## JAMAICA FERTILTY SURVEY

 1975/76DEPARTMENT OF STATISTICS AND

WORLD FERTILITY SURVEY

## Country Report

 Volume ।
# JAMAICA <br> FERTILITY SURVEY <br> 1975/76 

## COUNTRY REPORT-VOLUME I

## DEPARTMENT OF STATISTICS <br> Kingston, Jamaica <br> 1979

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## INTRODUCTION

Jamaica, along with other members of the international community, has witnessed the intensification of pressures of high population growth on resources and the braking effect which this has had on social and economic progress. Growing disparities in social benefits occurring within its economy point to a real need for adopting a strategy of planned population programmes aimed at reducing the rate of growth of population within a policy of continued improvement in the welfare of its people. A very important aspect of the pursuit of this policy is the requirement for assessments to be made at frequent
intervals of the demographic behaviour of the people. Thus, records of vital statistics and immigration become extremely useful. Of importance also is the measurement of fertility occurring at specific periods of development. Fertility Surveys thus become necessary tools for the provision of such data. In addition, Jamaica recognizes the usefulness of such surveys in regional and international comparisons. It was against this background that the Government of Jamaica decided to participate in the World Fertility Survey Programme.

## ACKNOWLEDGEMENTS

The Government of Jamaica recognizes the need to develop a comprehensive data base for use in the determination of a strategy directed towards achieving its goal of improving the standard of living for all its people in the broadest possible social context within the framework of social and economic development. Accordingly, it readily took advantage of the opportunity to participate in the World Fertility Survey promoted by the International Statistical Institute as part of its contribution to World Population Year.

The Government now takes this opportunity to express its gratitude to the international agencies, as well as regional and national organizations whose willing and effective participation contributed to the success of the Jamaica Fertility Survey. In particular, it wishes to record its appreciation to the International Statistical Institute and the World Fertility Survey Office in London for the organization of the programme and to the United Nations Fund for Population Activities for providing a significant proportion of the funding thus making the project possible.

In a project of this magnitude and complexity, a large number of persons must perforce have contributed in varying degrees to its success. To all these persons we extend our thanks. In particular, we wish to express our gratitude to Sir Maurice Kendall, the Director of the World Fertility Survey in London.

We also wish to express our thanks to the World Fertility Survey programme for providing the flexibility needed to overcome many of the difficult problems which confronted us; to Mr. R. Henwick and Mr. C. J. Hendriks of the International Statistical Institute, whose understanding and expert guidance in financial matters made disbursement and control relatively easy; to Dr. Alphonse MacDonald for assistance in the early stages of the project and in particular the sample design, and in the training; and to Mr. Vijay Verma, particularly for his assistance in the development of the economic module in the questionnaire.

Data processing created some problems for the Jamaica Fertility Survey and it is against this background we wish to record our sincere appreciation to the staff of the London WFS Office who gave us assistance in this field; in particular to Miss Pippa Simpson and Mr. Lennart Rehlin in the early stages of data processing, and especially to Mr. Bogale Demissie for the invaluable contribution which he has made towards the successful completion of this project. We record our thanks also to the U.S. Bureau of the Census for making its packaged computer tabulation program available to us and for instructing us in the use of the program. We extend also our sincere thanks to Dr. Susheela Singh from the London WFS Office for the effort made by her in finalizing the Report.

Co-operation at the regional level has been a feature of the Caribbean unit for a long time and within this programme the co-operation was strengthened by the role played by Mr. J. Harewood, Regional Co-ordinator for WFS in the English-speaking Caribbean. We express our deep gratitude to him and to his staff, particularly to Mrs. Norma Abdulah, for their involvement and assistance throughout all stages of the project, ending with the preparation of the final chapter of this Report. Special thanks is also extended to Mrs. Jocelyn Massaiah, Demographer at the University of the West Indies (Cave Hill), for her assistance in training.

Many persons in Jamaica contributed to the programme. The contribution of the National Committee in the development of the questionnaire is hereby acknowledged. I also wish to record my appreciation to all my staff both office and field staff, who have worked with dedication and great effort on this project. Special thanks to Miss Isbeth Bernard and her team of analysts and programmers who toiled so bravely on the project and to Mrs. Valerie Nam, who performed the difficult job of co-ordination in the latter stages of the programme.

Kingston
July 1979
Mrs. Carmen McFarlane
Department of Statistics

## CHAPTER 1

## BACKGROUND

### 1.0. ORPECTRVES

The World Fertility Survey Programme (WFS) is an international programme undertaken by the International Statistical Institute (ISI) in co-operation with the International Union for the Scientific Study of Population (IUSSP) and the United Nations (UN). The WFS, which deals with human fertility behaviour, has as its main objectives the following:
(a) to provide as many countries as possible with the detailed information they need about the fertility of their population and the factors which affect it, and
(b) to make comparisons of fertility between different countries and different parts of the world.

The Jamaica Fertility Survey (JFS) which was conducted as part of the World Fertility Survey Programme was designed to meet Jamaica's specific needs for fertility data as well as to provide data comparable with other countries participating in the WFS.

A number of specific objectives, intermediate and long range, were identified for the JFS/WFS.

## Intermediate Objectives

The intermediate objectives of the Survey were:
(a) to provide accurate up-to-date data on fertility levels and patterns as well as factors affecting fertility;
(b) to provide information necessary for the evaluation of the effect of the family planning programme on fertility; and
(c) to set up bench-marks relating to the interaction of fertility and other factors, both economic and social, for continuing analysis.

## Long Range Objectives

To provide the basis for a long-term on-going programme of fertility surveys within the government's social and demographic survey programme.

### 1.1. SOCIAL AND DEMOGRAPHIC BACKGROUND

## Geographical Location

Jamaica is located in the north western section of the

Caribbean archipelago at $18^{\circ}$ North and $77^{\circ}$ West, 90 miles south of Cuba and 100 miles west of Haiti. The inhabitants are English speaking, Jamaica having been a member of the British Empire from its capture by Britain in 1655 until it attained independence in 1962. The country therefore shares common cultural links with the English speaking territories in the Region - the islands of the Lesser Antilles and Guyana and Belize on the American mainland. The island itself has a maximum length of 146 miles and widths varying from 22 to 51 miles, with a total area of $4,243.6$ square miles.

A land of mountains, plateaux and plains, the highest point is 7,402 feet in the Blue Mountains. Chief among the rivers which radiate from the highlands is the Rio Grande, which collects much of the drainage of the north-east slopes, and the Black River which is the island's largest river and has a winding course of 44 miles in length.

Jamaica is divided into three counties - Surrey in the east, Middlesex in the middle and Cornwall in the west. These counties are divided into fourteen parishes. Surrey has four parishes - Kingston, St. Andrew, St. Thomas and Portland; Middlesex has five - St. Catherine, St. Mary, Clarendon, St. Ann and Manchester; while Cornwall also has five parishes - St. Elizabeth, Trelawny, St. James, Hanover and Westmoreland.

## Climate

Jamaica has a tropical maritime climate distinguished mainly by warm trade winds which in the Caribbean generally blow from east to east-north-east. Further modifications are caused by easterly waves, changing atmospheric conditions, weak convergences, and, during the winter months from November to February, cold fronts coming from the North American continent affecting the island with occasionally strong northerly winds and heavy rainfall particularly in the north and east central areas.

Located outside the main track of tropical storms, Jamaica is, nevertheless, affected by hurricanes causing serious damage consequent upon high wind or tremendous and long-lasting rainfall.

## Government

On 6 August 1962 the Jamaica (Constitution) Order in

Council came into effect establishing Jamaica as an independent nation. The structure of Government which was chosen is similar to that of other members of the British Commonwealth which have a parliamentary democracy.

The form of Government is monarchical within the Commonwealth, with the Head of the Commonwealth, the reigning sovereign, as Head of State, represented in Jamaica by a Governor General. The constitutional functions of the Head of State and Her Representative are formal and limited, and neither intervenes personally in parliamentary matters.

The Jamaican Constitution recognizes a two-party system of government, with representatives to the Lower House, the House of Representatives, democratically elected, with a Prime Minister and a Leader of Opposition selected by majority and minority representatives in Parliament from amongst their number. Members of the 21 member Upper House, the Senate, are nominated, a majority (13) on the advice of the Prime Minister and a minority (8) on the advice of the Leader of the Opposition. Under the Constitution a term of office represents five years with a period of grace of three months. A government may, however, end its terms of office within the period of five years.

## Population Size, Growth, and Vital Rates

On the basis of population counts obtained from eight censuses held between 1844 and 1943, and the number of births and deaths as registered after 1881 and estimated for the period 1844-1881, estimates of population movements up to 1943 have been derived. ${ }^{1}$ These estimates, together with those based on subsequent censuses held in 1960 and 1970, make it possible to identify five broad periods of population growth for Jamaica. These periods, the limits corresponding with census years, are 1844-1881, 1881-1921, 1921-1943, 1943-1960 and 1960-1970.

During the first period, the annual rate of growth was just under 1 percent for 1844-1861 and 1.4 percent for the remainder of the period. This situation was brought about by a slight decline in the crude birth rate, from 40 per thousand in 1861 to 38 per thousand in 1881, and an accompanying large decline in the crude death rate. This latter rate fell from 32 per thousand in 1861 to 26 per thousand in 1881.

The period 1881-1921, unlike the earlier period, saw a

[^2]net loss of population through migration, especially to the United States of America. The rate of population growth fell from 1.4 percent per annum at the end of the preceding period to under 1 percent between 1881-1891 and thence after a slight increase between 1891 and 1911, fell to 0.2 percent between 1911 and 1921. During this period also, the crude birth rate remained fairly stable, but the crude death rate rose from 23.1 in 1891 to 25.6 in 1921, as a result of depressed economic conditions following World War I, a series of natural disasters and, above all, a serious outbreak of influenza in 1918.

In the period 1921-1943, population increased by 1.7 percent per annum which is the highest rate of population growth in any intercensal period. This situation resulted from the cessation of emigration due to the passing of Quota Laws by the U.S.A. and Latin America, as well as to a significant decline in the crude death rate. The early 1920's saw a dramatic event in the island's demographic history, with the increasing control over mortality. Before that time, very high mortality rates persisted, but the cumulative effects of measures introduced since the mid19th century and especially the strengthening of Public Health Laws and machinery in the late 1920's combined to usher in a downward trend which has continued ever since. The first reduction in mortality which appeared after 1921 was among infants, and rates which in general exceeded 150 during the early part of the present century, had by 1943 fallen to 93.3. In 1921, the crude death rate was 25.6 , but this had fallen to 17.9 by 1943 .

The rate of population growth between 1943 and 1960 was 1.6 percent, a rate lower than in the preceding intercensal period. There was a rise in the rate of natural increase caused by a small rise in the crude birth rate, from 33.2 to 35.3 , and significant declines in the crude death rate, from 17.9 to 11.9. The natural increase was, however, offset by very heavy emigration during the period, hence the low rate of growth.

In 1970 the population of Jamaica stood at approximately 1.8 million, representing an intercensal increase of 238,700 , or an annual growth rate of 1.2 percent since 1960. This increase was the net result of a gain of 535,200, attributable to natural increase and a net loss of 296,500 from migration. The 1960-1970 growth rate of 1.2 percent represented a decrease from the 1.6 percent recorded for the period 1943-1960, and resulted from a continuing decline in the crude death rate during the 1960-1970 period, and a small but steady decrease in the crude birth rate, begun in the 1960 's, as well as a rise in emigration.

The year 1961 saw the beginning of a steadily declining

Table 1.1
SUMMARY OF POPULATION MOVEMENTS: 1844-1970

| Census Year | Census <br> Population | Intercensal Increase |  | Births, Deaths and Natural Increase during Intercensal Interval |  |  | Migration Balance | Intercensal Rates <br> Per 1,000 <br> Population |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number | Annual Growth Rate (Percent) | Births | Deaths | Natural Increase |  | Birth | Death | Natural Increase |
| 1844 | 377,433 | - | - | - | - | - | - | - | - | - |
| 1861 | 441,264 | 63,831 | 0.92 | 275,400 | 224,400 | 51,000 | $+12,800$ | 40.0 | 32.0 | 8.0 |
| 1871 | 506,154 | 64,890 | 1.38 | 184,800 | 127,900 | 56,900 | +8,000 | 39.0 | 27.0 | 12.0 |
| 1881 | 580,804 | 74,650 | 1.38 | 208,200 | 139,200 | 69,000 | +5,600 | 38.0 | 26.0 | 12.0 |
| 1891 | 639,491 | 58,687 | 0.97 | 224,200 | 140,700 | 83,500 | --24,800 | 36.7 | 23.1 | 13.6 |
| 1911 | 831,383 | 191,892 | 1.32 | 581,100 | 345,300 | 235,700 | -43,900 | 39.5 | 23.5 | 16.0 |
| 1921 | 858,118 | 26,735 | 0.32 | 320,200 | 216,400 | 103,800 | -77,100 | 27.9 | 25.6 | 12.3 |
| 1943 | 1,237,063 | 378,900 | 1.67 | 765,300 | 412,200 | 353,200 | +25,800 | 33.2 | 17.9 | 15.3 |
| 1960 | 1,609,800 | 372,800 | 1.56 | 855,500 | 287,500 | 568,000 | -195,200 | 35.3 | 11.9 | 23.4 |
| 1970 | 1,848,508 | 238,700 | 1.17 | 676,500 | 141,300 | 535,200 | -296,500 | 39.1 | 8.2 | 30.9 |

birth rate which at the end of the 19 th century was as high as 42.1. Relatively high rates in the high 30 's persisted from the beginning of the present century to throughout the 1920's. The rate declined from the mid-1920's until it reached 30.0 in 1945. Following the end of World War II, however, the birth rate started to rise again, reaching a peak of 42.1 at the end of the 1950 's.

Improved economic conditions in the 1960's, attitudinal changes related to childbearing resulting in a desire for smaller families, and heavy net outward migration of

Table 1.2
POPULATION MOVEMENTS: 1970-1976

| Year | End of Year <br> Population | Births | Deaths | Net <br> Emigration | Total <br> Population <br> Increase |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1970 | $1,890,700$ | 64,400 | 14,400 | 23,000 | 27,000 |
| 1971 | $1,911,400$ | 66,300 | 14,100 | 31,500 | 20,000 |
| 1972 | $1,953,500$ | 66,200 | 14,100 | 10,200 | 42,100 |
| 1973 | $1,991,000$ | 61,900 | 14,200 | 10,200 | 37,500 |
| 1974 | $2,025,000$ | 61,500 | 14,400 | 13,000 | 34,000 |
| 1975 | $2,060,300$ | 61,400 | 14,000 | 12,100 | 35,300 |
| 1976 | $2,084,200$ | 60,700 | 14,700 | 22,000 | 23,900 |

women in the childbearing ages combined to affect the birth rate. In addition, more widespread acceptance by the population of family limitation supported by the Government's declaration of its commitment through the establishment of the National Family Planning Board in 1967, provided a positive climate for declines in fertility. The net effect was a gradual but steady decline in the crude birth rate.

In 1974 Jamaica's population passed the two million mark and was an estimated $2,025,000$, increasing by the end of 1975 to $2,060,000$ and by 1976 to just over $2,080,000$. The rate of population growth between 1975 and 1976 was 1.2 percent, a rate which compares very favourably with rates in the more advanced of the developing countries, although it is still significantly above rates existing in the developed countries.

The infant mortality rate for 1976 stood at 20.4 and represents a continuation of the downward trend which has been evident over the years. The crude death rate continued to decrease and for 1976 was 7.0 , a decline of more than 70 percent since 1921.

Table 1.3
MEAN POPULATION, BIRTH, DEATH, AND NET EMIGRATION RATES, AND POPULATION INCREASE: $1970-1976$

| Year | Mean <br> Population | Crude Birth Rate (1) | Crude Death Rate (2) | Emigration Rate (3) | Rate of Natural Increase $(1)-(2)$ | Rate of Population Increase $(1)-(2)-(3)$ | Percentage <br> Population <br> Increase |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Per 1,000 Population |  |  |  |  |  |
| 1970 | 1,869,100 | 34.4 | 7.7 | 12.4 | 26.7 | 14.3 | 1.4 |
| 1971 | 1,901,100 | 34.9 | 7.4 | 16.8 | 27.5 | 10.7 | 1.7 |
| 1972 | 1,932,400 | 34.3 | 7.2 | 5.3 | 27.1 | 21.8 | 1.6 |
| 1973 | 1,972,000 | 31.4 | 7.2 | 5.4 | 24.2 | 18.8 | 2.0 |
| 1974 | 2,008,000 | 30.6 | 6.9 | 6.6 | 23.4 | 17.8 | 1.7 |
| 1975 | 2,042,700 | 30.1 | 7.0 | 5.9 | 23.2 | 17.3 | 1.7 |
| 1976 | 2,072,300 | 29.3 | 7.1 | 10.7 | 22.2 | 11.6 | 1.2 |

More recent estimates for the crude birth rate shows a high but steadily declining rate which for 1976 stood at 29.3.

## Population - Composition and Distribution

The social and demographic characteristics of a country are to a large extent determined by its historical development, and Jamaica is no exception. During the 17 th and 18th centuries, Jamaica was developed as an important supplier of tropical products, chiefly sugar, to Britain and the rest of Europe. Due to the existing low level of population density, however, the principal objective became that of bringing in the required population to provide labour on the sugar plantations. For two and a half centuries, therefore, people were brought in, free workers, slaves, and indentured workers, from wherever they could best be obtained - from Europe, Africa and Asia - and under the most favourable ongoing terms.

During the period of slavery, population growth was due entirely to immigration, especially of Africans, and by the end of this period the black population considerably outnumbered the Europeans and their white descendants. By 1844 when the first official Census of Jamaica was undertaken, of the total population of $377,433,78$ percent were Black, 18 percent Coloured (mixed), and 4 percent White.

Following emancipation in 1834 and the labour shortage which followed, the immigration of indentured workers from India, and to a lesser extent from Madeira and China, provided an important source of additional labour. However, since this immigration was numerically small, the racial pattern of the population remained relatively unaffected and in fact the distribution of the population by race in Jamaica has not changed significantly since the abolition of slavery. The 1960 Census revealed a situation whereby the main difference since 1844 was that the proportion of the population classified as white had fallen from 4 percent to 1 percent and in this latter Census the other racial groups, especially East Indians and Chinese comprised about 3 percent of the total. At the 1970 Census, 90.9 percent of the population were Black, and of the remaining groups East Indians comprised 1.7 percent, Chinese and White 0.6 percent each, while the group classified as mixed represented 5.7 percent of the population.

## Age and Sex Structure

Jamaica's age structure has been largely determined and affected by external migration and to a lesser extent by continued high rates of fertility. Marked increases

Table 1.4
POPULATION, BY RACIAL ORIGIN: CENSUS 1970

| Race | Total | Percent <br> Distribution |
| :--- | ---: | ---: |
| Total | $1,797,399$ | 100.0 |
| Negro/Black | $1,634,686$ | 90.9 |
| East Indian | 30,736 | 1.7 |
| Chinese | 11,781 | 0.7 |
| White | 11,841 | 0.7 |
| Mixed | 103,715 | 5.8 |
| Other Races | 2,777 | 0.1 |
| Not Stated | 1,863 | 0.1 |

between 1943 and 1970 in the proportion of the population under 15 years old represent the combined effects of these two processes. In 1943, 37 percent of the population was under 15 years of age, this proportion increasing to 43 percent in 1960 and by 1970 it had reached 48 percent. The high level for 1970 is traceable more to external migration than to levels of fertility, although the decade 1960-1970 witnessed fertility increases. The most outstanding aspect of change in the island's age structure is the considerable rise in the proportion of the population falling in the age range 5-14 years during the period 1960-1970. In 1943 this age group represented 23.9 percent of the total population, moving in 1960 to 24.5 percent and to 30.2 percent in 1970.

In the middle age groups, the effects of migration are very evident; there are decreasing proportions in these age groups between 1943 and 1970. The 15-29 year old group, from which the younger members of the working force are drawn, fell from 27 percent to 25 percent to 22 percent in the case of females. Even more pronounced is the decreasing proportion within the $30-44$ year old group; from 20 percent in 1943 to 16 percent in 1960 , then to 13 percent in 1970.

By contrast, at ages over 65 years, where external migration is not so pronounced, there are minor increases in the proportion which these age groups form of the total.

The age structure of the population, as is depicted in the population pyramids Figure 1 (p. 6), is predominantly a youthful one.

The pyramids which show changes in the age structure between 1960 and 1970 reveal the rise in the 5-14 age group which stands in strong contrast to the declining under 5 age group, an indication of the decreasing fertility rates over the period.

The impact of emigration on the middle age ranges is clearly demonstrated, and the extent to which the 1970 population falls below that of 1960 within the $15-54$ age

Table i. 5
DISTRIBUTION OF POPULATION, BY AGE AND BY SEX: 1943, 1960, AND 1970

| Age Group | Male |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1943 | 1960 | 1970 | 1943 | 1960 | 1970 |
| 0-4 | 78,300 | 134,954 | 144,463 | 78,065 | 132,937 | 142,259 |
| 5-14 | 148,565 | 197,662 | 272,305 | 147,356 | 196,955 | 269,953 |
| 15-29 | 158,271 | 174,885 | 184,657 | 180,221 | 205,868 | 201,841 |
| 30-44 | 120,075 | 123,682 | 111,752 | 123,461 | 141,846 | 125,377 |
| 45-64 | 71,270 | 113,723 | 118,994 | 79,377 | 117,631 | 129,698 |
| 65 and over | 21,614 | 28,533 | 43,763 | 30,147 | 41,038 | 55,239 |
| Total | 598,267 $\dagger$ | 773,439 | 875,934 | 638,796 $\ddagger$ | 836,275 | 924,367 |

$\dagger$ Includes 172 males for whom age was not specified.
$\ddagger$ Includes 169 females for whom age was not specified.

Table 1.6
PERCENT DISTRIBUTION OF POPULATION, BY AGE AND BY SEX, 1943, 1960 AND 1970

|  | Male |  |  |  | Female |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Age Group | 1943 | 1960 | 1970 | 1943 | 1960 | 1970 |  |  |
| $0-4$ | 13.1 | 17.4 | 16.5 | 12.1 | 15.9 | 15.4 |  |  |
| $5-14$ | 24.8 | 25.6 | 31.1 | 23.1 | 23.5 | 29.3 |  |  |
| $15-29$ | 26.5 | 22.6 | 21.1 | 28.2 | 24.6 | 21.9 |  |  |
| $30-44$ | 20.1 | 16.0 | 12.7 | 19.3 | 17.0 | 13.6 |  |  |
| $45-64$ | 11.9 | 14.7 | 13.6 | 12.5 | 14.1 | 13.8 |  |  |
| 65 and over | 3.6 | 3.7 | 5.0 | 4.7 | 4.9 | 6.0 |  |  |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |  |

range is well emphasized. Also shown are increases over age 64 . during the period.

A look at the median age of the population at three censuses reflects its changing age structure. The median age for both males and females declines from approximately 22 years in 1943 to 17 years in 1970. This may be attributed to both upturns in fertility since 1943 as well as to emigration of the population of working and childbearing age, especially between 1960 and 1970.

Of the 1.8 million people in 1970 , an estimated 876,000 ( 48.7 percent) were males, while females numbered 921,000 ( 51.3 percent) thus resulting in a sex ratio of approximately 95 males to 100 females.

In Jamaica, as in many other populations, the sex ratio at birth is weighted in favour of males. Due, however, to the comparatively high male infant mortality rate and the corresponding lower mortality rate among females, there is a tendency towards a higher proportion of females in the higher ages.

At the same time, external migration has had varying effects on the island's sex composition. The male dominated 19th century immigration of indentured labour resulted in a preponderance of males in the age group 1544. Correspondingly, later emigration arising from increasing work opportunities in other countries, again with a
significant male bias, lowered the sex ratio in the 15-44 age group up to the Census of 1921. The cessation of external migration following 1921 led somewhat to a redress in the sex imbalance, and by 1943 the preponderance of females was no longer evident.

The migration of the 1950 's and 1960's was less sex selective than that earlier, and therefore overall changes in sex ratios were less evident. Between 1943 and 1970 the sex ratio per 100 females declined from 94 in 1943 to 92 in 1960, and by 1970 had risen to 95.

More significant changes can, however, be observed in the different age groups. In terms of broad age groups, there is a preponderance of males below age 15 , while females predominate at higher ages. Within the age range $15-29$, the sex ratio in 1960 was a low 85 , but by 1970 had risen to 92 . With the exception of the 45-64 age group, there was an increase in sex ratios between 1960 and 1970 at higher ages.

## Degree of Urbanization

In Jamaica, as in many other countries, the determinants of the degree of urbanization have tended to be somewhat arbitrarily chosen, varying between enquiries, thus making comparison difficult. Available documentation on censuses taken before 1960 gives little information to allow for an analysis of urbanization in the earlier periods. In 1960, two criteria were set out which allowed for the identification of centres of concentrations prior to the taking of the census. These were a size criterion of an expected minimum of 2,000 persons and the presence within each locality of a combination of institutions providing social amenities including primary schools, churches, post offices and police stations. Thirtyfour towns, outside of the Kingston Metropolitan Area, were identified. On enumeration, all but five were found to contain populations within the minimum criterion. These represented ten percent of the total population. The


AGE AND SEX PYRAMID: 1960 and 1970

Table 1.7
SEX RATIOS, BY AGE: 1943, 1960, AND 1970 (Males per 100 Females)

| Age Group | 1943 | 1960 | 1970 |
| :---: | ---: | ---: | ---: |
| $0-4$ | 100.3 | 101.5 | 101.7 |
| $5-14$ | 100.8 | 100.4 | 100.9 |
| $15-29$ | 87.8 | 85.0 | 91.5 |
| $30-44$ | 97.3 | 87.3 | 89.1 |
| $45-64$ | 89.8 | 96.7 | 93.9 |
| 65 and over | 71.7 | 69.4 | 79.1 |
| Total | 93.7 | 92.5 | 95.1 |

Kingston Metropolitan Area with a population of 376,500 , represented a further 23 percent.

Applying these criteria in 1970, qualified by the inclusion of other institutions, such as hospitals and/or health clinics, and with a few exceptions, court houses, an additional fifteen towns were found to consist of the necessary concentration. In 1970, all urban areas represented 43 percent of the total population.

For survey purposes, however, only large areas of concentration are classified as urban. For the Fertility
Table 1.8
COMPARATIVE URBAN POPULATIONS BETWEEN THE 1960 AND 1970 CENSUSES, ACCORDING TO THE DEFINITION OF URBAN USED FOR THE JFS

| Area | 1960 |  | 1970 |  | Percent Increase 1960-1970 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Population | Percent of Total | Population | Percent of Total |  |
| Kingston Metropolitan Area | 376,500 | 23.4 | 475,500 | 26.2 | 26.3 |
| Montego Bay | 23,600 | 1.5 | 45,500 | 2.5 | 92.8 |
| Spanish Town | 14,700 | 0.9 | 39,200 | 2.2 | 166.7 |
| May Pen | 14,100 | 0.9 | 26,000 | 1.4 | 84.4 |
| Savanna-la-Mar | 9,800 | 0.5 | 11,600 | 0.6 | 18.4 |
| Mandeville | 8,400 | 0.5 | 13,700 | 0.7 | 63.1 |
| Port Antonio | 7,900 | 0.5 | 10,400 | 0.6 | 31.6 |
| Total - Urban Areas | 455,000 | 28.3 | 621,900 | 34.3 | 36.7 |
| Total - Rural Areas | 1,154,800 | 71.7 | 1,191,700 | 65.7 | 3.2 |
| Total | 1,609,800 | 100.0 | 1,813,600 | 100.0 | 12.7 |

[^3]Survey, as in most other sample surveys conducted by the Department at about that time, seven towns outside of the Kingston Metropolitan Area were considered to have sufficiently large concentrations as to be regarded as urban. Of the seven, six were regarded as urban in 1960 and in 1970. The seventh, the Portmore Area, has only recently been urbanized. Using the population in these six together with the Kingston Metropolitan Area as a measure of urbanization in Jamaica, the degree of urbanization over the decade between 1960 and 1970 rose by some 6 percent. This is set out in Table 1.8 below.

In aggregative terms, the real expansion in the urban population took place in the Kingston Metropolitan Area, but the rate of growth in most areas outside of the metropolitan area was significantly higher. The addition of the Portmore Area, with an estimated population of 9,500 in 1974, moving from a population of 2,200 in 1970, is also consistent with the faster rate of growth outside of the metropolitan area.

## Martage and Union Status

Linked to the existence of the slave regime in the early history of Jamaica, is the special type of mating which characterizes the population. Like all the Caribbean islands, Jamaica has a mating system comprising legal marriage, common-law unions of fair stability and more relatively unstable visiting unions. Union status for purposes of this study is determined by the type of union of the female respondents, and the three types of unions which are recognized are: married, common-law and visiting. Of the three union types 'married' enjoys full legal sanction and describes the situation where the woman is married to a partner with whom she cohabits. In a 'common-law union', the woman shares a common household with her partner, although they are not legally married to each other. A 'Visiting' union exists where a female is not sharing a common household with, nor is legally married to a partner, but maintains steady sexual association with the partner.

Table 1.9
PERCENT DISTRIBUTION OF WOMEN AGED 15-64, BY UNION STATUS AND BY AGE: CENSUS 1970

| Age Group | Union Status |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Married | Common-Law | Visiting | Not Living with Husband | Not Living with Common-Law Partner | Never Had Husband or Partner | Not Stated |
| Jamaica | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 15-19 | 13.73 | 0.53 | 6.39 | 33.09 | 0.09 | 2.86 | 37.07 | 14.98 |
| 20-24 | 15.36 | 5.12 | 19.98 | 36.42 | 0.84 | 9.86 | 23.83 | 19.12 |
| 25-29 | 12.30 | 9.34 | 20.25 | 16.54 | 2.55 | 10.80 | 10.45 | 12.61 |
| 30-34 | 9.90 | 11.37 | 14.36 | 7.54 | 4.59 | 9.29 | 5.70 | 10.24 |
| 35-39 | 10.05 | 13.92 | 12.41 | 4.28 | 7.59 | 9.89 | 4.64 | 8.88 |
| 40-44 | 9.43 | 14.09 | 9.05 | 1.70 | 12.27 | 11.64 | 4.22 | 7.55 |
| 45-49 | 7.87 | 13.23 | 6.26 | 0.29 | 14.09 | 11.14 | 3.69 | 7.43 |
| 50-54 | 8.15 | 12.90 | 4.98 | 0.06 | 18.17 | 11.88 | 3.70 | 6.67 |
| 55-59 | 6.88 | 10.57 | 3.59 | 0.04 | 18.18 | 11.09 | 3.32 | 5.82 |
| 60-64 | 6.32 | 8.93 | 2.72 | 0.04 | 21.67 | 11.55 | 3.38 | 6.70 |

Table 1.10
NUMBER OF WOMEN AGED 15-64, BY UNION STATUS AND BY AGE: CENSUS 1970

| Age Group | Union Status |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Married | Common-Law | Visiting | Not Living with Husband | Not Living with Common-Law Partner | Never Had <br> Husband or Partner | Not Stated |
| Total | 427,822 | 145,313 | 93,485 | 20,858 | 16,757 | 31,502 | 117,417 | 2,490 |
| 15-19 | 58,469 | 777 | 5,973 | 6,903 | 15 | 900 | 43,528 | 373 |
| 20-24 | 65,415 | 7,438 | 18,681 | 7,596 | 140 | 3,105 | 27,979 | 476 |
| 25-29 | 52,361 | 13,566 | 18,934 | 3,449 | 428 | 3,401 | 12,269 | 314 |
| 30-34 | 42,170 | 16,527 | 13,429 | 1,572 | 769 | 2,928 | 6,690 | 255 |
| 35-39 | 42,778 | 20,232 | 11,597 | 892 | 1,272 | 3,117 | 5,447 | 221 |
| 40-44 | 40,162 | 20,480 | 8,463 | 354 | 2,056 | 3,666 | 4,955 | 188 |
| 45-49 | 35,524 | 19,224 | 5,855 | 61 | 2,354 | 3,510 | 4,335 | 185 |
| 50-54 | 34,709 | 18,741 | 4,652 | 12 | 3,045 | 3,744 | 4,349 | 166 |
| 55-59 | 29,306 | 15,358 | 3,356 | 10 | 3,047 | 3,493 | 3,897 | 145 |
| 60-64 | 26,928 | 12,970 | 2,545 | 9 | 3,631 | 3,638 | 3,968 | 167 |

It is thus the presence or absence of two factors, legal sanction of the union and the sharing of a common household, which constitute the ground for differentiation between the three union types.

The distinctive features of each union type and the different ages at which they are established have important implications for fertility and interesting fertility differentials emerge as a result. In 1970, 60.7 percent of ail women were in unions; the majority, 56 percent being married unions while 36 percent were common-law. It is among the women in the higher age groups that marriage is most prevalent, while common-law and visiting unions occur mostly among the younger women. The majority of married women fall in the age group 35-44 with 26 percent in the 45-54 age group. Women in the age group 15-24 comprise 69.5 percent of all women in visiting unions while of the common-law unions the 20-29 age group form the majority - 40.2 percent.

## Family Systems

The West Indian and indeed the Jamaican family has been described by traditional sociologists as being 'matrifocal'. Because of the existence of some union types which are not always characterized by the presence of a resident father, it is usual for a woman to be living with and taking care of the children of a union, thus representing the head of that household unit.
'Even where the head of a household is a man, particularly among common-law unions, the woman often tends to dominate as far as running the house and rearing the family are concerned, which has led to much controversy about the alleged female-centred society and the irresponsibility of the West Indian male'. ${ }^{1}$

In attempting to explain this phenomenon, some sociologists have attributed it to the legacy of slavery. Slavery, it is argued, led to the disintegration of the African family life pattern as marriage among slaves was discouraged and, where it did occur, parents had little control over their children who were reared outside the family, thus undermining the family responsibility.

Others accept what is referred to as a 'structural functional' approach to family organization and explain matrifocality in terms of the generally weak economic position of the male. Recent studies have indicated, nevertheless, that there is considerable contact between the nonresident father who visits to discuss a variety of topics relevant to the proper functioning of the family. Account

[^4]should also be taken of the fact that in the majority of unions in Jamaica there is a resident male who may or may not be the father of the children of the household.

## Religion

Jamaican religion takes on a variety of forms and the religious groups represented consist of traditional orthodox denominations together with several revivalist sects.

At the 1970 Census, the majority of the population, 17.8 percent, were members of the Baptist faith. In the pre-emancipation period, the Baptist movement in Jamaica was very strong, and by 1830 had become an integrated part of Negro culture. By 1860 the Native Baptists were stronger than those centred around European orthodoxy. By 1960 Baptist represented 19 per cent of the total population, exceeded only by the Anglican faith, with 19.8 percent. By 1970 Anglicans comprised 15.4 percent of the total, Roman Catholics and Methodists 7.9 percent and 6.0 percent, respectively. At this time, the Church of God, the largest of the revivalist sects, account for 17.0 percent of the total, being second only to the Baptists.

## Population Policy and Family Planning

Jamaica's population policy has been formulated against a background of proposals to effect a greater improvement in the social and economic conditions of the people. Population policy is considered to be an integral part of social and economic policy since the Government of Jamaica sees the objectives of its policy on population as closely intertwined in the fabric of all social and economic development plans and programmes.

The population policy adopted by the Government is aimed at achieving shifts in attitudes to family size away from the preference for larger families to more limited numbers, stimulated by changing attitudes to life in general brought about by improvements in social and economic conditions. As a result of this effort to encourage smaller families, a programme of active family planning campaigns is pursued.

Formal family planning programmes and education were introduced in Jamaica in the early 1950's by a nongovernmental group of voluntary social workers.

However, the first steps in organizing family planning operations in Jamaica dates back to 1939 and was mainly a private effort. In 1963, the Government made a formal declaration stating:
'The Government will seek to bring about a greater
awareness of the implications of rapid population growth and population pressure in the island, and the national problems arising, as well as the effects of excessive childbearing on the lives and prospects of individuals,'
'The Government will encourage the spread of information on and techniques for the spacing or limitation on families for the benefit of those persons who desire them.'

In 1964 plans for a fertility control programme were outlined by the Minister of Health who stated that:
'The Government has no intention of interfering in the inalienable rights of the individual citizen. It is not compelling anyone to adopt Birth Control. It is not intending to persuade anyone to go against his or her religious beliefs or practice. All that the Government is doing is to provide facilities to those who voluntarily request them.'

In 1967, the government officially endorsed this programme by the formation of a statutory board. At its inception, the National Family Planning Board concentrated on the development of family planning infor-
mation as well as distribution of contraceptives through the establishment of specialized family planning centres and the operation of family planning clinics on selected days in generalized health clinics.

In 1974 family planning education and the nursing services became integrated in the general health services with the National Family Planning Board being responsible for:
(1) Public information and communication in all its various forms.
(2) Co-ordination and harmonization of the informational and educational programmes with service activities of various Ministries and Departments of Government as well as voluntary agencies.
(3) International matters and assistance.
(4) Research, monitoring and evaluation.
(5) Training.

A move towards complete integration in the Ministry of Health was initiated in early 1976 and is in the process of being implemented.

## CHAPTER 2

## ORGANIZATION AND CONDUCT OF THE SURVEY

### 2.9 ORGARNRATMON

Jamaica is participating in the WFS exercise within the broad framework of the international programme but operating in close collaboration with the English speaking participants of the Caribbean Region.

After preliminary consultation with WFS staffers and other Technical Advisers, through attendance at a number of meetings, including the 39th Session of ISI held in Vienna in 1973, and the First WFS Caribbean Regional Conference in Port-of-Spain, Trinidad in 1974, as well as more informal consultations with WFS personnel, including Mr. R. J. Harewood, Mr. R. A. Henwick and Dr. A. McDonald, and also Professor Leslie Kish, a member of the WFS Technical Advisory Committee, the Government of Jamaica, through the Department of Statistics, submitted on 30 October, 1974, a formal request for participation in the World Fertility Survey Programme. The Project Proposal - JAM/74/PO4/A/33 - was formally approved on 20 January 1975.

The organization of the survey operated at three levels: the international direction and assistance, the regional collaboration, and the local implementation.

## The International Relationship

The stated aims of the WFS programme is 'to assess the current state of human fertility throughout the world. This is being done principally through promoting and supporting nationally representative, internationally comparable, and scientifically designed and conducted sample surveys of fertility behaviour in as many countries as possible'. Financial support for the programme is provided principally by the United Nations Fund for Population Activities (UNFPA) and the United States Agency for International Development (USAID). Jamaica's participation in the programme is being financed by the UNFPA.

In addition to this funding, technical assistance included the provision of expertise by professional staff from WFS headquarters and other consultants as well as a Regional Co-ordinator, Mr. R. J. Harewood. WFS London coordinators were Dr. A. McDonald in the first instance, then Mr. Bogale Demissie and finally Dr. S. Singh. Matters relating to finances were dealt with by Messrs.


#### Abstract

R. A. Henwick and C. J. Hendriks, both from the office in The Hague, with the local UNDP office acting as liaison. Sir Maurice Kendall as Project Director of WFS had overall responsibility for the programme.


## Regional Co-ordination

To date, three English speaking countries in the Caribbean are participating in the World Fertility Survey programme. These are Guyana, Jamaica and Trinidad and Tobago. The basic similarities inherent in the societies of these countries and the historical pattern of regional collaboration in the planning and organization of demographic studies, including population censuses, provided the preconditions for collaboration within the WFS programme. Mr. Harewood, WFS Regional Co-ordinator, has been assisted in this effort by a committee comprising practising demographers within the region, including his Deputy, Mrs. Norma Abdullah. The survey directors of each of the participating countries, supported by their senior professional staff, completed the composition of the committee.

The major areas of involvement of the Regional Coordinating Committee (RCC) were:
(1) Questionnaire development.
(2) Tabulation plan.
(3) Training.
(4) Data Processing.

In addition, at the country level, the Regional Coordinator was involved in evaluation exercises, both in relation to the pretests and to the main survey.

## Evaluation

The Regional Co-ordinator and his Deputy were closely involved in the assessments of the Pretest Surveys and participated in the evaluation of the findings, making recommendations for modification when indicated. Mr . Harewood also participated in the evaluation of the response rates on the main survey and also on the results of the post-enumeration checks.

## Preparation of Country Report No. 1

The Regional Co-ordinator and his Deputy participated
in the preparation of Country Report No. 1, in the form of critical appraisal of the drafts prepared at the country level.

## Administrative and Technical Consultations

As agreed in the Project Document, the Regional Coordinator served as Administrative and Technical Consultant on all phases of the Survey.

## The National Organization

On the local level, the executing agency for the WFS/JFS is the Department of Statistics, the central statistical agency of the Government of Jamaica. The Director of Statistics, Mrs. Carmen McFarlane, is the Project Director. The survey has been conducted as part of the department's ongoing programme of social and demographic surveys designed to study, among others, the following topics: labour force; migration, internal and external; housing conditions; health; nutrition; fertility; sóciàl atitudes and behaviour; and incomes and expenditures. Thus, the hierarchy of responsibility and control exercised in all surveys conducted under the Continuing Household Survey Programme has been applied to this survey. The staff complement of the Department of Statistics at the time of the survey consisted of 31 in the professional grade and 286 in the administrative, technical and clerical grades. Of these, 18 professionals and 20 others together with 60 temporary employees participated directly in the survey. These numbers exclude persons engaged in accounts, registry, executive services and printing.

A National Advisory Committee, comprising representatives of the National Planning Agency, the National Family Planning Board, the Ministry of Health (the Ministry charged with responsibility for the Population Policy of the Government), and the Department of Sociology at the Mona Campus of the University of the West Indies, collaborated with the Department of Statistics in the early stages of planning the survey.

### 2.1. COVERAGE

The survey is designed to study fertility behaviour and its relationship to specific social and economic factors, based on a sample of households, with representation at the national level. It was originally proposed to consider the following for coverage in the survey:
(1) The Individual Questionnaire (WFS/Tech. 81) adapted to Jamaican conditions.
(2) A modified version of the Community Level Module.
(3) Some components of the Economic Data Module (preliminary format by Dr. Deborah Freedman.)

Some thought was also given by the National Advisory Committee to the inclusion of another Module on Abortion.

After extensive discussions on the local and regional levels it was decided to restrict coverage of the present survey to
(1) A WFS Caribbean CORE, which is in effect a modification of the WFS CORE,
(2) Some sections of the Economic Data Module,
with the possibility of conducting a further enquiry at a later date, incorporating sections of the Community Level Module and correlating the results with the present survey. The suggestion for the inclusion of the Module on Abortion was not further pursued.

### 2.2. THE SAMPLE DESIGN

The Jamaica Fertility Survey was designed to fit into the over-all framework of the Continuous Social and Demographic Survey programme implemented by the department since 1967. Under the programme, a number of periodic and specific enquiries have been conducted. These include among others, studies of the labour force, household budgets, communication skills, and internal migration.

The design adopted is generally that of a two stage sample, the first stage being a stratified selection of areas, followed at the second stage by an unstratified sample of dwellings within the selected areas.

## Geographic Divisions

Three major geographic divisions are employed in the sample design. These are: the parish, the sampling region, and the primary sampling unit (PSU). As has been previously stated, Jamaica is divided into fourteen parishes for legal and administrative purposes. The parishes vary in size physically as well as population wise. Thus, in order to approximate more closely to over-all uniformity in population size, sampling regions are created within each parish, with approximately equal population, using the 1970 . Population Census measurements as a guide, modified in some instances by known shifts in urban concentration. The mean size of a sampling region was established at approximately 2,000 households as

Table 2.1
NUMBER AND AVERAGE SIZE OF SAMPLING REGION, BY PARISH

| Parish | Number of <br> Sampling <br> Regions | Average Size of <br> Sampling Region <br> (Number of Households) |
| :--- | :---: | :---: |
| Kingston | 16 | 2,041 |
| St. Andrew | 51 | 2,072 |
| St. Thomas | 9 | 2,068 |
| Portland | 8 | 2,101 |
| St. Mary | 12 | 2,008 |
| St. Ann | 12 | 2,044 |
| Trelawny | 7 | 2,098 |
| St. James | 12 | 2,018 |
| Hanover | 7 | 1,863 |
| Westmorland | 13 | 2,010 |
| St. Elizabeth | 13 | 1,987 |
| Manchester | 12 | 2,065 |
| Clarendon | 19 | 2,053 |
| St. Catherine | 23 | 2,032 |

determined in the 1970 Population Census. The distribution of sampling regions by parish is shown above.

The sampling regions are comprised of agglomerations of enumeration districts grouped together contiguousiy to create regions approximating to the average parish size. The number of enumeration districts total approximately 4,800 .

Enumeration Districts were created to contain an average of 150 households in urban areas and 100 households in rural areas, using the more extended definition of urban. Physical size criteria are also applied. Thus, in order to maintain a closer approximation to a uniform population size in the primary enumeration unit, an area described as the primary sampling unit (PSU) was determined. PSU comprised EDs with households exceeding sixty in number. All EDs with less than sixty households were linked to other adjoining small EDs. As a result of this procedure the number of PSUs amounted to approximately 4,000 .

## Stratification

A number of socio-economic variables were examined in connection with the degree of stratification to be applied to the sample design. After careful examination it was decided that difficulties in delineating accurate boundaries for each stratum due to over-lapping and other problems were such that their application would not improve the precision of the sample in most instances. An urban-rural stratification was, however, considered feasible.

For this purpose, it was decided that the smallest unit of stratification should be the sampling region. Accordingly, towns classified as urban were required to contain a minimum population of 10,000 persons. On the basis of
the criterion previously mentioned, eight areas were regarded as urban. These included the Kingston Metropolitan Area, Spanish Town, Montego Bay, May Pen, Mandeville, Port Antonio, Savanna-la-mar and Portmore. All other areas were regarded as rural. Stratiifcation therefore was limited to an urban-rural division with the sampling regions as sub-strata. Of the total, 83 are regarded as urban and 131 as rural.

## Sample Selection

The design utilized a 10 percent area sample and 10 percent of dwellings within areas - an over-all sample of 1 percent. From each sampling region, two primary sampling units were selected with equal probability. The numbers of households in PSUs at the time of the 1970 Census were used as measures of size. A point to note is that the number of households used as size measures vary from the number of dwellings listed for the second stage selection since at the time the available list was one of househoids. The list used for the second stage selection included vacant and partially completed dwellings and with very few exceptions would be larger than the original 1970 list. Differences in the size of the lists would also be accounted for by additions of new dwelling units or demolitions since 1970.

A list of dwellings in selected PSUs was then made. The listing exercise was carefully monitored and areas suspected of high mobility and rapid development relisted as the need arose. For the Fertility Survey, twelve such areas were relisted prior to the actual enumeration. At the listing stage, basic information, such as the name and address of the head of the household as well as a description of the dwelling and the composition of the household, was collected.

