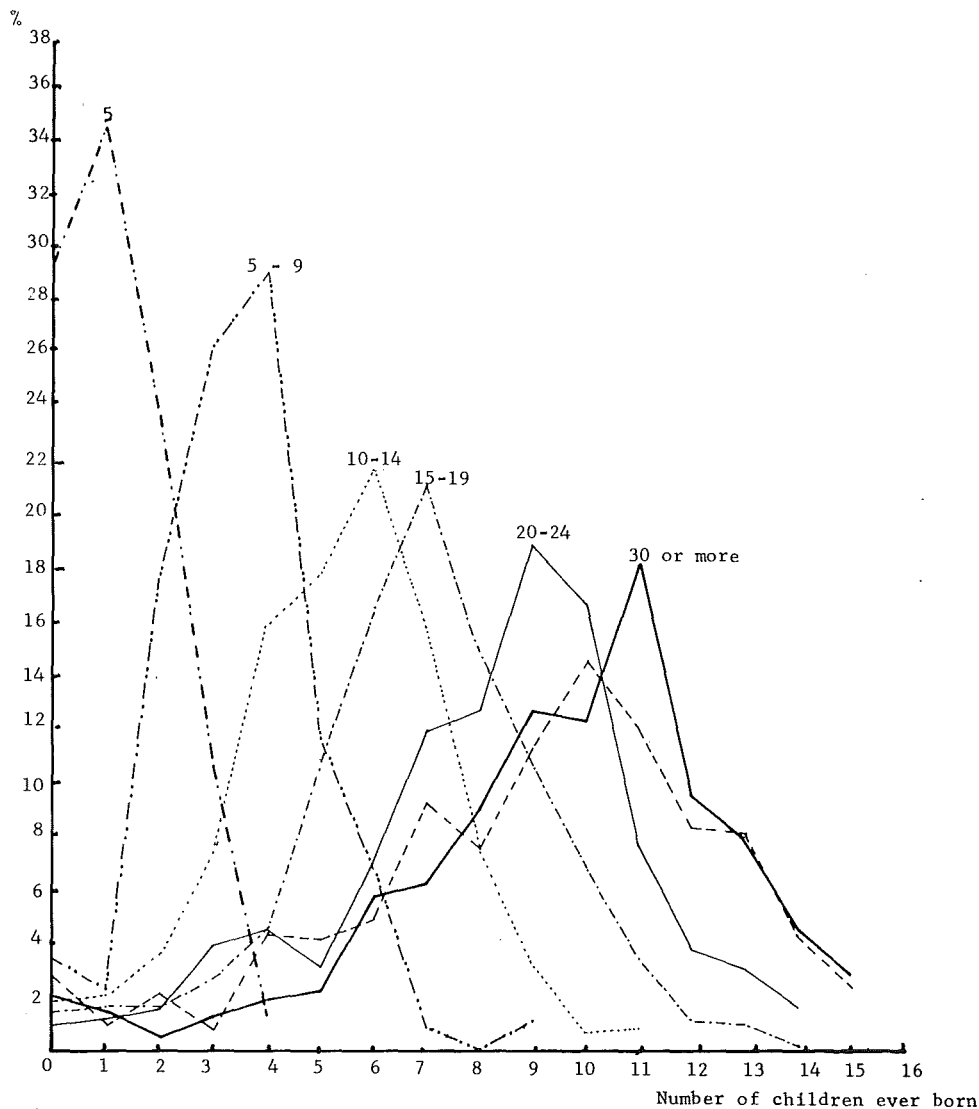
found when only currently married women are considered. Current age and duration of marriage were found to be positively correlated to number of children ever born.

## 5.2.3. Age at First Marriage

Table 5.3 shows the mean number of children ever born to all ever-married women by age at first marriage, current age, and duration of marriage. Age at first marriage shows a clear trend; women who married early tend to have a higher average of children ever born. Those who first married below age 15 have an average of 7 live births. This average decreases gradually until it reaches only 2.8 for those who first married at the age 25 or more.

These overall averages must be considered with caution due to the censoring effect and the varying possible years of exposure. Women who married at less than age 15 have approximately 30 or more years of exposure ahead of them, while those who marry at ages 25–29 have only about 20 or so years of exposure.

When the mean number of children ever born is considered for each marriage cohort, it is found that the relationship between age at marriage and number of children ever born is not a simple one, in spite of the fact that the relationship between marriage duration and children ever born holds true within each interval of age at first marriage. Within the first five years of marriage no differences can be observed; it appears that women, regardless of their ages at first marriage, behave in similar fashion and produce an average of approximately 1.2 live births. Some slight differences begin to appear within the second five years of marriage.

Those who first married at ages 15–21 have reported a higher number of children ever born than either those who married at ages less than 15 years or those who married at ages 22 or more. This may be partially attributed on one hand to adolescent sterility at the very young ages and, on the other hand, for those who first married at ages 22 or more, to non-exposure during their highly fecund late teens. Finally, those married at less than age 15 catch up fast, reaching almost the same average as those who first married at ages 15–21 with marital duration of 15–19 years, then they surpass them during the duration 20–24 years.

In sum, it has been observed that first marriage at ages below 22 has little impact on fertility. Only marriage at an age of 22 or more begins to have an impact.

## 5.3. FERTILITY DIFFERENTIALS

One of the aims of the JFS is to examine differences in fertility between various socio-economic groupings. This examination represents a first step towards an understanding of the determinants of fertility. Data from both the household and the individual survey permit us to examine differences in mean number of children ever born by various background variables. Section 5.3.1 gives a brief description of the main fertility differences as indicated by the household survey data. Fertility differentials as shown by the individual survey are described in

Table 5.3. Mean Number of Children Ever Born to Ever-Married Women, by Years Since First Marriage, by Current Age, and by Age at First Marriage

| Variable | Age at First Marriage | | | | | | Mean | Number of Women |
|---|---|---|---|---|---|---|---|---|
| | <15 | 15–17 | 18–19 | 20–21 | 22–24 | 25+ | | |
| Years Since First Marriage | | | | | | | | |
| <5 | 1.2 | 1.1 | 1.2 | 1.3 | 1.3 | 1.0 | 1.2 | 725 |
| 5–9 | 3.2 | 3.5 | 3.7 | 3.5 | 3.1 | 2.8 | 3.4 | 696 |
| 10–14 | 5.3 | 5.7 | 5.4 | 5.1 | 4.4 | 4.4 | 5.4 | 596 |
| 15–19 | 6.9 | 7.0 | 7.0 | 7.1 | 6.5 | 5.3 | 6.9 | 574 |
| 20–24 | 8.6 | 8.3 | 7.8 | 8.3 | 7.2 | * | 8.2 | 971 |
| 25–29 | 9.4 | 9.5 | 8.2 | 8.4 | * | — | 9.1 | 333 |
| 30+ | 10.3 | 8.8 | 6.8 | — | — | — | 9.6 | 216 |
| Current Age | | | | | | | | |
| <20 | 1.5 | 0.7 | 0.1 | — | — | — | 0.9 | 329 |
| 20–24 | 3.8 | 2.9 | 1.7 | 0.9 | 0.5 | — | 2.4 | 596 |
| 25–29 | 5.6 | 4.9 | 4.2 | 3.1 | 2.1 | 1.1 | 4.2 | 709 |
| 30–34 | 7.3 | 6.9 | 5.7 | 4.6 | 3.2 | 1.9 | 5.9 | 628 |
| 35–39 | 9.0 | 7.5 | 7.2 | 6.5 | 5.4 | 3.1 | 7.3 | 543 |
| 40–44 | 9.3 | 9.5 | 7.9 | 8.6 | 7.0 | 3.9 | 8.6 | 435 |
| 45+ | 10.3 | 8.9 | 7.9 | 7.8 | 6.8 | 5.7 | 8.8 | 372 |
| Total | 7.0 | 5.3 | 5.0 | 4.6 | 3.9 | 2.8 | 5.4 | |
| Mean Number of Women | 830 | 1,378 | 662 | 344 | 258 | 140 | | 3,612 |

Section 5.3.2, and a brief note on childlessness is given in Section 5.3.3.

### 5.3.1. Differentials: Data from the Household Survey

Table 5.4 shows the mean number of children ever born by current age of woman according to selected background variables. It should be noted that the household survey shows an overall mean number of children ever born of 5.6 for ever-married women at ages 15–49 and of 6 for ever-married women at ages 15 or more years.

As may be seen, women in urban areas tend to have lower fertility than women in rural areas. Muslim women tend to have higher fertility than non-Muslims. However, the most striking differences in fertility are shown for women with different educational levels. The number of children ever born is inversely related to level of education attained by women. This pattern persists in almost every age group, with the differences widening with increasing age.

### 5.3.2. Differentials: Data from the Individual Survey

The inverse relationship shown by figures in Table 5.4 between education and number of ever-born children is probably one of the most clear-cut correlations observed

in the developing countries. Most studies have indicated such an association, with few exceptions; for example, Harman[1] reported a positive relationship between female education and fertility in the Philippines. On the other hand, in low fertility countries the relationship between education and fertility is not systematic; the magnitude of the differentials has diminished in recent decades, and a direct relationship has even been observed at the highest educational level in a few countries.

As previously mentioned, the effect of age composition and marriage duration may make comparison between fertility levels according to educational level misleading. Table 5.5 shows the percentage distribution of women in different marital duration within each educational level. As may be seen, the least educated tend to be less represented in the shorter marital durations than do those with other educational levels. For women who first married less than five years ago, only 12 percent are with less than primary education, 34 percent with primary education, and 43 percent with secondary or more education. These figures show that standardization by marital duration is necessary when comparing the number of children ever born by level of education. One limitation is the very few frequencies in

[1] Harman, A., *Fertility and Economic Behaviour of Families in the Philippines.* Rand Corporation, Santa Monica, California, 1970.

Table 5.4. Mean Number of Children Ever Born to Ever-Married Women, by Age and by Background Variable

| Background Variable | Age | | | | | | | All Ages (15–49) |
|---|---|---|---|---|---|---|---|---|
| | 15–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45–49 | |
| Type of Place | | | | | | | | |
| Urban: Amman | 1.0 | 2.4 | 4.0 | 5.8 | 7.3 | 8.2 | 8.5 | 6.0 |
| Other | 0.7 | 2.3 | 4.0 | 5.9 | 7.2 | 8.3 | 8.2 | 6.0 |
| Rural | 1.0 | 2.7 | 4.4 | 6.3 | 8.0 | 8.7 | 8.9 | 6.1 |
| Region | | | | | | | | |
| Amman | 1.0 | 2.3 | 3.9 | 5.7 | 7.0 | 7.9 | 8.2 | 5.9 |
| Zarka and Irbid | 1.0 | 2.5 | 4.2 | 6.0 | 7.8 | 8.4 | 9.1 | 6.2 |
| Other Towns | 0.7 | 2.3 | 4.0 | 5.9 | 7.2 | 8.3 | 8.2 | 6.0 |
| Large Villages | 1.0 | 2.5 | 4.4 | 6.4 | 8.3 | 9.2 | 8.7 | 6.6 |
| Medium Villages | 0.9 | 2.7 | 4.4 | 6.5 | 7.8 | 8.7 | 9.1 | 6.1 |
| Small Villages | 1.1 | 2.7 | 4.4 | 6.0 | 8.0 | 8.4 | 8.8 | 5.8 |
| Level of Education | | | | | | | | |
| No Schooling | 1.0 | 2.9 | 4.7 | 6.5 | 8.0 | 8.8 | 8.9 | 7.3 |
| Incomplete Primary | 1.1 | 2.7 | 4.5 | 6.3 | 7.5 | 7.8 | 8.2 | 5.4 |
| Primary | 0.9 | 2.4 | 4.2 | 5.9 | 6.5 | 6.6 | 7.4 | 4.1 |
| Preparatory | 0.7 | 2.1 | 3.6 | 4.4 | 5.2 | 6.0 | 6.1 | 3.4 |
| Secondary | * | 1.1 | 2.5 | 3.5 | 4.0 | 5.4 | * | 2.9 |
| Institute | * | * | 1.9 | 3.3 | * | * | * | 2.7 |
| University | * | * | 1.4 | 2.3 | 2.7 | * | * | 1.9 |
| Religion | | | | | | | | |
| Muslim | 1.0 | 2.5 | 4.2 | 6.1 | 7.7 | 8.6 | 8.7 | 6.1 |
| Catholic | * | 1.8 | 2.7 | 4.1 | 4.9 | 5.3 | 6.8 | 4.8 |
| Other | * | 1.5 | 2.6 | 3.7 | 4.6 | 5.4 | 6.3 | 4.7 |
| All Ever-Married Women | 1.0 | 2.5 | 4.1 | 6.0 | 7.5 | 8.3 | 8.6 | 6.0 |

* Less than 20 cases.

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Table 5.5. Percent Distribution of All Ever-Married Women According to the Number of Children Ever Born and Years Since First Marriage by Level of Education

| Variable | No Schooling | Primary | Preparatory | Secondary or More | Total |
|---|---|---|---|---|---|
| | | | Level of Education | | |
| **Number of Children Ever Born** | | | | | |
| 0 | 5.7 | 12.6 | 12.0 | 10.2 | 7.7 |
| 1–3 | 18.9 | 40.9 | 51.3 | 51.9 | 27.5 |
| 4–6 | 27.1 | 30.7 | 28.3 | 33.0 | 27.7 |
| 7+ | 48.3 | 15.8 | 8.4 | 4.9 | 37.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| **Years Since First Marriage** | | | | | |
| <5 | 12.0 | 34.4 | 42.2 | 42.9 | 20.1 |
| 5–9 | 16.4 | 25.7 | 27.0 | 23.8 | 19.3 |
| 10–19 | 34.8 | 29.5 | 21.1 | 25.9 | 32.3 |
| 20+ | 36.8 | 10.4 | 9.7 | 7.4 | 28.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Mean | 6.3 | 3.7 | 3.0 | 2.7 | 5.4 |
| Number of Women | 2,470 | 701 | 204 | 236 | 3,612 |

the higher educational levels of longer marital duration. This makes these categories subject to high sampling errors.

The percent distribution of children ever born according to the level of education shows a clear trend; women with lower education tend to have higher parities. For example, 48.3 percent of women with no schooling have 7 or more children ever born, in comparison with only 15.8, 8.4, and 4.9 for women with primary, preparatory, and secondary or more education, respectively. The percentage of women in the low parity bracket of 1–3 live births is 18.9 for the least educated, in comparison with 51.9 percent for those with secondary education or more.

However, these trends may be exaggerated due to variations in the distribution of women by marital duration. Table 5.6 shows mean number of children ever born, by marital duration and educational level together with the standardized means for educational level. As may be seen education is inversely related to

number of children ever born. While ever-married women with no schooling have an average of 6.3, those with primary, preparatory, and secondary or more levels have only 3.7, 3.0, and 2.7, respectively. If marital duration is controlled, the differentials, though less in magnitude, still hold true. Women with less than primary education have an average number of live births of 5.5, which declines gradually as level of education rises to reach 3.6 for women with secondary or more education. Although this is approximately a standardization of years of exposure, it does not control for age at first marriage which has been shown to be rising with more education.

In sum, it may be concluded that there are differentials in fertility behaviour by educational attainment of women, i.e. a woman tends to have, on the average, less number of live births if her educational level is higher. However, education is highly related to other variables. In the remainder of this section, we shall investigate fertility differentials by education in relation to some of these variables.

Table 5.6. Mean Number of Children Ever Born, Crude and Adjusted, of Ever-Married Women, by Years Since First Marriage and by Level of Education

| Years Since First Marriage | No Schooling | Primary | Preparatory | Secondary or More | Mean | Number of Women |
|---|---|---|---|---|---|---|
| | | | Level of Education | | | |
| <5 | 1.2 | 1.1 | 1.1 | 1.2 | 1.2 | 725 |
| 5–9 | 3.5 | 3.4 | 3.5 | 2.8 | 3.4 | 696 |
| 10–14 | 5.6 | 5.2 | 4.6 | 4.0 | 5.4 | 596 |
| 15–19 | 7.2 | 6.2 | 5.2 | 5.1 | 6.9 | 574 |
| 20–24 | 8.5 | 6.9 | 5.3 | * | 8.2 | 471 |
| 25–29 | 9.3 | 8.0 | * | * | 9.1 | 333 |
| 30+ | 9.7 | 9.0 | * | * | 9.6 | 216 |
| Crude Means | 6.3 | 3.7 | 3.0 | 2.7 | 5.4 | — |
| Standardized Means | 5.5 | 4.9 | 4.2 | 3.6 | 5.4 | — |

* Less than 10 cases.

It has been demonstrated that age at first marriage is negatively associated with the overall number of children ever born (Table 5.3). It has also been shown that the highly educated tend to marry later. It is, therefore, important to investigate the effect of age at first marriage on the previously established relationship between education and fertility. Within each age at first marriage category, fertility differentials by education keep the same pattern even when controlled further by current age. This simply means that education is negatively related to fertility, and age at first marriage is also negatively related to fertility. Nevertheless, each of the two variables has its own contribution to fertility when the other is held constant (see Schematic Diagram 6.1).

Table 5.7 shows that there exist some differentials in fertility by husband's occupation. The mean number of children ever born increases from 4.3 for those working in technical and clerical to a high of 6.9 for farmers and agricultural workers. The differences may be due to differences in marital durations. It is apparent from Table 5.7 that technical and clerical workers tend to have younger distribution in terms of marital duration, with only 21 percent married for 20 or more years. On the other hand, farmers and agricultural workers tend to be married for longer periods on the average, with about one-half of them married for 20 or more years. This suggests that the higher averages for farmers and agricultural workers may be due to longer periods of exposure. Standardized means, using the overall distribution of women by marital duration, show that a sizeable portion of the variation is due to the duration composition. Therefore, when the number of children ever born is standardized for duration of marriage, the differences become much smaller, with the exception of women whose husbands have technical and clerical occupations where the mean number of children ever born is still as low as 4.9 as compared to other occupations whose average varies between a minimum of 5.5 (skilled workers) and a maximum of 5.8 (household and other services). It has been shown that there are differentials in age at first marriage of wife by husband's occupation. When fertility differentials are considered within each age at first marriage group and current age, the differences are very small by husband's occupation, the exception being the technical occupations.

Husband's occupation may also be related to wife's education, under the assumption that husbands with higher occupations tend to have more educated wives. This is supported by the data where it was found that only 36 percent of those in the technical and clerical occupations married wives with less than primary education, 25.7 percent wives with primary, 14.1 percent with preparatory, and 23.2 with secondary or more. A majority of skilled and unskilled workers, however, were married to wives with no schooling reported, 69 percent and 94 percent, respectively. The corresponding figure for husbands with farming and agricultural occupations is 96 percent. This leads to the conclusion that the differences in fertility observed earlier between technical and clerical, on one hand, and other occupations, on the other, could be

Table 5.7. Percent Distribution of Ever-Married Women According to the Number of Children Ever Born and Years Since First Marriage, by Occupation of Husband

| | Occupation of Husband | | | | | | |
| Variable | Technical and Clerical | Skilled | Sales | Household and Other Services | Farmers and Agricultural Workers | Unskilled | Total |
|---|---|---|---|---|---|---|---|
| Number of Children Ever Born | | | | | | | |
| 0 | 9.5 | 6.8 | 6.6 | 9.3 | 4.0 | 5.5 | 7.7 |
| 1–3 | 38.7 | 27.6 | 16.8 | 28.7 | 17.2 | 15.6 | 27.5 |
| 4–6 | 28.4 | 27.4 | 27.6 | 28.8 | 21.8 | 34.6 | 27.5 |
| 7+ | 23.4 | 38.2 | 49.0 | 33.2 | 57.0 | 44.3 | 37.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Years Since First Marriage | | | | | | | |
| <5 | 27.7 | 20.2 | 13.8 | 20.6 | 11.3 | 10.5 | 20.1 |
| 5–9 | 21.3 | 20.2 | 12.6 | 22.4 | 9.5 | 18.6 | 19.3 |
| 10–19 | 30.1 | 31.9 | 34.5 | 34.5 | 29.9 | 31.4 | 32.3 |
| 20+ | 20.9 | 27.7 | 39.1 | 22.5 | 49.3 | 39.5 | 28.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Mean Number of Children Ever Born | 4.3 | 5.4 | 6.4 | 5.0 | 6.9 | 6.6 | 5.4 |
| Standardized Mean Number of Children Ever Born | 4.9 | 5.5 | 5.6 | 5.8 | 5.6 | 5.7 | — |
| Number of Women | 654 | 1,152 | 414 | 1,021 | 283 | 86 | 3,612 |

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due mainly to these differences in wives' educational levels (see Table 5.8). Figures in Table 5.8 show that the mean number of live births within each educational level varies only moderately by husband's occupation, whereas the variations are substantial by wife's educational level within each of the husband's occupation categories. It is apparent, therefore, that husband's occupation is much less significant in fertility differentials when compared to the effect of age at first marriage and wife's educational level. It seems, therefore, that most of the fertility variations by husband's occupation are due to differences in length of exposure, age at first marriage, and wife's educational level.

Table 5.9 indicates that within any given husband's occupation, there is no clear pattern of fertility by pattern of work of the wife. The exception to this is the group of women whose husbands have technical or clerical occupations; the average number of ever-born children is 2.4 for wives who are currently working, 4.2 for wives who worked earlier (whether before or after marriage or both), and 4.7 for wives who never worked. This suggests that wife's employment mattered only when husbands were high on the occupational scale. It should be recalled, however, that women whose husbands were in that particular category enjoyed high educational level and that working wives had the highest divorce and widowhood rates coupled with the least length of exposure.

The overall mean number of live births seems to show some differences by wife's pattern of work. Women who are currently working had the lowest mean of 4.8, while those who worked earlier had an average of 5.1. Finally, those who never worked had the highest average of 5.5. The distributions by marital duration within each of these three categories did not differ significantly.

Similarly, there were no significant differences between categories of pattern of work of the wife when controlled by age at first marriage. It seems that wives currently working had shorter length of exposure due to high marital dissolution and a lower proportion of remarriage.

In general, it has been stated in the literature that women's gainful employment outside home provides them with alternative role rather than bearing and rearing of children, and gives them creative expression of their abilities. Therefore, numerous studies have shown an inverse relationship between family size and the extent of female participation in the labour force, i.e. married women who are gainfully employed generally have fewer children than other married women. This relationship has been found to be more marked in the industrialized than in the non-industrialized countries, and in urban than in rural areas. Some studies have shown no relationship whatsoever. Some others even found positive association between female employment and fertility.

Table 5.8. Mean Number of Children Ever Born to All Ever-Married Women, by Level of Education and by Occupation of Husband

| Occupation of Husband | Level of Education | | | | |
| --- | --- | --- | --- | --- | --- |
| | No Schooling | Primary | Preparatory | Secondary or more | Total |
| Technical and Clerical | | | | | |
| Mean | 6.3 | 3.9 | 3.0 | 2.5 | 4.3 |
| Number of Women | 237 | 168 | 92 | 152 | 654 |
| Skilled | | | | | |
| Mean | 6.3 | 3.7 | 3.2 | 3.3 | 5.4 |
| Number of Women | 797 | 270 | 56 | 39 | 1,152 |
| Sales | | | | | |
| Mean | 7.4 | 4.8 | 3.8 | 2.5 | 6.4 |
| number of Women | 290 | 83 | 23 | 17 | 414 |
| Household and Other Services | | | | | |
| Mean | 5.4 | 3.1 | 2.4 | 3.3 | 5.0 |
| Number of Women | 790 | 168 | 31 | 31 | 1,021 |
| Farmers and Agricultural Workers | | | | | |
| Mean | 7.0 | * | * | * | 6.9 |
| Number of Women | 274 | 7 | 2 | — | 284 |
| Unskilled | | | | | |
| Mean | 6.8 | * | — | * | 6.6 |
| Number of Women | 81 | 4 | — | 1 | 86 |
| Total | | | | | |
| Mean | 6.3 | 3.7 | 3.0 | 2.7 | 5.4 |
| Number of Women | 2,470 | 701 | 204 | 135 | 3,612 |

* Less than 10 cases.

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Table 5.9. Mean Number of Children Ever Born to All Ever-Married Women, by Occupation of Husband and by Wife's Pattern of Work

| Occupation of Husband | Wife's Pattern of Work | | | |
|---|---|---|---|---|
| | Currently Working | Worked Earlier But Not Now | Never Worked | Total |
| Technical and Clerical | | | | |
| Mean | 2.4 | 4.2 | 4.7 | 4.3 |
| Number of Women | 95 | 100 | 458 | 654 |
| Skilled | | | | |
| Mean | 5.9 | 5.2 | 5.4 | 5.4 |
| Number of Women | 72 | 158 | 923 | 1,152 |
| Sales | | | | |
| Mean | 6.3 | 5.6 | 6.5 | 6.2 |
| Number of Women | 29 | 38 | 346 | 414 |
| Household and Other Services | | | | |
| Mean | 4.5 | 4.8 | 5.1 | 5.0 |
| Number of Women | 81 | 148 | 791 | 1,021 |
| Farmers and Agricultural Workers | | | | |
| Mean | 7.0 | 6.4 | 7.0 | 6.9 |
| Number of Women | 68 | 36 | 178 | 284 |
| Unskilled | | | | |
| Mean | * | 7.9 | 6.8 | 6.6 |
| Number of Women | 9 | 14 | 62 | 86 |
| Total | | | | |
| Mean | 4.8 | 5.1 | 5.5 | 5.4 |
| Number of Women | 354 | 497 | 2,761 | 3,612 |

* Less than 10 cases.

The interpretation of these observed differences is not feasible. Do working women tend to lower fertility in order to realize their goals of achieving or maintaining a higher standard of living? Or do they with originally fewer children find it easier or necessary to accept employment away from home? In the present context, it is not possible to assess the possible effects of wife's employment on fertility. As a general conclusion, however, it may be stated that wives' employment depresses fertility only under very specific conditions.

Another conclusion induced from Table 5.9, is that the fertility of wives of farmers and agricultural workers does not differ regardless of whether those wives are currently working, have ever worked, or never worked. This may be explained by the assertion that work on family farm or in home cottage industries does not affect fertility.

When controls are introduced for occupation and type of place of residence, the pattern becomes more clear. Jaffe and Azumi[1] found that among women who leave their home for work, fertility is 'significantly lower' than among women in cottage industries; this finding holds for all areas and age groups. Stycos and Weller[2] reached the same findings in Turkey, and suggested that as long as the roles of worker and mother are compatible, employment status will not affect fertility. The JFS data seem to support these findings.

From Table 5.10 significant differences in fertility are seen between rural and urban areas. Figures show a slight urban fertility excess over rural overall mean number of children ever born. Differentials within rural or within urban areas seem stronger. Large villages had the highest mean, while medium and small villages showed lower means. Within urban areas large metropolitan Amman had a low mean as compared to the cities of Zarka and Irbid or other smaller towns. However, one clear explanation is the different age composition of ever-married women between rural and urban areas as shown by Table 5.10.

When mean number of children ever born is standardized for age composition, the pattern is reversed. Urban means are reduced, while rural means are increased. This simply means that rural fertility is actually higher than urban fertility; the observed differences in the crude means are attributed mainly to different age compositions. It seems that the rural sample areas tended to have more younger ever-married women. Therefore, any comparison between rural and urban fertility must control for age or years since first marriage; otherwise, conclusions could be misleading.

[1] Jaffe, A. I. and K. Azumi. 'The Birth Rate and Cottage Industries in Underdeveloped Countries'. *Economic Development and Cultural Change* 4: October 1960. University of Chicago Press, Chicago.

[2] Stycos, J. and R. H. Weller. 'Female Working Roles and Fertility,' *Demography* 4: 1969.

Table 5.10. Mean Number of Children Ever Born to Ever-Married Women According to Place of Residence and Region, by Current Age (Crude and Adjusted Means)

| | Amman | | Zarka and Irbid | | Towns | | All Urban | | Villages Large | | Medium | | Small | | All Rural | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Age | Percent | Mean | Percent | Mean | Percent | Mean | Percent | Mean | Percent | Mean | Percent | Mean | Percent | Mean | Percent | Mean | Percent | Mean |
| <25 | 22.5 | 1.7 | 23.9 | 1.9 | 21.8 | 1.8 | 22.8 | 1.8 | 23.3 | 1.8 | 34.6 | 2.1 | 35.1 | 1.9 | 32.3 | 2.1 | 25.6 | 1.9 |
| 25–34 | 38.1 | 4.7 | 36.6 | 5.1 | 39.5 | 5.1 | 37.9 | 4.9 | 33.9 | 5.5 | 35.9 | 5.2 | 33.1 | 5.3 | 34.8 | 5.3 | 37.0 | 5.0 |
| 35–44 | 27.4 | 7.3 | 27.3 | 8.4 | 28.8 | 8.0 | 27.6 | 7.8 | 33.5 | 8.4 | 23.1 | 7.8 | 25.1 | 7.9 | 25.7 | 8.0 | 27.1 | 7.9 |
| 45+ | 12.0 | 8.3 | 12.2 | 9.3 | 10.1 | 8.6 | 11.7 | 8.6 | 8.8 | 9.3 | 6.5 | 9.2 | 7.7 | 9.7 | 7.1 | 9.3 | 10.5 | 8.8 |
| Crude Means | 100 | 5.2 | 100 | 5.8 | 100 | 5.4 | 100 | 5.4 | 100 | 6.0 | 100 | 5.0 | 100 | 5.1 | 100 | 5.2 | 100 | 5.4 |
| Standardized Means* | (1,287) | 5.0 | (732) | 5.6 | (514) | 5.4 | (2,532) | 5.3 | (227) | 5.8 | (602) | 5.5 | (251) | 5.6 | (1,080) | 5.6 | (3,612) | 5.4 |

* Figures in parentheses refer to number of women.

The apparent differences between fertility in rural and urban areas within each educational level, as indicated in Table 5.11, seem to be also attributed to differences in age composition and length of exposure. Differences within any given group of marital duration are small and not significant.

Woman's pattern of work seems to have a strong effect when rural/urban fertility differentials are considered. As may be seen from Table 5.12, currently working women in rural areas have much higher fertility than women in the same group in urban areas, especially if they worked also before marriage. This pattern persists for different durations of marriage.

Table 5.11. Mean Number of Children Ever Born to Ever-Married Women, by Level of Education, by Years Since First Marriage, and by Type of Place of Residence

| Years Since First Marriage and Level of Education | Type of Place | | Total | Number of Women |
|---|---|---|---|---|
| | Urban | Rural | | |
| <10 | | | | |
| No Schooling | 2.6 | 2.6 | 2.6 | 702 |
| Primary | 2.2 | 1.7 | 2.1 | 421 |
| Preparatory | 2.1 | 1.7 | 2.0 | 141 |
| Secondary + | 1.8 | * | 1.8 | 157 |
| All Levels | 2.3 | 2.3 | 2.3 | 1,420 |
| 10–19 | | | | |
| No Schooling | 6.6 | 6.2 | 6.4 | 860 |
| Primary | 5.5 | 6.4 | 5.6 | 208 |
| Preparatory | 4.9 | 3.6 | 4.8 | 43 |
| Secondary + | 4.4 | — | 4.4 | 60 |
| All Levels | 6.1 | 6.2 | 6.1 | 1,171 |
| 20+ | | | | |
| No Schooling | 9.1 | 8.9 | 9.0 | 909 |
| Primary | 7.6 | — | 7.6 | 73 |
| Preparatory | 6.0 | — | 6.0 | 20 |
| Secondary + | 4.5 | — | 4.5 | 18 |
| All Levels | 8.7 | 8.9 | 8.8 | 1,021 |
| All | | | | |
| No Schooling | 6.7 | 5.7 | 6.3 | 2,470 |
| Primary | 3.9 | 2.6 | 3.7 | 701 |
| Preparatory | 3.1 | 2.0 | 3.0 | 204 |
| Secondary + | 2.7 | * | 2.7 | 235 |
| All Levels | 5.4 | 5.2 | 5.4 | 3,612 |

* Less than 10 cases.

Table 5.12. Mean Number of Children Ever Born to Ever-Married Women, by Type of Place of Residence and by Pattern of Work

| Pattern of Work | Type of Place | | Mean | Number of Women |
|---|---|---|---|---|
| | Urban | Rural | | |
| Currently Working, Worked Before | 3.4 | 5.7 | 4.3 | 244 |
| Currently Working, Did Work Before | 5.3 | 6.7 | 5.9 | 110 |
| Worked After Marriage (Not Now) | 4.8 | 5.3 | 5.0 | 88 |
| Worked After and Before (Not Now) | 6.8 | 6.3 | 6.7 | 69 |
| Worked Before Only | 4.8 | 4.8 | 4.8 | 340 |
| Never Worked | 5.6 | 5.1 | 5.5 | 2,761 |
| Total | 5.4 | 5.2 | 5.4 | 3,612 |

### 5.3.3. Childlessness

In countries where cultural factors value children highly, childlessness would most likely be involuntary and would be considered a problem. The survey data provide some information on childlessness. It is obvious that to study childlessness with the survey data, there must be controls for martial duration, age at first marriage, and current age.

It should be noted that about 31.2 percent childless women were pregnant at the time of the survey. Only 13.2 percent of the childless women reported that they believe to have impairment of getting pregnant and as high as 52 percent reported themselves to be fecund. Furthermore, it is worth recalling that the percentage who reported themselves sterile increases dramatically with age until it reaches 71 percent for women aged 45 or more.

The percentage of pregnant childless women should in fact be taken into consideration when considering childlessness. The percentage of currently married childless women reporting a current pregnancy is as high as 38.7 percent for women under the age of 20 and 43 percent for those at ages 20–24. After age 25 the percentage of childless women reporting a current pregnancy is signifi-

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cantly reduced; it is nil for women aged 40 or more. (See Table 2.4.5 in the Appendix.)

The figures in Table 5.13 show an overall percentage of childlessness of 7.7. As expected, this percentage drops sharply with age; while it reaches 42.2 percent among ever-married women under the age of 20, it drops to 11.3 percent among women in the age group 20–24, and below 3 percent thereafter. When childlessness is considered by duration of marriage (Table 5.13), the percentage is as high as 30 for those who have been married for less than five years. The percentage childless is 3.5 for women with duration 5–9 years and drops thereafter to an average of approximately 2 per cent. Similar results were obtained from the 1972 survey.

Table 5.13. Percentage of Childlessness Among Ever-Married Women in Fertility Surveys of 1972 and 1976

| | Survey | |
| Duration of Marriage | 1972 | 1976 |
| --- | --- | --- |
| <5 | 32.9 | 29.8 |
| 5–9 | 3.7 | 3.5 |
| 10–14 | 1.5 | 1.9 |
| 15–19 | 1.7 | 1.5 |
| 20–24 | 2.0 | 1.0 |
| 25–29 | 1.5 | 2.8 |
| 30+ | 1.1 | 2.0 |
| Total | 8.4 | 7.7 |

## 5.4. EARLY MARITAL FERTILITY: FIRST FIVE YEARS

In this section consideration will be given to the rate of childbearing in the first five years of marriage. Such an examination is important in at least two respects:

(i) it enables us to examine trends, if any, in the tempo of early fertility when compared between marriage cohorts; and

(ii) it allows us to examine the relationship between age at marriage and fertility in the early stages of marriage.

The analaysis is, of course, restricted to women whose first marriage occurred at least five years ago. It should, however, be noted that women who entered first marriage at least five years ago and whose marriages were dissolved during this five-year period, will be included in the analysis.

Two indicators of early marital fertility will be considered: the interval between marriage and first birth and the mean number of births in the first five years of marriage.

Table 5.14 shows the per cent distribution of women who first married at least five years ago according to interval between first marriage and first birth, by age at first marriage. As may be seen, among women who married before age 15, only 18.4 percent had their first birth within the first year of marriage. This percentage increases to 28.8 percent for those married at 15–17 years and to 30.2 percent for those married at ages 18–19, then to a high of 36 percent for those married at ages 20–23, then it drops slightly. The table also shows that 13.4 percent of those married very early below the age of 15 were unable to have children at all during the first five years of marriage, which is almost as high as that for women married at the age of 25 or more. The lowest childlessness percentage (5.9) was among those married at ages 20–21. These figures may support the hypothesis of adolescent sterility. It is seen from Table 5.14 that a woman who first married in her late teens and very early twenties bore a child after a relatively short interval. In contrast a woman whose first marriage was consummated at an earlier age had a relatively longer interval. However, it should be noted that use of contraception has

Table 5.14. Percent Distribution of Women Who First Married Five Years Ago According to Interval Between Marriage and First Birth, by Age at First Marriage

| | Interval Between First Marriage and First Birth | | | | | | | |
| Age at First Marriage | Less Than One Year | 1– | 2– | 3– | 4 to Less Than 5 | Childless | Total | Number of Women |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| <15 | 18.4 | 32.2 | 19.2 | 9.8 | 7.0 | 13.4 | 100.0 | 762 |
| 15–17 | 28.8 | 40.2 | 15.2 | 6.1 | 3.0 | 6.8 | 100.0 | 1,092 |
| 18–19 | 30.2 | 40.1 | 14.4 | 5.6 | 1.9 | 7.8 | 100.0 | 515 |
| 20–21 | 36.0 | 36.7 | 13.7 | 6.8 | 1.2 | 5.9 | 100.0 | 253 |
| 22–24 | 32.9 | 44.2 | 10.8 | 3.2 | 2.6 | 6.3 | 100.0 | 187 |
| 25+ | 30.9 | 36.8 | 4.4 | 12.5 | 2.4 | 13.0 | 100.0 | 79 |
| Total | 27.2 | 37.9 | 15.4 | 7.0 | 3.7 | 8.8 | 100.0 | 2,887 |

* Women who had their first births during the interval 0–7 months were added to those who had had their first births during the interval 8–11 months. The justification for this is that pre-maritally conceived pregnancies are practically non-existent in Jordan. Among the women considered in this table, 7.6 percent have fallen in the interval 0–7 months. This figure is attributed to misstatement of date of first marriage and/or date of birth of the first child. It also may be due to the method of imputation used during the data processing stage for women who stated that they entered first marriage and had their first child during the same calendar year and who did not know the month in which each event took place.

not been considered and the above results, therefore, hold true under the assumption of no differential use of contraception by age at first marriage within the first five years of marriage.

Another evidence of adolescent sterility is the lower mean number of children born within the first five years of marriage when marriage was earlier, as may be seen from Table 5.15. There is a sort of a normal curve; with a low mean number of children for those married at an age less than 15, increasing gradually, until it reaches a peak of 2.4 for those married at ages 20–21, and thereafter it begins to drop. This pattern is also observed within each duration of marriage. This may lead to the conclusion that women who marry in their late teens or very early twenties bore more children, on the average, during the first five years of marriage than women whose first marriage was consummated at an earlier age.

An important observation from Table 5.15 is the difference in the average number of children ever born

within the first five years of marriage by marriage cohorts. The average is 2.4 for the more recent cohort with marriage duration 5–9 years, 2.2 for those married 10–19 years ago, and only 1.9 fog women with duration of 20 years of more. It is tempting to conclude that there was an increase in initial fertility by the more recent marriage cohorts. This may be partly due to differences in distribution by age at first marriage for different durations and partly due to memory and other sources of errors. When standardized for age at first marriage, differences become smaller though they still exist, as shown by Table 5.15.

Looking now at differences in intial fertility by various background variables, it may be seen from Table 5.16 that educational level does not appear to have an effect on the mean number of children ever born in the first five years of marriage. Nevertheless the pattern is not consistent. That same inconsistent pattern prevails within each group of age at first marriage. However, women with primary and

Table 5.15. Mean Number of Children Born Within First Five Years of Marriage — Confined to Women Who First Married at Least Five Years Ago, by Age at First Marriage and by Years Since First Marriage

| Years Since First Marriage | Age at First Marriage | | | | | | Overall Mean | | Number of Women |
|---|---|---|---|---|---|---|---|---|---|
| | <15 | 15–17 | 18–19 | 20–21 | 22–24 | 25+ | Crude | Standardized | |
| 5–9 | 2.1 | 2.4 | 2.5 | 2.4 | 2.2 | 2.3 | 2.4 | 2.5 | 696 |
| 10–19 | 2.0 | 2.3 | 2.4 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 | 1,171 |
| 20+ | 1.8 | 2.0 | 2.0 | 2.5 | 2.3 | * | 1.9 | 1.9 | 1,021 |
| All Durations | | | | | | | | | |
| Mean | 1.9 | 2.2 | 2.3 | 2.4 | 2.3 | 2.1 | 2.2 | 2.2 | |
| Number of Women | 762 | 1,092 | 515 | 253 | 187 | 79 | — | — | 2,887 |

* Less than 10 cases.

Table 5.16. Mean Number of Children Born Within First Five Years of Marriage — Confined to Women Who First Married at Least Five Years Ago, by Age at First Marriage, by Years Since First Marriage, and by Level of Education

| Variable | No Schooling | Primary | Pre-paratory | Secondary or more | Total | |
|---|---|---|---|---|---|---|
| | | | | | Mean | Numbers of Women |
| Age at First Marriage | | | | | | |
| <15 | 1.8 | 2.1 | * | * | 1.9 | 762 |
| 15–17 | 2.2 | 2.4 | 2.4 | 2.1 | 2.2 | 1,092 |
| 18–19 | 2.3 | 2.3 | 2.2 | 2.2 | 2.3 | 515 |
| 20–21 | 2.3 | 2.8 | 2.7 | 2.2 | 2.4 | 253 |
| 22–24 | 2.3 | 2.4 | 2.2 | 2.2 | 2.3 | 187 |
| 25+ | 1.8 | 2.5 | * | 2.2 | 2.1 | 79 |
| Years Since First Marriage | | | | | | |
| 5–9 | 2.3 | 2.4 | 2.5 | 2.2 | 2.4 | 696 |
| 10–19 | 2.2 | 2.3 | 2.4 | 2.2 | 2.2 | 1,171 |
| 20+ | 1.9 | 2.2 | 2.0 | 1.9 | 1.9 | 1,021 |
| Total | | | | | | |
| Mean | 2.1 | 2.3 | 2.4 | 2.2 | 2.2 | — |
| Number of Women | 2,174 | 460 | 119 | 134 | — | 2,887 |

* Less than 10 cases.

preparatory education show higher fertility within the first five years, than do those with no schooling and those with secondary education or more. Similar observations can be shown when marital duration is used as a control.

There appears to be a tendency for women to have children more rapidly within the first five years of marriage with no differentials by education. If these means are compared to the overall cumulative means of number of children ever born, it seems that women with higher education tend to slow down having more births after that initial period in contrast to the less educated women.

Likewise, no clear pattern of differences in initial fertility was found by religion, type of place of residence, occupation before first marriage, and pattern of work.

For women's work status before first married, those who were family unpaid workers had a slightly lower mean of children ever born in the first five years since first marriage; these differences disappeared when controlled by age at first marriage. The same is true for occupation of husband.

In sum, the emerging pattern is that initial fertility (within the first five years of marriage) is lower for those who married early in their teens or later in their twenties; and likewise, for those who were married for a considerable length of time at age twenty or more. No clear pattern, though there are slight differences, emerges in the initial fertility by educational level or other background variables. It seems that women tend to have children rapidly within the first five years of marriage regardless of their background. Differences, however, emerge clearly in the years that follow these early years of marriage.

## 5.5 RECENT MARITAL FERTILITY: THE LAST FIVE YEARS

Recent fertility means, in the present context, births in the last five years (60 months) immediately preceding each woman's date of interview. Recent fertility has practical importance since it reflects the level of fertility which has prevailed in the past five years. The analysis is confined to only currently married women who have been continuously in the married state for the past five years. Thus, all births to women who were divorced, widowed, or died during that period are excluded. Women who got married during that period were also excluded with their births. However, if the age specific rates for the period 0–4 years preceding the survey are summed, the result should be equivalent to a period total fertility rate.

Recent fertility, as defined above, suffers less from various sources of errors resulting from omission of births, misinterpretation of the reference period, or from misplacement in time relative to women's ages. This is mainly due to the fact that data relevant to the previous five years are more recent.

Table 5.17 is based on women who were first married at least five years ago, currently married, and experienced no marital dissolution during the interval. For this subgroup of women, Table 5.17 presents mean number of children born in the past five years, by current age and number of living children they had at the beginning of that interval.

Figures show that mean number of children born in the past five years decreases with age. Women who were under the age of 20 each had 2.5 children within the five-year interval until they reach age 25. This means that each woman who is less than 20, and stayed exposed

Table 5.17. Mean Number of Children Born in the Past Five Years to Women Who Have Been Continuously in Married State for the Past Five Years, by Current Age and by Number of Living Children Five Years Ago

| Current Age | Number of Living Children Five Years Ago | | | | Total | |
| | 0 | 1–3 | 4–6 | 7+ | Mean | Number of Women |
| --- | --- | --- | --- | --- | --- | --- |
| <25 | 2.5 | 2.5 | * | — | 2.5 | 324 |
| 25–29 | 2.4 | 2.3 | 2.0 | * | 2.2 | 578 |
| 30–34 | 1.1 | 1.8 | 2.0 | 2.0 | 1.9 | 584 |
| 35–39 | 0.4 | 1.4 | 1.6 | 1.7 | 1.6 | 513 |
| 40–44 | 0.1 | 0.6 | 0.9 | 1.3 | 1.0 | 399 |
| 45+ | * | 0.3 | 0.3 | 0.5 | 0.4 | 321 |
| Total | | | | | | |
|    Mean | 2.1 | 2.0 | 1.6 | 1.1 | 1.7 | — |
|    Number of Women | 272 | 947 | 909 | 591 | — | 2,719 |

* Less than ten cases.
† The less than 20 and the 20–24 age groups added together because of the few number of women at ages under 20 (only 24), who were continuously married for the past five years.

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during an interval of five years, has a live birth every two years. That same mean was achieved regardless of the number of living children she already had. A childless woman less than 20 had an average of 2.5 children born five years later just as did a woman in the same age group with 1–3 living children. This mean is reduced to 2.2 during the interval of five years from 20–24 to 25–29; and to 1.9, 1.6, 1.0, and 0.4 for women who are currently in the age groups 30–34, 35–39, 40–44, and 45 or more, respectively. Though the mean number of children born in the past five years was associated with the number of living children at the beginning of this interval, the pattern is not consistent. While women with a current age of 25–29 had a declining mean number of children in the interval as their number of living children increased, the reverse is found for the remaining age groups, i.e. women with high numbers of living children added more in the last five years than did those having fewer living children. It seems as if high fertility induces even higher fertility. In general, however, the overall mean number of children born in the past five years declines consistently as the number of living children a woman had at the beginning of that interval increases. In sum, it is apparent that the currently most fertile group of women, when exposed to the risk of conception, are those in the age group 20–29 regardless of their already achieved parity.

Out of the 3,612 ever-married women in the sample, 2,709 — that is, 75 percent — were continuously in the married state for the past five years. They each had an average of 1.7 live births within the past five years. Age at first marriage does not seem to have a significant effect on that average, except for women married at ages 25–29 who had a slightly lower average of 1.4 as compared to 1.8 for those who first married at ages 15–17. What seems to have a clear effect is the order of that past five years in the married life as may be seen from Table 5.18. The first

five years of marriage seems to be the most fertile as compared to the remaining intervals (five years each). When the past five-year period was the first in the martial life, an overall average of 2.5 was observed; those who first married at ages 18–19 showed the highest mean of 2.8; those who married at ages 20–21, and 15–17 had 2.5 each; those who first married at ages less than 15 showed 2.2, and at ages 22–24 had 2.3. Those who married late at ages 25–29, had 2.1 within these first five years of marital life.[1]

When the past five years were the second in the marital life, a lower average is achieved with the exception of those who first married early (at less than age 15 and who are currently aged 20–24) where the mean number of children ever born increased to 2.4 within the interval. A declining mean number of children ever born is prevalent after that for all ages at first marriage.

In sum, while the overall average number of live births in the past five years was 1.7 for the whole group considered, that average does not seem associated with the age at first marriage, but rather with the order of that past five years in the marital life. If it is the first, it generally yields a higher mean number of live births and that mean gradually declines for every subsequent interval observed. Of course, we deal here with cross-sectional and not cohort data, therefore women were not really passing through these intervals. For example, those in the second interval may have had in their first interval a different average, and so on.

The question to be considered now is whether different background variables appear to be associated with recent fertility. Table 5.19 shows the mean number of children

[1] It should be noticed that this group is different from those considered when analysing initial fertility, for the latter did not specify directly the past five years as the first in marital life.

Table 5.18. Mean Number of Children Born in the Past Five Years to Women Who Have Been Continuously in Married State for Past Five Years, by Current Age and by Order of That Five Years Interval in Marriage

| | The Order of the Past Five Years Interval in Marriage | | | | | | | Total | |
| | | | | | | | | | |
| Age at First Marriage | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | Mean | Number of Women |
|---|---|---|---|---|---|---|---|---|---|
| <15 | 2.2 | 2.4 | 2.0 | 1.9 | 1.6 | 0.9 | 0.3 | 1.6 | 709 |
| 15–17 | 2.5 | 2.2 | 1.9 | 1.5 | 1.3 | 0.4 | — | 1.8 | 1,033 |
| 18–19 | 2.8 | 2.4 | 1.9 | 1.5 | 0.8 | 0.4 | — | 1.7 | 493 |
| 20–21 | 2.5 | 1.9 | 1.9 | 1.0 | 0.5 | — | — | 1.7 | 232 |
| 22–24 | 2.3 | 1.9 | 1.6 | 1.1 | 0.7 | — | — | 1.6 | 177 |
| 25–29* | 2.1 | 1.5 | 1.0 | 0.6 | — | — | — | 0.4 | 65 |
| Total | | | | | | | | | |
| Mean | 2.5 | 2.2 | 1.9 | 1.5 | 1.2 | 0.6 | 0.3 | 1.7 | — |
| Number of Women | 337 | 586 | 559 | 489 | 376 | 260 | 102 | — | 2,709 |

* Those married for 30 years or more (11 cases) were excluded.

ever born in the past five years to women who have been continuously in married state for past five years by current age and by selected background variables.

Table 5.19. Mean Number of Children Ever Born in the Past Five Years to Women Who Have Been Continuously in Married State for Past Five Years, by Current Age and by Selected Background Variables

| | Current Age | | | | | Total |
|---|---|---|---|---|---|---|
| Background Variable | <15 | 25–34 | 35–44 | 45+ | Mean | Number of Women |
| Level of Education | | | | | | |
| No Schooling | 2.5 | 2.2 | 1.5 | 0.5 | 1.7 | 2,027 |
| Primary | 2.5 | 2.0 | 0.8 | 0.1 | 1.8 | 447 |
| Preparatory | 2.4 | 1.8 | 0.7 | * | 1.5 | 116 |
| Secondary or more | — | 1.6 | 0.6 | 0.0 | 1.2 | 129 |
| Region and Type of Residence | | | | | | |
| Amman | 2.5 | 1.9 | 1.1 | 0.3 | 1.5 | 952 |
| Zarka and Irbid | 2.4 | 2.2 | 1.3 | 0.4 | 1.7 | 570 |
| Towns | 2.6 | 2.0 | 1.3 | 0.4 | 1.7 | 391 |
| All Urban | 2.5 | 2.0 | 1.2 | 0.3 | 1.6 | 1,913 |
| Large Village | 2.6 | 2.4 | 1.6 | 0.6 | 1.9 | 180 |
| Medium Village | 2.5 | 2.3 | 1.6 | 0.6 | 2.0 | 447 |
| Small villages | 2.4 | 2.1 | 1.7 | 0.9 | 1.9 | 178 |
| All Rural | 2.5 | 2.3 | 1.6 | 0.6 | 2.0 | 806 |
| Religion | | | | | | |
| Muslims | 2.5 | 2.1 | 1.4 | 0.4 | 1.7 | 2,557 |
| Catholics and Others | * | 1.6 | 0.7 | 0.1 | 1.0 | 162 |
| Pattern of Work | | | | | | |
| Current Working | 2.2 | 2.1 | 1.3 | 0.4 | 1.6 | 231 |
| Worked Earlier | 2.4 | 2.2 | 1.2 | 0.5 | 1.7 | 377 |
| Never Worked | 2.5 | 2.0 | 1.3 | 0.4 | 1.7 | 2,111 |
| Total | 2.5 | 2.0 | 1.3 | 0.4 | 1.7 | 2,719 |

Education seems to be associated with recent fertility, in particular for women with ages of 25 or more. Higher education is associated with lower mean number of children ever born in the past five years. This does not hold for the young age group of less than 25. Of course, this may be attributed to the fact that no differences were found in initial fertility, and those less than age 25 are most likely still early in marriage. After that, educated women show a tendency to have children at a slower pace, and the differences within age groups become clearly apparent. This is evident when the number of children ever born in the past five years is classified by education and marital duration. It was found that the mean number of children ever born declines with marital duration for all educational levels, the differences becoming apparent with marital duration of 10 or more years.

Most of the variations in recent fertility by religious denomination may be due to educational and marital duration distributions.

Pattern of work showed some differences for women at ages less than 25, but not for those who are older than that. The overall mean did not shown any pattern of differentials. However, recent fertility in rural areas is higher than that in urban areas at all ages.

## 5.6. CURRENT FERTILITY

In this section we briefly discuss the pattern and level of current fertility, i.e. fertility in the 12-month period preceding the survey date. Two measures are employed: age specific fertility rates and total fertility rates. An age specific fertility rate (ASFR) is defined as the ratio of births occurring to a group of women of a particular age in a specified time period to the total number of women-years spent in that age group during the same time period. The total fertility rate (TFR) is obtained as the sum of age specific fertility rates over the childbearing ages. The TFR represents the number of live births that would occur to a woman if she were to go through her reproductive years exposed to the risk of childbearing represented by the schedule of age specific fertility rates of a given 12-month period. The estimation of these rates from a retrospective sample survey could be subject to appreciable sampling fluctuation as well as non-sampling errors resulting from omission of births or mis-statement of ages and dates.

The estimation of ASFR's from the household survey is based on a relatively simple procedure. First, the most recent births to the ever-married women at ages 15–49 who were enumerated in the household survey were classified by date of birth, and those occurring in the twelve months preceding the date of enumeration were distributed by the age of mother at child's birth. These births constituted the numerators in the calculation of ASFR's. The denominators were based on the age distribution of all women (irrespective of marital status) enumerated in the household survey.