The sampling fraction at the first stage was based on the number of PSUs in a sampling region and the number of selections from the sampling region. On the average this would be $2 / 20$; the variation would be due to differences in the number of PSUs making up the sampling region. This in turn would depend on the size of the PSUs within the sampling region.

The overall sampling fraction was therefore made up of two fractions thus:

$$
F=f_{1} \times f_{2}
$$

where $\quad F=$ over-all sampling fraction
$f_{1}=$ the sampling fraction at the first stage
and $\quad f_{2}=$ the sampling fraction at the second stage

The sampling fraction at the second stage was then determined by dividing the over-all sampling fraction by the first stage fraction thus:

$$
f_{2}=\frac{F}{f_{1}}
$$

From the list of dwellings, a systematic sample was selected using the reciprocal of the second stage selection as the interval.

The variance formula for each sub-stratum is that given for paired selection; the stratified ratio mean can be written as:

$$
r=\frac{y}{x}=\frac{\Sigma y_{h}}{\Sigma x_{h}}=\frac{\Sigma\left(y_{h_{1}}+y_{h_{2}}\right)}{\Sigma\left(x_{h_{1}}+x_{h_{2}}\right)}
$$

and $\quad \operatorname{var}(r)=\frac{1-f}{x^{2}} \Sigma D z_{h}^{2}$
where $\quad D z_{h}^{2}=\left(y_{h_{1}}-r x_{h_{1}}\right)-\left(y_{h_{2}}-r x_{h_{2}}\right)^{1}$
The variance for each stratum is the sum of the variances of the substrata within the stratum.

## Assumptions

Based on the experience of other surveys, a low nonresponse rate, that is, below five percent was anticipated. The number of selections was 5,400 , and after taking into consideration non-response and blanks, such as vacant dwellings, it was expected that approximately 4,500 responses would be forthcoming. Also based on the results of the 1970 census, the average number of females in the childbearing age group was computed as 0.81 per household. If this were realized, then at the completion of the survey the number of useable questionnaires was estimated to be over 3,500 .

[^5]
### 2.3. DEVELOPVIENT OR THE QUESTRONNAIRE

The WFS CORE was examined critically at the regional level, with Jamaica participating, for adoption in the survey. In principle, all aspects of the CORE questionnaire were accepted, with the exception of the treatment of partner relationships. In Jamaica, as in the Caribbean region generally, union status is a more significant factor in reproductive behaviour than legal marital status. The extent of non-legal unions and their relationship to the fertility of women as measured in the 1970 Population Census may be observed from Table 2.2.

Accordingly, fertility behaviour in this Region has historically been studied in the context of de facto rather than de jure unions. It was the consensus at the Regional level, therefore, that this approach should be maintained so as to be able to carry out meaningful analyses of fertility relationships and also to preserve comparability with existing data. WFS, after some negotiation, agreed to accept a Caribbean CORE adapted from the basic WFS CORE Questionnaire, taking into account this modification.

Thus, the basic WFS Caribbean CORE Questionnaire contained the following five sections of the Individual Schedule:
(1) Respondent's Background.
(2) Pregnancy History.
(3) Union Status and Partnership History.
(4) Contraceptive Knowledge and Use. ${ }^{1}$
(5) Fertility Regulation.

Two other sections, designed to incorporate some econ-

[^6]Table 2.2
NUMBER AND PERCENT DISTRIBUTION OF WOMEN, BY UNION STATUS AND BY NUMBER OF LIVEBORN CHILDREN: 1970

| Union Status | Women |  |  |  | Liveborn Children Ever Had |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Ages |  | 15-49 Years of Age |  |  |  |
|  | Number | Percent of Total | Number | Percent of Total | Number | Per Woman |
| Total | 429,423 | 100.0 | 366,879 | 100.0 | 1,354,465 | 3.2 |
| Married | 149,313 | 33.8 | 98,244 | 29.2 | 657,723 | 4.5 |
| Common-Law | 93,505 | 21.8 | 82,932 | 24.6 | 350,981 | 3.8 |
| Visiting | 20,933 | 4.9 | 20,827 | 6.2 | 56,543 | 2.7 |
| No Longer Living with Husband | 16,757 | 3.9 | 7,034 | 2.1 | 66,883 | 4.0 |
| No Longer Living with CommonLaw Partner | 31,505 | 7.3 | 20,627 | 6.1 | 111,094 | 3.5 |
| Never Had a Partner (Stable) | 118,871 | 27.7 | 105,203 | 31.2 | 106,185 | 0.9 |
| Not Stated | 2,539 | 0.6 | 2,012 | 0.6 | 5,056 | 2.0 |

omic factors into the study, were developed to a greater or lesser degree at the regional level. These were:
(6) Respondent's Work History.
(7) Partner's Background.

The approach to Section 6 - Respondent's Work History - is fairly uniform throughout the region. In Section 7 , however, the degree of detail applied varied between the countries. Jamaica placed some emphasis on Partner's Work History, with somewhat less emphasis on income earned. A more ambitious approach had originally been envisaged, but this appeared to introduce too many complications which could in fact jeopardize the efficiency of the total survey, and this was accordingly abandoned for a more simplified version.

Further attempts were made to include economic factors in the study. Questions on specified assets owned by householders were included in the first and second draft household schedules and field tested. Intense hostile reaction to these questions, arising mainiy from responses to the changing directions in political ideologies referred to earlier were experienced by interviewers during these two field tests and resulted in a decision to omit them from the main survey.

An adaptation of Deborah Freedman's module on the Costs and Benefits of Children, modified after field testing and in consultation with WFS personnel, provided the last section of the questionnaire: ' 8 . Costs and Benefits of Raising Children.'

Some consideration was given to the inclusion of an adaptation of the Community Level Module in the Survey, consistent with the views expressed in the Project Request. After intensive investigations into the techniques to be applied it was decided that an exercise aimed at setting up a rational system for the classification and demarcation of settlements in Jamaica was urgently needed in order to provide meaningful relationships. It was recognized, however, that this would require significant effort outside of the existing resources of the project. On this account it was decided not to incorporate it as part of the main exercise. The sample design does provide, however, for a matching of derived community level data with fertility data in the main survey. A final decision on inclusion was therefore postponed until a subsequent date.

The questionnaire was subjected to a number of field tests before being finalized. Sections $1-7$ of the Individual Schedule together with the Household Schedule were tested in Pretests 1 and 2, while Section 8 of the Individual Schedule was extensively tested in Pretests 2 and 3. Based
on an assessment of the findings of the three pretests, the questionnaire was suitably modified into its final form. Changes were, in general, relatively minor and were made to improve the flow of the questions and to avoid the juxtaposition of certain questions which may have proved embarrassing to respondents. Amendments were also made to the format of the questionnaire. More specifically, questions on ownership of assets by householders were deleted from the Household Schedule. The major changes in wording applied to Section 8; those in format, to Section 7. In the case of Section 7, the format was changed to allow for direct answers by the Respondent's Partner if he was present at the time of interview. Provision was also made for Respondent's answers in the event of her partner's absence or failure to respond.

All changes were endorsed by WFS personnel before the questionnaire was finalized.

### 2.4. PRETESTS

Three pretests were conducted during the period June to September 1975, prior to the main survey. The objectives of the pretests were to test:
(1) The formulation of the questions in relation to their acceptability in terms of common usage.
(2) The formulation of responses to the attitudinal questions.
(3) The reaction of the public in general to the questions included in the survey.
(4) The extent to which modification made as a result of a previous field test improved the efficiency of the questionnaire.
(5) The degree of non-response, totally, partially, as well as spatially.

In addition, results from the tests were to be used in the development or refinement of the following phases of the survey:
(1) The training programme.
(2) The editing and coding procedures.
(3) The field schedule.
(4) Systems development and data preparation procedures.

The first pretest was carried out in twelve primary sampling units. Both Household and Individual Schedules were used. The Household Schedule included questions on asset owning by householders; the Individual Schedule
covered Sections $1-7$. Selection of sampling units was purposive, aimed at obtaining representation at a national level, including at the same time elements of both urban and rural concentration. Care was taken to ensure that units selected for this and all other pretests were not included in the selection for the main survey in order to avoid response fatigue. Proximity to primary sampling units selected for the main survey was also taken into account. Interviewers were female and drawn from the pool of permanent enumerators employed by the Department of Statistics, a criterion of selection being experience in at least one household survey. Two female supervisors were also assigned from the permanent staff. Training methods used included:
(1) Background lectures.
(2) Lectures directly on the questionnaire.
(3) Demonstration and practice in the operation of tape recorders.
(4) Demonstration and practice interviews, some involving the use of the tape recorder, in office and in the field.
(5) Testing at two levels:
(a) By question and answer sessions.
(b) By written test.

Field work lasted eight days, followed by one day of debriefing at headquarters. Debriefing sessions were conducted by junior and senior professional headquarters staff, including the project director. The Regional Coordinator also participated.

Evaluation procedures included preliminary assessments by junior professional staff followed by final assessments by senior professional staff, the project director and the Regional Co-ordinator. Major findings were determined from summaries extracted after detailed scrutiny of the 148 Individual Questionanires, 96 Household Questionanires and recordings of 29 interviews, supported by reports made at the debriefing sessions. The findings highlighted a number of possible weaknesses. These related to:
(1) The inclusion of the question on asset-owning by householders - on the Household Schedule.
(2) The formulation of some of the questions on the Individual Schedule.
(3) Observed tendencies in interviewing, which could result in incomplete and/or inaccurate enumeration.
(4) Directly and indirectly, weaknesses in the training techniques employed.
The findings of the First Pretest provided the basis for modification of Sections 1-7 of the Individual Schedule. In addition, it provided a useful guide to the training team for the survey, and was intensively studied by the team with a view to obtaining guidelines for the development of a more effective training programme.

The Second and Third Pretests ran concurrently, two separate exercises being necessary to test two separate versions of Section 8 - Costs and Benefits of Raising Children. This exercise was designed to serve as a dress rehearsal for the main survey. The conditions expected in the main survey were stimulated as closely as possible. This applied mainly in the areas of recruitment, training, and some field operations. Fifteen primary sampling units were selected, twelve for the Second Pretest and three for the Third Pretest. Here, as in the First Pretest, selection was purposive. Representation in Pretest 2 was island-wide; in Pretest 3, only three parishes were represented.

Potential interviewers were contacted mainly through advertisement in the press and recruited after screening during field visits by members of headquarters staff. Twenty-two candidates were selected for training, most of whom had been unemployed since leaving school and lacked the experience of a working environment. Two female supervisors from the permanent field staff of the department, one of whom had worked on Pretest 1, were assigned to the exercise. The training techniques developed for the main survey (to be described later) were applied.

Field Operations for Pretests 2 and 3 lasted for fifteen and eleven days, respectively, with an additional day each for debriefing. Debriefings for these two tests were conducted by the project director, and senior and junior professional staff of the department. Evaluation procedures were similar to those adopted for Pretest 1. Major findings were, in this exercise, based on debriefing reports and on summaries extracted from the following:

|  | Household <br> Schedules | Individual <br> Schedules | Taped <br> Interviews |
| :---: | :---: | :---: | :---: |
| Pretest 2 | 87 | 119 | 8 |
| Pretest 3 | 33 | 30 | - |
| Total | 120 | 149 | 8 |

The findings from the three pretesting exercises carried out indicated that, in general, the questions included on the Individual Questionnaire, particularly in Sections 1-7, were well formulated, generally acceptable to respondents and elicited the required information. Problems in wording
of specific questions identified in debriefing sessions and from taped interviews in Pretest 1 were successfully modified as was demonstrated in subsequent pretests.

The responses to Section 8 in Pretest 2, supported by reports at the debriefing session, confirmed the view that Section 8 as originally designed should be extensively modified. Specifically, the responses to open-ended attitudinal questions were often irrelevant and did not allow meaningful classification. There was, in addition, a significantly high rate of non-response, in some cases up to 66.6 percent on these questions. In other instances, incomplete or inadequate data was given. There was also an observed tendency on the part of the interviewer to skip some questions, perhaps as a result of experience of nonresponse to those particular questions.

Section 8 as designed for Pretest 3 provided significantly more useful information, although the attitudinal questions did create problems also. Problems of wording were also identified. These were adjusted on the main questionnaire.

As was mentioned earlier, the questions on assetowning by householders elicited hostile responses in Pretest 1 and in Pretest 2, and it was accordingly decided to omit it from the main survey.

With respect to non-response, indications were that total non-response was relatively low. Partial nonresponse, especially concentrated on specific questions, were identified to be more significant, and these were highlighted for special emphasis in the main training exercise.

Finally, as was planned, the output of the three pretests was used in designing and finalizing the training programme for the main survey as well as for developing the editing and coding manual. The schedules of field operations were also developed from the pretest records.

### 2.5. TRAINING

Jamaica's participation in the World Fertility Survey Programme was posited not only on the need to and desirability of collecting data on fertility for national and international usage but also on benefits to be derived from exposure to new techniques and methodologies employed in survey programmes. A major area identified for development in the Jamaican household survey programme was training and the opportunity was taken to apply the techniques being developed in the Jamaica Fertility Survey. Two officers of the department had in 1974 and 1975 been released to undergo training in training techniques; one at the Royal Institute of Public

Administration in London and the other through a locally organized Public Sector Training Course. Assigned to the Staff Development Unit of the Department, they were given the responsibility to organize, co-ordinate, and monitor the training of personnel with a view to selecting, from personnel so trained, editor-coders, supervisors and field interviewers for employment on the fertility survey. This required, inter alia, the selection of suitable training methods, formulation of a suitable time-table, selection and training of trainers, preparation of equipment and material for use in training, selection of training sites, and generally ensuring the smooth and successful execution of the training programme and the achievement of its objectives.

Training on the fertility survey took place during the following periods in 1975:
(1) First Pretest Training - June 9-16
(2) Second Pretest Training - August 8-September 3
(3) Third Pretest Training — August 8-September 5
(4) Workshop for Trainers - October 1-3
(5) Training - Main Survey - October 6-31

Training on the First Pretest was conducted by the Censuses and Surveys Division of the Department, using training methods formerly applied in such an exercise. These have been summarized earlier. All other phases of the training programme were directed by the Staff Development Unit. As part of the exercise of developing the training programme, professional staff from this unit participated in the debriefing sessions and evaluation exercises for all three pretests. Thus, the weaknesses and strengths of the training methods applied in each test were extensively assessed and applied to the overall development of the programme.

The main method applied was the exposition, demonstration and performance technique, or 'Tell, Show and Do'. Conventional lectures on background subjects and directly on the questionnaire were given. In addition, there were demonstration interviews, by group leaders as well as by peers, followed in each by discussion on these interviews. Respondents were in the former instances women without prior knowledge of the questionnaire; in the latter, fellow trainees. Tape recordings of interviews conducted during pretests were also used. Apart from the mock interviews and critiques, other practical work included written exercises on a number of points arising from the lectures. Overhead projectors, flip charts and blackboard were used extensively during training as well as other visual aids, developed by the Staff Development Unit.

These included charts, diagrams and blow-ups illustrating and highlighting areas of the Individual Schedule and the Household Schedule as well as the purpose of the survey and interviewing techniques.

Continuous assessment formed an integral part of the programme and was performed by the following methods:
(1) Continuous assessment of classroom performance of trainees by group leaders and course coordinators.
(2) Continuous assessment of the time-table for rescheduling where necessary.
(3) Mid-course test on definitions and concepts, the Household Schedule, and completed sections of the Individual Schedule.
(4) Assessment of trainees' performance during field practice interviews.
(5) Final examination on definitions and concepts, the Household Schedule, and the IIndividuai Scheduie.

A workshop aimed at familiarizing lecturers and group leaders with the techniques to be used in the training, to ensure uniformity in imparting concepts, definitions and methods in connection with the questionnaire and other survey documents, as well as to highlight areas of weakness in training (as evidenced from previous tests) for emphasis in final training, was organized for the week before the final training. Six general lecturers, ten group
leaders and the Course Co-ordinator participated in the workshop.

A total of 27 persons participated as trainers in the four phases of the survey, as guest lecturers, general lecturers and as group leaders. Of these, four were provided through the WFS Regional Office. Details are given in table below.

### 2.6. FIELD OPRRATIONS - MATN SURVEY

## Organization

The organization of the field operations of the survey was determined by several factors, the most important being the size and spread of the sample, the requirements for supervision and quick field edits, the need for security controls and the character of the survey itself. The basic unit was the team at the zonal level. Each team comprised one supervisor, one field editor and five interviewers, with the qualification that all members of the team, excluding the field editor, must be female. Although field editors could be of either sex, prefference was given to females to provide for the replacement of a supervisor if it became necessary. The teams were under the direction of the department's senior supervisors, each senior supervisor being assigned four teams. The chief supervisor of statistical enumeration in the department co-ordinated the over-all field operations.

The staff complement adopted for the field operations of the survey was as follows:

Table 2.3
NUMBER OF TRAINERS, BY TYPE AND BY INSTITUTION, AT EACH TRAINING PHASE

| Programme | Category | Institution | Trainers | Trainees |
| :---: | :---: | :---: | :---: | :---: |
| 1. Pretest 1 | General Lecturers Group Leaders | Dept. of Statistics <br> Dept. of Statistics | 5 |  |
|  |  |  | 4 |  |
|  |  |  | 9 | 16 |
| 2. Pretests 2 and 3 | Guest Lecturers | Ministry of Health Public Sector Management Training (Visiting Prof.) | 1 |  |
|  |  |  | 1 |  |
|  |  | WFS Regional Committee | 1 |  |
|  |  | Dept. of Statistics | 6 |  |
|  |  | Dept. of Statistics | 4 |  |
|  |  | Total | 13 | 22 |
| 3. Main Survey | Guest Lecturers | National Family Planning Board <br> University of the West Indies | 1 |  |
|  |  |  | 1 |  |
|  | General Lecturers | WFS London Office | 1 |  |
|  |  | WFS Regional Committee | 2 |  |
|  |  | Dept. of Statistics | 5 |  |
|  | Group Leaders | WFS London Office | $1 \dagger$ |  |
|  |  | WFS Regional Committee | $2 \ddagger$ |  |
|  |  | Dept. of Statistics | $11 \S$ |  |
|  |  | Total | 18 | 96 |
| 4. Trainers' Workshop | Discussion Leaders | WFS Regional Committee <br> Dept. of Statistics | 1 |  |
|  |  |  | 9 |  |
|  |  | Total | 10 | 16 |

$\dagger$ Same as general lecturer.
$\ddagger$ Same as general lecturers.
§ Includes 3 general lecturers.

| (1) Senior Assistant Director (NPS III) | 1 (Part-time) |  |
| :--- | :--- | :--- |
| (2) Chief Supervisor | (PMA II) | 1 (Part-time) |
| (3) Senior Supervisors | (PMA I) | 3 (Part-time) |
| (4) Field Supervisors | (CR IV) | 12 |
| (5) Interviewers | (CR II) | 60 |
| (6) Field Editors | (CR IV) | 12 |
| (7) Office Clerks (Field) | (CR II) | 12 |

The distribution of the field staff by sex, source and experience is shown in Table 2.4.

## Recruitment

To meet the identified staff needs, recruitment was designed to allow for training an excess of 10 per cent of all categories of staff. However, for a number of reasons, the level decided upon proved insufficient to meet the requirements. This margin proved inadequate to compensate for those candidates who failed to complete the training successfully (drop-outs, failing preliminary and final tests) or for those who found alternative employment or those who refused to take up employment on completion of training etc.

Accordingly, the actual number of interviewers assigned to the survey was 11.7 percent less than those proposed in the deployment plan. In the case of supervisors, problems were encountered in finding candidates who demonstrated a sense of maturity, possessed the necessary academic qualifications and/or supervisory experience, had access to a motor car for the purpose of travelling, or who could be available for the duration of the exercise on a full-time basis. Although field editors could be of either sex, preference was given to females to provide for replacement of supervisors if it became necessary.

## Enumeration

Enumeration commenced on target on 3 November 1975 and was scheduled for completion within six weeks. In nine of the twelve zones, enumeration was completed within seven weeks. In the remaining three, a number of problems were encountered, which delayed completion for a further five weeks. Some reasons for the delay in completion were:
(1) Out-of-season heavy rainfall.
(2) Difficulties encountered in contacting some eligible females.
(3) Low output by some enumerators in an atternpt to prolong the period of enumeration.
(4) Understaffing due to insufficient recruitment and to resignations.
(5) Civil disturbances interrupting the work programme in the Kingston Metropolitan Area and other semi-urban areas throughout the country.

Attempts were made to adhere strictly to the deployment plan, including the maintenance of weekly targets. However, towards the end of the survey, resulting from the problems encountered, some logistic flexibility had to be exercised. Interviewers, laid off for reasons referred to earlier, had to be replaced. Also, since all teams did not complete their assignments with a reasonable degree of simultaneity, wherever practical, interviewers from completed zones were transferred to zones where the workload was lagging.

## Locating the Households/Dwellings

Locating the households/dwellings presented no real problems except in 174 of the 5,579 households/dwellings assigned. Of the 174 not identified, 49 were in areas experiencing civil disturbances, 89 were not located due to

Table 2.4
DISTRIBUTION OF FIELD STAFF, BY SEX, BY SOURCE AND BY EXPERIENCE

| Type | Number | Sex |  | Source of Staff |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Male | Female | Dept. of Statistics Permanent Field Staff $\dagger$ | Recruited Temporarily |
| Chief Supervisor | 1 | 1 | - | , | - |
| Senior Supervisors | 3 | 3 | - | 3 | - |
| Zone Supervisors | 12 | - | 12 | 5 | 7 |
| Interviewers | 53 | - | 53 | 7 | 46 |
| Field Editors | 12 | 1 | 11 | 7 | 5 |
| Total | 81 | 5 | 76 | 23 | 58 |

$\dagger$ This staff also worked on pre-test field work in the same capacities, except for two interviewers and one field editor who served as zone supervisors.
the rapid changes occuring in the addresses and description of the dwellings as a result of the frequency with which households/dwellings were demolished, removed and reconsiructed, or constructed; secondly, to the high mobility rate of residents in some peripheral urban areas. The remaining 36 households/dwellings were not identified as a result of faulty listing, or preparation of assignment, insufficient information or, as in one instance, when the occupant was found to be mentally ill.

Interviewers were expected to work for a minimum of 40 hours per week. Time worked in excess of expected minimum was compensated for by time off at slack periods. The typical weekly pattern was that interviewers worked Mondays through Thursdays in the field conducting interviews. On Fridays at the designated office, all interviewers reported to their respective zone offices and handed in completed work, prepared proposed itineraries, discussed problems with supervisors and field editors, and collected questionnaires re-routed after field edits. Saturdays and Sundays were spent trying to contact those respondents or households who were not available during the week.

The typical pattern was such that the interviewers departed directly from the place of residence to the point of work, except in such cases where problems were being experienced. In such instances, interviewers reported to the office to discuss the situation with the supervisor whose typical daily activities required that she report to office every morning to deal with interviewers' problems or to collect new instructions from the Head Office, and where necessary, to consult with senior officers.

## Supervision

Twelve field supervisors were assigned to the project. The supervisors varied greatly in supervisory experience. A total of six of the supervisors were drawn from the department's staff, three from the permanent field supervisory staff, one from the editing and coding section, and two from the permanent team of enumerators. The others were selected after screening, testing and evaluation of their performance during the training period. Due to this variation of supervisory experience, continuous technical supervision was essential. In addition to the three senior supervisors and one chief supervisor, six members of the professional staff carried out field and office checks throughout the process of field enumeration.

Each supervisor was responsible to a senior supervisor for a team of interviewers. The supervisor ensured that:
(1) The workload was equitably distributed among the interviewers.
(2) The interviewers had an adequate supply of all materials required for the survey.
(3) The completed work was collected, checked and recorded.
(4) The quality control checks (spot checks) were carried out.
(5) The households visited were the correct ones.
(6) The dwellings reported by the interviewers as closed, vacant, refused, and not located were correctly reported on.
(7) Continuous information flow was established and maintained with Head Office.
(8) Travelling and subsistence claims were fair and reasonable.
(9) Staff was provided with guidance and instructions in the performance of their official duties.
(10) All relevant data were collected and field documentation was satisfactorily completed.

One supervisor found the assignment physically too difficult and consequently withdrew her service within the first three weeks. Her assignment was taken over by a member of the field editing team.

## Field Documentation

Field documentation on the Fertility Survey was similar to that which obtained for all continuous Social and Demographic Surveys conducted by the Department. The forms used are listed below and are reproduced in the Appendix.
(1) Assignment and Control Form. Form CSDS $13^{\text {F }}$
(2) List of Households to be enumerated.
(3) Record of completed work assignment.

Form CSDS 6
4) Enumerator's Daily Progress Report.

Form CSDS $62^{\mathrm{F}}$
(5) Itinerary Sheet.

Form CSDS $14^{\mathrm{F}}$
Form CSDS 7
Forms CSDS $13^{\mathrm{F}}$ and 6 were satisfactorily completed. Form CSDS 6 was frequently amended to indicate changes in household population, in the use of buildings, and in the physical characteristics of dwellings, etc. Form CSDS $62^{\mathrm{F}}$ was appropriately written up and in many instances was used to solve problems relating to the
number of eligible females found as against the number reported from the field. It was from this document that the Sample Design Section was able to extract the frame for the Post-Enumeration Survey.

The Enumerator's Daily Progress Report was satisfactorily used to obtain a quick count on the status of the field activities. Infrequently, it was observed that certain entries were not reflecting the correct situation; for example, Column II, Other Activities. This column was used to record activities which were not intended for inclusion; for example, office work not done on the normal office day or leave taken. In other instances the entries in the remarks column were imprecise; for example, 'rainy', 'time-off', 'feeling sick', without indicating the time lost. Interviewers were supplied with diaries in which a detailed summary of the day's activities should be entered. However, as a result of checks made by Senior Staff from Head Office it was observed that the entries made were inadequate. This situation when examined revealed that the Field Supervisory Staff was not checking this document. Further investigations indicated that a similar situation existed in respect to the Department's Permanent Field Staff. With the aid of the field documents, it was possible to summarize and analyse the distribution of time by the interviewers during the period of enumeration. Details of the distribution of time between the interviewers' various activities are accordingly indicated in Table 2.5.

The time spent on travelling was abnormally high when compared with other household surveys. Contributory factors were:
(1) This enquiry differed from other household surveys in that each respondent (eligible female) in this instance had to be contacted individually. Consequently, several trips were necessary to the same household to effect completion of the ultimate unit.
(2) In the first two weeks of the survey, interviewers spent too much time travelling in attempt to contact one or two eligible females in the ED so as to complete the work in the sampling unit rather than
moving on to other EDs in a new sampling unit, planning for call backs on occasional visits.

With respect to the time utilized under 'other activities', this represented time lost due to bad weather (rain provided the most significant contribution), time used to collect and discuss assignments, and time used for lunch. However, a number of interviewers included other variables in this section. For example, time-off, time lost due to short periods of illness, and time spent consulting with supervisor.

The time spent checking with supervisor appears very small; however, certain discrepancies were identified. For example, interviewers recorded only those periods when the supervisor stopped and spoke with them and omitted those periods when the supervisor worked alongside them. Secondly, this column did not include the time spent in office on Fridays with the supervisor.

## Payment of Salaries and Travelling and Subsistence

 AllowancesSalary cheques were prepared at the head office, where all approved taxable and non-taxable contributions were deducted. The cheques were mailed to zone offices where they were received by the administrative staff and distributed.

Supervisors were paid travelling allowances at government approved rates. Interviewers were reimbursed for all expenditure incurred for travelling by the public transportation system between the points of base and work. Subsistence was paid for work done in excess of 10 miles from base and working for a period of six hours or more. All claims submitted on prescribed forms were examined and compared with the itinerary sheets by the chief, senior, and zone supervisors. These claims were finally vetted by the administrator, who approved payment. Few minor delays were experienced in the payment of travelling and subsistence; contributory factors were primarily incomplete or inadequate information, which required re-routing the claim forms for proper completion.

Table 2.5
DISTRIBUTION OF TIME SPENT BY INTERVIEWERS ON VARIOUS ACTIVITIES

| Item | Number of Hours Spent in |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Travelling | Checking Boundaries | Enumerating | Completion of Records | Checking with Supervisor | Office <br> Work | Other Activities |
| Total | 4,012 | 710 | 4,908 | 662 | 329 | 2,281 | 3,467 |
| Percentage of Total Hours | 24.5 | 4.3 | 29.9 | 4.0 | 2.0 | 13.9 | 21.2 |

Administrative checks were kept to a minimum in keeping with an optimum level of efficiency. Consequently, payments were prompt except during the period of a postal strike. During the period of the strike a travelling officer was assigned the responsibility of distributing the cheques. The speed with which payments were effected assisted in boosting the morale of the employees.

### 2.7. QUAEITY CONTROL AND EVALUATION

## General

Confidence in any sample survey is built up when data from the survey compare favourably with data from other investigations, or when additional checks are made at some later date and the results support the findings of the original survey. The availability of sampling errors also helps to assess the reliability of the estimates generated from the survey. However, one of the crucial aspects of the success of any sample survey is the measures taken to minimize non-sampling errors.

In the fertility survey a number of quality control measures were employed during and after the enumeration period. Firstly, field editors were assigned to teams to edit all incoming questionnaires. All incomplete questionnaires and other errors identified were brought to the attention of supervisors who re-routed them for correction and employed immediate remedial action to reduce the repetition of errors. At the same time, supervisors undertook the following checks:
(1) Observation checks were carried out to observe the interviewer at work. The purpose of these checks was to see how the interviewers dealt with interviewing and also to ensure that the terms and concepts of the survey were properly interpreted and explained. Supervisors were required to carry out these observation checks during the first two weeks of the survey, observing each interviewer at no less than five households and on at least two occasions during the period.
(2) Spot checks. The senior supervisor assigned to each supervisor two households per interviewer for reinterview after the questionnaires had been passed to the senior supervisor. The re-interview was done as soon as possible after the supervisor's assignment was issued and the completed questionnaires submitted to the senior supervisor for comparison with the one completed by the interviewer. In nearly all instances, observed differences were minor, resulting mostly from interviewer's fatigue; incorrect summation; faulty entries, such as not record-
ing pregnancy history in the correct time sequence; differences in the completion of those questions based on judgement, or where the respondents were different persons.
(3) Non-response checks. Supervisors checked all households reported by the interviewer to be vacant or closed. Also, respondents who refused to be interviewed by the interviewer were contacted by the supervisor who tried to complete the interview.
At the national level, professional staff from headquarters visited the zone offices and made random checks on the completed questionnaires. The quality of work seen was good in most instances. However, some interviewers were very weak in specific sections. Where such weakness was observed it was brought to the attention of the supervisor, and corrective action suggested. This included re-training in the specific areas and closer supervision.

## Post-Enumeration Checks

At the end of January 1976, enumeration was completed in all but two PSUs. In these, civil disturbances made it dangerous for the interviewers to operate. It was accordingly decided to cease enumeration altogether. Some post-enumeration checks were instituted, however. On completion of the main survey, comparisons between the actual and expected ratios of eligible females per dwelling showed some variation. A total of 3,329 eligible females were located in 4,613 households, an average of 0.72 eligible per household. The expected average based on our estimates was 0.81 . Of the 4,613 households enumerated, 1,785 or 38.7 percent had no eligible females. On the basis of this it was decided to check on the quality of enumeration in these households, recognizing that under-enumeration could have occurred in the other 61.3 percent of households in which at least one eligible female was located, but to carry out the checks only in households reporting no eligible females.

A total of 180 households, scattered over 165 primary sampling units, and representing a 10 percent sample of the 1,785 households with no reported eligible females, were selected at the zonal level for investigation over a two-week period in a post-enumeration survey. The investigations were carried out in February, approximately one month after the close of the main survey. Investigations were to determine if there were any eligible females in the assigned households and if so, were they present and eligible during the survey. It was recognized that problems of recall lapses could introduce some bias, particularly in the instances where households had been enumerated early in the survey. Despite this, however, it
was considered that the results from this exercise would be useful in identifying the significance of the problem, if in fact one existed.

## Organization

For the conduct of the post-enumeration survey the twelve zones into which the island was subdivided during the main survey were retained. Eighteen interviewers were assigned to the programme; one was temporarily recruited as the department had no female interviewer in the particular zone. All the interviewers possessed experience in the operation of the fertility survey, having either worked in one or more phases and or stages of the Jamaica Fertility Survey Programme.

The objective was therefore to determine the level of under-enumeration. No attempt was made in this exercise to re-enumerate households, apart from completing the household scheduie.

Supervision was done by the department's field staff, with eight zones having female supervisors. Provisions were made for professionals from the head office to keep in close touch with the field staff.

Interviewers were instructed to
(1) Visit each designated household.
(2) Complete the household schedule.
(3) If an eligible female was identified, determine if the period of residency included the survey period: 1 October-22 December (except for Kingston and St. Andrew, St. Catherine, and Clarendon, where interviewing continued until the end of January 1976).

## Evaluation of the results

The evaluation of this exercise was carried out in the following stages:
(1) Detailed quantitative assessment of coverage;
(2) Comparison of household schedules completed on both the main and post-enumeration surveys;
(3) Identifying and matching interviewers to observe to what extent interviewers enumerated the same household on both surveys.

In the two weeks in which the PES was conducted, all households assigned were located. In 23 of these households, 24 eligible females were identified. The reasons for non-enumeration of the respondents during the main survey period are given in Table 2.6.

The analysis of the data indicates that 93 percent of the 180 households were properly identified on the first time of the interview. Of the total, under-enumeration occurred in 3.3 percent of the households and in a further 2.8 percent of the households, females were identified as eligible, but no questionnaires were found.

A comparison of the household schedule completed on the main and on the post-enumeration survey indicated a few differences in the population structure (age, marital status, sex, size) and the names of all occupants of the households. However, the differences in the status of eligibility observed with respect to occupants reported on both surveys was minimal. Where differences on the status of eligibility were observed the condition resulted from faulty reporting or non-reporting on the main survey. Closely linked to this was the problem of mobility of household members (into and out of the designated households). Where this was not noted by the interviewer it could be inferred from the significant changes in the names obtained on both surveys.

Table 2.6
REASONS FOR NON-ENUMERATION IN MAIN SURVEY
(BASED ON POST-ENUMERATION SURVEY)

| Reasons for Non-enumeration | Number |
| :---: | :---: |
| Eligible female moved into designated household after the household was enumerated on the Main Survey, but during survey period | 5 |
| Eligible female is very sick (mentally ill) | 1 |
| Eligible females stopped attending school since the completion of Main Survey. The school leaving age ranges from 15 to approximately |  |
| 18 years | 2 |
| Incorrect age reported by respondent other than eligible female completing the household schedule on Main Survey | 1 |
| Wrong household enumerated on the Main Survey | 1 |
| Residency qualification at the time of the Main Survey was not precisely defined, e.g. the female started a visiting relationship with the male partner, but the relationship took on permanent characteristics during the post-enumeration period | 5 |
| Eligible females appear to satisfy all the requirements for inclusion in the Main Survey | 5 |
| Doubtful, e.g. respondent reported that she was interviewed on Main Survey, but no questionnaire relevant to her could be found | 4 |
| Total | 24 |

A matching of the interviewers who worked the designated households during the main survey and the post-enumeration survey showed that only 9 percent of the households were enumerated by the same interviewers on the post-enumeration exercise.

The quality controls employed were similar to those of the main survey.

### 2.8. EVALUATION

Evaluation of the data is based on preliminary results from the household schedule, base frequencies of a number of variables, and the published results of other investigations, in particular the Labour Force Survey, conducted about the same time as the Fertility Survey and the Population Censuses of 1960 and 1970. The variables used in this exercise were selected more on the basis of the availability of comparable data than on the basis of any systematic criteria.

Table 2.7
PERCENT DISTRIBUTION OF POPULATION, BY AGE GROUP AND BY SEX: 1960 AND 1970 CENSUSES AND LABOUR FORCE AND FERTILITY SURVEYS - HOUSEHOLD SCHEDULE

| Age Group | Censuses |  | Surveys |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1960 | 1970 | Labour Force October 1975 | $\begin{aligned} & \text { JFS } \\ & 1975 \end{aligned}$ |
| Both Sexes |  |  |  |  |
| 0-14 | 41.2 | 46.1 | 43.1 | 43.5 |
| 15-19 | 9.0 | 9.1 | 10.9 | 11.0 |
| 20-24 | 7.8 | 6.9 | 7.1 | 7.3 |
| 25-29 | 6.9 | 5.6 | 5.8 | 5.8 |
| 30-34 | 5.8 | 4.5 | 4.6 | 4.5 |
| 35-39 | 5.6 | 4.5 | 4.1 | 3.9 |
| 40-44 | 5.1 | 4.3 | 4.1 | 3.7 |
| 45-49 | 4.8 | 3.8 | 3.8 | 3.6 |
| 50 and over | 13.8 | 15.4 | 16.5 | 16.7 |
| Male |  |  |  |  |
| 0-14 | 43.0 | 47.6 | 44.6 | 44.7 |
| 15-19 | 8.8 | 8.9 | 10.8 | 10.9 |
| 20-24 | 7.3 | 6.6 | 6.9 | 7.2 |
| 25-29 | 6.4 | 5.5 | 5.8 | 5.8 |
| 30-34 | 5.5 | 4.3 | 4.7 | 4.7 |
| 35-39 | 5.3 | 4.2 | 3.8 | 3.7 |
| 40-44 | 5.1 | 4.2 | 4.0 | 3.7 |
| 45-49 | 5.0 | 3.8 | 3.7 | 3.7 |
| 50 and over | 13.3 | 14.8 | 15.7 | 15.6 |
| Female |  |  |  |  |
| 0-14 | 39.4 | 44.7 | 41.6 | 42.4 |
| 15-19 | 9.1 | 9.0 | 11.0 | 11.1 |
| 20-24 | 8.1 | 7.2 | 7.2 | 7.3 |
| 25-29 | 7.3 | 5.7 | 5.7 | 5.7 |
| 30-34 | 6.1 | 4.6 | 4.6 | 4.3 |
| 35-39 | 5.9 | 4.6 | 4.5 | 4.1 |
| 40-44 | 5.0 | 4.4 | 4.2 | 3.8 |
| 45-49 | 4.7 | 3.9 | 4.0 | 3.5 |
| 50 and over | 14.2 | 15.9 | 17.3 | 17.8 |

## Age Distribution of Population

The age distribution of the population has been tabulated from the household schedule of the Fertility Survey as well as from the October 1975 Labour Force Survey and the Censuses of 1960 and 1970. The results from both sample surveys seem consistent and the differences are not statistically significant. There are only a few major differences between the surveys and the censuses, particularly in the age group 0-14, among males and females. The 1970 Census results show a higher percent of the population in the $0-14$ age group. If the survey results are accepted, then the tendency is towards an increase in the proportion of the population 50 years of age and over and a lowering in the age group $0-14$. This is illustrated in Table 2.7.

## Union Status

Only limited comparisons may be made concerning the pattern of union history between the sampled population and earlier enquiries. Data from the population censuses of 1960 and 1970 for persons whose current union status was married and living with husband may be compared directly with data from the Fertility Survey. The concept of Common-law as defined in the Fertility Survey was introduced in the 1960 Census and maintained in the 1970 Census. The concept of Visiting, however, was not introduced until 1970, and in this enquiry was limited only to women who had had one or more children and no stable partner, common-law or married. Comparative distributions are presented in Table 2.8 below. The age range used is $15-45$ years, the range for which comparable information is available.

## Education

The level of education attained according to the 1970 Census and the JFS Survey are compared in Table 2.9. Since the survey is about 5 years later than the census

Table 2.8
PERCENT DISTRIBUTION OF WOMEN AGED 15-45, BY UNION TYPE: 1960, 1970 AND 1975

| Union Status | Women Aged 15-45 |  |  |
| :---: | :---: | :---: | :---: |
|  | 1960 Census | 1970 Census | JFS 1975 |
| Married | 26.2 | 29.3 | 28.3 |
| Common-law | 18.7 | 24.8 | 25.6 |
| Visiting | - $\dagger$ | $6.2 \dagger$ | 19.6 |
| No Longer Living with Partner | 18.6† $\} 55.3$ | $8.3 \dagger$ ¢ 45.9 | 15.3 ¢ 46.1 |
| Never Had a Partner | 36.7 $\ddagger$ | 31.4 $\ddagger$ | 11.2 |

[^7]year, each census age group should be compared with women five years older at the time of the survey, which is still an approximation. As the table shows, the survey population age 20 and over is very similar to the census population. The 15-19 group at survey time cannot be compared with the census population since when these women were 10-14 years old in 1970, they would still be in primary school.

Table 2.9
COMPARISON OF LEVEL OF EDUCATION ATTAINED: 1970 CENSUS AND JFS SURVEY 1975

|  | 1970 Census |  |  | JFS 1975 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Age Group | Primary | Secondary |  | Primary | Secondary |
| $15-19$ | 66.0 | 38.8 |  | $37.4 \dagger$ | $62.6 \dagger$ |
| $20-24$ | 79.1 | 20.5 |  | 65.0 | 35.0 |
| $25-29$ | 85.8 | 13.7 |  | 73.2 | 26.8 |
| $30-34$ | 88.5 | 11.0 |  | 83.2 | 16.8 |
| $35-39$ | 90.0 | 9.6 |  | 87.0 | 13.0 |
| $40-44$ | 91.8 | 7.7 |  | 89.3 | 10.7 |
| $45-49$ | 92.9 | 6.7 |  | 89.7 | 10.3 |

$\dagger$ Estimated, assuming that all 15-19 year-olds in school had reached some level of secondary education.

## Religion

The distribution by religious persuasion of the female population aged 15-49 and not attending school has been examined in the Fertility Survey and in the 1970 Census. The pattern in both studies appears similar, although there are differences in proportions. However, both show the major denominations as Anglican, Church of God, and Baptist. The Fertility Survey shows a higher proportion of persons reporting other denominations or no religion. This is illustrated in Table 2.10.

Table 2.10
PERCENT DISTRIBUTION OF FEMALE POPULATION AGED 15-49 BY RELIGION: 1970 POPULATION CENSUS AND JAMAICAN FERTILITY SURVEY

| Religion | 1970 <br> Population <br> Census | Jamaican <br> Fertility <br> Survey |
| :--- | :---: | :---: |
| Anglican | 15.9 | 12.4 |
| Baptist | 17.8 | 16.6 |
| Church of God | 17.5 | 20.9 |
| Methodist | 6.3 | 4.6 |
| Moravian | 2.8 | 2.4 |
| Presbyterian/Congregational | 5.1 | 3.3 |
| Roman Catholic | 8.5 | 8.4 |
| None/Other | 26.1 | 31.3 |

### 2.9. RESPONSE RATES

The sample yielded 5,579 dwellings but at the completion of field investigation the actual sample size turned out to be 5,654 (see Table 2.11). Of this total approxi-
mately 12 percent were vacant, closed or had been demolished between the listing exercise and the enumerations period. Total refusal was experienced in 3.2 percent of the dwellings and other non-enumerations, accounted for 3.1 percent. Enumeration was therefore conducted in 4,613 dwellings or approximately 82.7 percent of the originally selected sample. But among households in which enumeration was possible nonresponse further reduced the outcome of the sample. Not all eligible females were interviewed for one reason or another. Nearly 3 percent of those identified refused to give any information and a further 1 percent refused to complete the interview. Enumerators were not able to contact about 2 percent of all eligible females and in a comparatively small number of cases although contact was made interviews were not successfully concluded. A total of 93.7 percent of all eligible females were interviewed.

Every effort was made to keep non-response to a minimum. Enumerators were instructed to make at least three visits to the dwellings of respondents who could not be located, after which the supervisor took responsibility for the enumeration of the respondents. Total refusals would have been lower but for the non-enumeration of two PSU's because of civil disturbance in a particular area over an extended period.

### 2.10. DATA PROCESSING

## Editing and Coding

As is customary for any investigation of this type an editing and coding manual was prepared, outlining in detail just what was required of the editor-coders. Their main tasks may be summarized as follows:
(1) Check that all skip instructions were followed correctly.
(2) Verify the consistency of the answers given.
(3) Transfer all the data to the boxes provided at the right hand side of each page of the questionnaire.

Five clerks, four of whom had worked as enumerators on this survey, were selected and trained as editor-coders. They were supervised by a statistician. On finding any inconsistency or omission in a questionnaire, the editorcoders were allowed to change it, but only if the correct answer was perfectly obvious or could be obtained from elsewhere in the questionnaire. All other errors that could not be corrected by the editor-coders were forwarded to the supervisor who decided whether the questionnaire should be returned to the field for checking. Some

Table 2.11
RESPONSE RATES OF THE HOUSEHOLD AND INDIVIDUAL SURVEYS

| Parish | Number of PSU's | Number of Dwellings/Households |  |  |  |  |  |  |  | Number of Individual Respondents |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total | Found | $\begin{gathered} \text { Enumer- } \\ \text { ated } \end{gathered}$ | Refused | Vacant | Closed | Demol- <br> ished | Other Non-enumcration | Total Eligible Females | Completed Interviews | Refusals | Partial Refusal | No Contact |  |
| All Parishes | 425 | 5,579 | 5,654 | 4,613 | 181 | 448 | 138 | 100 | 174 |  |  |  |  |  |  |
| Kingston | 32 | 347 | 323† | 254 | 26 | 17 | 13 | 1 | 7 | 164 | 148 | 7 | 5 | 3 | 1 |
| St. Andrew | 100 | 1,372 | 1,399 | 1.121 | 106 | 67 | 33 | 13 | 59 | 973 | 881 | 56 | 10 | 25 | 1 |
| St. Thomas | 18 | 216 | 216 | 152 | 5 | 25 | 8 | 8 | 18 | 75 | 68 | 3 | - | 3 | 1 |
| Portland | 16 | 207 | 208 | 177 | 5 | 10 | 6 | 10 | - | 107 | 97 | 1 | - | 8 | 1 |
| St. Mary | 24 | 282 | 286 | 228 | - | 38 | 8 | 10 | 2 | 154 | 153 | 1 | - | - | - |
| St. Ann | 24 | 298 | 300 | 246 | - | 22 | 9 | 4 | 19 | 169 | 166 | - | - | 3 | - |
| Trelawny | 14 | 171 | 171 | 132 | 1 | 20 | 4 | 2 | 12 | 70 | 67 | - | - | 2 | 1 |
| St. James | 24 | 345 | 355 | 317 | 2 | 30 | 4 | 2 | - | 189 | 183 | 2 | - | 4 | - |
| Hanover | 14 | 119 | 126 | 116 | - | 6 | 3 | 1 | - | 63 | 61 | - | - | 2 | - |
| Westmoreland | 26 | 341 | 341 | 226 | 6 | 27 | 9 | 5 | 28 | 182 | 169 | 6 | 1 | 5 | 1 |
| St. Elizabeth | 26 | 317 | 321 | 284 | 2 | 31 | 1 | 1 | 2 | 190 | 183 | 1 | 1 | 1 | 4 |
| Manchester | 24 | 319 | 321 | 274 | 7 | 32 | 3 | 5 | - | 186 | 182 | 1 | 2 | 1 | - |
| Clarendon | 38 | 489 | 505 | 434 | 5 | 50 | 2 | 8 | 6 | 276 | 259 | 10 | 2 | 4 | 1 |
| St. Catherine | 45 | 756 | 782 | 612 | 16 | 73 | 30 | 30 | 21 | 510 | 485 | 6 | 6 | 13 | - |
| Jamaica |  |  |  |  |  |  |  |  |  | 3,308 | 3,102§ | 94 | 27 | 74 | 11 |

[^8]questionnaires were in fact re-routed to the field; in the majority of cases this was because of missing or inconsistent dates.