A second set of fertility rates — based on the household survey data — was produced for currently married women only. These rates are known as 'age specific marital fertility rates' (ASMFR).

Age specific fertility rates were also derived from the individual survey data. The numerators were derived using the same procedure applied to the household survey data. The number of births thus obtained for any given age group was divided by the number of ever-married women in the same age group. This rate was multiplied by the proportion of ever-married women in the same age group, which was derived from the household survey data.

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The rates thus obtained from the household survey and the individual survey data are shown in Table 5.20. As may be seen the two schedules agree fairly closely with each other. The household survey shows a total fertility rate of 7.34 live births per woman. The curve of age specific rates begins with a minimum somewhere around age 15, then sweeps upward forming a very broad peak extending over the age range 20–34 years, with a maximum occurring at ages 25–29. Thereafter, the fertility rate declines to level of near age 50.

Table 5.20. Age Specific Fertility Rates per 1,000 Women as Shown by the Household Survey and by the Individual Survey

| Survey | Age | | | | | | | Total Fertility Rate |
|---|---|---|---|---|---|---|---|---|
| | 15–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45–44 | |
| Household | 71 | 300 | 367 | 332 | 240 | 112 | 47 | 7.34 |
| Individual | 93 | 335 | 386 | 311 | 229 | 83 | 25 | 7.32 |

The household survey data also allows the calculation of ASFR's and ASMFR's according to type of place of residence, region, level of education, and religion. These rates are shown in Tables 5.21 and 5.22.

As may be seen, variation in the level of current fertility by type of place of residence is quite substantial. The TFR increases from 6.5 for women living in cities to 7.0 for those living in towns and to 9.1 for rural women. The more detailed set of rates according to region shows even more striking differences in current fertility between urban and rural areas. The TFR increases from 5.95 for women in Amann to 9.65 for those in small villages.

Marked differences in current fertility by religion are also shown by Table 5.21. The TFR decreases from 7.62 for Muslim women to 3.10 for Catholics and others.

The differences in current fertility by the woman's level of education are substantial. The TFR decreases from 9.0 for women with no schooling, to 6.1 for those with primary education, and to 3.2 for women with secondary education. Much of this variation is due to differences in the age specific fertility rates for the ages below 25. This suggests that the better educated have a much lower proportion married at these ages as compared to the less educated. This is, of course consistent with the findings reported earlier in Chapter 4.

## 5.7. TRENDS IN THE LEVEL OF FERTILITY

In this section, extensive use is made of the birth history data to compute age specific fertility rates for different time periods and thus obtain an indication of whether a change in the timing and level of fertility has or has not taken place.

The computation involves two steps: first, births are classified by calendar year of occurrence and by age of

Table 5.21. Age Specific Fertility Rates per 1,000 Women by Selected Background Variables, 1975–76

| Variable | Age | | | | | | | Total Rate |
|---|---|---|---|---|---|---|---|---|
| | 15–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45–49 | |
| All Women | 71 | 300 | 367 | 332 | 240 | 112 | 47 | 7.34 |
| Type of Place | | | | | | | | |
| Urban (Cities) | 59 | 259 | 330 | 302 | 206 | 100 | 34 | 6.45 |
| Urban (Towns) | 56 | 266 | 363 | 346 | 244 | 83 | 45 | 7.02 |
| Rural | 101 | 390 | 430 | 370 | 303 | 145 | 76 | 9.07 |
| Region | | | | | | | | |
| Amman | 55 | 255 | 317 | 268 | 179 | 87 | 29 | 5.95 |
| Zarka and Irbid | 67 | 266 | 355 | 368 | 255 | 120 | 45 | 7.37 |
| Other towns | 56 | 266 | 363 | 346 | 244 | 83 | 45 | 7.02 |
| Large Villages | 57 | 374 | 483 | 373 | 278 | 163 | 65 | 8.97 |
| Medium Villages | 98 | 396 | 389 | 364 | 310 | 146 | 61 | 8.83 |
| Small Villages | 152 | 390 | 467 | 372 | 317 | 122 | 110 | 9.65 |
| Level of Education | | | | | | | | |
| No Schooling | 132 | 406 | 432 | 375 | 278 | 126 | 52 | 9.01 |
| Incomplete Primary | 166 | 380 | 397 | 342 | 242 | 106 | 46 | 8.40 |
| Primary | 81 | 338 | 358 | 295 | 120 | 13 | 9 | 6.07 |
| Preparatory | 19 | 287 | 322 | 218 | 59 | 71 | 27 | 5.02 |
| Secondary | 9 | 106 | 224 | 152 | 94 | 48 | 0 | 3.17 |
| Institute and University | 0 | 54 | 192 | 177 | 54 | 0 | 0 | 2.39 |
| Religion | | | | | | | | |
| Muslim | 74 | 309 | 378 | 341 | 254 | 118 | 50 | 7.62 |
| Catholic and Other | 7 | 145 | 191 | 193 | 49 | 23 | 11 | 3.10 |

Table 5.22. Age Specific Marital Fertility Rates per 1,000 Currently Married Women, by Selected Background Variables, 1975–1976

| Variable | Age |
|---|---|---|---|---|---|---|---|
| | 15–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45–49 |
| All Currently Married Women | 396 | 486 | 429 | 357 | 259 | 125 | 55 |
| Type of Place | | | | | | | |
|   Urban (Cities) | 421 | 475 | 406 | 334 | 224 | 112 | 41 |
|   Urban (Towns) | 360 | 453 | 428 | 372 | 264 | 97 | 58 |
|   Rural | 379 | 513 | 467 | 390 | 322 | 160 | 85 |
| Region | | | | | | | |
|   Amman | 407 | 471 | 400 | 299 | 196 | 98 | 35 |
|   Zarka and Irbid | 444 | 483 | 416 | 399 | 274 | 134 | 51 |
|   Other Towns | 360 | 453 | 428 | 372 | 264 | 97 | 58 |
|   Large Villages | 302 | 530 | 526 | 384 | 288 | 181 | 71 |
|   Medium Villages | 356 | 523 | 431 | 391 | 333 | 163 | 70 |
|   Small Villages | 467 | 480 | 490 | 391 | 333 | 131 | 123 |
| Level of Education | | | | | | | |
|   No Schooling | 366 | 522 | 472 | 402 | 297 | 141 | 61 |
|   Incomplete Primary | 494 | 511 | 434 | 370 | 268 | 119 | 57 |
|   Primary | 388 | 457 | 408 | 320 | 133 | 14 | 10 |
|   Preparatory | 321 | 524 | 401 | 237 | 65 | 81 | 31 |
|   Secondary | 222 | 375 | 326 | 179 | 101 | 52 | 0 |
|   Institute and University | — | 350 | 343 | 213 | 64 | — | — |
| Religion | | | | | | | |
|   Muslim | 398 | 488 | 436 | 367 | 273 | 132 | 59 |
|   Catholic and Other | 250 | 431 | 200 | 233 | 56 | 27 | 15 |

mother at maternity; second, the person-years lived by all women — regardless of marital status — are calculated by single years of age for each calendar year, using the data for women ever-married and then adjusting the total to take into account never-married women.

As mentioned earlier in Section 5.1, there are two approaches to the measurement of fertility: the period approach and the cohort approach. Table 5.23 shows the 'period' age specific fertility rates. It should be noted that because the individual survey covered only ever-married women under 50 years of age, the further we go back in time from the date of interview, the less complete the age specific fertility schedule becomes. In estimating the total fertility rates for the 15 years (1961–1976) preceding the survey, older women in the earlier years were assigned the rates at those ages prevailing for the immediately following years for which data were available. In the case of unchanging fertility of older women, this approximation is of no consequence; when fertility is declining it is likely to underestimate somewhat the magnitude of decline in the TFR. The TFR's thus obtained were 0.94 for 1961–1966, 8.54 for 1966–1971 and 7.70 for 1971–1976. Thus the level of period fertility during 1971–1976 was about 15 percent below that for the period 1961–1966. This decline of 1.34 live births per woman over the last 15 years has come from almost all age groups. However, the shape of the age curve of fertility rates has retained a

broad peak extending over ages 20–34 with the peak occurring at ages 25–29.

This recent decline in fertility is also shown by cohort fertility rates as may be seen from Table 5.24 which shows

Table 5.23. Age Specific Fertility Rates per 1,000 Women

| Age | Year |
|---|---|---|---|---|---|---|---|---|
| | 1936–41 | 1941–46 | 1946–51 | 1951–56 | 1956–61 | 1961–66 | 1966–71 | 1971–76 |
| 10–14 | 8 | 23 | 23 | 19 | 13 | 9 | 4 | 1 |
| 15–19 | — | 169 | 222 | 188 | 196 | 198 | 175 | 124 |
| 20–24 | — | — | 363 | 356 | 378 | 380 | 367 | 346 |
| 25–29 | — | — | — | 358 | 416 | 414 | 402 | 368 |
| 30–34 | — | — | — | — | 340 | 380 | 353 | 335 |
| 35–39 | — | — | — | — | — | 276 | 256 | 245 |
| 40–44 | — | — | — | — | — | — | 131 | 101 |
| 45–49 | — | — | — | — | — | — | — | 20 |

Table 5.24. Mean Number of Children Born (per Woman), by Selected Exact Ages and by Woman's Year of Birth

| Year of Birth | Age (Exact Years) |
|---|---|---|---|---|---|---|---|
| | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
| 1926–31 | 0.13 | 1.23 | 3.05 | 4.94 | 6.74 | 8.04 | 8.60 |
| 1931–36 | 0.16 | 1.18 | 3.04 | 5.20 | 7.06 | 8.28 | |
| 1936–41 | 0.12 | 1.10 | 2.96 | 4.94 | 6.60 | | |
| 1941–46 | 0.12 | 1.19 | 3.10 | 5.03 | | | |
| 1946–51 | 0.08 | 1.03 | 2.87 | | | | |
| 1951–56 | 0.07 | 0.89 | | | | | |
| 1956–61 | 0.02 | | | | | | |

the mean number of children born — per woman — by selected exact ages for the 1921–1961 birth cohorts. Women born during 1926–1931 had, on average, 8.6 children per woman by the time they reached age 45. Women born during 1926–1941 show an irregular pattern of change in fertility. This may be attributed either to variations in the sample, or it may be caused by memory lapse resulting in omission of births, or over-reporting of the age of high parity mothers. Further investigation of these possible sources of error is necessary before a more definite statement can be made about the fertility of these cohorts.

However, a downward trend in fertility for women born since the early 1940's is shown by Table 5.24. The mean number of children born by exact age 20 has decreased by about 25 percent — from 1.19 for the 1941–1946 cohort to 0.89 for the 1951–1956 cohort. This decline in teenage fertility is at least in part due to the upward shift in the age pattern of first marriage noted earlier.

# CHAPTER 6

# INFANT AND CHILD MORTALITY

## 6.1. INTRODUCTION

There are two sources of data on mortality in the JFS: the household survey and the individual survey. The household survey included questions intended to provide information on survivorship of parents and on survivorship of first spouse. The proportion not orphaned or the proportion not widowed from first spouse can be used to give estimates of mortality rates at adult ages. The household survey also included the WFS General Mortality Module. This provides information on deaths of members of the household occurring during the 24 months preceding the survey date. The individual survey included — in the birth history section — questions on survivorship of each child and age at death, if any.

Full analysis of these data on mortality is likely to be a lengthy process. For the purposes of the present report, attention will be given to the historical trend and current level of infant and child mortality and to the current level of adult mortality. The trend in infant and child mortality is a topic of great interest in its own right as well as a background against which findings on fertility preferences and behaviour may be placed in their proper context.

Section 6.2 provides a descriptive account of the trend and current level of infant and child mortality. Section 6.3 presents an analysis of the level of adult mortality. Finally, a brief analysis of the effects of child mortality on family size is given in Section 6.4.

## 6.2. INFANT AND CHILD MORTALITY

The question of levels, trends, and differentials in infant and child mortality in Jordan is particularly important, in view of the relatively high rates which are believed to have hitherto prevailed. There are also other more general reasons for the study of infant and child mortality. Within any population, a relatively high rate of mortality prevails during the first years of life. The infant mortality rate (deaths within the first year of life per 1,000 births) is a sensitive indicator of the health conditions enjoyed by a community, and the level of infant and child mortality is generally associated with mortality levels at older ages.

Estimates of infant and child mortality may be derived from the information collected in the household survey on the proportion of children who died amongst the children ever born to women of various ages by sex of child. Table 6.1 shows the proportion of children ever born who died by current age of women. These proportions can be converted to estimates of probabilities of dying. Brass has shown that for women in the age groups 15–19, 20–24, 25–29, and 30–34, the proportions dead are approximately equal to the probabilities of dying by ages 1, 2, 3, and 5 years, respectively. Brass calculated correction factors for converting these proportions into probabilities of dying, using a model life table system for the mortality behaviour and a simple polynomial at a range of locations to represent fertility. The conversion factors are obtained using the ratio of the average number of children ever born to women aged 15–19 years to the average number of children ever born to women aged 20–24 years; this ratio is taken as an index of the age location of early childbearing.

Table 6.1. Proportion of Children Dying, by Sex of Child and by Age of Women

| Age of Women | Males | Females | Both Sexes |
|---|---|---|---|
| 15–19 | 0.0851 | 0.0850 | 0.0851 |
| 20–24 | 0.0893 | 0.0970 | 0.0931 |
| 25–29 | 0.0977 | 0.0950 | 0.0964 |
| 30–34 | 0.1090 | 0.1158 | 0.1162 |
| 35–39 | 0.1362 | 0.1476 | 0.1417 |
| 40–44 | 0.1717 | 0.1778 | 0.1746 |
| 45–49 | 0.2066 | 0.2040 | 0.2054 |
| 50–54 | 0.2680 | 0.2463 | 0.2568 |
| 55–59 | 0.2957 | 0.2956 | 0.2957 |

These estimates of the probabilities of dying before reaching ages 1, 2, 3, and 5 thus obtained are then graduated, using a standard model life table. The graduated values are shown in Table 6.2 for males and for females. As may be seen, out of 1,000 live births of either sex, 81 males and 83 females die within the first year of life, and 95 males and 99 females die before reaching their second birthday. The excess in female over male child mortality may be due to the fact that in many developing societies, more attention and care are given to male babies than female babies.

Table 6.2. Probabilities of Dying Between Birth and Selected Ages

| Age (Exact Years) | Probability of Dying | |
|---|---|---|
| | Males | Females |
| 1 | 0.081 | 0.082 |
| 2 | 0.095 | 0.099 |
| 3 | 0.102 | 0.106 |
| 5 | 0.108 | 0.113 |

The household survey data also allow us to investigate the urban–rural differential in child mortality. The graduated probabilities of dying before reaching ages 1, 2, 3, and 5 years by sex and by type of place of residence are shown in Table 6.3 which shows a much lower level of child mortality in urban areas than in rural areas.

It is also possible to examine the trend in infant and child mortality from the birth history data collected in the individual survey. Table 6.4 shows the proportion of children dying under one, two, and five years of age per 1,000 live births, by sex and by year of birth. The table shows substantial reductions in the level of infant and child mortality. About 15 percent of the children born in the period 1945–1949 died within the first year of life; the corresponding figure for the period 1970–1975 was only 7 percent. A similar decline is shown for deaths within the first two years of life and the first five years of life. It should be noted that estimates of infant mortality based on retrospective birth histories are probably subjected to recall-lapse · particularly in relation to infant deaths occurring a long time ago. Therefore, the estimates in Table 6.4 should be regarded as tentative. Nevertheless, the figures in Table 6.4 provide sufficient evidence to substantiate a sharp declining infant and child mortality over the past thirty years.

Table 6.3. Probabilities of Dying Between Birth and Selected Ages per 1,000 Live Births, by Type of Place of Residence

| Age (Exact Years) | Type of Place | |
|---|---|---|
| | Urban | Rural |
| Males | | |
| 1 | 70.6 | 98.2 |
| 2 | 83.0 | 114.9 |
| 3 | 89.1 | 123.0 |
| 5 | 94.5 | 130.1 |
| Females | | |
| 1 | 73.4 | 103.0 |
| 2 | 87.6 | 120.2 |
| 3 | 94.3 | 129.1 |
| 5 | 100.3 | 136.9 |

## 6.3. LEVELS OF ADULT MORTALITY[1]

The household survey included questions intended to provide information on survivorship of first spouse. This information can be used to estimate mortality rates at adult ages. The basic idea behind these questions is to obtain information from the respondent on the survival of some related person who is known to have been alive at some time in the past, i.e. at respondents' birth for mothers, at conception for fathers, and at marriage for spouses. The proportion not orphaned or the proportion never widowed from first spouse are adjusted in such a way that gives estimates of the probabilities of survival at adult ages.

[1] Abdel-Aziz, Abdullah. 'Fertility and Mortality in Jordan: An Analysis of Results from the 1976 Household Survey.' Unpublished M.Phil. thesis, Cairo Demographic Centre, 1979.

Table 6.4. Proportion of Children Dying Under One, Two, and Five Years of Age, per 1,000 Live Births, by Sex and by Year of Birth

| Age and Sex | Year of Birth | | | | | |
|---|---|---|---|---|---|---|
| | 1945–1949 | 1950–1954 | 1955–1959 | 1960–1964 | 1965–1969 | 1970+ |
| Both sexes | | | | | | |
| Under 1 | 148 | 133 | 114 | 88 | 71 | 69 |
| Under 2 | 214 | 186 | 153 | 116 | 86 | 78 |
| Under 5 | 271 | 229 | 177 | 128 | 95 | — |
| Males | | | | | | |
| Under 1 | 175 | 133 | 113 | 95 | 64 | 64 |
| Under 2 | 226 | 182 | 140 | 121 | 79 | 71 |
| Under 5 | 289 | 229 | 159 | 130 | 88 | — |
| Females | | | | | | |
| Under 1 | 115 | 133 | 116 | 80 | 78 | 75 |
| Under 2 | 199 | 191 | 167 | 112 | 94 | 85 |
| Under 5 | 249 | 230 | 196 | 125 | 102 | — |

## 6.3.1. The Orphanhood Method

In the household survey each member of the household was asked the following two questions:

'Is your father alive?'
'Is your mother alive?'

Brass[1] has derived a relationship between the proportion of persons in each five-year age group with surviving mothers and the mortality of mothers, and derived conversion factors to transform proportions of surviving mothers into life table probabilities of survival. Later, Blacker[2] developed corresponding conversion factors for estimating adult male mortality from proportions of surviving fathers.

Table 6.5 shows the proportion of surviving fathers and the proportion of surviving mothers as shown by the household survey data.

Table 6.5. Proportions of Surviving Mothers Alive and of Fathers Alive, by Age of Respondents

| Age* | Proportion of Mothers Alive | Proportion of Fathers Alive |
|---|---|---|
| 5–9 | 0.99245 | 0.97063 |
| 10–14 | 0.98290 | 0.94599 |
| 15–19 | 0.97222 | 0.89928 |
| 20–24 | 0.94411 | 0.83743 |
| 25–29 | 0.86986 | 0.71736 |
| 30–34 | 0.80138 | 0.61374 |
| 35–39 | 0.69566 | 0.47360 |
| 40–44 | 0.57010 | 0.34970 |
| 45–49 | 0.44850 | 0.24617 |
| 50–54 | 0.32897 | 0.16065 |
| 55–59 | 0.23325 | 0.09587 |

* Age group of daughters for proportion of mothers alive and age group of sons for proportion of fathers alive.

## 6.3.2. The Widowhood Method

The orphanhood method raises a number of substantial difficulties namely, the multiple counting of parents according to surviving children, the 'adoption' effect for mothers, the widespread of ages at births of children for fathers, and the biases due to rapid changes in mortality. There is another indirect set of measures related to death rates which in suitable situations are less subject to these problems. Marriages are dissolved by the death of a partner to provide a distinctive class, the widowed. In populations where marriage is clearly defined, and entered into by almost all persons over a limited range of ages, the proportions ever widowed by age provide such a set of measures.

The household survey data give the current marital status of persons enumerated in the survey. Persons who have married more than once were asked: 'Is your husband (wife) alive?'. Proportions never widowed from first spouse are then used to obtain estimates of survival ratios at adult ages. Table 6.6 shows proportions never widowed from first spouse, by age and by sex, as shown by the household survey data.

Table 6.6 Proportion Never Widowed, by Age and by Sex

| Age Group of Female Respondents | Proportion Never Widowed from First Husband | Age Group of Male Respondents | Proportion Never Widowed from First Wife |
|---|---|---|---|
| 20–24 | 0.9889 | 20–24 | 1.0000 |
| 25–29 | 0.9861 | 25–29 | 0.9924 |
| 30–34 | 0.9669 | 30–34 | 0.9897 |
| 35–39 | 0.9512 | 35–39 | 0.9820 |
| 40–44 | 0.9046 | 40–44 | 0.9601 |
| 45–49 | 0.8442 | 45–49 | 0.9580 |
| 50–54 | 0.7437 | 50–54 | 0.9279 |
| 55–59 | 0.6759 | 55–59 | 0.8802 |
| 60–64 | 0.5459 | 60–64 | 0.8381 |
| 65–69 | 0.4772 | 65–69 | 0.8224 |
| | | 70–74 | 0.7143 |

## 6.3.3. Survival Ratios

The survival ratios derived from the orphanhood and widowhood methods are not immediately comparable since the base ages are different. However, by linking these estimates of adult mortality with those of infant and child mortality comparable estimates of the probabilities of survival may be obtained. These survival probabilities are shown in Table 6.7.

As may be seen, the survival probabilities derived from the orphanhood method are higher than those derived from the widowhood method for males and females.

However, it was found that the survival probabilities based on the orphanhood method yielded a higher expectation of life at birth for males than for females (64.8 and 63.2, respectively). The expectation of life at birth based on the widowhood method was 57.4 for males and 61.9 for females.

Almost everywhere, the expectation of life at birth is higher for females than for males. As the widowhood method is less subject to the limitations of the orphanhood method, and since the estimates of female expectation of life at birth based on the orphanhood and on the widowhood methods are fairly close, and taking into

[1] Brass, W. 1975. *Methods for Estimating Fertility and Mortality from Limited and Defective Data.* Laboratories for Population Studies, University of North Carolina, Chapel Hill.
[2] Blacker, J. 1977. The Estimation of Adult Mortality in Africa from Data on Orphanhood. *Population Studies*, 31(1).

Table 6.7. Survival Probabilities from Birth to Age $(n) - l(n)$- and from Age $n$ to Age $(n + 5) - p(n,5)$, by Method of Estimation

| Age (n) | Orphanhood | | Widowhood | |
|---|---|---|---|---|
| | l(n) | p(n,5) | l(n) | p(n,5) |
| Males | | | | |
| 30 | — | — | 0.85233 | 0.99129 |
| 35 | — | — | 0.84491 | 0.98132 |
| 40 | — | — | 0.82913 | 0.97089 |
| 45 | — | — | 0.80499 | 0.94140 |
| 50 | 0.80692 | 0.97072 | 0.75782 | 0.90419 |
| 55 | 0.78329 | 0.94855 | 0.68521 | 0.88887 |
| 60 | 0.74299 | 0.91383 | 0.60906 | 0.83690 |
| 65 | 0.67897 | 0.84163 | 0.50972 | 0.83726 |
| 70 | 0.57144 | 0.78995 | 0.42677 | — |
| 75 | 0.45141 | 0.68534 | — | — |
| 80 | 0.30937 | — | — | — |
| Females | | | | |
| 25 | — | — | 0.86175 | 0.99527 |
| 30 | — | — | 0.85767 | 0.98754 |
| 35 | 0.85571 | 0.99136 | 0.84698 | 0.98400 |
| 40 | 0.84832 | 0.98919 | 0.83343 | 0.98687 |
| 45 | 0.83915 | 0.97507 | 0.82249 | 0.95891 |
| 50 | 0.81823 | 0.92615 | 0.78869 | 0.94714 |
| 55 | 0.75780 | 0.93178 | 0.74700 | 0.96487 |
| 60 | 0.70610 | 0.87165 | 0.72076 | 0.90876 |
| 65 | 0.61547 | 0.81517 | 0.65500 | — |
| 70 | 0.50171 | 0.75484 | — | — |
| 75 | 0.37871 | 0.67830 | — | — |
| 80 | 0.25688 | — | — | — |

consideration the sex differential in life expectancy at birth, the survival probabilities based on the widowhood method seem to be much nearer to what is expected. However, further analysis of age patterns of mortality will be needed before a more definite statement on the level and pattern of mortality can be made.

## 6.4. EFFECTS OF CHILD MORTALITY ON FAMILY SIZE

This section deals with the cumulative impact of child mortality on family size, without regard to the ages of the deceased children at time of death. Cumulative child mortality is related, however, to the current age and marital duration of the women.

The relationship between infant mortality and fertility is controversial. Most of the literature distinguishes between the response of a couple to the death of a child of their own and the community wide response to infant mortality. Those who experience a child death, especially early in marriage, have and expect more children than couples without such experience.

As may be seen from Table 6.8 the average number of live births reported by all women was 5.4, with 4.7 still living at the time of interview. About 13 percent of the live-born children were reported as deceased by interview date, thus yielding an overall survival ratio of 87 percent. As expected, the mean number of deceased children increases with age and parity. Women in the age group 20–24 had 2.4 lives births, on the average, having lost 0.2 and ending up with 2.2; while women at ages 45 and over had 8.8 live births and ended up with 7.3. These particular data may suffer from several specific problems which may be identified as follows: (i) Selection: The surviving mothers (those interviewed) may constitute a biased sector of the population. (ii) Omission of children who died. It often occurs that there are omissions in the reporting of dead children, most frequently among older women. (iii) The problem of reporting still births as having been born alive and subsequently dying. (iv) Finally there is a problem that relates to changes in mortality, which may affect the estimates.

A similar trend may be noticed when considering the

Table 6.8. Mean Number of Children Ever Born, Living and Deceased, to All Ever-Married Women, by Current Age

| Current Age | Mean Number of Live Births | Mean Number of Living Children | Mean Number Deceased | Ratio Survived |
|---|---|---|---|---|
| <20 | 0.9 | 0.8 | 0.1 | 0.89 |
| 20–24 | 2.4 | 2.2 | 0.2 | 0.92 |
| 25–29 | 4.2 | 3.9 | 0.3 | 0.93 |
| 30–34 | 5.9 | 5.3 | 0.6 | 0.90 |
| 35–39 | 7.3 | 6.5 | 0.8 | 0.89 |
| 40–44 | 8.6 | 7.2 | 1.4 | 0.84 |
| 45+ | 8.8 | 7.3 | 1.5 | 0.80 |
| All | 5.4 | 4.7 | 0.7 | 0.87 |

Table 6.9 Percent Distribution of Ever-Married Women According to Number of Living Children and According to Current Age, by Number of Children Deceased

| Variable | Number of Children Deceased | | | | |
|---|---|---|---|---|---|
| | None | 1 | 2 | 3 | 4+ |
| Number of Living Children | | | | | |
| 1 | 96.5 | 3.5 | — | — | — |
| 2 | 90.4 | 8.3 | 1.3 | — | — |
| 3 | 81.4 | 15.6 | 2.4 | 0.6 | — |
| 4 | 76.5 | 18.9 | 4.0 | 0.3 | 0.3 |
| 5 | 71.1 | 23.1 | 3.8 | 1.4 | 0.5 |
| 6 | 61.9 | 27.4 | 7.9 | 2.8 | 0.0 |
| 7 | 49.9 | 32.9 | 13.2 | 3.0 | 1.6 |
| 8+ | 40.3 | 32.8 | 14.9 | 7.6 | 4.5 |
| Current Age | | | | | |
| <25 | 83.9 | 3.5 | 1.9 | 0.6 | 0.1 |
| 25–34 | 72.2 | 20.1 | 6.3 | 1.0 | 0.4 |
| 35–44 | 62.2 | 25.5 | 8.2 | 2.9 | 0.9 |
| 45+ | 53.7 | 26.2 | 8.3 | 8.3 | 3.5 |

distribution of living and deceased children by marital duration. Women who were married for 5–9 years had 3.4 live births, with 3.2 surviving, while those with marital duration of 25–29 had 9.1 live births, with 7.5 surviving.

Table 6.9 shows clearly that as parity increases, the percentage of women who experience a child death increases. The table is, however, confined to only 2,563 ever-married women who have had up to 8 live births.

About 3.5 percent of women who had one live birth have experienced losing that child. Of the women who have had two children, 8.3 percent have experienced one child death and 1.3 percent have lost both children.

Detailed examination of this table shows a very high level of internal consistency. The quality of the data appears to justify further analyses which will make use of the dates of the child deaths and the ages at death.

# CHAPTER 7

# PREFERENCE FOR NUMBER AND SEX OF CHILDREN

## 7.1. INTRODUCTION

In the preceding chapter, fertility behaviour was studied from several angles. The present chapter introduces the attitudinal dimensions as measured by women's preferences for additional children, the number they would choose to have in all, and finally preferences for sons or daughters. The concern here is to investigate what Stycos[1] calls the 'fertility belief system' which he refers to as 'the sum total of consciously held beliefs and attitudes, common to a group which have explicit preferences to fertility behaviour'.

The data, then, depend mainly on statements of opinions and attitudes. This, in fact, is a major limitation in this type of research which is based on the assumptions that people have opinions on these issues, and that these opinions are potential indicators of future behaviour.[2] However, in developing countries, Jordan being no exception, this may not be the case. Opinions may be changeable or superficial responses, reflecting a high degree of fatalism and religiousness. 'It has sometimes been suggested that for people in developing cultures the idea of family size is a Western culture import and that there is lack of realism in asking how many children are wanted.'[3] Women are traditionally expected, for cultural and religious reasons, to have a strong fatalistic ideas with regard to number of children and they might therefore consider as ridiculous a question about the number of children wanted. However, the widespread use of contraception in Jordan (see Chapter 8) implies that family building is increasingly subject to conscious deliberation, and, for this reason, the study of attitudes should be of at least some assistance in understanding fertility.

## 7.2. DESIRE TO CEASE CHILDBEARING AND ADDITIONAL NUMBER OF CHILDREN WANTED

In the JFS questionnaire, the question 'Do you want to have another child sometime?' was asked of fecund,

currently married women, except those currently pregnant. If a woman was currently pregnant, she was asked if she would like to have another child sometime in addition to the expected one. Currently married women who had been sterilized for contraceptive purposes were automatically classified as wanting no more children.

The number of additional children wanted was ascertained in the following way. Women who reported a desire for another child were asked how many boys and how many more girls they wanted, and these two components were summed. Women who wanted no more children, or were undecided, or had been sterilized for contraceptive purposes, were asked whether they had wanted any more children *before* they had become pregnant with their last child. If the answer to this retrosepctive questions was 'no', then a value of 'minus one' was assigned to the variable 'additional number of children wanted'. If the answer was 'yes' or 'undecided', a value of zero was assigned in the case of women who wanted no more or had been sterilized, while those undecided about another child were retained in an undecided category.

The analysis in the present section is based on all currently married women who were pregnant or believed themselves fecund, plus currently married women who had been sterilized for contraceptive purposes (total of 3,069 out of 3,612).

The underlying hypothesis is that a woman's desire to cease childbearing increases with age and number of living children: and for those who still want more, that there is a strong inverse relationship between the additional number wanted and the number of living children.

Out of the 3,069 women considered, 41.7 percent[1] expressed an opinion that they wished to have no more children, 4.1 percent were undecided, while the remainder wanted more children. The strength of the desire to cease childbearing can better be measured by taking into account the number of living children. Table 7.1 reveals that when a woman is still childless or has one or two living children, the desire for more children is quite strong. Among those with three or four children, nearly one-third wanted no more and this proportion rises to one-half among women with five or six living children. Further

[1] Stycos, J. M. *Family and Fertility in Puerto Rico*, N.Y.: Cornell Univ. Press 1955, p. 158.

[2] Okediji, F. O. 'Changes in Individual Reproduction Behaviour and Cultural Values' *Lecture Series on Population*, IUSSP, Bucharest 1974, p. 42.

[3] Coombs, L. C. 'Are Cross-Cultural Preference Comparisons Possible? A Measurement–Theoretic Approach' *IUSSP papers* No. 5, Liege, Belgium, 1975, p. 31.

[1] Standard error = 1.2 percent.

Table 7.1. Percentage of Currently Married, 'Fecund' Women Who Want No More Children and Mean Additional Number of Children Wanted, by Number of Living Children (Including any Current Pregnancy) and by Current Age

| Age | | Number of Living Children | | | | | | | Number of Cases | Mean (2) | Other Answers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1–2 | 3–4 | 5–6 | 7–8 | 9+ | Total | | | |
| <20 | Percent | 3.6 | 5.6 | 24.8 | — | — | — | 7.0 | 316 | — | 1 |
| | Mean (1) | 4.3 | 3.8 | 3.5 | — | — | — | 3.9 | — | 4.2 | — |
| 20–24 | Percent | 2.7 | 5.9 | 21.8 | 34.6 | * | — | 15.4 | 583 | — | 8 |
| | Mean (1) | 3.7 | 3.4 | 2.6 | 2.0 | * | — | 2.9 | — | 3.4 | — |
| 25–29 | Percent | 0.0 | 15.7 | 28.4 | 39.6 | 53.7 | * | 32.2 | 669 | — | 22 |
| | Mean (1) | 4.1 | 2.2 | 1.9 | 1.4 | 0.7 | * | 1.7 | — | 2.6 | — |
| 30–34 | Percent | 10.9 | 13.2 | 42.9 | 52.5 | 61.1 | 78.6 | 50.9 | 574 | — | 21 |
| | Mean (1) | 2.8 | 2.3 | 1.4 | 0.9 | 0.7 | −0.2 | 1.0 | — | 1.5 | — |
| 35–39 | Percent | * | 44.2 | 52.2 | 61.1 | 75.1 | 71.7 | 66.0 | 464 | — | 11 |
| | Mean (1) | * | 1.4 | 1.1 | 0.5 | 0.2 | −0.2 | 0.4 | — | 1.2 | — |
| 40–44 | Percent | * | * | 67.2 | 66.1 | 81.0 | 84.8 | 77.2 | 303 | — | 7 |
| | Mean (1) | * | * | 0.6 | 0.5 | −0.2 | −0.2 | 0.1 | — | 0.5 | — |
| 45+ | Percent | * | * | 76.3 | 80.6 | 75.6 | 77.1 | 75.6 | 160 | — | 4 |
| | Mean (1) | * | * | * | 0.2 | 0.2 | 0.2 | 0.2 | — | 0.9 | — |
| Total | Percent | 4.2 | 10.4 | 31.5 | 50.9 | 68.8 | 78.3 | 41.7 | 3,069 | — | 74 |
| | Mean (1) | 4.0 | 3.0 | 2.1 | 1.0 | 0.4 | −0.1 | 1.6 | — | — | — |
| | Mean (2) | 4.2 | 3.5 | 2.9 | 2.0 | 1.1 | — | — | — | 2.8 | — |
| Other Answers | | — | 9 | 24 | 23 | 10 | 7 | 74 | — | — | — |

* Less than ten cases
Mean (1) Calculated for all women including those who do not want more children.
Mean (2) Calculated only for those who want more children.
(Both means were calculated for women who gave numerical answers only.)

increases are observed for larger family sizes, though even for women with 9 or more children, only just over three-quarters (78.3 percent[1]) indicated a desire to limit family size.

The mean additional number of children wanted for all currently married 'fecund' women is 1.8 (1.6 subtracting unwanted pregnancies[2]). This mean is useful for predictive purposes. The mean additional number of children wanted, when restricted to only those who declared their wish for more children and mentioned the specific number they wanted is, 2.8. That latter means is as high as 4.2 for childless women and declines gradually with family size.

As current age and number of living children are highly associated, the proportion of women wanting to cease childbearing increases rapidly with age. A further observation is that, when the number of living children is controlled, the proportion of those who want to cease childbearing increases with age. This is shown in Figure 7.1. (As a point of caution, many cells contain too few frequencies to draw concrete conclusions.) This pattern of results may be explained by realizing that women, as they grow older, can do very little in terms of additional children, so they may be expected to declare less interest in further childbearing, just by being realistic. This is

further substantiated when mean number of additional children is considered, with number of living children held constant, since younger women wish for a higher average of additional children than older women. The mean number of additional children wanted is negative for some cells in Table 7.1, generally in the cases of older women with high parity. This indicates the existence of a substantial number of women who did not want their last child, a point that will be discussed in the next section.

The percentage of women wanting to cease childbearing and the mean number of additional children wanted are related to marital duration. Women who have been married longer are likely to have more living children and they are more likely to want to cease childbearing: consequently, the mean number of additional children wanted decreases with increasing marital duration. (Appendix Tables 3.1.2 and 3.2.4.)

Data which relate the desire to cease childbearing to women's education attainment are reported in Table 7.2. As has already been shown earlier, it is the least educated of the population that has borne the most children, yet, it appears at first glance that these very women are most likely to desire no more children. The better educated women, on the other hand, tend to be those who have married later, and hence had fewer children at the time of the interview. In as much as many of them have not had

[1] Standard error = 2.5 percent.
[2] Standard error = 0.07 for both figures.

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Figure 7.1. Percentage Wanting to Cease Childbearing, by Number of Living Children
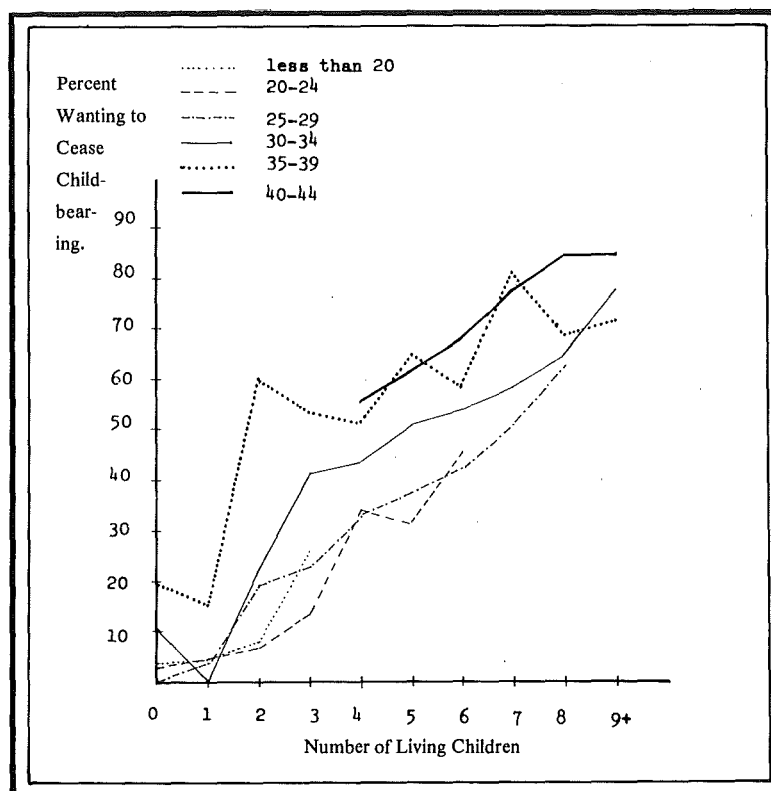


Table 7.2. Percentage of Currently Married, 'Fecund' Women Who Want No More Children and Mean Additional Number of Children Wanted, by Number of Living Children (Including Any Current Pregnancy) and by Level of Education

| Education | Number of Living Children | | | | | | | Mean (2) | Mean Standardized for Number of Living Children | Number of Cases |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5+ | Total | | | |
| No Schooling | | | | | | | | | | |
| Percent | 5.3 | 6.2 | 8.2 | 15.7 | 27.1 | 61.5 | 44.0 | — | 37.8 | 1,998 |
| Mean (1) | 4.7 | 4.2 | 3.2 | 3.2 | 2.4 | 0.6 | 1.6 | 2.9 | — | — |
| Elementary | | | | | | | | | | |
| Percent | 2.0 | 3.0 | 11.0 | 21.8 | 44.3 | 68.7 | 34.1 | — | 46.3 | 655 |
| Mean (1) | 3.5 | 4.2 | 2.7 | 2.2 | 0.7 | 0.1 | 1.8 | 2.8 | — | — |
| Preparatory | | | | | | | | | | |
| Percent | * | 2.7 | 15.2 | 49.6 | 68.8 | 80.4 | 39.9 | — | 59.7 | 193 |
| Mean (1) | 2.7 | 3.5 | 1.8 | 0.7 | 0.3 | −0.3 | 1.3 | 2.2 | — | — |
| Secondary+ | | | | | | | | | | |
| Percent | 1.7 | 4.8 | 37.4 | 57.8 | 74.5 | 76.8 | 44.9 | — | 57.5 | 223 |
| Mean (1) | 2.9 | 2.5 | 1.2 | 0.8 | 0.2 | −0.1 | 1.1 | 2.0 | — | — |
| All Women | | | | | | | | | | |
| Percent | 4.2 | 4.5 | 15.2 | 24.5 | 38.3 | 63.4 | 41.7 | — | 41.7 | 3,069 |
| Mean (1) | 4.0 | 3.8 | 2.5 | 2.5 | 1.6 | 0.5 | 1.6 | 2.4 | — | — |
| Number of Cases | 155 | 291 | 361 | 353 | 362 | 1,547 | — | — | — | 3,069 |

* Less than 10 cases.
Mean (1) Calculated for all women including those who do not want more children.
Mean (2) Calculated for only those who want more children.

time to have two or three children, a higher percentage tend to desire to have more children. When this percentage is examined controlling for number of living children, it is clear that the proportion of women wanting to cease having children increases as education becomes higher. Therefore, when these percentages are standardized for number of living children, the trend becomes clearly an increasing one; the standardized proportion for women with less than elementary education becomes only 38 percent and increases to approximately 60 percent for those of preparatory education or over.

The mean number of additional children wanted declines, as expected, with number of living children within each educational level. The mean number of additional children, for those who declared their desire for more, declined from 2.9 among those with less than elementary education to only 2.0 for those with secondary education or more. This is so despite the fact that the higher the educational level, the less the number of living children a woman has.

The proportion of women wanting to cease childbearing is significantly lower in rural than in urban areas. Only 30 percent of currently married, 'fecund' women living in rural areas expressed a desire to cease childbearing, as compared to about 47 percent among urban residents. As a result, the mean number of additional children wanted is much higher in rural than in urban areas, 2.5 compared to 1.2 children. (Appendix Tables 3.1.3B and 3.1.3C.)

Religious groups show clear differences in regard to the proportion wanting to cease childbearing and in the mean additional number of children wanted. While only 40 percent of Muslim women expressed the desire to cease childbearing, the figure reached 58 percent and 71 percent among Catholic and other Christian women, respectively. The mean number wanted was 1.7, 0.6, 0.1 for the three religious groups: Muslims, Catholics, and others, respectively. That same pattern was observed regardless of number of living children, and even when current age was controlled. However, it is not easy to reach more specific conclusions on religious differences due to the very small cell sizes — 66 Catholics and 105 other Christians — especially when classified according to age and number of living children.

No consistent differences emerge when desire to cease bearing children and the mean additional number of children wanted is considered in relation to pattern of work. (Appendix Table 3.1.3E.) Women who are not currently working but worked since marriage show higher proportions wanting to cease childbearing (more than 50

percent) and a lower average number of additional children wanted than for other categories. Those currently working, if they did not work before marriage, had a moderately high proportion of not wanting additional children (46 percent) and a low mean additional number of children (1.0). If currently working women had also worked before marriage, they scored high in average additional number of children wanted (1.8) and were the lowest group who wanted to cease childbearing (36 percent). When the mean number of additional children wanted was computed only for those who want more children, three categories showed high means in comparison with others. The three categories are those who had never worked, women who worked before marriage only, and surprisingly those currently working who worked also before marriage.

Standardization by number of living children reduces the differences, but it is still not possible to verify the hypothesis that working women tend to have less desire for additional children. In fact, both women who have never worked and currently working women have, more or less, the same pattern. To study the relationship between pattern of work and desire for additional children, more detailed analysis is necessary, relating pattern of work and probably length of employment and its status.

## 7.3. UNWANTED BIRTHS

Women who indicated a desire for no more children, or were undecided or had been sterilized for contraceptive purposes were asked the question: 'Thinking back to the time before you became pregnant with your last child, had you wanted to have any more children?'

Answers to this question must be interpreted with great caution because women were being asked to recall a preference that may never have been formulated consciously, and which is subject to subsequent rationalization or forgetfulness. In addition, such retrospective questions are prone to miscomprehension.

Despite these possible limitations, the pattern of findings is plausible and indicates that childbearing frequently exceeds the wishes of women. Thirty percent of all currently married women with at least one birth (or a current pregnancy) stated that their last child (or pregnancy) was unwanted. Naturally there is a strong relationship with family size, the proportion rises gradually from 1.4 percent for women with one living child to 9.5 percent for those with three children. A large increase to 23.2 percent is observed for those with four

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Table 7.3. Percentage of Women Who Did Not Want Last or Current Pregnancy, by Number of Living Children and by Current Age. Confined to Currently Married Women With At Least One Live Birth (or a Current Pregnancy)

| Current Age | Number of Living Children | | | | | | | | | Total | |
| | 0 or 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9+ | Percent | Number |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | 1.8 | 5.9 | 20.1 | 16.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.2 | 243 |
| 20–24 | 2.0 | 3.8 | 7.0 | 20.7 | 27.0 | 53.5 | 61.3 | 0.0 | 0.0 | 10.3 | 556 |
| 25–29 | 0.0 | 6.6 | 5.6 | 25.5 | 28.7 | 37.2 | 47.6 | 37.3 | 53.1 | 22.8 | 690 |
| 30–34 | 0.0 | 2.7 | 20.4 | 18.1 | 33.3 | 40.6 | 42.7 | 54.1 | 67.2 | 36.0 | 611 |
| 35–39 | 0.0 | 11.9 | 8.8 | 22.4 | 30.0 | 30.7 | 49.3 | 49.5 | 67.9 | 43.1 | 530 |
| 40–44 | * | 21.5 | 20.0 | 22.5 | 31.6 | 31.5 | 52.7 | 51.6 | 63.8 | 47.1 | 424 |
| 45+ | * | 18.8 | 0.0 | 35.6 | 39.9 | 36.3 | 32.6 | 50.6 | 51.6 | 41.3 | 363 |
| Total Percent | 1.4 | 6.1 | 9.5 | 23.2 | 30.9 | 36.4 | 45.2 | 50.8 | 61.8 | 30.0 | |
| Number of Cases | 338 | 389 | 381 | 414 | 379 | 407 | 334 | 273 | 503 | | 3,417 |

* Less than 10 cases.

children and then a steady rise to 61.8 percent amongst the group with nine or more living children (Table 7.3). When number of living children is controlled, the proportion that their last birth was unwanted varies little by age. The validity of these data will be discussed again in the next section.

## 7.4. TOTAL NUMBER OF CHILDREN DESIRED

This section is based on responses to the question 'If you could choose exactly the number of children to have in your whole life, how many children would that be?'. Therefore, the question is phrased in terms of the respondent's own position, rather than in terms of a more generalized ideal or norm. The question is intended to gauge personal attitudes, and, therefore responses will be termed 'number of children desired' rather than 'ideal number of children'.

Nevertheless, that question still suffers from the same limitations stated above about additional number of children desired. 'It is expected that women who have more children will also want more, as a result of reciprocal effects. To the extent that achieved fertility is the realization of fertility performances, women who wanted large families will have had large families.'[1] In other words, an upward bias in the number of children desired may stem from a woman stating a preference higher than what she may actually have preferred in order to adjust her stated preference to correspond to her achieved fertility, perhaps as a justification or for cultural constraints. As Freedman puts it 'Many women who already had large families would be unwilling to express a preference for fewer children than they had, because according to folklore this would mean that they wished their last children dead'.[2] This assertion was not wholly

supported by the Jordanian data because a high proportion of women did in fact express a preference for a smaller number than they actually had and, as shown in the previous section, a substantial minority reported that they had not wanted their last child. But to some extent, the objection may still be valid, since a high proportion of women, especially those with a large number of children, expressed as a preference exactly the number they have.

One particular point that applies to the JFS is that interviewers insisted that the respondent specify the number of children desired. Any other kind of answer, such as saying that such matters were up to God, fate, or chance, was not acceptable. Even answers such as 'undecided' were not accepted. This may have led to some bias in the woman's response by forcing her to give an answer whether it really expressed her attitude or not. She may even have given an answer that she thought would please the interviewer.

The first observation from Table 7.4 is that the overall mean number of children desired for currently married women is 6.3, which is high by any standard.[1] In 1972, the reported 'ideal' average number of children was 6.0. The demographic implication of such a mean is rapid population growth.[2] Women who stated two children as desired, a choice that signifies eventual suspension of population growth, comprised only a small minority (5.4 percent). Three children, which signifies moderate growth, was the choice of only 8.1 percent. One-fifth of women, however, chose four children as their desired number, while the remaining 65.1 percent stated a preference for five or more children. In other words, the majority expressed preferences that imply rapid population growth.

The modal desired size disregarding the cumulative percentage for these who chose 9 or more, is 4 children.

[1] WFS, op. cit., p. 32.
[2] Freedman, R. and J. Y. Takeshita. *Family Planning in Taiwan.* N.J. Princeton Univ. Press, 1969, p. 38.

[1] Standard error = 0.09 children.
[2] CELADE and CFSC, op. cit., p. 104.

Table 7.4. Percent Distribution of Currently Married Women According to Total Number of Children Wanted, by Current Age

| Current Age | Total Number of Children Wanted | | | | | | | | | | Mean Number of Living Children | Number of Cases |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 or 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9+ | Mean | | |
| <20 | 1.6 | 10.0 | 9.6 | 35.3 | 12.0 | 16.2 | 2.5 | 4.6 | 8.1 | 4.9 | 0.8 | 332 |
| 20–24 | 1.2 | 5.4 | 10.4 | 27.9 | 12.5 | 18.0 | 6.9 | 6.8 | 11.0 | 5.6 | 2.2 | 588 |
| 25–29 | 0.1 | 5.7 | 8.9 | 21.1 | 16.6 | 17.3 | 10.1 | 6.7 | 13.4 | 5.9 | 3.9 | 690 |
| 30–34 | 0.6 | 5.2 | 8.1 | 16.6 | 12.5 | 15.2 | 9.9 | 13.1 | 18.8 | 6.4 | 5.3 | 613 |
| 35–39 | 0.6 | 4.2 | 5.2 | 15.8 | 11.1 | 14.9 | 11.1 | 10.5 | 26.5 | 6.8 | 6.5 | 521 |
| 40–44 | 0.3 | 3.2 | 7.0 | 15.0 | 7.7 | 12.1 | 8.1 | 8.5 | 38.0 | 7.5 | 7.2 | 402 |
| 45+ | 0.2 | 5.3 | 6.2 | 16.2 | 8.8 | 8.9 | 7.2 | 7.7 | 39.4 | 7.6 | 7.3 | 322 |
| Total | 0.6 | 5.4 | 8.1 | 20.8 | 12.2 | 15.2 | 8.5 | 8.5 | 20.7 | 6.3 | 4.7 | 3,458 |

The percentage of women choosing that number decreases with age (Figure 7.2) that is, while 35.3 percent of women aged less than 20 thought of 4 as their desired number, only 19 percent among women aged 40 to 44 stated this number. The distribution of women by the desired number of children becomes more evenly distributed with increase in age. The limitations stated at the beginning of this section may have been partially responsible for that.

Women in the younger age groups tend to desire a smaller number of children than older women, perhaps reflecting either a tendency towards more favourable attitudes towards smaller family size for the younger cohorts, or more likely due to the rationalization or cultural constraints mentioned earlier. But even among the younger women in the sample, whose views on desired family size are of the greatest practical importance

Figure 7.2. Percent Distribution of Currently Married Women According to Total Number of Children
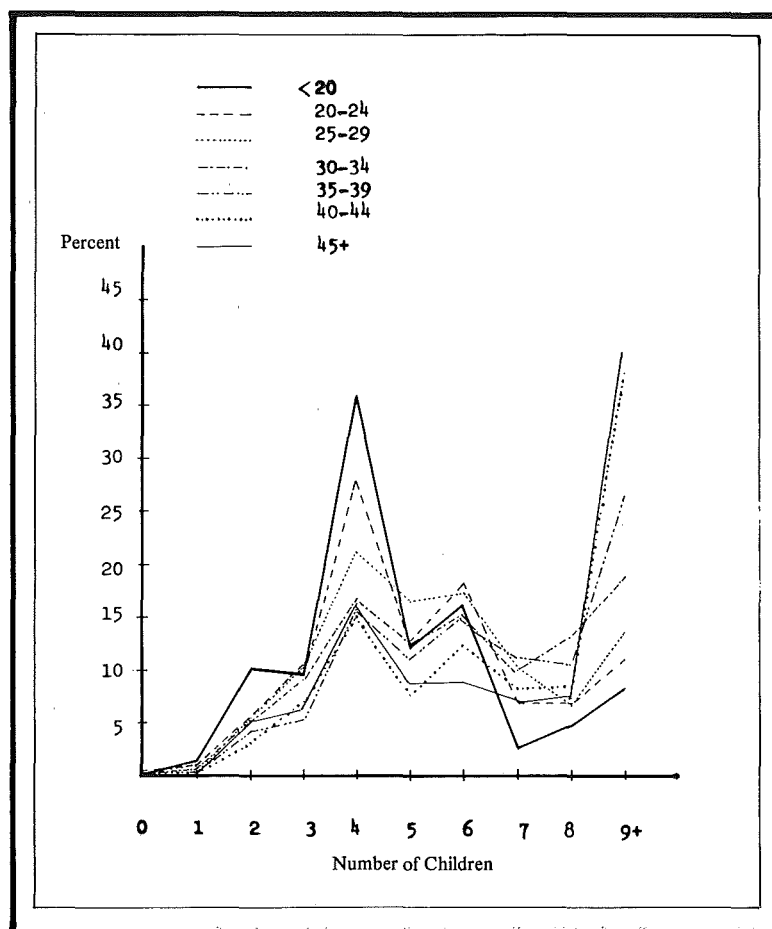
because they still have most of their reproductive life ahead of them, desired sizes are large. Women aged less than twenty want 4.9 children on average, while those in the 20 to 24 age group report an average of 5.6 children wanted.