The manual editing and coding took considerably more time than was originally estimated. This was because estimates were made before the questionnaire had been developed. In addition, the fact that some questionnaires had to be re-routed to the field contributed to lengthening of the process.

## Key Punching

The data was punched in overtime by the Department's Key Punching Staff. This was a straightforward exercise and was completed in a little over two months.

## Machine Edits

The mechanical editing was divided into four stages:
(1) Structural Checks

This programme was written in RPG II and was processed using the Department's System 3 Computer. Special checks were made to ensure that all the required card types were present.
(2) Range Checks

Following on an earlier decision that the package CONCOR should be used in the editing of the Jamaica Survey, a staff member from WFS, London, came to Jamaica to install and train local staff in the use of this package. Because of core

[^9]requirements, the package was installed on the government's main computer at the Central Data Processing Unit.

At that time, however, CONCOR was not at the level of development that was anticipated, and numerous difficulties arose when trying to execute the programme. Finally, after visits at different times from two additional staff members, and the installation of the third version of CONCOR, some satisfactory edit reports were obtained.

The above delays proved very costly: over eighteen months were spent in trying to get the programme going. During this period the clerical staff had to be maintained since there was no certainty that they would be available for reemployment, nor was it envisaged that the debugging of the programme package would take such a long time.
(3) Skip Checks

As CONCOR continued to be a problem it was finally abandoned. Instead a COBOL programme was written to do the skip checks. This was processed on the department's computer.
(4) Consistency Checks

The consistency checks were more or less a repeat of the edit checks that were done at the manual editing stage of the exercise. Special attention was given to the Pregnancy and Partner

Relations tables to ensure that the elapsed time between 'occurrences' was credible. In the case of the Pregnancy History it was found that although all pregnancies were recorded they were not always in chronological order. These had to be recoded in order to make it easier for checking as well as to make the data easier to manipulate at the tabulation stage.

## Tabulation

It was agreed that Guyana, Trinidad, and Jamaica should adopt a joint tabulation plan. One officer from each country, together with a staff member from WFS, London, met with the Regional Coordinator and his deputy in September 1976 to decide on this approach.

At this meeting it was agreed that the table programmes would be written in COCENTS. For ease of tabulation a common tape layout was designed to include 225
variables which were considered necessary in producing the tables for Country Report No. 1. The first draft of the Recode Instructions, showing how each variable should be computed, was prepared. (Subsequent adjustments were made by the Office of the Regional Coordinator. The final draft was completed in October 1977.) Coding for most of the table programmes was also done at this meeting.

The Recode Programmes were written independently by each country. Marginals from both the raw data and the recoded data were also prepared and sent to the Regional Coordinator for analysis. The table programmes were keypunched and tested by Jamaica and Guyana.

The Computer Systems section in the Department of Statistics is a comparatively young team. Participating in this exercise has been a learning experience. Special thanks must be given to Mr. Bogale Demissie from WFS, London, who assisted us greatly in the coding testing and in the production of the tables.

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## CHAPTER 3

## SUBSTANTIVE RINDINGS OF THE SURVEY

### 3.9. IRTTHODUCTON: CHARACTERESTES OR THE SAMPLE POPULATION

It is interesting and useful to begin this chapter by examining the characteristics of the sample population studied in the Jamaica Fertility Survey. All women in selected households, regardless of current union status, were eligible for interview except for the following two restrictions: they should be 15 to 49 years of age on their last birthday, and should not be full-time students at a primary or secondary school at the time of the enumeration. All eligible women were interviewed about their background characteristics (age, education, religion and place of birth), about their pregnancy history (Section 2 of the Questionnaire), and about whether they were at the time, or ever had been, in a married, common law or visiting union (Section 3 of the Questionnaire). Those women who had never been in a union were not asked any further questions and, therefore, are omitted from the appendix tables. They are also omitted from the discussion in this chapter, except for the description of the background characteristics of the sample population in the present section. The study population, therefore, comprises all women in the sample aged 15-49 who were ever in a union.

The distribution of the study population and of the women never in a union by age, area of residence, educational attainment, religion and current union status is shown in Table 3.0.A. The total number of women for whom complete and satisfactory questionnaires were obtained was 3,096 , of whom 2,765 were or had been in a union and 331 ( 11 percent) had never been in a union.

### 3.0.1. Age

Of the 2,765 women ever in a union, the largest proportion ( 20 per cent) was in the age group 20-24. The proportion was progressively less for the next two age groups ( 18 and 14 percent, respectively) so that over onehalf of the women were in the potentially high fertility age span 20-34 years. There were 11-12 percent in each of the age groups 15-19, 40-44, and 45-49.

The distribution by age of the women never in a union was understandably quite different, with 61 percent in age group 15-19, 24 percent in the $20-24$ age group, and the remaining 15 percent aged 25 and over.

### 3.0.2. Level of Education

Sixty-three percent of the women ever in a union had received 4 or more years of primary education but had not gone to secondary school, while 14 percent had received less than 4 years of primary schooling, including about 2 percent ( 44 women) who had received no schooling at all (Table 3.0.A). The remaining 23 percent of the women ever in a union had been to secondary school or higher. The number of women who had received university or other post-secondary education was too few to justify attempting to keep these as a separate group. On the other hand, while it may appear that the very large proportion with 4 or more years of primary schooling might have been further subdivided, this group includes, in fact, 48 percent with 6 years of primary education, while the remaining 15 percent had either 4 or 5 years of education. It was felt that women with 4 or 5 years of primary education would be more meaningfully grouped with those having 6 years of education than with those having less education.

Among the women never in a union, who, as indicated above, were on average a much younger group, the proportion who had received secondary or higher education was 49 percent.

### 3.0.3. Place of Residence

A simple urban-rural dichotomy, as defined in Chapter 2 , is used to classify the sample population by place of residence. The women ever in a union were evenly distributed between these two types of area with 48 percent living in urban and 52 percent in rural areas (see Table 3.0.A).

### 3.0.4. Religion

The largest denomination was the Church of God with 21 percent of the women ever in a union (see Table 3.0.A). Other large denominations were Baptist ( 17 percent) and Anglican (12 percent). Roman Catholics comprised 8 percent while a similar proportion reported 'no religion'. One-quarter of the women ever in a union were in small denominations which have been grouped together. For the most part they are classified as Protestant Nonconformist.

Table 3.0.A
PERCENT DISTRIBUTION OF ALL WOMEN IN THE SAMPLE NEVER IN A UNION AND EVER IN A UNION, BY SELECTED CHARACTERISTICS

| Characteristics | Never in a Union | Ever in a Union | Characteristics | Never in a Union | Ever in a Union |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | (b) Level of Education |  |  |
| All Women | 331 | 2,765 | Primary: <4 years $\ddagger$ \} | 51 | 14 |
| (a) Age |  |  | Secondary | 49 | 23 |
| 15-19 | 61 | 11 |  |  |  |
| 20-24 | 24 | 20 |  |  |  |
| 25-29 | 6 | 18 | (c) Place of Residence |  |  |
| 30-34 | 2 | 14 | Urban | n.a. | 48 |
| 35-39 | 2 | 14 | Rural | n,a. | 52 |
| 40-44 | 1 | 12 |  |  |  |
| 45-49 | 2 | 12 |  | All | Ever in a Union |
|  |  |  |  | Women |  |
| (e) Religion - |  |  |  |  |  |
| Anglican | 14 | 12 | (d) Current Union Status |  |  |
| Baptist | 13 | 17 | Married | 29 | 32 |
| Protestant Nonconformist $\dagger$ | 9 | 10 | Common Law | 26 | 29 |
| Roman Catholic | 7 | 8 | Visiting | 20 | 22 |
| Church of God |  | 21 | Single | 15 | 17 |
| Other $\}$ | 57 | 24 | Never in a Union | 11 | . |
| None $\quad$ |  | 8 |  |  |  |

$\dagger$ Includes Methodist, Moravian, Presbyterian and Congregational.
$\ddagger$ Including no education.
Note: Cell marked with a dot ( $\cdot$ ) is a logically impossible category.
Source: Special tabulations and marginals.
The distribution of women never in a union was very similar to that of ever in a union women, for all age groups in which the breakdown was available.

### 3.0.5. Current Union Status

Of the women ever in a union, one-third were married and living with their husbands at the time of the survey (see Table 3.0.A). A slightly smaller proportion (29 percent) were in a common law union and 22 percent were in a 'visiting' union. The remaining 17 percent did not have a partner at the time of the survey. Confining our attention to those women 'currently' in a union (i.e. excluding those classified as single), the proportions married, common law, and visiting were 39,35 , and 27 percent, respectively.

Of all the women in the sample, 11 percent had never been in a union, 74 percent were currently in a union, and 15 percent were single.

As will be expected, many of the above background variables are closely associated, and hence in the relatively simple analysis that will be undertaken in this report these interrelationships will have to be borne in mind. For example, it is known that the level of education is higher in urban than in rural areas, and hence this would have to be borne in mind when, in later sections, we relate these variables separately to dependent variables, such as fertility and contraception. It is, therefore, useful at this stage, to look at the relationships between some of these
background variables. This is done below for women ever in a union only, as this is the group of women to whom all remaining sections of the report will relate.

### 3.0.6. Level of Education and Age

There has been a considerable improvement in the level of education over time as can be seen by the very large decline in the proportion of women in the lowest educational group (see Table 3.0.B). Among women 35 years and over one in four had less than 4 years of primary education; the proportion at this level was only about 1 in 20 for women under 25 years of age, and indeed

Table 3.0.B
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO LEVEL OF EDUCATION, BY CURRENT AGE

| Current Age | Number of Women | Level of Education |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Primary |  | Secondary and Higher |
|  |  | <4 Years | $4+$ Years |  |
| All Ages | 2,765 | 14 | 64 | 23 |
| 15-19 | 303 | 3 | 51 | 46 |
| 20-24 | 565 | 7 | 60 | 33 |
| 25-29 | 485 | 10 | 65 | 26 |
| 30-34 | 384 | 11 | 73 | 16 |
| 35-39 | 371 | 24 | 64 | 12 |
| 40-44 | 333 | 26 | 63 | 10 |
| 45-49 | 324 | 22 | 68 | 10 |

[^10]only 3 percent for those $15-19$ years old. At the other extreme, nearly one-half of the women 15-19 years old had received secondary or higher education as compared with one-third of those aged $20-24$ years and only 10 percent of those 40 years old and over.

### 3.0.7. Place of Residence and Age

Women in the age span 25-34 years have the highest proportion living in urban areas (52-58 percent) (see Table 3.0.C). The proportion is somewhat lower for younger women (48-49 percent) but, expectedly, appreciably lower for women 35 years and older. This pattern is undoubtedly largely the result of age-selective rural to urban migration. One irregularity in the pattern is that women 45-49 years old had a much higher proportion living in urban areas than did the preceding age group 4044. This irregularity cannot be explained from the figures available from the survey. It will be noted, however, that the irregularity is mirrored in Table 3.0.B above in that the proportion in the lowest educational group is lower for women 45-49 than for women 40-44 years old.

Table 3.0.C
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO PLACE OF RESIDENCE, BY CURRENT AGE

| Current <br> Age | Number <br> of <br> Women | Urban | Rural |
| :---: | :---: | :---: | :---: |
| All Ages | 2,765 | 48 | 52 |
| $15-19$ | 303 | 48 | 52 |
| $20-24$ | 565 | 49 | 51 |
| $25-29$ | 485 | 58 | 42 |
| $30-34$ | 384 | 52 | 48 |
| $35-39$ | 371 | 43 | 57 |
| $40-44$ | 333 | 34 | 66 |
| $45-49$ | 324 | 41 | 59 |

Source: Derived from Appendix Table 1.5.1B.

## 3.0.o̊. Reeligion and Age

Table 3.0.D does not demonstrate any simple, consistent relationship between religion and age as is evident for the other two background variables just discussed. There is evidence, however, that the Church of God has attracted a larger proportion of the young women under 35 years of age (about 23 percent) than it has among older women ( 19 percent). Anglicans, on the other hand, had a smaller proportion of young women under 30 years (8-12 percent) than of older women (14-16 percent). Protestant Nonconformists (Methodists, Moravians, Presbyterians and Congregationalists) also had few young persons, particularly under 25 years of age. No clear pattern emerges for the other denominations except that the residual group 'Other' has higher proportions among the youngest and the oldest women and relatively fewer among those in the middle ages, while the proportion reporting 'no religion' was much higher for girls $15-19$ years of age than for older women.

### 3.0.9. Level of Education and Residence

The urban population has a higher level of education than the rural, as can be seen from the fact that among the former 31 percent had obtained secondary or higher education as against only 14 percent of the latter (see Table 3.0.E). Conversely, only 10 percent of the urban women were in the lowest educational group as compared with 18 percent of the rural women. In recent years secondary schools are being made more and more available in rural areas so that there may be a tendency for the difference to be reduced; on the other hand undoubtedly rural to urban migration remains highly selective as regards the level of education, with a much higher proportion of the better educated women being attracted to urban areas.

Table 3.0.D
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO RELIGION, BY CURRENT AGE

| Current Age | Religion |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Anglican | Baptist | Protestant Nonconformist $\dagger$ | Roman Catholic | Church of God | Other | None |
| All Ages | 12 | 17 | 10 | 8 | 21 | 24 | 8 |
| 15-19 | 8 | 16 | 6 | 9 | 22 | 28 | 12 |
| 20-24 | 12 | 14 | 9 | 10 | 25 | 23 | 7 |
| 25-29 | 12 | 18 | 12 | 8 | 20 | 22 | 8 |
| 30-34 | 14 | 15 | 13 | 10 | 23 | 19 | 6 |
| 35-39 | 11 | 18 | 11 | 7 | 19 | 24 | 10 |
| 40-44 | 16 | 19 | 11 | 6 | 19 | 25 | 6 |
| 45-49 | 16 | 19 | 10 | 6 | 19 | 27 | 4 |

[^11]Table 3.0.E
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO LEVEL OF EDUCATION, BY PLACE OF RESIDENCE

|  |  | Level of Education |  |  |
| :--- | :---: | :--- | :---: | :---: |
| Place of <br> Residence | Number <br> of <br> Women | Primary |  | Secondary <br> and <br> Higher |
| All Women | 2,765 | 14 | $6+$ Years | 64 |
| Urban | 1,319 | 10 | 59 | 23 |
| Rural | 1,446 | 18 | 68 | 31 |

Source: Derived from Appendix Table 2.2.7A.

### 3.0.10. Level of Education and Religion

Should we find, in later sections, that religion appears to be associated with the level of fertility, the knowledge and use of contraception and other dependent variables being studied, an interesting matter for speculation would be whether it is the religious beliefs and practice or the socioeconomic differences between the religions that is mainly operative. While it would be outside the scope of this report to attempt any serious analysis of this complex question, an awareness of the differences of the level of education and place of residence of the different denominations may be useful in drawing attention to the possible significance of socio-economic differences.

Table 3.0.F classifies women ever in a union according to educational level by religion. The Roman Catholics may be judged the most highly educated group, as they have by far the highest proportion with secondary or higher education (47 percent) and the lowest proportion (8 percent) with less than 4 years of primary schooling. Next, on this basis, are the Anglicans and the Protestant Nonconformists who have 27-30 percent in the highest educational group and only 9 percent in the lowest. On the other hand, the religious denominations with the lowest proportion having secondary education are the Church of God (14 percent) and the Baptists ( 17 percent). Women of 'no religion', however, had the highest proportion with less than 4 years of primary education ( 25 percent), followed by women of the Church of God ( 18 percent).

This is, of course, a very crude use of the data on educational attainment, as we have ignored the middle educational group in order to simplify the comparison, and have made no attempt to use the mean number of years of education or other indicator of the general level of education of the various denominations. The reason is that, as will be seen in the later sections, there is enough significant difference between the patterns of behaviour of the most and least educated to warrant this simple use of

Table 3.0.F
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO LEVEL OF EDUCATION, BY RELIGION

| Religion | Number of Women | Level of Education |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Primary |  | Secondary and Higher |
|  |  | $<4$ Years | $4+$ Years |  |
| All Women | 2,765 | 14 | 64 | 23 |
| Anglican | 343 | 9 | 61 | 30 |
| Baptist | 461 | 13 | 70 | 17 |
| Protestant Nonconformist $\dagger$ | 286 | 9 | 64 | 27 |
| Roman Catholic | 233 | 8 | 45 | 47 |
| Church of God | 577 | 18 | 69 | 14 |
| Other | 657 | 15 | 65 | 20 |
| None | 208 | 25 | 54 | 21 |

$\dagger$ Methodist, Moravian, Presbyterian, and Congregational.
Source: Derived from Appendix Table 2.2.7B.
educational level in the unsophisticated study to which we are limited at this stage.

### 3.0.11. Place of Residence and Religion

Residence is the other variable now cross-classified by religion (Table 3.0.G). Roman Catholics were much more urban-centred than any other denomination; 80 percent of this religious group lived in urban centres. Next were Anglicans, but with only 52 percent living in urban areas. These two denominations, together, comprised one-fifth of the total study population. The urban-rural distribution of the remaining denominations and of those with no religion was remarkably uniform, varying only between 43 and 45 percent.

Table 3.0.G
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO PLACE OF RESIDENCE, BY RELIGION

| Religion | Number of Women | Place of Residence |  |
| :---: | :---: | :---: | :---: |
|  |  | Urban | Rural |
| All Women | 2,765 | 48 | 52 |
| Anglican | 343 | 52 | 48 |
| Baptist | 461 | 43 | 57 |
| Protestant Nonconformist $\dagger$ ' | 286 | 45 | 55 |
| Roman Catholic | 233 | 80 | 20 |
| Church of God | 577 | 43 | 57 |
| Other | 657 | 44 | 56 |
| None | 208 | 45 | 55 |

$\dagger$ Methodist, Moravian, Presbyterian, and Congregational.
Source: Derived from Appendix Table 2.2.7C.

### 3.0.12. Current Union Status and Age

Among women under 20 years of age, more than onehalf ( 55 percent) were in a visiting union and a further 19

Table 3.0. H
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO CURRENT UNION STATUS, BY CURRENT AGE

|  |  |  | Number <br> of <br> Women |  |  |  | Married | Common <br> Law | Visiting | Single |
| :--- | :---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current Age | Lurrent Union Status |  |  |  |  |  |  |  |  |  |
| All Women | 2,765 | 32 | 29 | 22 | 17 |  |  |  |  |  |
| $15-19$ | 303 | 2 | 24 | 55 | 19 |  |  |  |  |  |
| $20-24$ | 565 | 14 | 33 | 38 | 15 |  |  |  |  |  |
| $25-29$ | 485 | 29 | 37 | 18 | 17 |  |  |  |  |  |
| $30-34$ | 384 | 40 | 34 | 12 | 15 |  |  |  |  |  |
| $35-39$ | 371 | 46 | 27 | 12 | 15 |  |  |  |  |  |
| $40-44$ | 333 | 52 | 22 | 10 | 17 |  |  |  |  |  |
| $45-49$ | 324 | 49 | 18 | 7 | 26 |  |  |  |  |  |

Source: Appendix Table 1.5.1A.
percent were single, most of them after having been in a visiting union (see Table 3.0.H). Only one-quarter of these young women, therefore, were in a union (married or common law) which involved living in the same household with their partners; only 2 percent of these women were married.

Among women ever in a union aged 20-24, visiting unions were still the highest proportion ( 38 percent), but this was only slightly higher than the proportion in a common law union (one-third). The proportion married increased appreciably with age, and by the end of the childbearing period about one-half of the women were married. On the other hand, the proportion in a visiting union declined steadily, with only 7 percent of those 45 years and over being classified as visiting. The proportion in a common law union also declined with age reaching its highest level among women 25-29 years, and then declining to 18 percent for the oldest age group. The proportion single declined from 19 percent among the youngest women to $15-17$ percent for women 20-44 years old, but one in four of the women 45-49 were reported as single.

The above differences between the age groups, in particular the decline in the proportion in a visiting union and the increase in the proportion married, with increasing age, suggest that there is appreciable shifting from visiting and to a lesser extent from common law unions to marriage. This shifting between union types, particularly in so far as it involves changes in cohabitation, is considered by Caribbean students to be a matter of appreciable significance for the study of fertility in the region. While no detailed analysis of this complex aspect of nuptiality can be undertaken in the present report, a limited study based on the initial and current union of each women is attempted later in this chapter (see Section 3.1.2).

### 3.1. MATHNG TATRERNS AND EXPOSUEE TO CHILDREARING

Conventional analyses of reproductive behaviour identify marital status and marriage duration as two of the primary demographic determinants of fertility. This is related to the fact that in most societies, all but a negligible proportion of children are born to parents who are legally married to each other. For this reason, the fertility surveys carried out within the World Fertility Survey programme have, in most countries, been restricted to ever-married women. In the Caribbean, however, because of the existing family systems already described, a large proportion of births occur outside of legal wedlock. For example, in Jamaica the illegitimacy rate has for long been around 70 percent. As would be expected, in these circumstances, a large proportion of the mothers in Jamaica are women who have never been married. From the 1970 Census, for example, the evidence is that about 60 percent of mothers aged 15-49 had never been married.

For the study of fertility in the Caribbean, therefore, attention must be paid not only to legal marriage but also to the other family union types with a significant exposure to the risk of childbearing. The three family union types used in the Jamaica survey are married, common law, and visiting, defined as follows:

Married -legally married and living with husband;
Common law-living as 'man and wife' with a partner to whom the respondent is not legally married; and

Visiting -having a steady partner, involving sexual relations, but not sharing a common household with him.

Since the study population covers all women ever in a union, there is a fourth category of women in the survey, that is those women who were formerly in one of the above union types but who, at the time of the survey, had no partner. These are designated as single, though in the text of the report they are also at times referred to as no longer in a union or no longer with a partner.

The present section examines the age of women at entry into their first (initial) union, and the pattern of mating as revealed by the number of relationships entered into, the number of partners, the proportion of time spent in unions, the current union status, the pattern of union history, and in the context of the foregoing, the exposure status of the women in the study population.

### 3.1.1. Age at Inital Union ${ }^{1}$

An important factor in the study of mating patterns in a society is the age at which women enter into their first union, since the age at initial entry plays a major role in determining the length of time spent in unions, thereby influencing their reproductive capacity. Data on the age of entry into initial union, for all women ever in a union, are given in Appendix Table 1.1.1. This shows that more than one-half ( 55 percent) of the women ever in a union had entered their first union before age 18, and nearly 3 out of 4 by age 21 , the mean age at entry being 17.9 years.

It can, however, be misleading if we attempt to discern trends in age at initial entry by comparing the percentage distribution (or the mean age at entry) for the separate age groups shown in that table. There are two reasons for this: first, the distribution by age at entry is necessarily limited by the current age of the women. For example, all women ever in a union, aged 15-19, must have been 19 years or younger at the time of their initial entry; on the other hand, only some of the ever-in-a-union women aged $30-34$ would have first entered into a union by age 19, but all must have entered before age 35, and so forth. The other reason is that since the study population excludes all women never in a union, it excludes a proportion of the women in each age group, and this proportion will normally decline with age, especially earlier in the age span. Thus, from the 1970 Population Census, the evidence is that the proportion of the age groups who were never in a union, and would, therefore, be excluded from our study population, is 64 percent for women 15-19 years old, 6 percent for those aged $30-34$, and 5 percent for those 45-49 years old.

To correct for these sources of bias when considering trends in age at initial entry into a union, it is necessary to restrict attention to subsamples of the study population which are homogeneous in their exposure to the risk of entry into a union. This is achieved in Table 3.1.A by a system of censoring which uses age 25 as the pivotal age, and excludes all women who (a) have not reached age 25 , or (b) who first entered into a union after age 25 . This subsample comprises 1,733 women or just under two-thirds of the total study population.

Of this restricted group of women, 11 percent started their first union before the age of 15 while just under onehalf had entered their first union before their eighteenth birthday. The average age of entry into initial union was 17.8 years $^{1}$ or only fractionally less than for the study

[^12]population as a whole. The table suggests that the proportion starting their first union at a young age has increased; thus the proportion entering their first union before age 18 was 38 percent for women 40 years old and over, 48 percent for those 35-39 years old, and $56-59$ percent for those under 35 . On the other hand, the proportion entering their first union at 20 years of age or over was over 40 per cent for those 45-49 years old but only one-half of this for women 30-34 years, with the general tendency for the proportion to increase with age.

## Table 3.1.A

PERCENT DISTRIBUTION OF WOMEN ACCORDING TO AGE AT ENTRY INTO INITIAL UNION, BY CURRENT AGE. CONFINED TO WOMEN AGED OVER 24 YEARS AND WHOSE INITIAL UNION WAS BEFORE AGE 25

| Current <br> Age | Number of Women | Age at Initial Union |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 15 | 15-17 | 18-19 | 20-21 | 22-24 | Mean |
| All Women | 1,733 | 11 | 38 | 22 | 17 | 13 | 17.8 |
| 25-29 | 470 | 15 | 4 i | 19 | 15 | 10 | 17.4 |
| 30-34 | 365 | 10 | 49 | 20 | 12 | 9 | 17.5 |
| 35-39 | 341 | 13 | 35 | 22 | 15 | 15 | 17.9 |
| 40-44 | 286 | 8 | 30 | 28 | 20 | 14 | 18.3 |
| 45-49 | 271 | 6 | 32 | 20 | 23 | 19 | 18.6 |

Source: Percent distribution derived from Appendix Table 1.1.1. Mean from Appendix Table 1.1.3.

As a result of these shifts, the mean age at entry into the initial union was 18.6 years for women aged 45-49 but declined steadily for the younger age groups, being 17.4 for women 25-29 years old. It is, however, necessary to be cautious when seeking to determine trends from crosssectional data of this type. Given the nature of the information in this case, there is the possibility that older women may have tended to overstate their age at initial entry, perhaps through omitting to report their earliest, least stable unions. Since for the most part these would be the initial visiting unions, such an omission should also tend to reduce the proportion of initial unions of this type among older women. This, however, does not appear to be the case. Calculations from data censored as described above suggest that the proportion of women whose first union was a visiting union is higher among women 25-29 years of age ( 85 percent) than it is for older women. However, excluding this group, this proportion was highest among the oldest women ( 81.5 per cent) and is slightly less for each succeeding younger cohort, being 79 percent for women $30-34$ years old. Although this suggests that visiting unions were not omitted to any great extent, it still remains possible that older women may have overstated age at entry.

The Appendix Tables $1.1 .3 \mathrm{~A}-\mathrm{D}$ show the mean age at entry into first union of those women, already specified, who were over 24 years old and whose first union was before age 25 , by current age and some selected background variables. From Table 1.1.3A it will be seen that there is little difference between the mean age at entry of women with less than 4 years and those with 4 years or more of primary education. The one exception is for women now aged $30-34$, but here the number of cases of women in the lower education group is very small, and the difference may be largely explained by sampling error. On the other hand, for every current age group, the mean age at entry for women with secondary or higher education is appreciably higher than for women with primary education. One well-accepted reason for this higher age at entry for the best educated is that the additional years of education are of direct significance in that during these years few women enter into their first union until their secondary education is completed. As regards the earlier observation on the apparent declining mean age at entry into first union, there is no evidence of any such decline among women with secondary or higher education. Among women with a primary education, however, the mean age at entry was $17.6(+0.5)$ years for women now aged 45-49, but has declined for each succeeding younger age group to $16.8(+0.5)$ years for those $25-29$ years old.

Women living in rural areas entered into their first union at a younger age than those now living in urban areas (Appendix Table 1.1.3B). Except for women currently aged $30-34$ the difference is $0.6-0.9$ years; for women $30-$ 34 the difference is smaller. There is no clear relationship between age at first union and religion. Because of the relatively high status of Roman Catholics as regards place of residence and education (see Section 3.0) one might have expected that the mean age at first union for this denomination would be higher than for others. This is not so, however, except for the age groups 25-29 and 45-49, while Roman Catholics had the lowest age at entry among women aged $40-44$. For women $30-34$ and $35-39$ only Baptists and women with 'no religion' had a lower mean age at entry than Roman Catholics. On the other hand the mean age at first union was among the highest for every age group (Appendix Table 1.1.3C).

### 3.1.2. Union and Relationship Change

Earlier studies of the relationship between mating patterns and fertility in the Caribbean have indicated that in addition to the variety of union types, of appreciable significance is the fact that there is a not infrequent change of union status on the part of many women during the course of their childbearing period. Indeed, it has been
proposed that the various legal and de facto unions to some extent represent successive stages in a life style. ${ }^{1}$ Consideration has also been given to the exient to which women's fertility is affected by the number of partners they have had. ${ }^{2}$ In the Jamaica Fertility Survey, information was sought on each respondent's full union history, including all changes in relationships, partners and union types.

The various union types have already been defined. The term 'partner' is used in preference to 'husband' because the latter is generally used with reference to the legally married partner only, and sometimes to the common law partner, but seldom, if ever to the 'visiting' partner. The term 'partner', therefore, refers to the male companion in either of the three union types. A 'relationship' is defined as that period during which a women remained with one partner in a given type of union. A change of partner or a change of union type would result in a change of relationship. Thus, if a woman who was in a common law relationship either changed her partner or married the same partner, the first relationship would have ended and a new one started. A relationship could, of course, also be ended without a new one being started.

Table 3.1.B
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO NUMBER OF RELATIONSHIPS AND NUMBER OF PARTNERS

| Number of <br> Relationships/ <br> Partners | Percent Distribution according to: |  |
| :---: | :---: | :---: |
|  | Relationships | Partners |
| All Women | 2,765 | 2,765 |
| 1 | 25 | 50 |
| 2 | 34 | 29 |
| 3 | 24 | 15 |
| 4 | 11 | 5 |
| $5+$ | 7 | 2 |

Source: Appendix Tables 1.3.1(1) amd 1.3.1(2).

Table 3.1.B shows that 25 percent of the women had only 1 relationship, while 50 percent had only 1 partner. In other words, while one-half of the study population of women had only one partner, one-half of these had more than one relationship, and hence a change of union status with the same partner. Twenty-nine percent of the women had 2 partners and another 15 percent had 3 partners, while 7 percent had 4 or more partners. On the other hand,

[^13]34 percent of all women had 2 relationships, 24 percent had 3 and the remaining 18 percent had 4 or more.

The mean number of relationships of all women ever in a union was 2.4 , while the mean number of partners was 1.8 (Table 3.1.C). Understandably, the mean number of relationships and partners both increase slowly with the period since the first union. What is more striking is that women who entered their first union at an early age consistently had more relationships and more partners than those who entered at a later age, even when controlling for the number of years since the first union. These differentials between those entering their first union before age 18 and those entering at 18 years or older are sufficiently large and consistent to justify the conclusion that age at entry is a factor of appreciable significance. Age, per se, however, is probably an indirect rather than a direct factor. As has been pointed out earlier, visiting unions are contracted, on the average, at early ages, and the probability of moving from visiting to one of the more stable unions (married or common law) is apparently higher than that of movement between common law and married unions - a point to be discussed later. The effect would, therefore, be demonstrated in a higher mean number of relationships and partners per women among those who entered their first union early.

Table 3.1.C
MEAN NUMBER OF RELATIONSHIPS AND MEAN NUMBER OF PARTNERS OF WOMEN EVER IN A UNION, BY AGE AT ENTRY INTO INITIAL UNION AND BY YEARS SINCE INITIAL UNION

| Years sinceInitialEntry | Age at Initial Union |  |  |
| :---: | :---: | :---: | :---: |
|  | All Ages | $<18$ years | $18+$ years |
|  | Mean Number of |  |  |
|  | Relationships Partners | Relationships Partners | Relationships Partners |
| All Women | $\underset{(2,765)}{2.4}$ | $\underset{(1,519)}{2.6}$ | $\underset{(1,246)}{2.3}$ |
| <5 | $1.5{ }_{(557)}^{1.3}$ | ${ }_{(327)}^{1.4}$ | $\begin{gathered} 1.4{ }_{(230)} 1,2 \\ \hline \end{gathered}$ |
| 5-9 | $2 .{\underset{(623)}{1.7} 1.7}^{2}$ | ${ }_{(372)} 1.8$ | $2 .{\underset{(251)}{ } 1.5}^{2}$ |
| 10-14 | $2.6(450) 1.9$ | $\begin{gathered} 2.9 \\ (260) \end{gathered}$ | $2.3{ }^{190)} 1.6$ |
| 15-19 | ${ }_{(423)} 2.0$ | $\begin{gathered} 3 .)_{(210)}^{2.3} \end{gathered}$ | $\begin{gathered} 2.6{ }_{(213)}^{1.8} \end{gathered}$ |
| 20-24 | ${ }_{(356)} 2.1$ | $\begin{gathered} 3.4{ }_{(146)} 2.4 \\ \hline \end{gathered}$ | $\begin{gathered} 2.8{ }_{(210)}^{1.9} \end{gathered}$ |
| 25+ | ${ }_{(356)} 2.0$ | ${ }_{(204)} 2.2$ | ${ }_{(152)}^{1.9}$ |

Source: Appendix Tables 1.3.1(1) and 1.3.1(2).
Changes in union type will be discussed, using the change from initial to current union as the indicator of change. In a comprehensive analysis of changes in union
status, there is no reason why only the initial and current union types should be taken into account. Roberts and Braithwaite in their study of family types in Trinidad (op. cit.) used a typology based on the initial, the second, and the terminal union. Since full union histories were obtained in this survey the typology can be extended, if so desired. Such complex typologies will be developed in later research, however, and the simple cross-classification of initial by current union type will be used here. This crossclassification would produce 9 types, but three of these, married to visiting, married to common law, and common law to visiting are combined with other groups because of their insignificant number of cases. Finally, a group consisting of all currently single women, who may have started in any type of union, was created. The resulting seven categories are:

|  |  |  |  |
| :---: | :--- | :--- | :---: |
| Initial |  | Current | Number <br> of |
| Category | Union type <br> Union Type | Women |  |
| 1 | Married | Married | 157 |
| 2 | Common law | Married | 121 |
| 3 | Visiting | Married | 606 |
| 4 | Married/Common law | Common law | 179 |
| 5 | Visiting | Common law | 620 |
| 6 | Any | Visiting | 609 |
| 7 | Any | Single | 473 |

The pattern of change in terms of the full cross-classification will be discussed before proceeding to the more concise variable, pattern of union history, consisting of the seven groups above (Table 3.1.D).

## (a) Changes from Initial to Current Union Type

Of the 2,765 women ever in a union, only 6.5 percent reported that their first union was marriage, and of these 88 percent were still married at the time of the survey and 7 percent were single, while the remaining few were either common law or visiting. A further 13 percent of all women started in a common law union and 48 percent had not changed status, while 33 percent had since married, 13 percent were single, and 6 percent were currently in a visiting union. Finally, the majority of women, 80 percent of the total, had started in a visiting union, although by the time of the survey, 71 percent of these had changed their union status, with roughly equal numbers in the three unions (about 27 percent), while the remaining 19 percent were single.

These crude figures appear to support the findings of Caribbean researchers that most women begin mating in a visiting union, but there is a tendency for these to shift to more stable common law and married unions, while many also revert, at least temporarily, to the single state. A
smailer number of women start in a common law union, and here the tendency is to shift to marriage rather than to other types. And finally, only a small number of women reported marriage as their first union type and there is little change of union status among these.

Table 3.1.D
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO CURRENT UNION STATUS, BY YEARS SINCE ENTRY INTO INITIAL UNION AND BY TYPE OF INITIAL UNION

| Initial Union Type and Years Since Initial Union | Number of Women | Current Union Status |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Married | Common | Visiting | Single |
| All Union Types |  |  |  |  |  |
| Total | 2,765 | 32 | 29 | 22 | 17 |
| $<10$ | 1,180 | 17 | 29 | 38 | 16 |
| 10-19 | 873 | 36 | 35 | 13 | 17 |
| $20+$ | 712 | 51 | 21 | 8 | 20 |
| Married |  |  |  |  |  |
| Total | 177 | 88 | 2 | 3 | 7 |
| $<10$ | 68 | 97 | - | 2 | 2 |
| 10-19 | 74 | 87 | 1 | 4 | 8 |
| $20+$ | 35 | [74] | [6] | [3] | [17] |
| Common law |  |  |  |  |  |
| Total | 367 | 33 | 48 | 7 | 13 |
| <10 | 107 | 15 | 72 | 9 | 5 |
| 10-19 | 123 | 24 | 55 | 7 | 14 |
| 20+ | 137 | 55 | 22 | 4 | 19 |
| Visiting |  |  |  |  |  |
| Total | 2,221 | 27 | 28 | 26 | 19 |
| <10 | 1,005 | 12 | 27 | 43 | 18 |
| 10-19 | 676 | 32 | 34 | 15 | 18 |
| $20+$ | 540 | 48 | 22 | 9 | 21 |

Brackets [] indicate percentage calculated on a base of at least 20 but less than 50

Source: Appendix Table 1.5.4.
The breakdown by duration (Table 3.1.D) further supports these findings and suggests that the pattern of shifting is an ongoing one. Thus, while for women in a union less than 10 years 72 percent of these women initially in a common law union were still in such a union and only 15 percent were married, for women with 20 years or more duration, ${ }^{1}$ only 22 percent were still common law, but 55 percent were married. Similarly, of women who started in a visiting union, the proportion who remained in visiting unions decreased with duration, from 43 percent to 9 percent, while the proportion who had become married increased with duration, from 12 percent to 48 percent. These changes by duration suggest that there may be some typical life cycle changes, e.g. for initial visiting union women, a movement to common law and married, and for initial common law women, to marriage. Caution should be exercised however, in drawing conclusions about life cycle patterns from cross-sectional data.

[^14]
## (b) Pattern of Union History

Table 3.1.E shows the cross-classification of all women ever in a union according to pattern of union history, by current age and level of education. Among the women under 25 years of age only a negligible proportion are in the married/married category since, as shown earlier, marriage usually takes place at later ages. The proportion is $7-8$ percent for women 25 years and older. For women under age 35 , only a small proportion of women whose first union was common law are currently married; this proportion is appreciably higher for older women. There does not appear to be much further shifting from visiting to married after age 34.

The cross-classification by level of education shows that the proportion in the married/married category is very much higher for women with a secondary education than for those in the two lower levels. On the other hand, the proportion of women who are currently married after first being in a common law union is negligible for women with a secondary education and much higher for the lowest educational group than for those with $4+$ years of primary schooling. The shifts from visiting to married are about the same proportion for each educational group.

One matter of interest is the extent to which the number of partners that a woman has had differs for the various pattern of union history categories we have identified. Table 3.1.F gives this information for all women ever in a union. As stated earlier, virtually all women in the married/married category had only one partner. Of the other two categories of currently married women, the proportion who have had only one partner was 60 percent for those who were originally common law and 56 percent for those originally visiting. Among women currently common law, more than 50 percent of those who started as married or common law partner, but only one in three of those whose first union was visiting, had one partner. The other categories are intermediate. At the other extreme, of the women currently married, except those who were initially married, 12-14 percent had 3 or more partners. This proportion was $21-22$ percent for the $\mathrm{M}, \mathrm{CL} / \mathrm{CL}$ and the single women but was 28 percent for the other two groups.

If we consider the mean number of partners, for women of every duration, the married/married women had only 1 partner, while those whose first union was common law or visiting had the next lowest average number of partners. This average was 1.3 for women whose first union started less than 10 years ago and 1.8 for those with a duration of 20 years or more; in every case there was little difference between the $\mathrm{CL} / \mathrm{M}$ and the $\mathrm{V} / \mathrm{M}$. In general, the women

Table 3.1.E
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO PATTERN OF UNION HISTORY, BY CURRENT AGE AND BY LEVEL OF EDUCATION

| Current Age and Level of Education | Number of <br> Women | Pattern of Union History (Initial/Current Union) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | M/M | $\mathrm{CL} / \mathrm{M}$ | $\mathrm{V} / \mathrm{M}$ | $\mathrm{M}, \mathrm{CL} / \mathrm{CL}$ | V/CL | All/V | All/S |
| All Women | 2,765 | 6 | 4 | 22 | 7 | 22 | 22 | 17 |
| Current Age |  |  |  |  |  |  |  |  |
| $<25$ | 868 | 2 | 1 | 8 | 6 | 24 | 44 | 16 |
| 25-34 | 869 | 8 | 3 | 24 | 8 | 27 | 15 | 16 |
| 35-4.4 | 704 | 8 | 9 | 33 | 7 | 18 | 11 | 16 |
| $45+$ | 324 | 7 | 10 | 33 | 4 | 15 | 7 | 26 |
| Level of Education |  |  |  |  |  |  |  |  |
| Primary: <4 years | 383 | 3 | 10 | 23 | 9 | 27 | 10 | 18 |
| $4+$ years | 1,758 | 3 | 4 | 22 | 7 | 26 | 20 | 18 |
| Secondary | 624 | 15 | 1 | 22 | 2 | 10 | 36 | 14 |

Source: Derived from Appendix Tables 2.2.6D and 2.2.7D.
who started in a visiting union and were currently common law or visiting had the highest mean number of partners for every duration.

In addition there were some significant variations in the
mean age at first union by the above 'pattern of union history' categories (Appendix Table 1.1.3D). As pointed out before, these tables related only to women who were at least 25 years old at the time of the survey and whose first union took place before age 25 . The mean age at first

Table 3.1.F
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO NUMBER OF PARTNERS, BY PATTERN OF UNION HISTORY AND BY YEARS SINCE ENTRY INTO INITIAL UNION

| Years since Initial Union and Pattern of Union History | Number of Women | Number of Partners |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | $4+$ | Mean |
| All Durations |  |  |  |  |  |  |
| Married/Married | 157 | 98 | 2 | 0 | 0 | 1.0 |
| Common Law/Married | 121 | 60 | 27 | 7 | 5 | 1.6 |
| Visiting Married | 606 | 56 | 29 | 11 | 3 | 1.6 |
| Married, Common Law/Common Law | 179 | 52 | 26 | 17 | 5 | 1.8 |
| Visiting/Common Law | 620 | 34 | 38 | 19 | 9 | 2.1 |
| All/Visiting | 609 | 44 | 30 | 18 | 8 | 1.9 |
| All/Single | 473 | 49 | 30 | 13 | 8 | 1.8 |
| $<10$ |  |  |  |  |  |  |
| Married/Married | 66 | 100 | 0 | 0 | 0 | 1.0 |
| Common Law/Married | 16 | * | * | * | * | * |
| Visiting/Married | 127 | 76 | 19 | 5 | 1 | 1.3 |
| Married, Common Law/Common Law | 77 | 78 | 17 | 5 | 0 | 1.3 |
| Visiting/Common Law | 269 | 49 | 35 | 13 | 2 | 1.7 |
| All/Visiting | 439 | 57 | 28 | 12 | 3 | 1.6 |
| All/Single | 186 | 66 | 24 | 8 | 3 | 1.5 |
| 10-19 |  |  |  |  |  |  |
| Married/Married | 65 | 95 | 46 | 0 | 0 | 1.0 |
| Common Law/Married | 30 | [73] | [20] | [3] | [3] | [1.4] |
| Visiting/Married | 218 | 54 | 34 | 10 | 2 | 1.6 |
| Married, Common Law/Common Law | 69 | 41 | 29 | 20 | 10 | 2.0 |
| Visiting/Common Law | 234 | 24 | 42 | 21 | 13 | 2.3 |
| All/Visiting | 113 | 9 | 41 | 32 | 19 | 2.7 |
| All/Single | 144 | 42 | 35 | 11 | 12 | 2.0 |
| $20+$ |  |  |  |  |  |  |
| Married/Married | 26 | [100] | 0 | 0 | 0 | [1.0] |
| Common Law/Married | 75 | 51 | 32 | 11 | 7 | 1.8 |
| Visiting/Married | 261 | 49 | 30 | 16 | 5 | 1.8 |
| Married, Common Law/Common Law | 33 | [15] | [39] | [39] | [6] | [2.5] |
| Visiting/Common Law | 117 | 16 | 38 | 27 | 19 | 2.5 |
| All/Visiting | 57 | 11 | 21 | 39 | 30 | 3.0 |
| All/Single | 143 | 35 | 32 | 22 | 11 | 2.2 |

Note: An asterisk $\left(^{*}\right.$ ) indicates percentage was not calculated because base was less than 20 ; brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50 .

Source: Derived from Appendix Table 2.2.7E.
union of these women was about 18 years for all of the categories except: (a) women whose initial and current unions were legal marriage, for whom the mean age at first union was about 2 years higher; and (b) women currently in a common law union who started in a visiting union, for whom the mean age at first union was about 1 year lower.

### 3.1.3. Percentage of Time in Unions

The age at first union, dealt with in subsection 3.1.1, when subtracted from the woman's current age, measures the number of years since the woman's first union. This control variable is extensively used in the subsection on cumulative fertility (3.2.2), as an indicator of the amount of time that the woman has been exposed to intercourse. The measure is inaccurate, however, since even within unions exposure time is lost due to temporary separations, and more importantly, time between unions and time after the last union, if the woman remains in the single state, is lost to exposure. WFS has, therefore, recommended that attention should be given to the percentage of time since entry into the first union, which has been spent in unions. Table 1.4.1 and Table Group 1.4.2(1) of the Appendix deal with this matter. Because of the special importance of loss of time in unions in the Caribbean, in addition to the above, a further group of tables [1.4.2(2)], is included in the Appendix dealing with the percentage of time since age 15 , which has been spent in unions.

All women in the study population spent an average of 84 percent of the time since the first union in unions. It would be interesting to relate time lost to the length of time since the woman first entered a union, since a positive correlation between the two would be expected. Length of time will be measured by age at first entry in conjunction with current age. Appendix Table 1.4 .1 which crossclassifies the above by age at first union indicates that, in general, the proportion of time spent in unions is higher, in any age group, for women with the highest age at entry. Departure from this rule tends for the most part to occur for those groups where the number of women is small, and hence the sampling error is relatively large. Excluding these exceptional cases, the average percentage of time spent in unions ranges from 81 , for women 45 years of age and over and first in a union at age 15-19, to 90-91 for women under 25 years of age who first entered a union at age $20-24$.

The percentage of time spent in unions is 83 for women with less than a secondary education and 88 for those with a secondary or higher education. The percentage is appreciably higher for this highest education group at all ages except for $15-19$ and $30-34$ where the differences are
small [Appendix Table 1.4.2(1)A]. If women 30 years of age and over are combined into 10 -year age groups, as is done in Table 3.1.G, then only for age group 15-19 is the percentage not significantly higher for women with a secondary education than for the other groups.

It would be expected, however, that the higher percentage of time for women with a secondary education is partly explained by the higher average age at entry into a union or the younger current age of these better educated women. The tables allow limited control for age at first union by subdividing the total into those who entered their first union at less than age 18 and those who entered at age 18 or over. It is seen, however, that 51 percent of women with a secondary education entered their first union at less than 18 years of age, which is a higher proportion than that for women with less than 4 years of primary schooling ( 48 percent), but is lower than the proportion for the middle education group ( 58 percent). For women who entered a union before age 18 , women with a secondary education still have the highest percentage of time spent in unions for those currentily aged $20-$ 24 and 25-29, but for women 30 years old and over the percentage declines as education increases.

When the percentage of time spent in unions is crossclassified by place of residence (Table 3.1.H) for women first in a union at less than 18 years of age, the percentage is higher for urban women $15-19$ years old, but is higher for rural women for all age groups over 25 , although the difference in the percentages of rural and urban women fluctuates considerably. Women who first entered a union at age 18 or higher have a different pattern - urban women spend a higher percentage of their time in unions up to age 30 , but the differences are very small above age 30 , and are in general in favour of rural women, which was the same situation as that for women who first entered at age 18 or less.

Appendix Table 1.4.2(1)D which shows the percentage of time spent in unions by pattern of union history is of special interest. It is generally believed that visiting unions are the least stable of the three union types and that common law unions are somewhat less stable than married unions. This is supported by the Appendix table under reference, which is summarized in Table 3.1.J. Because of the small number of women currently married whose first union was either married or common law, these two categories are grouped together in Table 3.1.J. This table shows that for every age group, irrespective of the age at first union, the percentage of time spent in unions is slightly higher for currently married women (first two columns), than for those currently in a common law union (columns 3 and 4), while for those in a visiting union

Table 3.1.G
AVERAGE PERCENTAGE OF TIME SINCE ENTRY INTO INITIAL UNION WHICH HAS BEEN SPENT IN UNIONS BY ALL WOMEN EVER IN A UNION, BY LEVEL OF EDUCATION, BY CURRENT AGE, AND BY AGE AT ENTRY INTO INITIAL UNION $\dagger$

| Age at Initial Union and Current Age | Total | Level of Education |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Primary |  | Secondary or Higher |
|  |  | $<4$ Years | $4+$ Years |  |
| All Women |  |  |  |  |
| Total | $84(2,757)$ | 83 (383) | $83(1,750)$ | 88 (624) |
| 15-19 | 88 (303) | * (9) | 89 (154) | 87 (140) |
| 20-24 | 85 (563) | [85] (38) | 83 (338) | 89 (187) |
| 25-29 | 83 (483) | [80] (47) | 83 (312) | 91 (124) |
| 30-39 | 84 (752) | 83 (129) | 83 (515) | 88 (108) |
| 40-49 | 83 (656) | 84 (160) | 83 (431) | 87 (65) |
| $<18$ at Initial Union |  |  |  |  |
| Total | $83(1,515)$ | 83 (184) | $82(1,010)$ | 85 (321) |
| 15-19 | 88 (285) | * (7) | 89 (146) | 87 (132) |
| 20-24 | 84 (380) | [86] (24) | 82 (243) | 89 (113) |
| 25-29 | 84 (261) | [76] (32) | 86 (191) | [92] (38) |
| $30+$ | 82 (589) | 83 (121) | 82 (430) | [80] (38) |
| 18+ at Initial Union |  |  |  |  |
| Total | $85(1,242)$ | 84 (199) | 84 (740) | 90 (303) |
| 15-24 | 87 (201) |  |  | 90 (82) |
| 25-29 | 84 (222) |  |  | 90 (86) |
| 30-39 | 87 (375) | 87 (59) | 85 (238) | 93 (78) |
| 40-49 | 84 (444) | 83 (109) | 84 (278) | 88 (57) |

$\dagger$ Age is grouped differently among the 3 panels of this table, and for the $18+$ panel, only the 2 primary categories are grouped together because of the small number of cases in these categories.

Note: An asterisk (*) indicates percentage was not calculated because base was less than 20; brackets [] indicate percentage was calculated on a base of at least 20 but less than 50 .

Source: Appendix Table 1.4.2(1)A.
(column 5) the percentage is appreciably lower than for the preceding two. For example, among women 35 years of age and over and first in a union before age 18, the percentage of time since first union which has been spent in unions is about 92 percent for married women, 85
percent for common law wives, and 68 percent for those in a visiting union. The table also makes it clear that for all age groups the percentage of time spent in unions by those designated currently single is, in turn, appreciably lower than that of visiting women.

Table 3.1.H
AVERAGE PERCENTAGE OF TIME SINCE ENTRY INTO INITIAL UNION WHICH HAS BEEN SPENT IN UNIONS BY ALL WOMEN EVER IN A UNION, BY PLACE OF RESIDENCE, BY CURRENT AGE, AND BY AGE AT ENTRY INTO INITIAL UNION

| Age at Initial Union and Current Age | Total | Place of Residence |  | Difference (Rural minus Urban) |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Urban | Rural |  |
| $<18$ at Initial Union |  |  |  |  |
| Total | $83(1,515)$ | 81 (689) | 84 (826) | +3 |
| 15-19 | 88 (285) | 90 (132) | 86 (153) | -4 |
| 20-24 | 84 (380) | 84 (175) | 84 (205) | 0 |
| 25-29 | 85 (261) | 81 (139) | 87 (122) | +6 |
| 30-34 | 81 (215) | 81 (112) | 82 (103) | +1 |
| 35-39 | 83 (162) | 78 (58) | 85 (104) | $+7$ |
| 40-44 | 83 (109) | [81] (39) | 84 (70) | $[+3]$ |
| 45-49 | 80 (103) | [76] (34) | 83 (69) | $[+7]$ |
| 18+ at Initial Union |  |  |  |  |
| Total | $85(1,242)$ | 85 (629) | 86 (613) | +1 |
| 15-24 | 87 (201) | 90 (112) | 84 (89) | -6 |
| 25-29 | 84 (222) | 86 (141) | 82 (81) | -4 |
| 30-34 | 86 (168) | 86 (89) | 87 (79) | +1 |
| 35-39 | 88 (207) | 89 (102) | 87 (105) | $-2$ |
| 40-44 | 85 (224) | 85 (86) | 86 (138) | +1 |
| 45-49 | 83 (220) | 80 (99) | 85 (121) | +5 |

Source: Appendix Table 1.4.2(1)B.

But if the pattern of relative stability of unions enunciated above is correct, then in addition to the differentials by current union, we would expect that within a current union type, those women whose initial union was visiting would have spent a lesser percentage of their time in unions than those who were initially married or common law. Table 3.1.5 bears out this point for most age groups. Thus, among women currently $25-34$ years old, who first formed a union at age 18 or higher, and who are currently married, those whose first union was visiting had spent 95 percent of their time in unions, while those whose first union was married or common law had spent 98 percent. Similarly, among those currently common law in the same age group, those whose first union was visiting reported 88 percent of their time spent in unions as compared with 95 percent for those whose first union was married or common law.

### 3.1.4. Current Union Status

Roberts (op cit.) has demonstrated the effectiveness of current union status in the study of fertility, based on the simple population census classification. Although it would have been useful to present more detailed information on union history, given that it is available from the survey, this would be too difficult for the present report. Consequently, current union status will be used as the main union status background variable throughout the report.

Current union status will be discussed in relation to current age, for the total population. Union status is next considered in relation to five background variables: education, residence, religion, age at first union, and duration since entry into a union.

Table 3.1.K (i) shows that, taking all ages together, the proportion in visiting unions increases significantly with the level of education. On the other hand, the proportion in a common law union varies inversely with education, though with little difference between the two levels of primary education. Moreover, of the women with less than 4 years of primary education more than one-third are in a common law union as compared with only 1 in 10 in a visiting union, but of those with secondary or higher education the figures are almost identically opposite. However, since women with secondary education have a much younger age distribution than either of the two primary education groups, the union status/education differentials may be due more to age than to education. That is, educated women are more likely to be in a visiting union, not because education is conducive to visiting unions, but because their younger age is associated with visiting unions.

There is not much difference in the union status distribution of urban and rural women when the total is considered [Table 3.1.K(ii)]. However, when age is taken into account, an interesting difference between younger and older women emerges. Among women under 25 years of age, the proportion in married and common law unions is higher among urban than among rural women. For women 35 years old and over, however, the opposite pattern holds, with the proportion of women in visiting unions or single being higher in urban areas.

The cross-classification by religion [Table 3.1.K(iii)] shows that the proportion married is relatively very low among women with 'no religion', and is also relatively low among Baptists and members of the Church of God, while the pattern as regards common law unions is the reverse,

Table 3.1.J
AVERAGE PERCENTAGE OF TIME SINCE ENTRY INTO INITIAL UNION WHICH HAS BEEN SPENT IN UNIONS BY ALL WOMEN EVER IN A UNION, BY PATTERN OF UNION HISTORY, BY CURRENT AGE, AND BY AGE AT ENTRY INTO INITIAL UNION

| Age at Initial Union and Current Age | Pattern of Union History |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M,CL/M | V/M | M,CL/CL | V/CL | All/V | All/S |
| <18 at Initial Union |  |  |  |  |  |  |
| Total | 98 (60) | 91 (291) | 89 (100) | 85 (409) | 77 (400) | 64 (255) |
| 15-24 | * (5) | [96] (49) | [97] (40) | 89 (169) | 87 (294) | 68 (108) |
| 25-34 | $\cdots$ (15) | 91 (117) | [90] (40) | 85 (158) | 74 (68) | 42 (78) |
| 35+ | [97] (40) | 90 (125) | [85] (20) | 85 (82) | [68] (38) | 62 (69) |
| 18+ at Initial Union |  |  |  |  |  |  |
| Total | 98 (217) | 94 (315) | 87 (77) | 88 (208) | 75 (208) | 61 (217) |
| 15-24 | * (15) | * (16) | * (10) | [93] (40) | 91 (85) | [56] (35) |
| 25-34 | 98 (75) | 95 (87) | [95] (29) | 88 (80) | 72 (62) | 62 (57) |
| 35+ | 98 (127) | 94 (212) | [84] (38) | 87 (88) | 73 (61) | 62 (125) |

[^15]Table 3.1.K
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO CURRENT UNION STATUS, BY (i) LEVEL OF EDUCATION, BY (ii) PLACE OF RESIDENCE, AND BY (iii) RELIGION

| Background Variable | Number of Women | Current Union Status |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Married | Common Law | Visiting | Single |
| (i) Level of Education |  |  |  |  |  |
| Primary: <4 years | 383 | 36 | 36 | 10 | 18 |
| $4+$ years | 1,758 | 29 | 33 | 20 | 18 |
| Secondary + | 624 | 38 | 12 | 36 | 14 |
| (ii) Place of Residence |  |  |  |  |  |
| Urban | 1,319 | 31 | 31 | 23 | 16 |
| Rural | 1,446 | 33 | 28 | 21 | 18 |
| (ii) Religion |  |  |  |  |  |
| Anglican | 343 | 36 | 23 | 21 | 20 |
| Baptist | 461 | 27 | 31 | 25 | 17 |
| Protestant Nonconformist $\dagger$ | 286 | 39 | 27 | 19 | 16 |
| Roman Catholic | 233 | 37 | 23 | 25 | 16 |
| Church of God | 577 | 29 | 31 | 23 | 17 |
| Others | 657 | 38 | 25 | 20 | 17 |
| None | 208 | 13 | 49 | 23 | 16 |

$\dagger$ Includes Methodist, Moravian, Presbyterian, and Congregational.
Source: Appendix Tables 1.5.1A. 1.5.1B, and 1.5.1C.
the proportion being very high for those with no religion and much lower, but still relatively high, for Baptists and Church of God members. The proportion in a visiting union is highest among Baptists and Roman Catholics, but here the range (19-25) is much smaller than that for married women (13-39) and women in a common law union (23-49). The proportion single is $16-17$ percent for each denomination except Anglican for which it is 20 percent. These differences in current union status by religion probably partly reflect socio-economic differences, differences in age structure and not to any extent to religious emphasis.

There is a significant difference in the distribution by current union status of women whose first union was 18 years or less and those who first joined a union above age 18 (Appendix Table 1.5.2). There is little difference in the proportions single, but the proportion married was nearly twice as high for those who entered unions later (43 percent as compared with 23 percent), while the proportions in common law and visiting unions were higher among those who first entered a union at age 18 or less.

When we consider current union status by years since first union (duration), the proportion married increases steadily with duration up to a duration of 25-29 years, increasing from 11 percent of those first in a union for less than 5 years to 53 percent for those first in a union for 25-29 years. The proportion declines, however, for women in a union for 30 years or more ( 43 percent) because of an appreciably increase in the proportion single. The proportion in a visiting union, on the other hand, declines very rapidly from nearly one-half for
women ever in a union for less than 5 years to 6 percent for those with duration 30 years and over. The proportion in a common law union is highest for women with duration 10-14 years ( 36 percent), but this proportion declines steadily to about 18 percent for those first in a union 25 29 years ago. For shorter durations, the proportion rises from 24 percent for those ever in a union for less than 5 years to 34 percent for those with 5-9 years duration.

The cross-classification of union status by years since first union within age at entry confirms the general pattern described above. Treating women with duration 25 years and over as a single group, because of the small size of the 30 plus group, the proportion married is higher for women whose first union was at age 18 or after, regardless of duration. In general, too, the proportion in a common law union and in a visiting union is higher, for every duration, in the case of women whose first union was contracted before age 18. There is no consistent pattern in the differentials for the proportion of single women.

### 3.1.5. Exposure Status

The proportion of women who are exposed to the risk of conception is an important factor to be taken into account in the study of fertility, contraceptive practice and fertility intentions. WFS has recommended an index of exposure status for grouping women in the study population according to their level or state of exposure. The index recommended by WFS subdivides women into the following five categories:
(a) currently pregnant;
(b) not currently married;
(c) currently married, with husband or wife sterilized for contraceptive purposes;
(d) currently married, with either the husband or wife reported as infecund; and
(e) currently married women who are fully exposed to the risk of conception.

For the Caribbean reports, the above index has had to be modified because women in the study population are classified by union status and not merely subdivided into currently or not currently married. As a consequence, the group 'not currently married' is replaced by 'not currently in a union', while the 'currently married' category is replaced by 'currently in a union' and further subdivided by current union status because of the findings, from earlier studies, that the risk of exposure varies greatly with union type. In particular, women in a visiting union do not cohabit with their partners and consequently are less at risk than women in the other two union types. Because of the need to expand the Caribbean index in this way, it was decided to group together cases where the wife or husband has been sterilized for contraceptive purposes with those cases where there is a sterilization other than for contraceptive purposes or where either partner is reported to suffer a fecundity impairment. This means that the Caribbean index does not separately identify women who
are currently in a union and have been sterilized for contraceptive purposes. However, this information is available in later tables in the report as these women are classified, in other tables, as 'fecund' and 'currently contracepting'.

The exposure status variable for the Caribbean, therefore, divides women ever in a union into four major groups, the last two of these being further subdivided by current union status, as follows:
A. Currently pregnant (Group 1)
B. Not currently pregnant, of whom:
B. 1 Not currently in a union (Group 2)
B.2. Currently in a union, of whom:
B.2.1. Women/partner sterilized or having other fecundity impairment (Group 3), subdivided into (i) married; (ii) common law; (iii) visiting
B.2.2. Women and partner reported fecund (Group 4), subdivided into (i) married; (ii) common law; (iii) visiting.

Of the women ever in a union, 17 percent were not currently in a union, 7 percent were currently pregnant, and 13 percent were sterilized/impaired, so that 37 percent were not exposed and 63 percent were exposed to the risk of childbearing. Table 3.1.L shows that the proportion at risk was about 70 percent for women under 35 years of

Table 3.1.L
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO EXPOSURE STATUS, BY (i) CURRENT AGE, BY (ii) YEARS SINCE ENTRY INTO INITIAL UNION, AND BY (iii) NUMBER OF LIVING CHILDREN

| Current Age, Years Since Initial Union and Number of Living Children | Number of Women | Exposure Status |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Currently <br> Pregnant | Not Currently in a Union | Sterilized/ Impaired | Reported <br> Fecund $\dagger$ |
| All Women | 2,765 | 7 | 17 | 12 | 63 |
| (i) Current Age |  |  |  |  |  |
| <25 | 868 | 13 | 16 | 1 | 71 |
| 25-34 | 869 | 8 | 15 | 8 | 68 |
| 35-34 | 704 | 3 | 16 | 22 | 59 |
| 45+ | 324 | 1 | 26 | 33 | 40 |
| (ii) Years since Initial Union |  |  |  |  |  |
| $<5$ | 557 | 14 | 16 | 1 | 69 |
| 5-9 | 623 | 9 | 14 | 3 | 74 |
| 10-14 | 450 | 8 | 16 | 8 | 68 |
| 15-19 | 423 | 4 | 17 | 23 | 57 |
| 20-24 | 356 | 2 | 17 | 26 | 55 |
| 25-29 | 261 | 2 | 20 | 26 | 52 |
| $30+$ | 95 | 1 | 30 | 32 | 38 |
| (iii) Number of Living Children |  |  |  |  |  |
| 0 | 371 | 10 | 18 | 8 | 64 |
| 1 | 521 | 9 | 19 | 5 | 66 |
| 2 | 459 | 8 | 17 | 6 | 70 |
| 3 | 347 | 9 | 14 | 9 | 69 |
| 4 | 268 | 6 | 17 | 16 | 61 |
| 5+ | 799 | 5 | 16 | 24 | 56 |

$\dagger$ That is, exposed in WFS terminology.
Source: Appendix Tables 1.6.2 and 1.6.1.
age, but was very much lower for older women ( 45 percent and 40 percent, respectively for women $35-44$ and 45 years of age and over). The factors contributing to nonexposure also differ, of course, with age. The proportion not currently in a union was about 16 percent for women under 45 years old, but was 10 percentage points higher for the highest age group. Of the two other components, current pregnancy obviously is much more important for women under 35 years than for older women, while the reverse is true for sterilization and fecundity impairment. This last component was negligible for women under 35 years of age but comprised nearly one-quarter of those 35-44 years old and one-third of the highest age group.

The general pattern holds if years since first union is used instead of current age [Table 3.1.L(ii)]. The proportion reported fecund was highest for women with a duration of 5-9 years and declined steadily for longer durations. Here again the proportion sterilized/impaired increased and the proportion currently pregnant declined as the duration increased, while the proportion not currently in a union is fairly uniform except for women with duration 30 years of age and over which is appreciably higher than for shorter durations.

Table 3.1.L(iii) cross-classifies exposure statui by number of living children which, of course, is itself related to current age and years since first union, as the longer the period of exposure the larger, on average, will be the number of living children. The proportion exposed was
highest for women with 2 or 3 children and declined steadily for women with lower or higher parity. In general, the level of sterilization/impairment increased and the proportion currently pregnant declined as the number of living children increased; more specifically, the proportion currently pregnant is appreciably higher and the proportion sterilized/impaired appreciably lower for women with less than 4 children than for women with 4 or more children.

Table 3.1.M shows exposure status by level of education and current age. For all women taken together, there is a clear increase in the proportion exposed as education increases. For the various age groups, however, the pattern that emerges is that the proportion exposed is significantly higher for women with secondary or higher education, but the differences between the two primary education groups are small and inconsistent. The figures for all women also suggest that the proportion sterilized/ impaired is negligible for women with secondary or higher education and is very much higher for those with primary education. This pattern, however, is largely the result of the differential age structures of the women with secondary education as compared with that of women with less education. It will be remembered that sterilization/impairment is in general negligible for women under 35 years of age but is about one-quarter for the women 35 years of age and over. However, only 18 percent of the women with secondary or more education are 35 years old and

Table 3.1.M
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO EXPOSURE Status, by level of education and by current age

| Current Age and Level of Education | Number of <br> Women | Exposure Status |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Currently <br> Pregnant | Not Currently in a Union | Sterilized/ <br> Impaired | Reported Fecund |
| All Ages |  |  |  |  |  |
| Primary: $<4 \mathrm{yrs}$ | 383 | 6 | 18 | 20 | 55 |
| $4+\mathrm{yrs}$ | 1,758 | 7 | 18 | 14 | 62 |
| Secondary+ | 624 | 8 | 14 | 5 | 73 |
| $<25$ |  |  |  |  |  |
| Primary: $<4 \mathrm{yrs}$ | 47 | [11] | [21] | [0] | [68] |
| $4+\mathrm{yrs}$ | 494 | 13 | 16 | 2 | 69 |
| Secondary+ | 327 | 12 | 14 | 1 | 74 |
| 25-34 |  |  |  |  |  |
| Primary: $<4 \mathrm{yrs}$ | 88 | 13 | 11 | 8 | 68 |
| $4+\mathrm{yrs}$ | 595 | 8 | 17 | 10 | 65 |
| Secondary+ | 186 | 7 | 11 | 2 | 80 |
| 35-44 |  |  |  |  |  |
| Primary: <4 yrs | 176 | 5 | 18 | 26 | 52 |
| $4+\mathrm{yrs}$ | 448 | 3 | 15 | 22 | 60 |
| Secondary+ | 80 | 0 | 18 | 15 | 68 |
| 45+ |  |  |  |  |  |
| Primary: <4 yrs | 72 | 0 | 24 | 38 | 39 |
| $4+\mathrm{yrs}$ | 221 | 1 | 28 | 31 | 40 |
| Secondary + | 31 | [0] | [16] | [39] | [45] |

Note: Brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50.
Source: Appendix Table 1.6.3.A.
over as compared with 38 percent of those with 4 or more years of primary education and 65 percent of those with the least education. Nevertheless, the proportion sterilized/ impaired does decline slightly as education increases even for women 35 years and over, the proportions being 29 , 25 , and 22 percent for women 35 years of age and over, with less than 4 years primary, 4 or more years of primary and secondary or higher education, respectively.

For the other two components, the proportion currently pregnant does not appear to be significantly related to level of education. The proportion not currently in a union was relatively low in all age groups except the $35-44$ one, but here again no consistent, significant relationship between educational level and the proportion not in a union emerges.

The proportion of women reported fecund was higher in urban than in rural areas (Table 3.1.N), this being balanced, for all ages together, by a higher proportion in rural areas in each of the 3 subgroups of women not exposed. The differential in the proportion reported fecund was greatest for women under 35 years of age, the proportion fecund being 13 percentage points higher for urban women under 25 years of age and 10 percentage points higher for the age group 25-34 years old. For women 35-44 years old the urban excess was much less ( 3 percentage points), but for the oldest women a larger proportion of rural women were exposed.

Among women under 35 years of age, the proportions who were pregnant, not in a union and sterilized/impaired were higher in rural than in urban areas. The pattern is different for older women. The proportion currently pregnant was negligible (under 1 percent) for women 35
years old and over except among rural women 35-44 years old among whom 4 percent were reported as pregnant. The proportion without a partner was higher in urban areas, unlike the pattern for younger women. The proportion sterilized/impaired was also greater for rural women among those aged $35-44$, the differential, in fact, being larger than for younger women. Among the oldest women, however, the proportion was higher for urban dwellers.

Because of the interest in exposure status by current union status, the exposure index subdivides women sterilized/impaired and those reported fecund by current union status (see Appendix tables). Another approach to studying this relationship is to cross-classify the categories pregnant, sterilized/impaired, and reported fecund by current union status, confining the classification to women currently in a union. This is done in Table 3.1.O.

The proportion of women reported fecund is highest for women in a visiting union for every age group, and is lowest for married women except for age group 25-34. The relatively high proportion of exposed women in a visiting union is balanced by a relatively low proportion of these women who are pregnant in the youngest age group, and by a relatively low proportion sterilized/impaired for women 25 years and older. Comparing women in the two cohabiting unions, the differential in the proportion exposed is greatest for women $36-44$ years old (5 percentage points), and is lower ( 3 percentage points) for women under 35 years of age, the proportion for married women being the lower for women under 25 and the higher for women 25-34. There is no difference for women 45 years of age and older. The proportion pregnant was 4

Table 3.1.N
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO EXPOSURE STATUS, BY PLACE OF RESIDENCE AND BY CURRENT AGE

| Current Age and Place of Residence | Number of Women | Exposure Status |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Currently <br> Pregnant | Not Currently in a Union | Sterilized/ Impaired | Reported Fecund |
| All Ages |  |  |  |  |  |
| Urban | 1,319 | 6 | 16 | 10 | 68 |
| Rural | 1,446 | 9 | 18 | 15 | 59 |
| <25 |  |  |  |  |  |
| Urban | 419 | 10 | 12 | 1 | 77 |
| Rural | 449 | 15 | 20 | 1 | 64 |
| 25-34 |  |  |  |  |  |
| Urban | 481 | 7 | 14 | 6 | 73 |
| Rural | 388 | 10 | 17 | 11 | 63 |
| 35-44 |  |  |  |  |  |
| Urban | 285 | 1 | 20 | 18 | 61 |
| Rural | 419 | 4 | 13 | 25 | 58 |
| 45+ |  |  |  |  |  |
| Urban | 134 | 1 | 27 | 36 | 37 |
| Rural | 190 | 1 | 25 | 32 | 43 |

Source: Appendix Table 1.6.3B.

Taīie 3.1.0
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO EXPOSURE STATUS, BY CURRENT UNION STATUS AND BY CURRENT AGE

| Current Age and Current Union Status |  | Exposure Status |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Currently <br> Pregnant | Sterilized/ <br> Impaired | Reported Fecund |
| All Ages |  |  |  |  |
| Married ${ }^{-}$ | 884 | 5 | 24 | 71 |
| Common Law | 799 | 10 | 13 | 77 |
| Visiting | 609 | 10 | 6 | 84 |
| $<25$ |  |  |  |  |
| Married | 85 | 18 | 2 | 80 |
| Common Law | 260 | 17 | 1 | 83 |
| Visiting | 380 | 12 | 2 | 87 |
| 25-34 |  |  |  |  |
| Married | 295 | 7 | 12 | 82 |
| Common Law | 308 | 11 | 10 | 79 |
| Visiting | 130 | 10 | 5 | 85 |
| 35-44 |  |  |  |  |
| Married | 344 | 3 | 29 | 69 |
| Common Law | 172 | 2 | 25 | 73 |
| Visiting | 77 | 5 | 21 | 74 |
| $45+$ |  |  |  |  |
| Married | 160 | 1 | 46 | 53 |
| Common Law | 59 | 0 | 47 | 53 |
| Visiting | 22 | [5] | [27] | [68] |

Note: Brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50 .
Source: Derived from Appendix Table 1.6.3D.
percentage points higher for common law women aged 25-34 years, while the proportion sterilized/impaired was 4 percentage points higher for married women 35-44 years old. Apart from these, the differences in these two components were small.

### 3.2. FERTILITY

The WFS CORE QUESTIONNAIRE provided for the collection of detailed pregnancy history data in two parts, the first part relating to all live births and the second to other pregnancies. In the Caribbean surveys, this approach was modified so that all pregnancies were listed in order of occurrence in a single 'Pregnancy History' table. The data from the pregnancy histories, plus the direct information collected on the total number of live births to each women, are used to provide tabulations on three aspects of fertility:
(a) Initial fertility, covering births before or within the first five years since entry into initial union;
(b) Cumulative fertility, covering births up to the date of the survey; and
(c) Current fertility, measured directly in terms of births in the five years preceding the survey, and indirectly in terms of the proportion of women currently pregnant.

In addition, from special tabulations obtained from the pregnancy histories, age specific fertility rates have been calculated for a number of years and are included. Finally, because of the effect of child mortality on actual fertility, this topic is also dealt with in this section.

### 3.2.1. Initial Fertility

Initial fertility refers to fertility within the first five years of unionship, and therefore the discussion will be limited to women who have been in a union for five years or longer. Two measures of initial fertility are used here - the length of the first birth interval and the number of live births within the first five years of unionship.

There were 2,208 women in the sample who had first entered a union at least five years before the survey. As is shown in Table 3.2.A, 14 percent of these women are recorded as having a negative first birth interval, i.e. their first birth occurred before their first entry into a union. Since all unions, and not only legal unions, have been taken into account, it was expected that the number of women with a negative union would be negligible as it would relate only to those births resulting from casual sexual contact. For this reason, it had originally been intended to exclude the negative interval from this table. The proportion of women reporting a negative union therefore appears excessive, particularly 'when one notes that more than one in four of women who first entered a union

Table 3.2.A
PERCENT DISTRIBUTION OF WOMEN FIRST IN A UNION AT LEAST FIVE YEARS AGO ACCORDING TO INTERVAL, BETWEEN INITIAL ENTRY INTO A UNION AND FIRST BIRTH, BY AGE AT INITIAL UNION

| Age at Initial Union | No. of Women | Interval from Union to First Birth (Months) |  |  |  |  |  | Did Not Have a Birth |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Negative | 0-7 | 8-11 | 12-23 | 24-35 | $36+$ |  |
| Total | 2,208 | 14 | 10 | 14 | 28 | 11 | 17 | 6 |
| $<15$ | 312 | 3 | 6 | 13 | 26 | 16 | 31 | 5 |
| 15-17 | 880 | 9 | 12 | 16 | 31 | 12 | 16 | 5 |
| 18-19 | 409 | 14 | 12 | 15 | 31 | 9 | 14 | 5 |
| 20-21 | 281 | 20 | 9 | 10 | 24 | 10 | 17 | 11 |
| 22-24 | 193 | 26 | 8 | 14 | 24 | 8 | 13 | 7 |
| $25+$ | 133 | 36 | 5 | 12 | 15 | 8 | 10 | 14 |

Source: Appendix Table 2.1.1.
at age 22-24, and more than one in three of those first entering at 25 years of age or higher reported that their first birth occurred before they entered a union. This suggests that, given the somewhat indeterminate nature of the start of a visiting union, many women, particularly those whose first union is reported as starting at higher ages, tended to report a later date of first entry into a union than was in fact the case.

Of the 2,208 women, 6 percent had no live births. The modal interval between first union and first birth is $12-23$ months ( 1 year) with 28 percent of the women reporting this interval. This is followed by the interval 'less than one year' which includes 24 percent of the women, 10 percent having an interval of less than 8 months and the remaining 14 percent an interval of $8-11$ months. The proportion who had their first birth within a two year period since first entry into a union ( $24-35$ months) was 11 percent, while as many as 7 percent had their first birth after 5 years in a union.

The breakdown by age at first union further highlights the peculiarities about the proportion of women with a negative first birth interval; this proportion increases consistently and rapidly from 3 percent for women first in
a union at under 15 years of age to 36 percent for those whose first union started when they were 25 years or older. Even if it is assumed that because of recall problems it is safer to group together the negative interval and the interval of less than 7 months, there is a large jump from 9 percent for those in a union before age 15 to 21 percent for those who joined at age 15-17, and then a slower but steady climb to 41 percent for those initially in a union at age 25 or higher. While it is reasonable to expect that women entering their first union at a young age will tend to have a longer first birth interval, particularly with the practice of contraception for the spacing of children, the considerable differences in the proportion having their first birth before the eighth month of their first union according to age at first union are surprising.

In Table 3.2.B the mean length of the first birth interval is considered for those women with a positive birth interval, that is where women with a negative birth interval or with no children are excluded. There are 1,767 women covered in this table.

The mean length of interval is 23.6 months, but there is a wide range according to the age at first union, being less than 15 months for women first in a union at age 25 and

Table 3.2.B
MEAN LENGTH OF INTERVAL BETWEEN INITIAL ENTRY INTO A UNION AND FIRST BIRTH AMONG WOMEN FIRST IN A UNION AT LEAST FIVE YEARS AND WITH A POSITIVE BIRTH INTERVAL, BY YEARS SINCE INITIAL UNION AND BY AGE AT INITIAL UNION

| Age at First Union | Total | Years since Initial Union |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 5-9 | 10-19 | $20+$ |
| All Women | 23.6 (1,767) | 21.4 (491) | 21.8 (692) | 27.8 (584) |
| $<15$ | 35.6 (286) | 34.1 (96) | 32.5 (104) | 40.8 (86) |
| 15-17 | 22.7 (761) | 20.7 (228) | 22.6 (312) | 24.8 (221) |
| 18-19 | 22.2 (330) | 18.3 (71) | 18.0 (125) | 29.0 (134) |
| 20-21 | 21.8 (195) | [17.0] (47) | 21.5 (65) | 25.0 (83) |
| 22-24 | 19.6 (129) | [16.0] (32) | 16.4 (50) | [25.3] (47) |
| $25+$ | 14.9 (66) | * (17) | [14.9] (36) | * (13) |

[^16]Table 3.2.C
MEAN NUMBER OF CHILDREN BORN BEFORE OR WITHIN FIRST FIVE YEARS OF ENTRY INTO INITIAL UNION TO ALL WOMEN EVER IN A UNION AT LEAST FIVE YEARS, BY YEARS SINCE INITIAL UNION AND BY AGE AT ENTRY INTO INITIAL UNION

| Age at Initial Union | Total | Years since Initial Union |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 5-9 | 10-19 | $20+$ |
| All Women | $1.8(2,208)$ | 1.7 (623) | 1.9 (873) | 1.7 (712) |
| $<15$ | 1.4 (312) | 1.3 (107) | 1.4 (112) | 1.4 (93) |
| 15-17 | 1.7 (880) | 1.7 (265) | 1.7 (358) | 1.6 (257) |
| 18-19 | 1.9 (409) | 1.9 (103) | 2.1 (153) | 1.8 (153) |
| 20-21 | 1.7 (281) | 1.7 (69) | 1.8 (97) | 1.6 (115) |
| 22-24 | 2.0 (193) | [1.7] (45) | 2.3 (77) | 2.0 (71) |
| $25+$ | 2.3 (133) | [2.0] (34) | 2.5 (76) | [2.4] (23) |

Note: Brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .
Source: Appendix Table 2.1.2A.
over, about 20-23 months for women first in a union between 15 and 24 years of age, but considerably higher - nearly 36 months - for those who entered their first union before their fifteenth birthday. Within the age span 15-24 years at first union, the average length of interval declines slowly as age at union increases. The pattern of a comparatively very long interval for women first in a union before age 15 is maintained for the three duration cohorts in the table. In general, too, for women first in a union at 15-24 years of age, the length of interval declines as age at first union increases for women first in a union 5-9 or 1019 years ago, with one exception in the latter cohort. For those in a union for 20 years or more no such pattern is maintained for women entering their first union between 15 and 24 years of age.

The mean number of children born before or within the first five years of entry into a union was 1.8 per woman, and hardly varies with the years since initial entry into a union. There is more variation according to the age at initial entry into a union, the mean being 1.4 for women first in a union before age 15, 2.3 for those first entering at age 25 or older, and 1.7-2.0 for those entering their first union at intervening ages (Table 3.2.C).

There is remarkable uniformity in the figures crossclassified by years since first union and age at first union. Dealing first with age at first union, there are only negligible differences in the means for women of different durations, the range being only $0.1-0.2$ for women who joined a union before age 22 . The range is greater, $0.5-0.6$ for women whose age at first entry was 22 years and higher, but here the number of cases are fewer. However, even if the women who first joined in a union at age 22 or higher are all taken together, the range is still 0.6 , the means being $1.8,2.4$, and 2.1 for those with union duration of $5-9,10-19$, and 20 years and over, respectively. Because of this, the patterns for the three duration cohorts are very similar, with the means increasing with age at first union except for women first in a union at age 20-21.

The Appendix Tables cross-classify the above data by selected characteristics of the woman. The classification by level of education shows that there is little difference in the mean number of children born before or within the first five years in a union for women in the two subgroups with primary education ( $1.8-1.9$ ); however, the mean is appreciably less (1.3) for those with secondary or higher

Table 3.2.D
MEAN NUMBER OF CHILDREN BORN BEFORE OR WITHIN FIRST FIVE YEARS OF ENTRY INTO INITIAL UNION TO ALL WOMEN EVER IN A UNION AT LEAST FIVE YEARS, BY LEVEL OF EDUCATION AND BY AGE AT ENTRY INTO INITIAL UNION

| Age at Initial Union | Total | Level of Education |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Primary <4 Years | Primary 4+ Years | Secondary or Higher |
| All Women | $1.8(2,208)$ | 1.8 (355) | $1.9(1,470)$ | 1.3 (383) |
| $<15$ | 1.4 (312) | [1.5] (48) | 1.4 (216) | [1.0] (48) |
| 15-17 | 1.7 (880) | 1.7 (127) | 1.7 (626) | 1.3 (127) |
| 18-19 | 1.9 (409) | 2.1 (65) | 2.0 (280) | 1.4 (64) |
| 20-21 | 1.7 (281) | 2.0 (57) | 1.8 (164) | 1.3 (60) |
| 22-24 | 2.0 (193) | [1.8] (30) | 2.4 (105) | 1.6 (58) |
| $25+$ | 2.3 (133) | [2.1] (28) | 2.7 (79) | [1.4] (26) |

Note: Brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50.
Source: Appendix Table 2.1.2A.
education. This pattern holds, in general, regardless of the age at initial entry into a union (Table 3.2.D). The same pattern also holds if years since first union by level of education is considered (Appendix Table 2.1.2A).

The classification by place of residence (Appendix Table 2.1.2B) shows a higher fertility in the first five years among rural than among urban women. The differential is somewhat lower for women first in a union 10-19 years ago than for the other durations. The higher fertility of rural women is maintained, however, for every period of duration, irrespective of the age at initial union.

In the classification by religion (Appendix Table 2.1.2C), the denominations with the lowest mean number of children, in the first five years in a union are Roman Catholics and the group comprising Methodist, Moravian, Presbyterian, and Congregational. Those with the highest number of children are: Church of God, and, to a lesser extent, Baptists, and those with no religion. These patterns hold, in general, for the three duration cohorts, and are not affected by differential ages at entry into a union.

It is expected that the type of current union will be related to initial fertility, considering that current union type was shown to be related to percentage of time spent in unions (Section 3.1.3). The earlier analysis showed that married women had lost the least amount of time, followed by common law, visiting, and single women, in that order. Indeed, Table 3.2.E shows that the mean number of children born in the first five years of unionship was highest for women who are currently married or currently common law and whose initial union was also either married or common law. The mean for each of these three groups is 2.0 children born before or during the first five years in a union. Currently married women whose first union was visiting, however, as well as those currently common law and initially visiting both had a mean which was about the same as women currently in a visiting union, the mean for these three groups being 1.7-1.8. The mean for single women is only minimally less.

The number of cases is too small to permit a breakdown by age at first union except into less than 18 years and 18 years and over. There is little difference by the union history pattern for the under 18 group. For those who entered their initial union at age 18 and higher, the mean is highest for women who are currently common law and whose initial union was either legal marriage or common law (2.3). This is closely followed by women who are currently married with initial union married or common law and women currently in a common law union and originally visiting (2.1). The other three groups follow with means of 1.7-1.8. Since the small number of cases has greatly restricted the use of the cross-classification by age at first union, one approach to take this into account is to standardize the means for the various patterns of union history by the age-at-first-union distribution of the population as a whole. The standardized means thus derived are also shown in Table 3.2.E. Women who are currently married and originally married or common law, as well as all women currently common law have a standardized mean of $1.9-2.0$ children per womañ as compared with $1.6-1.7$ for the visiting and single women and those currently married and initially visiting.

### 3.2.2. Cumulative Fertility

Data on the cumulative fertility of women, i.e. the total number of children ever born to each woman, are particularly relevant to the study of differential fertility. As is to be expected, however, the number of children ever born to women ever in a union is closely associated with the periods of time that they have been exposed to childbearing. To control for this, the tables in this subsection use, for the most part, either current age or years since first union (sometimes referred to here as duration for convenience) as a measure of the length of time that each woman has been exposed. The use of current age as a control variable is based on the fact that, on average, women tend to attain puberty at about the same age (about 15 years of age or slightly less). One of the draw-

Table 3.2.E
MEAN NUMBER OF CHILDREN BORN BEFORE OR WITHIN FIRST FIVE YEARS OF ENTRY INTO INITIAL UNION TO all women ever in a union at least five years, by pattern of union history and by age at entry INTO INITIAL UNION

| Age at First Union | Pattern of Union History |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M, CL/M | V/M | M, CL/CL | V/CL | All/V | All/S |
| All Women | 2.0 (245) | 1.7 (577) | 2.0 (151) | 1.8 (514) | 1.7 (343) | 1.6 (378) |
| $<18$ | 1.7 (61) | 1.6 (277) | 1.7 (88) | 1.6 (347) | 1.6 (223) | 1.5 (196) |
| 18+ | 2.1 (184) | 1.8 (300) | 2.3 (63) | 2.1 (167) | 1.8(120) | 1.7 (182) |
| Standardized | 1.9 | 1.7 | 2.0 | 1.9 | 1.7 | 1.6 |

[^17]backs of current age, in this regard, is that it ignores the fact that there are much wider differences between women in the age at which they join a sexual union and hence become directly exposed to the risk of childbirth. For this reason, Years since First Union is a better control variable for cumulative fertility than current age in many respects. One advantage of current age, however, is that it gives an indication of the number of years of reproductive life remaining to the woman. Current age, however, suffers from one further drawback when, as in the present case, the fertility experience of a study population which is restricted to those who have ever been in a union is being considered. The type of bias that arises with this restriction of the study population has already been discussed with respect to age at first union. The problem is retained here since the women 15-19 in the survey, for example, differ from the remainder of women in the same age cohort in that they joined in a union earlier and hence could be expected to have their first and subsequent children at an earlier age than the remaining women in the age cohort will eventually do. Any attempt to compare the fertility performance of the various age cohorts come up against this problem. This bias does not exist when a comparison is made on the duration of the union, or union cohort rather than age cohort, though in this case, the earlier cohorts tend to have a bias introduced by the exclusion of those women who were 50 years and over at the time of the survey. In interpreting these two control variables, therefore, the above limitations should be borne in mind.

It is to be expected that the number of children ever born to women in the sample will increase steadily with current age and with years since first union. Table 3.2.F
shows the percent distribution according to the number of children ever born, and the mean number of children by these two demographic variables.

Dealing first with current age, one-half of the women approaching the end of their childbearing period (45-49 years of age) had borne six children or more, while 45-47 percent of those 35-44 years of age had similarly large families. It seems probable, therefore, that women 35-44 years old now will end up, also, with about one-half of them having very large families of six children or more. No conclusions can be drawn in this regard about the younger cohorts. At the other extreme, the proportion of childless women was 37 percent for the youngest age group, just one-half of this for women 20-24, and 5-8 percent of the older age groups. Somewhat surprisingly, the proportion childless among the oldest age group ( 8 percent) is somewhat higher than for women in the age span 30-44 (5-6 percent), and is, in fact, the same as for women $25-29$ years of age. The mean number of children per woman increases steadily from one child per woman for the youngest age group to 5.6 for the oldest.

The pattern for the distribution by years since first union is generally similar, though the proportion childless is somewhat lower in most cases when years since first union is used as the measure of length of exposure, and is only 3 percent for women in a union 30 years or longer. The proportion childless is surprisingly higher ( 7 percent) for women first in a union 25-29 years ago, than for women in a union 10-24 years ( $4-5$ per cent). The proportion with very large families of six children or more, on the other hand, increases more rapidly with duration than with

Table 3.2.F
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO NUMBER OF CHILDREN EVER BORN, BY (i) CURRENT AGE AND BY (ii) YEARS SINCE INITIAL UNION

| Current Age Years Since Initial Union | Number of Women | Number of Children Ever Born |  |  |  | Mean <br> Number of Children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | None | 1-2 | 3-5 | $6+$ |  |
| All Women | 2,765 | 12 | 34 | 30 | 24 | 3.6 |
| (i) Current Age |  |  |  |  |  |  |
| 15-19 | 303 | 37 | 59 | 5 | - | 0.9 |
| 20-24 | 565 | 18 | 54 | 27 | 0 | 1.8 |
| 25-29 | 485 | 8 | 38 | 45 | 10 | 2.9 |
| 30-34 | 384 | 5 | 24 | 43 | 29 | 4.1 |
| 35-39 | 371 | 5 | 20 | 30 | 45 | 5.2 |
| 40-44 | 333 | 6 | 20 | 27 | 47 | 5.4 |
| 45-49 | 324 | 8 | 16 | 25 | 51 | 5.6 |
| (ii) Years Since Initial Union |  |  |  |  |  |  |
| <5 | 557 | 35 | 60 | 4 | 1 | 1.0 |
| 5-9 | 623 | 10 | 50 | 38 | 2 | 2.3 |
| 10-14 | 450 | 5 | 23 | 53 | 19 | 3.7 |
| 15-19 | 423 | 4 | 20 | 37 | 40 | 4.8 |
| 20-24 | 356 | 5 | 15 | 29 | 51 | 5.6 |
| 25-29 | 261 | 7 | 16 | 23 | 54 | 6.0 |
| $30+$ | 95 | 3 | 16 | 19 | 62 | 6.7 |

Source: Appendix Tables 2.2.1 and 2.2.2.
age, and is 50 percent or higher for all women first in a union 20 years or more ago, reaching nearly two out of every three women with a duration of 30 years or more. The mean number of children is again one child per woman for those with the shortest period of exposure, but rises to 6.0 and 6.7 , respectively for those first in a union $25-29$ and 30 or more years ago.

Cross classification by duration and age at first union gives an indication of the importance of age at first union even when duration is held constant (see Table 3.2.G). Contrary to what might be expected, apart from women first in a union 25 years or more, the mean number of children for any given duration cohort is not highest for those who entered their first union youngest (at less than 15 years of age), but rather for those first joining a union at ages 15-17 or 18-19 and, in the case of women in a union for less than 15 years, those who entered very late (at 25 years of age or higher). For women who first joined a union 25 years or more ago, the mean is highest for those who entered youngest (under 15 years of age), but here the numbers of cases are small and hence the means are liable to relatively large sampling error.

The age at entry into the first union is important in studying fertility because sexual exposure can be assumed to intensify with the advent of the first union. In addition, however, in fertility studies in the Caribbean, account
should also be taken of the type of union because it has been found that the level of fertility varies appreciably with union type, because of differences in the stability and in the frequency of sexual intercourse in unions of different types. [See, for example, Roberts, George W. and Sinclair, Sonja, A. (1978): Women in Jamaica. KTO Press.]

Table 3.2 H shows that when no account is taken of the number of years that the women have been exposed to child-birth, the mean number of children per women is higher for married women (4.5) than for common law wives (3.8), and higher for single women (3.2), than for those in a visiting union (2.2). If current age is controlled, however, the mean number of children is higher for common law than for married women for all age groups below the age of 40 , demonstrating that it is the older age distribution of married women which gives the total group a higher mean. In addition, the introduction of age shows that the fertility of women in a visiting union is higher than that of single women for all age groups above age 25 , with the higher total mean of single women again being due to their older age distribution rather than to their higher fertility.

When the variable Years since First Entry is introduced, it is found that for the longest durations ( 20 years or more), as for the oldest ages ( 40 years or more), married women have higher fertility than common law women.