Figure 7.3 shows that the mean number of living children never exceeds the mean desired for any age group. If women aged 45 or more represent completed fertility, it may be said, that they desire, on the average, 7.5 children and have had 8.8 live births, of which 7.3 are still living, which is approximately what they profess to want. This is an unusual result, for in many studies conducted in developing countries, the results have shown an excess of actual fertility, especially as women progress to the end of childbearing.[1] The Jordanian case shows that, on the average, the desired number is higher than the number of living children, even for women who have completed their fertility. These results are consistent with those observed earlier in the section on additional number of children desired (where even women aged 45 or more

[1] Khalifa, Atef 'A Proposal Explanation of The Fertility Gap Differentials by Socio-Economic Status and Modernity: The Case of Egypt' *Pop. Studies* XXVII No. 3, 1973 p. 431. Also CELADE and CFSC op. cit.

still wanted, on the average, a positive figure) but they appear to be inconsistent with the findings concerning whether the last birth was wanted or unwanted (Table 7.3). Table 7.5 and 7.6 shed some light on this point.

Table 7.5 shows clearly that the average total number of children desired increases constantly with number of living children. The mean desired is always higher than the number of living children up to the number 7. At eight living children, the mean number desired begins to fluctuate and then falls behind when the number is 9 or more.

The first three columns of Table 7.6 and Figure 7.4 show the change in the relationship between desired and actual family size, as number of living children increases. The proportion of women who desire more than what they actually have decreases constantly with increase in number of living children. Women who have 8 living children were split almost equally between desiring less, equal, or more than the actual number. Women with nine or more living children were split equally between those desiring less or equal, with those desiring more decreasing to the lowest proportions (approximately 1 out of every 4).

Figure 7.3. Means of Number of Children Wanted, Ever Born, and Still Living, for Ever-Married Women, by Current Age
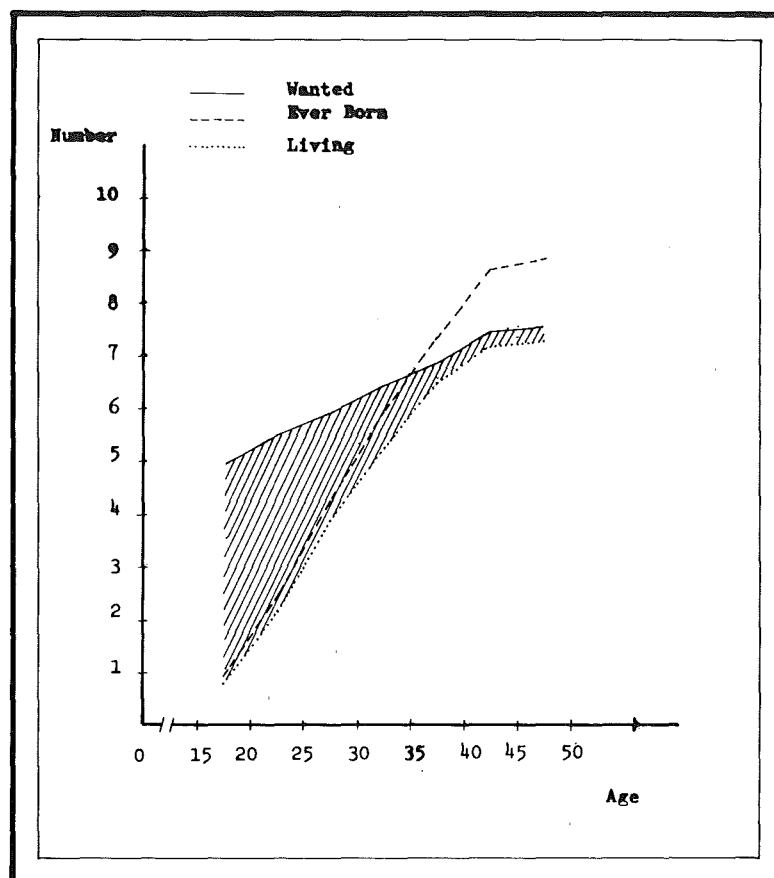
Table 7.5. Mean Total Number of Children Wanted by Currently Married Women, by Number of Living Children (Including Any Current Pregnancy) and by Current Age

| Current Age | Number of Living Children | | | | | | | | | | | Total Number of Living Children |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9+ | Mean | |
| <20 | 4.5 | 4.8 | 5.1 | 5.6 | * | — | — | — | — | — | 4.9 | 322 |
| 20–24 | 3.8 | 5.2 | 5.0 | 5.9 | 6.2 | 7.4 | 7.2 | * | — | — | 5.6 | 588 |
| 25–29 | 4.6 | 4.0 | 4.2 | 5.6 | 5.6 | 6.6 | 6.6 | 7.6 | 8.8 | * | 5.9 | 690 |
| 30–34 | 3.4 | 3.6 | 4.3 | 4.8 | 5.2 | 6.2 | 6.7 | 7.5 | 7.8 | 8.4 | 6.4 | 613 |
| 35–39 | 4.3 | 4.2 | 3.0 | 4.4 | 5.2 | 5.5 | 6.6 | 6.9 | 7.8 | 8.5 | 6.8 | 521 |
| 40–44 | 5.7 | * | 3.9 | 4.5 | 5.8 | 7.0 | 7.3 | 7.5 | 7.4 | 8.7 | 7.5 | 402 |
| 45+ | * | * | * | * | 4.4 | 6.2 | 7.1 | 7.6 | 8.0 | 8.7 | 7.6 | 322 |
| Total | | | | | | | | | | | | |
| Mean | 4.3 | 4.7 | 4.6 | 5.6 | 5.6 | 6.4 | 6.8 | 7.4 | 7.8 | 8.6 | 6.3 | |
| Number | 195 | 306 | 371 | 367 | 394 | 363 | 393 | 326 | 261 | 485 | | 3,456 |

* Less than 10 cases.

The shape of the curve for those who desire more seems to decrease slightly at the beginning and at the end, with the faster decline between the numbers 3 to 8 children.

Table 7.6 also facilitates a comparison of three indices of fertility preferences: total desired family size, desire for no more births, and 'unwanted' births. Though differences in the subpopulation (Col. 4 excludes infecund women) and in the definition of number of living children (current pregnancies are not included for the data in Col. 5), the comparison nevertheless is revealing. A close corres- pondence may be observed between the proportion wanting no more children and the proportion whose desired family size is less than or equal to actual family size, in particular for those with four or more living children. However, the percentage of women who did not want their last birth is very much greater than the percentage whose total desired size was less than actual size. This discrepancy should be investigated in greater detail in subsequent analysis, but it does suggest that the retrospective question concerning the last birth may have been widely misunderstood.

Figure 7.4. Percentage of Currently Married Women Who Want Less, Equal, or More Than the Number of Living Children, by Number of Living Children



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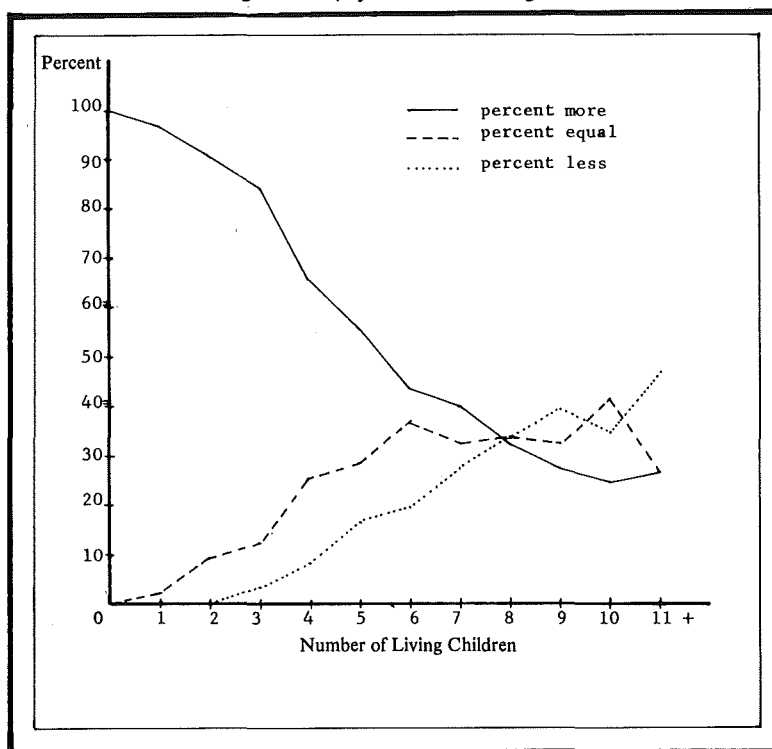
Table 7.6. Percent Distribution of Currently Married Women According to Wanting Less, Equal, or More Than Number of Living Children

| Number of Living Children | Percent Wanting | | | Percent Wanting No More Children | Percent Not Wanting Last Pregnancy | Number |
|---|---|---|---|---|---|---|
| | Fewer | Equal | More | | | |
| 0 | — | 0.9 | 99.9 | 4.2 | 0.0 | 287 |
| 1 | 0.7 | 2.3 | 97.0 | 4.5 | 1.4 | 311 |
| 2 | 0.3 | 9.1 | 90.6 | 15.2 | 6.1 | 367 |
| 3 | 3.4 | 12.5 | 84.1 | 24.8 | 9.5 | 366 |
| 4 | 8.3 | 25.9 | 65.9 | 38.3 | 23.2 | 385 |
| 5 | 16.7 | 28.2 | 55.1 | 49.2 | 30.9 | 352 |
| 6 | 19.8 | 36.2 | 43.9 | 54.5 | 36.4 | 379 |
| 7 | 27.7 | 32.3 | 40.0 | 68.9 | 45.2 | 318 |
| 8 | 34.4 | 33.1 | 32.5 | 69.3 | 50.8 | 342 |
| 9+ | 39.8* | 33.9 | 28.3 | 78.3 | 61.8 | 450 |
| Total | 16.4 | 23.0 | 60.6 | 41.7 | 30.0 | 3,458 |

* Restricted to women with one or more live births or currently pregnant.

## 7.5. DIFFERENTIALS IN THE TOTAL NUMBER OF CHILDREN DESIRED

Having considered the desired number of children, we now identify the main factors that explain or account for differences in these desires. The first variable to consider is age at first marriage. The hypothesis is that women who marry early have high fertility preferences.

Table 7.7 seems to verify the hypothesis that women marrying early tend to have, generally speaking, preferences for larger families. Women married at an age less than 15 had a mean of 7.2 children, which declines with increasing age at first marriage to reach only 4.2 for those married at 30 or more. This appears to hold true when marital duration is controlled. However, this conclusion must be stated with caution. As seen earlier, age at first marriage is associated with many other factors, such as education. Therefore, differentials shown in the mean number of desired children may be due to these other factors rather than age at first marriage itself. This is a possibility which may be examined in future analysis.

Table 7.7 Mean Total Number of Children Wanted By Currently Married Women, by Years Since First Marriage and by Age at First Marriage

| Age at First Marriage | Years Since First Marriage | | | | Mean |
|---|---|---|---|---|---|
| | <10 | 10–19 | 29–29 | 30+ | |
| <15 | 6.0 | 7.2 | 7.7 | 8.1 | 7.2 |
| 15–19 | 5.4 | 6.6 | 7.4 | 7.8 | 6.3 |
| 20–24 | 4.8 | 6.3 | 6.9 | — | 5.6 |
| 25–29 | 3.8 | 5.7 | * | — | 4.5 |
| 30+ | 4.2 | * | — | — | 4.2 |
| Total | 5.3 | 6.6 | 7.4 | 8.0 | 6.3 |
| Number | 1,395 | 1,129 | 752 | 182 | 3,458 |

* Less than 10 cases.

Educational attainment is an important factor in determining women's fertility preferences. Women who are more educated desire less children. Women with no schooling desired, on the average, 7 children. Those with elementary education have a mean of 5.3, women with preparatory education desire only 4.4, and, finally, women with secondary or more have the lowest mean of 3.9 children desired. That same pattern is found when number of living children is controlled (Table 7.8).

Although comparisons between different religions are not highly reliable due to the small number of cases of Catholics and other Christians, it can be stated in a general way (and only for the overall average) that Muslims prefer a larger family size than do Christians. While Muslim women desired an average of 6.4 children, the figure was only 4.5 and 4.2 for Catholics and other Christians, respectively.

Currently married women residing in rural areas seem to want, on the average, a larger total number of children (7.1) than do women in urban areas (6.0). The differences between rural and urban areas are sharpened when number of living children is controlled.

Pattern of work had no obvious effect on desired number of children. No consistent pattern emerged with different patterns of work, even when number of living children, or age of both were controlled. The only observation is that women who never worked had a slightly higher mean total of children wanted than others (Appendix Table 3.3.7E).

Husband's occupation seems to have a clear relation to preferences. Wives of farmers and agricultural workers have preferences for a high number of children; they desire

Table 7.8. Mean Total Number of Children Wanted by Currently Married Women, by Number of Living Children (Including Any Current Pregnancy) and by Selected Background Variables

| Variable | Number of Living Children | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | 0 | 1–2 | 3–4 | 5–6 | 7–8 | 9+ | Mean | Number |
| A. Education | | | | | | | | |
| No School | 4.8 | 5.2 | 6.3 | 7.0 | 7.7 | 8.7 | 7.0 | 2,340 |
| Elementary | 3.7 | 4.8 | 4.9 | 5.8 | 7.3 | 7.2 | 5.3 | 689 |
| Preparatory | 3.0 | 4.2 | 4.2 | 5.2 | * | * | 4.4 | 201 |
| Secondary+ | 3.0 | 3.4 | 4.0 | 5.2 | * | — | 3.9 | 229 |
| B. Religion | | | | | | | | |
| Muslims | 4.3 | 4.7 | 5.7 | 6.8 | 7.6 | 8.6 | 6.4 | 3.258 |
| Catholics | * | 3.1 | 4.8 | 4.7 | * | * | 4.5 | 73 |
| Other Christians | * | 3.1 | 3.6 | 4.5 | 5.7 | * | 4.2 | 127 |
| C. Region of Residence | | | | | | | | |
| Amman | 4.1 | 3.9 | 5.0 | 5.9 | 7.1 | 8.2 | 5.7 | 1,218 |
| Zarka and Irbid | 3.9 | 4.7 | 5.0 | 6.4 | 7.2 | 9.2 | 6.4 | 207 |
| Towns | 4.6 | 4.5 | 5.5 | 6.7 | 7.6 | 7.7 | 6.2 | 498 |
| Large Villages | 4.6 | 5.9 | 6.4 | 7.2 | 8.1 | 8.8 | 7.2 | 219 |
| Medium Villages | 4.3 | 5.7 | 6.6 | 7.6 | 8.0 | 9.1 | 7.0 | 572 |
| Small Villages | 4.7 | 5.8 | 6.7 | 8.1 | 9.3 | 8.0 | 7.2 | 243 |
| Total Urban | 4.2 | 4.2 | 5.1 | 6.2 | 7.3 | 8.5 | 6.0 | 2,423 |
| Total Rural | 4.5 | 5.7 | 6.5 | 7.6 | 8.3 | 8.7 | 7.1 | 1,035 |
| Total | 4.3 | 4.6 | 5.6 | 6.7 | 7.6 | 8.6 | 6.3 | |
| Number | 195 | 677 | 761 | 754 | 587 | 485 | | 3,458 |

* Less than 10 cases.

an average of 7.9 children. Wives of husbands who work in sales or household and other service occupations had lower means of 6.7 and 6.5, whereas unskilled had an average of 7.1. If the husband is a skilled worker, his wife has a still lower desired number of children with an average of 6.3; and if a clerical worker, 5.7. The lowest mean number of desired children was 4.8, observed among wives of husbands working in technical occupations (Appendix Table 3.3.7F). These findings must be taken with caution since, as has been noted earlier, the relationship between husband's occupation and wife's education and pattern of work is close.

## 7.6. PREFERENCES CONCERNING THE SEX OF CHILDREN

Islamic teaching and Arab tradition form the socio-cultural configuration of the traditional Jordanian family pattern, which is a patriarchal family, male dominated, and characterized by strong family ties. According to the Jordanian system of moral principles and social norms, sons in particular must take care of their parents, any unmarried sisters, daughters, in addition to widows and divorced women. Unmarried sons live with the family and have to obey the family head and they represent an important source of income.[1] Therefore sons are looked

upon as being of more benefit to the family than daughters, either through working or providing eventual old-age security. In addition, Arab traditions have always valued sons highly, as a source of pride, security, and for their active part in defending the family. With this background in mind, it will be expected to find strong son preferences in Jordan.

The objective of the present section is the detection of any possible impact of the sex of children currently alive upon future fertility intentions, namely, whether the woman wants more children, the preferred sex if she does want more, the mean additional number wanted, and the total number desired.

Most findings in the literature suggest lower fertility for families already having a sufficient number of sons.[1] However, in at least one study[2] this relationship has not been found, in the sense that women have the same number of subsequent pregnancies, regardless of the sex composition of the first three children. It is the intention of the present section to examine the applicability of such findings on Jordanian society, though the possible effect of

[1] Asad, El and A. Khalifa, op. cit., p. 33.

[1] Coombs op. cit. and Freedman, R., L. Coombs, and M. C. Chang, 'Trends in Family Size Preferences and Practice of Family Planning: Taiwan, 1965–1970', Studies in Family Planning 3: 12 The Population Council: N.Y., 1972.
[2] Repetto, R. 'Son Preference and Fertility Behaviour in Developing Countries' Studies in Family Planning 3: 4 70–76 The Population Council: N.Y., 1972.

sex composition on fertility performance will be left for subsequent analysis. The first approach is to investigate the effect of the sex composition of living children on the proportion who want no more children. In order to obtain as sharp a contrast as possible between those women who have mostly sons and those who have mostly duaghters, current pregnancies and currently pregnant women are excluded altogether from this section. This is due mainly to the fact that the sex of the unborn child is not known.

It has been shown earlier that the percentage of women who want to cease childbearing increases with both age and parity. However, the magnitude of the increase is clearly different for each sex, indicating clear, strong son preferences. Table 7.9 and Figure 7.5 show these findings. When total number of living children is held constant, wives with no sons want, in clearly lower proportions, to cease childbearing. These proportions are much higher when they have no daughter showing more satisfaction with this situation than in the case of no sons. For example, when the total number of living children is four,

44.5 percent of women with four boys and no girls indicate a willingness to cease childbearing, while only 18 percent think the same way when all four are daughters.

Table 7.9. Percentage of Currently Married, 'Fecund' Non-Pregnant Women Who Do Not Want More Children, by Number of Living Children and by Number of Living Sons

| Number of Living Children | Number of Living Sons | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| 0 | 4.2 | — | — | — | — |
| 1 | 3.7 | 8.6 | — | — | — |
| 2 | 5.0 | 19.6 | 17.2 | — | — |
| 3 | 21.8 | 15.2 | 32.5 | 30.4 | — |
| 4 | 18.0 | 28.1 | 38.4 | 41.0 | 44.5 |
| 5 | 13.3* | 33.1 | 51.0 | 60.2 | 67.0 |
| 6 | | 30.9* | 48.9 | 55.9 | 58.6 |
| 7 | | | 57.0* | 71.9 | 72.7 |
| 8 | | | | 74.8* | 75.6 |
| 9+ | | | | | 80.6* |
| Total | 6.3 | 19.7 | 38.9 | 57.8 | 68.4 |

* This figure is for the indicated number of children or more.

Figure 7.5. Percentage of Currently Married, 'Fecund' Non-Pregnant Women Who Want No More Children, by Number of Living Children, for Varying Sex Compositions



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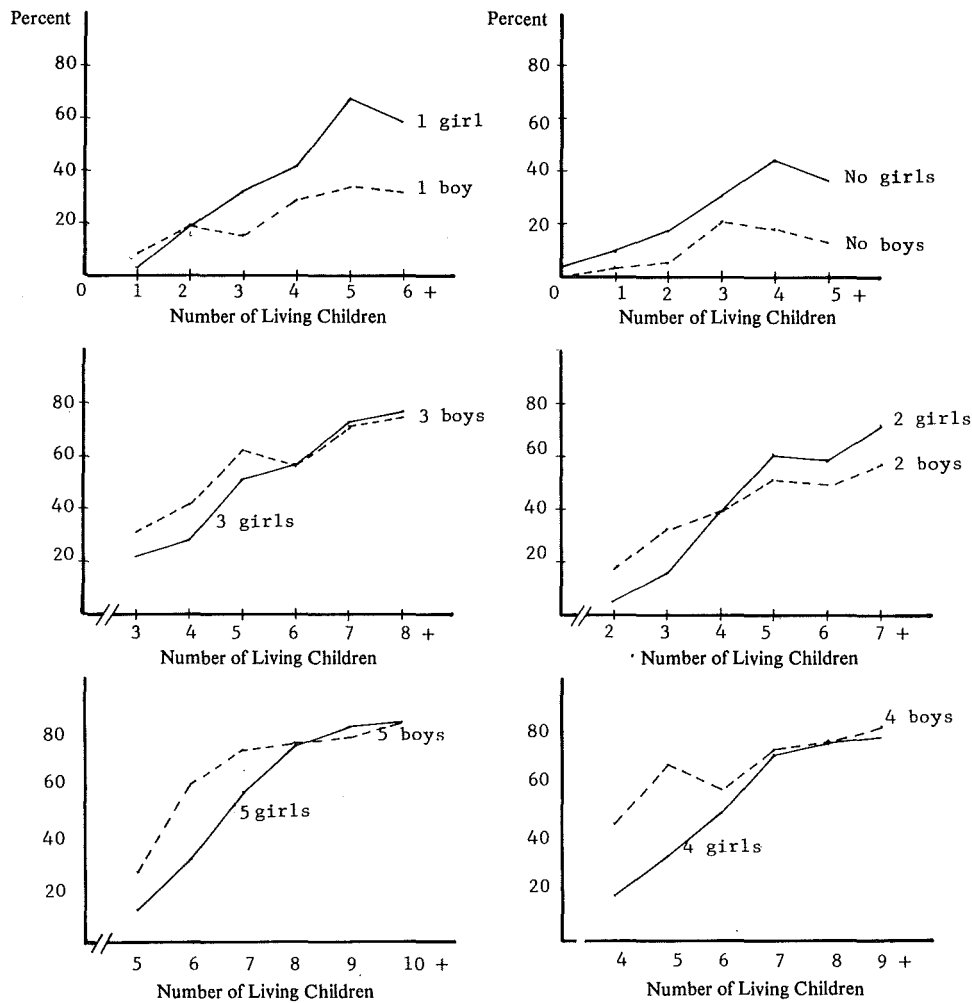
Figure 7.5 shows also that satisfaction becomes greater as the number of sons in the family increases. This is the case for each total number of living children considered. For women with four living children, 18 percent want to cease childbearing if they have no sons; this proportion increases to 28.1 percent if there is one son and to 38.4 percent if they have two sons. These proportions do not show the same trend with an increase of number of daughters. This simply leads to the conclusion that the proportion wanting no more children increases rapidly with the number of living sons, for wives with similar numbers of living children.

The desire for a balanced sex composition is less apparent than that for a sex composition in favour of sons. For women with four living children, 38 percent desire to cease childbearing if the composition is balanced, but 41 percent desire so if they have three sons, and the figure rises to 44.5 percent when all four children are sons. For women with six living children, 55.9 percent desire to cease childbearing with a balanced sex composition. The percentage drops to 48.9 in a composition of 4 daughters and two sons yet increases to 58.6 when the composition is 4 sons and two daughters. This suggests that Jordanian women are more content with a preponderance of boys than with a balanced sex composition.

Another way of measuring sex preference is illustrated in Table 7.10. These data are derived from responses to the question. 'Would you prefer your next (first) child to be a boy or a girl?', which was asked of all non-pregnant fecund, currently married women who wanted to have more children.

Overall, 42.5 percent of these women would prefer a boy, 13.3 percent a girl while the remainder (44.2 percent) expressed no preference. Among childless women, 36.4 percent prefer their first child to be a boy as compared to only 14.8 percent preferring a girl. It is clear that the percentage preferring the next child to be a boy is always higher than that preferring a girl as long as the sex composition is in favour of girls or balanced. With a large number of living daughters, the imbalance in favour of sons becomes more pronounced. For example, when the number of living daughters is four, none preferred the next child to be a girl, regardless of the number of living sons they already have. Yet when the number of sons is also four, 42.7 percent preferred the next child to be a boy. Even when the number of boys is five or more, and the number of daughters is only four, none of the wives preferred the next child to be a girl, whereas 19.3 percent of them still preferred a boy.

Figure 7.6 shows the overall percentages preferring the next child to be a boy or a girl by either number of daughters or number of sons (regardless of the total number of living children). It is clear that the percentage 'preferring the next child to be a boy is always higher except in two instances: first, when there are no living daughters and second, when number of sons is five or more. These last two cases do not give any indication of a general preference for girls: rather it is a desire to have a girl when there are no daughters and the number of living sons is already satisfactory.

Finally, an attempt will be made to detect whether son preferences are related to mean additional number and

Table 7.10. Percentage of Currently Married, 'Fecund' Non-Pregnant Women Preferring Boys Next and Girls Next, by Number of Living Sons and by Number of Living Daughters. Confined to Women Wanting Another Child

| Number of Living Daughters | Preference | Number of Living Sons | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5+ | Percent | Number of Cases |
| 0 | Boy | 36.4 | 15.0 | 13.4 | 18.9 | 11.4 | 8.3 | 24.0 | 343 |
| | Girl | 14.8 | 31.4 | 59.7 | 47.8 | 79.2 | 84.6 | 34.1 | |
| 1 | Boy | 50.2 | 32.2 | 23.1 | 16.1 | 0.0 | 10.6 | 31.8 | 323 |
| | Girl | 1.6 | 4.0 | 22.0 | 17.1 | 45.7 | 34.8 | 11.7 | |
| 2 | Boy | 74.7 | 61.3 | 41.5 | 34.1 | 40.2 | 13.5 | 52.4 | 260 |
| | Girl | 1.8 | 0.0 | 3.4 | 1.8 | 15.8 | 0.0 | 2.9 | |
| 3 | Boy | 88.7 | 68.0 | 60.2 | 45.8 | 35.5 | 31.6 | 59.3 | 154 |
| | Girl | 0.0 | 0.0 | 0.0 | 8.7 | 3.0 | 17.6 | 3.3 | |
| 4 | Boy | * | 79.0 | 59.7 | 48.2 | 42.7 | 19.3 | 60.7 | 88 |
| | Girl | * | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| 5+ | Boy | 91.8 | 82.2 | 66.4 | 79.9 | 65.5 | 41.2 | 73.4 | 101 |
| | Girl | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.3 | 1.4 | |
| Total | Boy | 53.9 | 45.9 | 35.7 | 37.7 | 32.6 | 19.1 | 42.5 | |
| | Girl | 7.0 | 8.7 | 21.1 | 13.5 | 23.6 | 25.4 | 13.3 | |
| Number of Cases | | 355 | 348 | 258 | 138 | 88 | 81 | — | 1,269 |

* Less than 10 cases.

Figure 7.6. Number of Women Who Prefer a Boy or Who Prefer a Girl, by Number of Living Daughters (Sons). Confined to Currently Married, 'Fecund' Non-Pregnant Women Who Want Another Child
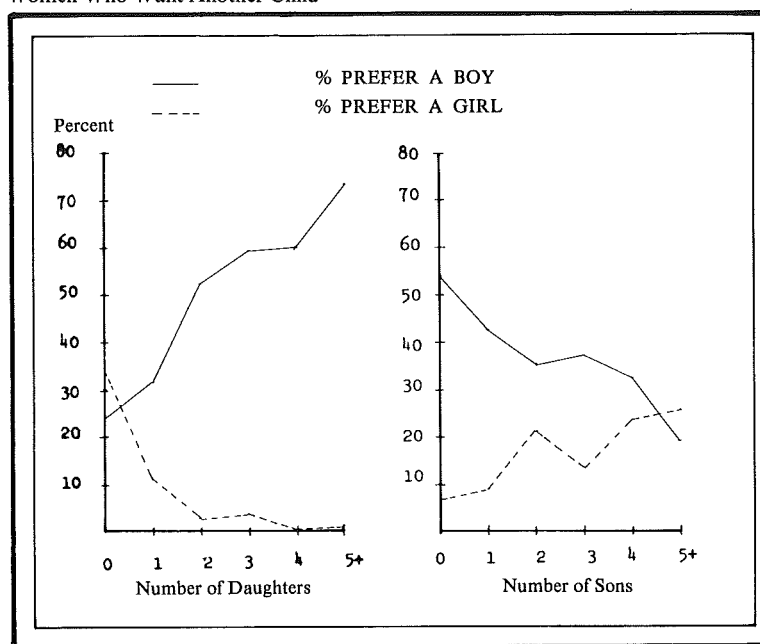


mean total number of children wanted. This is important since it is directly related to future fertility intentions.

Table 7.11 gives an indication of the significance of son preference on future fertility intentions. The overall mean number of additional children for currently married, 'fecund' non-pregnant women is 1.5. As indicated earlier, this mean declines with parity, age, and duration of marriage regardless of the sex composition of the children. The effect of sex composition on the additional number of children wanted can be seen from Table 7.11. In general, when number of living children is held constant, women desire fewer numbers of additional children as the number

of sons increases, though there are a few exceptions to this pattern.

Table 7.11 also indicates that balancing the sex composition will not particularly affect the mean number of children desired. For example, when the number of children is four, and the sex composition of the children is balanced the mean additional number of children wanted is 1.6: it increases at 2.1 for those with three daughters and one son, and it drops to only 1.0 for those with three sons and one daughter. If all four are girls the mean is as high as 2.4.

Similarly, it seems from Table 7.12 that a woman

Table 7.11. Mean Additional Number of Children Wanted by Currently Married, 'Fecund' Non-Pregnant Women, by Number of Living Sons and by Number of Living Children

| Number of Living Children | Number of Living Sons | | | | |
| --- | --- | --- | --- | --- | --- |
| | 0 | 1 | 2 | 3 | 4 |
| 0 | 4.0 | — | — | — | — |
| 1 | 3.7 | 3.5 | — | — | — |
| 2 | 2.7 | 2.4 | 2.1 | — | — |
| 3 | 2.0 | 2.3 | 2.6 | 1.9 | — |
| 4 | 2.4 | 2.1 | 1.6 | 1.0 | 1.4 |
| 5 | 2.4* | 1.5 | 1.0 | 1.3 | 0.5 |
| 6 | | 0.9* | 0.7 | 1.3 | 0.4 |
| 7 | | | 0.5* | 0.2 | 0.0 |
| 8 | | | | 0.1* | 0.2 |
| 9+ | | | | | 0.2* |
| Total | 3.5 | 2.4 | 1.6 | 0.9 | 0.3 |
| Number of Cases | 379 | 436 | 443 | 371 | 307 |

* This figure is for the indicated number of children or more.

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desires a higher mean total number of children when the number of her sons is less than the number of her daughters or even equal, and further this pattern holds true for any given number of living children.

More evidence concerning son preferences will be given later in connection with current use of contraception.

To summarize, it is apparent that Jordanian women have strong preferences for sons over daughters: more women are satisfied with a sex composition biased towards sons, and accordingly they want to cease childbearing in higher proportions, when these conditions are fulfilled. A balanced sex composition is not as satisfying as one with more boys. Most women prefer their next child to be a boy rather than a girl. When a woman, controlling for number of living children, has more boys than girls, she desires fewer additional children on average and even her preferences for the total number of children desired are less. This last finding testifies to the impact of son preferences on future fertility intentions.

Table 7.12. Mean Total Number of Children Wanted by Currently Married, Non-Pregnant Women, by Number of Living Sons And by Number of Living Children

| Number of Living Children | Number of Living Sons | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| 0 | 4.3 | — | — | — | — |
| 1 | 4.8 | 4.3 | — | — | — |
| 2 | 4.8 | 4.5 | 4.4 | — | — |
| 3 | 5.7 | 5.6 | 5.9 | 4.9 | — |
| 4 | 6.3 | 5.9 | 5.5 | 5.1 | 5.4 |
| 5 | 7.9* | 6.3 | 6.2 | 6.8 | 5.8 |
| 6 | | 6.4* | 7.0 | 7.3 | 6.7 |
| 7 | | | 7.3* | 7.5 | 7.5 |
| 8 | | | | 8.2* | 7.2 |
| 9+ | | | | | 8.3* |
| Total | 4.8 | 5.3 | 6.0 | 6.8 | 7.0 |
| Number of Cases | 433 | 482 | 519 | 449 | 377 |

* This figure is for the indicated number of children or more.

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# CHAPTER 8

# KNOWLEDGE AND USE OF CONTRACEPTION

## 8.1. INTRODUCTION

Knowledge of methods of contraception is a prerequisite for their use, but alone it is insufficient to stimulate action. Therefore, the person who lacks this knowledge is unable to make a family planning choice. The present chapter explores rather fully the level of knowledge of contraceptive methods at the time of the survey. Furthermore, it attempts to examine the factors associated with possession of absence of knowledge. It is also the objective of this chapter to study the extent to which knowledge has been translated into action. This is important in Jordan because at the time of the survey there was no government organized programme for promoting or providing family planning services. Most of the efforts at that time were private. The first family planning association was established on the West Bank in 1963, and the first was established on the East Bank at the end of 1971, in Irbid. This was followed by a few others, established during 1972–1975 in the city of Amman itself.[1] All these were private efforts. Jordan had, until that time, no specific population policy. In later years, the official position of Jordan tended to support family planning as an integrated part of maternal and child health and an assurance of the right of the family to choose freely the number and timing of their children.[2]

The present chapter will attempt to identify those categories of the population which have the highest and the lowest levels of knowledge and use. A distinction between ever-users and current users will be necessary. Ever-users include both current users or users some time in the past. Contraception is defined as any deliberate practice, including sterilization, undertaken to reduce the risk of conception.

The data for the present chapter were derived from section four in the questionnaire which contains 21 questions. (See Appendix I.) There are some points of caution, however, which must be kept in mind when interpreting tables based on these data.

Due to the self-reporting nature of the survey, knowledge of contraception is defined as simply 'hearing of' a

specific method as the woman reports, whether before or after probing. 'Ever-use' may have been sporadic or incorrect. 'Current use' may, in practice, mean simply 'recent' use, with a vague interpretation of 'recent'.[1]

The first section deals with breastfeeding, an important proximate determinant of fertility, because one of its physiological functions is to prolong post partum amenorrhoea. The duration of the period of infecundity following a birth is a function of the duration and intensity of lactation.[2]

## 8.2. BREASTFEEDING PRACTICE IN THE CLOSED INTERVAL

Breastfeeding is believed to prolong the period of post partum amenorrhoea. It is asserted that, in societies with negligible use of contraceptives, one of the most important factors limiting fertility levels far below the theoretical maximum is the practice of breastfeeding.[3] 'Knowledge about the physiological mechanisms connected with breastfeeding is incomplete but it is thought that the sucking action triggers a hormonal response causing a delayed return of the menses.'[4] Some studies have questioned the extent of the effect of breastfeeding on fertility levels, in the sense that 'the relatively high inverse correlation existing between breastfeeding and fertility virtually disappears when infant mortality is held constant.'[5]

A birth interval can be divided into four components.[6]

(1) An infecundable interval immediately following a birth. In the absence of lactation, this segment averages about 1.5 months, while prolonged lactation results in infecundable periods of up to two years. The duration of this birth-interval segment is usually measured from birth to the first post partum

[1] Asad, El, 'Some Dimensions of Family Planning in Jordan', a paper presented in Conference of Arab Scholars in Health & Population, Alex. 3–8, 1978.
[2] Ibid., p. 17 and p. 20.

[1] WFS op. cit p. 34.
[2] Bongaarts, John 'A Framework for Analysing the Proximate Determinants of Fertility' *Population & Development Review 1978*, Vol. 4, No. 1, p. 107.
[3] Myntti, C. 'The Effects of Breast-Feeding, Temporary Emigration and Contraceptive Use on the Fertility of the Yemen Arab Republic' *Population Council Regional papers* May 1978, p. 1.
[4] Ibid., p. 2.
[5] Knodel, J. and Van de Walle *Breast-Feed, Fertility and Infant Mortality* (1967), mentioned in U.N. op. cit., p. 75.
[6] Bongaarts, John op. cit., p. 115.

menses, because the return of menses, closely coincides with the return of ovulation.

(2) Waiting time to conception, which starts at the first ovulation following birth and ends with a conception. Although few measurements are available, existing observations indicate that population averages for this interval range from a low of about 5 months to high values that only rarely exceed 10 months, with typical values around 7.5 months.

(3) Time added by spontaneous intrauterine mortality. In cases where a conception does not end in a live birth, the duration of a shortened pregnancy and another waiting time to conception are added to the birth interval. On average, the time added by intrauterine mortality equals about 2 months per birth interval.

(4) A nine-months' gestation period ending in a live birth.

'Without lactation, a typical average birth interval can therefore be estimated to equal 1.5 + 7.5 + 2 + 9.'

For women with two or more live births and who are not currently pregnant, the last closed birth interval is defined as the period between date of last live birth and date of next-to-last live birth. For currently pregnant women with one or more live births, the expected birth date of the next child will be considered instead of the date of the last live birth. Therefore, the data are necessarily limited to women who have had at least two live births (or at least one birth and a current pregnancy).

The objectives of the present section are to show:

(a) the pattern of variation in the length of breast-feeding in the last closed interval according to age at marriage, birth order of the child and background variables; and

(b) to determine whether, and to what extent, breast-feeding has affected the length of the closed interval.

Table 8.1 gives the pattern of breastfeeding in the closed interval for all women with such an interval. Data in this table show the general pattern of breastfeeding in the closed interval for all women with such an interval. The results are affected by involuntary termination of breast-feeding by infant death or by conception. This problem of self-censoring is taken into account in Table 8.2 where the data on breastfeeding are shown only for women whose child survived for at least twenty-four months and who did not conceive for the same length of time.

Before attempting to comment on the patterns observed in either Tables 8.1 or 8.2, it must be realized that responses are affected by considerable heaping, especially at multiples of 6. This problem of heaping distorts the pattern. The extent of heaping can be seen clearly in the histogram shown in Figure 8.1. This is just a point of caution, and no attempt will be made in the present report to adjust the data.

Table 8.1. Percent Distribution According to Length of Breastfeeding in Last Closed Interval, by Current Age and by Birth Order. Confined to Women With at Least Two Live Births (Including Any Current Pregnancy)

| | Duration of Breastfeeding* | | | | | Number of Women |
|---|---|---|---|---|---|---|
| Variable | <6 Months | 6–11 Months | 12+ Months | Mean | Did Not Breastfeed | |
| Current Age | | | | | | |
| <25 | 30.9 | 27.8 | 32.7 | 8.8 | 8.6 | 571 |
| 25–34 | 25.5 | 21.7 | 44.6 | 10.6 | 8.2 | 1,242 |
| 35–44 | 18.3 | 21.4 | 52.0 | 12.5 | 8.3 | 936 |
| 45+ | 14.2 | 22.0 | 59.2 | 14.1 | 4.6 | 355 |
| Birth Order | | | | | | |
| 1 | 40.8 | 20.8 | 30.1 | 8.3 | 8.0 | 337 |
| 2 | 31.5 | 25.6 | 33.5 | 8.9 | 9.4 | 365 |
| 3 | 27.9 | 20.3 | 43.0 | 10.5 | 8.8 | 356 |
| 4+ | 19.2 | 21.0 | 52.3 | 12.3 | 7.5 | 2,047 |
| Total | 23.9 | 21.4 | 46.8 | 11.2 | 7.9 | 3,105 |

* It is assumed that responses have been given in terms of 'nearest month' rather than 'completed months'. For example, if the response is 6, it is usually meant 5.5 to 6.5. Tables 8.1 and 8.2 assumed that this is the case and responses of 6 and 12 were divided each by 2 to make the categories in the tables possible. For example, less than 6 months duration included adding up all responses below 6 and half of the responses of 6 months, and so on.

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Table 8.2. Percent Distribution of Women According to Length of Breastfeeding in Last Closed Interval, by Current Age and by Birth Order. Confined to Women With at Least Two Live Births (Including Any Current Pregnancy) Whose Last Closed Interval Exceeded 32 Months and Whose Child Survived at Least Two Years

| Variable | Duration of Breastfeeding | | | | Did Not Breastfeed | Number of Women* |
|---|---|---|---|---|---|---|
| | <6 Months | 6–11 Months | 12–23 Months | Mean | | |
| Current Age | | | | | | |
| <25 | 23.3 | 19.7 | 49.7 | 11.0 | 7.3 | 59 |
| 25–34 | 20.4 | 18.8 | 52.9 | 11.7 | 7.9 | 314 |
| 35–44 | 16.7 | 23.7 | 51.9 | 12.0 | 7.7 | 327 |
| 45+ | 12.3 | 19.1 | 66.5 | 14.3 | 2.1 | 129 |
| Birth Order | | | | | | |
| 1 | 29.2 | 16.4 | 46.3 | 10.3 | 8.1 | 68 |
| 2 | 29.7 | 21.4 | 38.9 | 9.2 | 10.0 | 87 |
| 3 | 27.0 | 17.6 | 47.2 | 11.0 | 8.2 | 93 |
| 4+ | 13.3 | 22.0 | 58.6 | 13.0 | 6.1 | 580 |
| Total | 17.5 | 21.6 | 54.0 | 12.2 | 6.9 | 828 |

* Excludes women breastfeeding more than two years.

Figure 8.1. Percent Distribution of Women Who Breastfed, by Duration of Breastfeeding in Months



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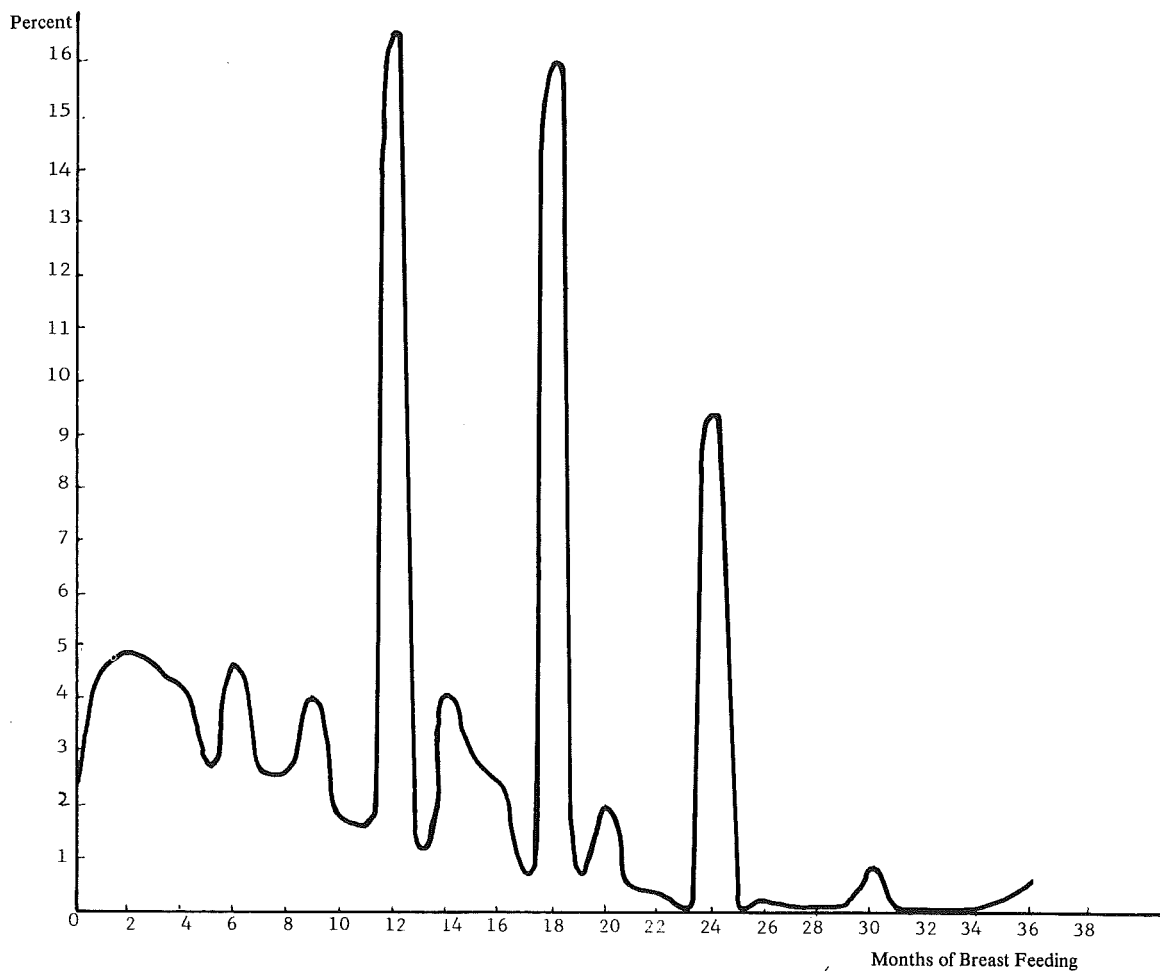
It seems from Table 8.1 that older women breastfed for longer periods than younger ones. For women less than 25 years of age, 8.6 percent did not breastfeed at all, and only one-third breastfed for one year or more. The average duration for these young women, computed by assigning a zero value for women who did not breastfeed, is 8.8 months. The average duration of breastfeeding increased to 10.6 months, 12.5 months and 14.1 months for women aged 25 to 34, 35 to 44, and 45 or more, respectively. The percentage of women who breastfed for one year or more reached 52.0 for women aged 35 to 44 and 59.2 percent for women aged 45 and over. The proportion who never breastfed was the lowest for women 45 or more (2.1 percent). As the duration of breastfeeding by birth order is necessarily affected by age, an interpretation that duration of breastfeeding increases with the birth order of the last-but-one child would be misleading since higher order births occur predominantly to older women. A control by age is therefore necessary before any conclusion may be drawn.

When the problem of self-censoring is taken into account in Table 8.2 by confining data to breastfeeding in the first 24 months for women whose closed interval was at least 33 months and whose child survived at least two full years, the age pattern was the same, though differences were reduced. The mean length varied slightly up to age 44 but increased more sharply for the oldest age group: a similar pattern is apparent in the proportion of women who breastfed for one or more years. The percentage of women who did not breastfeed remains about the same regardless of age, up to age 44. Among women 45 or more, this proportion is much lower. The fact that the proportion of women who never started breastfeeding is much the same in Tables 8.1 and 8.2 demonstrates that perinatal mortality is not the explanation for the behaviour of this minority of women.

We turn now to the question of whether breastfeeding has affected the length of the closed interval. Therefore,

Table 8.3. Mean Length of Last Interval, by Whether the Woman has Ever Used Contraceptives, by Number of Months of Breastfeeding During That Interval, and by Current Age. Confined to Women with at Least Two Births, (Including any Current Pregnancy) Whose Last Closed Interval Did Not Exceed Five Years

| Current Age | Did Not Breastfeed | Length of Breastfeeding in Months | | | | | |
| | | 0–5 | 6–11 | 12–17 | 18–23 | 24+ | Total |
| --- | --- | --- | --- | --- | --- | --- | --- |
| <25 | 19.0 | 16.8 | 18.2 | 22.6 | 28.5 | 28.9 | 20.8 |
| 25–34 | 19.5 | 18.8 | 21.0 | 25.1 | 29.9 | 32.6 | 24.6 |
| 35–44 | 23.8 | 23.5 | 22.7 | 26.1 | 30.7 | 32.5 | 27.3 |
| 45+ | 25.3 | 29.7 | 24.1 | 27.6 | 29.2 | 35.0 | 29.5 |
| Total | 21.4 | 19.7 | 20.9 | 25.2 | 29.8 | 32.9 | 25.1 |

contraceptive use, which is another major determinant of interval length must be controlled: this is most conveniently achieved by confining attention to women who used no method in the last closed interval. Thus, data in Table 8.3 are based on all women with at least two live births (including any current pregnancy), who did not use contraception and whose last closed interval did not exceed five years. This last restriction is necessary to prevent a few extremely long intervals from affecting the means.

Figures in Table 8.3 show that mean length of closed interval increases with current age and length of breastfeeding. In general, older women had longer birth intervals, from a mean length of 20.8 months for women aged less than 25 to 29.5 for women aged 45 or more. That trend is the same regardless of duration of breastfeeding.

There appears to be no association between length of breastfeeding and length of the interval among women who weaned their child within the first year. Beyond that, however, a clear association is apparent: the mean length of the interval rises from 25.2, to 29.8, and to 32.9 months for women who breastfed from 12 to 17, 18 to 23, and 24 or more months, respectively. This pattern holds true for all age groups.

These results are difficult to interpret because of the problem of circular causality. While it is true that prolonged lactation delays the resumption of ovulation and thus prolongs the birth interval, it is equally true that conception inhibits lactation and thus brings about involuntary weaning. For this reason, no confident conclusion regarding the effect of breastfeeding on birth interval length can be reached on the basis of Table 8.3.

Finally, an attempt will be made to examine the differentials in the pattern of breastfeeding by some background variables. Women with higher education tend to breastfeed their children for a shorter duration on the average. Women with no schooling breastfed their children for a mean duration of 13.7 months, the elementary school group for 10.2, preparatory for 7.9, and finally the secondary or more group for only 6.0 months. It is not possible from the present tabulations to examine whether education in itself is responsible for this pattern or whether the relationship operates through other factors, such as the greater likelihood of women with higher education to have worked during the last interval, or their higher incomes which allows switching to powdered milk and formulae.

Table 8.4 presents mean duration of breastfeeding by pattern of work and an unexpected trend is apparent.

Contrary to the hypothesis that working women find bottle-feeding as a suitable solution, Table 8.4 shows that currently working women breastfed their babies the longest, with a mean of 13 months. The lowest mean was found among women who had worked since marriage and before marriage but are not currently working (8.8 months). This observation, however, must be interpreted with reservation, since it is important to know if the woman was working or not during the relevant interval, not just currently. It is also important to know whether working women have tended to supplement breast milk while at work by powdered formula, as compared to complete breastfeeding by other categories of women. Furthermore, the precise nature of work must be considered as an important factor. A woman might work in the fields where she can hold her child with her, or even in a cottage industry at home, for which she need not leave home at all.

It seems that rural women breastfed their babies for

Table 8.4. Mean Length of Breastfeeding in Last Closed Interval, by Number of Children Ever Born (Including Any Current Pregnancy) and by Selected Background Variables. Confined to Women With at Least Two Live Births (Including Any Current pregnancy) Whose Last Closed Interval Exceeded 32 Months and Whose Child Survived at Least Two Years

| Variable | Number of Children Ever Born | | |
|---|---|---|---|
| | 0–3 | 4+ | Total |
| Education | | | |
| No Schooling | 12.5 | 13.8 | 13.7 |
| Elementary | 9.1 | 10.6 | 10.2 |
| Preparatory | 9.1 | 7.2 | 7.9 |
| Secondary or More | 4.4 | 8.1 | 6.0 |
| Pattern of Work | | | |
| Current Work, Worked Before | 8.2 | 15.1 | 13.0 |
| Current Work, Not Before | * | 13.4 | 13.0 |
| Not Current Work, Worked Since Before Marriage | * | 9.1 | 8.0 |
| Not Current Work, Not Before Only Since Marriage | * | 14.4 | 13.1 |
| Worked Before Mariage Only | 8.6 | 12.5 | 11.6 |
| Never Worked | 10.5 | 12.6 | 12.2 |
| Religion | | | |
| Muslim | 10.4 | 3.0 | 12.6 |
| Catholic | * | 8.1 | 6.8 |
| Other Christian | 6.7 | 8.9 | 8.1 |
| Region of Residence | | | |
| Amman | 7.0 | 11.7 | 10.8 |
| Zarka and Irbid | 8.3 | 11.0 | 10.6 |
| Towns | 11.8 | 12.2 | 12.2 |
| Large Villages | 11.1 | 13.7 | 13.4 |
| Medium Villages | 14.7 | 16.2 | 15.9 |
| Small Villages | 12.9 | 16.4 | 15.8 |
| Total | 9.7 | 12.7 | 12.2 |

longer than did women in urban areas, especially in large cities, such as Amman, Zarka and Irbid. Women in rural areas breastfed for an average duration of 15.4 months in the last closed interval as compared to only 11 months for women in urban areas. In the last closed interval, women with less than four children ever born, breastfed for shorter periods than did women with four or more children ever born, whether in rural or urban areas. The longest mean length of breastfeeding observed in the last closed interval was in medium or small villages, expecially for women with four or more live births.

Perhaps because it is a religious prescription, Muslin women breastfeed their children for longer periods than Christians, and the proportion of those who do not breastfeed at all amongst them is lower. When husband's occupation is considered, it is clearly apparent that wives of those working as farmers or in agricultural or unskilled occupations breastfeed for longer durations than wives of technical, clerical or skilled husbands. Wives of husbands working in sales or service occupations fall in between. (Appendix Table 4.1.5.)

## 8.3. KNOWLEDGE OF CONTRACEPTION

Because of the definition of knowledge as simply 'heard of', it is expected that high proportions will report knowledge of contraceptives, though they may not have sufficiently detailed and precise knowledge to permit a trial use of a method. Therefore, the discussion is limited to the familiarity with particular methods, since no report is possible about how well-informed the respondents were about each method.

The discussion is based on all ever-married women, since knowledge and ever-use do not depend on current marital status.

Methods of contraception may be divided into efficient or modern ones, and inefficient or traditional ones. The former includes pills, IUD, other female scientific methods (such as foam tablets, diaphragms and jellies) condoms and sterilization.

Table 8.5 presents a summary of the status of knowledge concerning contraception which characterized Jordanian women at the time of the survey. Figures show that almost 97 percent[1] of all ever-married women had heard of at least one efficient contraceptive method. This result destroys any illusion that the Jordanian women are totally ignorant of methods of contraception. In the 1972 survey the proportion of those who knew a method was 93.6 percent. That was in response to the question: 'Here

[1] Standard error = 0.3 percent.

are some methods married couples use to delay or prevent a pregnancy, which one have you heard about?' (Read the methods listed.) It seems therefore that almost universal knowledge about ever-married women in childbearing ages about at least one method has existed for several years.

Table 8.5. Percent Distribution of All Ever-Married Women According to Knowledge of Contraceptive Methods, by Current Age

| Current Age | No Knowledge | Knows | | Number of Women |
| | | Ineffective Methods Only | Effective Methods | |
|---|---|---|---|---|
| <20 | 4.2 | 0.9 | 94.8 | 329 |
| 20–24 | 2.6 | 0.2 | 97.2 | 596 |
| 25–29 | 2.3 | 0.0 | 97.7 | 709 |
| 30–34 | 2.5 | 0.2 | 97.3 | 628 |
| 35–39 | 3.1 | 0.0 | 96.9 | 543 |
| 40–44 | 2.5 | 0.0 | 97.5 | 435 |
| 45+ | 4.5 | 0.0 | 95.5 | 372 |
| Total | 2.9 | 0.2 | 96.9 | 3,612 |

The proportion who do not know any method whether efficient or inefficient, was 2.9 percent, which is very low. That proportion was slightly higher for the very young wives less than age 25 and for older wives aged 45 or more — 4.2 and 4.5 percent, respectively.

The various contraceptive methods were not equally known. On an overall basis, the ranking of familiarity of the methods was as follows:[1]

| | | Percent |
|---|---|---|
| (1) | Pill | 95.8 |
| (2) | Female Sterilization | 78.8 |
| (3) | IUD | 76.0 |
| (4) | Withdrawal | 54.2 |
| (5) | Condom | 50.6 |
| (6) | Rhythm | 50.1 |
| (7) | Abstention | 32.5 |
| (8) | Other Female Scientific Methods | 21.4 |
| (9) | Douche | 19.8 |
| (10) | Male Sterilization | 19.1 |
| (11) | Other Methods | 55.2 |

The pill was the most widely known method, followed by female sterilization and the IUD. Withdrawal, condom, and rhythm methods are known by approximately 50 percent of women. Only one-third of women had heard of abstention as a means of contraception. One out of 5 women had heard of either douche, male sterilization, or other female scientific methods. That distribution suggests that almost every ever-married women in Jordan had

knowledge of at least one highly reliable method, most likely the pill, and a high percentage have knowledge of two or more such methods. The relative position of methods is almost the same for all age groups.

Knowledge of contraceptive methods was unequally distributed among women. Women with elementary education or more were almost uniformly well-informed, and only women with no schooling tended to be less informed. The lowest level of knowledge was found among women with no schooling and aged either less than 25 or 45 or more, but even among these extreme groups about 9 out of 10 women had heard of a method. This generally high level of knowledge makes it unnecessary to go into other socio-economic differentials.

## 8.4. EVER-USE OF CONTRACEPTION

Contraceptive practice is the intermediate variable primarily responsible for the wide range in the levels of fertility within marriage. In Jordan, the subject of contraception is controversial. According to the 1972 fertility survey, only 12.5 percent of the women interviewed gave unconditional approoaval, 54.5 percent supported conditional approval, while 33.1 percent expressed their disapproval.[1] More than one-half disapprove because they believe that controlling fertility is against Islam.[2]

Since 1971, increased efforts have been devoted to making family planning services more available as part of maternal and child health services. The Ministry of Health is now more supportive of the principle of family planning and works to introduce and expand family planning in all maternal and child health centres.

In the previous section, it was shown that only a small minority had not 'heard of' at least one modern, reliable contraceptive method. The present section attempts to study the extent to which this knowledge actually has been used. The present section will deal lightly with ever-use, but more detail concerning current use will be given in the next section.

Data on ever-use were obtained along with those on knowledge. Since the question is retrospective and refers to all her previous marital life, it is possible that a woman used more than one method.

An important reservation in regard to the data collected is that no assessment of the length or nature of use of the method is known. Thus, no distinction was made between women who used a method correctly and those who did

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[1] Standard errors for the first six methods listed are 0.4, 1.0, 1.5, 1.2, 1.2, and 1.2 percent, respectively.

[1] N.F.S. of Jordan 1972, op. cit., p. 119.
[2] Ibid, p. 120.

words, educated women seem more inclined to use contraceptives for spacing than do the less educated. Though women with no schooling had a relatively lower ever-use proportion in all age groups in comparison to other educational levels, the disparity is greatest among those aged less than 25 (Appendix Table 4.3.2A).

Muslims have the lowest proportion of ever-users: it is almost one-half that of the Catholics and other Christians. It is particularly interesting to observe a proportion as high as 80 percent ever-use among Catholics. However, it must be recalled that religion has been shown to be highly related to education, and most Catholics and other Christian in the sample were highly educated. Therefore, these differences between religions may be due in part to differences in education. When ever-use is considered by pattern of work, no differences are observed in the overall proportions of ever-users, except for those who worked since marriage but not currently working (whether they worked before marriage or not) who showed a clearly higher proportion of ever-users.

Wives of farmers and agricultural workers had the lowest observed proportions of ever-use, while wives of husbands in technical occupations showed the highest level (74.6 percent). Wives of household and unskilled workers reported a relatively low proportion of ever-use, 31.6 and 23.9 percent, respectively. Clerical and sales workers showed a relatively high proportion of ever-users, while skilled workers had a moderate proportion. Again, husband's occupation is highly related to wife's education and pattern of work, and thus this subject needs more detailed analysis to establish whether these variations are due to husband's occupation in itself or whether other factors influence the relationship.

The difference between rural and urban women is substantial. While 57.3 percent of ever-married women residing in urban areas were ever-users, only 20.8 percent were so in rural areas. The differences hold for variations in number of living children and in size of community. Metropolitan Amman had the largest proportion of ever-married users. Zarka, Irbid, and smaller towns had slightly lower proportions, while villages had far lower proportions.

## 8.5. CURRENT USE OF CONTRACEPTION

Thus far we have considered only 'ever-use' of contraception. We now turn to that group of persons who stated that they were using contraception at the time of the survey: therefore, the data will be based only on women for whom the question of current use is relevant, i.e. for 'exposed' women. Thus, widowed, divorced, separated,

those infecund for reasons other than contraceptive sterilization, and currently pregnant women will be included.

Table 8.10 shows that at the time of the survey, about one-fourth of the 2,338 exposed women stated that they were currently using efficient contraceptives (including sterilization) and in addition 12 percent were using inefficient methods.[1] Again, this is a high proportion, especially considering the prevailing fertility level in Jordan.

Table 8.10. Percentage of 'Exposed' Women Who Are Currently Using Specified Contraceptive Methods (Including Sterilization), by Current Age

| Method | Current Age | | | | Total |
|---|---|---|---|---|---|
| | 25 | 25–34 | 35–44 | 45 + | |
| Efficient | 14.7 | 27.5 | 32.7 | 27.6 | 25.6 |
| Pill | 12.8 | 19.7 | 20.0 | 13.6 | 17.6 |
| IUD | 0.7 | 4.2 | 3.5 | 1.9 | 3.0 |
| Condom | 1.0 | 1.7 | 3.4 | 2.5 | 2.1 |
| Other Female Scientific | 0.2 | 0.5 | 0.0 | 0.0 | 0.2 |
| Sterilization (M & F) | 0.0 | 1.4 | 5.8 | 9.6 | 2.8 |
| Inefficient | 6.4 | 13.1 | 13.9 | 13.8 | 11.6 |
| Rhythm | 1.6 | 4.0 | 3.5 | 1.9 | 3.1 |
| Withdrawal | 2.6 | 5.6 | 5.5 | 7.0 | 4.9 |
| Abstention | 0.3 | 0.5 | 0.5 | 2.0 | 0.6 |
| Others (Douche) | 1.8 | 2.9 | 4.3 | 2.9 | 3.0 |
| Total | 21.1 | 39.6 | 46.6 | 41.4 | 37.2 |

Table 8.10 also shows that about 17.6 percent are using the pill, which was the most popular method of contraception for exposed women in all age groups. The second most common efficient method, which claims only 3 percent of the exposed women, is the IUD. This method seems more popular among women 25 to 44 than among the very young, aged less than 25, or the very old, aged 45 or more. Sterilization (mainly female) increases in importance with age: no woman aged less than 25 was sterilized, while 9.6 percent of exposed women aged 45 or more were sterilized for contraceptive purposes. Turning to the inefficient methods, users of withdrawal, rhythm and others (including douche) account for about 11 percent of exposed women.

The age group that has the highest proportion of current users is the 35 to 44 year old group, where 46.6 percent of the exposed women are currently using contraceptives. Woman aged less than 25 are least likely to be current users (21 per cent).

As can be seen in Table 8.11, both the number of living children and current age are very important determinants of contraceptive use. The proportion of current users is

[1] Standard errors are 1.5 percent for efficient methods, 0.7 percent for inefficient methods, and 1.7 percent for all methods.

Table 8.11. Percentage of 'Exposed' Women Who Are Currently Using Contraception (Including Sterilization), by Number of Living Children and by Current Age

| Current Age | Number of Living Children | | | | | | | | | | Total | Number of Women |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9+ | | |
| <20 | 2.3 | 18.9 | 27.4 | 8.9 | — | — | — | — | — | — | 13.4 | 211 |
| 20–24 | 10.0 | 30.8 | 27.8 | 28.7 | 22.5 | 13.9 | * | — | — | — | 25.3 | 393 |
| 25–29 | 29.0 | 37.3 | 40.6 | 34.3 | 39.6 | 36.1 | 31.7 | 40.9 | * | * | 37.2 | 490 |
| 30–34 | * | 39.0 | 69.2 | 54.8 | 42.1 | 40.4 | 44.1 | 41.7 | 41.7 | 47.7 | 44.2 | 442 |
| 35–39 | * | * | * | 53.8 | 49.8 | 53.8 | 51.4 | 53.8 | 34.8 | 37.2 | 45.9 | 374 |
| 40–44 | * | * | * | * | * | 73.9 | 59.9 | 30.8 | 51.3 | 46.0 | 47.6 | 279 |
| 45+ | * | * | * | * | * | * | 46.0 | 49.0 | 40.7 | 43.0 | 41.4 | 149 |
| Total | 7.0 | 26.6 | 37.4 | 36.2 | 36.5 | 42.5 | 45.2 | 43.7 | 41.7 | 43.1 | 37.3 | 2,338 |

* Less than 10 cases.

high when age is 30 or more and family size is 5 or more children. The proportion is moderate when family size is between one and four children and age is 20 to 29. Finally, the proportion of current users is lower when age and family size are lower.

In sum, regardless of the methods being used, efficient or inefficient, women tend not to be users when they are still childless (93 percent are not currently users): then the proportion of current users increases until the number of living children is 5. After 5, the proportion stabilizes between 40 to 45 percent regardless of number of living children. This same pattern is observed with regard to age, that is, the proportion currently using increases rapidly until age 30 to 34, then it stabilizes at approximately the same level.

In Section 7.6, it was concluded that there is a preference for sons. It would be further evidence of the influence of these attitudes on behaviour if it could be proved that women are more likely to use contraception when the sex composition of their children is in favour of sons.

This is indicated by the figures in Table 8.12 which show that the proportion currently using tends to be higher when the number of sons is greater than the number of daughters in the family. However, there are exceptions to this pattern and the association, in any case, is not a strong one. Thus, the hypothesis that a preference for sons exerts a major influence on contraceptive use receives little support.

So far, it has been demonstrated that as the family size, which is associated with current age, increases, the pressure to practice family planning becomes greater. We turn now to examine variations in current use by some background variables, namely, wife's education, region and type of place of residence, religion, pattern of work, and husband's occupation.

Table 8.12. Percentage of 'Exposed' Women Who Are Currently Using Contraception (Including Sterilization), by Number of Living Sons and by Number of Living Children

| Number of Living Children | Number of Living Sons | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| 0 | 7.0 | — | — | — | — |
| 1 | 26.8 | 26.3 | — | — | — |
| 2 | 36.6 | 35.2 | 41.5 | — | — |
| 3 | 26.0 | 36.8 | 36.7 | 41.3 | — |
| 4 | 34.3 | 34.1 | 40.2 | 37.1 | 27.6 |
| 5 | 28.0* | 30.0 | 39.3 | 55.7 | 46.1 |
| 6 | | 33.0* | 36.9 | 44.3 | 48.3 |
| 7 | | | 36.5* | 38.1 | 35.8 |
| 8 | | | | 49.2* | 44.0 |
| 9+ | | | | | 41.8* |
| Total | 20.6 | 32.9 | 38.6 | 44.9 | 42.0 |

* This figure is for the indicated number of children or more.

Most research into the relationship between education and contraceptive use indicates clearly that better educated women use contraception more frequently and more efficiently. The same relationship is found in the JFS and is documented in Table 8.13 and Figure 8.2. The proportion using contraceptives tended to rise rather uniformly with increasing level of education: 27.8 percent of exposed women with no schooling were current users at the time of the survey, compared to 47.9 percent, 59.7 percent and 72.4 percent for elementary, preparatory, and secondary or more educated women, respectively. Within each age category, the proportion practising increases systematically with education. Again, if the number of living children is held constant, the proportion currently using still increases with education. The variations between women with no schooling and those with preparatory or more education are even stronger when the proportions are standardized for age. The proportion of women using contraception increases from 25.5 percent for women with no schooling, to 55 percent for those with

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Table 8.13. Percentage of 'Exposed' Women Who Are Currently Using Contraception (Including Sterilization), by Number of Living Children, by Current Age, and by Level of Education

| Variable | Level of Education | | | | | Number of Women |
|---|---|---|---|---|---|---|
| | No Schooling | Elementary | Preparatory | Secondary+ | Total | |
| Current Age | | | | | | |
| <25 | 8.1 | 30.8 | 35.4 | 45.7 | 21.1 | 604 |
| 25–34 | 25.6 | 57.1 | 72.4 | 78.5 | 40.5 | 932 |
| 35–44 | 38.8 | 71.5 | 94.8 | 88.7 | 46.6 | 653 |
| 45+ | 37.2 | 70.1 | * | * | 41.4 | 149 |
| Number of Living Children | | | | | | |
| 0 | 6.0 | 8.4 | 0.0 | 15.1 | 7.0 | 155 |
| 1 | 8.9 | 31.3 | 41.5 | 53.3 | 26.6 | 199 |
| 2 | 11.6 | 39.6 | 46.8 | 86.1 | 37.4 | 263 |
| 3 | 16.2 | 49.6 | 62.3 | 71.4 | 36.2 | 258 |
| 4 | 16.8 | 55.5 | 81.8 | 81.9 | 36.5 | 268 |
| 5 | 36.8 | 64.9 | 88.9 | 84.2 | 43.4 | 1,194 |
| Total | 27.8 | 47.9 | 59.7 | 72.4 | 37.3 | 2,338 |

* Less than 10 cases.

elementary, and to about 70 percent for women with preparatory or more education.

Of the three religious groups, the percentage of current users is lowest among Muslims. Catholics and other Christians had high percentages of current use. Again, it must be recalled that the educational levels among Catholics and other Christians are much higher than among Muslims, and the variation in use may be attributed to variations in education. Differences varied little when standardized by age.

The percentage of current users among exposed women differs greatly by husbands' occupations. Wives of technical or clerical husbands had the highest percentages, 62.8 and 55.0 percent, respectively. Wives of farmers and husbands working in the agricultural sector had the lowest percentage — 11.5 percent. Those working in agri-

Figure 8.2. Percentage of 'Exposed Women' Currently Using Contraceptive Methods, by Number of Living Children and by Level of Education
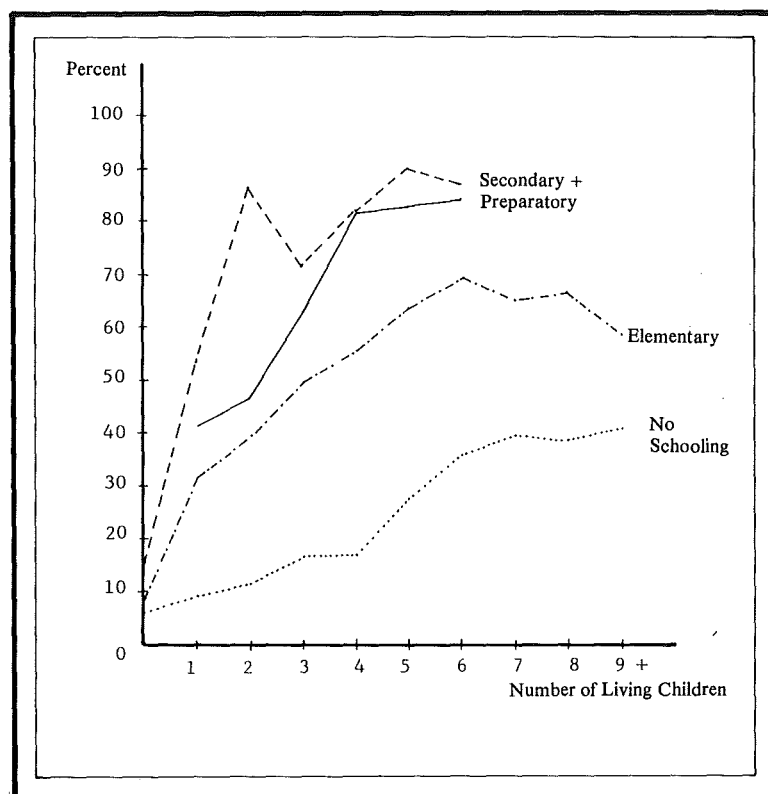
cultural occupations were mainly residing in rural areas where current use is generally low. As seen from Table 8.14, wives residing in rural areas had a level of current use of 12.9 percent (standardized by age), compared to 46.7 percent for women residing in urban areas.

## 8.6. PATTERN OF CONTRACEPTIVE USE

Pattern of contraceptive use is a summary variable, organized according to timing of most recent use and intentions for future use. The variable is classified into seven categories. It must be mentioned that this variable uses a base population consisting of all ever-married women. However, some categories are restricted to certain subgroups of the population. Intention for future use was asked only of never-users who were currently married and fecund. Current use and use earlier in the open interval was limited to non-pregnant women, while past users who used earlier in some closed interval applied to any woman, regardless of current pregnancy status, who had used some method in the past but not since the last birth.

This section presents an opportunity to compare some aspects of pattern of use in the JFS with data from the 1972 fertility survey in Jordan. In the 1972 questionnaire, a respondent indicated past use or current use in response to a list of methods. The questions were asked of all ever-married women. This makes it possible to compare some aspects of pattern of contraceptive use between the 1972 and the 1976 surveys. Table 8.15 presents this comparison in terms of the percentages of ever and current use among all ever-married women by number of living children.

In 1972, about 28.3 percent stated that they had used contraceptives in the past and 21.0 percent were practising at the time of interview (all methods, regardless of efficiency). The most widely used method at the time of the 1972 interview was still the pill. In 1976, only 22.3 percent of all ever-married women reported using a method in the past, another 24.1 percent were practising at the time of the interview. This shows a decline of 5 percent among past users and an increase of 3

Table 8.14. Percentage of 'Exposed' Women Who Are Currently Using Contraception (Including Sterilization), by Selected Background Variables

| Variable | Percentage Currently Using Contraceptives | | Number of Women |
|---|---|---|---|
| | Observed | Standardized by Age | |
| Religion | | | |
| Muslim | 34.5 | 35.5 | 2,194 |
| Catholic | 76.7 | 75.3 | 52 |
| Other Christian | 80.6 | 73.2 | 92 |
| Pattern of Work | | | |
| Currently Working: | | | |
| Worked Before | 34.0 | 31.8 | 164 |
| Did Not Work Before | 52.5 | 51.3 | 55 |
| Not Currently Working: | | | |
| Worked Before | 55.2 | 50.1 | 62 |
| Did Not Work Before | 43.2 | 40.5 | 46 |
| Worked Only Before | 38.4 | 38.6 | 232 |
| Never Worked | 36.2 | 36.5 | 1,779 |
| Husband's Occupation | | | |
| Technical | 62.8 | 62.9 | 308 |
| Clerical | 55.0 | 57.1 | 150 |
| Skilled | 37.0 | 37.5 | 720 |
| Sales | 44.6 | 41.2 | 271 |
| Household and Other Services | 27.0 | 28.9 | 648 |
| Unskilled | 21.1 | 18.6 | 51 |
| Farmers and Agricultural | 11.5 | 10.4 | 186 |
| Region and Type of Place of Residence | | | |
| Amman | 52.6 | 51.4 | 861 |
| Zarka and Irbid | 41.1 | 40.9 | 449 |
| Towns | 43.2 | 42.2 | 347 |
| Total Urban | 47.5 | 46.7 | 1,658 |
| Large Village | 15.3 | 14.5 | 133 |
| Medium Village | 11.4 | 11.8 | 377 |
| Small Village | 12.2 | 13.9 | 170 |
| Total Rural | 12.4 | 12.9 | 1,080 |

Table 8.15. Percentage of All Ever-Married Women Who Are Past Users and Current Users (Including Sterilization), by Number of Living Children: 1972 and 1976 Fertility Surveys

| Number of Living Children | Past Users 1972 | Past Users 1976 | Current Users 1972 | Current Users 1976 |
|---|---|---|---|---|
| 0 | 3.0 | 8.8 | 0.9 | 3.7 |
| 1 | 11.6 | 16.7 | 9.3 | 15.9 |
| 2 | 24.6 | 18.3 | 16.7 | 25.5 |
| 3 | 31.4 | 25.0 | 24.8 | 24.6 |
| 4 | 29.1 | 25.2 | 22.7 | 24.1 |
| 5 | 34.5 | 23.8 | 26.8 | 28.3 |
| 6 | 33.1 | 21.2 | 24.5 | 30.6 |
| 7 | 38.4 | 23.7 | 27.6 | 28.7 |
| 8 | 39.5 | 31.0 | 31.7 | 27.3 |
| 9+ | 37.1 | 27.3 | 25.9 | 27.8 |
| Total | 28.3 | 22.3 | 21.0 | 24.1 |

percent among current users.[1] Little change in overall use is apparent in the 4 year interval between the two surveys. The percentage of current users who were using inefficient methods was also about 31 percent in both surveys. The only departure from 1972 to 1976 is that current use has increased at all family sizes, especially for childless women and for those with only one or two children, probably indicating a trend to start use earlier in the process of family building.

Of all the ever-married women (3,612) interviewed in the 1976 survey, 53.6 percent had never used contraception, whether efficient or inefficient methods.[2] About one-fifth of those who never used were not fecund or not married at the time of the survey, and one-third intended to use contraception in the future (Table 8.16). The remainder (approximately one-half) thought that they would not use any contraception in the future. In other words, of all ever-married women, 27.6 percent had never used and intended no future use.[3] These constitute the

[1] Standard errors for past and current users in 1976 are 1.1 percent and 1.2 percent, respectively.
[2] Standard error = 1.4 percent.
[3] Standard error = 1.2 percent.

sub-group who believe that there is no need for family planning regardless of age or parity, though too much trust should not be placed on stated intentions. Younger women seem more inclined to use in the future than older women: one-third of women aged less than 20 intend to use in the future, compared to only 5 percent or less for women aged 40 and over. It must be noticed, however, that the proportion of women who are not fecund or not married also increases with age. If we compare the ratio of those who intend to use in the future to the total number of fecund and currently married women, it is still apparent that younger respondents are more inclined to use in the future. The proportion of fecund married women who intend use is about 44 percent for those aged less than 30: it declines to 37 percent for women 35 to 39 and further to 30 percent and 10 percent for the two oldest age groups.

Past users represented 22.3 percent of all ever-married women.[1] That percentage is subdivided into 6.2 percent who used in the open interval, 9.2 percent in the last closed interval, and 6.9 percent in some earlier interval. The figures show an increasing trend by age in use in the open interval. This is expected since use in an open interval for older women implies use to cease child-bearing rather than for spacing. Those who used in the last closed interval increased with age until the age group 25 to 29, then declined, a pattern that suggests that contraceptive practice between two pregnancies is of relatively recent origin. This is further supported when use in some earlier interval is considered by age, where approximately the same age pattern is retained.

Variations of patterns of contraceptive use by marital duration are similar to that by current age (Table 8.17). Past use in the open interval increases with marital duration. While the highest proportion of past users in the last closed interval is for duration of 10 to 19 years, current use is low for those below 10 or above 30 years of

[1] Standard error = 1.1 percent.

Table 8.16. Percent Distribution of All Ever-Married Women According to Pattern of Contraceptive Use, by Current Age

| Current Age | Never Used Intends Future Use | Never Used Does Not Intend Future Use | Never Used Not Fecund or Currently Married | Total | Past User In Open Interval | Past User Closed Interval | Past User Used Earlier | Total | Current User Sterilized | Current User Other Methods | Total | Number of Women |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | 33.3 | 46.2 | 3.5 | 82.9 | 3.4 | 3.5 | 1.6 | 8.5 | 0.0 | 8.6 | 8.6 | 329 |
| 20–24 | 27.9 | 31.8 | 1.6 | 61.3 | 5.8 | 10.0 | 6.2 | 22.0 | 0.0 | 16.6 | 16.6 | 596 |
| 25–29 | 18.8 | 26.1 | 3.1 | 48.0 | 3.3 | 14.0 | 9.0 | 26.3 | 0.4 | 25.3 | 25.7 | 709 |
| 30–34 | 12.5 | 25.3 | 6.3 | 44.2 | 4.4 | 12.1 | 8.2 | 24.7 | 1.6 | 29.6 | 31.2 | 628 |
| 35–39 | 10.9 | 25.5 | 10.7 | 47.1 | 5.0 | 9.3 | 6.9 | 21.2 | 3.5 | 28.1 | 31.7 | 543 |
| 40–44 | 5.0 | 24.0 | 19.0 | 48.1 | 8.9 | 4.8 | 7.7 | 21.4 | 4.4 | 26.2 | 30.5 | 435 |
| 45+ | 2.0 | 17.9 | 37.8 | 57.6 | 16.1 | 4.4 | 5.4 | 25.8 | 3.9 | 12.7 | 16.6 | 372 |
| Total | 15.9 | 27.6 | 10.1 | 53.6 | 6.2 | 9.2 | 6.9 | 22.3 | 1.8 | 22.3 | 24.1 | 3,612 |

Table 8.17. Percent Distribution of All Ever-Married Women According to Pattern of Contraceptive Use, by Years Since First Marriage and by Age at First Marriage

| Pattern of Use | Years Since First Marriage | | | | Age at First Marriage | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | <10 | 10–19 | 20–24 | 30+ | <15 | 15–19 | 20–24 | 25–29 | 30+ | |
| **Never Users** | | | | | | | | | | |
| Future Use: | | | | | | | | | | |
| Intend | 26.2 | 12.4 | 6.9 | 1.6 | 14.3 | 16.4 | 16.4 | 17.6 | 12.5 | 15.9 |
| Do Not Intend | 32.5 | 27.1 | 23.4 | 13.4 | 28.6 | 28.6 | 23.3 | 22.7 | 33.3 | 27.6 |
| Not Fecund | 2.8 | 6.4 | 19.6 | 42.3 | 15.4 | 9.0 | 7.3 | 4.2 | 16.9 | 10.1 |
| Total | 61.5 | 45.8 | 49.9 | 57.3 | 58.3 | 54.0 | 47.0 | 44.4 | 62.7 | 53.6 |
| **Past Users** | | | | | | | | | | |
| In Open Intervals | 4.4 | 4.4 | 9.3 | 15.8 | 7.3 | 4.8 | 9.0 | 7.6 | 3.8 | 6.2 |
| In Last Closed Interval | 9.9 | 11.0 | 6.2 | 7.1 | 9.0 | 9.1 | 10.4 | 6.8 | 13.2 | 9.2 |
| In Past Closed Interval | 5.5 | 9.1 | 6.5 | 5.1 | 7.3 | 7.0 | 5.9 | 9.1 | — | 6.9 |
| Total | 19.8 | 24.5 | 21.9 | 28.0 | 23.6 | 20.9 | 25.2 | 23.5 | 16.9 | 22.3 |
| Current Users | 18.7 | 29.7 | 28.1 | 14.7 | 18.1 | 25.1 | 27.8 | 32.1 | 20.4 | 24.1 |

marital duration, and it is high for those in the range 10 to 29 years of duration.

If we consider age at first marriage, the highest proportion who are currently using is among those who married at ages 25 to 29. The proportion of never-users declines with increase in age at first marriage, with the exception of those married at age 30 or more. The latter group may tend to use less because they were married late in their reproductive life and want to have children. Those who married early are most likely to be never-users, especially during the first ten years of marriage, where the highest observed proportion of never users (75.5 percent) is observed. (Appendix Table 4.2.5.) It must be recalled that education is inversely related to age at first marriage and therefore these findings may merely reflect the association between education and pattern of contraceptive use.

A cross-classification of pattern of use by the variable 'exposure status' reveals that a high percentage of currently pregnant women have never used contraception (61.4 percent), but that a high proportion indicated past use, especially in the past closed interval, and a high proportion (25.2 percent) also indicate intention for future use of contraception. Among married women who reported current impairments to conception — other than sterilization for contraceptive purposes — about 35 percent have used contraception in the past, mostly in the open interval. That pattern of contraceptive use by exposure status is about the same for all age groups. The proportion of past users is a little lower for widowed or separated women (28 percent), but again the majority of these used in the open interval.

Educational attainment has a substantial effect on pattern of contraceptive use. As noted in an earlier

Table 8.18. Percent Distribution of All Ever-Married Women According to Pattern of Contraceptive Use, by Exposure Status*

| Pattern of Use | Exposure Status | | | | |
|---|---|---|---|---|---|
| | Pregnant | Widowed or Separated | Other Impairments | Fecund | Total |
| **Never Used** | | | | | |
| Intends Future Use | 25.2 | — | — | 17.2 | 15.9 |
| Does Not Intend Future Use | 36.2 | — | — | 32.2 | 27.6 |
| Not Fecund or Not Currently Married | — | 72.1 | 65.1 | — | 10.1 |
| **Past Users** | | | | | |
| In Open Interval | — | 17.5 | 19.3 | 5.3 | 6.2 |
| In Closed Interval | 25.3 | 6.7 | 6.9 | 4.9 | 9.2 |
| In Earlier Interval | 13.3 | 3.8 | 8.7 | 4.9 | 6.9 |
| Current Users | — | — | — | 35.5 | 24.1 |
| Number of Women | 732 | 154 | 388 | 2,272 | 3,546 |

* 65 cases who were sterilized are not included.

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section, ever-use and current use of contraception is closed related to educational level. Table 8.19 and Figure 8.3 show that intention to use in the future is also associated with education. While only 25 percent of the no-schooling never-users intended future use, 44.8, 59.4 and 67.7 percent of those having elementary, prepratory and secondary or more education, respectively, intended to do so in the future.

Current users represent a very high proportion (52.2 percent) among women with secondary or more education, but only 17.2 percent among women without

Table 8.19. Percent Distribution of All Ever-Married Women According to Pattern of Contraceptive Use, by Level of Education

| Pattern of Use | Level of Education | | | | |
| | No Schooling | Elementary | Preparatory | Secondary+ | Total |
| --- | --- | --- | --- | --- | --- |
| Never Used | | | | | |
| Intends Future Use | 15.5 | 18.4 | 16.5 | 13.4 | 15.9 |
| Does Not Intend Future Use | 33.8 | 19.2 | 9.2 | 2.9 | 27.6 |
| Not Fecund or Not Currently | | | | | |
| Married | 13.2 | 3.4 | 2.2 | 3.6 | 10.1 |
| Total | 62.5 | 41.0 | 27.8 | 19.8 | 53.6 |
| Past Use | | | | | |
| In Open | 5.6 | 6.5 | 10.9 | 6.7 | 6.2 |
| In Last Closed | 7.2 | 12.7 | 13.1 | 16.4 | 9.2 |
| In Earlier Interval | 7.4 | 6.7 | 3.2 | 4.7 | 6.9 |
| Total | 20.3 | 26.0 | 27.3 | 27.8 | 22.3 |
| Current Use | 17.2 | 33.0 | 44.9 | 52.2 | 24.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Figure 8.3. Percent Distribution of Women, by Education and by Pattern of Contraceptive Use
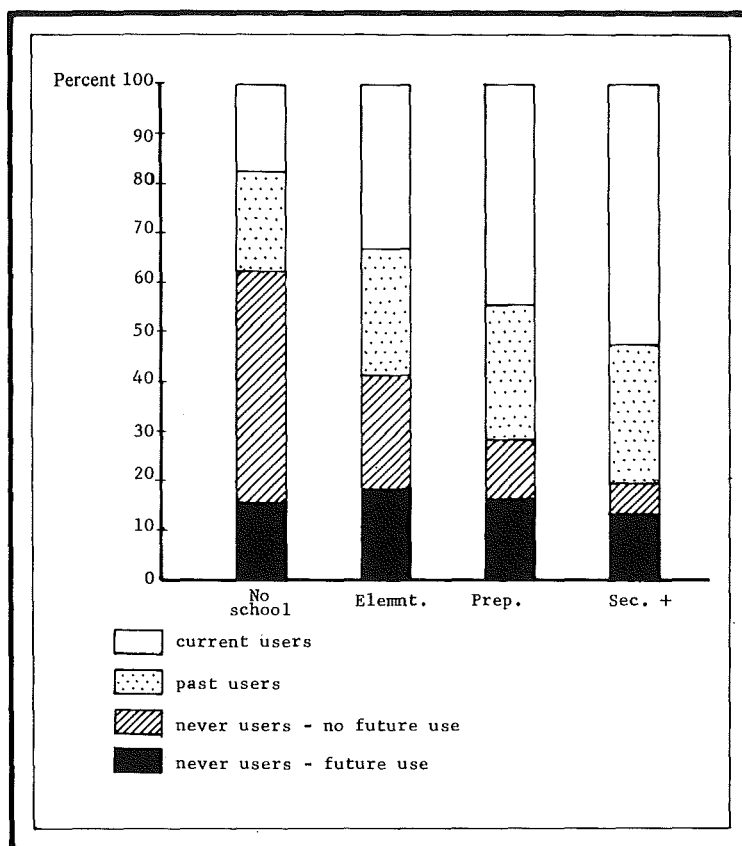
schooling. This trend, when compared with past users, indicates that there is more continuity of use among the higher educated. Most of the more educated who used in the past used in a closed interval, whether the last one or earlier ones, which is an indication that they tend to use for spacing purposes as well as for family limitation.

That same pattern was observed within all age groups and within all family sizes as measured by the number of living children. (See Appendix Tables 4.5.5A and 4.5.6A.)

This report will not attempt to verify the hypothesis that more educated women tend to choose more effective methods and tend to use these methods properly, resulting in a higher rate of use-effectiveness. Some aspects of these hypotheses will be considered in later reports.

Variations in pattern of contraceptive use by religious affiliations show a clear pattern: Muslims tend to have less current and past use, with a higher proportion of never users, compared to Catholics and other Christians (Table 8.20). This conclusion holds true for all age groups and across different numbers of living children.

Husband's occupation is related to pattern of contraceptive use. Wives of technical and clerical husbands had the highest proportion of current as well as past use, mostly in the last closed interval. In addition, among the never users of that same group, there exists the highest proportion of those who intend to use contraception in the future. At the other extreme, wives of farmers and other agricultural workers have the lowest proportion of current use, as well as past use, and have the highest percentage not intending to use in the future. In between range the remaining occupations. Again, it must be recalled that husbands' occupations differed in terms of education and pattern of work. Thus, the observed differences may be due mainly or partially to these differences.

Pattern of contraceptive use tabulated by pattern of work gives results that differ from what might be expected. Women who are not currently working (whether they worked after marriage only, or before and after) had the highest proportion of current and past users. Differences in age composition, education and type of work must be considred before any generalizations may be reached.

Table 8.20. Percent Distribution of All Ever-Married Women According to Pattern of Contraceptive Use, by Selected Background Variables

| | Users | | | | Past Users | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Background Variable | Intend Future Use | Do Not Intend Use | Not Fecund | Total | In Open Interval | Closed Interval | Used Earlier | Total | Current Users |
| Husband's Occupation | | | | | | | | | |
| Technical | 12.6 | 6.9 | 6.0 | 25.4 | 7.6 | 14.2 | 7.3 | 29.1 | 45.5 |
| Clerical | 14.9 | 18.1 | 8.4 | 41.4 | 10.3 | 9.4 | 2.8 | 22.6 | 36.2 |
| Skilled | 15.9 | 25.4 | 8.9 | 50.2 | 7.1 | 11.1 | 8.3 | 26.6 | 23.2 |
| Sales | 14.2 | 23.4 | 11.0 | 48.5 | 6.6 | 7.9 | 7.8 | 22.3 | 29.2 |
| Household and Other Services | 18.2 | 36.5 | 10.1 | 64.7 | 4.6 | 7.2 | 6.3 | 18.1 | 17.2 |
| Unskilled | 18.4 | 42.2 | 15.5 | 76.1 | 1.6 | 6.0 | 3.6 | 11.2 | 12.7 |
| Agriculture | 16.0 | 44.5 | 19.7 | 80.0 | 2.8 | 4.3 | 5.2 | 12.4 | 7.5 |
| Pattern of Work* | | | | | | | | | |
| (1) | 22.3 | 21.9 | 10.9 | 55.1 | 5.7 | 11.3 | 5.0 | 22.0 | 22.9 |
| (2) | 6.3 | 20.4 | 30.2 | 56.9 | 7.0 | 6.3 | 3.5 | 16.8 | 26.3 |
| (3) | 10.3 | 21.2 | 5.2 | 36.7 | 3.8 | 10.4 | 10.7 | 24.8 | 38.5 |
| (4) | 5.3 | 18.4 | 15.7 | 39.4 | 10.2 | 11.3 | 9.9 | 31.4 | 29.2 |
| (5) | 18.7 | 29.2 | 7.2 | 55.1 | 3.9 | 7.5 | 7.3 | 18.7 | 26.2 |
| (6) | 15.9 | 28.6 | 9.6 | 54.0 | 6.4 | 9.3 | 6.9 | 22.7 | 23.3 |
| Region and Type of Residence | | | | | | | | | |
| Amman | 13.1 | 16.9 | 8.8 | 38.8 | 8.5 | 11.0 | 6.5 | 26.0 | 35.2 |
| Zarka and Irbid | 12.7 | 22.4 | 10.8 | 46.0 | 8.5 | 11.7 | 8.6 | 28.8 | 25.2 |
| Towns | 13.2 | 25.2 | 9.5 | 47.9 | 4.7 | 10.7 | 7.6 | 23.0 | 29.1 |
| Total Urban | 13.0 | 20.2 | 9.5 | 42.7 | 7.7 | 11.1 | 7.4 | 26.2 | 31.1 |
| Large Village | 25.6 | 36.8 | 11.3 | 73.7 | 3.1 | 8.2 | 6.0 | 17.4 | 8.9 |
| Medium Village | 20.8 | 48.0 | 11.6 | 80.5 | 2.0 | 4.5 | 5.9 | 12.4 | 7.2 |
| Small Village | 25.1 | 44.8 | 10.9 | 80.8 | 3.1 | 2.6 | 5.2 | 10.9 | 8.3 |
| Total Rural | 22.8 | 44.9 | 11.4 | 79.1 | 2.5 | 4.8 | 5.8 | 13.1 | 7.8 |

* Pattern of work codes are:
(1) Currently working and worked before marriage.
(2) Currently working and did not work before marriage.
(3) Not currently working, worked after marriage.
(4) Not currently working, worked after and before.
(5) Worked before marriage only.
(6) Never worked.

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As seen from the previous sections, use in rural areas is low. Table 8.20 shows that intentions to use in the future are also moderate in rural areas. Seventy-nine percent of women residing in rural areas were never users, and more than half of them do not intend future use. This is a high percentage that reaches about 45 percent of all ever-married women residing in rural areas.

## 8.7. CONTRACEPTIVE USE AND LENGTH OF BIRTH INTERVALS

In this final section the relationships between contraceptive use and length of the last closed birth interval of the open interval are examined. The relevant findings are shown in Table 8.21.

Considering the closed interval first, the data are based on women whose last closed birth interval did not exceed five years, so that the mean length of interval is not unduly affected by a few extremely high values. For age groups up to age 44, a marked difference of about 20 percent is apparent in the mean length of the interval between those who did and those who did not use a method of contraception during the interval. For woman aged 45 to 49, this difference is minimal, perhaps because contraceptive users at older ages tend to be more fecund than non-users, and this characteristic may counter-balance the effect of their contraception.

Further details may be found in Appendix Table 4.1.6. The introduction of duration of breastfeeding as a control does not substantially affect the relationship between contraception and interval length, but a difference emerges between users of efficient and inefficient methods in the closed interval. For each age group, the interval length is greater for users of efficient methods: for instance, among women aged less than 25, users of efficient methods experienced a birth interval of 26.9 months compared to 23.2 months for users of inefficient methods: for age group 25 to 34, the corresponding figures are 30.8 and 26.9 months. This is evidence of the superior efficacy of those methods classified as efficient.

Turning now to the open interval data, which are based on exposed women with one or more live births, these reveal that the relationship between contraceptive use and interval length is even more pronounced than for the closed interval. Whereas women who have used any method since the last birth report an open interval of 39.4 months, women who have not used contraception have an average interval of only 19.1 months. This strong association holds up to age 44, but is somewhat reduced for the oldest women in the sample, probably because of the greater fecundity of the user group, as noted above. Confident interpretation of these data is difficult in the absence of information concerning the timing of contraceptive adoption in relation to the last birth and duration of use. Nevertheless, the findings for the open and closed interval, considered together, strongly suggest that contraceptive use is a major determinant of birth interval length and hence of fertility. They also serve to allay fears that use of contraception was seriously over-reported by respondents in order to please interviewers or for other reasons.

Table 8.21. (A) Mean Length of Last Closed Birth Interval, by Whether Women Used Contraception in That Interval, Confined to Women With at Least Two Live Births (Including Any Current Pregnancy) Whose Last Closed Interval Did Not Exceed Five Years. (B) Mean Length of Open Interval, by Contraceptive Status in That Interval, Confined to the Exposed Women With One or More Live Births

| | (A) Closed Interval | | | (B) Open Interval | | | | |
|---|---|---|---|---|---|---|---|---|
| Current Age | Used Contraception in Interval | Did Not Use Contraception | Total | Currently Using Contraception | Used Earlier in Interval | All Users in Interval | Not Used | Total |
| <25 | 25.8 | 20.7 | 21.7 | 14.0 | 15.7 | 14.3 | 7.8 | 9.9 |
| 25–34 | 29.2 | 24.6 | 26.1 | 25.6 | 33.7 | 26.3 | 14.3 | 19.7 |
| 35–44 | 33.1 | 27.3 | 28.9 | 58.9 | 59.8 | 59.0 | 24.7 | 41.0 |
| 45+ | 30.8 | 29.4 | 29.7 | 89.1 | 140.2 | 98.1 | 77.2 | 86.4 |

CHAPTER 9

# USE OF CONTRACEPTION AS RELATED TO FERTILITY PREFERENCES

## 9.1. INTRODUCTION

The purpose of this chapter is to examine whether women who want no more children will actually implement this inclination by using contraception. It is hypothesized that women who do not want more children will tend to use contraceptives, which is consistent behaviour. Otherwise, their behaviour is considered inconsistent, though this is a simplification of the problem. In fact, the behaviour of many women appears to be inconsistent in this respect, though reasons for this inconsistency may be rational. These underlying causes stem usually from social and cultural sources, such as husband's wishes and family structure.

Obviously, then, desire for no more children is not the only factor to determine use. 'Three factors have been shown to be important in determining the likelihood of a couple practising contraception, namely, desire for no more children, knowledge of contraceptive methods, and approval of use. In addition to these main conditions, some other factors must be considered to explain effectively the use-differentials observed, such as family relationship and other external effects.'[1] Furthermore, availability of efficient methods may be important, especially in the case of Jordan.

Nevertheless, the purpose here is simply to quantify the degree of 'personal' inconsistency for the woman regardless of its underlying sources, acknowledging that those who will be considered inconsistent in their personal behaviour may in fact be behaving rationally from a societal and cultural point of view.

The present chapter will focus attention on differences in knowledge and pattern of contraceptive use as related to fertility preferences. Much of the analysis is based on 'exposed' women. As before, women who have been sterilized for contraceptive purposes are classified as wanting no more children, even though the question was not explicitly asked of them.

The aim is to identify the target groups for family

planning programmes, namely, those who want no more children, and therefore 'need' to use contraception in order to achieve their intentions. This last group coincides with Jordanian population policy which goes as far as providing the means whereby fertility intentions may be achieved. In Jordan, this is the principal target group.[1]

To identify the target group which is considered as behaving inconsistently we confine the illustration to simple 2 × 2 tables in which there are two status variables, each of which is dichotomized into 'Yes' and 'No'.

|  |  | Do you want more children? | | |
|---|---|---|---|---|
|  |  | Yes | No | Total |
| Are you currently using an efficient method? | Yes | A | B | A + B |
|  | No | C | D | C + D |
|  | Total | A + C | B + D | A + B + C + D |

The inconsistent group is identified in cell 'D'. The other three categories A, B and C are, understandably, consistent.[2]

## 9.2. KNOWLEDGE OF CONTRACEPTION

Firstly, however, we consider knowledge of contraception in the light of fertility preferences. As shown earlier, knowledge of contraception is widespread among ever-married women in Jordan: only 2.4 percent said that they had no knowledge at all, while about 97 percent knew at least one efficient method. As previously discussed, in order to determine the proportion of those who want to cease childbearing, women were asked if they want a future birth. Furthermore, women were asked about the total number of children they desire.

Table 9.1 shows the overall percent distribution of

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[1] Khalifa, Atef, *Pop. Stud.* op. cit., p. 442.

[1] Asad, El, op. cit
[2] WFS, *Guidelines*, op. cit., p. 40.

currently married, 'fecund' women according to level of contraceptive knowledge and whether number of children wanted exceeds the number living, including any current pregnancy.

Data indicate that only the small fraction of 0.4 percent may be considered as a target population for a family planning publicity campaign, i.e. women who do not want more children, yet they know no contraceptive method. It is a negligible fraction, and knowledge may then be discounted as pre-condition of use since it is widespread enough.

Figures in Table 9.1 also indicate that a higher proportion of those who do not want more children or those with a number of living children in excess of the desired number, as compared to those who want future children, know about a contraceptive method.

The range of variation between age groups in the proportion having knowledge of at least one efficient method was narrow whether for those who want a future birth or those who do not want any more. However, within each age group, the proportion of those who have knowledge of at least one efficient method was higher among those who want no more than among those who desire a future birth.

## 9.3. STATUS INCONSISTENCY: CONTRACEPTIVE USE AND FERTILITY PREFERENCES

The underlying hypothesis of the present section is that exposed women who want no more children should implement their intentions by being current users. If they are not currently using, this is considered as a 'personal' inconsistent behaviour. It is hypothesized that inconsistent behaviour will lead to unwanted pregnancies. As evidence of that, 1,026 ever-married women with at least one live birth (or a current pregnancy) considered their last (or current) pregnancy unwanted, though the proportion of those among them who used contraception in that last closed interval was about 45 percent (29 percent efficient methods) as compared to only 19.7 percent (13.0 percent efficient methods) among those who wanted that last (or current) pregnancy. (Appendix Table 5.2.5.)

Table 9.2 shows that exposed women who do not want more children use in higher proportions and tend to use more efficient methods more frequently than those who want another child. The differences are clear: while 79.4 percent of those who want future birth are not currently users, only 41.4 percent of those who do not want more children are not current users. This holds true when number of living children is held constant. For example, for those with 5 or more living children, 79.4 percent of those who want more are not current users as compared to only 41.1 percent among exposed women who do not want more.

Furthermore, exposed women who do not want a future birth tend to resort to more efficient methods. Only 27.9 percent of these women are using methods considered inefficient, as compared to 38 percent of the other subgroups of exposed women.

According to the stated hypothesis 41.1 percent of women who do not want future birth are inconsistent in the sense that they do not currently use contraception. They amount to 17.2 percent of all exposed women.

Table 9.1. Percent Distribution of Currently Married, 'Fecund' Women According to Level of Contraceptive Knowledge, by Desire for More Children and by Whether Number of Children Wanted Exceeds Number of Living Children (Including any Current Pregnancy)

| | Knows at Least One Efficient Method | | |
| --- | --- | --- | --- |
| Variable | Yes | No | Total |
| A. Future Births:* | | | |
| Wanted | 1,604 (54.4) | 69 (2.3) | 1,673 (56.7) |
| Not Wanted | 1,267 (42.9) | 13 (0.4) | 1,280 (43.3) |
| Total | 2,871 (97.3) | 82 (2.7) | 2,953 (100.0) |
| B. Difference Between Wanted and Living Children. | | | |
| Living < Desired Number | 1,763 (57.4) | 71 (2.3) | 1,834 (59.7) |
| Living ≥ Desired Number | 1,222 (39.8) | 14 (0.5) | 1,236 (40.3) |
| Total | 2,985 (97.2) | 84 (2.8) | 3,069 (100.0) |

* 118 undecided cases were excluded.

Table 9.2. Percent Distribution of 'Exposed' Women Who Are Currently Using Efficient or Inefficient Methods (Including Sterilization), by Number of Living Children and by Desire for More Children

| Desire for Children | Number of Living Children | Percentage Currently Using | | | Number of Women |
| --- | --- | --- | --- | --- | --- |
| | | None | Inefficient | Efficient | |
| Want Future Birth | | | | | |
| | <3 | 77.9 | 8.2 | 13.9 | 553 |
| | 3 | 75.8 | 8.2 | 16.0 | 184 |
| | 4 | 77.7 | 9.2 | 13.1 | 153 |
| | 5+ | 84.2 | 6.5 | 9.3 | 379 |
| | Total | 79.4 | 7.8 | 12.7 | 1,269 |
| Do Not Want Future Birth | | | | | |
| | <3 | 42.4 | 5.8 | 51.9 | 59 |
| | 3 | 31.8 | 25.1 | 43.1 | 65 |
| | 4 | 40.9 | 19.3 | 39.8 | 97 |
| | 5+ | 41.8 | 16.8 | 41.4 | 761 |
| | Total | 41.1 | 17.0 | 41.9 | 981 |
| Total* | <3 | 73.7 | 7.9 | 18.4 | 617 |
| | 3 | 63.8 | 12.1 | 24.1 | 258 |
| | 4 | 63.5 | 12.6 | 23.9 | 268 |
| | 5+ | 56.6 | 13.2 | 30.1 | 1,194 |
| | Total | 62.7 | 11.6 | 25.6 | 2,338 |

* Includes 88 'undecided' cases.

In fact, the inconsistent group is more than that if users of inefficient methods are included as potential converts to efficient methods. Viewed in this way, only 41.9 percent are currently using efficient methods among those highly motivated women who want no more children and 58.1 percent of them (or 24.4 percent of all exposed women) may be considered as 'target population'. As concluded in the previous section, knowledge is not the responsible factor for this inconsistency. These women constitute the 'target population' for family planning efforts in Jordan. These are the women, regardless of social and cultural factors, who are motivated to take steps to prevent a conception that would be considered, according to their own intentions, unwanted.

If the proportion of current users of efficient contraceptives to total exposed women who do not want more children (981 cases) is classified by marital duration and age at first marriage, no clear trend is observed: only those who married very early had, in general, a lower percentage, especially at early years of marriage. Those who had been married for 20 years or more had a lower than average percentage of those currently using efficient contraceptives. (Appendix Table 5.2.2A.)

The question to be considered now is: Are these variations by various background variables in the percentage of exposed women who do not want more children and are using efficient contraceptives?

The proportion of those who are consistent in the sense of using contraceptives to implement their intentions to

cease childbearing increases rapidly with educational level of wife. For women with less than elementary education, 34 percent of those exposed and who do not want more children can be considered consistent; the proportion increases to 56 percent for women with elementary education, then to about 60 percent for women with secondary education. That same trend is repeated within each age group. However, when all exposed women are taken as a denominator, the proportion who constitute the target population is only high (28.6 percent) among women with no schooling, while it is approximately the same for other educational levels (see Figure 9.1). But the proportion of women who are currently using contraception and do not want more children shows a clear increasing pattern with education from 15 percent among women with no schooling to 28.2 percent among those with secondary or more education.

In terms of religious affiliation, exposed Muslim women seem to have a higher proportion who are not currently users and this holds true for all age groups. Exposed wives of farmers or those in agricultural occupations seem to have the highest proportion of non-current use, while wives of those in technical and clerical occupations had the lowest proportion of non-users of efficient contraceptives. Proportions for other occupations ranged in between these.

As may be expected, exposed urban women are more consistent than those residing in rural areas: higher proportions of exposed urban women who want no more

Figure 9.1. Percentage of Women Who Are Currently Using An Efficient
Contraceptive Method (Including Sterilization), by Level of Education. Confined
to 'Exposed' Women Who Want No More Children



Do not want more / Do not use (target)

Do not want more / Current use

Want more children
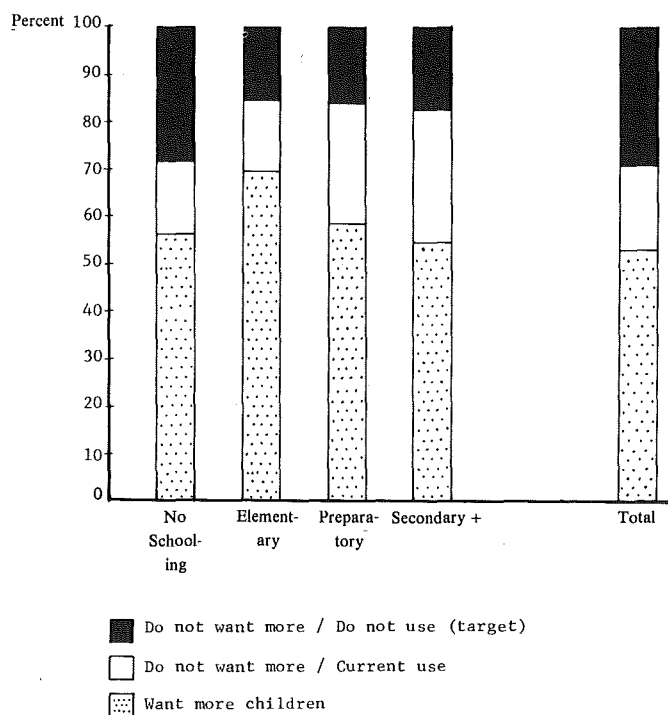
children were classified as current users of efficient contraceptives (47.8 percent as compared to 18.4 percent for rural women), this holding true for all age groups. The metropolitan city of Amman seems to have the highest proportion of those currently using an efficient method among exposed women who want no more children (51.5 percent).