Table 3.2.G
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY AGE AT ENTRY INTO INITIAL UNION AND BY YEARS SINCE INITIAL UNION

| Years since Initial Union | Age at Entry into Initial Union |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | $<15$ | 15-17 | 18-19 | 20-21 | 22-24 | $25+$ |
| Total |  |  |  |  |  |  |  |
| Mean | 3.6 | 3.6 | 3.5 | 3.9 | 3.4 | 3.5 | 3.2 |
| Number | 2,765 | 386 | 1,133 | 505 | 344 | 233 | 164 |
| $<5$ |  |  |  |  |  |  |  |
| Number | 557 | 74 | 253 | 96 | 63 | 40 | 2.0 |
| 5-9 |  |  |  |  |  |  |  |
| Mean | 2.3 | 2.2 | 2.3 | 2.5 | 2.1 | 2.1 | 2.3 |
| Number | 623 | 107 | 265 | 103 | 69 | 45 | 34 |
| 10-14 |  |  |  |  |  |  |  |
| Mean | 3.7 | 3.6 | 3.8 | 3.8 | 3.4 | 3.5 | 4.1 |
| Number | 450 | 55 | 205 | 74 | 50 | 32 | 34 |
| 15-19 |  |  |  |  |  |  |  |
| Mean | 4.8 | 4.5 | 4.9 | 5.3 | 4.6 | 5.0 | 3.5 |
| 20-24 Number | 423 | 57 | 153 | 79 | 47 | 45 | 42 |
| 20-24 |  |  |  |  |  |  |  |
| Number | 5.6 356 | 5.9 37 | 6.2 109 | 5.9 78 | 4.7 58 | 4.9 51 | 23 |
| 25-29 |  |  |  |  |  |  |  |
| Mean | 6.0 | 6.9 | 6.2 | 6.3 | 5.1 | 5.2 | 0 |
| Number | 261 | 33 | 85 | 66 | 57 | 20 | - |
| $30+$ |  |  |  |  |  |  |  |
| Number | 95 | 23 | 63 | 9 | - | - | - |

Source: Appendix Table 2.2.3A.

Similarly, visiting women who first entered a union 10 years or more ago (as in the case of age, at 25 years or older) have higher fertility than single women. The two variables, current age and duration, are therefore in agreement about the age patterns of fertility.

Age at first union may also influence the level of fertility within age groups. To examine this point, fertility is standardized by age at first union, for each current age union group. The higher fertility of common law over married women under 35 years of age is maintained after standardization, but the differences are reduced. For example, among women 25-34 years old, the mean number of children for common law women is 0.7 higher than for married women. However, when the means are standardized for age at first union, the difference is reduced to 0.4 children. This means that for these women under 35 years of age the higher fertility of common law women is to a significant extent the result of their earlier age at initial entry into union. By age 35-44, however, married women surpass common law wives, suggesting that over the full length of the reproductive period the
younger mean age at entry of common law women is counterbalanced by the more continuous exposure of married women.

We now consider, very briefly, the probable influence on fertility of two other intermediate variables - Patiern of Union History and Number of Partners. The justification for taking into account previous union types in any comprehensive analysis of Caribbean fertility has already been raised. If, for example, women in the non-cohabiting 'visiting' union type have an appreciably lower fertility risk than those in the two cohabiting types - married and common law - then we would expect the fertility level of currently married or currently common law women to differ according to whether or not they have spent a significant proportion of their time in a visiting union before entering their present status. One approach to taking past union history into account is to categorize women according to the various union types they have experienced. As we indicated in Section 3.1, it was decided to limit this categorization, in this general report, to groupings based on the women's initial and current union

Table 3.2.H
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY CURRENT UNION STATUS AND BY (i) CURRENT AGE, BY (ii) YEARS SINCE INITIAL UNION, AND BY (iii) CURRENT AGE, STANDARDIZED FOR AGE AT INITIAL UNION

| Current Age and Years Since Initial Union | Total |  | Current Union Status |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Married |  | Common Law |  | Visiting |  | Single |  |
| All Women | 3.6 | ,765) |  | (884) | 3.8 | (799) |  | (609) |  | (473) |
| (i) Current Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 0.9 | (303) | * | (6) | 1.3 | (72) |  | (167) |  | (58) |
| 20-24 |  | (565) |  | (79) | 2.3 | (188) |  | (213) | 1.6 | (85) |
| 25-29 |  | (485) | 2.5 | (140) |  | (179) | 2.8 | (86) | 3.0 | (80) |
| 30-34 |  | (384) |  | (155) | 4.8 | (129) | [3.7] | (44) | 3.3 | (56) |
| 35-39 |  | (371) |  | (172) | 5.8 | (99) | [5.2] | (45) | 4.4 | (55) |
| 40-44 |  | (333) |  | (172) | 5.4 | (73) | [4.4] | (32) | 4.2 | (56) |
| 45-49 |  | (324) |  | (160) | 5.0 | (59) | [6.4] | (22) | 5.1 | (83) |
| (i)B Current Age (10-year Intervals) |  |  |  |  |  |  |  |  |  |  |
| 15-24 |  | (868) | 1.7 | (85) |  | (260) |  | (380) |  | (143) |
| 25-34 |  | (869) | 3.3 | (295) | 4.0 | (308) |  | (130) |  | (136) |
| 35-44 |  | (704) |  | (344) | 5.7 | (172) |  | (77) |  | (111) |
| 45+ |  | (324) |  | (160) | 5.0 | (59) | [64] | (22) | 5.1 | (83) |
| (ii) Years Since Initial Union |  |  |  |  |  |  |  |  |  |  |
| $<5$ |  | (557) |  | (62) |  | (134) | 0.7 | (266) | 0.9 | (95) |
| 5-9 |  | (623) |  | (147) |  | (212) |  | (173) | 2.0 | (91) |
| 10-14 |  | (450) |  | (149) |  | (164) | 3.7 | (64) | 3.4 | (73) |
| 15-19 |  | (423) |  | (164) | 5.3 | (139) | [4.9] | (49) | 3.9 | (71) |
| 20-24 |  | (356) |  | (182) |  | (83) | [5.3] | (29) | 4.6 | (62) |
| 25-29 |  | (261) |  | (139) | [5.3] | (47) | [6.3] | (22) | 5.3 | (53) |
| $30+$ |  | (95) | [7.7] | (41) | [6.8] | (20) | * | (6) | [5.3] | (28) |
| (iii) Current Age, Standardized for |  |  |  |  |  |  |  |  |  |  |
| Age at Initial Union |  |  |  |  |  |  |  |  |  |  |
| All Women |  |  | 4.8 |  | 3.8 |  | 2.2 |  | 3.2 |  |
| 15-24 |  |  | 1.8 |  | 2.0 |  | 1.1 |  | 1.4 |  |
| 25-34 |  |  | 3.5 |  | 3.9 |  | 3.1 |  | 2.9 |  |
| 35-44 |  |  | 5.6 |  | 5.6 |  | 5.0 |  | 4.3 |  |
| $45+$ |  |  | 6.0 |  | 4.9 |  | * |  | 4.9 |  |

[^18]type. Even here, because of restrictions in the number of cases, we have had to merge some subgroups, so that in our seven-way categorization, women currently in visiting or single union status have not been subdivided by initial union type.

Notwithstanding this limitation of the number of categories, it is clear from Table 3.2.J. that a study of the fertility of these categories by period of exposure (current age or years since first union) is limited by the small number of cases in many instances. Despite these limitations in the data, there appears to be no evidence that women whose initial union type was visiting have a consistently lower fertility than others with the same current union type. Among currently married women, for example, it is women whose initial union type was also legal marriage that have the lowest mean number of children ever born for every age group and all but one of the duration cohorts. Among women currently common law, those who were initially in a visiting union appear to have the highest level of fertility in the case of women aged 35 years and over or women first in a union 15 or more years ago. Another hypothesis worth investigating is that, in terms of social status, common law unions are lower than married or visiting unions, and hence, the fertility of currently married women would be highest among those initially in a common law union. This appears to be borne out in Table 3.2.J(i) for the various age groups but cannot be tested for the breakdown by duration in the table. Among those currently in a common law union, those
initially also in a common law union do have a higher fertility than those initially visiting for the shorter periods of exposure but, as indicated above, women initially in a visiting union have the higher level for the longer periods of exposure.

A comparison of the means standardized for age at first union [Table 3.2.J(iii)] shows that age at first union is of especial significance only for women in the married/ married category, where the very low fertility level is largely accounted for by their relatively late entry into their initial union.

This very inadequate discussion of union types and fertility is introduced here primarily to draw attention to the availability of data for a much more intensive analysis at a later stage.

In this connection, a table has been included in this report (Appendix Table 2.2 .7 E ) which shows the mean number of children ever born by pattern of union history and number of partners. There are two opposing views on the probable relationship between number of partners and fertility. The first is that women with many partners are likely to have spent a significant proportion of their time since initial entry into a union without a partner (i.e. loss of time between partners) and hence a large number of partners is likely to depress the level of fertility. The second view is that for a variety of reasons, including economic, women will feel constrained to have one or more children for each partner, and therefore, a large

Table 3.2.J
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY PATTERN OF UNION HISTORY AND BY (i) CURRENT AGE, BY (ii) YEARS SINCE INITIAL UNION, AND BY (iii) CURRENT AGE, STANDARDIZED FOR AGE AT ENTRY INTO INITIAL UNION

| Current Age and Years Since Initial Union | Total | Pattern of Union History (Initial/Current Union) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | M/M | CL/M | V/M | M, CL/CL | V/CL | All/V | All/S |  |
| All Women | $3.6(2,765)$ | 2.8 (157) | 6.2 (121) | 4.6 (606) | 3.9 (179) | 3.7 (620) | 2.2 (609) | 3.2 | (473) |
| (i) Current Age |  |  |  |  |  |  |  |  |  |
| 15-24 | 1.5 (868) | * (15) | * (5) | 1.8 (65) | 2.0 (50) | 2.0 (210) | 1.1 (380) | 1.3 | (143) |
| 25-34 | 3.5 (869) | 2.3 (68) | [3.7] (23) | 3.6 (204) | 4.2 (70) | 3.9 (238) | 3.1 (130) | 3.1 | (136) |
| 35-44 | 5.3 (704) | 3.9 (53) | 6.6 (70) | 5.7 (231) | [5.3] (47) | 5.8 (125) | 4.9 (77) | 4.3 | (111) |
| 45+ | 5.6 (324) | [3.4] (21) | [7.5] (33) | 6.1 (106) | * (12) | [5.1] (47) | [6.4] (22) | 5.1 | (83) |
| (ii) Years Since Initial Union |  |  |  |  |  |  |  |  |  |
| <5 | 1.0 (557) | [1.2] (32) | * (1) | [1.1] (29) | [1.8] (28) | 1.4 (106) | 0.7 (266) | 0.9 | (95) |
| 5-9 | 2.3 (623) | [2.1] (34) | * (15) | 2.2 (98) | [3.0] (49) | 2.6 (163) | 2.0 (173) | 2.0 | (91) |
| 10-14 | 3.7 (450) | [3.3] (39) | * (12) | 3.6 (98) | [4.1] (37) | 3.9 (127) | 3.7 (64) | 3.4 | (73) |
| 15-19 | 4.8 (423) | [3.8] (26) | * (18) | 4.8 (120) | [5.2] (32) | 5.4 (107) | [4.9] (49) | 3.9 | (71) |
| $20+$ | 6.2 (356) | * (11) | [7.9] (44) | 6.5 (125) | * (12) | 5.6 (55) | [6.3] (28) | 5.3 | (81) |
| (iii) Current Age, Standardized for Age at Initial Union |  |  |  |  |  |  |  |  |  |
| All Women |  | 3.8 | 6.2 | 4.7 | 3.9 | 3.7 | 2.2 | 3.2 |  |
| 15-24 |  | * | * | 1.8 | 1.9 | 2.0 | 1.1 | 1.4 |  |
| 25-34 |  | 3.7 | 3.6 | 3.5 | 4.2 | 3.7 | 3.1 | 2.9 |  |
| 35-44 |  | 4.4 | 6.7 | 5.6 | 5.4 | 5.7 | 5.0 | 4.3 |  |

Note: An asterisk (*) indicates mean was not calculated because base was less than 20; brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .

Source: Appendix Tables 2.2.6D and 2.2.5F.
number of partners is likely to be associated with a large number of children. Appendix Table 2.2 .7 E appears to bear out the second view, since for every duration the mean number of children tends to increase with the number of partners. Among women with a duration of $10-$ 19 years, for example, the mean number of children is 4.0 for those with 1 or 2 partners, 4.6 for those with 3 partners and 5.2 for those with 4 or more partners. For women in a union less than 10 years the mean increases steadily from 1.1 for those with 1 partner to 2.9 for those with 4 or more partners. The single significant exception is for women with a duration of 20 years or more, where the mean for women with 1 partner is higher than for those with 2 or 3 partners.

If we consider the above relationship for each 'pattern of union history' category, the trend for fertility to increase with the number of partners is generally maintained, but again there are instances where the mean number of children is higher for those with 1 partner than for those with 2 and in some cases 3 partners. This is so for most of the categories among women with a duration of 20 years or more, and is also true for women currently in a common law union, irrespective of initial union, among women with a duration of $10-19$ years.

A consideration of the fertility level of the different pattern of union history categories when the variable number of partners is controlled can also prove illuminating. The influence of spending some time in a visiting union in depressing the over-all fertility, and of common law unions in increasing the woman's over-all fertility are, for example, much better demonstrated if attention is restricted to women with only 1 partner. Among women with a duration of less than 10 years or $10-19$ years, where the number of cases are adequate, the categories with the highest fertility are those in which part of the time was spent in a common law union (e.g. 4.6-4.9 for women with a duration of 10-19 years).

The influence of number of partners on fertility has not, so far, attracted much attention, nor is it dealt with any further in the present report. Here again, however, the simple analysis is intended to draw attention to the availability of the data on the topic and, hopefully, to attract more searching analysis at a later stage.

An examination of the relationship between fertility and a number of selected background characteristics of the women in the survey now follows (Appendix Tables 2.2.5 to 2.2 .7 ). The principal background variables dealt with in

Table 3.2.K
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY LEVEL OF EDUCATION AND BY (i) CURRENT AGE, BY (ii) YEARS SINCE INITIAL UNION, AND BY (iii) CURRENT AGE, STANDARDIZED FOR AGE AT INITIAL UNION

| Current Age and Years Since Initial Union | Total |  | Level of Education |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Primary |  |  |  | Secondary or Higher |  |
|  |  |  | <4 Years |  | 4 Years + |  |  |  |
| All Women | 3.6 ( 2,765 ) |  | 4.7 (383) |  | $4.0(1,758)$ |  | 1.7 (624) |  |
| (i) Current Age |  |  |  |  |  |  |  |  |
| 15-24 |  | (868) | [1.9] |  | 1.7 | (494) |  | (327) |
| 25-34 |  | (869) |  |  |  | (595) |  | (186) |
| 35-44 |  | (704) | 5.5 | (176) | 5.6 | (448) |  | (80) |
| 45+ |  | (324) |  | (72) | 5.8 | (221) | [3.7] | (31) |
| (ii) Years Since Initial Union |  |  |  |  |  |  |  |  |
| <5 |  | (557) |  |  |  | (288) |  | (241) |
| 5-9 |  | (623) |  |  | 2.6 | (375) |  |  |
| 10-14 |  | (450) |  |  | 4.0 | (325) | 2.6 | (72) |
| 15-19 |  | (423) | 4.8 | (75) |  | (295) | 2.9 | (53) |
| 20-24 |  | (356) |  |  | 5.9 | (223) | [3.5] |  |
| 25-29 |  | (261) |  |  | 6.0 | (182) |  |  |
| $30+$ |  |  | [7.3] |  | 6.4 |  | * |  |
| (iii) Current Age, Standardized for Age at Initial Union |  |  |  |  |  |  |  |  |
| All Women | 3.6 |  | 4.8 |  | 4.0 |  | 1.7 |  |
| 15-24 | 1.5 |  | 2.0 |  | 1.7 |  | $\begin{aligned} & 1.0 \\ & 2.2 \end{aligned}$ |  |
| 25-34 | 3.5 |  | 3.6 |  | 3.8 |  |  |  |
| 35-44 | 5.3 |  | 5.4 |  | 5.7 |  | $\begin{aligned} & 2.2 \\ & 3.1 \end{aligned}$ |  |
| 45+ | 5.6 |  | 6.0 |  |  |  |  |  |

Note: The total population of each age group has been used as the standard population in (iii).
Note: An asterisk $\left(^{*}\right)$ indicates the mean was not calculated because the base was less than 20; brackets [ ] indicate the mean was calculated on a base of at least 20 but less than 50 .

Source: Appendix Tables 2.2.6A and 2.2.5A.
this report are: Level of Education, Place of Residence and Religion of the woman. Characteristics related to economic activity are dealt with only in a few tables, while the characteristics of the woman's partner have been largely ignored at this stage. These will be dealt with in a more thorough manner in subsequent analysis of the survey results.

Of particular interest is the relationship between the level of education of women and their fertility. The mean number of children ever born is 4.8 for women with less than 4 years of primary education, 4.0 for those with 4 years or more of primary education, and very much less (1.7) for those with a secondary education. It is essential, however, to consider cumulative fertility in relation to the length of time to which women have been exposed and the crude figures just mentioned do not, therefore, tell a great deal about fertility differentials by education. Table 3.2.K, therefore, shows these differentials when the length of exposure is controlled.

The pattern of the lowest education group having the higher cumulative fertility does not hold when the period of exposure is taken into account. Thus, when current age is the control variable there is no significant difference between the women who had less than 4 years of primary schooling and those who had 4 years or more. When, however, the variable is controlled it is those with 4 years or more of primary education that have the highest fertility level for most duration cohorts, the exceptions being the groups with the least (less than 5 years) and the most ( 25 years or more) exposure, while those who first joined a union 5-24 years ago have a higher fertility than those with less education. For all age and duration cohorts, however, the fertility level of women with a secondary education is very much lower than that of women with primary education only.

A point that has often been made is that the lower level of fertility of better educated women, and more particularly those with a secondary or higher education, is in part due to the fact that these women enter into sexual unions at later ages than the less educated women. In Table 3.2.K (iii) age at first union has been standardized to throw some light on the importance of age at first union in this respect. This can be judged by considering the differences between the middle and upper education groups for the various age cohorts. For women 15-24 years of age the difference between the standardized and unstandardized means are unchanged as standardization has not in fact changed either of the two means. For women 25-34 years of age the difference between the unstandardized means is 2.0 while for the standardized
means it is 1.6 so that about one-fifth of the difference appears to be the result of the later age at entry into a union by the better educated women. For women 35-44 years old, however, standardization increases the difference from 2.3 to 2.5 implying that for this age-group the effect of differential ages at entry into first union has operated in the opposite direction to what would have been expected. The number of women with a secondary or higher education is too small to warrant the calculation of standardized means for women 45 years and over. On the whole, therefore, differences in age at first union are not particularly important in explaining the observed lower level of fertility of women with a secondary education.

The relevance of union type as an intermediate variable should now be considered. Current union status is dealt with first, bearing in mind the limitations of this variable, since not all of a woman's children would necessarily have been the outcome of the current union type, and none, of course, would normally be the outcome of the current union status of single women. Since the fertility level of married and common law women is appreciably higher than that of visiting and single women, we must consider whether the fertility differentials by level of education could be largely the result of the higher incidence of lowfertility unions among the better educated women. Table 3.2.L, however, shows that for every union type within durations the fertility level of women with a secondary or higher education is appreciably lower than that of women with less education. The differentials between the middle and lower education levels are neither large nor consistent. Therefore it can safely be concluded that current union type is not of considerable importance in explaining educational differentials in fertility. This is borne out by the fact that the means, standardized for current union status, are only slightly different, if at all, from the unstandardized means by level of education and duration (Table 3.2.L).

Cross-classification by the more detailed pattern of union history is an improvement on current union status in that it takes into account the first union type as well (Appendix Table 2.2.7D). There is still, however, no indication that differences in the types of union in which women engage are responsible for any significant part of the fertility differentials by level of education. Here again, the standardized means (not shown here) do not differ significantly from the unstandardized means by level of education. The educational differentials in fertility, therefore, appear to be independent of any other intervening variables, and are probably due to the direct effects of education.

Table 3.2.L
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY LEVEL OF EDUCATION, BY CURRENT UNION STATUS, AND BY YEARS SINCE ENTRY INTO INITIAL UNION

| Years since Initial Union and Current Union Status | Total | Level of Education |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Primary |  |  | Secondary or Higher |
|  |  | $<4$ Years | $4+$ | Years |  |
| All Durations |  |  |  |  |  |
| All Women | 3.6 (2,765) | 4.7 (383) | 4.0 | (1,765) | 1.7 (624) |
| Married | 4.5 (884) | 5.9 (137) | 5.2 | (512) | 2.5 (235) |
| Common Law | 3.8 (799) | 4.5 (138) |  | (587) | 1.9 (74) |
| Visiting | 2.2 (609) | [3.3] (39) | 2.8 | (344) | 1.0 (226) |
| Single | 3.2 (473) | 3.7 (69) | 3.6 | (315) | 1.3 (89) |
| Standardized |  | 4.5 | 4.0 |  | 1.8 |
| $<10$ |  |  |  |  |  |
| All Women | $1.7(1,180)$ | $2.0 \quad$ (76) | 2.0 | (663) | 1.1 (441) |
| Married | 1.9 (209) | * (11) | 2.4 | (74) | 1.5 (124) |
| Common Law | 2.2 (346) | [1.6] (37) | 2.4 | (250) | 1.5 (59) |
| Visiting | 1.2 (439) | * (16) |  | (226) | 0.8 (197) |
| Single | 1.4 (186) | * (12) | 1.7 | (113) | 0.9 (61) |
| Standardized |  | [1.5] | 2.0 |  | 1.1 |
| 10-19 |  |  |  |  |  |
| All Women | 4.2 (873) | 4.4 (128) | 4.5 | (620) | 2.8 (125) |
| Married | 4.2 (313) | [4.8] (40) | 4.6 | (198) | 2.7 (75) |
| Common Law | 4.6 (303) | 4.8 (56) | 4.6 | (235) | * (12) |
| Visiting | 4.2 (113) | * (8) | 4.7 | (83) | 3.0 (22) |
| Single | 3.6 (144) | 3.2 (24) | 3.9 | (104) | * (16) |
| Standardized |  | 4.4 | 4.5 |  | 2.9 |
| $20+$ |  |  |  |  |  |
| All Women | 5.9 (712) | 6.1 (179) | 6.1 | (475) | 3.8 (58) |
| Married | 6.3 (632) | 7.0 (86) | 6.3 | (240) | [4.6] (36) |
| Common Law | 5.7 (150) | [5.8] (45) | 5.8 | (102) | * (3) |
| Visiting | 5.8 (57) | * (15) | [6.7] | (35) | * (7) |
| Single | 5.0 (143) | [4.9] (33) | 5.4 | (98) | * (12) |
| Standardized |  | 6.2 | 6.0 |  | [3.5] |

Note: An asterisk (*) indicates the mean was not calculated because the base was less than 20 ; brackets [] indicate the mean was calculated on a base of at least 20 but less than 50. Source: Derived from Appendix Table 2.2.7D.

Another characteristic of women that has often been found to be related to their level of fertility is their urbanrural residence. Urban and rural populations may differ in a number of important ways that affect their fertility. These differences may be demographic, including differences in the age-sex structure and in ethnic origin; or they may be cultural or economic or social, including different levels of education. The mere existence of urbanrural fertility differentials need not necessarily, therefore, provide an indication of the cause of the differentials. Table 3.2.M compares the fertility of women residing in urban and rural areas.

The number of children ever born to women living in rural areas is appreciably higher than the number born to urban women for every age group and every duration period. For all categories (based on age or duration) the mean for rural women is 20 percent or more higher than that for urban women. In the classification by current age, the differential increases, in both absolute and relative terms, the means differing by 0.3 ( 23 percent) for young women under 25 years old, and by 1.6 children (34
percent) for women 45 years old and over. In the classification by duration, the differences between the means for urban and rural women also increase with time, but in this case the relative differences are smaller for women first in a union $10-19$ years ago, than for those with a longer or shorter duration.

It might be expected that the higher fertility of rural women is associated with their having a lower mean age at first union than urban women. But the differences in this respect are not very large; for example, 52 percent of urban women had started their first union before age 18 , as compared with 57 percent of rural women. As a consequence, standardizing for age at first union does not affect the differences between the means significantly, except possibly in the case of women aged 45 years and over.

Differences in current union type or in the pattern of union history could account for a significant proportion of the observed differences between urban and rural fertility. Appendix Table 2.2 .7 F shows the means of urban and

Table 3.2.M
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY PLACE OF RESIDENCE AND BY (i) CURRENT AGE, BY (ii) YEARS SINCE ENTRY INTO INITIAL UNION, AND BY (iii) CURRENT AGE, STANDARDIZED FOR AGE AT INITIAL UNION

| Current Age and Years Since Initial Union | Total | Place of Residence |  |
| :---: | :---: | :---: | :---: |
|  |  | Urban | Pural |
| All Women | 3.6 (2,765) | $3.0(1,319)$ | $4.1(1,446)$ |
| (i) Current Age |  |  |  |
| 15-24 | 1.5 (868) | 1.3 (419) | 1.6 (449) |
| 25-34 | 3.5 (869) | 3.1 (481) | 4.0 (388) |
| 35-44 | 5.3 (704) | 4.5 (285) | 5.8 (419) |
| 45+ | 5.6 (324) | 4.7 (134) | 6.3 (190) |
| (ii) Years Since Initial Union |  |  |  |
| $<5$ | 1.0 (557) | 0.8 (274) | 1.1 (283) |
| 5-9 | 2.3 (623) | 2.1 (329) | 2.6 (294) |
| 10-14 | 3.7 (450) | 3.4 (234) | 4.1 (216) |
| 15-19 | 4.8 (423) | 4.3 (210) | 5.2 (213) |
| 20-24 | 5.6 (356) | 4.6 (145) | 6.2 (211) |
| 25-29 | 6.0 (261) | 5.1 (94) | 6.5 (167) |
| 30+ | 6.7 (95) | [5.2] (33) | 7.5 (62) |
| (iii) Current Age, Standardized for Age at Initial Union |  |  |  |
| All Women | 3.6 | 3.0 | 4.1 |
| 15-24 | 1.5 | 1.3 | 1.6 |
| 25-34 | 3.5 | 3.1 | 3.9 |
| 35-44 | 5.3 | 4.6 | 5.8 |
| 45+ | 5.6 | 4.8 | 6.1 |

Note: Brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .

Source: Appendix Tables 2.2.6B and 2.2.5B.
rural women cross-classified by pattern of union history. The rural women of each pattern of union history have a higher fertility than their urban counterparts. The urbanrural differences are not affected by standardization for pattern of union history in the case of women who first joined a union $10-19$ years ago. For women in a union 20 years or more, a small part of the urban-rural differential ( 0.2 of the 1.6 ) is attributable to a larger proportion of urban women being in low-fertility unions. For example, 1 in 4 of rural women were in visiting unions or were single as compared with 1 in 3 of urban women. In the case of women in a union for less than 10 years, the pattern is reversed, with the proportion of women in visiting unions or single being higher among rural women ( 59 percent) than among urban ( 47 percent). As a result, standardization actually slightly increases the urban-rural differential (Table 3.2.M).

Appendix Tables 2.2.7A and 2.2.7C enable one to consider whether the fertility differentials by residence can in any part be attributed to the known urban-rural differences in level of education and religious affiliation, respectively. Dealing first with religion, the large differences between urban and rural means persist, in general, for all denominations and all durations. The single important exception is the Roman Catholic denomination, where the rural fertility is only marginally higher than the
urban for women first in a union less than 20 years ago (taken as a single group), while the difference (0.4) for women first in a union 20 years or more ago is considerably less than the difference for the other denominations, though the number of cases here are few. On the whole, therefore, differences in religious affiliation between urban and rural populations do not make any contribution to the urban-rural differences, as is seen from the standardized means, for women first in a union less than 20 years ago. Among women in a union for 20 years or more about 12.5 per cent of the difference is attributable to this factor (Table 3.2.N).

Table 3.2.N
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY PLACE OF RESIDENCE AND BY YEARS SINCE ENTRY INTO INITIAL UNION, STANDARDIZED FOR (i) LEVEL OF EDUCATION AND
(ii) RELIGION

| Years Since <br> Initial Union | Total | Place of Residence |  |
| :---: | :---: | :---: | :---: |
|  |  | Urban | Rural |
| (i) Standardized for Level of Education |  |  |  |
| All Women | 3.6 | \{3.0\} 3.2 | \{4.1\} 3.8 |
| $<10$ | 1.7 | \{1.5\} 1.6 | \{1.8\} 1.8 |
| 10-19 | 4.2 | \{3.9\} 4.0 | \{4.6\} 4.5 |
| 20+ | 5.9 | \{4.9\} 5.0 | $\{6.5\} 6.3$ |
| (ii) Standardized for Religion |  |  |  |
| All Women | 3.6 | \{3.0\} 3.0 | \{4.1\} 4.0 |
| $<10$ | 1.7 | (1.5) 1.5 | \{1.8) 1.8 |
| 10-19 | 4.2 | \{3.9\} 3.9 | \{4.6\} 4.6 |
| $20+$ | 5.9 | \{4.9\} 5.0 | \{6.5\} 6.4 |

Note: The figures in brackets \{ \}, are unstandardized means.
Source: Appendix Tables 2.2.7A and 2.2.7C.

Differences in the level of education are, however, more relevant. Appendix Table 2.2.7A shows that the fertility of women with a secondary education is about the same for urban and rural women for those in a union less than 20 years, while for those with a longer duration the rural fertility is lower though the number of cases are too small for us to be confident about this difference. When we standardize for level of education, the differences between urban and rural fertility are reduced. For women in a union for 20 years or more, for example, the difference is reduced from 1.6 to 1.3.

Standardization for education reduced the urban-rural differential in all duration groups - for women with durations of less than 10 years, the differential was reduced from 0.3 to 0.2 , for the $10-19$ group, from 0.7 to 0.5 for the 20 or more years group, from 1.6 to 1.3 , and for the total sample, from 1.1 to 0.6 children. Education and residence are, therefore, interrelated variables and the education differential described earlier is clearly highly dependent on residence as well.

The third characteristic which is investigated is religion. The mean numbers of children born to women belonging to different religious denoninations are shown in Table 3.2.0. Contrary to the expectation that Roman Catholics, because of the teaching of their religion on contraception, would have a relatively high fertility, the mean number of children born to Roman Catholics is least for all ages together as well as for each age group except 25-34, where it is very slightly higher than the Protestant Nonconformist group. The remaining denominations, in increasing order of fertility level, are: Anglicans, no religion, others, Baptists, and Church of God. Considering the level of fertility of Roman Catholics, it seems likely that religious differentials in fertility are the result of social, economic, and related differences rather than religious teaching. If education is used as an indicator of socioeconomic status, then the religious differentials, controlling for education level, are significantly reduced (Table 3.2.0). The reduction in the range of the means may be measured by the unweighted standard deviation of the means; for example, for women in a union for $10-19$ years, it is 0.38 for the unstandardized means and 0.26 for the standardized means. An example of the size of the reductions in absolute terms may be seen in the case of women with a union duration of $10-19$ years - the differential of 0.9 child between Roman Catholics and Baptists was reduced by nearly 50 percent to 0.5 child, after standardization.

Finally, the relationship between the economic activity of women and their level of fertility is considered. Two
variables are used with respect to economic activity - the pattern of work history, and the current or most recent occupation. As regards pattern of work, WFS had recommended the derivation of a summary variable of the work history based on economic activity status before and after first marriage. Because of the mating patterns in the Caribbean, already discussed at length in this report, it was considered more pertinent to relate this summary measure to the periods before and after the woman's first birth. As a consequence, a variable - Pattern of Work has been obtained with the following categories:

1. Currently Working
1.1. Worked before first birth
1.2. Did not work before first birth
1.3. No live birth
2. Not Currently Working
2.1. Worked before and after first birth
2.2. Worked before but not after first birth
2.3. Worked after but not before first birth

## 3. Never Worked

There are some significant differentials by pattern of work (see Table 3.2.P). Although women who have never worked unexpectedly have one of the lowest mean family sizes for the less than 10 year duration group, by duration 10-19 and 20+ years they have one of the highest means. Also, women who are currently working and worked before the first birth, and the group who are not currently

Table 3.2.0
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY RELIGION AND BY (i) CURRENT AGE AND BY (ii) YEARS SINCE ENTRY INTO INITIAL UNION, STANDARDIZED FOR LEVEL OF EDUCATION

| Current Age and Years Since Initial Union | Total | Religion |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Anglican | Baptist | Protestant Nonconformists $\dagger$ | Roman Catholic | Church of God | Other | None |
| (i) Current Age |  |  |  |  |  |  |  |  |
| All Women | 3.6 (2,765) | $3.4(343)$ | $3.8(461)$ | 3.5 (286) | 2.7 (233) | 3.9 (577) | 3.5 (657) | 3.4 (208) |
| $\Delta$ |  |  |  | -0.1 | -0.9 | +0.3 | -0.1 | -0.2 |
| $<25$ | (868) | 1.4 (88) | 1.6 (128) | 1.3 (68) | 1.2 (87) | 1.7 (205) | 1.4 (215) | -1.3 (77) |
|  |  | -0.1 | +0.1 | -0.2 | -0.3 | +0.2 | -0.1 | -0.2 |
| 25-34 | (869) | 3.1 (112) | 3.6 (142) | 3.0 (109) | 3.1 (78) | 3.7 (183) | 3.6 (183) | 4.0 (62) |
|  |  | -0.4 | +0.1 | -0.5 | -0.4 | +0.2 | +0.1 | +0.5 |
| 35-44 | (704) | 5.0 (92) | 5.4 (131) | 5.4 (77) | [3.7] (47) | 6.3 (129) | 5.2 (172) | 5.1 (56) |
|  |  | $\begin{aligned} &-0.3(51) \\ & 5.1 \\ &-0.5 \end{aligned}$ | $+0.1$ | $\begin{aligned} & +0.1 \\ & {[5.0](32)} \end{aligned}$ | [-1.6] | $+1.0$ | -0.1 | $-0.2$ <br> (13) |
| $45+$ | 5.6 (324) |  | 5.6 (60) |  | $\underset{[-0.5]}{[5.1]}(21)$ | 7.0+1.4 | 5.4-0.2 |  |
| $\Delta$ |  |  | 0 | [-0.6] |  |  |  |  |
| (ii) Years Since Initial Union, Standardized for Level of Education |  |  |  |  |  |  |  |  |
| All Women | 3.6 | \{3.4\} 3.7 | \{3.8\} 3.7 | \{3.5\} 3.6 | \{2.7\} 3.2 | \{3.9\} 3.7 | \{3.5\} 3.5 | \{3.4) 3.3 |
| $<10$ | 1.7 | \{1.6\} 1.6 | \{1.8\} 1.7 | \{1.6) 1.6 | \{1.3\} 1.5 | \{1.8\} 1.8 | \{1.7\} 1.6 | \{1.6\} 1.5 |
| 10-19 | 4.2 | \{4.0\} 4.1 | \{4.5\} 4.3 | \{3.8) 4.0 | \{3.6\} 3.8 | \{4.4\} 4.3 | \{4.3\} 4.3 | \{4.6\} 4.6 |
| $20+$ | 5.9 | \{5.4\} 5.8 | \{5.8\} 5.8 | \{5.7\} 6.0 | \{4.7\} 5.5 | \{7.1\} 7.0 | $\{5.7\} \dagger 5.7$ | \{5.7\} 5.8 |

$\dagger$ Includes Methodist, Moravian, Presbyterian, and Congregational.
Note: $\Delta$ is the difference between the mean for the given denomination and the mean for all denominations; the figures in braces \{ $\}$ are the unstandardized means; brackets [] indicate mean was calculated on a base of at least 20 but less than 50 .

Source: Appendix Tables 2.2.6C and 2.2.7B.

Table $3.2 . \mathrm{P}$
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY PATTERN OF WORK HISTORY ÁND BY YEARS SINCE INITIAL UNION

| Pattern of Work | Years since Initial Union |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  | All Durations | $<10$ | $10-19$ | $20+$ |
| Currently Working |  |  |  |  |
| Worked before first birth | $3.5(498)$ | $1.8(171)$ | $3.5(182)$ | $5.4(145)$ |
| Did not work before first birth | $4.2(416)$ | $2.4(109)$ | $4.1(172)$ | $5.8(135)$ |
| No live birth | $0.0(169)$ | $0.0(125)$ | $0.0(21)$ | $0.0(23)$ |
| Not Currently Working |  |  |  |  |
| Worked before and after | $3.4(477)$ | $1.5(212)$ | $4.5(146)$ | $5.5(119)$ |
| Worked before not after | $3.7(207)$ | $1.8(122)$ | $5.5(47)$ | $7.3(38)$ |
| Worked after and not before | $4.1(426)$ | $2.5(166)$ | $4.4(164)$ | $6.4(96)$ |
| Never Worked | $3.9(536)$ | $1.6(264)$ | $5.3(128)$ | $7.0(144)$ |

Source: Appendix Table 2.2.7J.
working but worked before and after the first birth, have the lowest means for durations of $20+$ years, and are among the lowest at shorter durations.

Data on fertility by present/most recent occupation of the woman are given in Table 3.2.Q. For all union durations, fertility is highest among women in unsikilled and independent occupations (i.e. self-employed in unskilled occupations). At the second level were women in service (3.8) and skilled (3.3) occupations, and women who had never worked (3.6). Women with the lowest level of fertility were those in professional, technical and related occupations (2.0) and clerical and sales workers (2.4). The relatively low level of fertility among women who never worked is, however, accounted for by the fact that a large proportion of these are young women, whose exposure to childbearing is comparatively recent. Duration specific fertility data demonstrate this: for every duration cohort, women who have never worked are one of the highest fertility groups, with the unskilled group also being very high. For all durations, the professional, technical, and related and the clerical and sales groups have the lowest fertility.

### 3.2.3. Effects of Child Mortality

In this subsection, the effects of child mortality are assessed by the proportions of children ever born who have died, distributed according to the number of children ever-born (Table 3.2.R).

Of all the children born to women in the survey, 7.5 percent had died by the time of the survey. The proportion of women who had lost one or more children increased steadily with increasing parity. The proportion of the number of children ever-born who have died does not increase continuously by parity, however. The range is from 5.0 percent for women with two children to 10.3 percent for those with 9 or more children, and although the trend is upward, as parity rises, there are fluctuations, e.g. parities 5 and 7 have unexpectedly low proportions dead.

Table 3.2.R compares the mean number of children ever born with the mean number of children living, by current age of mother and by years since first union.

Table 3.2.S shows that the mean number of children dying increased with age and duration of union of the

Table 3.2.Q
MEAN NUMBER OF CHILDREN EVER BORN TO ALL WOMEN EVER IN A UNION, BY YEARS SINCE INITIAL UNION AND BY CURRENT/MOST RECENT OCCUPATION

| Current/Most Recent Occupation | Total | Years since Initial Union |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $<5$ | 5-9 | 10-14 | 15-19 | $20+$ |
| All Women | 3.6 (2,757) | 1.0 (554) | 2.3 (621) | 3.7 (449) | 4.8 (423) | 5.9 (710) |
| Professional, Technical, etc. | 2.0 (212) | [0.5] (45) | 1.6 (67) | [2.2] (40) | [2.9] (28) | [4.3] (32) |
| Clerical and Sales | 2.4 (415) | 0.7 (106) | 1.7 (116) | 3.3 (68) | 3.4 (56) | 4.4 (69) |
| Independent | 4.6 (303) | * (17) | [2.6] (25) | [3.5] (47) | 4.3 (70) | 5.8 (144) |
| Service | 3.8 (766) | 1.0 (104) | 2.5 (184) | 4.1 (156) | 4.8 (122) | 5.7 (200) |
| Craftsmen | 3.3 (153) | * (17) | [2.7] (42) | [3.2] (40) | [4.5] (24) | [4.7] (30) |
| Unskilled | 5.0 (210) | [1.6] (21) | [2.7] (38) | [4.5] (22) | [5.9] (38) | 6.5 (91) |
| Never Worked | 3.6 (698) | 1.1 (244) | 2.6 (149) | 4.5 (76) | 6.2 (85) | 7.0 (144) |

[^19]Table 3.2.R
PERCENT DISTRIBUTION OF MOTHERS ACCORDING TO THE NUMBER OF THEIR CHILDREN WHO DIED, BY NUMBER OF CHILDREN EVER BORN

| Number of Children Ever Boinin | Number of Women | Number of Children Who Died |  |  |  |  |  |  | Proportion Dying |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0 | 1 | 2 | 3 | 4 | 5 | $6+$ |  |
| 1 | 501 | 94.8 | 5.2 | - | - | - | - | - | 5.2 |
| 2 | 447 | 91.3 | 7.4 | 1.3 | - | - | - | - | 5.0 |
| 3 | 330 | 83.3 | 12.7 | 3.3 | 0.6 | - | - | - | 7.1 |
| 4 | 281 | 75.1 | 21.7 | 2.5 | 0.7 | - | - | - | 7.2 |
| 5 | 220 | 75.0 | 20.9 | 3.6 | 0.5 | - | - | - | 5.9 |
| 6 | 172 | 68.6 | 23.3 | 6.4 | 1.2 | 0.6 | - | - | 7.0 |
| 7 | 137 | 62.8 | 30.7 | 6.6 | - | -- | - | - | 6.3 |
| 8 | 115 | 56.5 | 26.1 | 11.3 | 5.2 | - | 0.9 | - | 8.6 |
| $9+$ | 225 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | 10.3 |

Source: Derived from Appendix Table 2.3.3.

Table 3.2.S
MEAN NUMBER OF CHILDREN EVER BORN AND MEAN NUMBER OF LIVING CHILDREN BORN TO WOMEN EVER IN A UNION, BY (i) CURRENT AGE AND (ii) YEARS SINCE ENTRY INTO INITIAL UNION

| Current Age and Years Since First Union | Number of <br> Women | Mean Number of Children Ever Born | Mean Number of Living Children | Mean Number of Children Dying | Percentage Loss |
| :---: | :---: | :---: | :---: | :---: | :---: |
| All Women | 2,765 | 3.6 | 3.3 | 0.3 | 8 |
| (i) Current Age |  |  |  |  |  |
| 15-19 | 303 | 0.9 | 0.8 | 0.1 | 11 |
| 20-24 | 565 | 1.8 | 1.7 | 0.1 | 6 |
| 25-29 | 485 | 2.9 | 2.8 | 0.1 | 3 |
| 30-34 | 384 | 4.1 | 3.9 | 0.2 | 5 |
| 35-39 | 371 | 5.2 | 4.8 | 0.4 | 8 |
| 40-44 | 333 | 5.4 | 4.9 | 0.5 | 9 |
| 45-49 | 324 | 5.6 | 5.1 | 0.5 | 9 |
| (ii) Years since First Union |  |  |  |  |  |
| <5 | 557 | 1.0 | 0.9 | 0.1 | 10 |
| 5-9 | 623 | 2.3 | 2.2 | 0.1 | 4 |
| 10-14 | 450 | 3.7 | 3.5 | 0.2 | 5 |
| 15-19 | 423 | 4.8 | 4.4 | 0.4 | 8 |
| 20-24 | 356 | 5.6 | 5.1 | 0.5 | 9 |
| 25-29 | 261 | 6.0 | 5.4 | 0.6 | 10 |
| $30+$ | 95 | 6.7 | 5.9 | 0.8 | 12 |

Source: (i) Appendix Tables 2.2.1 and 2.3.1; (ii) Appendix Tables 2.2.5 and 2.3.2.
mother, though for younger women, aged 15-29, and for women with short durations ( $0-9$ years), it was constant. Consequently the 'percentage loss' is highest for the youngest and oldest women (and for extremes of duration) and lowest for the intermediate values. Using duration as an example, we find that women with less than 5 years duration had lost 10 percent of their live-born children, and women with durations of 30 or more years had lost 12 percent, while the 5-9 years duration group had lost only 4 percent of their children.

Infant mortality rates have been derived from Appendix Table 2.3.5 for the six years preceding the survey. The rate per 1,000 live births fluctuates between 35 and 48 during this period except for the two adjacent years 1972 and 1973, when it was 33 and 63 , respectively, an average of 47. Comparable infant mortality rates from national vital
statistics are significantly lower, ranging from 23.2 in 1975 to 32.2 in 1970.

### 3.2.4. Recent Fertility

The tables proposed by WFS for the study of current fertility have, as their main purpose, the identification of 'those women who, when exposed to the risk of conception, are currently most fertile'. To this end, Appendix Tables 2.4.1 to 2.4.3 are confined to women who lived continuously with the same partner during the 5 years preceding the survey. Since the concern is only with ensuring that at no time during the 5 -year period was the woman without a partner, changes of union type while continuously with the same partner do not exclude the woman from the study population in these tables.

Table 3.2.T
MEAN NUMBER OF CHILDREN BORN IN THE PAST FIVE YEARS TO WOMEN WHO HAVE LIVED CONTINUOUSLY WITH THE SAME PARTNER DURING THIS PERIOD, BY NUMBER OF LIVING CHÏLDREN FIVE YEARS AGO AND BY AGE FIVE YEARS AGO

| Age Five Years Ago | Total | Number of Living Children Five Years Ago |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0 | 1-2 | 3-5 | $6+$ |
| All Women | $0.9(1,167)$ | 0.9 (150) | 0.9 (343) | 0.8 (378) | 0.8 (296) |
| 10-19 | 1.7 (111) | 1.5 (55) | 1.8 (54) | - (2) | - |
| 20-29 | 1.2 (402) | [0.9] (42) | 1.1 (169) | 1.3 (164) | 1.4 (27) |
| 30-34 | 0.8 (235) | [0.3] (30) | [0.3] (49) | 0.7 (101) | 1.3 (70) |
| 35-39 | 0.5 (219) | $\}^{[0.3]}$ | [0.1] (38) | 0.4 (66) | 0.8 (100) |
| 40-44 | 0.1 (200) | [0.0] (23) | [0.0] (33) | [0.1] (45) | 0.2 (99) |

[^20]Of the 2,765 women ever in a union, 1,167 , or 42 percent, had lived continuously with the same partner during the whole of the five-year period immediately preceding the survey. For all ages taken together, according to Table 3.2.T, the mean number of children born to these women during the period under review was 0.9 , and hardly varied with the number of iiving chiidiren the women had had at the beginning of the period. The most fertile women during the period were those who were 10-19 years old five years ago, and had $1-2$ children at that time. For all family sizes, the mean number of children born during the period declined as age increased. What is striking, however, is that for every age group, fertility during the last five years was positively related to family size at the beginning of the five-year period. This phenomenon will undoubtedly deserve careful investigation in the later analysis.