## 9.4. PATTERN OF CONTRACEPTIVE USE

In the previous analysis in Section 9.3, part of the inconsistency may be temporary if non-users in the target population have intentions to do so in the future. The analysis in this section is based on all 'fecund' women and not only 'exposed' ones: in other words, we take into account that currently pregnant women may want no more children and will plan for future use, although they cannot be classified as current users.

In terms of pattern of contraceptive use, as shown in Table 9.4 and Figure 9.2, the pattern is significantly different between those who want a future birth and those who do not want a future birth. The never-users comprise 67.6 percent among those who want more children with

about 1 in 3 of them intending to use contraception in the future. This may be compared to 29.8 percent never-use among fecund women who want no more children, with about 1 in 2 of them intending to use in the future. The 15.6 percent of those who want a future birth yet who are currently using could be considered as exponents of a sophisticated kind of use intended for spacing, and the same applies to those who used in the past. The target population consists of all 54.9 percent who are not currently users and want no more children. However, some of them were past users, for whom it is not understandable why they stopped using contraceptives, especially those 3.4 percent who used in the last open interval. It must be recalled, however, that this figure includes some currently pregnant women who do not want more after termination of the current pregnancy. Furthermore, 13.4 percent stated the intention of using in the future. These last two subgroups, past users and those who intend use in the future, are probably not priority targets for family planning programmes, since they know how to use or at least have positive attitudes in regard to using contraceptives. The 'urgent target population' consists of women who do not want any more children, never used contraceptives, and intend not to do so in the

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Table 9.3. Percentage of Women Who Are Currently Using Efficient Contraceptive Methods (Including Sterilization), by Current Age and Selected Background Variables. Confined to 'Exposed' Women Who Want No More Children

| Variable | 25 | 25–34 | 35–44 | 45+ | Total Percent | Total Number |
|---|---|---|---|---|---|---|
| **Education** | | | | | | |
| No Schooling | 15.9 | 31.6 | 38.5 | 29.6 | 34.4 | 668 |
| Elementary | 57.4 | 55.3 | 54.4 | 67.4 | 56.0 | 171 |
| Preparatory | * | 57.8 | 52.0 | * | 60.1 | 63 |
| Secondary | * | 63.7 | 67.7 | * | 61.6 | 78 |
| **Region** | | | | | | |
| Amman | 49.4 | 53.8 | 52.8 | 41.5 | 51.5 | 426 |
| Zarka and Irbid | 54.7 | 39.0 | 46.2 | 35.2 | 42.6 | 210 |
| Towns | 69.5 | 53.3 | 38.3 | 29.2 | 44.5 | 149 |
| Total Urban | 56.2 | 49.7 | 48.1 | 38.4 | 47.8 | 786 |
| Large Villages | * | 22.3 | 22.3 | * | 21.2 | 52 |
| Med. Village | * | 9.7 | 19.4 | * | 14.5 | 89 |
| Small Villages | * | 21.4 | 24.7 | 32.4 | 22.2 | 54 |
| Total Rural | 13.5 | 15.8 | 21.4 | 16.9 | 18.4 | 195 |
| **Religion** | | | | | | |
| Muslims | 35.3 | 42.6 | 40.2 | 33.1 | 40.0 | 881 |
| Christians and Catholics | * | 48.3 | 67.9 | 49.4 | 59.3 | 100 |
| **Husband's Occupation** | | | | | | |
| Tech. & Clerical | 63.8 | 56.2 | 62.0 | 36.8 | 57.5 | 211 |
| Sales | * | 45.5 | 47.1 | 45.5 | 46.3 | 138 |
| Skilled | 49.4 | 41.9 | 38.2 | 34.0 | 39.8 | 307 |
| Household & Other Services | 14.1 | 40.3 | 39.3 | 35.3 | 37.8 | 231 |
| Farmers and Agricultural | * | 7.7 | 18.9 | 11.0 | 13.9 | 76 |
| Unskilled | * | | | | 35.1 | 17 |
| **Pattern of Work** | | | | | | |
| Currently working and worked before marriage | 0.0 | 28.5 | 27.6 | * | 30.2 | 56 |
| Currently working and did not work before marriage | 0.0 | 34.4 | * | * | 37.7 | 25 |
| Not currently working, worked after marriage | 0.0 | * | 56.8 | * | 50.5 | 33 |
| Not currently working, worked after and before | * | * | 29.8 | * | 36.6 | 24 |
| Worked before marriage only | * | 36.8 | 46.0 | * | 43.1 | 84 |
| Never worked | 35.9 | 46.2 | 43.4 | 33.0 | 42.6 | 760 |
| Total | 39.1 | 43.2 | 42.9 | 35.5 | 41.9 | 981 |

* Less than 10 cases.

future. This last group represents 16.4 percent of all fecund women who want no more children in the future, and 6.8 percent of all fecund women.

Table 9.4 and Figure 9.2 show differences in pattern of contraceptive use by age groups between the two subgroups of women, namely those who want and those who do not want a future birth. It is clearly observed that the proportion of those who intend to use in the future declines with age for both subgroups. Among women who do not want future birth the target population (i.e. those not currently using) declines with age. Nevertheless, the 'urgent target population' (as indicated in Figure 9.2) is probably high among women aged less than 25 and those aged 45 or more. The proportion considered sophisticated users (i.e. currently users though they want more children) is highest among those 25 to 34 and very small for women aged 45 or more. The majority of women who want a future birth are never-users, and, among them, those who intend

Figure 9.2A Percent Distribution of Currently Married, 'Fecund' Women According to Pattern of Contraceptive Use, by Desire for More Children and by Current Age
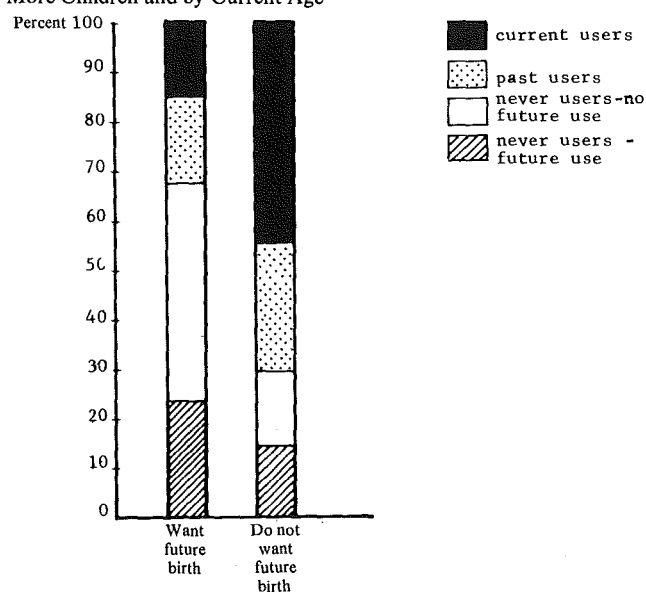
Figure 9.2.B. Percent Distribution of Currently Married, 'Fecund' Women According to Pattern of Contraceptive Use, by Do Not Want Future Birth and by Current Age
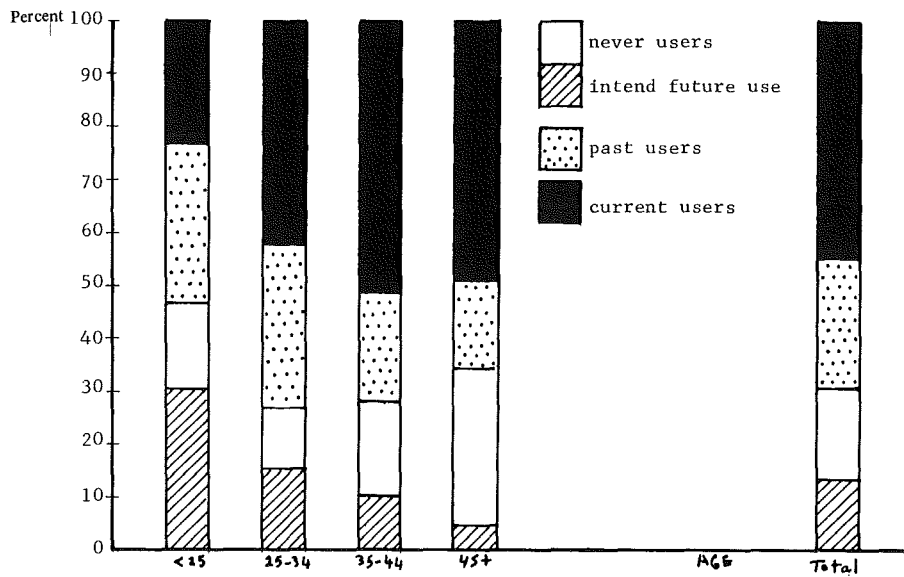


Figure 9.2.C. Percent Distribution of Currently Married, 'Fecund' Women According to Pattern of Contraceptive Use, by Want Future Birth and by Current Age
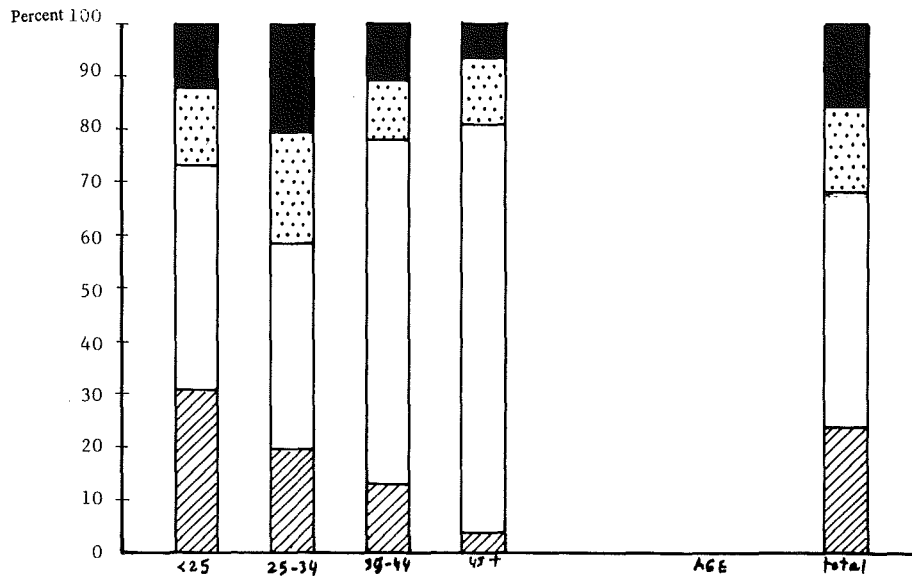


future use is even smaller, and rapidly declines with age.

Educational level of the wife seems to be strongly associated with her consistent behaviour. Table 9.5 and Figure 9.3 indicate a clear pattern by education. Highly educated women who do not want more children, never used contraceptives, and do not intend to use in the future comprise only 1.9 percent of all educated fecund women who do not want a future birth. That same proportion reaches 21.8 percent among women with no schooling.

Table 9.4. Percent Distribution of Currently Married, 'Fecund' Women According to Pattern of Contraceptive Use, by Desire for More Children and by Current Age

| Desire for More Children and Current Age | Never Used Intends Future Use — Yes | No | Total | Past User — Open Interval | Closed Interval | Earlier Closed Interval | Total | Current User — Sterilizations | Other Methods | Total | Number of Women |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <25 | | | | | | | | | | | |
| Wants Future Birth | 30.9 | 41.2 | 72.0 | 5.3 | 6.3 | 3.7 | 15.2 | 0.0 | 12.7 | 12.7 | 772 |
| Wants No More Births | 30.5 | 16.6 | 47.1 | 1.2 | 19.3 | 9.1 | 29.7 | 0.0 | 23.2 | 23.2 | 112 |
| Undecided | 21.4 | 35.5 | 56.9 | 8.7 | 5.8 | 8.7 | 23.3 | 0.0 | 19.9 | 19.9 | 16 |
| Total | 30.7 | 38.0 | 68.7 | 4.8 | 7.9 | 4.4 | 17.2 | 0.0 | 14.2 | 14.2 | 900 |
| 25–34 | | | | | | | | | | | |
| Wants Future Birth | 19.2 | 39.7 | 58.9 | 3.6 | 9.6 | 7.3 | 20.4 | 0.0 | 20.7 | 20.7 | 668 |
| Wants No More Births | 15.2 | 11.4 | 26.6 | 2.3 | 18.1 | 10.6 | 31.0 | 2.6 | 39.9 | 42.4 | 508 |
| Undecided | 9.7 | 31.2 | 40.9 | 10.2 | 7.8 | 5.3 | 23.4 | 0.0 | 35.7 | 35.7 | 67 |
| Total | 17.0 | 27.7 | 44.7 | 3.4 | 12.9 | 8.5 | 24.9 | 1.0 | 29.3 | 30.4 | 1,243 |
| 35–44 | | | | | | | | | | | |
| Wants Future Birth | 12.2 | 65.3 | 77.5 | 1.4 | 2.8 | 7.2 | 11.4 | 0.0 | 11.1 | 11.1 | 199 |
| Wants No More Births | 10.2 | 18.1 | 23.4 | 3.7 | 9.6 | 7.0 | 20.3 | 7.0 | 44.3 | 51.3 | 540 |
| Undecided | 5.9 | 55.2 | 61.1 | 5.1 | 10.2 | 3.4 | 18.8 | 0.0 | 20.1 | 20.1 | 27 |
| Total | 10.6 | 31.7 | 42.3 | 3.2 | 7.8 | 6.9 | 17.9 | 5.0 | 34.8 | 39.8 | 766 |
| 45+ | | | | | | | | | | | |
| Wants Future Birth | 3.6 | 77.4 | 81.0 | 0.0 | 4.4 | 8.1 | 12.5 | 0.0 | 6.5 | 6.5 | 32 |
| Wants No More Births | 4.8 | 28.9 | 33.7 | 8.6 | 2.8 | 5.9 | 17.2 | 11.8 | 37.3 | 49.1 | 121 |
| Undecided | 6.4 | 93.6 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7 |
| Total | 4.6 | 41.4 | 46.1 | 6.5 | 3.0 | 6.1 | 15.5 | 8.9 | 29.5 | 38.4 | 160 |
| All Ages | | | | | | | | | | | |
| Wants Future Birth | 23.4 | 44.1 | 67.6 | 4.0 | 7.1 | 5.6 | 16.8 | 0.0 | 15.6 | 15.6 | 1,671 |
| Wants No More Births | 13.4 | 16.4 | 29.8 | 3.4 | 13.2 | 8.5 | 25.1 | 5.1 | 40.0 | 45.1 | 1,280 |
| Undecided | 10.2 | 41.1 | 51.3 | 8.2 | 7.6 | 5.0 | 20.9 | 0.0 | 27.8 | 27.8 | 118 |
| Total | 18.8 | 32.4 | 51.2 | 3.9 | 9.7 | 6.8 | 20.4 | 2.1 | 26.3 | 28.4 | 3,069 |

Table 9.5. Percent Distribution of Currently Married, 'Fecund' Women According to Pattern of Contraceptive Use, by Desire for More Children and by Level of Education*

| Education | Never Users — Intends Future Use | Does Not Intend Future Use | All Never Users | Past Users | Current Users | Number of Women |
|---|---|---|---|---|---|---|
| Wants Future Birth | | | | | | |
| No Schooling | 22.6 | 58.0 | 80.6 | 11.7 | 7.6 | 1,033 |
| Elementary | 26.3 | 28.6 | 54.9 | 22.4 | 22.6 | 409 |
| Preparatory | 26.2 | 14.5 | 40.7 | 28.9 | 30.4 | 113 |
| Secondary + | 18.4 | 4.2 | 22.6 | 30.0 | 47.4 | 116 |
| Total | 24.4 | 44.1 | 67.6 | 16.8 | 15.6 | 1,671 |
| Wants No More Births | | | | | | |
| No Schooling | 15.8 | 21.8 | 37.6 | 24.6 | 37.8 | 880 |
| Elementary | 8.5 | 6.5 | 15.0 | 27.7 | 57.3 | 223 |
| Preparatory | 4.7 | 2.5 | 7.2 | 21.2 | 71.7 | 77 |
| Secondary+ | 10.0 | 1.9 | 11.9 | 26.2 | 61.9 | 100 |
| Total | 13.4 | 16.4 | 29.8 | 25.1 | 45.1 | 1,280 |

* 118 'undecided' cases are excluded.

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Figure 9.3. Percent Distribution of Currently Married, 'Fecund' Women According to Pattern of Contraceptive Use, by Desire for More Children and by Level of Education
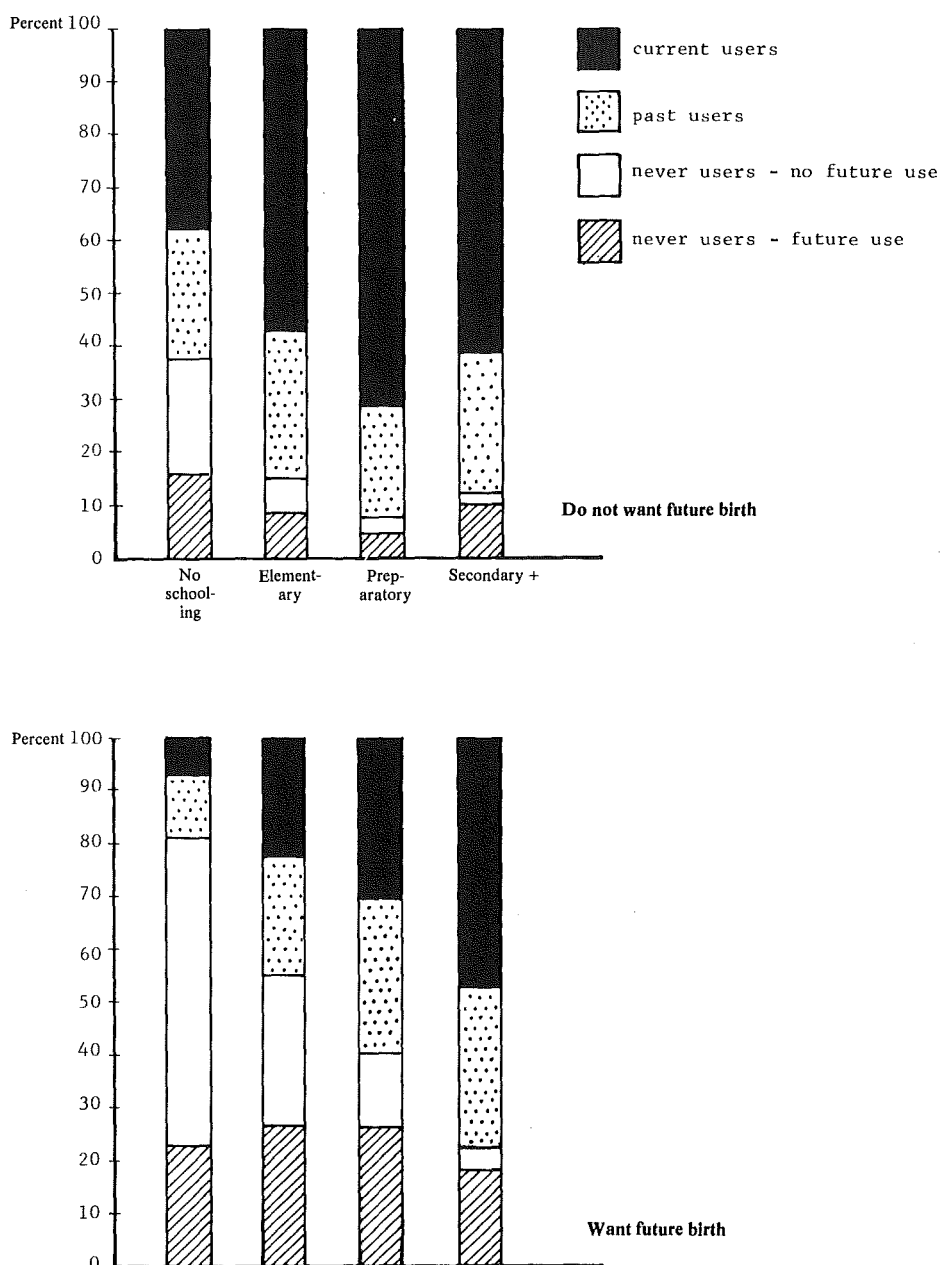


Among never-users, whether wanting future births or not, the proportion intending future use increases with education. The proportion of those who use contraception for spacing births increases with education.

In sum, it seems that as a woman acquires more education, she becomes more consistent in her behaviour. This may mean that she responds less to cultural and social constraints that may force her to apparently inconsistent behaviour. When a woman is more educated she also tends to use contraceptives for spacing rather than just for ceasing childbearing. More educated women

tend in high proportion to be ready to implement their fertility intentions in terms of use. That pattern seems to be the same in all age groups.

From Table 9.6 it may be noted that differences in pattern of contraceptive use by type of place of residence are strong. Fecund urban women who do not want future births had a current use proportion of 52.6 percent compared to only 18.4 percent among those women residing in rural areas. The proportion of those who resist the idea of contraception (i.e. never-users who have no intention of future use) is much higher (26.3 percent)

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among rural women who do not want future births than among urban women (9.8 percent).

The differences by religious affiliation are more pronounced when comparing fecund women who want future births. Muslim women who want future births are mainly never users, with only 14.6 percent currently using. Catholics and other Christians who want future births still have high proportions of current use (45.6 percent) and only 26.8 percent were never-users.

Table 9.6. Percent Distribution of Currently Married, 'Fecund' Women According to Pattern of Contraceptive Use and Desire for More Children, by Selected Background Variables*

| | Never Users | | | | | |
|---|---|---|---|---|---|---|
| Residence, Religion | Intends Future Use | Does Not Intend Future Use | All Never Users | Past Users | Current Users | Number of Women |
| Wants Future Birth | | | | | | |
| Urban | 21.6 | 34.9 | 56.4 | 21.6 | 22.0 | 1,054 |
| Rural | 26.6 | 60.0 | 86.6 | 8.7 | 4.7 | 617 |
| Muslims | 23.7 | 45.3 | 69.0 | 16.4 | 14.6 | 1,617 |
| Other Religions | 17.0 | 9.8 | 26.8 | 27.6 | 45.6 | 55 |
| Wants No More Births | | | | | | |
| Urban | 9.8 | 11.9 | 21.7 | 25.6 | 52.6 | 999 |
| Rural | 26.3 | 32.1 | 58.5 | 23.2 | 18.4 | 281 |
| Muslims | 14.3 | 18.0 | 32.3 | 25.3 | 42.4 | 1,164 |
| Other Religions | 5.0 | 21.0 | 26.0 | 22.4 | 46.2 | 116 |

* 118 'undecided' cases are excluded.

APPENDIX I

HOUSEHOLD SCHEDULE
SHORT HOUSEHOLD SCHEDULE
INDIVIDUAL QUESTIONNAIRE
COMMUNITY LEVEL QUESTIONNAIRE

HASHEMITE   KINGDOM   OF   JORDAN

DEPARTMENT   OF   STATISTICS

IN   COLLABORATION   WITH

INTERNATIONAL   STATISTICAL   INSTITUTE

JORDAN   FERTILITY   SURVEY

1976

HOUSEHOLD   SCHEDULE

Governorate.....................

City/village....................

St. Name/Number.................        House No................
                                        (If available)

Any other details...............

Card Type      ¹ $\boxed{0}\boxed{2}$

Cluster No.    ³ ☐☐☐ ⁵

Household No.  ⁶ ☐☐☐ ⁸

| First Visit | Second Visit | Third Visit | Result Codes: |
|---|---|---|---|
| Name................... | Name................... | Name................... | 1. Completed    5 Partially Completed |
| Date................... | Date................... | Date................... | 2. No eligible   6. Doesn't speak member      Arabic but |
| Result................. | Result................. | Result................. | 3. Differed |
| | | | 4. Refused    7 Other _____ (Specify) |

| Field scrutinized Yes ☐ No ☐ | Reinterviewed/ spot checked Yes ☐ No ☐ | Office edited Yes ☐ No ☐ | Coded Yes ☐ No ☐ |
|---|---|---|---|
| Name.................. | Name.................. | Name.................. | Name.................. |
| Date.................. | Date.................. | Date.................. | Date.................. |

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

| Serial No. | NAME OF USUAL RESIDENTS AND VISITORS. | RELATIONSHIP | | | | RESIDENCE | | | | | SEX | | AGE | | | MORTALITY | | | | | | | | | EDUCATION | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.Would you please give me the names of persons who usually live in your household starting with the head of household? | 2.What is the relationship of this person to the head of house-hold? | Mother Line No. | Couple No. | Generation No. | 3.Does this person usually live here? | | 4.Did this person sleep here last night? | | INTERVIEWER: IF THE ANSWER TO RESIDENCE QUESTION IS NO IN BOTH CASES DELETE THE LINE AND PROCEED TO NEXT MEMBER OF THE HOUSEHOLD. | 5. Is this person male or female? | | 6.How old is he/she? | Code | 7. Is (his/her) father still alive? | | 8.Is he/she) the eldest living child of (his/her) father? | | 9. Is (his/her) mother still alive? | | 10.Is he/she) the eldest living child of (his/her) mother? | | INTERVIEWER: THE NEXT QUESTIONS ARE TO BE ASKED FOR PERSONS AGED 6 YEARS OR ABOVE | 11.Has (he/she) ever been to school? | | IF 'YES' TO QUESTION 11: | | | INTERVIEWER: THE NEXT QUESTIONS ARE TO BE ASKED FOR PERSONS AGED 13 YEARS OR ABOVE. |
| | | | | | | Yes | No | Yes | No | | M | F | | | Yes | No | Yes | No | Yes | No | Yes | No | | Yes | No | 12.What is the highest certificate (he/she) obtained? | Code | 13.What is the highest class (he/she) success-fully com- pleted? | Code |
| 9-10 | | 11-12 | 13 | 14 | | 15 | 15 | 16 | 16 | | 17 | 17 | 18-19 | 18-19 | 20 | 20 | 21 | 21 | 22 | 22 | 23 | 23 | | 24 | 24 | | 25 | | 26-27 |
| XX | | XX | X | X | | X | X | X | X | | X | X | X X | X X | X | X | X | X | X | X | X | X | | X | X | | X | | X X |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| IF CONTINUATION SHEET USED TICK HERE ☐ | Just to make sure you have a complete listing: | 1.Are there any small children or infants that we have not listed? | Yes☐ (Enter each in table) No☐ |
|---|---|---|---|
| | | 2.Are there any other persons, such as servants, friends or lodgers who usually live here? | Yes☐ (Enter each in table) No☐ |
| | | 3.Do you have any guests or visitors temporarily staying with you? | Yes☐ (Enter each in table) No☐ |

102

| Serial No. | MARITAL STATUS | | | | | | | | | INTERVIEWER: THE NEXT QUESTIONS ARE TO BE ASKED FOR EVER MARRIED WOMEN (i.e. IF THE ANSWER TO Q.14 IS 'YES' | NUMBER OF LIVE BIRTHS | | | | | | | | | PARTICULARS OF THE MOST RECENT LIVE BIRTH | | | | | | FERTILITY RESPONDENT: 29.Give line No. of person answering Questions 18-28 | ELIGIBILITY: 30. Tick all women eligible for individual interview. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 14 Has (he/ she) ever been married? | | IF 'YES' TO QUESTION 14: | | | | | | | | Does she have any children of her own liv- ing with her? If 'Yes':How many? | | Does she have any children of her own who do not live with her? If 'Yes':How many? | | Has she ever given birth to a child who later died? If 'Yes': How many? | | INTERVIEWER: Sum up res- ponses 18-23 & make sure the No. is correct.If not, correct the res- ponses. | | 26 In what month and year did your last birth occur? | | 27 Was that a boy or a girl? | | 28 Is (he/ she) still Alive? | | | |
| | | | 15 Is (he/ she) now Married(M) Divorced (D), or Widowed(W)? | | | 16 Has (he/she) been married more than once? | | 17 If'Yes' to Q16: Is (his first wife/her first husband alive? | | | | | | | | | | | | | | | | | | | |
| | Yes | No | M | D | W | Yes | No | Yes | No | | 18 Sons | 19 Daught- ers | 20 Sons | 21 Daught- ers | 22 Sons | 23 Daught- ers | 24 Sons | 25 Daught- ers | Month | Year | Boy | Girl | Yes | No | | |
| | 28 | 28 | 29 | 29 | 29 | 30 | 30 | 31 | 31 | | 32 | 33 | 34 | 35 | 36 | 37 | 38-39 | 40-41 | 42-43 | 44-45 | 46 | 46 | 47 | 47 | 48-49 | 50-51 |
| | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X X | X X | X X | X X | X | X | X | X | X X | X X |
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52 ___ 53    54 ___ 55

Total number of       Total number of
Males in H.H.         Females in H.H.

## CHARACTERISTICS OF THE DWELLING

| | | | |
|---|---|---|---|
| Result ☐ (15) | Month ☐☐ (13) | Interviewer ☐☐☐☐ (9) | House-Hold No. ☐☐☐☐ (6) Cluster No. ☐☐☐ (3) Card type ☐☐ (1) |

Has this H.H been selected in the sample    Yes ☐ 1 (16)    No ☐ 2 (16)

| | | Code | pos. | col. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. What is the type of building material? | . stone | 1 | | | 7. What is the type of lighting? | . Electricity | 1 | | | |
| | . cement | 2 | | | | . Kerosene oil lamp | 2 | X | 26 | |
| | . bricks | 3 | X | 17 | | . other | 3 | | | |
| | . stone and mud | 4 | | | | | | | | |
| | . other | 5 | | | 8. What is the tenancy status of the dwelling? | . owned | 1 | | | |
| | | | | | | . rented | 2 | X | 27 | |
| 2. How many number of rooms is there in the dwelling? ___ | | | X | 18 | | . other | 3 | | | |
| 3. Is any of these rooms used for professional purposes? | .Yes | 1 | X | 19 | 9. Possession of the following articles: | . Bicycle | 1 | X | 28 |
| | .No | 2 | | | | . Motor cycle | 2 | X | 29 |
| | | | | | | . Car | 3 | X | 30 |
| - If 'Yes', how many? ___ | | | X | 20 | | . Refrigerator | 4 | X | 31 |
| | | | | | | . Washing machine | 5 | X | 32 |
| 4. Is there a kitchen? | .Yes | 1 | X | 21 | | . Radio | 6 | X | 33 |
| | .No | 2 | | | | . T.V. | 1 | X | 34 |
| | | | | | | . Telephone | 2 | X | 35 |
| - If 'Yes, is it | . private | 1 | X | 22 | | . Cooking gas | 3 | X | 36 |
| | . common | 2 | | | | . Sewing machine | 4 | X | 37 |
| | | | | | | . Watch | 5 | X | 38 |
| 5. Is there a toilet? | .Yes | 1 | X | 23 | | | | | |
| | .No | 2 | | | 10. What language do you usually speak at home? | . Arabic | 1 | X | 39 |
| - If 'Yes', is it | . private | 1 | X | 24 | | . Other | 2 | | |
| | . common | 2 | | | | | | | |
| 6. What is the source of drinking water? | | | | | 11. Religion or Doctrine: | . Moslem | 1 | | |
| | . Tap inside the dwelling | 1 | | | | . Catholic christian | 2 | | |
| | . Tap outside the dwelling | 2 | X | 25 | | . Other christian | 2 | X | 40 |
| | . Well | 3 | | | | . Other christian | 3 | | |
| | . Other | 4 | | | | . Other | 4 | | |

104

## MEMBERS OF THE HOUSEHOLD WHO HAVE DIED IN THE LAST 24 MONTHS

| NAME | RELATIONSHIP TO HEAD OF HOUSEHOLD | SEX | | AGE AT DEATH | DATE OF DEATH | |
|---|---|---|---|---|---|---|
| | | Code | Male | Female | Code | Month | Year |
| | | 41 | 42 | 42 | 43 | 45 | 47 |
| | | X | X | X | XX | XX | XX |
| | | 49 | 50 | 50 | 51 | 53 | 55 |
| | | X | X | X | XX | XX | XX |
| | | 57 | 58 | 58 | 59 | 61 | 63 |
| | | X | X | X | XX | XX | XX |
| | | 65 | 66 | 66 | 67 | 69 | 71 |
| | | X | X | X | XX | XX | XX |
| | | 73 | 74 | 74 | 75 | 77 | 79 |
| | | X | X | X | XX | XX | XX |

# JORDAN FERTILITY SURVEY

## SHORT HOUSEHOLD SCHEDULE

| | |
|---|---|
| Governorate ......... | Cluster Number ........... |
| City/Village | Household Number |

1

| 1 | 0 |

3

| | | |

6

| | | |

| Interviewer Calls | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Date | | | | |
| Interviewer Name | | | | |
| Result * | | | | |

13

| |

14

| |

15

| | | |

19

| |

* Result Codes

1. Completed

2. No competent R at home

3. Deferred

4. Refused

5. Dwelling vacant or ruined

6. Address not a dwelling

7. Address not found or non-existent

8. Doesn't speak Arabic, but

9. Other (specify)

No. of H.H. members

20

| | |

No. of eligible respondents

22

| |

All information here is for
Statistical Purposes only. The
information is considered
confidential according to the
Statistical Act No.(24) for 1950
and its modifications

# JORDAN FERTILITY SURVEY

1

## INDIVIDUAL QUESTIONNAIRE

(for ever-married women aged 15-49)

| IDENTIFICATION | | | |
|---|---|---|---|
| Governorate ............. | Cluster No ..................... | | |
| City/Village ........... | Household No. ................... | | |
| | Line No. of women .............. | | |

1  [2][0]

3  [ ][ ][ ]

6  [ ][ ][ ]

9  [ ][ ]

11  [ ]

[ ]

| Interviewer Calls | 1 | 2 | 3 |
|---|---|---|---|
| Date | | | |
| Interviewer name | | | |
| Time started | | | |
| Time ended | | | |
| Duration | | | |
| Result* | | | |
| Next visit:  Date | | | |
|           Time | | | |

12  [ ][ ][ ][ ]  15

16  [ ][ ]

18  [ ]

*Result codes

    1. Completed      5. Partly completed

    2. Not at home   6. Doesn't speak Arabic, but

    3. Deferred      7. Other (specify)

    4. Refused

19  [ ]

| Scrutinized [ ] | Reinterviewed [ ]<br>or spot-checked | Edited [ ] | Coded' [ ] |
|---|---|---|---|
| Name ............ | Name ................ | Name .............. | Name ............... |
| Date ........... | Date ............... | Date .............. | Date ............. |

# SECTION 1. RESPONDENT'S BACKGROUND

PLACE OF INTERVIEW (CITY/VILLAGE NAME) ·············

101. Do you live in this house?

YES ☐1                     NO ☐2

102. Do you live in ············· (City/Village name mentioned above)?

YES ☐1                NO ☐2

103. Where do you live? ·····················

DESERT ☐1   VILLAGE ☐2   TOWN ☐3   CITY ☐4

104. Have you always lived in ··············· (City/Village name mentioned above 101 or in 103 above)

YES ☐1                     NO ☐2

| 105. What kind of area would you say (this, that) was when you were growing up, say to age 12 ? Was it a desert, a village, a town, or a city? | 106. In what kind of area did you live mostly when you were growing up, say to age 12 ? Was it a desert, a village, a town, or a city? |
|---|---|
| DESERT ☐1     VILLAGE ☐2 | TOWN ☐3     CITY ☐4 |

107. In what month and year were you born?

······· 19····                     D.K. ☐88

(MONTH)   (YEAR)

(SKIP TO 109)

108. How old are you?

(RECORD BEST ESTIMATE)

109. Have you ever attended school ?

YES $\boxed{1}$                    NO $\boxed{2}$

(SKIP TO 113)

110. What was the highest level of education you achieved, was it elementary, preparatory, secondary, higher institute or university ?

ELEMENTARY $\boxed{1}$    PREPARATORY $\boxed{2}$    SECONDARY $\boxed{3}$

HIGHER INSTITUTE $\boxed{4}$         UNIVERSITY $\boxed{5}$

111. What was the highest class you completed at that level ?

.................

112. INTERVIEWER : TICK APPROPRIATE BOX

LESS THAN 6 YEARS SCHOOLING ☐         6 OR MORE YEARS SCHOOLING ☐

(SKIP TO 114)

113. Can you read - say a newspaper or magazine ?

YES $\boxed{1}$                    NO $\boxed{2}$

114. What is your religion

MOSLEM $\boxed{1}$         CATHOLIC $\boxed{2}$

OTHER CHRISTIAN $\boxed{3}$         OTHER RELIGION $\boxed{4}$

201.  Now I have some questions about your married life. Are you now
      married, widowed, or divorced ?

MARRIED [1]          WIDOWED [2]              DIVORCED [3]

37 □

38 □

202.  Were you married only once, or more than once ?

      ONCE [1]                                    MORE
                                               THAN ONCE  [2]
      (SKIP TO TABLE, ASK 209.                  (SKIP TO 208)
      TICK APPROPRIATE BOX IN
      210, AND CONTINUE)

39 □□  41 □□
   M      Y

203.  In what month and year did you and your husband start
      living together ?            .......... 19....
                                      (M)        (Y)

      IF D.K. ASK: How old were you then? [7][7]
                                              (Age)

      IF STILL D.K. ASK: How many years
      ago was that ?                   [6][6]
                                       (Years ago)

204.  Does your husband ordinarily live in your household ?

      YES [1]                              NO [2]

43 □

44 □

      205.  Is he away only for the time being, or have
            you stopped living together for good ?

            AWAY FOR                  STOPPED
            TIME BEING [1]            FOR GOOD [2]
            (SKIP TO 207)
                                      206.  In what month and
                                            year did you stop
                                            living together ?
                                            .......... 19....
                                              (M)        (Y)

                                            IF D.K. ASK: For how
                                            many years did you live
                                            together ? [6][6]
                                                        (YEARS)

45 □□  47 □□
   M      Y

207.  Have you been married more than once ?

      YES [1]                              NO [2]
                                           (SKIP TO 213)

49 □

50 □

208.  How many times have you been married altogether ?

      ...................
      (NUMBER OF TIMES)

INTERVIEWER: FOR EACH PAST MARRIAGE ASK 209-212, THEN SKIP TO 213.
             (IF CURRENTLY MARRIED, THE NUMBER OF ENTRIES IN THE TABLE
             WILL BE ONE LESS THAN THE ANSWER TO 208).

                    MONTH OF INTERVIEW

Puncher:

End Card

51 □

109

| 209. In what month and year did you begin living with your (first, second ....) husband ?<br><br>IF D.K.:How old were you then ?<br><br>IF STILL D.K. How many years ago was it ? | 210.How did the marriage end ? | 211.<br>IF DIVORCE: In what month and year did stop living together?<br><br>IF D.K.: For how many years did you live together before separating? | 212.IF DEATH: In what month and year did he die ?<br><br>IF D.K.: For how many years had you lived together when he died ? | Puncher<br><br>New Card<br><br>1<br>[3][0] |
|---|---|---|---|---|
| 01 ..... 19..<br>   (M)     (Y)<br>[7][7]<br>   (Age)<br>[6][6]<br>(Years ago) | DEATH [1]<br><br>DIVORCE [2] | ..... 19..<br>  (M)     (Y)<br>[6][6]<br>(Years lasted) | ..... 19..<br>  (M)     (Y)<br>[6][6]<br>(Years lasted) | 11            15<br>[ ][ ] [ ][ ] [ ] [ ][ ] [ ][ ]<br>M    Y   End   M    Y |
| 02 ..... 19..<br>   (M)     (Y)<br>[7][7]<br>   (Age)<br>[6][6]<br>(Years ago) | DEATH [1]<br><br>DIVORCE [2] | ..... 19..<br>  (M)     (Y)<br>[6][6]<br>(Years lasted) | ..... 19..<br>  (M)     (Y)<br>[6][6]<br>(Years lasted) | 20            24<br>[ ][ ] [ ][ ] [ ] [ ][ ] [ ][ ] |
| 03 ..... 19..<br>   (M)     (Y)<br>[7][7]<br>   (Age)<br>[6][6]<br>(Years ago) | DEATH [1]<br><br>DIVORCE [2] | ..... 19..<br>  (M)     (Y)<br>[6][6]<br>(Years lasted) | ..... 19..<br>  (M)     (Y)<br>[6][6]<br>(Years lasted) | 29            33<br>[ ][ ] [ ][ ] [ ] [ ][ ] [ ][ ] |
| 04 ..... 19..<br>   (M)     (Y)<br>[7][7]<br>   (Age)<br>[6][6]<br>(Years ago) | DEATH [1]<br><br>DIVORCE [2] | ..... 19..<br>  (M)     (Y)<br>[6][6]<br>(Years lasted) | ..... 19..<br>  (M)     (Y)<br>[6][6]<br>(Years lasted) | 38            42<br>[ ][ ] [ ][ ] [ ] [ ][ ] [ ][ ] |

213. How old were you when your periods began for the first time?

Age ............      D.K. |8 8|
(SKIP TO 301)

47
|  |  |

214. Was it <u>before</u> or <u>after</u> you started living with your first husband?

Before |1|      After |2|      D.K. |8|
(SKIP TO 301)

49
| |

215. How many years (before, after) you started living with your first husband did your periods begin?

...............
(Years)

50
|  |  |

111

# SECTION 3. MATERNITY HISTORY

301. We should like to get a complete record of all the babies each woman has actually given birth to in all of her life.
Do you have any sons you have given birth to now living with you?

YES ☐                  NO |0 0|
                                  (SKIP TO 303)

| 302. How many sons live with you?  .............. |
| (NUMBER) |

303. Do you have any sons you have given birth to who do not live with you?

YES ☐                  NO |00|
                              (SKIP TO 305)

| 304. How many sons do not live with you ............ |
| (NUMBER) |

305. Do you have any daugthers you have given birth to now living with you?

YES ☐                  NO |00|
                              (SKIP TO 307)

| 306. How many daughters live with you? ............ |
| (NUMBER) |

307. Do you have any daughters you have given birth to who do not live with you?

YES ☐                  NO |00|
                              (SKIP TO 309)

| 308. How many daughters do not live with you? ........ |
| (NUMBER) |

309. Have you ever given birth to any boy or girl who later died, even if the child lived for only a short time?

YES ☐                  NO |00|
                              (SKIP TO 311)

| 310. How many of your children have died? ............ |
| (NUMBER) |

311. INTERVIEWER: Sum answers to questions 302, 304, 306, 308 and 310 and enter total here: .............
                                            (TOTAL)

6

52

54

56

58

60

62 63

NOW ASK:

Just to make sure I have this right, you have had
............ births.   Is that correct?
   (TOTAL)

YES                                    NO

PROBE AND CORRECT RESPONSES
(TO QUESTIONS 302 - 310) AS
NECESSARY.

- IF ZERO LIVE BIRTHS, SKIP TO 326.
- IF ONE LIVE BIRTH, SKIP TO 312.

OTHERWISE:
Now I want to ask you some questions about each of your ...........
births, starting with the first birth you had.          (TOTAL)

ASK 312 - 316 FOR EACH LIVE BIRTH, STARTING WITH THE FIRST.
IF TWINS, USE ONE LINE FOR EACH AND CONNECT WITH A BRACKET
AT THE LEFT.

8

| 312. What name did you give your (first, second, ...) child? | 313. Was it a boy or a girl? | 314. In what month and year was he/she born? IF D.K. ASK: How many years ago? | 315. Is this child still living? | 316. IF DEAD: For how long did the child live? | |
|---|---|---|---|---|---|
| 01 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 11 Sex\|Mth \| YR \| Age at death |
| 02 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 18 |
| 03 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 25 |
| 04 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 32 |
| 05 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 39 |
| 06 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 46 |
| 07 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 53 |
| 08 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 60 |
| 09 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 67 |
| 10 ____ | BOY [1] GIRL [2] | MONTH....YEAR.... [6\|6] .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 74           80 Puncher: End Card |

114

| 312. What name did you give your (first, second, ...) child? | 313. Was it a boy or a girl? | 314. In what month and year was he/she born? IF D.K. ASK: How many years ago? | 315. Is this child still living? | 316. IF DEAD: For how long did the child live? | Puncher New Card |
|---|---|---|---|---|---|
| | | | | | 1 — 3│2 |
| 01 ___ | BOY [1] GIRL [2] | MONTH....YEAR.... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 11 — Sex│Mth │ YR │Age at death |
| 02 ___ | BOY [1] GIRL [2] | MONTH.....YEAR.... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 18 |
| 03 ___ | BOY [1] GIRL [2] | MONTH....YEAR.... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 25 |
| 04 ___ | BOY [1] GIRL [2] | MONTH....YEAR.... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 32 |
| 05 ___ | BOY [1] GIRL [2] | MONTH....YEAR.... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 39 |
| 06 ___ | BOY [1] GIRL [2] | MONTH....YEAR.... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 46 |
| 07 ___ | BOY [1] GIRL [2] | MONTH....YEAR.... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 53 |
| 08 ___ | BOY [1] GIRL [2] | MONTH...YEAR.... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 60 |
| 09 ___ | BOY [1] GIRL [2] | MONTH....YEAR .... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 67 |
| 10 ___ | BOY [1] GIRL [2] | MONTH....YEAR .... 6│6 .......... (Years ago) | YES [ ] NO [ ] | MONTH.... YEAR .... | 74 — 80 Puncher: End Card |

317. Did you feed ...................... at the breast?
           (NAME OF LAST CHILD)

                YES ☐1              NO ☐2
                  │              (SKIP TO 320)
                  ▼

┌────────────────────────────────────────────────────────────┐
│ 318. For how many months did you breast-feed?               │
│                                                              │
│              STILL                TILL                        │
│  ........    BREAST- ☐6 6         CHILD ☐7 7    D.K. ☐8 8     │
│  (MONTHS)    FEEDING              DIED                        │
│     │        (SKIP TO 320)    (SKIP TO 320)  (SKIP TO 320)   │
│     ▼                                                        │
│ ┌──────────────────────────────────────────────────────┐   │
│ │ 319. Had you completely stopped breast-feeding him/her │   │
│ │      after ............ months?                        │   │
│ │                                                        │   │
│ │              YES ☐1              NO ☐2                  │   │
│ │                              (CORRECT 318)             │   │
│ └──────────────────────────────────────────────────────┘   │
└────────────────────────────────────────────────────────────┘

320. INTERVIEWER: TICK APPROPRIATE BOX (SEE BIRTH HISTORY TABLE,
     LAST BIRTH)

     LAST BIRTH          LAST BIRTH
     6 OR MORE ☐1        WITHIN LAST ☐2
     YEARS AGO           6 YEARS       │
     (SKIP TO 322)                     ▼

┌────────────────────────────────────────────────────────────┐
│ 321. How many months after the birth of ..................  │
│      did your periods come back?  (NAME OF LAST BIRTH)       │
│                                                              │
│      ............    D.K. ☐8 8       NOT YET ☐7 7            │
│        (MONTHS)                                              │
└────────────────────────────────────────────────────────────┘

322. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311).

                          TWO OR
     ONE BIRTH ☐1         MORE BIRTHS ☐2
     (SKIP TO 326)                     │
                                       ▼

┌────────────────────────────────────────────────────────────┐
│ 323. Did you feed ........................... at the breast?│
│           (NAME OF NEXT-TO-LAST CHILD)                       │
│                                                              │
│                YES ☐1              NO ☐2                     │
│                  │              (SKIP TO 326)                │
│                  ▼                                           │
└────────────────────────────────────────────────────────────┘

324. For how many months did you breast-feed?

. . . . . . . . . . . .
(MONTHS)

TILL
CHILD [7|7]
DIED
(SKIP TO 326)

D.K. [8|8]
(SKIP TO 326)

| | |
|---|---|
| 20 | [ | ] |

325. Had you completely stopped breast-feeding him/her
after . . . . . . . . . . . . . months?

YES [1]

NO [2]
(CORRECT 324)

22 [ ]

INTERVIEWER: SEE 211 AND 212, IF THE WOMAN IS WIDOWED OR DIVORCED:
SEE 206, IF THE WOMAN IS MARRIED BUT NOT LIVING WITH
HUSBAND: TICK BOX "NO" (QUESTION 326 BELOW) FOR THOSE
WHO HAVE BEEN WIDOWED OR DIVORCED FOR ONE YEAR OR MORE.

23 [ ]

326. Are you pregnant now?

YES [1]

NO [2]
(SKIP TO 329)

D.K. [8]
(SKIP TO 329)

.24 [ ]

327. How many months pregnant are you now? . . . . . . . . . . . . .
(MONTHS)

328. Would you prefer to have a boy or a girl?

BOY [1]     GIRL [2]     EITHER [3]     OTHER
ANSWER [4] . . . . . . . . . . . . . .
(SPECIFY)

25 [ ]

329. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311 AND 326)

[1] NO LIVE BIRTH
AND NOT
CURRENTLY
PREGNANT

[2] NO LIVE BIRTH
BUT CURRENTLY
PREGNANT

[3] ONE OR MORE
LIVE BIRTHS

(SKIP TO 332)

26 [ ]

330. Have you ever been
pregnant?
(IF NO PROBE: I mean, have
you ever had a preganacy
even one that lasted just
a few weeks or a few months)?

YES [1]               NO [2]
(SKIP TO 338)

Aside from your current pregn-
ancy, have there been any other
times you were pregnant?
(IF NO PROBE: I mean, have you
ever had a pregnancy that lasted
for just a few weeks or a few
months)?

YES [1]               NO [2]
(SKIP TO 338)

27 [ ]

331. How many such pregnancies have you had? . . . . . . . . . . . . . .
(NUMBER)
(ASK 334 - 337)

28 [ ]

117

332. Have you ever had a pregnancy that lasted for just a few weeks or a few months?

INTERVIEWER: ASK 332 FOR EACH INTERVAL (BEFORE FIRST LIVE BIRTHS, BETWEEN SUCCESSIVE LIVE BIRTHS, AND BETWEEN LAST LIVE BIRTH AND TILL NOW OR TILL CURRENT PREGNANCY), AND NOTE ANSWERS FOR EACH INTERVAL IN CORRESPONDING LINE.

| INTERVAL-NUMBER | | NUMBER OF PREGNANCIES |
|---|---|---|
| 00 | Before 1st live birth | |
| 01 | Between 1st and | |
| 02 | Between 2nd and | |
| 03 | Between 3rd and | |
| 04 | Between 4th and | |
| 05 | Between 5th and | |
| 06 | Between 6th and | |
| 07 | Between 7th and | |
| 08 | Between 8th and | |
| 09 | Between 9th and | |
| 10 | Between 10th and | |
| 11 | Between 11th and | |
| 12 | Between 12th and | |
| 13 | Between 13th and | |
| 14 | Between 14th and | |
| 15 | Between 15th and | |
| 16 | Between 16th and | |
| 17 | Between 17th and | |
| 18 | Between 18th and | |
| 19 | Between 19th and | |
| 20 | Between 20th and | |

29
□
Total

□ 30
□ 31
□ 32
□ 33
□ 34
□ 35
□ 36
□ 37
□ 38
□ 39
□ 40
□ 41
□ 42
□ 43
□ 44
□ 45
□ 46
□ 47
□ 48
□ 49
□ 50

Puncher
End Card

118

IF ANY PREGNANCIES WERE MENTIONED IN 332, NOTE THE NUMBER OF THE INTERVAL IN COL. 1 AND ASK 334-337 FOR EACH SUCH PREGNANCY STARTING WITH THE FIRST.

Puncher
New Card

| 333. NO. OF INTERVAL TO WHICH PREGNANCY BELONGS (1) | 334. How many months did that pregnancy last? (2) | 335. IF 7 MONTHS OR MORE IN 334 ASK: Did that baby show any sign of life after it was born? (3) | 336. IF YES TO 335 ASK: Was the baby a boy or a girl? (4) | 337. IF LESS THAN 7 IN 334 ASK: Did you, or a doctor or someone else do anything to end that pregnancy early? (5) |
|---|---|---|---|---|

1

4 1

| | MTHS — LESS THAN 7 — 7 OR MORE | YES 1   NO 2 | BOY 1   GIRL 2 | YES 1   NO 2 | 11 |
| | MTHS — LESS THAN 7 — 7 + | YES 1   NO 2 | BOY 1   GIRL 2 | YES 1   NO 2 | 17 |
| | MTHS — LESS THAN 7 — 7 + | YES 1   NO 2 | BOY 1   GIRL 2 | YES 1   NO 2 | 23 |
| | MTHS — LESS THAN 7 — 7 + | YES 1   NO 2 | BOY 1   GIRL 2 | YES 1   NO 2 | 29 |
| | MTHS — LESS THAN 7 — 7 + | YES 1   NO 2 | BOY 1   GIRL 2 | YES 1   NO 2 | 35 |
| | MTHS — LESS THAN 7 — 7 + | YES 1   NO 2 | BOY 1   GIRL 2 | YES 1   NO 2 | 41 |
| | MTHS — LESS THAN 7 — 7 + | YES 1   NO 2 | BOY 1   GIRL 2 | YES 1   NO 2 | 47 |
| | MTHS — LESS THAN — 7 + | YES 1   NO 2 | BOY 1   GIRL 2 | YES 1   NO 2 | 53         58 |

Puncher: End Card

119

338. Assuming it were legal, would you approve or disapprove of women having an abortion by a doctor in the following cases?