Appendix Tables $2 \cdot 4.3 \mathrm{~A}-2 \cdot 4.3 \mathrm{E}$ allow for an examination of the association of current fertility with selected
variables. The intermediate variable - Current Union Type - is first considered. The proportion of women currently in a union for at least five years who had lived continuously with the same partner during the whole of this period was 64 percent. Not surprisingly, this proportion was highest for married women ( 76 percent), followed by those currentity common law ( 61 percent), and least, by far, for women in a visiting union ( 40 percent). These figures give a rough indication of the relative stability of the three union types though, as indicated earlier, some of the women with the same partner may have changed their union type with him during the five-year period.

Taking all ages together, the mean number of children born in the five years preceding the survey was highest for common law wives (1.2), followed by women in a visiting union (0.9) and married women (0.6). The ascendancy of common law unions is maintained for all age groups (Table 3.2.U). However, the fertility of visiting unions is

Table 3.2.U
MEAN NUMBER OF CHILDREN BORN IN THE PAST FIVE YEARS TO WOMEN WHO HAVE LIVED CONTINUOUSLY WITH THE SAME PARTNER DURING THIS PERIOD, BY CURRENT UNION TYPE AND BY AGE

| Age | Total | Current Union Type |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Current and 5 Years Ago |  | Married | Common Law | Visiting |
| All Women | $0.9(1,167)$ | 0.6 (626) | 1.2 (404) | 0.9 (137) |
| Five-Year Age Groups |  |  |  |  |
| 15-24 10-19 | 1.7 (111) | * (13) | 1.9 (53) | [1.5] (45) |
| 25-29 20-24 | 1.3 (181) | 1.2 (63) | 1.5 (91) | [1.0] (27) |
| 30-34 25-29 | 1.1 (121) | 0.9 (113) | 1.4 (90) | * (18) |
| 35-39 30-34 | 0.8 (235) | 0.7 (142) | 1.1 (73) | [0.7] (20) |
| 40-44 35-39 | 0.5 (219) | 0.5 (151) | 0.7 (56) | * (12) |
| 45-49 40-44 | 0.1 (200) | 0.1 (144) | [0.1] (41) | * (15) |
| Ten-Year Age Groups |  |  |  |  |
| 15-29 10-24 | 1.4 (282) | 1.3 (76) | 1.6 (144) | 1.3 (72) |
| 30-39 25-34 | 0.9 (456) | 0.8 (255) | 1.2 (163) | [0.8] (38) |
| 40-49 35-44 | 0.3 (419) | 0.3 (295) | 0.4 (97) | [0.1] (27) |

Note: An asterisk $\left(^{*}\right)$ indicates the mean was not calculated because base was less than 20 ; brackets $[1$ indicate mean was calculated on a base of at least 20 but less than 50 .

Source: Derived from Appendix Table 2.4.3D.
not higher than that of married women, when classified by age; instead the fertility of these unions is identical for women under 35 years of age at the beginning of the period, but is higher for married unions among older women.

Although the number of women who actually changed union type during the five-year period was probably not large, it is nevertheless interesting to enquire whether the fertility of the current union types differs according to the initial union type, i.e. according to pattern of union history. From Appendix Table 2.4.3D, the most significant difference is that for women currently married, the fertility of those initially in a common law union was highest, while there was little difference between those initially married and those initially in a visiting union. In fact, the fertility level of currently married women whose initial union was common law was very similar to that of women currently in a common law union for the separate age groups. The lower level of this former group ( 0.8 as against 1.2 for currently common law) when women of all ages are treated together is entirely explained by the fact that it includes virtually no women currently under 30 years of age, and it is among these young women that fertility is highest. For women currently 30 years old and over, the mean number of births of women currently in a common law union was 0.9 irrespective of their initial union, while the mean number was 0.8 for those initially common law and now married. The comparable figure for currently married women whose first union was either married or visiting as well as for all women currently in a visiting union is 0.5 .

The background variables Level of Education, Place of Residence and Religion are considered next. The pattern already observed, with relation to education - that there is little difference between the fertility performance of women in the two lower educational groups but that the level for women with secondary education is significantly lower - is maintained here (Appendix Table 2.4.3A) for all age groups except for women currently 45-49 years old where it is very low for all education groups. The differential between women with primary and those with secondary education is least for women currently under 30 years of age (treated as a single group), where the fertility level for the less educated is about 36 percent higher than for those with secondary education. For women 30 years and over, the fertility of the less educated is twice as high as that of the most educated group (Appendix Table 2.4.3A).

The higher fertility among rural women is also maintained when their current fertility is considered. Here
again the differential increases with age, the rural mean being only $12-15$ percent higher for women currently under 25 years of age as against $50-100$ percent higher for older women. And, as for education, if women currently 45 years old and over are treated as a separate group, the pattern is reversed, the rural being lower, though both rates are very low ( $0.1-0.2$ children per woman in the fiveyear period) (Appendix Table 2.4.3B).

The last two tables in this subsection deal with the number of women reporting themselves as pregnant at the time of the survey. It is clear that there would have been a serious risk of underreporting of pregnancies particularly among women in the early stages of pregnancy and who, in consequence, were either ignorant or unsure of their pregnancy. Despite this and other shortcomings, the reported pregnancies can be taken as a rough indicator of fertility in the very near future. Just over 8 percent of all women currently in a union reported that they were currently pregnant. The proportion was highest among the youngest women ( 17 percent) and declined steadily with age to less than 1 percent of those 45-49 years old. The most striking point about Appendix Table 2.4.4, which bears out an earlier observation, is that for women 30 years old and over, the incidence of pregnancy is much higher among women who already have 7 or more children, than it is among those with smaller families. Indeed, among women 40-49 years of age, where only 9 of them reported themselves as pregnant, 8 of these already had 7 children or more (Appendix Table 2.4.4).

### 3.2.5. Age Specific Fertility Rates

Age specific fertility rates were calculated for Jamaica for the period 1963-1975 (see Table 3.2.V). Two adjustments were incorporated in calculating the denominators for the rates:
(a) The never-in-a-union women were distributed by single years of age and added into the ever-in-union population.
(b) The age-group 15-19 was inflated to account for girls who were full-time students and who were therefore excluded from the sample. This was done on the basis of the proportions in school, according to the 1970 Census.

Table 3.2.V also shows the 1963 age specific rates based on vital statistics for comparison. Rates based on vital statistics are not available for later years.

The survey rates show a general trend of decreasing fertility, from a total fertility rate of 6.33 in 1963 to 3.66 in 1975. The fluctuations in the annual rates are marked,

Table 3.2.V
AGE SPECIFIC FERTILITY RATES FROM THE IAMAICA FERTILITY SURVEY: 1965-1975

| Age | Rates Based on Jamaica Fertility Survey |  |  |  |  |  |  |  |  |  |  |  |  | Rates Based on Vital Statistics 1963 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1975 | 1974 | 1973 | 1972 | 1971 | 1970 | 1969 | 1968 | 1967 | 1966 | 1965 | 1964 | 1963 |  |
| 15-19 | 140 | 143 | 128 | 173 | 158 | 216 | 169 | 179 | 148 | 195 | 211 | 181 | 161 | 149 |
| 20-24 | 217 | 251 | 240 | 263 | 281 | 271 | 249 | 271 | 292 | 307 | 303 | 274 | 291 | 188 |
| 25-29 | 166 | 205 | 231 | 269 | 225 | 265 | 229 | 267 | 276 | 276 | 298 | 277 | 358 | 271 |
| 30-34 | 85 | 178 | 187 | 202 | 208 | 201 | 224 | 210 | 236 | 197 | 294 | 213 | 266 | 227 |
| 35-39 | 73 | 82 | 128 | 126 | 126 | 136 | 143 | 206 | 125 | 172 | 188 | '188' | '188' | 150 |
| 40-44 | 42 | 55 | 66 | 51 | 66 | 52 | '52' | '52' | '52' | '52' | '52' | ' 52 ' | '52' | 52 |
| 45-49 | 9 | '9' | '9' | '9' | ' 9 ' | ' 9 ' | '9' | '9, | '9' | '9, | '9' | ' 9 ' | '9' | 8 |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fertility Rate | 3.66 | 4.61 | 4.94 | 5.46 | 5.36 | 5.75 | 5.37 | 5.97 | 5.69 | 6.04 | 6.77 | 5.97 | 6.63 | 5.73 |

Source: Appendix Tables 1.12, and III. 2D; Tekse, Kalman, 'Population and Vital Statistics. Jamaica 1832-1964,' Department of Statistics, Jamaica.
however, probably because of a combination of factors, such as age mis-statement and displacement in favour of the years 1970 and 1965 , both of which show the effect of heaping. The large difference between 1975 and 1974 also seems to indicate that some displacement occurred, from 1975 to 1974. The 1963 Total Fertility Rate derived from the national vital statistics is 0.9 child lower than the comparable survey rate, although when the annual fluctuations are taken into account (ranging from a TFR of 5.69 in 1967 to 6.77 in 1965), the difference between the vital statistics and survey rates is closer to 0.5 child.

### 3.3. PREFERENCES FOR NUMBER OF CHILDREN

In this section the attitudes of respondents as regards the number of children they would prefer is considered. The number and characteristics of women who want no more children and those who did not want their last (or current) pregnancy, the mean additional number of children wanted, ideal family size, and sex preference as regards additional children wanted are the topics which will be investigated.

The base population relevant here excludes women who are not currently in a union and infecund women because questions on desire for more children were not asked of these groups. Women sterilized for contraceptive purposes are included, however, as wanting no more children. Although they were not asked this question specifically, sterilization implies their attitude. The base population therefore consists of women currently in a union and 'fecund'.

The group wants no more children requires some explanation since it is defined in two different ways in this discussion. The question 'Do you want to have any (more) children?' produced one of three possible responses: No, Undecided, and Yes. In defining the Want No More
variable, only No answers were included, while the Undecided were included with the Yes. In deriving the variable Number of Additional Children Wanted, however, the group wants no more includes the Undecided as well as the $N o$ 's, since by definition, only those who answered Yes could be asked how many more children they wanted.

### 3.3.1. Desire to Cease Childbearing

The first three tables in this subsection - Appendix Tables 3.1.1-3.1.3 - related to the percentage of women currently in a union and 'fecund', who want no more children. Just over 4 out of every 10 women who are in a union and classified as 'fecund' are recorded as wanting no more children (Appendix Table 3.1.1). This proportion is, understandably, very low among women with no children (3 percent), but it increases consistently with parity up to parity five. The increase is rapid at first, rising to 21 percent for those with 1 child and 39 percent for those with 2 children. Thereafter the proportion wanting no more children rises more slowly to 61 percent for those with 5 children. For women with higher parities the proportion does not rise consistently with parity. Instead, women with 6 living children or with 8 living children have a smaller proportion wanting no more children than those with 5 living children ( $54-58$ percent), while, on the other hand, among those with 7 or with $9+$ living children, the proportion is very much higher ( $70-71$ percent).

The proportion wanting no more children also rises, fairly consistently, with current age, from under 1 in four of those aged 15-19 to more than one-half of those 35-39 years old. There is little change for the next age group, but the proportion jumps to two-thirds for those 45-49 years old. We would expect that the association between current age and parity would explain the similarity of the two relationships. This simple relationship is not generally held within parities, however, since for any given parity, the
tendency is for women in the middle age groups to have a lower proportion wanting no more children than the older as well as the younger age groups. For example, for women with 1 living child (or current pregnancy), the proportion wanting no more children was 29 percent of those aged 15-19 and declines steadily to 8 percent of those aged 25-29, thereafter increasing again to nearly 50 percent for those 40 years of age and over. And even among women with 8 children, about 70 percent of those $25-34$ years old wanted no more children, but this proportion is down to about 43 percent for women 35-44 years old (taken as a single group), and appears to rise again for those 45 years old and over. This pattern exists for every parity. Some interesting possible explanations of this phenomenon are obvious but it would be outside the scope of this first report to seek to follow up this matter further with the limited information now available.

The classification by years since first union, instead of current age, demonstrates the same general pattern of first a decline then an increase in the proportion wanting no more children for every parity. For example, again for women with 1 living child (or current pregnancy), the proportion declines from 24 percent for those first in a union less than 5 years ago to 8 percent with a union duration of $10-14$ years, and then increases again to 42 percent for those who joined their first union 20 years or more ago (Table 3.3.A).

The cross-classification of the proportion wanting no more children by number of living children and level of education, but without a control for current age shows, surprisingly, a higher percentage among those with primary education, when all women are taken together.

This is due to the younger age distribution of the secondary-educated women, however. Breaking down the totals by parity shows that for women with less than 2 children the percentage is the same for both education groups, while for women with higher parity it is the better educated women who have the higher percentage, as we would expect. From the detailed figures in Appendix Table 3.1.3A, there does not appear to be a consistent difference between the two lower levels of education. Because of this, and because of the small number of cases in the lowest educational group, all women with less than secondary education are grouped together in the summary Table 3.3.B. For women under 35 years of age, the proportion not wanting any more children is consistently higher among the better educated for women with 2 or more children. For those with less than 2 children the differences are not consistent, though the fluctuations are small.

Appendix Table 3.1.3B compares urban and rural women. Taking women of all ages together, the proportion wanting no more children is equally low ( 41 percent) for both urban and rural women.

In general the percentage wanting no more children is higher among those in urban areas, the relative difference being greater for women with less than 6 living children. Looking at residential differences by age, we find that the desire to cease childbearing is greater among urban women for all age groups except for the extreme cases of women under 25 years of age with less than 3 children and women 45 years old and over with more than 3 children. The variable Wanting the Last (or Current) Pregnancy may also be a good indicator of future fertility (Appendix Tables 3.1.5 and 3.1.4). In the case of Jamaica, however,

Table 3.3.A
PERCENTAGE OF WOMEN CURRENTLY IN A UNION AND 'FECUND' WHO WANT NO MORE CHILDREN, BY NUMBER OF LIVING CHILDREN (INCLUDING ANY CURRENT PREGNANCY) AND BY YEARS SINCE ENTRY INTO INITIAL UNION

| Years Since <br> First Union | Total | Number of Living Children |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0 | 1 | 2 | 3 | 4 | 5 | 6+ |
| All Women | 42 | 3 | 21 | 39 | 48 | 54 | 61 | 64 |
|  | $(2,131)$ | (240) | (389) | (369) | (284) | (213) | (174) | (462) |
| $<5$ | 23 | 1 | 24 | 41 | [67] | * | * | * |
|  | (456) | (138) | (190) | (99) | (21) | (5) | (1) | (2) |
| 5-9 | 33 | 2 | 11 | 32 | 41 | 61 | [68] | * |
|  | (525) | (50) | (101) | (155) | (118) | (67) | (22) | (12) |
| 10-14 | 46 | * | [8] | [34] | 49 | 49 | 65 | 63 |
|  | (358) | (16) | (36) | (41) | (74) | (74) | (52) | (65) |
| 15-19 | 51 | * | [35] | [49] | [49] | [44] | 51 | 60 |
|  | (326) | (11) | (29) | (35) | (37) | (32) | (53) | (129) |
| $20+$ | 59 | [8] | [42] | [56] | [56] | [63] | [65] | 66 |
|  | (466) | (25) | (33) | (39) | (34) | (35) | (46) | (254) |

[^21]Table 3.3.
PERCENTAGE OF WOMEN CURRENTLY IN A UNION AND 'FECUND' WHO WANT NO MORE CHILDREN, BY LEVEL OF EDUCATION, BY NUMBER OF LIVING CHILDREN (INCLUDING ANY CURRENT PREGNANCY), AND BY CURRENT AGE

| Current Age and Number of Living Children | Total | Level of Education |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Primary or None |  |  | ndary Higher |
| All Women |  |  |  |  |  |
| Total | $42(2,131)$ | 44 | $(1,613)$ | 33 | (518) |
| 0 | 3 (240) | 3 | (126) | 3 | (99) |
| 1 | 21 (389) | 21 | (230) |  | (159) |
| 2 | 39 (369) | 36 | (254) |  | (115) |
| 3 | 48 (284) | 44 | (216) |  | (68) |
| 4-5 | 57 (387) | 57 | (343) | [59] | (44) |
| $6+$ | 64 (462) | 63 | (444) | * | (18) |
| 15-24 |  |  |  |  |  |
| Total | 27 (718) | 30 | (442) | 23 | (276) |
| 0 | 1 (152) | 3 | (63) | 0 | (89) |
| 1 | 21 (239) | 19 | (132) | 23 | (107) |
| 2 | 34 (175) | 33 | (125) | 38 | (50) |
| 3+ | 53 (152) | 52 | (122) | [60] | (30) |
| 25-34 |  |  |  |  |  |
| Total | 42 (715) | 44 | (552) |  | (163) |
| 0 | [2] (47) | [0] | (27) | [5] | (20) |
| 1 | 13 (95) | 14 | (51) | [11] | (44) |
| 2 | 36 (127) | 32 | (76) | 43 | (51) |
| $3+$ | 53 (446) | 53 | (398) | [54] | (48) |
| 35+ |  |  |  |  |  |
| Total | 56 (698) | 55 | (619) | 67 | (79) |
| 0-2 | 39 (163) | 33 | (136) | [67] | (27) |
| 3-4 | 56 (119) | 52 | (93) | [73] | (26) |
| $5+$ | 64 (416) | 64 | (390) | [62] | (26) |

Note: An asterisk (*) indicates that the percentage was not calculated because the base was less than 20; brackets [ ] indicate the mean was calculated on a base of at least 20 but less than 50.

Source: Appendix Table 3.1.3A.
the validity of this variable is weakened by the high nonresponse rate of 40 percent. Because of the resulting small number of cases comments are limited to the age groups 25-34 and 35-44 (Table 3.3.C).

The proportion of women reported as not wanting their last (or current) pregnancy is amazingly high - 69 percent. This figure cannot, however, be accepted uncritically in the light of the large number of persons who did not respond to the question. If it is assumed that all the women who did not reply in fact wanted their last (or current) pregnancy, then the proportion who did not want the pregnancy would be 41 percent. Rather than putting emphasis on the level of unwanted pregnancies, evidence of differences by current union type is considered. The indications are that the proportion not wanting their pregnancy was somewhat lower for married women than for others, while common law wives had a slightly higher proportion than those in a visiting union. Even here, however, one needs to be very cautious because of the large non-response to this question.

Table 3.3.C
PERCENTAGE OF WOMEN WHO DID NOT WANT LAST (OR CURRENT) PREGNANCY, BY CURRENT UNION STATUS, BY NUMBER OF LIVING CHILDREN, AND BY CURRENT AGE. CONFINED TO WOMEN CURRENTLY IN A UNION WITH AT LEAST ONE CHILD (OR A CURRENT PREGNANCY)

| Current Age and Number of Living Children | Total | Current Union Status |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Married | Common Law | Visiting |
| All Ages |  |  |  |  |
| Total | $69(1,221)$ | 64 (536) | 76 (421) | 67 (264) |
| 0-2 | 46 (324) | 34 (103) | 50 (96) | 54 (125) |
| 3-4 | 64 (342) | 51 (148) | 75 (126) | 74 (68) |
| $5+$ | 85 (555) | 81 (285) | 89 (199) | 86 (71) |
| 25-34 |  |  |  |  |
| Total | 67 (411) | 57 (158) | 78 (180) | 63 (72) |
| 0-2 | 40 (90) | [33] (43) | [58] (26) | [33] (21) |
| 3-4 | 62 (151) | 49 (63) | 72 (58) | [67] (30) |
| $5+$ | 87 (170) | 87 (53) | 87 (96) | [86] (21) |
| 35-44 |  |  |  |  |
| Total | 70 (408) | 64 (241) | 81 (114) | 77 (53) |
| 0-2 | 30 (63) | [18] (34) | * (18) | * (11) |
| 3-4 | 56 (77) | 50 (54) | * (15) | $\stackrel{\text { \% (8) }}{ }$ |
| 5+ | 84 (268) | 79 (153) | $90 \quad$ (81) | [91] (34) |

Note: An asterisk (*) indicates the percentage was not calculated because the base was less than 20; brackets [ ] indicate the percentage was calculated on a base of at least 20 but less than 50.

Source: Appendix Table 3.1.4.

### 3.3.2. Additional Number of Children Wanted

The base population relevant for this variable is all women currently in a union and 'fecund'. Within this base are two distinct subgroups: (1) those women who answered No or Undecided to the question on desire for more children and those women who were sterilized, equivalent to 59 percent of the total, and classified as wanting zero children for the purposes of calculating means; and (2) women who answered Yes to the question on desire for more children, who were subsequently asked how many more children they wanted, and who comprise about 30 percent of the total.

For the total of 2,127 'fecund' women in a union, the mean additional number of children wanted was 0.9 . The mean was as high as 2.5 for women with no children, and was 1.4 for those with one child. Thereafter, the mean declined steadily as parity increased, to 0.2 for women with 5-8 living children and 0.0 for women with 9 or more children.

Looking at education, we find that in general, among women under 35 years of age, those with secondary education wanted fewer additional children than those with less education, within every parity group (Table 3.3.D). Within each age group, however, women with a secondary education had larger proportions with small families, causing the mean additional number of children
wanted to be siightly higher for the better educated within age groups. For women over 35 the cell sizes are too small to permit analysis.

Table 3.3.D
MEAN ADDITIONAL NUMBER OF CHILDREN WANTED BY WOMEN CURRENTLY IN A UNION AND 'FECUND', BY LEVEL OF EDUCATION, BY NUMBER OF LIVING CHILDREN, AND BY CURRENT AGE

| Current Age and Number of Living Children | Total |  | Level of Education |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Primary or None |  | Secon or H | ndary <br> Higher |
| All Ages |  |  |  |  |  |  |
| Total | 0.9 | $(2,127)$ | 0.8 | (1,611) | 1.2 | (516) |
| 0 | 2.5 | (239) | 2.3 | (126) | 2.6 | (113) |
| 1 | 1.4 | (388) | 1.4 | (229) | 1.4 | (159) |
| 2 | 0.8 | (369) | 0.9 | (254) | 0.7 | (115) |
| 3 | 0.7 | (283) | 0.8 | (216) | 0.4 | (67) |
| 4 | 0.5 | (213) | 0.6 | (186) | [0.4] | (27) |
| 5-8 | 0.2 | (492) | 0.2 | (460) | [0.1] | (32) |
| $9+$ | 0.0 | (143) | 0.0 | (140) | * | (3) |
| 15-24 |  |  |  |  |  |  |
| Total | 1.5 | (717) | 1.4 | (442) | 1.7 | (275) |
| 0 | 2.7 | (152) | 2.3 | (63) | 2.8 | (89) |
| 1 | 1.6 | (239) | 1.6 | (132) | 1.5 | (107) |
| 2 | 0.9 | (175) | 1.0 | (125) | 0.8 | (50) |
| $3+$ | 0.9 | (151) | 1.0 | (122) | [0.8] | (29) |
| 25-34 |  |  |  |  |  |  |
| Total | 0.8 | (714) | 0.8 | (551) | 1.0 | (163) |
| 0 | [2.5] | (47) | [2.7] | (27) | [2.2] | (20) |
| 1 | 1.4 | (95) | 1.5 | (51) | [1.3] | (44) |
| 2 | 0.8 | (127) | 0.8 | (76) |  | (51) |
| $3+$ | 0.4 | (445) | 0.5 | (397) | [0.3] | (48) |
| 35-44 |  |  |  |  |  |  |
| Total | 0.4 | (539) | 0.3 | (476) | 0.3 | (63) |
| 0-2 | 1.1 | (127) | 1.1 | (103) | [0.7] | (24) |
| $3+$ | 0.1 | (412) | 0.1 | (373) | [0.1] | (39) |
| $45+$ |  |  |  |  |  |  |
| Total | 0.2 | (157) | 0.3 | (142) |  | (15) |
| 0-2 | [0.8] | (34) | [0.9] | (32) |  | (2) |
| $3+$ | 0.1 | (123) | 0.1 | (110) | * | (13) |

Note: An asterisk ( ${ }^{*}$ ) indicates the mean was not calculated because the base was less than 20; brackets [ ] indicate the mean was calculated on a base of at least 20 but less than 50 .
Source: Appendix Table 3.2.3A.
The cross-classification by place of residence (Appendix Table 3.2.2B) indicates that for women under 25 years of age there is hardly any difference between the mean additional number of children wanted by urban and rural women, regardless of parity. For women aged 25-44, rural women invariably want more additional children than their urban counterparts. There are too few women aged 45 and over for a meaningful comparison to be made for those older women.

The final table in this subsection compares the mean additional number of children wanted by women of different current union types. Table 3.3.E does not indicate any clear association between current union type and the number of additional children wanted. True, for all women taken together, the mean additional number of children is
less for maritied women ( 0.6 ), followed by common law wives ( 0.9 ) and highest for those in a visiting union (1.3). But when controls for current age and number of living children are introduced this apparent association disappears almost entirely.

Table 3.3.E
MEAN ADDITIONAL NUMBER OF CHILDREN WANTED BY WOMEN CURRENTLY IN A UNION AND 'FECUND', BY CURRENT UNION STATUS, BY NUMBER OF LIVING CHILDREN, AND BY CURRENT AGE

| Current Age and Number of Living Children | Total |  | Current Union Status |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Mar | rried | Comm | on Law | Visit | iting |
| All Ages |  |  |  |  |  |  |  |  |
| Total | 0.9 | $(2,127)$ | 0.6 | (786) |  | (748) |  | (593) |
| 0 | 2.5 | (239) | [2.0] | (40) | 2.4 | (64) | 2.6 | (135) |
| 1 | 1.4 | (388) | 1.4 | (100) |  | (122) | 1.4 | (166) |
| 2 | 0.8 | (369) | 0.8 | (134) |  | (127) | 0.6 | (108) |
| 3 | 0.7 | (283) | 0.4 | (114) | 0.7 | (105) | 1.1 | (64) |
| 4 | 0.5 | (213) | 0.3 | (76) | 0.8 | (96) | [0.5] | (41) |
| 5 | 0.3 | (173) |  | (71) | 0.4 | (71) | [0.2] | (31) |
| $6+$ | 0.1 | (462) | 0.1 | (251) | 0.1 | (163) | [0.1] | (48) |
| 15-24 |  |  |  |  |  |  |  |  |
| Total | 1.5 | (717) | 1.3 | (84) |  | (257) | 1.7 | (376) |
| 0-1 | 2.0 | (391) | [1.9] | (36) | 1.9 | (104) | 2.0 | (251) |
| 2 | 0.9 | (175) | [1.1] | (27) |  | (69) | 0.8 | (79) |
| $3+$ | 0.9 | (151) | [0.5] | (21) | 0.8 | (84) | [1.3] | (46) |
| 25-34 |  |  |  |  |  |  |  |  |
| Total | 0.8 | (714) | 0.8 | (287) |  | (298) | 0.7 | (129) |
| 0-1 | 1.2 | (142) |  | (55) |  | (53) | [1.6] | (34) |
| 2-3 | 0.7 | (260) | 0.7 | (131) |  | (85) | [0.6] | (44) |
| 4 | 0.6 | (105) | [0.4] | (35) |  | (47) | [0.3] | (23) |
| 5+ | 0.3 | (207) |  | (66) |  | (113) | [0.2] | (28) |
| 35-44 |  |  |  |  |  |  |  |  |
| Total | 0.4 | (539) |  | (312) |  | (157) | 0.4 | (70) |
| 0-2 | 1.1 | (127) | 1.1 | (66) | [1.1] | (37) | [0.9] | (24) |
| $3+$ | 0.1 | (412) | 0.1 | (246) | 0.2 | (120) | [0.2] | (46) |

Note: Brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .

Source: Appendix Table 3.2.3D.

### 3.3.3. Total Number of Children Desired

All women in the study population were asked: 'If you could choose exactly the number of children to have in your whole life, how many would that be?'. This could give some identification of the 'ideal' family size of each respondent irrespective of her present number of children or her capacity for having more. Replies to this question would be coloured by past experiences, present fecundity and other conditions, and even the possible desire to 'say the right thing', and this should be borne in mind.

Appendix Table 3.3.1(1) shows that for all women currently in a union, the modal family size desired was 4 children, just under 30 percent of all women giving this as their ideal. This was followed by the desire for 2 and 3 children by 20 percent and 18 percent of the women, respectively. Two-thirds of the women, therefore, gave 2 to 4 children as the number they would choose to have.

For all age groups except the youngest, 4 was the modal number desired. For women under 20 years old, however, the family size desired by the largest number was 2 children, one-third of the women giving this as their ideal number. The proportion desiring $2-4$ children was highest among women 15-24 years old ( 80 percent) and declined steadily as age increased to 51 percent for those $40-44$ years old. The proportion was slightly higher for women 45 years of age and over ( 55 percent). Only 15-18 percent of women under 25 years old had an ideal family size of 5 or more children, but this proportion increased with age to 45 percent of those $40-44$ years old. Consequently the mean desired family size was strongly related to age, increasing from 3.5 for the $15-24$ age group to 5.1 for the 45-49 age group.

Cross-tabulation of the total number of children desired by education and by place of residence shows that the general tendency is for better educated women and those living in urban areas to have a smaller ideal family size (see Appendix Tables 3.3.A and 3.3.B).

Table 3.3.F
MEAN TOTAL NUMBER OF CHILDREN DESIRED BY WOMEN CURRENTLY IN A UNION, BY CURRENT UNION STATUS, BY NUMBER OF LIVING CHILDREN, AND BY CURRENT AGE

| Current Age and Number of Living Children | Total |  | Current Union Status |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Mar | rried | Comm | on Law | Visit | iting |
| All Ages |  |  |  |  |  |  |  |  |
| Total | 4.2 | $(2,287)$ | 4.5 | (882) | 4.3 | (797) |  | (608) |
| 0 | 3.3 | (268) |  | (59) | 3.3 | (71) |  | (138) |
| 1 | 3.1 | (408) | 3.1 | (112) | 3.3 | (129) |  | (167) |
| 2 |  | (390) | 3.3 | (144) |  | (135) |  | (111) |
| 3 | 3.9 | (300) | 3.8 | (123) | 4.1 | (111) | 3.9 | (66) |
| 4 | 4.4 | (235) | 4.0 | (92) | 4.8 | (101) | [4.5] | (42) |
| 5 | 4.8 | (178) | 4.5 | (74) | 5.3 | (72) | [4.3] | (32) |
| 6-7 |  | (253) | 5.5 | (130) | 4.9 | (97) | [4.2] | (26) |
| 8+ | 6.4 | (255) | 6.9 | (148) | 5.6 | (81) | [6.0] | (26) |
| 15-24 |  |  |  |  |  |  |  |  |
| Total | 3.5 | (725) | 3.4 | (85) | 3.7 | (260) |  | (380) |
| 0-1 | 3.2 | (394) | [2.9] | (37) | 3.2 | (104) |  | (253) |
| 2 | 3.5 | (177) | [3.6] | (27) | 3.6 | (70) | 3.4 | (80) |
| $3+$ | 4.2 | (154) | [3.9] | (21) | 4.3 | (86) | [4.2] | (47) |
| 25-34 |  |  |  |  |  |  |  |  |
| Total | 4.1 | (729) |  | (293) | 4.5 | (307) |  | (129) |
| 0-1 | 3.1 | (144) | 2.7 | (57) | 3.8 | (53) | [2.6] | (34) |
| 2-3 | 3.6 | (268) | 3.5 | (134) | 3.7 | (90) | [3.7] | (44) |
| 4 | 4.5 | (107) | [4.3] | (35) | [4.9] | (49) | [4.0] | (23) |
| $5+$ | 5.1 | (210) | 4.9 | (67) |  | (115) | [4.5] | (28) |
| 35-44 |  |  |  |  |  |  |  |  |
| Total | 4.7 | (592) | 4.9 | (344) |  | (171) | 4.2 | (77) |
| 0-2 | 3.1 | (150) | 3.2 | (80) | [3.0] | (44) | [3.1] | (26) |
| 3-5 | 4.3 | (182) | 4.0 | (111) | [5.2] | (46) | [4.0] | (25) |
| 6+ | 6.0 | (260) | 6.5 | (153) | 5.1 | (81) | [5.5] | (26) |
| $45+$ |  |  |  |  |  |  |  |  |
| Total | 5.1 | (241) | 5.3 | (160) | 4.6 | (59) | [4.4] | (22) |

[^22]Table 3.3.F allows us to investigate whether there is a relationship between the size of family desired and the current union type of women. For all women taken together, the smallest family size is desired by women in a a visiting union (3.6), while married women (4.5) had a slightly higher ideal size than women in a common law union (4.3). When we cross-tabulate by parity, the relationship is less simple. Among women with 1-5 children, those in a common law union desire the highest number of children, and for women with 6 or more children, married women are highest. There is no difference by union type among those with no living children. Introduction of a further control - age - does not change the pattern: among women under 35 years of age, those in a common law union desire the highest number, and among older women, married women had the highest ideal size, in general. For most age/parity groups, the ideal family size of women in a visiting union is intermediate between that of married and common law wives. The breakdown by pattern of union history might throw some further light on the tendency for the ideal family size to be highest for common law wives among younger women but for married women among older women. This, however, cannot be pursued in the present report.

### 3.4. KNOWLEDGE AND USE OF CONTRACEPTION

The discussion in Chapter I of the size and growth of the population over the past century and a half showed that population growth rates and crude birth rates were at a peak in the period 1921 and 1943, diminished very slightly between 1943 and 1960, and showed further decreases in the last inter-censal period 1960-1970.

It was near the end of the period of highest population growth that family planning activity in Jamaica was first introduced - i.e. in 1939. But this was mainly a private effort, and formal family planning programmes were not introduced until the 1950's. It was 17 years later that the National Family Planning Board, a statutory board, was formed and family planning activity fully institutionalized. Thus, the women of Jamaica have been exposed to widespread contraceptive education and easily available supplies for nearly 20 years. It is no surprise, then, that, as shall be seen later, contraceptive knowledge among women in the sample is of an extremely high order.

Before examining how the level of knowledge varies with the characteristics of the women in the sample, however, variations in the practice of breastfeeding is first examined. This discussion is included here, in this section dealing with knowledge and use of contraception, because

Table 3.4.A
PERCENT DISTRIBUTION OF WOMEN ACCORDING TO LENGTH (MONTHS) OF BREASTFEEDING IN LAST CLOSED INTERVAL, BY CURRENT AGE, AND BY NUMBER OF CHILDREN EVER BORN. CONFINED TO WOMEN WITH AT LEAST TWO LIVE BIRTHS (INCLUDING ANY CURRENT PREGNANCY) $\dagger$

|  |  | Length (Months) of Breastfeeding |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current Age and Children Ever Born | Number of Cases | Did Not Breastfeed | $<3$ | 3-5 | 6 | 7-8 | 9-11 | 12 | $13+$ | Mean |
| Current Age |  |  |  |  |  |  |  |  |  |  |
| All Ages | 1,923 | 6 | 7 | 20 | 11 | 11 | 23 | 13 | 9 | 7.6 |
| Under 25 | 395 | 6 | 7 | 23 | 11 | 12 | 20 | 11 | 9 | 7.3 |
| 25-34 | 682 | 6 | 9 | 23 | 11 | 11 | 19 | 13 | 8 | 7.2 |
| 35-44 | 587 | 6 | 7 | 18 | 11 | 10 | 24 | 14 | 9 | 7.9 |
| 45 and over | 259 | 4 | 5 | 12 | 10 | 10 | 32 | 15 | 11 | 8.8 |
| Number of Children Ever Born |  |  |  |  |  |  |  |  |  |  |
| 2 | 445 | 7 | 10 | 23 | 10 | 11 | 20 | 10 | 9 | 6.9 |
| 3 | 334 | 9 | 10 | 21 | 11 | 12 | 19 | 11 | 8 | 7.0 |
| 4 | 286 | 8 | 9 | 19 | 13 | 12 | 20 | 13 | 6 | 6.9 |
| $5+$ | 858 | 3 | 5 | 18 | 11 | 10 | 26 | 17 | 10 | 8.5 |

$\dagger$ Excluding not stated.
Source: Appendix Tables 4.1.1 and 4.1.2.
it is generally recognized that breastfeeding has a temporary contraceptive effect. It is known that some women prolong breastfeeding in an effort to delay the next conception. It is therefore necessary to consider not only the pattern of variation in length of breastfeeding according to current age, age at first union, birth order of the child and background variables of the women, but also the extent to which breastfeeding has affected the length of the closed interval.

### 3.4.1. Breastfeeding Practice in the Closed Interval

By definition, the last closed interval covers the period between the last two births or between the last birth and a current pregnancy. It follows therefore that the discussion in this subsection must be limited to women who have had at least two livebirths, or one birth and a current pregnancy. There were 1,923 such women, after excluding the 44 women who did not respond to the question (see Table 3.4.A).

Variations in the length of breastfeeding by current age are not large, but the mean length does increase slightly from those under 35 years of age ( $7.2-7.3$ months) to the 35-44 age group ( 7.9 months) and to the oldest group, 45-49 years old ( 8.8 months). These means reflect a gradual shift in the distribution, e.g. older women have lower proportions with breastfeeding of under five months, and higher proportions at 9 or more months. Within this gradual change, the homogeneity of the under 25 and the 25-34 age groups is striking.

Variations by parity are similar to those by age, with the highest parity group, women with 5 or more children, having a distinctly higher mean, 8.5 months, than the other three parity groups, with 2,3 or 4 children, whose means are $6.9-7.0$ months. Given the homogeneity of women with less than 5 children, however, we have a dichotomized distribution by family size, rather than the more gradual change observed by age. However, the data shown in Table 3.4.A relate to all women with a closed interval,

Table 3.4.B
MEAN LENGTH (MONTHS) OF BREASTFEEDING IN THE LAST CLOSED INTERVAL, BY CURRENT AGE AND BY NUMBER OF CHILDREN EVER BORN/BIRTH ORDER OF CHILD. 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 $\dagger$

| Current Age | Mean Length <br> (Months) of <br> Breastfeeding | Number of <br> Children <br> Ever Born | Birth <br> Order of <br> Child | Mean Length <br> (Months) of <br> Breastfeeding |
| :--- | :---: | :---: | :---: | :---: |
| Total | $7.8(796)$ |  |  |  |
| Under 25 | $7.8(133)$ | 2 | 1 | $6.9(222)$ |
| $25-34$ | $6.9(285)$ | 3 | 2 | $6.7(139)$ |
| $35-44$ | $8.1(256)$ | 4 | 3 | $7.2(119)$ |
| 45 and over | $9.5(122)$ | $5+$ | $4+$ | $9.2(316)$ |

[^23]and does not take into account the survivorship of the child or the length of that interval. The results are therefore affected by involuntary termination of breastfeeding by infant death or by conception. This problem of selfcensoring is taken into account in Table 3.4.B which is confined to women for whom the length of the closed interval was at least $33(24+9)$ months, and whose child survived at least two full years. Only 830 women qualified for inclusion when these limitations are applied. A further refinement was introduced to ensure exactly 24 completed months of observation: half the women who reported exactly 24 months breastfeeding, representing durations of 23.5-24.0 months, were included, and the rest, who would have had over 24.0 months' duration, were excluded along with other durations of over 25 months. Table 3.4.B, therefore, relates to 796 women and shows the mean length of breastfeeding by current age and by parity. Even after censoring, the means still show that the oldest women, aged over 45 , and the highest parity women, those with 5 or more children, had longer durations of breastfeeding than other groups. In addition, however, an unexpected result of censorship is that of the middle group, those aged $25-34$ or those with 3 children, having a shorter breastfeeding duration than the extremes of the age or parity distributions. The dichotomy between parities of under 4
children and 4 or more children is maintained within subgroups when breastfeeding is cross-tabulated by background variables (Table 3.4.C).

The mean length of breastfeeding falls sharply with an increase in education - from 9.8 months among the least educated to 5.2 months for women with secondary or higher education. The difference in mean number of months' breasffeeding between women with less than four children and those with four or more also declines with an increase in the level of education - from 1.6 months among women with less than four years' primary education to 0.4 months among those at the highest level. In contrast, while rural women breastfed their children for a longer period, on average, than did urban women, the differential remains constant, at about 1.6 months whether the women had less than four or four or more children.

For all women taken together, married women breastfed the last but one child for a substantially shorter period than did women in the two other types of union at the time of the survey, or those who had no current partner. For all women taken together, common law wives had the longest mean period of breastfeeding ( 8.4 months), but this is not very much higher than the mean periods for visiting and single women between which the difference is minimal (8.1

Table 3.4.C
MEAN LENGTH OF BREASTFEEDING IN THE LAST CLOSED INTERVAL, BY NUMBER OF CHILDREN EVER BORN 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

| Background Variables | Total | Number of Children Ever Born |  |
| :---: | :---: | :---: | :---: |
|  |  | Less than 4 | 4 or More |
| All Women | 7.8 (796) | 6.8 (361) | 8.6 (435) |
| Level of Education |  |  |  |
| Primary: <4 years | 9.8 (114) | [8.6] (33) | 10.2 (81) |
| $4+$ years | 8.1 (550) | 7.4 (230) | 8.6 (320) |
| Secondary or Higher | 5.2 (132) | 5.1 (98) | [5.5] (34) |
| Current Union Status |  |  |  |
| Married | 7.3 (332) | 5.3 (125) | 8.5 (207) |
| Common Law | 8.4 (200) | 7.8 (95) | 8.9 (105) |
| Visiting | 8.1 (141) | 7.3 (82) | 9.2 (59) |
| Single | 8.0 (123) | 7.9 (59) | 8.0 (64) |
| Place of Residence |  |  |  |
| Urban | 7.0 (390) | 6.2 (203) | 7.9 (187) |
| Rural | 8.6 (406) | 7.6 (158) | 9.2 (248) |
| Religion |  |  |  |
| Anglican | 7.2 (100) | 5.3 (52) | [9.2] (48) |
| Baptist | 8.1 (134) | 7.2 (59) | 8.8 (75) |
| Protestant Nonconformist $\dagger$ | 7.4 (88) | [6.3] (35) | [8.6] (53) |
| Roman Catholic | 5.9 (54) | [5.1] (27) | [6.7] (27) |
| Church of God | 8.4 (166) | 7.3 (82) | 9.5 (84) |
| Others | 8.0 (197) | 7.5 $[8.1]$ | 8.4 (115) |
| None | 8.4 (57) | [8.1] (24) | [8.6] (33) |

$\dagger$ Includes Methodist, Moravian, Presbyterian, and Congregationalist.
Note: An asterisk ( ${ }^{*}$ ) indicates mean was not calculated because base was less than 20; brackets [] indicate mean was calculated on a base of at least 20 but less than 50 .

Source: Appendix Table 4.1.5.
and 8.0 months, respectively). However, this pattern is not maintained when the fertility experience of the women is taken into account, for, as is shown in Table 3.4C, among women with less than four children, it is the currently single women whose period of breastfeeding was longest, while among those with four or more children, the mean length of breastfeeding is greatest among common law wives. Further, among women without a current partner at the time of the survey, the number of children ever born makes no significant difference to the mean length of breastfeeding, and this is the only group where this is so, for the mean is 1.1 months longer for common law women with four or more children than for those with fewer children, 1.9 months among common law wives, and as much as 3.2 months among married women.

On the average, Roman Catholics breastfed their children for a shorter period of time ( 5.9 months) than did women in any of the other religious groups. Next in line are Anglicans and the Protestant Nonconformist group (7.2 and 7.4 months, respectively), followed by Baptists and the residual 'Other' group ( 8.1 and 8.0 months, respectively), and then by Church of God members and women recorded as having no religion ( 8.4 months). The ranking varies according to family size. The difference is most marked among Anglican women for whom the mean length of breastfeeding was 5.3 months among those with less than four liveborn children and 9.2 months among those with a larger number of children. The variation in means is least among women recorded as having no religion ( 0.5 months).

## Breastfeeding and Contraception

To measure the contraceptive effect of breastfeeding, it is necessary to cross-tabulate duration of breastfeeding by length of the last closed interval (Table 3.4.D). The table is confined to women with at least two live births, including any current pregnancy, whose last closed interval did not exceed five years. While ever-use of contraception and current age are used as control variables in the Table, there are difficulties in interpretation. Firstly, ever-users may have been practising contraception during the interval. Secondly, current age at the time of the survey is a less satisfactory variable to use in this context than the age at the start of the last closed interval. For these reasons, and also because the absolute cell frequencies are relatively small, no firm conclusions are drawn from the detailed cross-classification. Considering the total sample or the totals for age groups, we find that the mean length of the last closed interval increased consistently with the number of months' breastfeeding in that interval. Interpretation of these findings are complicated because of the problem of circular causáality, however; not only may the length of lactation influence fecundability, but also conception implies an involuntary cessation of lactation. When the totals are broken down by ever-use, however, this positive association is still maintained among women who had never practised contraception. The absence of a positive relationship among ever-users is to be expected, since usage during the interval may disturb the predicted relationship. The interference of contraceptive use is evident from the fact that ever-users almost invariably

Table 3.4.D
MEAN LENGTH OF LAST CLOSED INTERVAL, BY NUMBER OF MONTHS BREASTFEEDING, BY WHETHER THE WOMAN HAS EVER USED CONTRACEPTION AND BY CURRENT AGE. CONFINED TO WOMEN WITH AT LEAST TWO LIVE BIRTHS (INCLUDING ANY CURRENT PREGNANCY) WHOSE LAST CLOSED INTERVAL DID NOT EXCEED FIVE YEARS

| Current Age and Ever Use of Contraception | Total | Did Not Breastfeed | Number of Months Breastfeeding |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $<6$ | 6 | 7-11 | 12 | $13+$ |
| All Women |  |  |  |  |  |  |  |
| Total | $27.0(1,617)$ | 24.1 (94) | 25.6 (441) | 26.9 (175) | 27.0 (560) | 28.9 (212) | 30.9 (135) |
| Used no Method | 26.6 (453) | [21.2] (26) | 24.2 (91) | [24.4] (47) | 26.4 (161) | 29.2 (79) | 32.1 (49) |
| Used a Method | $27.2(1,164)$ | 25.2 (68) | 22.1 (350) | 27.9 (128) | 27.2 (399) | 28.8 (133) | 30.1 (86) |
| $<25$ years |  |  |  |  |  |  |  |
| Total | 25.0 (351) | [24.7] (21) | 22.7 (108) | [24.0] (41) | 27.4 (116) | [30.3] (37) | [29.2] (28) |
| Used no Method | 24.4 (86) | * (6) | * (16) | * (14) | [21.5] (24) | * (16) | * (10) |
| Used a Method | 25.1 (265) | * (15) | 23.2 (92) | [24.3] (27) | 25.6 (92) | 24.4 (21) | * (18) |
| 25-34 Years |  |  |  |  |  |  |  |
| Total | 27.3 (590) | [24.5] (35) | 27.0 (77) | 28.2 (69) | 26.6 (185) | 27.8 (77) | [30.7] (47) |
| Used no Method | 26.0 (108) | * (9) | [26.9] (25) | (8) | [24.5] (37) | (17) | * (12) |
| Used a Method | 27.5 (482) | [24.8] (26) | 26.9 (152) | 29.1 (61) | 27.1 (148) | 27.6 (60) | [30.9] (35) |
| $35+$ Years |  |  |  |  |  |  |  |
| Total | 27.9 (676) | [23.2] (38) | 26.0 (156) | 27.3 (65) | 28.3 (259) | 29.3 (98) | 31.7 (60) |
| Used no Method | 27.5 (259) | * (11) | 24.4 (50) | [25.8] (25) | 28.3 (100) | [28.6] (46) | [33.7] (27) |
| Used a Method | 28.1 (417) | [25.3] (27) | 26.8 (106) | [28.4] (40) | 28.4 (159) | 29.8 (52) | [30.1] (33) |

[^24]have a longer closed interval, for every age breastfeeding duration group. In general, we may conclude that among never-users, breastfeeding is positively related to length of the closed interval, but that among ever-users, usage interferes with the expected biological relationship.

### 3.4.2. Knowledge of Contraception

The encouragement of contraceptive use forms the core of the population control policy in Jamaica, as in most developing countries with high growth rates and a comparatively young population. But contraceptive knowledge must precede contraceptive use, and the survey was used as a vehicle for assessing the extent of contraceptive knowledge among the respondents. Information was collected from all women ever in a union. Each woman was asked to name any methods that she knew that could be used to delay or prevent pregnancy. The interviewer then read out a list of methods not mentioned by the respondent who indicated, for each, if she had heard of that method. For the purpose of this report, a woman is classified as knowing about a method if she reported having heard of it, before or after probing by the interviewer. Consequently, this knowledge could be quite superficial. In measuring the level of knowledge a distinction is made between methods recognized as efficient and non-efficient methods. Efficient methods include: the pill, the IUD, the injection, other female scientific methods, the condom and male and female sterilization.

Of all the women ever in a union, less than 2 percent reported knowing no method at all, with a negligible 0.1 percent knowing only inefficient methods. Thus, virtually all the women interviewed knew at least one efficient method. Given the high level of knowledge, variations by age or parity were negligible (Appendix Table 4.2.1A).

The best known methods were the pill, the condom, injections, female sterilization and the IUD, known by 8595 percent of the women. Other scientific methods and withdrawal were known by 67 and 59 percent, respectively, while the other methods were less familiar, the best known being the douche, the rhythm method, abstention, and male sterilization ( $38-43$ percent). With the exception of sterilization and the condom, all the efficient methods were best known by women aged 25-29, the modal age for these exceptions being 30-34 years for male and female sterilization and 15-19 years for the condom. Highest proportions knowing inefficient methods were in the 30-34 age group. Women with four or more living children were only slightly less knowledgeable about efficient contraceptive methods than were those with fewer children. Proportionately more of them knew about the IUD, female sterilization, and other scientific methods, while women with smaller families had the higher percentage knowing about the other efficient methods.

Cross-tabulation of knowledge by two important background variables, education and union status, is shown in Table 3.4.E. Again, given the very high over-all level of knowledge, variations are quite small, but in general knowledge is slightly lower among women with less than 4 years primary education, about 95 percent, compared to the two higher education groups with knowledge of 98-99 percent. Considering union status, married women have slightly lower knowledge than the three other groups.

From Appendix Tables 4.2.2B and 4.2 .2 C , it is noted that a slightly higher percentage of rural than of urban women in all age groups professed knowledge of some contraceptive method, while there was little variation in the level of knowledge by the religious affiliation of the women.

Table 3.4.E
PERCENTAGE OF ALL WOMEN EVER IN A UNION WHO HAVE EVER HEARD OF ANY CONTRACEPTIVE METHODS INCLUDING STERILIZATION, BY NUMBER OF LIVING CHILDREN, BY LEVEL OF EDUCATION, AND BY CURRENT UNION STATUS

| Level of Education and Current Union Status | Total | Number of Living Children |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0 | 1 | 2 | 3 | 4 | $5+$ |
| Total | $98(2,765)$ | 98 (371) | 98 (521) | 99 (459) | 98 (347) | 97 (268) | 98 (799) |
| Level of Education |  |  |  |  |  |  |  |
| Primary: <4 years | 95 (383) | [93] (43) | [96] (48) | 94 (52) | [91] (34) | [93] (42) | 96 (164) |
| 4+ years | $98(1,758)$ | 97 (162) | 98 (286) | 99 (274) | 98 (247) | 98 (191) | 98 (598) |
| Secondary or Higher | 99 (624) | 99 (166) | 99 (187) | 100 (133) | 100 (66) | [97] (35) | [97] (37) |
| Current Union Status |  |  |  |  |  |  |  |
| Married | 96 (884) | 93 (62) | 95 (123) | 98 (138) | 98 (123) | 96 (91) | 96 (347) |
| Common Law | 99 (799) | 99 (82) | 98 (129) | 99 (138) | 97 (116) | 99 (91) | 100 (243) |
| Visiting | 99 (609) | 98 (160) | 99 (165) | 100 (102) | 100 (60) | [95] (39) | 99 (83) |
| Single | 99 (473) | 100 (67) | 100 (104) | 99 (81) | [98] (48) | [98] (47) | 98 (126) |

Note: Brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50.
Source: Appendix Tables 4.2.2A and 4.2.2D.

### 3.4.3. Ever-Use of Contraceptive

Of the 2,765 women ever in a union, 56 percent had at some time used an efficient contraceptive, with a further 10 percent having used one or more inefficient methods. Thus, two out of three of all women had practised contraception. Ever-use of efficient methods was greatest ( 69 percent) among women aged 25-29 at the time of the survey, with proportions of ever-users diminishing on either side of that peak to 48 percent among the youngest and 32 percent among the eldest groups. Ever-use of inefficient methods was commonest among the eldest and youngest groups. In these two age groups, also, were found the highest percentages of women who had never practised contraception (Appendix Table 4.3.1(1)). Family size (i.e. less than four or four or more living children) made no difference to the ranking of the age groups in respect of use of efficient methods, use of inefficient methods or non-use of contraceptives. Neither was the pattern disturbed if we restricted the analysis to women currently in a union and 'fecund', of which 60 percent had at some time used efficient methods, with an additional 9 percent having used inefficient methods.

The pill and the condom were the methods ever used by the greatest percentage of women ( 30 and 25 percent, respectively, followed by withdrawal ( 20 percent), injections and other scientific methods ( 11 per cent). All other methods had been used by less than 11 per cent of women ever in a union. The modal age group for ever-use of the pill was the $25-29$, while the $30-34$ age group had highest proportions who had used all other methods except the condom, withdrawal and abstention, used most by women
aged 20-24, and female sterilization which was most popular among women aged 35-39.

Table 3.4.F shows the percentage of all women ever in a union who had ever practised contraception, by the number of living children and by a number of background variables. For the whole sample, the percentage of everusers increased with the number of living children, from 49 percent for those with no children to 72 percent for those with two children, but levelled off at higher parities. This pattern is repeated in each of the subgroups created by controlling for each of four background variables shown in the table.

There is a high degree of correlation between level of education and contraceptive use, regardless of family size. The differences in proportions of ever-users at each educational level are very large, 53 percent of the least educated and 76 percent of the most educated women having reported contraceptive use at some time. The marked difference between the upper and lower primary is interesting, since in other aspects of fertility behaviour they have been closely similar. These differences are most marked among women with three living children (44 percentage points) and declined for women with more than five children (to 18 percentage points).

Place of residence is also associated with contraceptive use, urban women having appreciably higher proportions of ever-users than rural women, regardless of family size. In the case of union status, contraceptive practice was most common among women in a visiting union at the time of the survey and, once again, this general conclusion

Table 3.4.F
PERCENTAGE OF ALL WOMEN EVER IN A UNION WHO EVER USED ANY CONTRACEPTIVE METHODS, INCLUDING STERILIZATION, BY NUMBER OF LIVING CHILDREN AND BY SELECTED BACKGROUND VARIABLES

| Background Variables | Total | Number of Living Children |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 0 |  | 1 | 2 |  | 3 |  | 4 |  | + |
| All Women | $66(2,765)$ | 49 | (371) | 58 | (521) | 72 (459) | 70 | (347) |  | (268) |  | (799) |
| Level of Education |  |  |  |  |  |  |  |  |  |  |  |  |
| Primary: <4 years | 53 (383) | [26] | (43) | [44] | (48) | 58 (52) | [41] | (34) |  | (42) |  | (164) |
| $4+$ years | $65(1,758)$ | 38 | (162) | 49 | (286) | 68 (274) | 70 | (247) |  | (191) |  | (598) |
| Secondary or Higher | 76 (624) | 65 | (166) | 75 | (187) | 85 (133) | 85 | (66) | [83] | (35) | [81] | (37) |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | $73(1,319)$ | 57 | (209) | 65 | (262) | 79 (248) |  | (185) |  | (135) |  | (280) |
| Rural | $59(1,446)$ | 38 | (162) | 51 | (259) | 63 (211) | 58 | (162) |  | (133) | 67 | (519) |
| Current Union Status |  |  |  |  |  |  |  |  |  |  |  |  |
| Married | 66 (884) | 40 | (62) | 58 | (123) | 70 (138) | 72 | (123) |  | (91) |  | (347) |
| Common Law | 66 (799) | 34 | (82) | 51 | (129) | 74 (138) | 68 | (116) |  | (91) | 76 | (243) |
| Visiting | 72 (609) | 62 | (160) | 67 | (165) | 80 (102) | 75 | (60) |  | (39) |  | (83) |
| Single | 59 (473) | 42 | (67) | 52 | (104) | 59 (81) | [65] | (48) |  | (47) |  | (126) |
| Current Age |  |  |  |  |  |  |  |  |  |  |  |  |
| Under 25 | 66 (868) | 59 | (223) | 61 | (296) | 78 (201) |  | (95) | [75] | (40) |  | (13) |
| 25-34 | 77 (869) |  | (64) | 63 | (132) | 81 (150) |  | (164) |  | (126) |  | (233) |
| 35+ | $55(1,048)$ |  | (84) | 41 | (93) | 47 (108) | 56 | (88) |  | (102) |  | (553) |

[^25]is unaffected by family size. No doubt this relationship reflects the higher educational level of women in visiting unions. Of the rest, there is no difference between the proportions of married women and common law wives who were ever-users ( 66 percent), while the comparable proportion of single women was least ( 59 percent). Looking at the union status pattern of ever-use by the number of living children, however, we find that the pattern for the whole sample is not maintained. Women in visiting unions do still have the highest usage at all family sizes, but the ranking of the other three union groups fluctuates by family size, though the variations in percentage are not very large.

Among childless women, current age is negatively associated with contraceptive practice. However, among mothers, and for the sample population as a whole, women aged 25-34 had the highest proportion of ever-users, while least proportions were found among older women aged 35 or over. The differences in ever use between mothers aged under 25 and those in the 25-34 age group are not very large, but ever-use is substantiaily less among the older group, aged 35 or more, compared to younger women.

### 3.4.4. Current Use of Contraception

In this subsection of the report the current level of contraceptive use in the country and the factors with which this use is associated are considered. The data are limited to the women for whom contraceptive use is relevant - that is, the women who are exposed to childbearing. Excluded, therefore, are women who are currently pregnant, who have no current partner or who have been reported infecund. Women who have been sterilized for contraceptive purposes are included, however, and are treated as 'exposed' and using a 100 percent efficient method of contraception.

There were 1,940 'exposed' women in the survey for two of whom inadequate data was obtained, so that the tabulations are confined to 1,938 women. Of these 43 percent are reported as currently using efficient methods and 3 percent inefficient methods. Thus, more than onehalf of the women at the risk of childbearing at survey time ( 55 percent) were not practising contraception.

Current use of contraceptives generally, and of efficient methods in particular, are positively associated with the number of living children that the women reported, the proportion for effective methods increasing from 37 percent for women with less than three children to 51 percent of those with five or more. But this positive association applies only to women over the age of 25 ; among younger women current use of efficient methods is
most widespread among those with four living children (41 percent) and least among those with three children (37 percent). Appendix Table 4.4.1 provides the details.

The most popular method is the pill, currently in use by 14 percent of the respondents, followed by female sterilization ( 10 percent). The condom and injections are in use by 8 and 7 percent, respectively, and no other method is in current use by more than 2 percent of women (Appendix Table 4.4.1). Understandably, female sterilization is most widely used among women aged 35 years or more, while the pill is much more popular among younger women.

It is important to determine which of the 'exposed' women are current contraceptors. For this purpose, all current users are grouped together, whether they are using an efficient or an inefficient method. It will be remembered that less than 3 percent of the women were using an inefficient method (Appendix Table 4.4.1) so that the cross-classification will not be materially affected. It will be remembered, also, that the number of living children is an important factor in the use of contraceptives, and for this reason Table 3.4.G shows the percentage of exposed women who are currently using contraception, by number of living children and selected background variables. As has been stated, 45 percent of all exposed women were currently contracepting at the time of the survey, the proportions increasing from 32 percent of childless women to 53 percent of mothers with five or more living children. It will be remembered that a positive association between ever-use of contraception and family size emerged only in respect of women with less than three children, remaining stable at higher family sizes (Table 3.4.F). A similar pattern obtains when current use is considered, and is reflected in all of the subgroups shown in Table 3.4.G.

As in the case of ever-use, current use increases consistently with an increase in the level of education of women, regardless of family size. The increases in current use are very large between the women at an intermediate level of education and those with secondary or higher education for women with less than four children, but are much less extreme among women with larger families. The higher level of current use among urban women is also consistent with the data shown earlier, in which urban women had substantially higher proportions of ever-users than did rural women.

Anglicans and Roman Catholics reported greater current use of contraceptives ( 53 percent) than did women of other religious affiliations. Of the Protestant Nonconformist group just under one-half were current contraceptors, and 40-44 percent of the other religious groups BY NUMBER OF LIVING CHILDREN AND BY SELECTED BACKGROUND VARIABLES

| Selected <br> Background Variables | Total | Number of Living Children |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 0 |  | 1 |  | 2 |  | 3 |  | 4 |  | 5 |
| All Women | $45(1,939)$ | 32 | (240) | 34 | (353) | 50 | (326) | 45 | (253) | 52 | (183) | 53 | (584) |
| Level of Education |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Primary: < 4 years | 37 (249) | [11] | (27) | [14] | (29) | [42] | (31) | [26] | (23) | [43] | (28) | 48 | (111) |
| $4+$ years | $44(1,219)$ |  | (99) |  | (183) |  | (193) |  | (175) | 53 | (130) |  | (439) |
| Secondary or Higher | 53 (471) |  |  | 45 | (141) | 67 | (102) | 64 |  | [56] | (25) | [62] | (34) |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 51 (961) |  | (142) | 37 | (191) |  | (184) |  | (145) | 55 | (93) |  | (206) |
| Rural | $40 \quad$ (978) | 20 | (98) | 31 | (162) | 37 | (142) | 36 | (108) | 49 | (90) | 49 | (378) |
| Religion |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Anglican | 53 (237) | [42] |  | [42] | (43) |  | (44) |  | (38) | [48] | (25) | 60 | (63) |
| Baptist | 44 (326) | [43] |  | [34] | (47) | [45] | (47) | [34] | (41) | [59] | (32) | 46 | (110) |
| Protestant Nonconformist $\dagger$ | 49 (208) |  | (18) | [44] | (48) | [57] | (35) | [35] | (29) | [59] | (22) | 54 | (56) |
| Roman Catholic | 53 (182) |  |  |  | (41) |  | (35) | [68] | (25) | * | (17) |  | (37) |
| Church of God | 41 (387) | [13] | (45) | 20 | (59) | 42 | (59) | [38] | (47) | [63] | (46) |  | (131) |
| Others | 44 (450) |  | (59) | 33 | (85) | 48 | (82) | 49 | (55) | [32] | (25) |  | (144) |
| None | 40 (149) |  | (18) | [30] | (30) | [37] | (24) | * | (18) | * | (16) | [56] | (43) |
| Current Union Status |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Married | 48 (738) |  |  |  | (97) |  | (121) |  | (107) | 54 | (69) |  | (304) |
| Common Law | 42 (671) |  | (65) |  | (112) |  | (116) |  | (92) | 49 | (77) | 53 | (209) |
| Visiting | 47 (530) |  | (135) |  | (144) | 55 | (89) | 41 | (54) | 54 | (37) | 59 | (71) |
| Current Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $<25$ | 43 (615) |  | (152) | 37 | (205) |  | (145) |  | (68) | 54 | (35) |  | (10) |
| 25-34 | 53 (648) |  | (47) |  | (94) |  | (115) |  | (125) | 56 | (90) |  | (177) |
| 35-44 | $44 \quad(520)$ | [10] |  | 17 | (47) | 26 | (50) | [40] | (48) | 46 | (52) |  | (293) |
| 45+ | 32 (156) | * | (11) | * | (7) |  | (16) | * | (12) | * | (6) | 35 | (104) |

$\dagger$ Includes Methodist, Moravian, Presbyterian, and Congregational.
Note: An asterisk (*) indicates percentage was not calculated because base was less than 20 ; brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50 .

Source: Appendix Tables 4.4.2, 4.4.5B, 4.4.5C, and 4.4.5D.
were recorded as using contraceptives at the time of the survey. The breakdown by religion and number of living children result in cell frequencies that are too small to allow analysis.

Current contraceptive use among union groups constitutes a major departure from the analysis of ever-use. It will be remembered that of the three groups currently in a union, the proportion of visiting women who had ever practised contraception was substantially higher than comparable proportions of married and common law wives, between whom there was no difference (Table 3.4.F). However, it is seen here that current contraceptive practice was least among women in a common law union (42 percent) and greatest among married women and visiting women, with very little difference between these two groups. But it must be borne in mind that the two populations are not the same, the one dealing with ever-use relating to all women ever in a union, and the other considering current use among 'exposed' women. Furthermore, when consideration is given different family sizes separately, it is noted that there is greater coincidence in the ranking of the union groups according to ever-use and current use. Thus, among women with less than three
children, and among those with four or more children, current use is greatest among visiting women. The reversal of the union status pattern of ever-use is probably more apparent than real, a result of the differential age, parity and therefore usage, distributions among union groups.

### 3.4.5. Pattern of Contraceptive Use

The data on contraceptive use has been used to derive a summary variable Pattern of Contraceptive Use which is the subject of this subsection. First, women are divided into those who have never used any contraceptive method and those who have used. Among the former, those who were in a union and 'fecund' are then further subdivided according to whether they thought they may use a method at any time in the future.

The women who had used contraceptives are subdivided into current users and past users, the former being further subdivided into those who were sterilized for contraceptive purposes and other users. The past users were in turn subdivided into three groups according to when last they used contraception.

Of the 2,765 women ever in a union, 130 gave
insufficient data to allow classification into one or other of the categories identified. The analysis therefore relates to 2,635 women.

These are divided almost equally into the three groups: never used (32 percent), past users (33 percent), and current users ( 35 percent). The first group, the never-users, are comprised of 7 percent who intend future use, 14 percent who do not plan to practise contraception in future, and 11 percent who were either infecund or without a current partner at the time of the survey. In the second group, the past users are made up of 11 percent who had used contraceptive methods in the open interval, 8 percent who contracepted in the last closed interval, 11 percent who used a method in an earlier closed interval and 2 percent who have suffered a fecundity impairment. In the third group, the current users, are 8 percent of all women who have been sterilized for contraceptive purposes and 26 percent who are using other contraceptive methods.

Pattern of contraceptive use is cross-tabulated by current age, number of living children, and exposure status (Table 3.4.H). Since ever-use and current use of contraception have already been discussed earlier, this section will deal mainly with the characteristics of never-users and with the drop-out rate among ever-users.

The proportion of never-users is least among women aged $25-34$ years ( $21-22$ percent) and increases on both sides of the age scale to 39 percent among the youngest group, and 53 percent among the oldest women aged 45 years and over. But the younger groups, under 25 years of age, had comparatively high percentages of their numbers who intended to practise contraception in the future, quite unlike the older groups among whom resistance to future contraception is very marked. Drop-out rates are very high for the youngest and oldest groups (58 and 62 percent respectively), and least for women aged 35-39 years. The implication is that many of the younger women will have been practising contraception, with a

Table 3.4.H
PERCENT DISTRIBUTION OF WOMEN EVER IN A UNION ACCORDING TO PATTERN OF CONTRACEPTIVE USE, BY CURRENT AGE, BY NUMBER OF LIVING CHILDREN, AND BY EXPOSURE STATUS

| Current Age, Number of Living Children, and Exposure Status | Number of Women | Pattern of Contraceptive Use $\dagger$ |  |  |  |  |  | Past User as a <br> Percentage of Total Ever-Users |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Never Used |  |  | Past User |  |  |  |
|  |  |  | Whether Intends Future Use |  | Total | Interval Last Used |  |  |
|  |  | Total | Yes | No |  | Open | Last Closed |  |
| Total | 2,765 | 32 | 7 | 14 | 33 | 11 | 8 | 49 |
| Current Age |  |  |  |  |  |  |  |  |
| $<20$ | 303 | 39 | 18 | 10 | 35 | 12 | 12 | 58 |
| 20-24 | 565 | 27 | 10 | 11 | 37 | 15 | 10 | 51 |
| 25-29 | 485 | 21 | 7 | 9 | 40 | 15 | 11 | 51 |
| 30-34 | 384 | 22 | 3 | 13 | 32 | 11 | 7 | 41 |
| 35-39 | 371 | 31 | 5 | 18 | 27 | 10 | 7 | 39 |
| 40-44 | 333 | 43 | 4 | 23 | 25 | 7 | 5 | 44 |
| 45+ | 324 | 53 | 1 | 19 | 29 | 7 | 2 | 62 |
| Number of Living Children |  |  |  |  |  |  |  |  |
| 0 | 345 | 50 | 13 | 18 | 28 | 20 | 6 | 56 |
| 1 | 491 | 40 | 9 | 17 | 34 | 12 | 10 | 57 |
| 2 | 445 | 27 | 5 | 12 | 35 | 11 | 7 | 49 |
| 3 | 334 | 29 | 7 | 13 | 37 | 11 | 11 | 57 |
| 4 | 256 | 26 | 6 | 10 | 35 | 11 | 10 | 47 |
| 5 | 213 | 21 | 1 | 11 | 33 | 12 | 6 | 42 |
| 6 | 173 | 24 | 3 | 13 | 32 | 6 | 9 | 42 |
| 7 | 122 | 31 | 2 | 16 | 29 | 10 | 3 | 42 |
| 8+ | 256 | 30 | 7 | 15 | 27 | 5 | 7 | 39 |
| Exposure Status |  |  |  |  |  |  |  |  |
| Currently Pregnant | 202 | 31 | 21 | 8 | 69 | 0 | 44 | 100 |
| Currently Single | 463 | 42 | 0 | 0 | 51 | 25 | 10 | 87 |
| Sterilized/Impaired | 347 | 30 | 0 | 0 | 16 | 0 | 0 | 23 |
| Fecund $\ddagger$ : Total | 1753 | 30 | 9 | 22 | 28 | 11 | 5 | 40 |
| Married | 628 | 33 | 5 | 28 | 26 | 12 | 5 | 39 |
| Common Law | 613 | 33 | 10 | 23 | 29 | 9 | 4 | 42 |
| Visiting | 512 | 24 | 11 | 13 | 29 | 12 | 7 | 37 |

[^26]view to spacing their children, while many of the older group may consider themselves 'less fecund' than formerly.

With regard to family size, women with fewer than two children, not unnaturally, have the largest proportions of never-users. Comparable proportions are least ( 21 percent) among women with five children and do not vary substantially ( 24 to 31 percent) among women with two to four, or six or more living children. In general, drop-out rates tend to vary negatively with family size, the only important exception being the group with two children, for whom the rate appears somewhat low.

With the exception of single women and those in a visiting union at the time of the survey, never-use shows little variation according to exposure status (30-33 percent). The proportion is higher ( 42 percent) among single women, and somewhat lower ( 24 percent) for visiting women. Single women and those who had been sterilized or otherwise impaired were not asked about possible future use of contraception. Of the rest, about two-thirds of pregnant women who had never used indicated that they would practice contraception in the future. This compares with less than one-third of other fecund never-users, the proportions being 18 preent among married women, 30 percent for common law wives and 46 percent for women in a visiting union. The dropout rate is roughly the same for all three union status subgroups of fecund women.

In Table 3.4.J, the pattern of contraceptive use of the women is cross-tabulated by selected background variables and by number of living children. It will be seen that whatever the family size the proportion of never-users is highest among the least educated women, and lowest among those with the highest level of educational attainment. However, the least educated groups also have the highest proportion of never-users intending use in the future, for family sizes of four or more children, although the situation is reversed for women with less than four children.

The proportion of women who are past users, is positively associated with level of education, for all women ever in a union, and for the two family size groups, women with less than four and more than six children. The variations for the intermediate family size group with 4-6 children are very small, however (31-34 percent), therefore not supporting the general pattern.

Rural women have consistently higher proportions of never-users than urban women whatever the size of family. Considering never-users who were asked whether they intend future use, however, we find that roughly the same proportion of urban and rural never-users intend to use in the future. On the other hand, the percentages of women who were past users is uniformly higher among urban women than among their rural counterparts, but the differentials are not large (Table 3.4.K).

Table 3.4.J
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO PATTERN OF CONTRACEPTIVE USE, BY NUMBER OF LIVING CHILDREN AND BY LEVEL OF EDUCATION

| Number of Living Children and Level of Education | Number of Women | Pattern of Contraceptive Use |  |  |  |  |  | Past User as a Percentage of Total Ever-Users |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Never Used |  |  | Past User |  |  |  |
|  |  |  | Whether Intends Future Use |  | Total | Interval Last Used |  |  |
|  |  | Total | Yes | No |  | Open | Last Closed |  |
| Level of Education |  |  |  |  |  |  |  |  |
| All Women |  |  |  |  |  |  |  |  |
| Primary: <4 years | 362 | 45 | 5 | 21 | 27 | 6 | 6 | 49 |
| $4+$ years | 1,675 | 33 | 7 | 14 | 33 | 10 | 8 | 49 |
| Secondary or Higher | 598 | 22 | 6 | 9 | 37 | 18 | 9 | 46 |
| <4 Living Children |  |  |  |  |  |  |  |  |
| Primary: <4 years | 167 | 57 | 4 | 30 | 25 | 5 | 4 | 65 |
| 4+ years | 920 | 40 | 10 | 16 | 34 | 11 | 9 | 56 |
| Secondary or Higher | 528 | 22 | 7 | 8 | 37 | 19 | 10 | 48 |
| 4-6 Living Children |  |  |  |  |  |  |  |  |
| Primary: <4 years | 104 | 34 | 6 | 14 | 33 | 9 | 10 | 49 |
| 4+ years | 477 | 22 | 3 | 11 | 34 | 9 | 8 | 44 |
| Secondary or Higher | 61 | 18 | 2 | 10 | 31 | 16 | 5 | 38 |
| 7+ Living Children |  |  |  |  |  |  |  |  |
| Primary: <4 years | 91 | 36 | 8 | 14 | 24 | 4 | 8 | 38 |
| $4+$ years | 278 | 29 | 4 | 16 | 29 | 8 | 4 | 40 |
| Secondary or Higher | 9 | * | * | * | * | * | * | * |

Note: An asterisk ( ${ }^{*}$ ) indicates percentage was not calculated because base was less than 20.
Source: Appendix Table 4.5.6A.

Table 3.4.K
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO PATTERN OF CONTRACEPTIVE USE, BY NUMBER OF LIVING CHILDREN AND BY PLACE OF RESIDENCE

| Number of Living Children and Place of Residence | Number of <br> Women | Pattern of Contraceptive Use |  |  |  |  |  | Past User as a Percentage of Total Ever-Users |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Never Used |  |  | Total | Past User |  |  |
|  |  |  | Whether Intends Future Use |  |  | Interval Last Used |  |  |
|  |  | Total | Yes | No |  | Open | Last Closed |  |
| Place of Residence |  |  |  |  |  |  |  |  |
| All Women |  |  |  |  |  |  |  |  |
| Urban | 1,260 | 25 | 5 | 10 | 35 | 14 | 9 | 47 |
| Rural | 1,375 | 39 | 8 | 17 | 31 | 9 | 7 | 51 |
| <4 Children |  |  |  |  |  |  |  |  |
| Urban | 856 | 27 | 6 | 11 | 35 | 15 | 9 | 49 |
| Rural | 759 | 46 | 11 | 19 | 32 | 11 | 8 | 59 |
| 4-6 Children |  |  |  |  |  |  |  |  |
| Urban | 297 | 17 | 3 | 8 | 37 | 11 | 9 | 45 |
| Rural | 345 | 29 | 4 | 14 | 31 | 8 | 7 | 44 |
| $7+$ Children 107 - 29 |  |  |  |  |  |  |  |  |
| Urban | 107 | 23 | 3 | 11 | 29 | 11 | 6 | 38 |
| Rural | 271 | 33 | 6 | 17 | 27 | 5 | 5 | 41 |

Source: Appendix Table 4.5.6B,

Among religious groups the range in never-use extends from 23 percent (Anglican) to 38 percent (Church of God), with most groups being closer to the Church of God group, except for Roman Catholics who have 25 percent never-users. Considering only those never-users who were asked whether they intend to use in the future, we find that the proportion of those women who say they will use in the future is quite low for Anglicans ( 25 percent), but highest for Roman Catholics ( 37 percent), and also for Baptists and the Church of God ( 35 percent), with the other groups falling in between. Looking at the breakdown by parity, we find that in general women with less than 4 children were more likely to intend future use than women with larger families. The proportion of past users varies much less than that of never-users - a range of 5 percentage points: from 31 percent to 36 percent.

Among all women currently in a union, those in a visiting union had made greatest use of contraceptives, their proportions of never-users generally being least for each family size. Considering only those never-users who were asked about intended future use, visiting never-users had the highest proportion intending future use at all family sizes.

While visiting women had lower never-use and higher intended use, married and common law women were fairly close together in proportions never-used, but common law women had slightly higher proportions intending use in the future, at all family sizes.

It is useful to look at discontinuation rates in terms of the proportions of ever-users who are now no longer using

- shown for all subgroups in the last columin of Table 3.4.J. It must be borne in mind, however, that discontinuation is a function of the use of contraception for spacing, as well as being a function of age and duration, only partly captured by the family size variable. Discontinuation is therefore only indirectly related to the background variables used here. Looking at education we find that, in general, discontinuation rates are negatively associated with education within family size groups. In the case of residence, rural and urban women have similar discontinuation rates for family sizes of 4 or more children but for less than 4 children, rural women have much higher discontinuation rates.

It will be remembered that of the three union types visiting women had the least proportion of never-users and expressed the greatest desire for future contraceptive use. However, the rate of discontinuation is not least among this group except for women with four to six living children. For those with smaller or larger family sizes, it is the married women who showed greatest perseverance in the use of contraceptives.

### 3.4.6. Efficiency and Fecundity: Length of the Open Interval

This brief subsection is intended to examine the extent to which the length of the open interval depends upon contraceptive use. The data is confined to exposed women with one or more live births. It therefore excludes women who were pregnant at the time of the survey, as well as those who were not in a current union and women who were using sterilization or were impaired.

Table 3.4.L
PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO PATTERN OF CONTRACEPTIVE USE, BY NUMBER OF LIVING CHILDREN AND BY RELIGION

$\dagger$ Includes Methodist, Moravian, Presbyterian, and Congregational.
Note: An asterisk (*) indicates percentage was not calculated because base was less than 20 ; brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50 .

Source: Appendix Table 4.5.6C.

For the 1,038 women included, the mean length of the open interval is 45.6 months. It will be noted from Appendix Table 4.6.1 that 60 percent of these women are current users, while 14 percent were past users in the open interval, and the remaining 26 percent had not practised contraception since their last birth. Our comments are confined to the mean length of the interval for each subgroup (Table 3.4.N).

If contraceptive use in the open interval were causally related to the length of the interval, one would expect the interval to be longest among current users and shortest among non-users. The means do not conform to this pattern regardless of whether we consider the age groups separately or all women as a single group. Indeed, for women over 34 , the mean length of the interval is shortest
for current users, while for younger women, the mean length is not noticeably longer than that for non-users. There are, of course, other factors which would affect the length of the open interval, such as the practice of breastfeeding, or the probability that many of the persons who did use contraception did so with a view to the spacing rather than limitation of children. There is, too, no indication that current users have been contracepting throughout the entire interval or at what stage in the interval past users discontinued using contraception. Thus, it can only be pointed out that the data do not provide any evidence of association between the length of the open interval and contraceptive use in that interval, but that the data are inconclusive.

If the mean length of the closed interval by contracep-

PERCENT DISTRIBUTION OF ALL WOMEN EVER IN A UNION ACCORDING TO PATTERN OF CONTRACEPTIVE USE, BY NUMBER OF LIVING CHILDREN AND BY CURRENT UNION STATUS

| Number of Living Children and Current Union Status | Number of Women | Total | Pattern of Contraceptive Use |  |  |  |  | Past User as a <br> Percentage of Total <br> Ever-Users |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Never Used |  | Past User |  |  |  |
|  |  |  | Whether Intends Future Use |  | Total | Interval Last Used |  |  |
|  |  |  | Yes | No |  | Yes | No |  |
| Current Union Status |  |  |  |  |  |  |  |  |
| All Women |  |  |  |  |  |  |  |  |
| Married | 842 | 32 | 4 | 20 | 26 | 9 | 7 | 38 |
| Common Law | 752 | 32 | 9 | 18 | 31 | 7 | 7 | 45 |
| Visiting | 575 | 25 | 13 | 11 | 32 | 10 | 9 | 43 |
| Single $\dagger$ | 466 | 42 | 0 | 0 | 51 | 25 | 10 | 87 |
| <4 Living Children |  |  |  |  |  |  |  |  |
| Married | 422 | 35 | 5 | 20 | 28 | 12 | 7 | 37 |
| Common Law | 438 | 39 | 11 | 23 | 31 | 8 | 8 | 50 |
| Visiting | 460 | 27 | 14 | 12 | 32 | 11 | 9 | 45 |
| Single $\dagger$ | 295 | 47 | 0 | 0 | 49 | 25 | 9 | 94 |
| 4-6 Living Children 2317 |  |  |  |  |  |  |  |  |
| Married | 231 | 27 | 3 | 17 | 25 | 5 | 7 | 34 |
| Common Law | 203 | 22 | 5 | 14 | 30 | 7 | 5 | 38 |
| Visiting | 81 | 11 | 6 | 4 | 30 | 6 | 10 | 33 |
| Single $\dagger$ | 127 | 29 | 0 | 0 | 59 | 25 | 13 | 83 |
| 7+ Living Children |  |  |  |  |  |  |  |  |
| Married | 189 | 32 | 3 | 25 | 24 | 6 | 5 | 35 |
| Common Law | 111 | 23 | 8 | 8 | 31 | 4 | 6 | 40 |
| Visiting | 34 | [27] | [12] | [9] | [32] | [9] | [6] | [44] |
| Single $\dagger$ | 44 | [43] | [0] | [0] | [34] | [18] | [7] | [60] |

$\dagger$ Single women were not asked whether they intend future use.
Note: The Balancing Column Not in a Union or Not Fecund has been excluded from the group Never Used and the Columns Used in an Earlier Interval and Fecundity Impairment have been excluded from the group Past User; Brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50 .

Source: Appendix Table 4.5.6E.

Table 3.4.N
MEAN LENGTH OF THE OPEN INTERVAL (MONTHS), BY CONTRACEPTIVE USE (EXCLUDING STERILIZATION) IN THAT INTERVAL AND BY CURRENT AGE. CONFINED TO 'EXPOSED' WOMEN WITH ONE OR MORE LIVE BIRTHS

| Current Age | Total | Contraceptive Use in the Open Interval |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Currently Using | Used Earlier | Did Not Use |
| All Women | $45.6(1,038)$ | 39.7 (621) | 66.0 (144) | 43.3 (273) |
| $<25$ | 20.1 (333) | 19.9 (202) | [30.1] (40) | 16.0 (91) |
| 25-34 | 41.8 (426) | 38.9 (273) | 63.2 (60) | 36.4 (93) |
| 35-44 | 75.7 (223) | 62.1 (121) | [94.8] (33) | 90.6 (69) |
| 45+ | 107.5 (56) | 99.6 (25) | * (11) | 105.8 (20) |

Note: An asterisk (*) indicates mean was not calculated because the base was less than 20; brackets [ ] indicate that the mean was calculated on a base of at least 20 but less than 50 .

Source: Appendix Table 4.6.1.
tive use, as shown in Table 3.4.0, is considered, a pattern of association between these two variables does emerge.

It can be seen here that for all women, and for each age group, excepting only the $45+$ group, the mean length of the interval for women who used a method exceeds that

Table 3.4.0
MEAN LENGTH OF LAST CLOSED INTERVAL (MONTHS), BY CONTRACEPTIVE USE (EXCLUDING STERILIZATION) IN THAT INTERVAL AND BY CURRENT AGE. CONFINED TO 'EXPOSED' WOMEN WITH ONE OR MORE LIVE BIRTHS

| Current <br> Age | Total | Contraceptive Use in Closed Interval |  |
| :---: | :---: | :---: | :---: |
|  |  | Used no Method | Used a Method |
| Total | $35.7(1,920)$ | $35.2(1,406)$ | 37.1 (514) |
| <25 | 26.6 (363) | 26.1 (262) | 27.7 (101) |
| 25-34 | 33.9 (685) | 32.1 (451) | 37.5 (234) |
| 35-44 | 40.3 (603) | 39.4 (459) | 43.2 (144) |
| 45+ | 42.0 (269) | 42.7 (234) | [36.9] (35) |

Source: Appendix Table 4.6.2.
for non-users. The difference in means is 1.6 months among the youngest women, increases to 5.4 months among those aged 25-34 years, and shows a slight decline to 3.8 months for those in the 35-44 year group. The reversal of the pattern among women aged 45 and over is probably due partly to the greater fecundity of users and partly to the small number of women who had used a method.

### 3.5. USE OR CORTRACRPTHON AS REEATED TO FERTILTTY PRERERENTALS

This section examines to what extent women who say that they want no more children tend to implement this decision by using contraception. As before, women who have been sterilized are treated as exposed, currently using, and wanting no more children, even though the specific question was not posed to them. In addition to using the variable Wants No More Children as one measure of fertility preference, a new variable, consisting of the difference between the total number of children desired and actual family size (including any current pregnancy) was constructed and is related to contraceptive use below. The variable Total Number of Children Desired was obtained from the question 'If you could choose exactly the number of children to have in your whole life, how many children would that be?'

This new variable has three categories - the number of children desired may be less than, equal to, or more than the number of living children. The distribution of women for this variable, by current age, is shown in Table 3.5.A. Of the 2,119 'Fecund' women, 59 percent had fewer living children than their ideal, with younger women having a much higher proportion in this category. Twenty percent had more children than their ideal number, with older women having increasingly high proportions in this category. For 21 percent of women, their actual family size was equal to the ideal, with older women generally having higher proportions in this category.

The hypothesis that will be tested below is that women who have as many or more children than their ideal will be the ones most likely to be using contraception efficiently. The discussion below will be divided into two sections, use of contraception and pattern of contraceptive use.

### 3.5.1. Knowledge of Contraception and Desire for Children

No clear pattern of association emerges between knowledge of contraceptive methods and the desire for more children. Among women who already had more than their ideal number of children, 98 percent knew at least one efficient method. This proportion is only slightly higher than the comparable proportion for those whose ideal number of children equalled the number they already had ( 97 percent) and only slightly lower than that for women who had less than their ideal number ( 99 percent).

All of the women under 25 years of age and in the $30-$ 34 year group whose ideal number of children is less than or equal to the current family size knew at least one

Table 3.5.A
PERCENTAGE DISTRIBUTION OF WOMEN CURRENTLY IN A UNION AND 'FECUND' ACCORDING TO WHETHER THE TOTAL NUMBER OF CHILDREN DESIRED EXCEEDS NUMBER OF LIVING CHILDREN (INCLUDING ANY CURRENT PREGNANCY), BY CURRENT AGE

|  |  | Total Number of Children Desired is: |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Current <br> Age | Number <br> of <br> Women | Less than <br> the Number <br> of Living <br> Children | Equal to <br> the Number <br> of Living <br> Children | Greater than <br> the Number <br> of Living <br> Children |
| All Ages | 2,119 | 20 | 21 | 59 |
| $<20$ | 242 | 1 | 9 | 90 |
| $20-24$ | 475 | 4 | 17 | 79 |
| $25-29$ | 393 | 14 | 21 | 65 |
| $30-34$ | 314 | 28 | 29 | 43 |
| $35-39$ | 295 | 40 | 23 | 37 |
| $40-44$ | 243 | 31 | 30 | 39 |
| $45+$ | 157 | 46 | 17 | 38 |

Source: Derived from Appendix Table 5.1.2.
efficient method. The level of contraceptive knowledge was lowest for women aged 35-39 years, among those whose ideal number was less than the number of living children; for the 45-49 group whose ideal number equalled current family size; and for the 40-44 year group who 'desired' more children than they already had (see Appendix Table 5.1.2).

### 3.5.2. Use of Contraception and Desire for Children

Current use of contraception appears to be linked with the desire for more children. Thus, 44 percent of the women who wanted no more children or who were undecided were practising contraception at the time of the survey, as compared with 36 percent of those who wanted a future birth. The same relationship holds even when we consider the use of efficient methods alone, the proportions being 40 percent for those who do not want a future birth, 41 per cent for the 'undecided' women and 34 percent for those who do want one (see Table 3.5.B). This is an extremely small difference in use, and it suggests that contraceptive use for spacing is almost as important as use for limiting family size. In addition, for every size group, women who do not want more or who are undecided, have higher usage than those who do want more children, with the differentials increasing as family size increases.

With regard to the use of efficient methods only, there appears to be a negative association between family size and the practise of contraception among those women who want more children, but this pattern is not maintained in the other two groups. Usage of efficient contraceptive methods by 'exposed' women is shown in Table 3.5.C for the three union groups, by number of living children. Because of the limitations imposed by small cell frequen-

Table 3.5.8
PERCENT DISTRIBUTION OF 'EXPOSED' WOMEN ACCORDING TO CURRENT USE OF SPECIFIC CONTRACEPTIVE METHODS (INCLUDING STERILIZATION), BY NUMBER OF LIVING CHILDREN AND BY DESIRE FOR MORE CHILDREN

| Number of Living Children and Whether wants Future Birth | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { Women } \end{aligned}$ | Current Contraceptive Method |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | None now Used | Method now Using |  | Specific Method |  |  |  |
|  |  |  | Inefficient Only | Efficient | Pill | Condom | Injections | $\begin{aligned} & \text { All } \\ & \text { Other } \end{aligned}$ |
| More Children Wanted |  |  |  |  |  |  |  |  |
| Total | 843 | 64 | 2 | 34 | 15 | 10 | 6 | 5 |
| $<3$ Living Children | 642 | 63 | 2 | 35 | 17 | 11 | 5 | 5 |
| 3-4 Living Children | 146 | 66 | 1 | 33 | 12 | 7 | 11 | 4 |
| $5+$ Living Children | 55 | 78 | 2 | 20 | 5 | 2 | 5 | 9 |
| No More Children Wanted |  |  |  |  |  |  |  |  |
| Total | 741 | 56 | 4 | 40 | 16 | 8 | 10 | 11 |
| $<3$ Living Children | 186 | 60 | 1 | 40 | 18 | 10 | 7 | 5 |
| 3-4 Living Children | 202 | 50 | 7 | 43 | 20 | 10 |  | 13 |
| $5+$ Living Children | 353 | 57 | 4 | 39 | 12 | 6 | 13 | 12 |
| Undecided |  |  |  |  |  |  |  |  |
| Total | 153 | 56 | 3 | 41 | 17 | 7 | 13 | 7 |
| <3 Living Children | 68 | 56 | 3 | 41 | 19 | 10 | 9 | 6 |
| 3-4 Living Children | 50 | 30 | 2 | 48 | 24 | 4 | 14 | 6 |
| $5+$ Living Children | 35 | [66] | [3] | [31] | [3] | [6] | [20] | [6] |

Note: Brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50 . Source: Appendix Table 5.2.1.
cies, only the total and the married group are broken down by age. Only 40 percent of those 'exposed' women who wanted no more children were taking effective action to prevent conception. In general, women with a medium size family ( $3-5$ children) made greatest use of contraceptives, 45 percent of them being current users, as compared with 40 percent of those with smaller families and 34 percent of the women with larger families. This differential according to family size is generally true within each age group, with the exception that among women aged 40 and over, women with six or more children had a slightly higher proportion using than women with $3-5$ children.

Looking at the total population of the three union types, it can be seen that married women had the lowest proportion using efficient contraception, as little as 34 percent, compared with 44 percent for common law wives, and 46 percent for women in visiting unions. In addition, while visiting and common law women follow the general pattern for all women in which women with medium sized families have highest usage, married women have a different pattern, with small families having slightly higher usage than medium sized families. This differential in terms of total union groups is probably a result of union differentials in age structure, with the older age distribution of married women, combined with lower use among older women producing a lower usage rate for married women as a whole. Married women probably do have slightly lower use than the other groups, however, as seen from the
comparison of the 25-39 and the $40+$ age groups of married women with the same for all women.

Common law wives with six or more children had a comparatively high proportion of their numbers using an efficient contraceptive ( 46 percent) when this is compared, on the one hand, with common law wives with less than three children ( 34 percent) and, on the other hand, with women with such large families in the other types of union ( 28 and 34 percent).

Comparing the 25-39 age group with the $40+$ group, we find that for the total and for married women, those aged 25-39 had proportions currently using far in excess of the proportions for women aged 40 and over, regardless of family size. This suggests that either there is a generational difference in usage or a life-cycle difference, in the sense that older women feel they are less fecund and are therefore less likely to use contraception.
'Exposed' women who want no more children and who are currently using an efficient contraceptive are crosstabulated below by two background variables: education and residence (Table 3.5.D). Taking all women together, the percentage currently practising efficient contraception is positively associated with level of education, with usage increasing from 25 percent for the least educated to 49 percent for the most educated women. Although the breakdown of education by age results in several of the cell frequencies being very small (especially for the women

Table 3.5.C
PERCENTAGE OF WOMEN WHO ARE CURRENTLY USING AN EFFICIENT CONTRACEPTIVE (INCLUDING STERILIZATION) BY NUMDER OF LIVING CHILDREN, BY CURRENT AGE AND BY CURRENT UNION STATUS. CONFINED TO 'EXPOSED' WOMEN WHO WANT NO MORE CHILDREN

| Current Union Status and Current Age | Total | Number of Living Children |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $<3$ | 3-5 | $6+$ |
| All Union Types |  |  |  |  |
| All Ages | 40 (742) | 40 (187) | 45 (296) | 34 (259) |
| Under 25 | 47 (126) | 45 (75) | 49 (51) | - (0) |
| 25-39 | 49 (390) | 45 (75) | 53 (180) | 47 (135) |
| $40+$ | 20 (226) | [16] (37) | 20 (65) | 21 (124) |
| Married |  |  |  |  |
| All Ages | 34 (343) | 40 (67) | 39 (131) | 28 (145) |
| Under 25 | \% (14) | * (8) | * (6) | $\square$ (0) |
| 25-39 | 47 (176) | [51] (37) | 49 (82) | 42 (57) |
| $40+$ | 18 (153) | [14] (22) | 21 (43) | 18 (88) |
| Common Law |  |  |  |  |
| All Ages | 44 (239) | [34] (47) | 48 (107) | 46 (85) |
| Visiting |  |  |  |  |
| All Ages | 46(160) | 42 (73) | 55 (58) | [34] (29) |

Note: An asterisk (*) indicates percentage was not calculated because the base was less than 20; brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50.
Source: Appendix Table 5.2.3(1).
with a lower primary education), the impression is that this general pattern of association is maintained for all age groups. At each of the educational levels, women aged 2534 had highest proportions currently using efficient contraceptive methods. The very large difference in use between the lower primary and higher primary groups is particularly noticeable.