Puncher: New Card

1

5 0

11

12

13

14

15

16

17

| | APPROVE | DISAPPROVE | D.K. |
|---|---|---|---|
| 1. If the pregnancy is dangerous to her life? | 1 | 2 | 8 |
| 2. If the pregnancy is dangerous to her health? | 1 | 2 | 8 |
| 3. If the woman has been raped? | 1 | 2 | 8 |
| 4. If there is good reason to believe that the child might be deformed or mentally defective? | 1 | 2 | 8 |
| 5. If the woman is not married? | 1 | 2 | 8 |
| 6. If the couple can not afford another child? | 1 | 2 | 8 |
| 7. If the woman wants abortion for any reason? | 1 | 2 | 8 |

339. RELIABILITY OF ANSWERS IN SECTION 3:

POOR 1          FAIR 2          GOOD 3

18

340. PRESENCE OF OTHERS AT THIS POINT (TICK ALL THAT APPLY):

NO OTHERS 0

CHILDREN UNDER 10 1

19

HUSBAND 2

OTHER MALES 4

OTHER FEMALES 8

120

# SECTION 4. CONTRACEPTIVE KNOWLEDGE AND USE

401. Now I want to talk about a somewhat different topic. As you may know, there are various ways that a couple can delay or avoid the next pregnancy. Do you know of, or have you heard of, any of these ways or methods?

YES [1]　　　　　　NO [2]

(SKIP TO INSTRUCTIONS ABOVE 404)

402. Which methods do you know of? ................................
PROBE: Do you know of any others? .............................
INTERVIEWER: RECORD ANSWER, THEN PROCEED TO TICK BOX(ES) IN
COL.1 CORRESPONDING TO THE METHOD(S) MENTIONED.
FOR EACH METHOD SO TICKED (EXCEPT STERILIZATION) ASK

403. Have you ever used (METHOD)?
REFER TO METHOD IN SAME WORDS USED BY R IN 402. TICK RESPONSE IN
COL.3 CORRESPONDING TO THE PARTICULAR METHOD.
NOW ASK 404-414, IN TURN, SKIPPING THOSE METHODS TICKED IN COL.1.
PREFACE THE QUESTIONING WITH:
There are some other methods which you have not mentioned, and
I would like to find out if you might have heard of them.

| Col.1 | FOR THOSE WHO SAID 'NO' TO 401, PREFACE Q.404 WITH: | Col.2 | 'Col.3 | | |
|---|---|---|---|---|---|
| FROM 402 | Just to make sure, let me describe some methods to see if you have heard of them. | EVER HEARD OF | EVER USED | | |
| [θ] PILL | 404. One way a woman can delay the next pregnancy, or avoid getting pregnant, is to take a pill every day. Have you ever heard of this method? (TICK RESPONSE IN COL.2). IF NO, SKIP TO NEXT UNTICKED METHOD. IF YES: Have you ever used this method? (Tick response in Col.3). | YES[1] NO [2] | YES[1] NO [2] | 23 □ | 24 □ |
| [θ] IUD | 405. A woman may have a loop or coil of plastic or metal, the intrauterine device (IUD), inserted in her womb by a doctor and left there. Have you ever heard of this method? (AS ABOVE). IF YES: Have you ever used this method? (AS ABOVE). | YES[1] NO [2] | YES[1] NO [2] | 25 □ | 26 □ |
| [θ] OTHER FEMALE SCIEN-TIFIC | 406. Women may also use other methods to avoid getting pregnant, such as placing a diaphragm or tampon or sponge in themselves before sex, or using foam tablets, or jelly or cream. Have you ever heard of any of these methods? IF YES: Have you ever used any of these methods? | YES[1] NO [2] | YES[1] NO [2] | 27 □ | 28 □ |
| [θ] DOUCHE | 407. Some women wash themselves immediately after sex, with water or perhaps some other liquid. Have you ever heard of this method? IF YES: Have you ever used this method to avoid getting pregnant? | YES[1] NO [2] | YES[1] NO [2] | 29 □ | 30 □ |

| Col.1 | | Col.2 | Col.3 | | |
|---|---|---|---|---|---|
| FROM 402 | | EVER HEARD OF | EVER USED | | |
| $\theta$ CONDOM | 408. There are also some methods men use so that their wives will not get pregnant. Some men wear a condom during sex. Have you ever heard of this method? IF YES: Did you and your husband ever use this method? | YES [1] NO [2] | YES [1] NO [2] | 31 □ | 32 □ |
| $\theta$ RHYTHM | 409. Some couples avoid having sex on particular days of the month when the woman is most able to become pregnant. This is called the safe period or rhythm method. Have you ever heard of this method? IF YES: Did you and your husband ever do this? | YES [1] NO. [2] | YES [1] NO [2] | 33 □ | 34 □ |
| $\theta$ WITH DRAWAL | 410. Some men practise withdrawal, that is, they are careful and pull out before climax. Have you ever heard of this method? IF YES: Did you and your husband ever use this method? | YES [1] NO [2] | YES [1] NO [2] | 35 □ | 36 □ |
| $\theta$ AB- STAIN | 411. Another way is to go without sex for several months or longer to avoid getting pregnant. Have you ever heard of this method being used? IF YES: Have you ever done this to avoid getting pregnant? | YES [1] NO [2] | YES [1] NO [2] | 37 □ | 38 □ |
| $\theta$ FEMALE STERIL | 412. Some women have an operation, called sterilization, such as having their tubes tied, in order not to have any more children. Have you ever heard of this method? (TICK RESPONSE IN COL.2) | YES [1] NO [2] | ///// | 39 □ | |
| $\theta$ MALE STERIL | 413. Some men have a sterilization operation, called vasectomy, so that their wife will not have more children. Have you ever heard of this method? (TICK RESPONSE IN COL.2). | YES [1] NO [2] | ///// | 40 □ | |
| # OTHER | 414. Have you ever heard of any other methods which women or men use to avoid pregnancy? IF YES: (SPECIFY) ..................... IF YES: (SPECIFY)..................... FOR EACH METHOD, ASK: Did you and your husband ever use this method so that you would not get pregnant? | YES$_1$ [1] NO$_1$ [2] YES$_2$ [1] NO$_2$ [2] YES$_3$ [1] NO$_3$ [2] | | 41 □□□ 44 □□□ 47 □□□ | |

415. INTERVIEWER: TICK APPROPRIATE BOX.

AT LEAST ONE YES [1]
IN COL.3
(SKIP TO 418)

NOT A SINGLE [2]
YES IN COL.3 ↓

50 □

416. I want to make sure I have the correct information. Have you ever done anything or tried in any way to delay or avoid getting pregnant?

YES ☐1   NO ☐2

(SKIP TO SECTION 5)

417. What method was that? ...........................

418. INTERVIEWER: TICK APPROPRIATE BOX (SEE 404)

EVER USED ☐1   NEVER USED ☐2
PILL            PILL

(SKIP TO 420)

419. Is any pill available in this house now?

YES ☐1   NO ☐2   D.K. ☐8

420. INTERVIEWER: TICK APPROPRIATE BOX (SEE 408)

EVER USED ☐1   NEVER USED ☐2
CONDOM          CONDOM

(SKIP TO SECTION 5)

421. Are any condoms available in this house now?

YES ☐1   NO ☐2   D.K. ☐8

51 ☐

52 ☐☐

54 ☐

55 ☐

56 ☐

57 ☐

# SECTION 5. FERTILITY REGULATION

---

**501. INTERVIEWER: TICK APPROPRIATE BOX (SEE 326)**

CURRENTLY PREGNANT [1]          NOT CURRENTLY PREGNANT, OR D.K. [2]

---

**502. INTERVIEWER: TICK APPROPRIATE BOX (SEE 415 AND 416)**

HAS USED A CONTRACEPTIVE METHOD [1]          HAS NEVER USED A CONTRACEPTIVE METHOD [2]

(SKIP TO 553, YELLOW PAGES)          (SKIP TO 547, GREEN PAGES)

**503. INTERVIEWER: TICK APPROPRIATE BOX (SEE 201 AND 205)**

MARRIED AND LIVING WITH HUSBAND [1]          MARRIED BUT NOT LIVING WITH HUSBAND, WIDOWED OR DIVORCED [2]

(SKIP TO 570, BLUE PAGES)

---

**504. INTERVIEWER: TICK APPROPRIATE BOX (SEE 415 AND 416)**

HAS USED A CONTRACEPTIVE METHOD [1]          HAS NEVER USED A CONTRACEPTIVE METHOD [2]

---

**505. Are you or your husband currently using a method to keep you from getting pregnant?**

YES [1]          NO [2]

**506. What method are you using?**

..........................

INTERVIEWER: (EXCEPT FOR STERILIZATION) SKIP TO 518, PINK PAGES.

IF METHOD IS FEMALE STERILIZATION, SKIP TO 571, BLUE PAGES.

IF METHOD IS MALE STERILIZATION, SKIP TO 575, BLUE PAGES.

**507. As far as you know, is it physically possible for you and your husband to have a child, supposing you wanted one?**

YES [1]          NO [2]          D.K. [8]

(SKIP TO 570 BLUE PAGES)

(SKIP TO 509, GREY PAGES)

---

**508. As far as you know, is it physically possible for you and your husband to have a child, supposing you wanted one?**

YES [1]          NO [2]          D.K. [8]

(SKIP TO 518, PINK PAGES)          (SKIP TO 570, BLUE PAGES)          (SKIP TO 518, PINK PAGES)

---

FOR OFFICE WORK: Put the number of the question to be skipped to as the case may be.

---

58

59

60

61

62

63

65

66

67 68

Puncher:End Card

124

NOTE: 509-517 ARE ONLY FOR THOSE NOT CURRENTLY PREGNANT, LIVING WITH HUSBAND, FECUND, WHO HAVE NEVER USED A CONTRACEPTIVE METHOD.

509   INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

NO LIVE BIRTH [1]                    ONE OR MORE LIVE BIRTHS [2]

(SKIP TO 514)

510. Do you want to have another child sometime?

YES [1]              NO [2]              UNDECIDED [3]
                  (SKIP TO 513)          (SKIP TO 513)

511. Would you prefer your next child to be a boy or a girl?

BOY [1]              GIRL [2]              EITHER [3]

OTHER ANSWER (SPECIFY) ..........................

512. How many more boys and how many more girls do you want to have?

BOYS                          GIRLS

......                        .......

(SKIP TO 517)

513. IF ONE LIVE BIRTH, ASK:          IF TWO OR MORE LIVE BIRTHS, ASK:

Thinking back to the time before you became pregnant with your child. Had you wanted to have any children?

Thinking back to the time before you became pregnant with your last child. Had you wanted to have any more children?

YES [1]              NO [2]              UNDECIDED [3]
(SKIP TO 517)      (SKIP TO 517)          (SKIP TO 517)

125

514. Do you want to have any children?

YES [1]                NO [2]                UNDECIDED [3]

                       (SKIP TO 517)        (SKIP TO 517)

515. Would you prefer your first child to be a boy or a girl?

BOY [1]            GIRL [2]            EITHER [3]

OTHER ANSWER (SPECIFY) ........................

516. How many boys and how many girls in all do you want to have?

BOYS                    GIRLS

......                  .......

517. Do you think you and your husband may use any method at any time in the future so that you will not become pregnant?

YES [1]                NO [2]                UNDECIDED [3]

599. If you could choose exactly the number of children to have in your whole life, how many children would that be?

NUMBER ............

(SKIP TO SECTION 6)

19

20

21
23

25

26

28 29

Puncher:
End Card

126

NOTE: 518-546 ARE ONLY FOR THOSE NOT CURRENTLY PREGNANT, LIVING WITH HUSBAND, FECUND, WHO HAVE USED A CONTRACEPTIVE METHOD.

518. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

NO LIVE BIRTH ☐1    ONE OR MORE LIVE BIRTHS ☐2

(SKIP TO 539)

519. Do you want to have another child sometime?

YES ☐1    NO ☐2    UNDECIDED ☐3
(SKIP TO 530)    (SKIP TO 530)

520. Would you prefer your next child to be a boy or a girl?

BOY ☐1    GIRL ☐2    EITHER ☐3
OTHER ANSWER (SPECIFY) .....................

521. How many more boys and how many more girls do you want to have?

BOYS                    GIRLS

......                    .......

522. INTERVIEWER: PICK APPROPRIATE BOX (SEE 505)

CURRENTLY CONTRACEPTING ☐1    NOT CURRENTLY CONTRACEPTING ☐2

(SKIP TO 526)

523. Have you or your husband used a method to keep you from getting pregnant since the birth of your (last) child?

YES ☐1    NO ☐2
(SKIP TO 526)

524. What was the last method you used?

...............................................
(IF METHOD WAS ABSTINENCE, SKIP TO 526)

525. Did you stop because you wanted to become pregnant?

YES ☐1    NO ☐2

127

526. IF ONE LIVE BIRTH, ASK:

Think back to the time before you became pregnant with your child. Was there any time when you or your husband were using a method to keep you from getting pregnant?

YES ☐1    NO ☐2
          (SKIP TO 599)

IF TWO OR MORE LIVE BIRTHS, ASK:

Think back to the interval between your (last) two births. Was there any time during that interval when you or your husband were using a method to keep you from getting pregnant?

YES ☐1    NO ☐2
          (SKIP TO 599)

527. What method were you using?

..........................................
(IF METHOD WAS ABSTINENCE, SKIP TO 599)

528. Did you become pregnant while using that method, or had you stopped using before becoming pregnant?

WHILE USING ☐1        HAD STOPPED ☐2        D.K. ☐8
(SKIP TO 599)                                (SKIP TO 599)

529. Did you stop because you wanted to become pregnant?

YES ☐1                    NO ☐2
(SKIP TO 599)             (SKIP TO 599)

530. INTERVIEWER: TICK APPROPRIATE BOX (SEE 505)

CURRENTLY CONTRACEPTING ☐1        NOT CURRENTLY CONTRACEPTING ☐2
(SKIP TO 533)

531. Have you or your husband used a method to keep you from getting pregnant since the birth of your (last) child?

YES ☐1                    NO ☐2
                          (SKIP TO 533)

532. What was the last method you used?

..................................

23 ☐

24 ☐☐

26 ☐

27 ☐

28 ☐

29 ☐

30 ☐☐

128

533. IF ONE LIVE BIRTH, ASK:

Thinking back to the time you became pregnant with your child. Had you wanted to have any children?

YES ☐1       NO ☐2

UNDECIDED ☐3

IF TWO OR MORE LIVE BIRTHS, ASK:

Thinking back to the time before you became pregnant with your last child. Had you wanted to have any more children?

YES ☐1       NO ☐2

UNDECIDED ☐3

534. Was there any time before the birth of your child when you or your husband were using a method to keep you from getting pregnant?

YES ☐1       NO ☐2
                (SKIP TO 599)

Was there any time in the interval between your (last) two births when you or your husband were using a method to keep you from getting pregnant?

YES ☐1       NO ☐2
                (SKIP TO 599)

535. What method were you using?

..............................................

(IF METHOD WAS ABSTINENCE, SKIP TO 599)

536. INTERVIEWER: TICK APPROPRIATE BOX (SEE 533)

"YES" TO 533 ☐1

"NO" OR "UNDECIDED" ☐2 TO 533
(SKIP TO 599)

537. Did you become pregnant while using that method, or had you stopped using before becoming pregnant?

WHILE USING ☐1       HAD STOPPED ☐2       D.K. ☐8

(SKIP TO 599)                                   (SKIP TO 599)

538. Did you stop because you wanted to become pregnant?

YES ☐1                       NO ☐2

(SKIP TO 599)               (SKIP TO 599)

32 ☐

33 ☐

34 ☐☐

36 ☐

37 ☐

38 ☐

129

NOTE: 553-569 ARE ONLY FOR THOSE CURRENTLY PREGNANT WHO HAVE USED A CONTRACEPTIVE METHOD.

553. INTERVIEWER: TICK APPROPRIATE BOX (SEE 201 AND 205)

MARRIED AND LIVING WITH HUSBAND [1]   MARRIED BUT NOT LIVING WITH HUSBAND, [2]   WIDOWED OR DIVORCED

(SKIP TO 562)

554. Do you want to have another child sometime, in addition to the one you are expecting?

YES [1]        NO [2]        UNDECIDED [3]
            (SKIP TO 562)   (SKIP TO 562)

555. How many more boys and how many more girls do you want to have, after the one you are expecting?

BOYS            GIRLS

......          .......

556. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

NO LIVE BIRTH [1]        ONE OR MORE LIVE BIRTHS [2]

557. What was the last method you or your husband used to keep you from getting pregnant?

....................
....................
....................
....................
....................

(IF ABSTINENCE, SKIP TO 599)

558. Think back to the interval between your (last) birth and your current pregnancy. Was there any time during that interval when you or your husband were using a method to keep you from getting pregnant?

YES [1]        NO [2]
            (SKIP TO 599)

559. What was the last method you used?
....................
(IF ABSTINENCE, SKIP TO 599)

560. Did you become pregnant while using that method, or had you stopped using before becoming pregnant?

WHILE USING [1]        HAD STOPPED [2]        D.K. [8]
(SKIP TO 599)                                (SKIP TO 599)

561. Did you stop because you wanted to become pregnant?

YES [1]                        NO [2]
(SKIP TO 599)                  (SKIP TO 599)

130

562. Before you became pregnant this time, had you wanted to have any (more) children?

YES ☐1      NO ☐2      UNDECIDED ☐3

563. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

NO LIVE ☐1          ONE OR MORE ☐2
BIRTH               LIVE BIRTHS

564. What was the last method you or your husband used to keep you from getting pregnant?

..................

........  .......

....  ............
(IF ABSTINENCE, SKIP TO 599)

565. Think back to the interval between your (last) birth and your current pregnancy. Was there any time during that interval when you or your husband were using a method to keep you from getting pregnant?

YES ☐1          NO ☐2
                (SKIP TO 599)

566. What was the last method you used?

...........................
(IF ABSTINENCE, SKIP TO 599)

567. INTERVIEWER: TICK APPROPRIATE BOX (SEE 562)

"YES" TO ☐1          "NO" OR ☐
562                  "UNDECIDED"
                     TO 562
                     (SKIP TO 599)

568. Did you become pregnant while using that method, or had you stopped using before becoming pregnant?

WHILE ☐1          HAD ☐2          D.K. ☐8
USING             STOPPED
(SKIP TO 599)                      (SKIP TO 599)

569. Did you stop because you wanted to become pregnant?

YES ☐1          NO ☐2

599. If you could choose exactly the number of children to have in your whole life, how many children would that be?

(NUMBER)...................

(SKIP TO SECTION 6)

25 ☐

26 ☐

27 ☐☐

29 ☐

30 ☐☐

32 ☐

33 ☐

34 ☐

35 ☐☐

37 ☐☐☐

Puncher:End
Card

131

NOTE: 570-595 ARE FOR THOSE WHO ARE NOT CURRENTLY PREGNANT, WHO CANNOT HAVE (MORE) CHILDREN AS WELL AS FOR THOSE WHO ARE MARRIED BUT NOT LIVING WITH HUSBAND, WIDOWED OR DIVORCED.

570. Have you had an operation that makes it impossible for you to have any (more) children?

YES [1]          NO [2]
              (SKIP TO 573)

571. In what month and year did that operation take place?
     (MONTH) .......... (YEAR) 19........

572. Was one purpose of that operation to prevent you having any (more) children?

     YES [1]          NO [2]
     (SKIP TO 576)    (SKIP TO 576)

573. INTERVIEWER: TICK APPROPRIATE BOX (SEE 201 AND 205)

MARRIED AND LIVING WITH HUSBAND [1]     MARRIED BUT NOT LIVING WITH HUSBAND, [2]     WIDOWED OR DIVORCED
                                                                       (SKIP TO 576)

574. Has your husband had an operation that makes it impossible to have children?

     YES [1]          NO [2]
                   (SKIP TO 576)

575. In what month and year did that operation take place?
     (MONTH) ..............(YEAR) 19.....

576. INTERVIEWER: TICK APPROPRIATE BOX (SEE 415 AND 416)

HAS USED A CONTRACEPTIVE METHOD [1]     HAS NEVER USED A CONTRACEPTIVE METHOD [2]

577. TICK APPROPRIATE BOX (SEE 311)
NO LIVE BIRTH [1]   ONE OR MORE LIVE BIRTHS [2]
(SKIP TO 579)   (SKIP TO 581)

578. TICK APPROPRIATE BOX (SEE 311)
NO LIVE BIRTH [1]   ONE OR MORE LIVE BIRTHS [2]
(SKIP TO 580)   (SKIP TO 594)

Puncher: New Card
1
[5][5]
11
12
14
16
17
18
19
MTH.
21
YR.
23
24 25

132

579. What was the last method (other than sterilization) you or your husband used to keep you from becoming pregnant?

.........................................

580. Since you were first married, have you ever wanted to have any children?

    YES $\boxed{1}$          NO $\boxed{2}$          UNDECIDED $\boxed{3}$

  (SKIP TO 599)      (SKIP TO 599)      (SKIP TO 599)

581. Did you or your husband use any method (other than sterilization) at any time after the birth of your (last) child, to keep you from becoming pregnant?

      YES $\boxed{1}$              NO $\boxed{2}$

                          (SKIP TO 583)

> 582. What was the last method you used?
>
> .........................

583. At any time after the birth of your (last) child, did you want to have any more children?

    YES $\boxed{1}$          NO $\boxed{2}$          UNDECIDED $\boxed{3}$

                 (SKIP TO 588)       (SKIP TO 588)

584. 

| IF ONE LIVE BIRTH, ASK: Think back to the time before you became pregnant with your child. Was there any time when you or your husband were using a method to keep you from getting pregnant? | IF TWO OR MORE LIVE BIRTHS, ASK: Think back to the interval between your (last) two births. Was there any time during that interval when you or your husband were using a method to keep you from getting pregnant? |
|---|---|
| YES $\boxed{1}$    NO $\boxed{2}$     (SKIP TO 599) | YES $\boxed{1}$    NO $\boxed{2}$     (SKIP TO 599) |

> 585. What method were you using?
>
> .................................
>               (IF ABSTINENCE, SKIP TO 599)
>
> 586. Did you become pregnant while using that method, or had you stopped using before becoming pregnant?
>
> WHILE USING $\boxed{1}$     HAD STOPPED $\boxed{2}$     D.K. $\boxed{8}$
>
> (SKIP TO 599)                    (SKIP TO 599)
>
>> 587. Did you stop because you wanted to become pregnant?
>>
>>     YES $\boxed{1}$              NO $\boxed{2}$
>>
>> (SKIP TO 599)         (SKIP TO 599)

588. IF ONE LIVE BIRTH, ASK: | IF TWO OR MORE LIVE BIRTHS, AKS:
Thinking back to the time before you became pregnant with your child, had you wanted to have any children? | Thinking back to the time before you became pregnant with your last child, had you wanted to have any more children?

YES 1          NO 2          YES 1          NO 2

UNDECIDED 3          UNDECIDED 3

38 ☐

589. Was there any time before the birth of your child when you or your husband were using a method to keep you from getting pregnant? | Was there any time in the interval between your (last) two births when you or your husband were using a method to keep you from getting pregnant?

YES 1          NO 2          YES 1          NO 2
↓          (SKIP TO 599)          ↓          (SKIP TO 599)

39 ☐

590. What method were you using?

.................................................
(IF METHOD WAS ABSTINENCE, SKIP TO 599)

40 ☐☐

591. INTERVIEWER: TICK APPROPRIATE BOX (SEE 588)

"YES" TO 588    1          "NO" OR "UNDECIDED" 2
TO 588
(SKIP TO 599)
↓

42 ☐

592. Did you become pregnant while using that method, or had you stopped using before becoming pregnant?

WHILE USING 1          HAD STOPPED 2          D.K. 8
(SKIP TO 599)          (SKIP TO 599)

43 ☐

593. Did you stop because you wanted to become pregnant?
YES 1          NO 2
(SKIP TO 599)          (SKIP TO 599

44 ☐

594. At any time before the birth of your (last) child, did you want to have any more children?

YES 1          NO 2          UNDECIDED 3
(SKIP TO 599)          ↓

45 ☐

595. IF ONE LIVE BIRTH, ASK: | IF TWO OR MORE LIVE BIRTHS, ASK:
Thinking back to the time before you became pregnant with your child, had you wanted to have any children? | Thinking back to the time before you became pregnant with your last child, had you wanted to have any more children?

YES 1          NO 2          UNDECIDED 3

46 ☐

47 ☐

599. If you could choose exactly the number of children to have in your whole life, how many children would that be?

(NUMBER) ................

(SKIP TO SECTION 6)

49  50 ☐☐

Puncher: End Card

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# SECTION 6. WORK HISTORY

601. As you know, many women work - I mean aside from doing their own housework. Some take up jobs for which they are paid in cash or kind. Others sell things, or have a small business, or work on the family farm. Are you doing any such work at the present time?

YES [1]                           NO [2]

> 602. Have you ever worked since the day when you were first married?
>
>     YES [1]                    NO [2]
>                            (SKIP TO 613)
>
> 603. In what year did you last work?
>
>                             (YEAR) 19 .........

604. I would like to ask some questions about your present work (or the last work you did). What is (or was) your occupation - that is, what kind of work do (or did) you do?

.................................................

.................................................

605. INTERVIEWER: TICK APPROPRIATE BOX.

                                NOT
    FARMING [1]                    FARMING [2]
                                (SKIP TO 607)

> 606. Is (was) that your family farm?
>
>     YES [1]                    NO [2]
>     (SKIP TO 610)            (SKIP TO 609)

607. Do (did) you work mostly at home or do (did) you work mostly away from home in that job?

        HOME [1]                    AWAY [2]

608. Are (were) you employed by some member of your family, or by someone else, or are (were) you self-employed?

FAMILY                 SOMEONE                 SELF-
MEMBER [1]             ELSE [2]                EMPLOYED [3]
                                      (SKIP TO 610)

609. Do (did) you get paid mostly in cash or mostly in kind, or are (were) you unpaid?

    CASH [1]                KIND [2]                UNPAID [3]

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610. About how many years in all have you worked since you were first married?

................(YEARS)

611. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

NO LIVE BIRTH [1]          ONE OR MORE LIVE BIRTHS [2]

612. Did you work between the time you were first married and the birth of your first child?

YES [1]                    NO [2]

613. Now let us go back to the time before you were first married. Did you do any work at any time before you were first married?

YES [1]                    NO [2]
                           (SKIP TO 701)

614. For how many years altogether did you work before you were first married?

................(YEARS)

615. What kind of work did you do mainly, before you were first married?

................................................

................................................

616. Were you employed by some member of your family, or by someone else, or were you self-employed?

FAMILY MEMBER [1]      SOMEONE ELSE [2]      SELF-EMPLOYED [3]
                                             (SKIP TO 701)

617. Did you get paid mostly in cash or mostly in kind, or are (were) you unpaid?

CASH [1]          KIND 2          UNPAID [3]

23

25

26

27

28

30

33

34

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701. INTERVIEWER: TICK APPROPRIATE BOX (SEE 202 AND 207)

MARRIED ⌐—⌐          MARRIED MORE ⌐—
  ONCE  └─┘             THAN ONCE

702. INTERVIEWER: TICK APPROPRIATE BOX (SEE 201 AND 205)

MARRIED AND —⌐          MARRIED BUT ⌐—⌐  WIDOWED
LIVING WITH └⌐           NOT LIVING └─┘    OR
  HUSBAND               WITH HUSBAND,    DIVORCED

703. How old is your husband? .......
                                (YEARS)

704. Did your present (last) husband ever attend school?

      YES ⌐1⌐                         NO ⌐2⌐
       │                           (SKIP TO 708)

705. What was the highest level of education he achieved?

ELEMENTARY ⌐1⌐     PREPARATORY ⌐2⌐        SECONDARY ⌐3⌐

        HIGHER    —⌐
      INSTITUTE ⌐4⌐          UNIVERSITY ⌐5⌐

706. What was the highest class he completed at that level?

    ................................

707. INTERVIEWER: TICK APPROPRIATE BOX.

   LESS THAN 6    ⌐—⌐        6 OR MORE    ⌐—
  YEARS SCHOOLING └─┘      YEARS SCHOOLING └─┘
                                 (SKIP TO 709)

708. Can (could) he read - say a newspaper or magazine?

            YES ⌐1⌐                    NO ⌐2⌐

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709. In what kind of area did your present (last) husband live mostly when he was growing up, say to age 12? Was it a desert, a village, a town, or a city?

DESERT [1]       VILLAGE [2]       TOWN [3]       CITY [4]

710. Now I have some questions about your present (last) husband's work experience. What is (was) his occupation - that is, what kind of work does (did) he do? (IF UNEMPLOYED OR RETIRED, ASK LATEST OCCUPATION).

...............................................

...............................................
(IF NEVER WORKED, END INTERVIEW)

711. Is (was) he employed by some member of his family, or by someone else, or is (was) he self-employed?

FAMILY              SOMEONE                SELF-
MEMBER [1]          ELSE [2]               EMPLOYED [3]
                                           (SKIP TO 713)

712. Does (did) he get paid mostly in cash or mostly in kind, or is (was) he unpaid?

CASH [1]            KIND [2]            UNPAID [3]
(END INTERVIEW)     (END INTERVIEW)     (END INTERVIEW)

713. Does (did) he have any regular paid employees in his business?

YES [1]                          NO [2]
                                 (END INTERVIEW)

714. How many regular paid employees does (did) he have?
(NUMBER) ...................

END INTERVIEW

(SKIP TO PAGE 35)

# JORDAN WORLD FERTILITY SURVEY 1976

## COMMUNITY LEVEL QUESTIONNAIRE

Governorate ——————————  Village ——————  Cluster Number ——

Supervisor ——————————  Date ——————————

| | Respondent's Name | Age | Occupation | Information provide for section |
|---|---|---|---|---|
| 1 | ——————————— | ——— | ————— | ———————————— |
| 2 | ——————————— | ——— | ————— | ———————————— |
| 3 | ——————————— | ——— | ————— | ———————————— |
| 4 | ——————————— | ——— | ————— | ———————————— |

---

01. Distance from nearest Village / Town ————  Name of adjacent Village

    Name of Town ——————————————  ————————————

    Mode of Transport:  Walking ___ Train ___ Bus ___ Taxi ___ Riding Animal ___ Other (specify) ___

---

| 02. Transportation Facilities | Located in this Village | Not Located in this Village | Located in Village (Name) ⟶ | Distance from this Village (Name) |
|---|---|---|---|---|
| Hard surfaced Road | | | | |
| Loose Surfaced Road | | | | |
| Bus Stop | | | | |
| Train Stop | | | | |
| Train Station | | | | |

| 03. Comunication Facilities | | | | |
|---|---|---|---|---|
| , Post Office | | | | |
| News Paper | | | | |
| Movie House | | | | |
| Television | | | | |
| Radio | | | | |

| 08. | Health and Family Planning Services | Located in this Village | Not Located in this Village | Located in Village (Name) ⟶ | Distance from this Village (Name) |
|---|---|---|---|---|---|
| | Hospital | | | | |
| | Chemist | | | | |
| | Clinic | | | | |
| | Maternal and Child Health Center | | | | |
| | Family Planning Center | | | | |

| 16. | Educational Facilities | | | | | |
|---|---|---|---|---|---|---|
| Primary School | Boys | | | | |
| | Girls | | | | |
| | Both Sexes | | | | |
| Pre-Secondary School | Boys | | | | |
| | Girls | | | | |
| | Both Sexes | | | | |
| Secondary School | Boys | | | | |
| | Girls | | | | |
| | Both Sexes | | | | |
| Other | (Specify) | | | | |

| 32. | Location of following in the Community | No | Yes |
|---|---|---|---|
| | Town Council | | |
| | Village Council | | |
| | Community Council | | |

Remarks

_____

_____

_____

_____

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APPENDIX II

# SAMPLE DESIGN, SELECTION, AND IMPLEMENTATION

# APPENDIX II

# SAMPLE DESIGN, SELECTION AND IMPLEMENTATION

## II.1. SAMPLE DESIGN

1. *Size:* According to the 1975 Agricultural Census, there is a total of 292,000 households in Jordan (East Bank), the average household size being 6.48 persons. To obtain a sample of 14,000 to 15,000 households — generally considered to be the minimum size required for the study of general fertility and mortality through a 'long' household schedule — it was decided to have a 5 percent equal probability sample. For the detailed interview of ever-married women in the child bearing ages, 1 in 4 of the households were subsampled (overall sampling rate being 1.25 percent), with a view to obtaining approximately 3,500 eligible women on the basis that all eligible women would be interviewed in each selected household. Within households so selected, eligibility conditions for the individual interview were: ever-married women aged 15–49, who slept in the household the night before the first visit for the household interview. In the following description the two phases of the sample will be called the 'Household Schedule Sample' and the 'Individual Interview Sample' respectively.

2. *Stratification:* For the purpose of sample selection, the country was divided into 7 explicit strata defined by size of the localities as follows:

> *Strata 1–3:* Amman, Zarka and Irbid, three major cities, each with population 100,000 and over, according to the 1975 Agricultural Census. The cities were self-representing in the sample.
>
> *Stratum 4:* Towns with a population between 10,000 and less than 100,000.
>
> *Stratum 5:* Large villages, with a population between 5,000 and less than 10,000.
>
> *Stratum 6:* Medium villages, with a population between 1,000 and less than 5,000.
>
> *Stratum 7:* Small villages, with a population under 1,000.

During selection, strata 4 and 5 were subdivided according to the five governorates in the country. In other strata, stratification by governorate was provided implicitly by systematic selection from a geographical ordering of the area units.

3. *Clustering and Stages of the Sample:* In the urban areas, the last area stage units for which maps were generally available consisted of blocks of 50 households on the average. From previous experience, 50 was considered to be a satisfactory cluster size for the Household Schedule Sample. Hence, selected blocks could be completely enumerated for this sample, avoiding the need for a separate listing operation. In the rural areas, blocks of similar size could be created by special mapping operations where required. This design would result in the selection of 280 to 300 sample clusters. For the individual interview, 1 in 4 households were selected from every sample cluster, and an average of approximately 1.0 eligible women were found per household. This gives an average cluster size of about 13 interviews.

The sample consisted of a single area stage in all strata except for strata 4 and 5 (Towns and Large Villages). In these two strata, a second area stage was introduced for the following practical reasons:

(i) For the 14 towns in the frame, no block maps were available at the time of the planning of the present study. Five towns, one in each governorate, were selected for the mapping operation. It was felt that it would be difficult to map more than 5 towns by the time this frame was required for the selection of blocks.

(ii) The 15 large villages in the frame also required a special mapping operation. To limit the work involved, 6 villages were selected. Each of the selected villages was mapped and divided into 16 more or less equal parts. These parts were ranked according to estimated size and paired — the largest with the smallest, the next largest with the next smallest, etc. One pair of clusters was then selected for complete enumeration for Household Schedule Sample, giving a 5 percent sample as for other strata. This procedure resulted in good control over sample size.

Mapping was also required for stratum 6 which consisted of 157 medium sized villages; 31 villages were selected and mapped to divide each village into 4 more or less equal clusters; since only one cluster per sample village was selected, the sample was effectively a single area stage sample of 'quarter-villages'.

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In stratum 7, 26 small villages were selected and completely enumerated. Hence no mapping was required for these units.[1]

## II.2. SAMPLE SELECTION

1. *Selection probabilities:* As was mentioned above, the sample was designed to be an equal probability sample. However, the procedure actually followed during selection deviated more or less significantly from this design in all strata except the last two (medium and small villages):

(i) In the urban areas (cities and towns, strata 1–4), in place of directly selecting 5 percent of the blocks, the number to be slected, say $a$, was determined indirectly as

$$a = \frac{0.05 \times (\text{Total households in the stratum, 1975 census})}{\text{Average block size (assumed 50 households)}}$$

Insofar as the denominator deviated from the actual average size, the actual sampling fraction differed from 0.05.

(ii) In towns and large villages (strata 4 and 5), the first stage selection was done independently between the 5 governorates. Since the numbers to be selected were very small, this procedure introduced variation in selection probabilities. The result was a significant under-sampling of households from towns in Amman governorate, and from large villages in Irbid governorate. The sample in the latter governorate was later corrected for the individual interview by relative over-sampling during that phase.

While it is difficult to assess accurately the increasing sampling variance associated with departures from an equal probability sample, it should be noted that significant departures occurred mainly in certain areas of strata 4 (towns) and 5 (large villages) where weights varying from 0.5 to 2.5 were introduced. Further, these areas comprise only about 10 percent of the whole sample. In any case, the problems resulting from the certain inadequacies of the frame discussed below are by far the more serious ones.

2. *Frame in Urban Areas:* In the urban strata, the frame for selection of blocks was based on small scale town planning maps.[2] The main problem resulted from the

lack of correspondence between these plans and the actual situation on the field. Often blocks were based not on the present population distribution, but on distribution as expected in the future. In a few cases (particularly in Zarka, where the problem was compounded by extremely small scale maps) even features like roads showing block boundaries on the maps referred sometimes to non-existent roads. However, the more serious consequences of the defects in the frame were the following:

(i) A very considerable variation in the block sizes. In fact, nearly one in five of the blocks in the frame were completely empty. Increased sampling variability resulted from the fact that empty block had not been removed from the frame prior to selection; and that no explicit or implicit stratification by block size had been done.[1]

(ii) Uncertainty about block boundaries in certain areas. In some towns individual blocks had not been demarcated on the maps, which showed only 'sub-units' consisting of 5 to 10 planned blocks. Once a block had been selected from a sub-unit, its boundaries were marked off on the maps, unfortunately, in some arbitrary way — usually chosen in an attempt to obtain a block of 50 households, which was not necessarily the average block size in the sub-unit.

(iii) As the town planning work was itself in progress, the frame used initially for the largest stratum — Amman — was later found to be incomplete. This, however, was corrected by selecting a supplementary sample from the areas previously left out.

(iv) In the town of Aqaba, special problems existed due to recent movements of the population and a great deal of new construction. It was not possible due to practical constrains to up-date the frame for Aqaba. It is likely that a certain undercoverage has occurred, particularly in the port areas.

It is not possible to correct any bias resulting from the above sources by any set of weights derived from the sample itself. We have decided to weight the urban sample according to the population enumerated during the 1975 Agricultural Census for each locality separately. Further details will be given in the next section. Table II.1 below shows close agreement for rural areas between the actual numbers of sample households obtained and the numbers enumerated during the Agricultural Census (the latter

---

[1] All clusters, or ultimate area units (UAU) were selected systematically from geographically ordered lists.

[2] The scale was as follows: Amman and Irbid 1:2,500; Zarka 1:25,000; the 5 towns 1:10,000.

[1] The number of ultimate area units selected was 280, out of which only 233 turned out to be non-empty. Empty UAUs were confined mainly to strata 1 to 4.

multiplied by design sampling to facilitate comparison). The close agreement suggests not only the very good coverage during the Agricultural Census, but also the good quality of mapping during the Fertility Survey. It also gives confidence in accepting the Agricultural Census data as a basis for determining sample weights since there is no obvious reason for the census coverage to be less complete for the urban areas. However, the population figures available from the census are only by localities. It would have been more satisfactory to weight samples from different sectors of a locality separately. This is particularly true of a large city like Amman.

## II.3. WEIGHTING OF THE SAMPLE

In this section details are given of the procedure used for determining appropriate weights to compensate for departures from the original design described above. The weights also take into account differences in response rates between strata. Sample weights are inversely proportional to selection probabilities multiplied by response rates. The weights are 'normalized' in such a way that the sum of the weights for the achieved sample equals the unweighted achieved sample size. In this way the overall difference between weighted and unweighted frequencies for subclasses of the sample is minimized. In presentation of results in this report, only weighted frequencies have been shown since generally weights do not differ greatly from unity. As can be seen from Table II.2 below, most of the cases have weights between 0.8 and 1.3, notable exceptions being 2 towns and 6 large villages which comprise about 10 percent of the unweighted sample. The weights have been calculated separately for the Household Schedule and the Individual Interview samples. For the latter, non-response occurs only at the stage of listing of household members (for which a short household schedule was used). Once eligible women had been identified, further non-response was virtually absent. (For the whole sample, only 2 women in 'Amman 1' were not interviewed after the household members had been listed.)

For various strata, weights are determined as follows:

1. *Cities and Towns:* Sample weights are taken to be proportional to

$$\frac{H, \text{ the No. of households in the population from 1975 Census[1]}}{h, \text{ the No. of households successfully interviewed}} \quad (1)$$

The above expression automatically takes into account the weighting due to non-response. Details for individual localities are as follows:

(i) *Amman:* As mentioned earlier, due to the incomplete frame initially used, a supplementary sample was later selected from Amman. Below the original sample is called 'Amman 1', and the supplementary sample 'Amman 2'. For the supplementary sample, the problems of the frame discussed previously were mainly eliminated. Hence we assume the population size (say $H_2$) it 'respresents' to be given directly by the achieved sample (say $h_2$) and selection probability (0.05) as follows:

$$H_2 = \frac{h_2}{0.05}$$

This gives the population (i.e. No. of households from 1975 Census) for 'Amman 1' to be:

$$H_1 = \text{(Total No. of households in Amman, 1975 Census)} - H_2,$$

from which the appropriate weight can be determined according to equation (1).

(ii) Zarka and Irbid: For these two cities equation (1) can be directly applied.

(iii) *Towns:* Since one town had been selected from each of the 5 governorates, we take $H$ in equation (1) to be the population of all the towns in the respective governorate (and not just the population of the particular sample town in that governorate). This is

[1] Figures of Agricultural Census 1975, have been updated to the end of 1975.

Table II.1. Comparison of the rural areas in the present sample with Agricultural Census enumeration

|  | No. of sample HHs (HH Schedule Sample) | No. of HHs enumerated in the Census 1975* |
|---|---|---|
| 6 sampled large villages | 860 | 735 |
| 31 sampled medium villages | 2,449 | 2,465 |
| 26 sampled small villages | 1,250 | 1,352 |

* Multiplied by the second stage sampling fractions to facilitate comparison with the sample.

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equivalent to assuming that initially one town was selected from each governorate with probability proportional to the size of the town.

2. *Villages:* For the 3 rural strata, the design sampling fractions were correctly implemented, and the weights can be determined from these fractions as follows:

$$\text{Weight } \alpha = \frac{1}{\text{Sampling fraction} \times \text{response rate}}$$

Table II.2. Sample Weights*

A. *Urban Sample*

| Locality/ Stratum (1) | No. of HHs 1975 Census (2) | Household Schedule Sample | | | Individual Interview Sample | | | |
|---|---|---|---|---|---|---|---|---|
| | | Normalized weights (3) | HHs Interviewed | | HHs completed (6) | Normalized weights (7) | Women Interviewed | |
| | | | Unweighted (4) | Weighted (5) | | | Unweighted (8) | Weighted (9) |
| Amman 1 | 84,200 | 0.833 | 4,977 | 4,148 | 1,164 | 0.932 | 1,160 | 1,081 |
| Amman 2 | 16,400 | 0.983 | 822 | 808 | 194 | 1.089 | 194 | 211 |
| Zarka | 37,800 | 1.243 | 1,498 | 1,862 | 348 | 1.399 | 353 | 494 |
| Irbid | 19,450 | 1.006 | 952 | 958 | 215 | 1.165 | 206 | 240 |
| Wadi Es Sir | 13,560 (Amman) | 2.579 | 259 | 668 | 63 | 2.772 | 63 | 175 |
| Ramtha | 10,410 (Irbid) | 1.163 | 441 | 513 | 103 | 1.302 | 104 | 135 |
| Salt | 10,780 (Balqa) | 0.835 | 636 | 531 | 142 | 0.978 | 117 | 114 |
| Karak | 3,310 (Karak) | 0.529 | 308 | 163 | 73 | 0.584 | 70 | 41 |
| Aqaba | 4,030 (Ma'an) | 0.626 | 318 | 199 | 57 | 0.911 | 55 | 50 |

B. *Rural Sample*

| Locality/ Stratum | Household Schedule Sample | | | | | Individual Interview Sample | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Selection Probability (%) (10) | Response Rate (11) | Normalized weights (12) | HHs Interviewed | | Selection Probability (%) (15) | Response Rate (16) | Normalized weights (17) | Women Interviewed | |
| | | | | Unweighted (13) | Weighted (14) | | | | Unweighted (18) | Weighted (19) |
| Large Villages — Irbid | 3.125 | 98.7 | 1.597 | 521 | 832 | 3.125 | 92.6 | 0.445 | 436 | 194 |
| Large Villages: — Others | 12.500 | 99.7 | 0.396 | 331 | 131 | 3.125 | 96.3 | 0.428 | 77 | 33 |
| Medium Villages: | 4.936 | 98.8 | 1.010 | 2,420 | 2,445 | 1.234 | 96.8 | 1.078 | 560 | 604 |
| Small Villages: — Amman | 4.990 | 87.1 | 1.134 | 350 | 397 | 1.248 | 88.9 | 1.161 | 70 | 81 |
| — Irbid | 4.990 | 80.0 | 1.234 | 457 | 564 | 1.248 | 96.4 | 1.071 | 106 | 114 |
| — Dalga — Karak and — Ma'an | 4.990 | 73.3 | 1.345 | 203 | 273 | 1.248 | 96.2 | 1.073 | 14 38 }55 3 | 59 |

*Explanatory Notes for table II.2*

A. *Urban Sample*

Col. (3) is proportional to Col. (4)/Col. (2). It is 'normalized' in such a way that the sum of weights for all households interviewed (in both urban and rural areas) equals the unweighted number of these households.

Col. (5) is Col. (3) × Col. (4). Obviously it is proportional to Col. (2). Comparison with Col. (4) gives an idea of the effect of weighting on sample frequencies as shown in the tabulations.

Col. (7) is proportional to Col. (6)/Col. (2). It is normalized in such a way that the sum of weights for all individual interviews for the whole sample equals the unweighted number of these interviews.

Col. (9) is Col. (7) × Col. (8)

B. *Rural Sample*

Col. (12) is inversely proportional to Col. (10) × Col. (11), and is normalized in the same way as Col. (3).

Col. (14) equals Col. (12) × Col. (13)

Col. (17) is inversely proportional to Col. (15) × Col. (16), and is normalized in the same way as Col. (7).

Col. (19) equals Col. (17) × Col. (18).

As was noted earlier, selection of large villages was done separately between governorates. The majority of the areas in this stratum belong to Irbid governorate. Hence we introduce only two sets of weights, one for Irbid, and the other for the rest of the governorates.

Small villages are the only stratum for which non-response is significant. For this reason we have computed weights separately for each governorate in this stratum, except for three smallest governorates which have been combined together since the numbers of sample households involved are not large.

### Sample Area Identification Numbers

The Sample Areas were given a 3-digit sequential number which appear as identification on each questionnaire. This identification number runs sequentially from 001 to 280. However, there are gaps in this sequence since some of the sample blocks were empty and hence do not appear on the final data set. Below we give each cluster a set of new identification numbers which define the sample structure for the purpose of sampling error computations, and also identify governorate and type of place (City/Town/Village, etc.) required for cross tabulation of the data. These new numbers are to be coded along with the original identification numbers, on to the recoded variable tape for the individual questionnaire (variables V 102 to V 105). The new set of numbers are as follows:

(1) UAU (Ultimate Area Units) number: This is a 3

digit sequential number (001–233) reflecting the order of selection of the clusters. In the main the original follows identification number.

(2) PSU (Primary Sampling Units) number: This is also a sequential number following the UAU number. For large villages in Irbid, two UAUs belong to one PSU; for the towns we have ignored the first stage (i.e. selection of 5 towns out of 14) and treated PSUs as being the same as UAUs. The PSUs are identical to the UAUs for the rest of the sample, which consists of a single area stage.

(3) Strata number: For sampling error computation, strata have been formed by pairing adjacent PSUs. Occasionally 3 PSUs are included in the stratum. This is done so that these strata, defined for the purpose of sampling error computations, do not cut across the original explicit strata, or across governorates which form separate domains of analysis.

(4) Domain number: This number consists of 2 digits. The first digit identifies the type of place as follows:

Cities (1), towns (2), large villages (3), medium villages (4), and small villages (5).

The second digit identifies governorates as follows:

Amman (Amman city (0), rest (1)), Irbid (2), Baloa (3), Karak (4), and Ma'an (5).

APPENDIX III

# SAMPLING ERRORS

# APPENDIX III

# SAMPLING ERRORS

## INTRODUCTION

The estimates presented in this report were obtained from a sample of 3,612 women. If the survey had used other women, it is likely that the response frequencies would vary somewhat from those that are shown. Sampling error refers to this type of uncertainty — that is, to the degree to which responses are likely to vary from one sample to another.

A particularly useful measure of sampling error is the *standard error* (SE), estimated from the variance in responses within the sample itself. It has the property that in 2 samples out of 3 the true value of a parameter for the whole population will lie within one standard error, and in 19 samples out of 20 it will lie within two standard errors of the sample estimate, assuming that the survey responses themselves are accurate. (The quantity: Sample Estimate $\pm$ 2 SE is commonly referred to as the 95 percent confidence interval of the estimate.) Knowing the standard error thus allows a good estimate to be made of the range in which the true value should fall.

For example, the mean age at first marriage for all ever-married women in the JFS was 17.6 years (Table III.1), with a standard error of 0.1 year. The range Mean $\pm$ 2 SE is 17.4 to 17.8 years. There is only a 5 percent chance that the true figure is not in this interval if the women in the survey have remembered their own ages at marriage correctly.

Standard errors can also be found for differences between two estimates, with the same interpretation. Thus, for ever-married women ages 30–34 and 35–39 mean ages at marriage found in the survey were 18.1 years and 17.9 years, respectively (Table III.2a). The difference of −0.2 years is about the same as its standard error of 0.3 years (Table III.2b), and so could easily be due to chance. We would want a larger sample before deciding to accept the difference as real.[1]

A second measure that is often helpful is the *design effect* (DEFT), which is the ratio of the computed standard error to the standard error under simple random sampling. The result shows how closely the actual

[1] In the few cases where the standard error of a difference is about half the size of the difference itself, we have included an extra decimal place in the Tables so that rounding errors will not cause a wrong impression to be given.

sampling design (for Jordan, a stratified cluster sample) approximates a nationwide sample drawn purely at random; i.e., for a particular sample design and cluster size, the design effect is a measure of the loss of sampling precision with respect to a particular variable that has resulted from the use of clusters as the area units. The two main factors on which its magnitude depends are the average cluster size and the relative homogeneity of responses for the given variable within and among clusters. (For samples drawn using very small clusters, for very small subsamples in clusters of any size, and for variables that are relatively homogeneous, DEFT can be expected to approach unity. This implies that no sampling precision has been lost through cluster sampling as compared to simple random sampling nationwide.) In the JFS the average value of DEFT for 26 variables is 1.2.

## COMPUTATIONAL FORMULAE

In outline, the procedure for estimating sampling errors for a stratified clustered sample is as follows.

Consider a *ratio statistic* $r = y/x$, where $y$ and $x$ are two variables the ratio of which is being estimated. (The procedure also applies to estimates like means, proportions or percentages which can be regarded as special cases of ratios.) Let suffix '$j$' represent an individual, suffix '$i$' the PSU to which the individual belongs, and suffix '$h$' the stratum in which the PSU lies. Hence,

$y_{hij}$ = value of variable $y$ for the individual $j$, in PSU $i$ and stratum $h$,

$w_{hij}$ = sample weight for the individual,

$y_{hi} = \sum_j w_{hij} \cdot y_{hij}$, the weighted sum of $y$'s for all individuals in PSU $i$,

$y_h = \sum_i y_{hi}$, the sum of $y_{hi}$ for all PSUs in the stratum, and

$y = \sum_h y_h$, the sum of $y_h$ for all strata in the sample.

Similar terms can be defined for variable $x$.

The variance SE$^2$ (= square of the standard error) of the ratio estimate $r = y/x$ is estimated as

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

where

$f$ = overall sampling fraction, here negligible,

$m_h$ = the number of PSUs in stratum $h$,

$H$ = the number of strata in the sample,

$r$ = ratio of the two sample aggregates $y$ and $x$,

$z_{hl} = y_{hl} - r \cdot x_{hl}$, and

$z_h = \sum z_{hl} = y_h - r \cdot x_h$

The computation formula requires at least two PSUs per stratum, i.e. $m_h \geq 2$.

Equation (1) applies also for estimates computed over a particular subclass of the sample. Individuals or PSUs or strata not belonging to the subclass are simply ignored in the computation. The summations ('$\sum$') are taken over only the units belonging to the subclass being considered.

SR, the standard error of a ratio estimate $r$ corresponding to an equivalent sample selected entirely at random, is required to estimate DEFT = SE/SR, and is given by

$$SR^2 = \frac{1-f}{n-1} \left( \sum w_{hij} z_{hij}^2 / \sum w_{hij} \right) \qquad (2)$$

where $z_{hij} = (y_{hij} - r x_{hij})$,

and $r$ is the ratio estimate, $r = y/x = \sum w_{hij} y_{hij} / \sum w_{hij} x_{hij}$.

$n$ is the total sample size, and '$\sum$' is the sum for all individuals over the sample. As before, means, proportions or percentages are merely special cases of ratios.

Variance of the *difference* of two subclass means for a stratified clustered sample is given by the following formulae. Denoting the second subclass in the pair by prime (')

$$SE_{r-r'}^2 = \text{var}(r - r') = \text{var}(r) + \text{var}(r') - 2\,\text{cov}(r,r')$$

where var $(r)$ and var $(r')$ are given by equation (1) and the covariance is given by

$$\text{cov}(r,r') = \frac{1-f}{xx'} \sum_{h=1}^{H} \left[ \frac{m_h}{m_h - 1} \left( \sum_{l=1}^{m_h} z_{hl} \cdot z_{hl}' - \frac{z_h z_h'}{m_h} \right) \right] \qquad (3)$$

Usually cov $(r,r')$ is positive due to positive correlation between individuals in the two subclasses who belong to the same cluster in the sample.

For sample subclasses where standard errors are not given these can be estimated from the relationship:

$$\frac{DEFT_s^2 - 1}{DEFT_t^2 - 1} \doteq (n_s/n_t)^{1/3},$$

where $s$ is a subsample of $t$, and $n_s$ and $n_t$ are the subsample and sample sizes, respectively, and $DEFT_s$ and $DEFT_t$ are the subsample and sample DEFT's. Inserting the formula for DEFT $\{= n_t \cdot SE_t / [r_t(1 - r_t)]\}$ and rearranging terms, this becomes:

$$DEFT_s \doteq \left\{ (n_s/n_t)^{1/3} \left[ \frac{(n_t \cdot SE_t)^2}{r_t(1 - r_t)} - 1 \right] + 1 \right\}^{1/2}. \qquad (4)$$

As was noted earlier, this is a value closer to 1.0 than is $DEFT_t$, since the design effect is less for smaller sample numbers.

For households, the sampling error tables also include rates of homogeneity (ROH), which indicate to what extent responses for a particular variable are more homogeneous within PSU's than in the sample as a whole. ROH is calculated as:

$$ROH = \frac{DEFT^2 - 1}{\bar{b} - 1},$$

where $\bar{b}$ is the mean PSU size. (To find ROH values for the individual questionnaire responses, $\bar{b}$ can be calculated as sample size/229.)

## TABLE FORMAT

The first set of tables that follows presents a summary of standard errors and design effects for a number of variables. It lists as well the table number in which the variable first appears, the variable mean or percent and its standard deviation over the whole sample, and the weighted sample size.

The second set of tables are broken down into smaller categories (age group, educational level, etc.) and show the variable mean or percent, standard error and weighted sample size for each. As with the first set, the table number in which the category is first used is shown. The tables also present the standard errors of differences between categories, so that these can also be assessed. The reader should turn back to the appropriate text table to find the sample that has been used in each case, as this varies according to the topic under discussion.

The third set of tables are for the household questionnaire and derive from a larger sample (14,500 households as against 3,612 individual questionnaires), using less detailed questions.[1] Table III.4 lists sample means or proportions and standard errors for 14 variables, broken down by age or education and by area. Table III.5 displays whole sample DEFT and ROH values across 13 of the variables.

[1] For computing household sampling errors, the following adjustments have been made:

(a) Sample blocks which turned out to be completely empty have simply been ignored.

(b) In one stratum ('towns') the first stage of selection was ignored since the sample had been drawn to be regionally balanced. For this stratum, containing about 15 percent of the total sample, the second stage area units (blocks) were substituted for PSUs since these were similar in size and characteristics to the PSUs in the rest of the sample.

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Table III.1. Definition of Variables and Sampling Errors Over the Total Sample

| Text Table | Variable Name | Population Over Which Defined | Sample Mean or Percent | Standard Deviation | Standard Error (SE) | Design Effect (DEFT) | Weighted Sample Size (N) |
|---|---|---|---|---|---|---|---|
| 4.3 | Age at First Marriage | Ever-Married Women | 17.6 | 3.6 | 0.1 | 1.4 | 3,607 |
| 4.4 | Age at First Marriage — for Women Married Before Age 20 | Ever-Married Women 20+ | 16.3 | 2.1 | 0.05 | 1.2 | 2,540 |
| 4.7 | Percent of First Marriages Dissolved | Ever-Married Women | 7.2% | 25.9 | 0.5 | 1.1 | 3,612 |
| 4.10 | Percent Currently Married | Ever-Married Women | 95.7% | 20.2 | 0.4 | 1.0 | 3,612 |
| 4.15 | Percent of Time Spent in Union Since First Marriage | Ever-Married Women | 97.4% | 13.7 | 0.2 | 0.9 | 3,612 |
| 5.1 | Number of Children Ever Born | Ever-Married Women | 5.37 | 3.60 | 0.07 | 1.2 | 3,612 |
| — | Number of Living Children | Ever-Married Women | 4.72 | 3.06 | 0.06 | 1.2 | 3,612 |
| — | Percent of Women Having Births in First Five Years of Marriage | Women Married Five or More Years Before Interview | 91.2% | 28.3 | 0.1 | 1.0 | 2,887 |
| 5.15 | Children Born in Past Five Years of Marriage | Women Married Five or More Years Before Interview | 2.16 | 1.07 | 0.02 | 1.0 | 2,887 |
| 5.17 | Children Born in Past Five Years | Women Continuously Married During Past Five Years | 1.68 | 1.17 | 0.03 | 1.5 | 2,719 |
| — | Percent Currently Pregnant | Currently Married Women | 21.2% | 40.9 | 0.7 | 1.0 | 3,458 |
| 7.1 | Want No More Additional Children | Currently Married, Fecund | 41.7% | 49.3 | 1.2 | 1.3 | 3,069 |
| 7.1 | Additional Children Wanted | Currently Married, Fecund | 1.85 | 2.7 | 0.07 | 1.4 | 3,067 |
| 7.1 | Additional Less Wanted | Currently Married, Fecund | 1.57 | 2.9 | 0.07 | 1.4 | 3,066 |
| 7.3 | Last Pregnancy Not Wanted | Currently Married, Currently Pregnant or With at Least One Fertile Pregnancy | 30.0% | 45.8 | 1.0 | 1.3 | 3,417 |
| 7.4 | Total Children Wanted | Currently Married | 6.3 | 3.2 | 0.09 | 1.6 | 3,458 |
| 8.1 | Breastfed in Last Closed Interval | Women With at Least Two Live Births or One Live Birth and a Current Pregnancy | 92.1% | 27.0 | 0.6 | 1.2 | 3,105 |
| 8.5 | Know Effective Contraceptives | Ever-Married Women | 96.9% | 17.3 | 0.3 | 1.1 | 3,612 |
| 8.6 | Ever Used Contraceptives | Ever-Married Women | 46.4% | 49.9 | 1.4 | 1.7 | 3,612 |
| 8.6 | Ever Used Effective Methods | Ever-Married Women | 39.1% | 48.8 | 1.4 | 1.7 | 3,612 |
| 8.10 | Currently Using Contraception | Currently Married, Fecund or Contraceptively sterilized Women | 37.3% | 48.4 | 1.7 | 1.7 | 2,338 |
| 8.10 | Currently Using Effective Methods | Currently Married, Fecund or Contraceptively sterilized Women | 25.6% | 43.7 | 1.5 | 1.6 | 2,338 |
| 8.16 | Never Used Contraception | Ever-Married Women | 53.6% | 49.9 | 1.4 | 1.7 | 3,612 |
| 8.16 | Used in Past | Ever-Married Women | 22.3% | 41.6 | 0.8 | 1.2 | 3,612 |
| 8.16 | Currently Using | Ever-Married Women | 24.1% | 42.8 | 1.2 | 1.7 | 3,612 |
| 9.3 | Want No Children and Currently Using Effective Methods | Currently Married and Fecund or Contraceptively sterilized, and Wanting No More Children | 41.9% | 49.4 | 2.1 | 1.3 | 981 |

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Table III.2a.  Sampling Errors for Current Age

| | | Current Age | | | | | | | | | | | | | | | | | | | |
| | | 15–19 | | | 20–24 | | | 25–29 | | | 30–34 | | | 35–39 | | | 40–44 | | | 45–49 | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.3 | Age at First Marriage | 16.0 | 0.1 | 325 | 17·4 | 0.1 | 596 | 18.1 | 0.2 | 709 | 18.1 | 0.2 | 628 | 17.9 | 0.2 | 543 | 17.7 | 0.2 | 435 | 17.3 | 0.2 | 372 |
| 4.4 | Age at First Marriage (<20) | — | — | — | 16.7 | 0·1 | 505 | 16.4 | 0.1 | 517 | 16.2 | 0.1 | 468 | 16.2 | 0.1 | 418 | 15.9 | 0.1 | 331 | 15.8 | 0.1 | 301 |
| 4.15 | Percent of Time Spent in Union Since First Marriage | 98.5% | 0.6 | 329 | 99.2% | 0.3 | 596 | 98.1% | 0.4 | 709 | 98.8% | 0.3 | 628 | 97.9% | 0.5 | 543 | 96.9% | 0.5 | 435 | 95.2% | 0.8 | 372 |
| 5.1 | Number of Children Ever Born | 0.89 | 0.06 | 329 | 2.44 | 0.07 | 596 | 4.23 | 0.08 | 709 | 5.89 | 0.13 | 628 | 7.28 | 0.14 | 543 | 8.58 | 0.18 | 435 | 8.79 | 0.21 | 372 |
| 5.17 | Children Born in Past Five Years | — | — | — | 2.49 | 0.06 | 300 | 2.25 | 0.07 | 578 | 1.90 | 0.05 | 584 | 1.59 | 0.05 | 513 | 1.03 | 0.06 | 399 | 0.41 | 0.05 | 321 |
| 7.1 | Want No Additional Children | 7.0% | 1.5 | 316 | 15.4% | 1.9 | 583 | 32.2% | 2.2 | 669 | 50.9% | 2.5 | 574 | 66.0% | 2.8 | 464 | 77.2% | 2.9 | 303 | 75.6% | 3.2 | 160 |
| 7.1 | Additional Children Wanted | 3.94 | 0.18 | 316 | 3.00 | 0.13 | 583 | 1.86 | 0.10 | 667 | 1.31 | 0.12 | 574 | 0.80 | 0.10 | 462 | 0.62 | 0.13 | 303 | 0.72 | 0.20 | 160 |
| 7.1 | Additional less Unwanted | 3.91 | 0.19 | 316 | 2.91 | 0.14 | 583 | 1.63 | 0.11 | 667 | 0.96 | 0.13 | 574 | 0.34 | 0.11 | 462 | 0.09 | 0.15 | 303 | 0.23 | 0.21 | 160 |
| 7.3 | Last Pregnancy Not Wanted | 5.2% | 1.4 | 243 | 10.3% | 1.4 | 556 | 22.8% | 2.1 | 690 | 36.0% | 2.1 | 611 | 43.1% | 2.4 | 530 | 47.1% | 2.7 | 424 | 41.3% | 2.4 | 363 |
| 7.4 | Total Children Wanted | 4.88 | 0.14 | 322 | 5.56 | 0.13 | 588 | 5.87 | 0.13 | 690 | 6.41 | 0.14 | 613 | 6.82 | 0.15 | 521 | 7.51 | 0.15 | 402 | 7.56 | 0.25 | 322 |
| 8.1 | Breastfed in Closed Interval | 88.4% | 3.1 | 108 | 92.1% | 1.3 | 463 | 93.6% | 1.0 | 656 | 89.7% | 1.6 | 586 | 93.4% | 1.1 | 517 | 89.7% | 1.5 | 419 | 95.4% | 1.1 | 356 |
| 8.5 | Knows Effective Contraceptives | 94.8% | 1.3 | 329 | 97.2% | 0.7 | 596 | 97.7% | 0.6 | 709 | 97.3% | 0.8 | 628 | 96.9% | 0.9 | 543 | 97.5% | 1.0 | 435 | 95.5% | 1.2 | 372 |
| 8.6 | Ever Used Contraception | 17.1% | 2.2 | 329 | 38.7% | 2.5 | 596 | 52.0% | 2.7 | 709 | 55.8% | 2.6 | 628 | 52.7% | 2.6 | 543 | 51.9% | 2.6 | 435 | 42.4% | 2.7 | 372 |
| 8.6 | Ever Used Effective Methods | 12.4% | 2.1 | 329 | 30.0% | 2.6 | 596 | 43.4% | 2.6 | 709 | 47.9% | 2.4 | 628 | 45.1% | 2.7 | 543 | 47.0% | 2.6 | 435 | 36.4% | 2.4 | 372 |
| 8.10 | Currently Using Contraception | 13.4% | 2.9 | 211 | 25.3% | 2.4 | 393 | 37.2% | 3.3 | 490 | 44.2% | 3.3 | 442 | 45.9% | 3.2 | 374 | 47.6% | 3.3 | 279 | 41.4% | 3.9 | 149 |
| 8.10 | Currently Using Effective Methods | 10.0% | 2.3 | 211 | 17.2% | 2.4 | 393 | 26.6% | 3.2 | 490 | 28.4% | 2.6 | 442 | 32.2% | 3.2 | 374 | 33.5% | 2.9 | 279 | 27.6% | 3.6 | 149 |
| 8.16 | Never Used Contraception | 82.9% | 2.2 | 329 | 61.3% | 2.5 | 596 | 48.0% | 2.7 | 709 | 44.2% | 2.6 | 628 | 47.1% | 2.7 | 543 | 48.1% | 2.6 | 435 | 57.6% | 2.7 | 372 |
| 8.16 | Used in Past | 8.5% | 1.3 | 329 | 22.0% | 1.9 | 596 | 26.3% | 1.7 | 709 | 24.7% | 1.9 | 628 | 21.2% | 2.0 | 543 | 21.4% | 2.1 | 435 | 25.8% | 2.2 | 372 |
| 8.16 | Currently Using | 8.6% | 1.8 | 329 | 16.6% | 1.7 | 596 | 25.7% | 2.5 | 709 | 31.2% | 2.6 | 628 | 31.7% | 2.4 | 543 | 30.5% | 2.5 | 435 | 16.6% | 1.8 | 372 |

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Table III.2b. Sampling Errors for Differences, by Current Age

| | | Current Age | | | | | | | | | | |
| | | (20–24)–(15–19) | | | (25–29)–(20–24) | | | (30–34)–(25–29) | | | (35–39)–(30–34) | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.3 | Age at First Marriage | — | — | — | — | — | — | — | — | — | −0.2 | 0.3 | 582 |
| 4.4 | Age at First Marriage (<20) | — | — | — | −0.23 | 0.13 | 511 | −0.29 | 0.14 | 491 | 0.1 | 0.2 | 442 |
| 4.15 | Percent of Time Spent in Union Since First Marriage | 0.7% | 0.7 | 424 | −1.12% | 0.50 | 648 | 0.7% | 0.5 | 666 | 0.9% | 0.5 | 582 |
| 5.1 | Number of Children Ever Born | 1.56 | 0.09 | 424 | 1.79 | 0.11 | 648 | 1.66 | 0.14 | 666 | 1.39 | 0.18 | 582 |
| 5.17 | Children born in Past Five Years | — | — | — | −0.24 | 0.09 | 395 | −0.35 | 0.08 | 581 | −0.31 | 0.06 | 546 |
| 7.1 | Want No Additional Children | 8.4% | 2.3 | 410 | 16.8% | 2.5 | 623 | 18.7% | 3.6 | 618 | 15.1% | 3.5 | 513 |
| | Additional Children Wanted | −0.94 | 0.21 | 410 | −1.15 | 0.14 | 623 | −0.55 | 0.14 | 617 | −0.51 | 0.14 | 512 |
| | Additional less Unwanted | −1.00 | 0.22 | 410 | −1.27 | 0.15 | 623 | −0.67 | 0.16 | 617 | −0.62 | 0.16 | 512 |
| 7.3 | Last Pregnancy Not Wanted | 5.1% | 2.1 | 338 | 12.4% | 2.2 | 616 | 13.2% | 3.0 | 648 | 7.2% | 3.3 | 568 |
| 7.4 | Total Children Wanted | 0.68 | 0.18 | 416 | 0.31 | 0.17 | 635 | 0.54 | 0.15 | 649 | 0.41 | 0.18 | 563 |
| 8.1 | Breastfed in Closed Interval | 3.8% | 3.1 | 176 | 1.4% | 1.5 | 543 | −3.8% | 1.6 | 619 | 3.7% | 2.0 | 550 |
| 8.5 | Knows Effective Contraceptives | 2.4% | 1.4 | 424 | 0.5% | 0.9 | 648 | −0.5% | 1.1 | 666 | −0.4% | 1.1 | 582 |
| 8.6 | Ever Used Contraceptives | 21.6% | 3.0 | 424 | 13.4% | 3.1 | 648 | 3.8% | 3.8 | 666 | −3.2% | 3.0 | 582 |
| | Ever Used Effective Methods | 17.5% | 2.8 | 424 | 13.4% | 3.1 | 648 | 4.5% | 3.5 | 666 | −2.8% | 3.0 | 582 |
| 8.10 | Currently Using Contraception | 11.9% | 3.3 | 274 | 11.9% | 3.2 | 436 | 7.0% | 5.2 | 465 | 1.7% | 3.8 | 406 |
| | Currently Using Effective Methods | 7.3% | 3.1 | 274 | 9.3% | 3.2 | 436 | 1.8% | 4.4 | 465 | 3.7% | 3.6 | 406 |
| 8.16 | Never Used Contraception | −21.6% | 3.0 | 424 | −13.4% | 3.1 | 648 | −3.8% | 3.8 | 666 | 3.0% | 3.1 | 582 |
| 8.16 | Used in Past | 13.5% | 2.3 | 424 | 4.3% | 2.6 | 648 | −1.7% | 2.7 | 666 | −3.5% | 2.7 | 582 |
| 8.16 | Currently Using | 8.1% | 2.1 | 424 | 9.0% | 2.6 | 648 | 5.5% | 3.9 | 666 | 0.5% | 3.0 | 582 |

Table III.3a. Sampling Errors, by Age at First Marriage

| | | Age at First Marriage | | | | | | | | | | |
| | | Less than 15 | | | 15–19 | | | 20–24 | | | 25–29 | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.15 | Children Born in First Five Years of Marriage | 1.88 | 0.05 | 762 | 2.24 | 0.03 | 1,608 | 2.36 | 0.05 | 440 | 2.14 | 0.13 | 68 |
| 7.7 | Total Children Wanted | 7.24 | 0.15 | 782 | 6.29 | 0.10 | 1,966 | 5.56 | 0.15 | 572 | 4.55 | 0.31 | 113 |
| 8.17 | Never used contraception | 58.3% | 2.0 | 830 | 54.0% | 2.0 | 2,039 | 47.0% | 2.4 | 603 | 44.4% | 4.9 | 115 |
| 8.17 | Used in Past | 23.6% | 1.7 | 830 | 20.9% | 1.0 | 2,039 | 25.2% | 2.0 | 603 | 23.5% | 3.9 | 115 |
| 8.17 | Currently Using | 18.1% | 1.6 | 830 | 25.1% | 1.6 | 2,039 | 27.8% | 2.3 | 603 | 32.1% | 4.8 | 115 |

Table III.3b. Sampling Errors for Differences, by Age at First Marriage

| | | Age at First Marriage | | | | | | | | |
| | | (15–19)–(less than 15) | | | (20–24)–(15–19) | | | (25–29)–(20–24) | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
|---|---|---|---|---|---|---|---|---|---|---|
| 5.15 | Children Born in First Five Years of Marriage | 0.36 | 0.06 | 1,034 | 0.12 | 0.05 | 690 | −0.23 | 0.13 | 117 |
| 7.7 | Total Children Wanted | −0.95 | 0.16 | 1,119 | −0.73 | 0.17 | 886 | −1.02 | 0.32 | 189 |
| 8.17 | Never Used Contraception | −4.3% | 2.4 | 1,180 | −7.0% | 3.1 | 930 | −2.6% | 5.5 | 194 |
| 8.17 | Used in Past | −2.7% | 1.9 | 1,180 | 4.3% | 2.3 | 930 | −1.7% | 4.9 | 194 |
| 8.17 | Currently Using | 7.0% | 2.1 | 1,180 | 2.6% | 2.5 | 930 | 4.3% | 5.3 | 194 |

| Current Age | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (40–44)–(35–39) | | | (45–49)–(40–44) | | | (25–34)–(15–24) | | | (35–44)–(25–34) | | | (45–49)–(35–44) | | |
| Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
| −0.2 | 0.2 | 483 | −0.4 | 0.3 | 401 | — | — | — | — | — | — | −0.51 | 0.24 | 539 |
| −0.34 | 0.19 | 369 | −0.1 | 0.2 | 315 | — | — | — | −0.22 | 0.10 | 851 | −0.31 | 0.17 | 429 |
| −1.0% | 0.8 | 483 | −1.7% | 1.0 | 401 | −0.60% | 0.33 | 1,094 | −1.1% | 0.4 | 1,129 | −2.2% | 0.9 | 539 |
| 1.30 | 0.19 | 483 | 0.21 | 0.23 | 401 | 3.12 | 0.10 | 1,094 | 2.85 | 0.14 | 1,129 | 0.93 | 0.20 | 539 |
| −0.56 | 0.06 | 449 | −0.62 | 0.07 | 356 | — | — | — | −0.73 | 0.05 | 1,022 | −0.94 | 0.06 | 475 |
| 11.2% | 3.9 | 366 | −1.6% | 4.5 | 210 | 28.4% | 1.9 | 1,044 | 29.6% | 2.2 | 948 | 5.2% | 3.6 | 265 |
| −0.18 | 0.16 | 366 | 0.10 | 0.25 | 210 | −1.73 | 0.12 | 1,043 | −0.88 | 0.09 | 946 | −0.01 | 0.21 | 265 |
| −0.26 | 0.18 | 366 | 0.15 | 0.27 | 210 | −1.93 | 0.13 | 1,043 | −1.08 | 0.10 | 946 | −0.01 | 0.23 | 265 |
| 4.0% | 3.4 | 471 | −5.8 | 3.8 | 391 | 20.2% | 1.6 | 990 | 15.9% | 2.2 | 1,101 | −3.6% | 3.0 | 526 |
| 0.69 | 0.19 | 454 | 0.04 | 0.27 | 357 | 0.80 | 0.13 | 1,072 | 1.00 | 0.14 | 1,081 | 0.43 | 0.25 | 477 |
| −3.8% | 2.0 | 463 | 5.7% | 2.0 | 385 | 0.3% | 1.6 | 782 | −0.3% | 1.3 | 1,068 | 3.6% | 1.5 | 515 |
| 0.6% | 1.3 | 483 | −2.0% | 1.2 | 401 | 1.2% | 0.8 | 1,094 | −0.4% | 0.8 | 1,129 | −1.7% | 1.2 | 539 |
| −0.7% | 3.3 | 483 | −9.6% | 3.6 | 401 | 22.8% | 2.3 | 1,094 | −1.5% | 2.3 | 1,129 | −10.0% | 3.2 | 539 |
| 1.9% | 3.6 | 483 | −10.6% | 3.6 | 401 | 21.8% | 2.3 | 1,094 | 0.4% | 2.2 | 1,129 | −9.6% | 3.0 | 539 |
| 1.6% | 4.3 | 320 | −6.2% | 4.7 | 194 | 19.4% | 2.3 | 733 | 6.1% | 2.4 | 768 | −5.2% | 4.4 | 243 |
| 1.3% | 4.2 | 320 | −5.8% | 4.6 | 194 | 12.7% | 2.2 | 733 | 5.3% | 2.3 | 768 | −5.1% | 4.1 | 243 |
| 0.9% | 3.3 | 483 | 9.6% | 3.6 | 401 | −22.8% | 2.3 | 1,094 | 1.4% | 2.3 | 1,129 | 10.1% | 3.3 | 539 |
| 0.2% | 3.2 | 483 | 4.4% | 3.0 | 401 | 8.3% | 1.7 | 1,094 | −4.3% | 1.8 | 1,129 | 4.5% | 2.5 | 539 |
| −1.1% | 3.4 | 483 | −14.0% | 2.9 | 401 | 14.5% | 1.7 | 1,094 | 2.9% | 1.9 | 1,129 | −14.6% | 2.4 | 539 |

Table III.4a. Sampling Errors, by Years Since First Marriage

| | | Years Since First Marriage | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Less than 10 | | | 10–19 | | | 20–29 | | | 30 and over | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
| 4.10 | Percent Currently Married | 98.2 | 0.4 | 1,420 | 96.4% | 0.6 | 1,171 | 93.5% | 0.8 | 804 | 84.4% | 2.6 | 216 |
| 5.2 | Number of Children Ever Born | 2.29 | 0.05 | 1,420 | 6.13 | 0.08 | 1,171 | 8.57 | 0.14 | 804 | 9.61 | 0.22 | 216 |
| 5.15 | Children Born in First Five Years of Marriage | 2.36 | 0.04 | 696 | 2.24 | 0.03 | 1,171 | 1.95 | 0.05 | 804 | 1.91 | 0.07 | 216 |
| 7.7 | Total Children Wanted | 5.25 | 0.09 | 1,395 | 6.62 | 0.12 | 1,129 | 7.43 | 0.16 | 752 | 7.96 | 0.28 | 182 |
| 8.17 | Never Used contraception | 61.5% | 1.6 | 1,420 | 45.8% | 2.2 | 1,171 | 49.9% | 2.2 | 804 | 57.3% | 3.2 | 216 |
| 8.17 | Used in Past | 19.8% | 1.1 | 1,420 | 24.5% | 1.4 | 1,171 | 21.9% | 1.4 | 804 | 28.0% | 3.1 | 216 |
| 8.17 | Currently Using | 18.7% | 1.3 | 1,420 | 29.7% | 1.9 | 1,171 | 28.1% | 1.8 | 804 | 14.7% | 2.5 | 216 |

Table III.4b. Sampling Errors for Differences, by Years Since First Marriage

| | | Years Since First Marriage | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | (10–19)–(0–9) | | | (20–29)–(10–19) | | | (30+)–(20–29) | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
| 4.10 | Percent Currently Married | −1.8% | 0.7 | 1,283 | −2.9% | 1.1 | 954 | −9.1% | 2.8 | 341 |
| 5.2 | Number of Children Ever Born | 3.84 | 0.09 | 1,283 | 2.44 | 0.13 | 954 | 1.05 | 0.24 | 341 |
| 5.15 | Children Born in First Five Years of Marriage | −0.12 | 0.05 | 837 | −0.29 | 0.06 | 954 | −0.04 | 0.08 | 341 |
| 7.7 | Total Children Wanted | 1.36 | 0.13 | 1,248 | 0.82 | 0.16 | 903 | 0.52 | 0.30 | 294 |
| 8.17 | Never Used Contraception | −15.7% | 2.2 | 1,283 | 4.1% | 2.7 | 954 | 7.3% | 3.7 | 341 |
| 8.17 | Used in Past | 4.7% | 1.7 | 1,283 | −2.6% | 2.0 | 954 | 6.1% | 3.4 | 341 |
| 8.17 | Currently Using | 11.0% | 1.9 | 1,283 | −1.5% | 2.2 | 954 | −13.4% | 3.2 | 341 |

153

# Table III.5a. Sampling Errors for Number of Living Children

## Number of Living Children

| Text Table | Variable Name | 0 Mean or Percent | SE | N | 1 Mean or Percent | SE | N | 2 Mean or Percent | SE | N | 3 Mean or Percent | SE | N | 4 Mean or Percent | SE | N | 5 Mean or Percent | SE | N | 6 Mean or Percent | SE | N | 7 Mean or Percent | SE | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.1 | Want No Additional Children | 4.2% | 1.7 | 155 | 4.5% | 1.2 | 292 | 15.2% | 2.0 | 361 | 24.5% | 2.6 | 353 | 38.3% | 3.1 | 362 | 47.2% | 3.5 | 330 | 54.5% | 2.7 | 341 | 68.4% | 3.3 | 275 |
| 7.1 | Additional Children Wanted | 4.04 | 0.20 | 155 | 3.82 | 0.19 | 291 | 2.55 | 0.13 | 360 | 2.49 | 0.18 | 353 | 1.76 | 0.16 | 362 | 1.48 | 0.12 | 330 | 1.12 | 0.13 | 339 | 0.86 | 0.15 | 275 |
| 7.1 | Additional Less Unwanted | 4.04 | 0.20 | 155 | 3.81 | 0.19 | 291 | 2.49 | 0.13 | 360 | 2.39 | 0.19 | 353 | 1.53 | 0.17 | 362 | 1.18 | 0.14 | 330 | 0.75 | 0.15 | 339 | 0.39 | 0.17 | 275 |
| 7.3 | Last Pregnancy Not Wanted | — | — | — | 1.4% | 0.65 | 328 | 6.1% | 1.3 | 390 | 9.5% | 1.3 | 381 | 23.2% | 2.8 | 414 | 30.9% | 3.0 | 379 | 36.4% | 2.5 | 407 | 45.2% | 3.0 | 334 |
| 7.5 | Total Children Wanted | 4.26 | 0.18 | 195 | 4.72 | 0.17 | 306 | 4.62 | 0.13 | 371 | 5.58 | 0.17 | 367 | 5.58 | 0.15 | 394 | 6.43 | 0.16 | 363 | 6.80 | 0.13 | 393 | 7.37 | 0.18 | 326 |
| 8.6 | Ever Used Contraception | 13.1% | 3.1 | 204 | 27.1% | 2.7 | 328 | 44.6% | 3.1 | 390 | 46.0% | 2.8 | 381 | 47.8% | 3.4 | 414 | 52.3% | 3.0 | 379 | 51.1% | 2.9 | 407 | 53.7% | 3.1 | 334 |
| 8.11 | Currently Using Contraception | 7.0% | 2.3 | 155 | 26.6% | 3.4 | 199 | 37.4% | 4.0 | 263 | 36.2% | 3.4 | 258 | 36.5% | 3.5 | 268 | 42.5% | 3.7 | 246 | 45.2% | 3.9 | 266 | 43.7% | 4.4 | 214 |
| 9.2 | Currently Using Effective Methods | 3.3% | 1.4 | 155 | 18.3% | 2.8 | 199 | 27.3% | 3.2 | 263 | 24.1% | 3.0 | 258 | 23.9% | 3.4 | 268 | 32.8% | 3.4 | 246 | 32.3% | 3.4 | 266 | 30.3% | 4.3 | 214 |

## Number of Living Children

| Text Table | Variable Name | 8 Mean or Percent | SE | N | 9+ Mean or Percent | SE | N | 1–2 Mean or Percent | SE | N | 3–4 Mean or Percent | SE | N | 5–6 Mean or Percent | SE | N | 7–8 Mean or Percent | SE | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.1 | Want No Additional Children | 69.3% | 2.9 | 220 | 78.3% | 2.5 | 381 | 10.4% | 1.2 | 652 | 31.5% | 2.2 | 714 | 50.9% | 2.4 | 671 | 68.8% | 2.3 | 495 |
| 7.1 | Additional Number Wanted | 0.82 | 0.12 | 220 | 0.52 | 0.12 | 381 | 3.12 | 0.12 | 651 | 2.12 | 0.13 | 714 | 1.30 | 0.10 | 670 | 0.84 | 0.11 | 495 |
| 7.1 | Additional Less Unwanted | 0.31 | 0.13 | 220 | −0.15 | 0.13 | 381 | 3.08 | 0.12 | 651 | 1.96 | 0.14 | 714 | 0.96 | 0.11 | 670 | 0.36 | 0.12 | 495 |
| 7.3 | Last Pregnancy Not Wanted | 50.8% | 3.0 | 273 | 61.8% | 1.9 | 503 | 4.0% | 0.75 | 717 | 16.6% | 1.7 | 795 | 33.7% | 2.1 | 786 | 47.7% | 2.1 | 607 |
| 7.4 | Total Children Wanted | 7.83 | 0.22 | 261 | 8.58 | 0.18 | 485 | 4.67 | 0.12 | 677 | 5.58 | 0.13 | 761 | 6.62 | 0.12 | 755 | 7.57 | 0.14 | 586 |
| 8.6 | Ever Used Contraception | 53.6% | 3.6 | 273 | 56.0% | 2.6 | 503 | 36.6% | 2.5 | 717 | 46.9% | 2.5 | 795 | 51.7% | 2.2 | 786 | 53.6% | 2.5 | 607 |
| 8.11 | Currently Using Contraception | 41.7% | 4.2 | 166 | 43.1% | 3.2 | 302 | 32.8% | 3.1 | 462 | 36.3% | 2.7 | 526 | 43.9% | 3.1 | 512 | 42.8% | 3.3 | 381 |
| 9.2 | Currently Using Effective Methods | 28.6% | 4.2 | 166 | 26.8% | 2.4 | 302 | 23.5% | 2.3 | 462 | 24.0% | 2.6 | 526 | 32.5% | 2.7 | 512 | 29.6% | 3.1 | 381 |

Table III.5b. Sampling Errors for Differences by Number of Living Children

| | | Number of Living Children | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (1–2)–0 | | | (3–4)–(1–2) | | | (5–6)–(3–4) | | | (7–8)–(5–6) | | | (9+)–(7–8) | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
| 7.1 | Want No Additional Children | 6.2% | 2.1 | 251 | 21.1% | 2.5 | 682 | 19.3% | 3.0 | 692 | 17.9% | 3.2 | 570 | 9.5% | 3.1 | 431 |
| 7.1 | Additional Number Wanted | −0.93 | 0.24 | 251 | −0.99 | 0.17 | 681 | −0.82 | 0.13 | 691 | −0.46 | 0.12 | 569 | −0.32 | 0.14 | 431 |
| 7.1 | Additional Less Unwanted | −0.96 | 0.24 | 251 | −1.12 | 0.17 | 681 | −1.00 | 0.14 | 691 | −0.60 | 0.14 | 569 | −0.50 | 0.16 | 431 |
| 7.3 | Last Pregnancy Not Wanted | — | — | — | 12.7% | 1.9 | 754 | 17.1% | 2.6 | 790 | 14.0% | 2.8 | 685 | 14.1% | 2.7 | 550 |
| 7.4 | Total Children Wanted | 0.41 | 0.22 | 302 | 0.91 | 0.15 | 716 | 1.04 | 0.12 | 758 | 0.95 | 0.16 | 660 | 1.00 | 0.22 | 531 |
| 8.6 | Ever Used Contraception | 23.5% | 4.7 | 318 | 10.3% | 3.3 | 754 | 4·8% | 2.9 | 790 | 2·0% | 3·0 | 685 | 2·4% | 3·3 | 550 |
| 8.11 | Currently Using Contraception | 25·7% | 4.6 | 233 | 3·6% | 4·0 | 492 | 7·6% | 3.6 | 519 | −1·1% | 4.2 | 437 | 0.3% | 4.5 | 337 |
| 9.2 | Currently Using Effective Methods | 20·2% | 2·6 | 233 | 0.5% | 3.3 | 492 | 8.5% | 3.2 | 519 | −3.0% | 3.9 | 437 | −2.8% | 3.8 | 337 |

Table III.6a. Sampling Errors for Wife's Education

| | | Wife's Education | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No Education | | | Primary | | | Preparatory | | | Secondary or More | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
| 4.5 | Age At First Marriage (<20) | 16.0 | 0.1 | 1,917 | 16.7 | 0.1 | 431 | 17.6 | 0.2 | 120 | 18.1 | 0.2 | 72 |
| 5.5 | Number of Children Ever Born | 6.30 | 0.09 | 2,470 | 3.69 | 0.12 | 701 | 3.02 | 0.17 | 204 | 2.67 | 0.13 | 236 |
| 5.16 | Children Born in First Five Years of Marriage | 2.11 | 0.02 | 2,174 | 2.35 | 0.05 | 460 | 2.36 | 0.10 | 119 | 2.17 | 0.08 | 134 |
| 5.19 | Children Born in Past Five Years | 1.70 | 0.03 | 2,027 | 1.76 | 0.07 | 447 | 1.54 | 0.13 | 116 | 1.20 | 0.10 | 129 |
| 7.2 | Want No Additional Children | 44.0% | 1.5 | 1,998 | 34.1% | 2.2 | 655 | 39.9% | 3.7 | 193 | 44.9% | 4.0 | 224 |
| 7.2 | Additional Children Wanted | 1.89 | 0.09 | 1,996 | 1.98 | 0.11 | 655 | 1.56 | 0.13 | 193 | 1.29 | 0.14 | 222 |
| 7.2 | Additional Less Unwanted | 1.58 | 0.10 | 1,996 | 1.74 | 0.12 | 655 | 1.32 | 0.15 | 193 | 1.08 | 0.16 | 222 |
| 7.8 | Total Children Wanted | 7.02 | 0.10 | 2,340 | 5.29 | 0.10 | 689 | 4.37 | 0.14 | 201 | 3.90 | 0.10 | 229 |
| 8.9 | Ever Used Contraception | 37.4% | 1.5 | 2,470 | 59.0% | 2.1 | 701 | 72.2% | 3.9 | 204 | 80.2% | 2.6 | 236 |
| 8.13 | Currently Using Contraception | 27.8% | 1.7 | 1,530 | 47.9% | 2.8 | 484 | 59.7% | 4.4 | 154 | 72.4% | 3.3 | 170 |
| 9.3 | Currently Using Effective Methods | 18.9% | 1.5 | 1,530 | 33.3% | 2.6 | 484 | 42.3% | 5.1 | 154 | 49.8% | 3.4 | 170 |

Table III.6b. Sampling Errors for Differences by Wife's Education

| | | Wife's Education | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Primary–No Education | | | Preparatory–Primary | | | Secondary–Preparatory | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
| 4.5 | Age at First Marriage (<20) | 0.7 | 0.1 | 704 | 0.9 | 0.2 | 187 | 0.56 | 0.25 | 90 |
| 5.5 | Number of Children Ever Born | −2.61 | 0.15 | 1,093 | −0.67 | 0.20 | 316 | −0.35 | 0.20 | 219 |
| 5.16 | Children Born in First Five Years of Marriage | 0.24 | 0.06 | 760 | 0.01 | 0.10 | 189 | −0.19 | 0.12 | 126 |
| 5.19 | Children Born in Past Five Years | 0.06 | 0.07 | 732 | −0.22 | 0.14 | 184 | −0.35 | 0.15 | 122 |
| 7.2 | Want No Additional Children | −10.0% | 2.5 | 987 | 5.9% | 4.5 | 298 | 5.0% | 5.6 | 207 |
| 7.2 | Additional Children Wanted | 0.09 | 0.14 | 987 | −0.43 | 0.17 | 298 | −0.27 | 0.18 | 206 |
| 7.2 | Additional Less Unwanted | 0.16 | 0.15 | 987 | −0.43 | 0.19 | 298 | −0.24 | 0.21 | 206 |
| 7.8 | Total Children Wanted | −1.73 | 0.14 | 1,064 | −0.91 | 0.17 | 311 | −0.47 | 0.16 | 214 |
| 8.9 | Ever Used Contraception | 21.6% | 2.2 | 1,093 | 13.2% | 4.5 | 316 | 8.0% | 4.5 | 219 |
| 8.13 | Currently Using Contraception | 20.1% | 2.9 | 735 | 11.8% | 5.2 | 233 | 12.7% | 5.0 | 161 |
| 9.3 | Currently Using Effective Methods | 14.5% | 2.9 | 735 | 9.0% | 5.7 | 233 | 7.5% | 6.0 | 161 |

Table III.7. Sampling Errors, by Husband's Occupation

| | | Husband's Occupation | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Technical | | | Clerical | | | Sales | | | Skilled | | | Household | | | Unskilled | | | Agriculture | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
| 4.6 | Age at First Marriage (<20) | 16.9 | 0.2 | 234 | 16.7 | 0.2 | 152 | 16.2 | 0.1 | 309 | 16.3 | 0.1 | 803 | 16.2 | 0.1 | 746 | 15.8 | 0.3 | 74 | 15.5 | 0.1 | 222 |
| 5.7 | Number of Children Ever Born | 3.92 | 0.15 | 426 | 4.98 | 0.25 | 228 | 6.43 | 0.19 | 414 | 5.44 | 0.12 | 1,152 | 5.03 | 0.13 | 1,021 | 6.60 | 0.43 | 86 | 6.90 | 0.22 | 283 |
| 8.9 | Ever used contraception | 74.6% | 2.2 | 426 | 58.6% | 3.8 | 228 | 51.5% | 2.9 | 414 | 49.7% | 1.9 | 1,152 | 35.3% | 2.1 | 1,021 | 23.9% | 5.7 | 86 | 20.0% | 3.0 | 283 |
| 8.14 | Currently using contraception | 62.8% | 3.4 | 308 | 55.0% | 4.2 | 150 | 44.6% | 3.9 | 271 | 37.0% | 2.4 | 721 | 27.0% | 2.4 | 648 | 21.1% | 5.7 | 51 | 11.5% | 2.8 | 186 |
| 9.3 | Want No Children and Currently Using Effective Methods | 57.0% | 4.1 | 142 | 58.5% | 5.5 | 69 | 46.3% | 4.4 | 138 | 39.8% | 3.3 | 307 | 37.8% | 3.8 | 231 | — | — | — | 14.0% | 3.7 | 77 |

Table III.8. Sampling Errors and Sampling Errors for Differences by Residence

| | | Residence | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Urban | | | Rural | | | Urban–Rural | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
| 4.7 | Age at First Marriage (<20) | 16.4 | 0.1 | 1,742 | 15.9 | 0.1 | 798 | 0.5 | 0.1 | 1,095 |
| 7.8 | Total Children Wanted | 5.99 | 0.10 | 2,423 | 7.08 | 0.15 | 1,035 | −1.10 | 0.18 | 1,450 |
| 8.9 | Ever Used Contraception | 57.3% | 1.6 | 2,533 | 20.8% | 1.9 | 1,079 | 36.5% | 2.5 | 1,513 |
| 8.14 | Currently Using Contraception | 47.5% | 2.1 | 1,658 | 12.4% | 1.9 | 680 | 35.1% | 2.8 | 964 |
| 9.3 | Want No Children and Currently Using Effective Methods | 47.8% | 2.4 | 786 | 18.4% | 3.0 | 195 | 29.4% | 3.8 | 313 |

Table III.9a. Sampling Errors, by Region

| | | Region | | | | | | | | | | | | | | | | |
| | | Amman | | | Zarka and Irbid | | | Towns | | | Large Villages | | | Medium Villages | | | Small Villages | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.8 | Total Children Wanted | 5.67 | 0.10 | 1,218 | 6.39 | 0.20 | 708 | 6.20 | 0.30 | 498 | 7.18 | 0.22 | 220 | 6.99 | 0.20 | 572 | 7.20 | 0.32 | 243 |
| 8.9 | Ever Used Contraception | 61.2% | 2.1 | 1,287 | 54.0% | 3.2 | 732 | 52.1% | 4.2 | 514 | 26.3% | 1.3 | 227 | 19.4% | 3.0 | 602 | 19.2% | 3.7 | 251 |
| 8.14 | Currently Using Contraception | 52.6% | 2.6 | 861 | 41.1% | 3.9 | 449 | 43.2% | 5.3 | 347 | 15.3% | 2.1 | 133 | 11.4% | 2.8 | 377 | 12.2% | 3.9 | 170 |
| 9.3 | Want No Children and Currently Using Effective Methods | 51.5% | 2.8 | 427 | 42.6% | 3.8 | 210 | 44.5% | 7.8 | 149 | 21.2% | 3.0 | 52 | 14.5% | 3.1 | 90 | 22.2% | 9.1 | 54 |

Table III.9b. Sampling Errors for Differences, by Region

| | | Region | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Amman–Zarka, Irbid | | | Zarka, Irbid–Towns | | | Towns–Large Villages | | | Large Villages– Medium Villages | | | Medium Villages– Small Villages | | | Amman–Zarkam Irbid, Towns | | | Amman–Villages | | | Zarka, Irbid, Towns–Villages | | |
| Text Table | Variable Name | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N | Mean or Percent | SE | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.8 | Total Children Wanted | −0.72 | 0.23 | 895 | 0.19 | 0.36 | 584 | −0.99 | 0.37 | 305 | 0.19 | 0.30 | 317 | −0.21 | 0.38 | 341 | −0.64 | 0.20 | 1,212 | −1.42 | 0.18 | 1,119 | −0.77 | 0.23 | 1,114 |
| 8.9 | Ever Used Contraception | 7.2% | 3.8 | 933 | 2.0% | 5.3 | 604 | 25.8% | 4.4 | 315 | 6.9% | 3.3 | 329 | 0.1% | 4.8 | 354 | 8.0% | 3.3 | 1,266 | 40.4% | 2.8 | 1,174 | 32.5% | 3.2 | 1,156 |
| 8.14 | Currently Using Contraception | 11.5% | 4.7 | 591 | −2.1% | 6.6 | 392 | 27.9% | 5.7 | 192 | 3.8% | 3.5 | 196 | −0.8% | 4.8 | 234 | 10.6% | 4.2 | 828 | 40.2% | 3.2 | 760 | 29.6% | 3.7 | 734 |
| 9.3 | Want No Children and Currently Using Effective Methods | 8.9% | 4.7 | 282 | −1.9% | 8.7 | 175 | 23.3% | 8.4 | 77 | 6.8% | 4.3 | 66 | −7.7% | 9.6 | 67 | 8.1% | 4.9 | 390 | 33.1% | 4.1 | 268 | 25.0% | 5.0 | 253 |

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## Table III.10. Estimates and Their Standard Errors for 14 Variables Over 10 Subclasses, for the Total Sample and for Each of the 6 Domains

A. *Total Sample*

Variables

| Subclass* | N | Number of Children Ever Born | | Proportion of children who have died | | Age Specific Fertility Rate | | Marital ASFR | | Proportion of children born in last year who have died | | Mean Open Interval | | Proportion of Women Ever Married | | Proportion Currently Married | | Proportion who have had at least 1 live birth | | Proportion with Father living | | Proportion of eldest daughters with Father living | | Proportion with Mother living | | Proportion of eldest daughters with Mother living | | Proportion of Ever Married Women with husband living | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE |
| 15–19 | 5,187 | 0.176 | 0.010 | 0.087 | 0.009 | 0.079 | 0.005 | 0.410 | 0.009 | 0.042 | 0.010 | 19.3 | 0.43 | 0.195 | 0.009 | 0.190 | 0.008 | 0.112 | 0.006 | 0.895 | 0.006 | 0.934 | 0.008 | 0.970 | 0.003 | 0.971 | 0.006 | 0.975 | 0.006 |
| 20–24 | 3,401 | 1.550 | 0.046 | 0.094 | 0.005 | 0.312 | 0.010 | 0.491 | 0.011 | 0.040 | 0.007 | 12.2 | 0.24 | 0.642 | 0.014 | 0.632 | 0.014 | 0.554 | 0.013 | 0.831 | 0.007 | 0.888 | 0.013 | 0.938 | 0.004 | 0.949 | 0.007 | 0.985 | 0.002 |
| 25–29 | 2,938 | 3.590 | 0.081 | 0.096 | 0.004 | 0.372 | 0.013 | 0.431 | 0.013 | 0.039 | 0.006 | 16.9 | 0.43 | 0.874 | 0.010 | 0.858 | 0.011 | 0.823 | 0.010 | 0.712 | 0.010 | 0.800 | 0.019 | 0.859 | 0.008 | 0.878 | 0.014 | 0.983 | 0.002 |
| 30–34 | 2,412 | 5.660 | 0.090 | 0.112 | 0.004 | 0.335 | 0.013 | 0.359 | 0.013 | 0.039 | 0.008 | 24.5 | 0.86 | 0.953 | 0.005 | 0.926 | 0.006 | 0.920 | 0.006 | 0.601 | 0.011 | 0.725 | 0.017 | 0.791 | 0.010 | 0.817 | 0.020 | 0.984 | 0.003 |
| 35–39 | 2,417 | 7.260 | 0.109 | 0.142 | 0.004 | 0.246 | 0.011 | 0.264 | 0.011 | 0.048 | 0.008 | 38.0 | 1.17 | 0.974 | 0.003 | 0.932 | 0.006 | 0.946 | 0.006 | 0.450 | 0.010 | 0.581 | 0.020 | 0.673 | 0.010 | 0.746 | 0.020 | 0.977 | 0.003 |
| 40–44 | 1,851 | 8.150 | 0.129 | 0.175 | 0.005 | 0.115 | 0.008 | 0.128 | 0.008 | 0.060 | 0.015 | 63.7 | 1.57 | 0.980 | 0.004 | 0.899 | 0.007 | 0.956 | 0.005 | 0.336 | 0.012 | 0.414 | 0.023 | 0.562 | 0.015 | 0.607 | 0.026 | 0.970 | 0.005 |
| 45–49 | 1,257 | 8.390 | 0.149 | 0.206 | 0.006 | 0.040 | 0.006 | 0.047 | 0.006 | 0.076 | 0.037 | 106.0 | 3.04 | 0.983 | 0.004 | 0.847 | 0.010 | 0.958 | 0.007 | 0.227 | 0.013 | 0.303 | 0.021 | 0.432 | 0.014 | 0.492 | 0.030 | 0.948 | 0.006 |
| All (15–49) | 19,463 | 3.790 | 0.066 | 0.142 | 0.003 | 0.217 | 0.006 | 0.326 | 0.007 | 0.042 | 0.004 | 35.1 | 0.85 | 0.692 | 0.007 | 0.662 | 0.007 | 0.636 | 0.007 | 0.667 | 0.005 | 0.728 | 0.006 | 0.815 | 0.004 | 0.828 | 0.006 | 0.977 | 0.001 |
| NOED (15–49) | 7,625 | 6.260 | 0.082 | 0.163 | 0.003 | 0.273 | 0.007 | 0.313 | 0.007 | 0.053 | 0.006 | 36.8 | 0.89 | 0.917 | 0.004 | 0.867 | 0.005 | 0.872 | 0.006 | 0.532 | 0.007 | 0.590 | 0.010 | 0.693 | 0.006 | 0.715 | 0.012 | 0.972 | 0.002 |
| EDUC (15–49) | 11,838 | 2.110 | 0.036 | 0.098 | 0.003 | 0.180 | 0.005 | 0.341 | 0.006 | 0.032 | 0.005 | 33.0 | 1.40 | 0.540 | 0.006 | 0.522 | 0.006 | 0.475 | 0.006 | 0.760 | 0.006 | 0.827 | 0.008 | 0.898 | 0.003 | 0.910 | 0.005 | 0.983 | 0.001 |

* The Number of Sample Cases for the Various Variables is given in Table III.11 for DEFT's and ROHs

B. *Domain 1. Amman City*

Variables

| Subclass* | N | Number of Children Ever Born | | Proportion of children who have died | | Age Specific Fertility Rate | | Marital ASFR | | Proportion of children born in last year who have died | | Mean Open Interval | | Proportion of Women Ever Married | | Proportion Currently Married | | Proportion who have had at least 1 live birth | | Proportion with Father living | | Proportion of eldest daughters with Father living | | Proportion with Mother living | | Proportion of eldest daughters with Mother living | | Proportion of Ever Married Women with husband living | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE |
| 15–19 | 1,938 | 0.144 | 0.013 | 0.089 | 0.013 | 0.065 | 0.006 | 0.416 | 0.012 | 0.050 | 0.021 | 9.3 | 0.78 | 0.156 | 0.010 | 0.151 | 0.010 | 0.089 | 0.008 | 0.903 | 0.007 | 0.942 | 0.009 | 0.979 | 0.003 | 0.975 | 0.007 | 0.971 | 0.010 |
| 20–24 | 1,228 | 1.290 | 0.056 | 0.074 | 0.006 | 0.275 | 0.013 | 0.480 | 0.015 | 0.031 | 0.011 | 12.2 | 0.37 | 0.580 | 0.018 | 0.573 | 0.017 | 0.485 | 0.018 | 0.823 | 0.009 | 0.905 | 0.018 | 0.953 | 0.006 | 0.958 | 0.011 | 0.987 | 0.003 |
| 25–29 | 1,077 | 3.220 | 0.115 | 0.078 | 0.005 | 0.321 | 0.014 | 0.398 | 0.015 | 0.030 | 0.009 | 19.5 | 0.62 | 0.824 | 0.016 | 0.805 | 0.016 | 0.782 | 0.016 | 0.688 | 0.016 | 0.841 | 0.019 | 0.892 | 0.012 | 0.920 | 0.019 | 0.980 | 0.004 |
| 30–34 | 885 | 5.290 | 0.152 | 0.097 | 0.006 | 0.278 | 0.015 | 0.306 | 0.015 | 0.028 | 0.010 | 27.8 | 1.37 | 0.932 | 0.010 | 0.903 | 0.010 | 0.900 | 0.012 | 0.569 | 0.017 | 0.672 | 0.027 | 0.821 | 0.012 | 0.862 | 0.022 | 0.983 | 0.005 |
| 35–39 | 873 | 6.710 | 0.189 | 0.120 | 0.006 | 0.190 | 0.018 | 0.206 | 0.019 | 0.045 | 0.016 | 48.6 | 2.01 | 0.960 | 0.006 | 0.921 | 0.009 | 0.939 | 0.009 | 0.430 | 0.015 | 0.621 | 0.026 | 0.709 | 0.014 | 0.790 | 0.029 | 0.980 | 0.005 |
| 40–44 | 652 | 7.670 | 0.182 | 0.150 | 0.008 | 0.088 | 0.010 | 0.098 | 0.010 | 0.058 | 0.019 | 74.3 | 3.17 | 0.967 | 0.007 | 0.891 | 0.008 | 0.947 | 0.006 | 0.322 | 0.016 | 0.417 | 0.032 | 0.579 | 0.024 | 0.649 | 0.035 | 0.984 | 0.005 |
| 45–49 | 491 | 7.960 | 0.226 | 0.199 | 0.007 | 0.029 | 0.006 | 0.033 | 0.007 | 0.116 | 0.077 | 119.0 | 3.65 | 0.978 | 0.007 | 0.829 | 0.017 | 0.955 | 0.011 | 0.192 | 0.019 | 0.254 | 0.033 | 0.437 | 0.021 | 0.504 | 0.042 | 0.953 | 0.006 |
| All (15–49) | 7,145 | 3.470 | 0.081 | 0.125 | 0.003 | 0.181 | 0.008 | 0.288 | 0.009 | 0.037 | 0.006 | 42.1 | 1.48 | 0.655 | 0.008 | 0.624 | 0.008 | 0.604 | 0.008 | 0.656 | 0.007 | 0.731 | 0.009 | 0.835 | 0.004 | 0.852 | 0.008 | 0.979 | 0.002 |
| NOED (15–49) | 1,817 | 6.770 | 0.106 | 0.159 | 0.004 | 0.229 | 0.013 | 0.266 | 0.014 | 0.047 | 0.009 | 44.8 | 1.90 | 0.917 | 0.006 | 0.858 | 0.008 | 0.879 | 0.008 | 0.478 | 0.011 | 0.557 | 0.016 | 0.684 | 0.010 | 0.729 | 0.021 | 0.975 | 0.004 |
| EDUC (15–49) | 5,328 | 2.340 | 0.044 | 0.092 | 0.004 | 0.164 | 0.007 | 0.300 | 0.009 | 0.032 | 0.007 | 40.6 | 1.93 | 0.565 | 0.007 | 0.544 | 0.007 | 0.510 | 0.007 | 0.716 | 0.009 | 0.799 | 0.010 | 0.887 | 0.004 | 0.900 | 0.007 | 0.981 | 0.002 |

* N = No. of Cases. This is the same for all variables in the row except: (i) Marital ASFR, for which given number should be multiplied by 'R' for variable Proportion Currently Married; (ii) OPEN, for which multiply the given number by 'R' for variable Proportion Who Have Had at Least One Live Birth; (iii) Proportion of Eldest Daughters with Father Living, and Proportion with Mother Living, for which approximate values may be obtained by multiplying ratio of 'N' for these variables and 'N' in Table III.10A. Other domains require similar adjustments.

# Table III.10.—*Continued.*

C. *Domain 2. Zarka and Irbid*

| Subclass* | N | Number of Children Ever Born | | Proportion of children who have died | | Age Specific Fertility Rate | | Marital ASFR | | Proportion of children born in last year who have died | | Mean Open Interval | | Proportion of Women Ever Married | | Proportion Currently Married | | Proportion who have had at least 1 live birth | | Proportion with Father living | | Proportion of eldest daughters with Father living | | Proportion with Mother living | | Proportion of eldest daughters with Mother living | | Proportion of Ever Married Women with husband living | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE |
| 15–19 | 1,111 | 0.151 | 0.026 | 0.070 | 0.024 | 0.074 | 0.011 | 0.422 | 0.021 | 0.043 | 0.027 | 8.09 | 0.71 | 0.167 | 0.022 | 0.165 | 0.022 | 0.094 | 0.015 | 0.900 | 0.013 | 0.966 | 0.010 | 0.967 | 0.006 | 0.960 | 0.002 | 0.989 | 0.007 |
| 20–24 | 696 | 1.420 | 0.102 | 0.092 | 0.009 | 0.273 | 0.025 | 0.475 | 0.028 | 0.070 | 0.023 | 12.9 | 0.44 | 0.583 | 0.042 | 0.566 | 0.040 | 0.490 | 0.034 | 0.859 | 0.015 | 0.907 | 0.023 | 0.940 | 0.008 | 0.941 | 0.017 | 0.984 | 0.005 |
| 25–29 | 544 | 3.620 | 0.215 | 0.081 | 0.008 | 0.377 | 0.022 | 0.436 | 0.021 | 0.035 | 0.014 | 17.1 | 0.95 | 0.869 | 0.024 | 0.086 | 0.025 | 0.818 | 0.028 | 0.712 | 0.033 | 0.807 | 0.057 | 0.880 | 0.014 | 0.919 | 0.023 | 0.987 | 0.005 |
| 30–34 | 468 | 5.640 | 0.206 | 0.091 | 0.007 | 0.357 | 0.041 | 0.384 | 0.041 | 0.012 | 0.008 | 23.2 | 1.72 | 0.952 | 0.008 | 0.925 | 0.013 | 0.923 | 0.011 | 0.639 | 0.029 | 0.802 | 0.040 | 0.794 | 0.020 | 0.786 | 0.056 | 0.984 | 0.006 |
| 35–39 | 475 | 7.510 | 0.258 | 0.121 | 0.008 | 0.243 | 0.021 | 0.260 | 0.021 | 0.032 | 0.016 | 33.1 | 2.86 | 0.969 | 0.008 | 0.935 | 0.012 | 0.943 | 0.008 | 0.435 | 0.015 | 0.687 | 0.031 | 0.815 | 0.038 |  |  | 0.969 | 0.008 |
| 40–44 | 428 | 8.360 | 0.328 | 0.170 | 0.017 | 0.126 | 0.023 | 0.139 | 0.024 | 0.023 | 0.022 | 58.9 | 2.77 | 0.992 | 0.006 | 0.909 | 0.016 | 0.971 | 0.008 | 0.325 | 0.026 | 0.418 | 0.044 | 0.531 | 0.034 | 0.564 | 0.070 | 0.972 | 0.008 |
| 45–49 | 268 | 8.900 | 0.337 | 0.192 | 0.016 | 0.044 | 0.014 | 0.051 | 0.015 | 0.106 | 0.087 | 104.0 | 8.93 | 0.981 | 0.008 | 0.863 | 0.021 | 0.964 | 0.013 | 0.263 | 0.030 | 0.397 | 0.041 | 0.424 | 0.021 | 0.481 | 0.060 | 0.966 | 0.014 |
| All (15–49) | 3,989 | 3.830 | 0.183 | 0.131 | 0.007 | 0.207 | 0.015 | 0.322 | 0.017 | 0.039 | 0.009 | 35.1 | 2.22 | 0.666 | 0.022 | 0.637 | 0.021 | 0.613 | 0.019 | 0.677 | 0.010 | 0.764 | 0.012 | 0.814 | 0.011 | 0.828 | 0.017 | 0.979 | 0.003 |
| NOED (15–49) | 1,390 | 6.940 | 0.210 | 0.147 | 0.008 | 0.256 | 0.016 | 0.285 | 0.017 | 0.046 | 0.009 | 40.6 | 2.15 | 0.946 | 0.009 | 0.896 | 0.012 | 0.908 | 0.013 | 0.485 | 0.015 | 0.597 | 0.020 | 0.656 | 0.017 | 0.688 | 0.033 | 0.975 | 0.005 |
| EDUC (15–49) | 2,599 | 2.170 | 0.053 | 0.103 | 0.007 | 0.180 | 0.015 | 0.359 | 0.017 | 0.034 | 0.011 | 29.6 | 3.53 | 0.516 | 0.015 | 0.499 | 0.015 | 0.455 | 0.011 | 0.779 | 0.015 | 0.864 | 0.016 | 0.898 | 0.008 | 0.912 | 0.011 | 0.982 | 0.003 |

D. *Domain 3. Towns*

| Subclass* | N | Number of Children Ever Born | | Proportion of children who have died | | Age Specific Fertility Rate | | Marital ASFR | | Proportion of children born in last year who have died | | Mean Open Interval | | Proportion of Women Ever Married | | Proportion Currently Married | | Proportion who have had at least 1 live birth | | Proportion with Father living | | Proportion of eldest daughters with Father living | | Proportion with Mother living | | Proportion of eldest daughters with Mother living | | Proportion of Ever Married Women with husband living | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE |
| 15–19 | 712 | 0.117 | 0.022 | 0.056 | 0.034 | 0.064 | 0.014 | 0.404 | 0.028 | 0.0 | 0.0 | 8.01 | 1.86 | 0.167 | 0.016 | 0.158 | 0.015 | 0.097 | 0.015 | 0.891 | 0.021 | 0.897 | 0.031 | 0.977 | 0.011 | 0.983 | 0.010 | 0.947 | 0.036 |
| 20–24 | 488 | 1.380 | 0.104 | 0.090 | 0.014 | 0.275 | 0.022 | 0.461 | 0.025 | 0.025 | 0.014 | 12.5 | 0.72 | 0.601 | 0.034 | 0.597 | 0.033 | 0.512 | 0.028 | 0.811 | 0.031 | 0.829 | 0.058 | 0.950 | 0.011 | 0.938 | 0.015 | 0.990 | 0.006 |
| 25–29 | 419 | 3.390 | 0.322 | 0.100 | 0.011 | 0.375 | 0.051 | 0.439 | 0.052 | 0.038 | 0.021 | 16.2 | 1.20 | 0.864 | 0.040 | 0.855 | 0.047 | 0.775 | 0.060 | 0.723 | 0.021 | 0.725 | 0.055 | 0.861 | 0.014 | 0.900 | 0.037 | 0.979 | 0.005 |
| 30–34 | 347 | 5.630 | 0.296 | 0.102 | 0.008 | 0.365 | 0.038 | 0.382 | 0.039 | 0.072 | 0.036 | 25.6 | 3.32 | 0.963 | 0.007 | 0.930 | 0.018 | 0.932 | 0.013 | 0.617 | 0.032 | 0.756 | 0.036 | 0.799 | 0.032 | 0.856 | 0.059 | 0.995 | 0.004 |
| 35–39 | 357 | 6.960 | 0.254 | 0.160 | 0.009 | 0.246 | 0.040 | 0.267 | 0.041 | 0.042 | 0.018 | 38.5 | 2.90 | 0.968 | 0.007 | 0.923 | 0.021 | 0.920 | 0.023 | 0.445 | 0.030 | 0.546 | 0.070 | 0.653 | 0.028 | 0.729 | 0.077 | 0.991 | 0.005 |
| 40–44 | 217 | 8.100 | 0.443 | 0.171 | 0.016 | 0.082 | 0.015 | 0.095 | 0.016 | 0.112 | 0.067 | 64.4 | 5.20 | 0.977 | 0.014 | 0.862 | 0.027 | 0.966 | 0.017 | 0.402 | 0.038 | 0.494 | 0.080 | 0.551 | 0.051 | 0.571 | 0.098 | 0.979 | 0.010 |
| 45–49 | 199 | 8.100 | 0.383 | 0.184 | 0.015 | 0.020 | 0.013 | 0.025 | 0.014 | 0.0 | 0.0 | 103.0 | 10.70 | 0.989 | 0.009 | 0.820 | 0.022 | 0.957 | 0.023 | 0.257 | 0.030 | 0.425 | 0.051 | 0.459 | 0.030 | 0.621 | 0.081 | 0.951 | 0.016 |
| All (15–49) | 2,739 | 3.650 | 0.269 | 0.140 | 0.005 | 0.209 | 0.020 | 0.323 | 0.023 | 0.042 | 0.010 | 35.3 | 2.96 | 0.680 | 0.026 | 0.644 | 0.026 | 0.619 | 0.030 | 0.673 | 0.015 | 0.719 | 0.017 | 0.818 | 0.010 | 0.847 | 0.017 | 0.981 | 0.005 |
| NOED (15–49) | 1,066 | 6.330 | 0.127 | 0.158 | 0.006 | 0.275 | 0.027 | 0.314 | 0.029 | 0.051 | 0.015 | 37.1 | 3.59 | 0.926 | 0.010 | 0.865 | 0.014 | 0.886 | 0.015 | 0.530 | 0.020 | 0.605 | 0.030 | 0.698 | 0.010 | 0.767 | 0.037 | 0.976 | 0.006 |
| EDUC (15–49) | 1,673 | 1.940 | 0.097 | 0.103 | 0.007 | 0.167 | 0.011 | 0.331 | 0.014 | 0.032 | 0.014 | 33.0 | 3.57 | 0.523 | 0.013 | 0.504 | 0.015 | 0.449 | 0.016 | 0.765 | 0.012 | 0.079 | 0.017 | 0.895 | 0.009 | 0.893 | 0.019 | 0.986 | 0.004 |

Table III.10.—*Continued.*

E. *Domain 4. Large Villages*

| | | Number of Children Ever Born | | Proportion of children who have died | | Age Specific Fertility Rate | | Marital ASFR | | Proportion of children born in last year who have died | | Mean Open Interval | | Proportion of Women Ever Married | | Proportion Currently Married | | Proportion who have had at least 1 live birth | | Proportion with Father living | | Proportion of eldest daughters with Father living | | Proportion with Mother living | | Proportion of eldest daughters with Mother living | | Proportion of Ever Married Women with husband living | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Subclass* | N | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE |
| 15–19 | 349 | 0.192 | 0.015 | 0.060 | 0.043 | 0.063 | 0.012 | 0.280 | 0.018 | 0.018 | 0.020 | 12.3 | 1.03 | 0.213 | 0.023 | 0.208 | 0.019 | 0.130 | 0.009 | 0.884 | 0.033 | 0.856 | 0.049 | 0.957 | 0.027 | 0.917 | 0.038 | 0.978 | 0.016 |
| 20–24 | 187 | 1.800 | 0.099 | 0.123 | 0.033 | 0.374 | 0.029 | 0.524 | 0.030 | 0.023 | 0.017 | 10.4 | 0.91 | 0.724 | 0.030 | 0.714 | 0.020 | 0.643 | 0.019 | 0.844 | 0.020 | 0.891 | 0.034 | 0.914 | 0.008 | 1.000 | 0.0 | 0.994 | 0.001 |
| 25–29 | 178 | 4.130 | 0.066 | 0.126 | 0.016 | 0.511 | 0.097 | 0.554 | 0.096 | 0.079 | 0.025 | 12.2 | 3.02 | 0.931 | 0.025 | 0.922 | 0.028 | 0.892 | 0.010 | 0.610 | 0.044 | 0.611 | 0.118 | 0.773 | 0.041 | 0.794 | 0.020 | 0.998 | 0.002 |
| 30–34 | 161 | 6.420 | 0.083 | 0.147 | 0.014 | 0.416 | 0.027 | 0.417 | 0.022 | 0.083 | 0.019 | 18.1 | 2.02 | 0.998 | 0.002 | 0.973 | 0.007 | 0.963 | 0.026 | 0.545 | 0.026 | 0.673 | 0.029 | 0.745 | 0.016 | 0.835 | 0.027 | 0.975 | 0.017 |
| 35–39 | 169 | 8.270 | 0.348 | 0.156 | 0.014 | 0.283 | 0.024 | 0.295 | 0.024 | 0.042 | 0.041 | 27.7 | 2.62 | 1.000 | 0.0 | 0.958 | 0.019 | 0.995 | 0.004 | 0.512 | 0.049 | 0.433 | 0.141 | 0.625 | 0.018 | 0.574 | 0.130 | 0.962 | 0.033 |
| 40–44 | 141 | 9.050 | 0.494 | 0.196 | 0.004 | 0.164 | 0.025 | 0.178 | 0.025 | 0.0 | 0.0 | 47.4 | 2.90 | 0.986 | 0.010 | 0.907 | 0.028 | 0.955 | 0.018 | 0.339 | 0.068 | 0.355 | 0.145 | 0.627 | 0.043 | 0.629 | 0.121 | 0.951 | 0.025 |
| 45–49 | 77 | 8.550 | 0.720 | 0.243 | 0.032 | 0.062 | 0.015 | 0.071 | 0.016 | 0.0 | 0.0 | 94.4 | 3.83 | 0.979 | 0.020 | 0.866 | 0.046 | 0.933 | 0.059 | 0.206 | 0.032 | 0.156 | 0.050 | 0.392 | 0.105 | 0.515 | 0.143 | 0.879 | 0.043 |
| All (15–49) | 1,262 | 4.370 | 0.149 | 0.167 | 0.012 | 0.258 | 0.021 | 0.364 | 0.021 | 0.052 | 0.008 | 27.6 | 2.24 | 0.729 | 0.008 | 0.700 | 0.002 | 0.677 | 0.004 | 0.644 | 0.026 | 0.640 | 0.040 | 0.782 | 0.019 | 0.793 | 0.024 | 0.968 | 0.004 |
| NOED (15–49) | 679 | 6.630 | 0.280 | 0.178 | 0.010 | 0.296 | 0.032 | 0.331 | 0.032 | 0.054 | 0.008 | 33.2 | 3.89 | 0.932 | 0.012 | 0.885 | 0.007 | 0.897 | 0.014 | 0.499 | 0.036 | 0.490 | 0.056 | 0.661 | 0.035 | 0.678 | 0.036 | 0.957 | 0.006 |
| EDUC (15–49) | 583 | 1.730 | 0.302 | 0.115 | 0.014 | 0.214 | 0.019 | 0.436 | 0.023 | 0.048 | 0.032 | 14.7 | 1.81 | 0.492 | 0.043 | 0.484 | 0.045 | 0.422 | 0.047 | 0.812 | 0.022 | 0.805 | 0.062 | 0.922 | 0.010 | 0.919 | 0.027 | 0.994 | 0.006 |

F. *Domain 5. Medium Villages*

| | | Number of Children Ever Born | | Proportion of children who have died | | Age Specific Fertility Rate | | Marital ASFR | | Proportion of children born in last year who have died | | Mean Open Interval | | Proportion of Women Ever Married | | Proportion Currently Married | | Proportion who have had at least 1 live birth | | Proportion with Father living | | Proportion of eldest daughters with Father living | | Proportion with Mother living | | Proportion of eldest daughters with Mother living | | Proportion of Ever Married Women with husband living | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Subclass* | N | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE |
| 15–19 | 716 | 0.257 | 0.026 | 0.104 | 0.018 | 0.110 | 0.014 | 0.389 | 0.022 | 0.013 | 0.013 | 10.7 | 0.97 | 0.289 | 0.023 | 0.283 | 0.023 | 0.159 | 0.016 | 0.898 | 0.014 | 0.931 | 0.020 | 0.969 | 0.007 | 1.00 | 0.0 | 0.976 | 0.006 |
| 20–24 | 545 | 2.070 | 0.124 | 0.105 | 0.011 | 0.417 | 0.030 | 0.537 | 0.031 | 0.040 | 0.013 | 11.4 | 0.65 | 0.772 | 0.030 | 0.761 | 0.032 | 0.704 | 0.031 | 0.837 | 0.018 | 0.883 | 0.034 | 0.928 | 0.014 | 0.936 | 0.019 | 0.983 | 0.004 |
| 25–29 | 452 | 4.060 | 0.137 | 0.114 | 0.009 | 0.386 | 0.019 | 0.424 | 0.018 | 0.035 | 0.011 | 15.0 | 0.71 | 0.931 | 0.016 | 0.902 | 0.017 | 0.884 | 0.017 | 0.779 | 0.014 | 0.846 | 0.035 | 0.824 | 0.025 | 0.817 | 0.051 | 0.978 | 0.005 |
| 30–34 | 373 | 6.190 | 0.193 | 0.144 | 0.011 | 0.363 | 0.026 | 0.385 | 0.026 | 0.015 | 0.014 | 21.1 | 1.63 | 0.967 | 0.010 | 0.943 | 0.013 | 0.930 | 0.015 | 0.629 | 0.031 | 0.711 | 0.056 | 0.775 | 0.027 | 0.787 | 0.058 | 0.986 | 0.006 |
| 35–39 | 351 | 7.670 | 0.210 | 0.166 | 0.009 | 0.328 | 0.032 | 0.350 | 0.033 | 0.061 | 0.017 | 27.5 | 2.36 | 0.991 | 0.005 | 0.937 | 0.011 | 0.951 | 0.015 | 0.466 | 0.026 | 0.549 | 0.034 | 0.641 | 0.027 | 0.707 | 0.045 | 0.971 | 0.007 |
| 40–44 | 274 | 8.560 | 0.217 | 0.201 | 0.009 | 0.159 | 0.023 | 0.175 | 0.024 | 0.140 | 0.053 | 54.4 | 2.33 | 0.989 | 0.006 | 0.908 | 0.015 | 0.956 | 0.013 | 0.351 | 0.028 | 0.392 | 0.056 | 0.554 | 0.032 | 0.630 | 0.027 | 0.955 | 0.017 |
| 45–49 | 147 | 9.070 | 0.347 | 0.239 | 0.017 | 0.062 | 0.014 | 0.070 | 0.015 | 0.111 | 0.114 | 87.2 | 6.19 | 1.00 | 0.0 | 0.884 | 0.030 | 0.973 | 0.013 | 0.267 | 0.039 | 0.304 | 0.043 | 0.438 | 0.045 | 0.421 | 0.063 | 0.938 | 0.018 |
| All (15–49) | 2,859 | 4.140 | 0.100 | 0.162 | 0.005 | 0.274 | 0.011 | 0.373 | 0.012 | 0.041 | 0.009 | 26.6 | 1.05 | 0.761 | 0.015 | 0.729 | 0.016 | 0.694 | 0.013 | 0.694 | 0.010 | 0.723 | 0.013 | 0.805 | 0.009 | 0.812 | 0.018 | 0.974 | 0.004 |
| NOED (15–49) | 1,838 | 5.610 | 0.166 | 0.170 | 0.005 | 0.299 | 0.011 | 0.349 | 0.012 | 0.053 | 0.009 | 30.3 | 1.13 | 0.896 | 0.010 | 0.851 | 0.012 | 0.845 | 0.012 | 0.603 | 0.010 | 0.628 | 0.013 | 0.730 | 0.014 | 0.731 | 0.025 | 0.971 | 0.005 |
| EDUC (15–49) | 1,021 | 1.480 | 0.112 | 0.105 | 0.007 | 0.228 | 0.016 | 0.445 | 0.019 | 0.013 | 0.007 | 14.2 | 0.85 | 0.518 | 0.025 | 0.510 | 0.027 | 0.422 | 0.024 | 0.860 | 0.013 | 0.898 | 0.020 | 0.942 | 0.009 | 0.963 | 0.011 | 0.981 | 0.006 |

# Table III.10.—*Continued.*

G. *Domain 6. Small Villages*

| Subclass* | N | Number of Children Ever Born | | Proportion of children who have died | | Age Specific Fertility Rate | | Marital ASFR | | Proportion of children born in last year who have died | | Mean Open Interval | | Proportion of Women Ever Married | | Proportion Currently Married | | Proportion who have had at least 1 live birth | | Proportion with Father living | | Proportion of eldest daughters with Father living | | Proportion with Mother living | | Proportion of eldest daughters with Mother living | | Proportion of Ever Married Women with husband living | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE | R | SE |
| 15–19 | 343 | 0.376 | 0.054 | 0.111 | 0.029 | 0.165 | 0.027 | 0.460 | 0.035 | 0.084 | 0.036 | 8.33 | 0.82 | 0.358 | 0.055 | 0.350 | 0.052 | 0.219 | 0.029 | 0.847 | 0.025 | 0.952 | 0.029 | 0.937 | 0.012 | 0.955 | 0.022 | 0.989 | 0.011 |
| 20–24 | 261 | 2.210 | 0.252 | 0.115 | 0.020 | 0.395 | 0.037 | 0.476 | 0.038 | 0.049 | 0.029 | 13.7 | 0.83 | 0.831 | 0.051 | 0.822 | 0.051 | 0.750 | 0.050 | 0.816 | 0.027 | 0.891 | 0.040 | 0.882 | 0.025 | 0.947 | 0.026 | 0.972 | 0.013 |
| 25–29 | 259 | 4.240 | 0.253 | 0.125 | 0.015 | 0.447 | 0.036 | 0.469 | 0.036 | 0.050 | 0.026 | 14.5 | 0.89 | 0.967 | 0.016 | 0.953 | 0.017 | 0.928 | 0.019 | 0.748 | 0.030 | 0.777 | 0.069 | 0.799 | 0.029 | 0.755 | 0.063 | 0.991 | 0.006 |
| 30–34 | 188 | 5.790 | 0.281 | 0.142 | 0.013 | 0.373 | 0.034 | 0.391 | 0.034 | 0.087 | 0.041 | 23.6 | 1.90 | 0.965 | 0.021 | 0.953 | 0.019 | 0.926 | 0.026 | 0.627 | 0.044 | 0.766 | 0.055 | 0.695 | 0.039 | 0.683 | 0.062 | 0.972 | 0.014 |
| 35–39 | 192 | 8.030 | 0.210 | 0.186 | 0.016 | 0.324 | 0.031 | 0.340 | 0.031 | 0.076 | 0.024 | 29.7 | 3.01 | 1.00 | 0.0 | 0.954 | 0.017 | 0.975 | 0.015 | 0.509 | 0.048 | 0.551 | 0.064 | 0.611 | 0.038 | 0.647 | 0.056 | 0.987 | 0.009 |
| 40–44 | 132 | 8.120 | 0.396 | 0.230 | 0.015 | 0.125 | 0.024 | 0.133 | 0.025 | 0.0 | 0.0 | 61.3 | 4.31 | 0.981 | 0.014 | 0.934 | 0.026 | 0.935 | 0.018 | 0.301 | 0.052 | 0.371 | 0.087 | 0.538 | 0.048 | 0.495 | 0.075 | 0.931 | 0.025 |
| 45–49 | 91 | 8.650 | 0.596 | 0.236 | 0.024 | 0.083 | 0.039 | 0.095 | 0.041 | 0.0 | 0.0 | 86.4 | 8.73 | 0.985 | 0.015 | 0.875 | 0.030 | 0.957 | 0.011 | 0.191 | 0.040 | 0.195 | 0.092 | 0.392 | 0.067 | 0.322 | 0.075 | 0.932 | 0.031 |
| All (15–49) | 1,466 | 4.290 | 0.131 | 0.173 | 0.010 | 0.294 | 0.017 | 0.375 | 0.017 | 0.061 | 0.015 | 27.7 | 1.57 | 0.807 | 0.022 | 0.782 | 0.021 | 0.739 | 0.015 | 0.662 | 0.019 | 0.715 | 0.021 | 0.759 | 0.014 | 0.748 | 0.026 | 0.973 | 0.005 |
| NOED (15–49) | 1,088 | 5.310 | 0.288 | 0.178 | 0.010 | 0.308 | 0.017 | 0.355 | 0.017 | 0.068 | 0.020 | 30.9 | 1.68 | 0.893 | 0.014 | 0.863 | 0.015 | 0.835 | 0.016 | 0.584 | 0.025 | 0.619 | 0.034 | 0.705 | 0.015 | 0.673 | 0.033 | 0.971 | 0.007 |
| EDUC (15–49) | 378 | 1.360 | 0.181 | 0.118 | 0.012 | 0.257 | 0.027 | 0.462 | 0.030 | 0.037 | 0.013 | 12.2 | 0.74 | 0.557 | 0.045 | 0.550 | 0.042 | 0.462 | 0.033 | 0.886 | 0.019 | 0.935 | 0.034 | 0.915 | 0.012 | 0.924 | 0.018 | 0.982 | 0.007 |

## Table III.11. Sample Size, DEFTs and ROHs for 13 variables over 10 subclasses

Variables

| Subclass | Number of Children Ever Born | | | Proportion of children who have died | Age Specific Fertility Rate | | | Marital ASFR | | | Proportion of children born in last year who have died | | Interval Since Last Birth | | | Proportion of Women Ever-Married | | | Proportion Currently Married | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | DEFT | ROH | | n | DEFT | ROH | n | DEFT | ROH | DEFT | ROH | n | DEFT | ROH | n | DEFT | ROH | n | DEFT | ROH |
| 15–19 | 5,187 | 1.270 | 0.028 | Not Available | 5,187 | 1.290 | 0.030 | 986 | 1.280 | 0.029 | 0.993 | −0.018 | 550 | 1.030 | 0.042 | 5,187 | 1.560 | 0.066 | 5,187 | 1.530 | 0.061 |
| 20–24 | 3,401 | 1.530 | 0.095 | | 3,401 | 1.260 | 0.041 | 2,149 | 1.270 | 0.043 | 1.190 | 0.113 | 1,810 | 0.914 | −0.024 | 3,401 | 1.670 | 0.129 | 3,401 | 1.640 | 0.120 |
| 25–29 | 2,938 | 1.800 | 0.188 | | 2,938 | 1.430 | 0.088 | 2,521 | 1.420 | 0.085 | 1.070 | 0.041 | 2,337 | 1.230 | 0.054 | 2,938 | 1.600 | 0.132 | 2,938 | 1.660 | 0.148 |
| 30–34 | 2,412 | 1.540 | 0.143 | | 2,412 | 1.320 | 0.076 | 2,234 | 1.310 | 0.074 | 1.160 | 0.135 | 2,090 | 1.440 | 0.131 | 2,412 | 1.100 | 0.021 | 2,412 | 1.100 | 0.021 |
| 35–39 | 2,417 | 1.650 | 0.177 | | 2,417 | 1.270 | 0.063 | 2,253 | 1.270 | 0.063 | 0.919 | −0.097 | 2,123 | 1.310 | 0.086 | 2,417 | 0.949 | −0.010 | 2,417 | 1.130 | 0.028 |
| 40–44 | 1,851 | 1.530 | 0.189 | | 1,851 | 1.060 | 0.018 | 1,664 | 1.050 | 0.016 | 0.908 | −0.100 | 1,547 | 1.160 | 0.058 | 1,851 | 1.150 | 0.045 | 1,851 | 0.995 | −0.001 |
| 45–49 | 1,257 | 1.400 | 0.213 | | 1,257 | 0.990 | −0.005 | 1,065 | 1.020 | 0.010 | 0.989 | 0.028 | 983 | 1.390 | 0.278 | 1,257 | 1.070 | 0.032 | 1,257 | 0.974 | −0.011 |
| All (15–49) | 19,463 | 2.330 | 0.052 | | 19,463 | 2.000 | 0.035 | 12,885 | 1.980 | 0.035 | 1.180 | 0.023 | 11,440 | 1.990 | 0.060 | 19,463 | 2.190 | 0.045 | 19,463 | 2.160 | 0.043 |
| NOED (15–49) | 7,625 | 1.830 | 0.072 | | 7,625 | 1.420 | 0.031 | 6,611 | 1.420 | 0.031 | 1.150 | 0.039 | 6,037 | 1.480 | 0.046 | 7,625 | 1.380 | 0.027 | 7,625 | 1.290 | 0.020 |
| EDUC (15–49) | 11,838 | 1.310 | 0.014 | | 11,838 | 1.530 | 0.026 | 6,535 | 1.510 | 0.025 | 1.230 | 0.061 | 5,403 | 2.340 | 0.197 | 11,838 | 1.370 | 0.017 | 11,838 | 1.400 | 0.019 |
| Mean for 5 yr classes | | 1.531 | 0.148 | | | 1.231 | 0.044 | | 1.231 | 0.046 | 1.033 | 0.015 | | 1.211 | 0.089 | | 1.300 | 0.059 | | 1.290 | 0.052 |
| Ratio to All (15–49) | | 0.657 | 2.846 | | | 0.616 | 1.257 | | 0.622 | 1.314 | 0.875 | 0.652 | | 0.609 | 1.483 | | 0.594 | 1.311 | | 0.597 | 1.209 |

Variables

| Subclass | Proportion who have had at least 1 live birth | | | Proportion with Father living | | | Proportion with Father alive (for eldest children) | | | Proportion with Mother living | | | Proportion with Mother alive (for eldest children) | | | Proportion of Ever-Married Women with husband living | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | DEFT | ROH | n | DEFT | ROH | n | DEFT | ROH | n | DEFT | ROH | n | DEFT | ROH | n | DEFT | ROH |
| 15–19 | 5,187 | 1.320 | 0.034 | 5,187 | 1.380 | 0.042 | 1,194 | 1.090 | 0.043 | 5,187 | 1.360 | 0.038 | 1,227 | 1.220 | 0.114 | 987 | 1.110 | 0.072 |
| 20–24 | 3,401 | 1.470 | 0.083 | 3,401 | 1.110 | 0.016 | 820 | 1.200 | 0.171 | 3,401 | 1.090 | 0.014 | 831 | 0.883 | −0.083 | 2,158 | 0.865 | −0.030 |
| 25–29 | 2,938 | 1.700 | 1.158 | 2,938 | 1.180 | 0.032 | 675 | 1.230 | 0.259 | 2,938 | 1.180 | 0.033 | 687 | 1.150 | 0.157 | 2,554 | 0.825 | −0.031 |
| 30–34 | 2,412 | 1.120 | 0.026 | 2,412 | 1.140 | 0.032 | 615 | 0.930 | −0.079 | 2,412 | 1.160 | 0.035 | 631 | 1.260 | 0.334 | 2,290 | 1.120 | 0.028 |
| 35–39 | 2,417 | 1.210 | 0.049 | 2,417 | 1.010 | 0.003 | 596 | 0.979 | −0.026 | 2,417 | 1.090 | 0.020 | 604 | 1.120 | 0.150 | 2,352 | 1.140 | 0.032 |
| 40–44 | 1,851 | 1.030 | 0.007 | 1,851 | 1.090 | 0.028 | 537 | 1.080 | 0.127 | 1,851 | 1.300 | 0.097 | 538 | 1.230 | 0.376 | 1,812 | 1.130 | 0.038 |
| 45–49 | 1,257 | 1.290 | 0.146 | 1,257 | 1.060 | 0.028 | 401 | 0.903 | −0.241 | 1,257 | 1.010 | 0.003 | 406 | 1.190 | 0.514 | 1,234 | 1.010 | 0.002 |
| All (15–49) | 19,463 | 2.040 | 0.037 | 19,463 | 1.390 | 0.011 | 4,838 | 0.933 | −0.006 | 19,463 | 1.330 | 0.009 | 4,924 | 1.210 | 0.022 | 13,387 | 1.090 | 0.003 |
| NOED (15–49) | 7,625 | 1.500 | 0.038 | 7,625 | 1.190 | 0.013 | 1,987 | 0.825 | −0.041 | 7,625 | 1.210 | 0.014 | 2,030 | 1.230 | 0.064 | 6,976 | 1.060 | 0.004 |
| EDUC (15–49) | 11,838 | 1.240 | 0.011 | 11,838 | 1.540 | 0.027 | 2,851 | 1.070 | 0.012 | 11,838 | 1.150 | 0.006 | 2,894 | 1.000 | 0.001 | 6,411 | 0.917 | −0.006 |
| Mean for 5 yr classes | | 1.306 | 0.215 | | 1.139 | 0.026 | | 1.059 | 0.036 | | 1.170 | 0.034 | | 1.150 | 0.223 | | 1.029 | 0.016 |
| Ratio to All (15–49) | | 0.640 | 5.811 | | 0.819 | 2.364 | | 1.135 | 0.994 | | 0.880 | 3.777 | | 0.950 | 10.136 | | 0.944 | 5.333 |

APPENDIX IV     GLOSSARY IN ENGLISH, FRENCH, SPANISH AND ARABIC

<div style="display:flex; justify-content:space-between;">

**Background Variables**

Husband's occupation :

    Technical
    Clerical
    Sales
    Farmers
    Agricultural workers
    Household type and other
      services
    Skilled
    Unskilled

Level of education :

    No schooling
    Primary
    Preparatory
    Secondary
    Institute
    University

Pattern of work :

    Worked before and after
      marriage
    Worked only after marriage
    Worked only before marriage
    Never worked

Region  :

    Amman
    Zarka and Irbid
    Other Towns
    Large villages
    Medium villages
    Small villages

Type of place of residence :

    Urban
    Rural

</div>

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**Variables socio-économiques**

Activité professionnelle du mari :

    Technicien
    Employé de bureau
    Employé du commerce
    Exploitant agricole
    Ouvrier agricole
    Employé de maison et autre
      service
    Ouvrier qualifié
    Ouvrier non qualifié

Niveau d'instruction :

    Non scolarisé
    Primaire
    Préparatoire
    Secondaire
    Institut
    Université

Période de travail :

    A travaillé avant et après
      le mariage
    A travaillé seulement après le mariage
    A travaillé seulement avant le mariage
    N'a jamais travaillé

Region :

    Amman
    Zarka et Irbid
    Autres villes
    Grands villages
    Villages moyens
    Petits villages

Nature de lieu de résidence :

    Urbain
    Rural

**Variable de Antecedentes**

Ocupación del esposo :

    Téchnica
    De oficina
    Ventas
    Campesino
    Trabajador agrícola
    Servicio doméstico y ostros
      servicios
    Cualificado
    No-cualificado

Nivel de Educación :

    Ninguna educación
    Primaria
    Preparatoria
    Secundaria
    Instituto
    Universidad

Patrón de trabajo :

    Trabajó antes y después del
      matrimonio
    Trabajó solamente después del matrimonio
    Trabajó solamente antes des matrimonio
    No ha trabajado nunca

Región :

    Amman
    Zarka y Irbid
    Otras ciudades
    Aldeas grandes
    Aldeas medianas
    Aldeas pequeñas

Tipo de lugar de residencia :

    Urbano
    Rural

متغيرات الخلفية

مهنة الزوج

مهن فنيه واد ارية عليا
مهن مكتبية
البيع
مزارعون
عمال الزراعه
خدمة الاسر وخدمات اخرى

مهــرة
غير مهرة

مستوى التعليم

لم يلتحق بمد ارس
ابتد ائي
اعداد ي
ثانوى
معهد فوق المتوسط
جامعه

نمط العمل

عملت قبل وبعد الزواج

عملت بعد الزواج فقط
عملت قبل الزواج فقط
لم تعمل أبدا

المنطقه

عمـــان
الزرقاء وار بد
مد ن اخرى
قرى كبيره
قرى متوسطه
قرى صغيره

نوع محل الاقامه

حضر
ريف

| Age, nuptiality, and exposure to child-bearing | Age, nuptialité et exposition au risque de grossesse | Edad, nupcialidad y esposición al riesgo del embarazo | العمر، الزواجية والتعرض للحمل |
|---|---|---|---|
| Age at first marriage | Age au premier mariage | Edad al primer matrimonio | السن عند الزواج الاوّل |
| Age cohort | Cohorte d'age | Cohorte de edad | دفعة عمرية |
| Calendar year of birth | Millésime de naissance | Año calendario de nacimiento | السنه الميّلاد ية للميلاد |
| Continuously in the married state for the past five years | Toujours mariée durant les cinq dernières années | Ha estado continuamente casada durante los últimos cinco años | باستمرار في حالة الزواج خلال السنوات الخمس الماضية |
| Continuously in the married state since first marriage | Toujours mariée depuis son premier mariage | Ha estado continuamente casada desde su primer matrimonio | باستمرار في حالة الزواج الاوّل |
| Current age | Age actuel | Edad actual | العمر الحالي |
| Current marital status : | Etat matrimonial actuel : | Estado civil actual: | الحاله الزواجية الحالية |
| Married | Mariée | Casada | متزوج |
| Widowed | Veuve | Viuda | أرمل |
| Divorced | Divorcée | Divorciada | مطلق |
| Separated | Séparée | Separada | منفصل |
| Currently married : | Actuellement mariée : | Actualmente casada : | متزوجه حاليا : |
| — and "fecund" | — et "fertile" | — y fértil | — وقادرة على الانجاب |
| — fecund and wants no more children | — fertile et ne veut plus d'autres enfants | — fértil y no desea tener más hijos | — قادرة على الانجاب ولا ترغب في المزيد من الاطفال |
| — and non-pregnant | — et non-enceinte | — y no-embarazada | — وغير حامل |
| Ever-married | Non-célibataire | Alguna vez casada : | متزوجه او سبق لها الزواج |
| — with at least two live births (including current pregnancy) | — avec au moins deux naissances vivantes (y compris grossesse actuelle) | — tiene al menos dos nacidos vivos (incluendo embarazo ectual) | — ولد يها على الاقّل مولودين أحياء ( تشمل الحمل الحالي) |
| Exposure status | Status d'exposition au risque de grossesse | Exposición al riesgo de embarazo | حالة التعرض |
| "Exposed" | "Exposée au risque de grossesse" | "Expuesta" | معرضه |
| — with at least one live-birth | — avec au moins une naissance vivante | — tiene al menas un nacido vivo | — ولد يها على الاقّل مولود حي |
| — and wants no more children | — et ne veut plus d'autres enfants | — y no desea tener más hijos | — ولا ترغب في المزيد من الاطفال |
| — and wants another child and states sex preference | — et désire avoir un autre enfant avec préférence pour le sexe | — y desea tener otro hijo e indica preferencia por un sexo determinado | — ترغب في طفل آخر وحدد ت النوع ( الجنس) المفضل للمولود |

| English | Français | Español | العربية |
|---|---|---|---|
| Ever used contraception (any methods) | A déjà utilisée une méthode contraceptive (quelle que soit la méthode) | Ha usado anticoncepción alguna vez (cualcuier método) | الاستعمال الحالي او السابق لاىٔ من وسائل منع الحمل |
| Ever used a modern method of contraception | A déjà utilisée une méthode contraceptive moderne | Ha usado alguna vez un método anticonceptivo moderno | الاستعمال الحالي او السابق لوسيلة حديثه لمنع الحمل |
| Ever use of specified contraception methods | A déjà utilisée des méthodes précises de contraception | Uso de métodos antoconceptivos especificos | الاستعمال الحالي او السابق لوسائل معينه لمنع الحمل |
| Heard of at least one modern method of contraception | A entendu parler d'au moins une méthode contraceptive moderne | Ha oido hablar de por lo menos un método anticonceptivo moderno | سمعت عن وسيلة حديثه واحدة على الاقل لمنع الحمل |
| Heard of specified contraception methods | A entendu parler de méthodes précises de contraception | Métodos anticonceptivos especificos de los que ha oido hablar | سمعت عن وسائل معينه لمنع الحمل |
| Living children when contraception used for the first time | Nombre d'enfants vivants quand elle a utilisé pour la première fois une méthode contraceptive | Número de hijos vivos que tenia cuando usó anticoncepción por primera vez | عدد الاطفال الباقين على قيد الحياه عند استعمال وسائل منع الحمل لاول مره |
| Pattern of contraceptive use | Type de pratique contraceptive | Patrón de uso de métodos anticonceptivos | نمط استعمال وسائل منع الحمل |
| Currently using | Pratique actuellement | Usa actualmente | تستعمل حاليا |
| Contraceptively sterilized | A subi une stétilisation volontaire | Esterilizada por razones anticontivas | معقمه بهدف منع الحمل |
| Using some other method | Utilise d'autres méthodes | Usa otro método | تستعمل احدى الطرق الاخرى |
| Past not current user | A pratiqué dans le passé mais ne pratique pas actuellement | Ha usado en el pasado pero no actualmente | استعملت في الماضي ولو تستعمل حاليا |
| Used in open interval | A pratiqué durant l'intervalle ouvert | Usó en el intervalo abierto | استعملت في الفتره المفتوحه |
| Used in last closed interval | A pratiqué dans le dernier intervalle fermé | Usó en el intervalo cerrado | استعملت في الفتره المغلقه الاخيره |
| Used only in an earlier interval | A pratiqué seulement dans un intervalle antérieur | Usó solamente en un intervalo cerrado anterior | استعملت فقط في فترة سابقه |
| Never used any method | N'a jamais pratiqué | Nunca ha usado anticoncepción | لم تستعمل ابدا اى وسيله |
| Intends futur use | Pense pratiquer dans le futur | Piensa usar en el futuro | تنوى الاستعمال مستقبلا |
| Does not intend future use | Ne pense pas pratiquer dans le futur | No tiene intenciones de usar en el futuro | لا تنوى الاستعمال مستقبلا |

| First marriage dissolved | Premier mariage dissous | Primer matrimonio disuelto | الزواج الاوّل انتهى |
| — and remarried | — et remariée | — y se ha vuelto a casar | —وتزوجت مرة اخرى |
| First married at least five years ago | Mariée pour la première fois il y a au moins 5 ans | Casada por primera vez hace por lo menos cinco años | الزواج الاوّل تم منذ خمس سنوات على الاقّل |
| First married before age 25 | Mariée pour la première fois avant d'atteindre 25 ans | Casada por primera vez antes de los 25 años de edad | تزوجت لاوّل مره قبل سن ٢٥ |
| Interval from first marriage to first birth | Intervalle entre le premier mariage et la première naissance | Intervalo entre el primer matrimonio y el primer nacimiento | الفترة بين الزواج الاوّل والمولود الاوّل |
| Marriage cohort | Cohorte des mariages | Cohorte de matrimonio | فوج زواجي |
| Marriage dissolution and remarriage | Dissolution de mariage et remariage | Disolución del matrimonio y matrimonio en segundas nupcias | انتهاء الزواج والزواج مرة اخرى |
| Number of times married | Nombre de mariages | Número de veces que ha estado casada | عدد مرات الزواج |
| Status of first marriage | Statut du premier mariage | Situación del primer matrimonio | حالة الزواج الاوّل |
| Times since first marriage spent in the married state | Durée écoulée depuis le premier mariage en état de femme mariée | Tiempo transcurrido en estado matrimonial, desde su primer matrimonio | الفترات المنقضية في حالة زواج منذ الزواج الاوّل |
| Years since first marriage | Années écoulées depuis le premier mariage | Años transcurridos desde el primer matrimonio | عدد السنوات منذ الزواج الاوّل |
| __Knowledge and use of contraception__ | __Connaissance et pratique de la contraception__ | __Conocimiento y uso de anticoncepción__ | معرفة واستحمال وسائل منع الحمل |
| Contraceptive method being used | Méthode contraceptive actuellement utilisée | Método anticonceptivo que usa actualmente | وسيلة منع الحمل المستخدمه |
| Contraceptive use (excluding sterilization) in the open interval | Méthode contraceptive (stérilisation exclue) utilisée dans l'intervalle ouvert | Uso de anticoncepción (excluyendo esterilización) en el intervalo abierto | استعمال وسائل منع الحمل (باستيعاد التعقيم) في الفتره المفتوحة |
| Contraceptive use in the last closed interval | Méthode contraceptive utilisée dans le dernier intervalle fermé | Uso de anticoncepción en el último intervalo cerrado | استعمال وسائل منع الحمل في الفترة المخلقه الاخيرة |
| Currently using contraception (any methods) | Pratique actuellement la contraception (quelle que soit la méthode) | Usa anticoncepción actualmente (cualquier método) | تستعمل حاليا أى من وسائل منع الحمل |
| Currently using a modern method of contraception | Utilise actuellement une méthode contraceptive moderne | Usa actualmente un método anticonceptivo moderno | تستعمل حاليا وسيله حديثه لمنع الحمل |

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| Specific contraceptive method | Méthode contraceptive | Métodos anticonceptivos especificos | وسائل محدده لمنع الحمل |
|---|---|---|---|
| Pill | Pilule | Pildora | الحبوب |
| IUD | DIU ou stérilet | Disposotivo intra-uterino (DIU) | اللولب |
| Condom | Préservatif | Condón | الواقي الذكرى |
| Female sterilisation | Ligature des trompes | Esterilización femenina | تعقيم النساء |
| Male sterilisation | Vasectomie | Esterilización masculina | تعقيم الرجال |
| Other female scientific | Autres méthodes scientifiques pour la femme | Otros métodos cientificos femeninos | وسائل علميه اخرى تستعملها المرأه |
| Rhythm | Continence périodique | Ritmo | فترة الامان |
| Withdrawal | Retrait | Retiro | القذف الخارجي |
| Abstinence | Abstention | Abstinencia | الامتناع الجنسي |
| Douche | Douche | Ducha | الدوش |

## Fertility and child mortality — Fécondité et mortalité infantile — Fecundidad y mortalidad infantil — الانجاب ووفيات الاطفال

| Fertility and child mortality | Fécondité et mortalité infantile | Fecundidad y mortalidad infantil | الانجاب ووفيات الاطفال |
|---|---|---|---|
| Age at birth of child in single years | Année d'âge de la mère à la naissance de l'enfant | Edad al tener el hijo, en años cumplidos | العمر عيد ميلاد الطفل بالسنوات الفرديه |
| Birth history | Historique des naissances | Historia de nacimientos | تاريخ الامومه |
| Birth order | Rangs de naissances | Orden de nacimiento | ترتيب المولود |
| Birth intervals | Intervalles entre naissances | Intervalos genécicos | الفترات بين المواليد |
| — Length of the open interval | — Longueur de l'intervalle ouvert | — Duración del intervalo abierto | — طول الفتره المفتوحة |
| — Length of the last closed interval | — Longueur du dernier intervalle fermé | — Duración del último intervalo cerrado | — طول آخر فترة مغلقه |
| Breast-feeding | Allaitement | Lactancia | الرضاعه من الثدى |
| — Breast-feeding in the last closed interval | — Allaitement dans le dernier intervalle fermé | — Lactancia en el último intervalo cerrado | — الرضاعه في آخرفترة مغلقه |
| — Last closed interval begins with a live birth, is longer than 32 months, with the child surviving at least 24 months | — Dernier intervalle fermé commençant avec une naissance vivante, ayant une durée supérieure à 32 mois et dont l'enfant a survécu au moins 24 mois | — El último intervalo cerrado comienza con un nacido vivo, dura más de $¿ meses y el noño sobrevivió por lo menos 24 meses | — آخر فتره مغلقه تبدا بمولود حي، واستمرت أكثر من ٣٢ شهراوالطفل تبقى على قيد الحياه لمدة ٢٤ شهرا على الاقل |

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| English | French | Spanish | Arabic |
|---|---|---|---|
| Calendar year of birth of child | Millésime de naissance de l'enfant | Año calendario de nacimiento del niño | السنه الميلاديه لميلاد الطفل |
| Child mortality by age at death | Mortalité infantile par âge au décès | Mordalidad infantil por edad al morir | وفيات الاطُفال حسب السن عند الوفاه |
| Child's age at death | Age au décès | Edad del niño al morir | عمر الطفل عند الوفاه |
| Children born before or within first 5 years of first marriage | Nombre d'enfants nés avant ou durant les 5 premières années du premier mariage | Hijos nacidos antes o durante los primeros 5 años de matrimonio | الاطُفال المولودين خلال السنوات الخمس للزواج الاول |
| Children born in past 5 years | Nombre d'enfants nés durant les 5 dernières années | Hijos nacidos en los últimos 5 años | الاطُفال المولودين خلال السنوات الخمس الماضيه |
| Children ever born (number of) | Nombre d'enfants déjà nés (descendance actuelle) | Número de hijos tenidos | عدد الاطُفال المولودين احياء |
| Children ever born plus current pregnancy | Nombre d'enfants déjà nés plus la grossesse actuelle | Número de hijos tenidos, más embarazo actual | عدد الاطُفال المولودين أحياء والحمل الحالي |
| Children who died before 2 years of age | Nombre d'enfants décédés avant l'âge de 2 ans | Hijos que murieron antes de los 2 años de edad | الاطفال الذين توفوا قبل بلوغ سنتين من العمر |
| Current pregnancy | Grossesse actuelle | Embarazo actual | الحمل الحالي |
| Duration since first marriage at birth of child | Durée écoulée entre le premier mariage et la naissance de l'enfant | Duración del matrimonio al nacimiento del hijo | الفترة منذ الزواج الاول وحتى ميلاد الطفل |
| Initial fertility | Fécondité initiale du mariage | Fecundidad inicial | الانجاب الاولي |
| Interval between first marriage and first birth | Intervalle entre premier mariage et première naissance | Intervalo entre el primer matrimonio y el primer nacimiento | الفترة بين الزواج الاول والطفل الاول |
| Live births in past 7 years | Nombre de naissances vivantes au cours des 7 dernières années | Nacidos vivos en los últimos 7 años | المواليد أحياء خلال السبع سنوات الماضيه |
| Living children | Nombre d'enfants vivants | Hijos actualmente vivos | الاطُفال الباقين على قيد الحياه |
| Living children plus current pregnancy | Nombre d'enfants vivants plus la grossesse actuelle | Número de hijos actualmente vivos más embarazo actual | الاطُفال الباقين على قيد الحياه والحمل الحالي |
| Living children 5 years ago | Nombre d'enfants vivants il y a 5 ans | Número de hijos vivos hace 5 años | الاطُفال الباقين على قيد الحياه منذ خمس سنوات مضت |
| Living children when contraception was used for the first time | Nombre d'enfants vivants au moment où la contraception a été utilisée pour la première fois | Número de hijos vivos que tenia cuando usó anticoncepción por primera vez | الاطُفال الباقين على قيد الحياه عند استعمال وسائل منع الحمل لاول مرة |
| Living daugthers | Nombre des filles vivantes | Número de hijas mujeres actualmente vivas | البنات الباقيات على قيد الحياه |

| English | French | Spanish | Arabic |
|---|---|---|---|
| Living sons | Nombre de garçons vivants | Número de hijos varones actualmente vivos | الابُناء الباقين على قيد الحياه |
| Male children born in past 5 years | Nombre de garçons nés au cours des 5 dernières années | Hijos varones nacidos en los últimos 5 años | الاطُفال الذكور الذين ولدوا في الخمس سنوات الماضيه |
| Month of current pregnancy | Mois de grossesse actuelle | Meses de embarazo del embarazo actual | شهر حدوث الحمل الحالي |
| Recent fertility | Fécondité récente du mariage | Fecundidad reciente | الانُجاب في الماضي القريب |
| Survivorship status | Survivants | Supervivencia | حالة البقاء على قيد الحياه |
| Years since birth occurred | Années écoulées depuis la naissance | Cuantos años hace que ocurrió el nacimiento | عدد السنوات المنقضيه منذ حدوث الميلاد |

| English | French | Spanish | Arabic |
|---|---|---|---|
| **Preferences for number and sex of children** | **Préférences relatives au nombre et au sexe des enfants** | **Preferencia por numero y sexo de los hijos** | تفضيلات عدد ونوع الاطُفال |
| Additional children wanted (number of) | Nombres d'enfants supplémentaires désirés | Número de hijos adicionales deseados | عدد الاطُفال الاضُافي المرغوب فيه |
| Desire for more children | Désire avoir d'autres enfants | Deseo de más hijos | الرغبة في المزيد من الاطُفال |
| Desire to cease child-bearing | Désire ne plus avoir d'enfants | Deseo de no tener más hijos | الرغبة في وقف الانُجاب |
| Desired family size | Dimension désirée de la famille | Tamaño de familia deseado | حجم الاسُرة المرغوب فيه |
| — exceeds number of living children | — dépasse le nombre d'enfants vivants | — excede el número de hijos vivos | — يتعدى عدد الاطُفال الباقين |
| Desires fewer than number living | Aurait désiré avoir moins d'enfants que le nombre de ses enfants actuellement vivants | Desea menos hijos de que los que tiene | ترغب في عدد أقل من عدد الاطُفال الباقين على قيد الحياه |
| Desires more than number living | Désire avoir plus d'enfants que le nombre de ses enfants actuellement vivants | Desea el mismo número de hijos que tiene | ترغب في عدد أكبر من عدد الاطُفال الباقين على قيد الحياه |
| Fertility preferences and the use of contraception | Descendance désirée et pratique de la contraception | Preferencias de fedundidad y uso de anticoncepción | تفضيلات الانُجاب واستعمال وسائل منع الحمل |
| Last child not wanted | Dernier enfant non désiré | Ultimo hijo no deseado | الطفل الاخُير غير مرغوب فيه |
| Prefers a boy | Préfère avoir un garçon | Prefiere un hijo varón | تفضل ولد |
| Prefers a girl | Préfère avoir une fille | Prefiere una hija mujer | تفضل بنت |

Preference concerning the sex of
    children

Total number of children desired

Wants another child

— and states a sex preference

Wants no more children

Préférence concernant le sexe des
    enfants

Nombre total d'enfants désirés

Désire avoir un autre enfant

— et a une préférence pour le sexe

Ne désire plus avoir d'enfants

Preferencias en cuanto el sexo de
    los hijos

Número total de hijos deseados

Desea otro hijo

— e indica preferencia por el sexo

No desea más hijos

التفضيلات المتعلقه بنوع الاطفال

العدد الاجمالي للأطفال المرغوب فيهم

ترغب في انجاب طفل آخر

ــ وتذكر تفضيلها للنوع

لا ترغب في انجاب طفل آخر