Except for women in the oldest group, aged 45 and over, the proportion of urban women practising effective contraception far exceeds the corresponding proportion of rural women.

### 3.5.3. Pattern of Contraceptive Use and Desire for Children

In this section attention will be restricted to women who
have never used contraception and those who have discontinued its use, since current users have already been discussed. For these two groups, never-users and past users, it is more appropriate to use 'fecund' women currently in a union and 'fecund' as the base population, rather than women reported fecund, which means that pregnant women are now included in the base.

In every age group above the age of 25 years those women who want more children had a higher proportion of never-users than did those who want no more or are undecided. Among the youngest group, there is no difference in the proportions who never used ( 29 percent). This youngest group, aged under 25 years, also constitutes an exception to the pattern of never-use observed for older women, between those who want no more children and

Table 3.5.D
PERCENTAGE OF WOMEN WHO ARE CURRENTLY USING AN EFFICIENT CONTRACEPTIVE (INCLUDING STERILIZATION), BY CURRENT AGE, BY LEVEL OF EDUCATION, AND BY PLACE OF RESIDENCE. CONFINED TO 'EXPOSED' WOMEN WHO WANT NO MORE CHILDREN

| Level of Education and Place of Residence | Total | Current Age |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Under 25 | 25-34 | 35-44 | 45+ |
| All Women | 40 (742) | 47 (126) | 54 (240) | 33 (273) | 19 (103) |
| Level of Education |  |  |  |  |  |
| Primary: <4 years | 25 (97) | * (11) | * (16) | 17 (53) | * (17) |
| $4+$ years | 41 (505) | 51 (73) | 52 (179) | 35 (179) | 18 (74) |
| Secondary/Higher | 49 (140) | [45] (42) | [60] (45) | [44] (41) | * (12) |
| Place of Residence |  |  |  |  |  |
| Urban | 47 (370) | 52 (58) | 59 (144) | 41 (132) | [17] (36) |
| Rural | 33 (372) | 43 (68) | 46 (96) | 25 (141) | 21 (67) |

Note: An asterisk $\left(^{*}\right)$ indicates percentage was not calculated because base was less than 20 ; brackets [ ] indicate percentage was calculated on a base of at least 20 but less than 50 .

Source: Appendix Tables 5.2.4(1)A and 5.2.4(1)B.
those who are undecided. The pattern for these older women (over 25) is that the proportion of never-users among the undecided group exceeds that among those who want no more. In contrast, for women under 25 , the proportion of the undecided who had never used was about 30 percent lower than that for those who want no more (Table 3.5.E).

If consideration is given to the intention to use contraception in the future in relation to the desire for more children, once again the attitude of the youngest women, aged under 25 years, differs from those of the older age groups. Among the young women, it is only among those who want no more children that the proportion intending future use exceeds the percentage who would not practise contraception, while among young women who want more or are undecided, the opposite situation prevails. In contrast, regardless of attitudes towards further childbearing, the proportions of the two older groups who do not intend future use exceeds those who do.

Table 3.5.E
PERCENTAGE OF WOMEN WHO HAVE NEVER USED CONTRACEPTION, $\dagger$ BY DESIRE FOR CHILDREN AND BY CURRENT AGE, CONFINED TO WOMEN WHO ARE CURRENTLY IN A UNION AND 'FECUND'

|  |  | Desire for More Children |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Current <br> Age | Total | Wants <br> Future Birth | Wants <br> No More | Undecided |  |
| Total |  | $30(1,820)$ | $33(821)$ | $27(842)$ | $29(157)$ |
| $<25$ | $28(668)$ | $29(433)$ | $30(183)$ | 20 | $(52)$ |
| $25-34$ | $21(621)$ | $29(274)$ | $14(283)$ | $16(64)$ |  |
| $35-44$ | $41(408)$ | $58(97)$ | $34(277)$ | $52(34)$ |  |
| $45+$ | $51(123)$ | $*(17)$ | $44(99)$ | $*$ | $(7)$ |

$\dagger$ Excluding not stated.
Note: An asterisk (*) indicates proportion was not calculated because base was less than 20 .

Source: Appendix Table 5.3.1.
It would be logical to expect that the largest proportion of 'fecund' women who had discontinued the practice of contraception would be found among those women who want more children; and least for those who definitely do not want any more. In fact, in each age group, the proportion of women who were past users of contraceptive methods is, contrary to expectations, greatest for women who reported that they want no more children, which gives rise to the speculation that women are using contraception with a view to spacing their children. However, until further more detailed study can be made of this phenomenon, this hypothesis cannot be tested.

The pattern of contraceptive use is also related to the alternative variable indicating fertility preferentials, i.e. whether the number of children desired is greater than, equal to or less than the number of living children
(including any current pregnancy) (Table 3.5.F). The table shows the percentage of women currently in a union and 'fecund' who have never used a contraceptive method and have no intention of practising contraception in the future. As one would expect, in every age group, the percentage of 'resistors' is least for those women for whom the desired number exceeds the number of children they already have, and highest among those who already have a number in excess of their ideal number of children. The percentage increases with age for all three subgroups.

Table 3.5.F
PERCENTAGE OF WOMEN CURRENTLY IN A UNION AND 'FECUND' WHO HAVE NEVER USED A CONTRACEPTIVE METHOD AND WHO DO NOT INTEND ANY FUTURE USE OF CONTRACEPTION, BY WHETHER THE TOTAL NUMBER OF CHILDREN DESIRED EXCEEDS THE NUMBER OF LIVING CHILDREN (INCLUDING ANY CURRENT PREGNANCY) AND BY CURRENT AGE

| Current Age | Total | Total Number of Children Desired is: |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Less than the Number of Living Children | Equal to the Number of Living Children | Greater than the Number of Living Children |
| All Ages | $10(2,004)$ | 11 (413) | 17 (421) | $21(1,170)$ |
| $<25$ | 13 (672) | * (18) | 8 (100) | 14 (554) |
| 25-34 | 13 (672) | 3 (136) | 10 (165) | 18 (371) |
| 35-44 | 27 (512) | 11 (189) | 29 (133) | 42 (190) |
| $45+$ | 41 (148) | 29 (70) | [48] (23) | 55 (55) |

Source: Appendix Table 5.3.2.

Using the same base, women who are currently in a union and 'fecund', Table 3.5.G shows the percent who have never used and do not intend to use contraception. Only those background variables which had fairly large cell frequencies were used.

For women 25 years and over, the percentage of resistors to contraception is negatively associated with the level of education of the women; but among the youngest women, there is no difference in proportions between the two levels of primary education. There is also a consistent difference between urban and rural women in their attitudes to future practice of contraception. In each age group, the proportion of resistors is considerably higher among rural women than among those living in urban areas; and the differential is substantially larger for women in the middle age groups ( $25-34$ and $35-44$ ) than it is among younger or older women.

When current union status is considered, no consistent pattern of resistance to the practice of contraception emerges. As will be seen from Table 3.5.G, there is no difference in proportions between common law and visiting women ( 17 percent) who have never used and will not use a contraceptive method, and this is nearly half as

Table 3.5.G
PERCENTAGE OF WOMEN CURRENTLY IN A UNION AND 'FECUND' WHO HAVE NEVER USED A CONTRACEPTIVE METHOD AND WHO DO NOT INTEND ANY FUTURE USE OF CONTRACEPTION, BY AGE AND BY SELECTED BACKGROUND VARIABLES

| Background Variables | Age Group |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $<25$ | 25-34 | 35-44 | $45+$ |
| Level of Education |  |  |  |  |
| Primary: $<4$ years | [14] (35) | 22 (69) | 37 (116) | [47] (32) |
| $4+$ years | 14 (380) | 13 (448) | 25 (335) | 44 (100) |
| Secondary/Higher | 10 (257) | 8 (159) | 16 (61) | * (16) |
| Place of Residence |  |  |  |  |
| Urban | 10 (339) | 9 (383) | 20 (205) | 37 (56) |
| Rural | 15 (333) | 18 (293) | 31 (307) | 43 (92) |
| Current Union Status |  |  |  |  |
| Married | 12 (77) | 13 (276) | 27 (291) | 47 (100) |
| Common Law | 17 (241) | 15 (277) | 27 (154) | [36] (33) |
| Visiting | 17 (354) | 8 (123) | 22 (67) | * (15) |

Source: Appendix Table 5.3.3.
much again as the comparable proportion among married women. In the older groups, resistance to contraception is least among visiting women. However, while it is greater for married women than for common law wives in the $45+$ age group, the reverse is true for those aged $25-34$ years, and among women aged $35-44$, the proportion is exactly the same for these two types of union.

The data from Table 5.3.3 can also be used to indicate the rate of 'drop-out' from contraceptive practice. Here a 'drop-out' is defined as a woman who has discontinued the practice of contraception even though she is in a union and 'fecund' and reports that she wants no more children. The percentages of 'drop-outs' are shown in Table 3.5.H, by current union status and current age. Here it can be seen that, for every age group, the percentage of 'drop-outs' is greatest among women in a common law union. It is least for married women under the age of 35 years and for visiting women in the 35-44 year old group, though the

## Table 3.5.H

PERCENTAGE OF EVER-USERS OF CONTRACEPTION WHO WERE NO LONGER CONTRACEPTING, BY CURRENT UNION STATUS AND BY CURRENT AGE. CONFINED TO WOMEN IN A UNION AND 'FECUND' WHO WANT NO MORE CHILDREN

|  |  | Current Union Status |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Current <br> Age | Total | Married | Common Law | Visiting |  |
| All Ages | $40(2,008)$ | $35(744)$ | $43(705)$ | $42(559)$ |  |
| $<25$ | 46 | $(672)$ | $42(77)$ | $50(241)$ | $44(354)$ |
| $25-34$ | 38 | $(676)$ | $33(276)$ | $41(277)$ | $40(123)$ |
| $35-44$ | 34 | $(512)$ | $34(291)$ | $36(154)$ | $33(67)$ |
| $45-49$ | 41 | $(148)$ | $38(100)$ | $[48](33)$ | $*$ |

Note: An asterisk (*) indicates that the percentage was not calculated because the base was less than 20; brackets [] indicate that the percentage was calculated on a base of at least 20 but less than 50.

Source: Derived from Appendix Table 5.3.3D.
difference in proportions of these two type of union groups aged 25-34 years and $35-44$ years is minimal. The number of women in visiting and common law unions are too small to justify any confident conclusions.

## CONCLUDING REMARKS

The main findings of the survey will be summarized here. More than half of the women in Jamaica had entered their first union by age 18 , and most women began mating in a visiting union, but eventually shifted to the more stable common law or married unions. Significant differentials were found by education and residence, with secondary educated and urban women having higher ages at entry.

On the average 5.6 children were born to the oldest age group of women, those 45-49 years old, although for the longest duration, $30+$ years, the mean was higher, 6.7 children. In general, no evidence was found to support the hypothesis that women whose initial union was visiting had lower fertility in the long run. Analysis by current union type showed that common law women had the largest family size up to age 40 , while married women did so above age 40 . Some differentials in fertility emerged, the strongest being that by education, with secondary educated women having lowest initial, cumulative, and current fertility, even after standardizing for demographic factors.

There was almost universal knowledge of some method of contraception, and quite a large proportion were users: two-thirds had used at some time while nearly half of exposed women were currently using. This high level of
contraceptive practice was accompanied by a fairly high proportion wanting no more children - four-tenths of women currently in a union and 'fecund' wanted no more. Both use and wanting no more children were directly related to parity, and again the education and residence differentials were significant. The desire for no more children was not closely related to current use, however,
suggesting that use may be determined by the need to space children as well as the need to limit family size.

Further analysis of the data should throw more light on changes in fertility and on the socio-economic and demographic factors (in particular the union history) that determine fertility behaviour in Jamaica.

## SGyIVNNOILSAOO

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## DEPARTMENT OF STATISTICS

JAMAICA FERTILITY SURVEY (JFSMFS)

## FORM CSOS $35^{2 T}$ <br> CONFIDENTIAL <br> CAP. 368

(For all women aged $15-49$ years who are not full-time students at a primary, secondary or high school)


## SECTION 1. RESPONDENT'S BACKGROUND

101. In what month and year were you born?

102. INTERVIEWER: IF RESPONDENT APPEARS TO HAVE HAD NO FORMAL EDUCATION, SKIP TO 104. IF NOT ASK:

Have you ever attended school?

104. What was the highest level of education you attained - primary secondary or university?

105. What was the highest standard you completed at this level?
(SKIP TO 107)
106. What was the highest certificate, diploma or degree that you earned?

1-13 HDENTIEICATION


14
(SPECIFY)

111. In what country were you born?
(COUNTRY)

112. How many years have you been living in Jamaica?
(IF LESS THAN ONE YEAR WRITE 0)
$\qquad$ YEARS

## SECTION 2. PREGNANCY HISTORY

201. We should like to get a complete record of all the babies each woman has given birth to
in all her life. Have you ever had any children?

202. How many of these children are now alive?
203. How many of the children you have given birth to live here with you now?
204. How many of the children you have given birth to are still alive but do not live with you?
205. How many of your children which were born alive have died? $\qquad$
206. INTERVIEWER: SUM ANSWERS 204, 205, AND 206 AND ENTER TOTAL HERE:



18


20


22

NOW ASK:
Just to make sure I have this right, you have had
$\qquad$ (SUM) live births in all. Is that correct?
YES 1
NO 2
(PROBE AND CORRECT RESPONSES IF NECESSARY)
208. Have you ever had any still births, that is a child who was born after at least seven months of pregnancy, but who did not cry or show any sign of life after it was born?

YES 1 NO 2
(SKIP TO 210)
209. How many such still births have you had? $\qquad$
210. Have you ever had a miscarriage or abortion, that is; a pregnancy which ended before a full seven months?
211. How many?

$$
\begin{aligned}
& \text { NO } 2 \\
& \text { (SKIP TO 212) }
\end{aligned}
$$

and enter total here
(SUM)
NOW ASK:
To make sure that I have this right. vou have had
(SUM) pregnancies in all. Is that correct?
NOS 2 (PROBE AND CORRECT
RESPONSES IF NECESSARY)
NOTE: Difference may in some cases de due
to twins, triplets etc.
In such cases explain here:
$\square$
33

IF ZERO PREGNANCIES, SKIP TO 225
IF ONE PREGNANCY, SKIP TO 213
If TWO OR MORE PREGNANCIES SAY:
Now I want to ask you some questions about each of your (SUM) pregnancies, starting with the first pregnancy you had and taking the pregnancies in the order they occurred.
-
ASK 213-219 FOR EACH PREGNANCY, STARTING WITH THE FIRST. IF TWINS, USE ONE LINE FOR EACH AND CONNECT WITH A BRACKET AT THE LEFT.

PREGNANCY HISTORY


## INTERVIEWER: CHECK QUESTION 212 TO MAKE SURE THAT YOU HAVE RECORDED THE INFORMATION ABOUT EVERY PREGNANCY:

PREGNANCY HISTORY


INTERVIEWER: CHECK QUESTION 212 TO MAKE SURE THAT YOU HAVE RECORDED THE INFORMATION ABOUT EVERY PREGNANCY:

## PREGNANCY HISTORY



INTERVIEWER: CHECK QUESTION 212 TO MAKE SURE THAT YOU HAVE RECORDED THE INFORMATION ABOUT EVERY PREGNANCY.

IF ONE OR MORE LIVEBIRTHS IN COLUMN 214, ASK 220 AND 221 ABOUT THE LAST LIVE BIRTH.

IF NO LIVEBIRTHS, SKIP TO 225
220. Did you breast feed $\qquad$ ?
(NAME, SEE 217)

221. For how many months did you breast feed?



## SECTION 3 UNION STATUS AND PARTNERS

301. Have you ever been married? (or according to Hindu or Muslim rites?)

A.r you living witt a common law partner now?

IF RESPONDENT DOES NOT APPEAR TO UNDERSTAND THE TERM COMMON LAW. ASK): Are you living as man and wife now with a pariner to whom you are not married?
YES $\quad$ nO
(SKIP TO 311.
TICK BOX 2 IN 311
AND GO TO 313)
307. Do you have a visiting partner, that is, a more or less steady partner with whom you have sexual relations?


310. Have you ever had a common law partner?
YES 1 NO $\quad 2$

| (GO TO 311. | (GO TO 311. |
| :--- | :--- |
| TICK BOX 5 | IN 311 |

AND GO TO 316)


NOTE: $312-315$ ARE FOR THOSE WOMEN WHO ARE MARRIED NOW, ARE COMMION LAW NOW, OR HAVE A VISITING PARTNER NOW.
312. Have you ever had a common law partner?
(iF RESPONDENT DOES NOT APPEAR TO UNDERSTAND THE TERM
COMMON LAW, ASK): Have you ever lived as man and wife with a partner to whom you were not married?

313. Have you ever had a visiting partner, that is, a more or less steady partner with whom you used to have sexual relations?

314. Is your present partner the only one you ever had, or, have you had any other whether married, common-law or visiting?

| MORE THAN | 1 |
| :--- | ---: |
| ONE | 1 |

ONLY ONE 2$]-\frac{1}{\square}$
Now I want to ask you some questions about your partner, starting from the first relationship you had with him. (GOTO TABLE AT QUESTION 3i8)
315. How many partners have you had altogether?
(NUMBER)
Now I want to ask you some questions about each of your (NUMBER) partners including
the present one, but we will start with the
first partner you ever had (GO TO TABLE AT QUESTION 318)

NOTE: 316-317 ARE FOR THOSE WOMEN WHO HAVE NO PARTNER NOW, BUT ARENERE MARRIED, WERE COMMON LAW, OR HAD A VISITING PARTNER.
316. Is your last partner the only one you have ever had or have you had any others, whether married, common law or visiting partners?

MORE THAN ONE 1


Now I want to ask you some questions about your partner (GO TO TABLE AT QUESTION 318)
317. How many partners have you had altogether?

> (NUMBER) Now I want to ask you some questions about each of your (NUMBER) partners starting with the first partner you ever had. (GO TO TABLE AT QUESTION 318)
398. RELIABILITY OF ANSWERS IN SECTION 3:
GOOD 1
FAIR
2
WEAK
3
399. INTERVIEWER: TICK APPROPRIATE BOX:

PRESENCE OF OTHERS DURING INTERVIEW OF SECTION 3

## (TICK ALL THAT APPLY):

NO OTHERS

| 0 | 0 | 0 | 0 |
| :--- | :--- | :--- | :--- |

CHILDREN UNDER 10 1

HUSBAND/PARTNER
2
OTHER MALES
4

OTHER FEMALES
8

|  | FIRST RELATIONSHIP |  |  |  |  |  | SECOND RELATIONSHIP |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 318. <br> When you and your (first, second...... present, last) partner first started together were you married to him, living common law, or was he a visiting partner? | 319. <br> In what month and year did this (M/CL/V) relationship stari? <br> TF $\overline{D K} \overline{A S K}$ <br> How old were you when this (M/CLIV) relationship started? | 320. <br> In what month and year did this (M/CL/V) reldtionship with him end? <br> $\overline{\mathrm{F}} \overline{\mathrm{D}} \overline{\mathrm{K}} \mathrm{AS} \overline{\mathrm{K}}:$ <br> How many years and months did you live/go together as (M/CL/V)? | 321. <br> Right after this were you without a partner for any length of time? | 322. <br> How <br> many <br> years <br> anq <br> months <br> did <br> you <br> remain <br> without <br> a partner <br> then? | 323. <br> IF MORE THAN ONE Partiver (SEE 314, 316) ASK: <br> After this was your next relationship with this same partner or with another partner? | 324. <br> In your next relationship with this partner were you married to him, living common law, or was he a visiting partner? | 325. <br> In what month and year did vou and he start this(M/CL/V) relationship - $\overline{\mathrm{F}} \overline{\mathrm{D}} . \overline{\mathrm{K}} . \overline{\mathrm{A}} \overline{\mathrm{S}} \mathrm{K}:$ <br> How old were you when this ( $\mathrm{M} / \mathrm{Cl} / \mathrm{V}$ ) relationship started? | 326. <br> In what menth and year did this(M/CL/V) relationship with him end? <br> D $\overline{\mathrm{F}} \cdot \overline{\mathrm{K}}-\overline{\mathrm{A} S K}$ <br> How many years and months did you live/go together as (M/CL/V) | 327. <br> Right <br> after <br> this <br> were <br> you <br> without <br> partner <br> for any length of time? | 328. <br> How <br> many <br> years <br> and <br> months <br> did <br> you <br> remain <br> without <br> a <br> partner <br> then? |
|  | $\begin{array}{ll} \mathrm{M} & 1 \\ \mathrm{CL} & 2 \\ & 2 \\ & 3 \end{array}$ |  | STILL <br> GOING <br> ON 1 <br> (GO TO <br> 398 ON <br> PAGE 13) <br> (MONTH) <br> (YEAR) <br> (YEARS) <br> (MONTHS) | $\text { YES } 1$ $\begin{aligned} & \text { NO } 2 \\ & \text { (SKIP } \\ & \text { TO 323) } \end{aligned}$ | UNTIL <br> (GO TO <br> 398 ON <br> PAGE 13) <br> $\overline{\text { (YEARS) }}$ <br> (MONTHS) | AN. <br> OTHER 2 <br> (GO TO <br> 318 FOR <br> SECOND <br> PARTNER) | $\begin{array}{cc} M & 1 \\ C L & 2 \\ & 3 \end{array}$ | $\overline{(M O N T H)}$ <br> $\overline{\text { (YEAR) }}$ <br> $\overline{\text { IF D.K. }} 7$ <br> (AGE-YRS) | STILL <br> GOING <br> ON <br> (GO TO <br> 398 ON <br> PAGE 13) <br> $\overline{(M O N T H)}$ <br> $\overline{(Y E A R)}$ <br> $\overline{\text { (YEARS) }}$ <br> $\overline{\text { (MONTHS) }}$ | $\square$ <br> YES 1 $\begin{array}{l\|l} \text { NO } & 2 \\ \text { (SKIP } \\ \text { TO } 329 \text { ) } \end{array}$ | UNTIL <br> NOW $\square$ <br> (GO TO <br> 398 ON <br> PAGE 13) <br> $\overline{\text { (YEARS) }}$ <br> $\overline{(\text { MONTHS })}$ |
|  |  | $\overline{\text { (MONTH) }}$ <br> $\overline{\text { (YEAR) }}$ <br> IF D.K. <br> $\overline{\text { (AGE-YRS) }}$ | sTILL GOING ON $\square$ PAGE 13) <br> $\overline{(M O N T H)}$ <br> $\overline{(\mathrm{YEAR})}$ <br> (YEARS) <br> $\overline{\text { (MONTHS) }}$ | YES <br> 1 <br> No 2 (SKIP TO 323) | UNTIL NOW | $\begin{aligned} & \text { SAME } \\ & \text { (GO TO } \\ & 324 \text { ) } \\ & \\ & \\ & \text { AN. } \\ & \text { OTHER } 2 \\ & \text { (GO TO } \\ & 318 \text { FOR } \\ & \text { THIRD } \\ & \text { PARTNER) } \end{aligned}$ | $\begin{array}{cc} M & 1 \\ C L & 2 \\ V & 3 \end{array}$ |  | STILL GOING ON (GO TO 398 ON PAGE 13) $\overline{\text { (MONTH) }}$ $\overline{\text { (YEAR) }}$ $\overline{\text { (YEARS) }}$ $\overline{\text { (MONTHS) }}$ | YES <br> 1 <br> No 2 $\square$ (SKIP TO 329) | UNTIL |
|  | $\begin{array}{ll} M & 1 \\ C L & 2 \\ V & 3 \end{array}$ | $\overline{(M O N T H)}$ $\overline{\text { (YEAR) }}$ IF D.K. $\overline{\text { (AGE-YRS) }}$ | STILL GOING ON $\square$ <br> (GO TO 398 ON PAGE 13) <br> (MONTH) <br> $\overline{(Y E A R)}$ <br> $\overline{\text { (YEARS) }}$ <br> (MONTHS) | $\operatorname{YES} 1$ $\begin{aligned} & \text { NO } 2 \\ & \begin{array}{ll} \text { SKIP } \\ \text { TO 323) } \end{array} \\ & \hline \end{aligned}$ | UNTIL | SAME <br> (GO TO <br> 324) <br> AN. <br> OTHER 2 <br> (GO TO <br> 318 FOR <br> FOURTH <br> PARTNER) |  |  | STILL <br> GOING <br> ON $\square$ <br> (GO TO <br> 398 ON <br> PAGE 13) <br> $\overline{(M O N T H)}$ <br> $\overline{(\mathrm{YEAR})}$ <br> (YEARS) <br> (MONTHS) | YES $\square$ <br> NO $\square$ 2 <br> (SKIP <br> TO 329) | UNTIL $\square$ <br> (GO TO |

PARTAERS/RELATIONSHIPS - CONTINUED


|  | FIAST RELATIONSHIP |  |  |  |  |  | SECOND RELATIONSHIP |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 318. <br> When you and yout (first, second..... present, last) pariner Pirst stasted together were you married to him, living common law, or was he a visiting partner? | 319. <br> In what month and year did this ( $\mathrm{M} / \mathrm{CI} / \mathrm{V}$ ) relationship start? <br> IFIDK ASK: <br> How old were you when this (M/CL/V) relationship started? | 320. <br> In what month and year did this (M/Cl/V) relationship with him end? <br> IF DK ASK: <br> How many years and months did you live/go together as (M/CL/V)? | 321. <br> Right <br> after <br> this <br> weie <br> you <br> without <br> a partner <br> for any <br> length <br> of <br> time? | 322. <br> How <br> many <br> years <br> and months did <br> you <br> remain without a partner then? | 223. <br> IF MORE THAN ONE PARTNER (SEE 314, 316) ASK: <br> After this was your next relationship with this same partner or with another partner? | 324. <br> In your nexi relatonship with this partner were you mafried to him, living common law, or was he a visiting partner? | 325. <br> In what monit and year did you and he start this (M/CL/N) relationship IFD.K.ADK <br> How old were you when this (M/CL/V) relationship started? | 326. <br> In what month and year did this ( $\mathrm{M} / \mathrm{Cl} \mathrm{N}$ ) relationshlp with hlm end? <br> FFD.K Ā̄K <br> How many years and months did you live/go together in this (M/CL $N$ ) relationship: | 327. <br> Rigit <br> after <br> this <br> were <br> you <br> without <br> a <br> partner <br> for any <br> length <br> of time? | 328. <br> How <br> many <br> years <br> and <br> months <br> dld <br> you <br> remain <br> without <br> a <br> partner then? |
|  | $M$ <br> 1 $C L$ $\square$ $V$ <br> 3 |  | $\begin{aligned} & \text { STILL } \\ & \text { GOING } \quad 1 \\ & \text { ON } \\ & (G O T O \\ & 398 \text { ON } \\ & \text { PAGE 13) } \\ & \overline{(M O N T H)} \\ & \overline{\text { (YEAR) }} \\ & \overline{(Y E A R S)} \\ & \hline \text { MONTHS) } \end{aligned}$ |  | UNTIL NOW $\square$ <br> (GO TO 393 ON PAGE 13) $\overline{(Y E A R S)}$ <br> (MONTHS) | SAME (GO TO 324) <br> AN. <br> OTHER 2 <br> (GO70 <br> 318 FOR <br> FIFTH <br> PARTNER) | $\begin{array}{cc} M & 1 \\ C l & 2 \\ V & 3 \end{array}$ |  | STILL GOING $\quad 1]$ ON (GO TO 398 ON PAGE 13) $\overline{(M O N T H)}$ $\overline{(Y E A R)}$ $\overline{(Y E A R S)}$ $\overline{(M O N T H S})$ |  | UNTIL NOW (GO TO 398 ON PAGE 13) $\overline{(Y E A R S)}$ <br> (MONTHS) |
| FIFTH PARTNER | $\begin{array}{ll} \mathrm{M} & 1 \\ \mathrm{CL} & 2 \\ \mathrm{~V} & 3 \end{array}$ | (MONTH) <br> $\overline{\text { (YEAR) }}$ $\overline{\text { If } 0 . K .}$ $\overline{\text { (AGE.YRS) }}$ | STILL <br> GOING <br> ON $\square$ <br> (GO TO <br> 398 ON <br> PAGE 13) <br> $\overline{(M O N T H)}$ <br> $\overline{(Y E A R)}$ <br> $\overline{(Y E A R S)}$ <br> (MONTHS) | $\begin{array}{l\|l\|} \hline \text { YES } & 1 \end{array}$ NO | UNTIL NOW <br> 1 <br> (GO TO <br> 398 ON <br> PAGE 13) <br> $\overline{(Y E A R S)}$ <br> (MONTIIS) | SAME $\square$ (GO TO 324) <br> AN. OTHER 2 (GO TO 318 FOR SIXTH PARTNER) |  |  | STILL GOING ON (GOTO 39 DON PAGE 13) $\overline{(M O N T H)}$ $\overline{(Y E A R)}$ $\overline{\text { (YEARS) }}$ $\overline{\text { (MONTHS) }}$ | YES <br> 1 $\begin{array}{l\|l} \text { NO } & 2 \\ \text { (SKIP } \\ \text { TO 329) } \end{array}$ | UNTIL NOW <br> (GO TO 398 ON PAGE 13) $\overline{\text { (YEARS) }}$ <br> $\overline{(M O N T H S})$ |
|  |  |  | still. <br> GOING <br> ON $\square$ <br> (60) 70 398 ON page 13) <br> $\overline{\text { (AONTHI) }}$ (YEAR) <br> $\overline{\text { (YEARS) }}$ <br> $\overline{\text { (MONTMS) }}$ | YES $\square$ <br> NO 2 <br> (SN:IP <br> 10323) | UNTIL NOW <br> (GO TO <br> 398 ON <br> PAGE 13) $\overline{(Y E A R S})$ <br> $\overline{(M O N T H S})$ | SAME $\quad 1$ (GOTO $324)$ AN. OTHER 2 GOTO SUPPL. SHEET 3A) | M <br> 1 $\mathrm{CL}$ |  | STILL GOING ON |  | UNTIL NOW <br> (GO TO $398 \mathrm{ON}$ <br> PAGE (3) $\overline{(Y E A R S)}$ <br> $\overline{(M O N T H S})$ |

## partners/relationships - COntinued



## 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 the next pregnancy or avoid pregnancy. Do you know of, or have you heard of, any of these ways or methods?

VES $1 \square$
(SKIP TO INSTRUCTION ABOVE 404)
402. Which methods do you know of? $\qquad$

PROBE: Do you know of any others?
INTERVIEWER: RECORD ANSWER, AND THEN PROCEED TO TICK BOX (ES) IN COL. 1 BELOW CORRESPONDING TO THE METHOD (S) MENTIONED. FOR EACH METHOD SO TICKED ASK:
403. Have you ever used (METHOD)?
(REFER TO METHOD IN SAME WORDS USED RY RESPONDENT IN 402. TICK RESPONSE IN COL. 3 CORRESPONDING TO THE PARTICULAR METHOD).

NOW ASK 404-415, 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 |  |  | COL. 2 | COL. 3 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FROM 402 |  |  | EVER <br> HEARD <br> OF | EVER USED |  |  |  |
| OTHER FEMALE SCIEN. TIFIC | $407 .$ | 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? | $\mathrm{YES} 1$ $\mathrm{NO} 2$ | $\begin{aligned} & \text { YES } 1] \\ & \text { NO } 2 \end{aligned}$ |  |  | 27 |
| $\square$ <br> DOUCHE | $408$ | Some women douche themselves immediately after sex, with water or perhaps some other liquid. Have you ever heard of this method to avoid getting pregnant? IF YES: Have you ever used this method | $\begin{aligned} & \text { YES } 1 \\ & \text { NO } 2 \end{aligned}$ | $\begin{aligned} & \text { YES } 1 \\ & \mathrm{NO}, 2 \end{aligned}$ |  |  | $\frac{\square}{30}$ |
| $\square$ <br> CONDOM | $409 .$ | There are also some methods men use so that their partners will not get pregnant, some men wear a condom (e.g. Durex, French letter, rubber, safe, or prophylactic) during sex. Have you ever heard of this method? IF YES: Did you and yout partner ever use this method? | $\begin{aligned} & \text { YES } 1 \\ & \text { NO } 2 \end{aligned}$ | $\begin{aligned} & \text { YES } 1] \\ & \text { NO } 2 \end{aligned}$ |  |  |  |
| $\square$ <br> RHY- <br> THM | $410 .$ | 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 partner ever do this? | $\begin{aligned} & \text { YES } 1 \\ & \mathrm{NO} \end{aligned}$ | $\begin{aligned} & \text { YES } 1 \\ & \text { NO } 2 \end{aligned}$ |  | $\frac{\square}{35}$ |  |
| 8 <br> WITH DRAWAL | 411. | 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 partner ever use this method? | $\begin{aligned} & \text { YES } 1 \\ & \text { NO } 2 \end{aligned}$ | $\begin{aligned} & \text { YES } 1 \\ & \text { NO } 2 \end{aligned}$ |  | $\square$ | $\frac{\square}{39}$ |
| 9 <br> AB- <br> STAIN | $412 .$ | 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? | $\begin{aligned} & \text { YES } 1 \\ & \text { NO } 2 \end{aligned}$ | $\begin{aligned} & \text { YES } 1] \\ & \text { NO } 2 \end{aligned}$ |  | $\frac{\square}{41}$ |  |
| $\square$ <br> FEMALE STERIL | 413. | 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). | $\begin{aligned} & \text { YES } 1 \\ & \text { NO } 2 \end{aligned}$ |  |  | $\square$ | $\frac{\square}{44}$ |
| $\square$ <br> MALE STERIL | $414 .$ | Some men have a sterilization operation, called vasectomy, so that their partner will not have more children. Have you ever heard of this method? (TICK RESPONSE IN COL. 2) | $\begin{aligned} & \text { YES } 1 \\ & \text { NO } 2 \end{aligned}$ |  |  |  | $4$ |



## SECTION 5. FERTLLTY REGULATION

501. INTERVIEWER: TICK APPROPRIATE BOX (SEE 225)


NOTE: 509-517 ARE ONLY FOR THOSE NOT CURRENTLY PREGNANT, WITH A PARTNER, ABLE TO HAVE A CHILD, WHO HAVE NEVEA USED A CONTRACEPTIVE METHOD
509. INTERVIEWER: TICK APPROPRIATE BOX (SEE 207)
NO LIVE
BIRTH
1
(SKIP TO 514)

ONE OR MORE
LIVE BIRTHS

510. Do you want to have another child sometime?

YES
NO 2
(SKIP TO 513)
UNDECIDED
(SKIP TO 513)
511. Would you prefer your next child to be a boy or a girl?


OTHER ANSWER $\qquad$ (SPECIFY)
512. How many more children do you want to have?
(NUMBER)
(SKIP TO 517)
513. IF ONE LIVE BIRTH, (SEE 207)

ASK:
Thinking back to the time before you became pregnant with your child, had you wanted to have any children?

## IF TWO OR MORE LIVE

 BIRTHS, (SEE 207) ASK:Thinking back to the time before you became pregnant with your last child, had you wanted to have any more children?
YES
(SKIP TO 517)
NO 2
(SKIP TO 517)

UNDECIDED 3
(SKIP TO 517)
59. Oo you went to have any children?
YES

NO 2
ISKIP TO 517
D.K.
3
(SKIP TO 5i7)
515. Would you prefer your first child to be a boy or a girl?

BOY 1 GIRL 2 EITHER 3

OTHER ANSWER $\qquad$
(SPECIFY)
510. How many children in all do you want to have?
(NUMBER)
517. Do you think you and your partner may use any method at any time in the fuzure so that you will not become pregnant?

589. If you could choose exactly the number of children to have in your whole life, how many children would that be?
(NUMBER)

NOTE: 518.546 ARE ONLY FOR THOSE NOT CURRENTLY PREGNANT, WITH A PARTNER, ABLE TO HAVE A CHILD, WHO HAVE USED A CONTRACEPTIVE METHOD.
519.

INTERVIEWER: TICK APPROPRIATE BOX (SEE 207)

519. Do you want to have another child sometime?

520. Would you prefer your next child to be a boy or a girl?
BOY $\qquad$ GIRL
2
EITHER
3

OTHER ANSWER $\qquad$
(SPECIFY)
521. How many more children do you want to have?
(NUMBER)
522. INTERVIEWER: TICK APPROPRIATE BOX (SEE 505)

523. Have you or your partner used a method to keep you from getting pragnent since the time of your (last) child's birth?

YES $\qquad$ NO 2
1
(SKIP TO 526)
524. What was the last method you used?
(IF METHOD WAS ABSTINENCE, SKIP TO 626)
525. Did you stop because you wanted to become pregnant?
YES
1
NO
2
526. IF ONE LIVE BIRTH, (SEE 207) ASK:

Think back to the time before you became pregnant with your child. Was there any time when you or your partner ware using a method to keep you from getting pregnant?

YES 1 NO 2
(SKIP TO 599)

IF TWO OR MORE LIVE BIRTHS, (SEE 207) ASK:

Think back to the interval between your (last) two births. Was there any time during that interval when you or your partner were using a method to keep you from getting pregnant?

(SKIP TO 599)
528. Did you become pregnant while using that method, or had you stopped using it before becoming pregnant?

529. Did you stop because you wanted to become pregnant?

| YES 10 | NO 2 |
| :--- | :--- |
| (SKIP TO 599) | (SKIP TO 599) |

530. INTERVIEWER: TICK APPROPRIATE BOX (SEE 505)

CURRENTLY
CONTRACEPTING
NOT CURRENTLY CONTRACEPTING

531. Have you or your partner used a method to keep you from getting pregnant since the time of your (last) child's birth?

YES


NO 2
(SKIP TO 533)
532. What was the last method you used?
$\qquad$
533. IF ONE LIVE BIRTH, (SEE 207) ASK:
Thinking back to the time before you became pregnant with your child, had you wented to have any children?

## YES 11 NO 2 UNDECIDED 3

534. Was there any time before the birth of your child when you or your parther were using a method to keep you from getting pregnant?
YES 1 NO 2 1 (SKIP TO 599)
535. What method were you using?

IF TWO OR MORE LIVE BIRTHS, (SEE 207) ASK:

Thinking back to the time before you became pregnant with your last child, had you wanted to have any more children?
YES 11


Was there any time in the interval between your (last) two births when you or your partner were using a method to keep you from getting pregnant?
YES 1
NO 2
(SKIP TO 599)
536. INTERVIEWER: TICK APPROPRIATE BOX (SEE 533)
$\begin{array}{lll}\text { "YES" TO "NO"OR "UNDECIDED" } 2 \\ 533 & 1053\end{array}$
(SKIP TO 599)
537. Did you become pregnant while using that method, or had you stopped using it hefore becoming pregnant?

538. Did you stop because you wanted to become pregnant?

| YES 1 | NO |
| :--- | :--- |
| (SKIP TO 599) | 2 |
| (SKIP TO 599) |  |



OTHER ANSWER $\qquad$ (SPECIFY)
541. How many children in all do you want to have?
(NUMBER)
542. INTERVIEWER: TICK APPROPRIATE BOX (SEE 505)

CURRENTLY NOT CURRENTLY CONTRACEPTING 1 CONTRACEPTING
(SKIP TO 599)
543. What was the last method you or your partner used to keep you from getting pregnant?
(IF METHOD WAS ABSTINENCE, SKIP TO 599)
544. Did you stop because you wanted to become pregnant?

| YES 11 | NO 2 |
| :--- | :--- |
| (SKIP TO 599) | (SKIP TO 599) |

545. INTERVIEWER: TICK APPROPRIATE BOX (SEE 505)

## CURRENTLY CONTRACEPTING 1

NOT CURRENTLY CONTRACEPTING 2
(SKIP TO 599)
546. What was the last method you or your partner used to keep you from getting pregnant?
$\qquad$

1
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)
562. Before you became pregnant this time, did you want to have any (more) children?
YES
1
NO
2
UNDECIDED 3
563. INTERVIEWER: TICK APPROPRIATE BOX (SEE 207)

| NOLIVE |
| :--- |
| BIRTH |


568. Did you become pregnant while using that method, or had you stopped using it before becoming pregnant?

WHILE USING 1
(SKIP TO 599)
569. Did you stop because you wanted to become pregnant?

599. If you could choose exactly the number of children to have in your whole life, how many children would that be?

HAD STOPPED 2
D.K. 3
(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 partner were using a method to keep you from getting pregnant?

566. What was the last method you used?

## $\frac{\square}{36}$

(NUMBER)

NOTE: 570.595 APE FOR THOSE WHO CANNOT HAVE (MORE) CHILDREN AS wELl AS FOR THOSE WHO HAVE NO PRESENT PARTNER.
570. Hove you had an operation that makes it impossible for you to have any (more) childeen?

$$
\text { VES } 1
$$

1


NO 2
(SKIP TO 573)
571. In what month and vear did that operation take place?

572. Was one purpose of that operation to prevent you having any (more) children?

```
YES 1
(SKIP TO 576)
NO
```



```
(SKIP TO 576)
```

573. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

HAS A
PARTNER AT
PRESENT

NO
PRESENT
PARTNER 2
(SKIP TO 576)

576. INTERVIEWER: TICK APPROPRIATE BOX (SEE 416, 417)

HAS USED A
CONTRACEPTIVE
METHOD

577. TICK APPROPRIATE BOX (SEE 207)

NO LIVE BIRTH 1 (SKIP TO 579)

ONE OR MORE LIVE BIRTHS (SKIP TO 581)

HAS NEVER USED A CONTRACEPTIVE METHOD

578. TICK APPROPRIATE BOX (SEE 207)

NO LIVE BIRTH
 (SKIP TO 580) ONE OR MORE LIVE BIRTHS 2 (SKIP TO 594)

579. What was the last method you or your pariner used to keep you from getting pregnant?
$\qquad$
580. Since you had your firsi partner, have you cver wanted to have any children?
Yes 1
(SKIP TO 599)
NO 2
(SKIP TO 599)
UNDECIDED 3
(SKIP TO 599)
581. Did you or your partner use any method at any time after the birth of your (last) child, to keep you from getting pregnant?
YES 1
NO 2
(SKIP TO 583)
582. What was the last method you used?
$\qquad$ .

583. At any time after the birth of your (last) child, did you want to have any more children?


NO 2
(SKIP TO 588)
UNDECIDED 3
(SKIP TO 588)

## IF TWO OR MORE LIVE BIRTHS,

 (SEE 207) ASK:Think back to the interval between your (last) two births. Was there any time during that interval when you or your partner were using a method to keep you from getting pregnant?
keep you from getting pregnant?


685. What method were you using?
(IP ABSTINENCE, SKIP TO 599)
586. Did you become pregnant while using that method, or had you stopped using it before becoming pregnant?

WHILE USING 1
(SKIP TO 599) HAD STOPPED 2
D.K. 3
(SKIP TO 599)
587. Did you stop because you wanted to become pregnant?

| YES 11 | NO |
| :--- | :--- |
| (SKIP TO 599) | (SKIP TO 599) |

588. IF ONE LIVE BIRTH, (SEE 207) ASK:

Thinking back to the time before you became pregnant with your child, had you wanted to have any children?

589. Was there any time before the birth of your child when you or your partner were using a method to keep you from getting pregnant?

YES


(SKIP TO 599)
using?
(IF METHOD WAS ABSTINENCE, SKIP TO 599)
591. INTERVIEWER: TICK APPROPRIATE BOX (SEE 588)


Did you become pregnant while using that method, or had you stopped using it before becoming pregnant?

## WHILE USING 1

(SKIP TO 599)

D. K. 3
(SKIP TO 599)
593. Did you stop because you wanted to become pregnant?

| YES 1 NO | NO |
| :--- | :--- |
| (SKIP TO 599) | (SKIP TO 599) |

594. At any time af ter the birth of your (last) child, did you want to have any more children?

595. IF ONE LIVE BIRTH, (SEE 207)

ASK:
Thinking back to the time before you became pregnant with your child, did you want to have any children?

## IF TWO OR MORE LIVE BIRTHS (SEE 207) ASK:

Thinking back to the time before you became pregnant with your last child, did you want to have any more children?


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)
(GO ON IO SECTION Gi



## 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. Others sell things, or have a small business, or work on the family farm. Are you doing any such work at the present time?

602. I would like to ask you some questions about (your present work, the last work you did). What (is, was) your occupation that is, what kind of work (do, did) you do?
603. INTERVIEWER: TICK APPRCPRIATE BOX

IF NOT CLEAR WHETHER WORK IN 606 WAS IN FARMING OR NOT ASK: (Is, was) this in farming?

608. (Is, was) that your family farm?

609. (Do, did) you work mostly at home or (do, did) you work mostly away from home in that job?

HOME 1 AWAY 2

610. (Are, were) you employed by some member of your family, or by someone else, or (are, werel you self-employed?

| FAMILY SOMEONE |  |  |
| :--- | :--- | :--- |
| MEMBER | 1 | SELF |
| ELSE |  |  |

611. INTERVIEWEA: TICK APPROPRIATE BOX (SEE 206)

612. Now let us go back to the time before the birth of your first child. Did you do any work at any time before you had your first child?

613. For how many years altogether did you work before the birth of your first child?
614. What kind of work did you do mainly?
615. Were you employed by some member of your family, or by someone else, or were you self-employed?

| FAMILY | SOMEONE |  |  |
| :--- | :--- | :--- | :--- | :--- |
| MEMBER | 1 | 2 | SELF- |
| ELSE | 2 | EMPLOYED 3 |  |

## SECTION 7 CURRENT (LAST)PARTNER'S BACKGROUND

701. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

702. Did your present partner ever attend school?

703. What was the highest standard he completed at that level?
$\qquad$
(SKIP TO 706)
704. What was the highest certificate, diploma or degree that he earned?
705. What religion does he belong to?

706. Now I have some questions about your partner's work experience,

First, does he now work?

708. What is his occupation that is, what kind of work does he do?
$\qquad$
$\qquad$
709. Does he work for a wage or salary, does he have his own business or farm, or is he an unpaid worker?

WORKS FOR
WAGE/
SALARY
(SKIP TO 712)
1
HAS OWN
BUSINESS/ 2
FARM

| UNPAID 3 | DON'T 4 |
| :--- | :--- |
| WORKER | KNOW 4 |
| ISKIP TO | (SKIPTO |
| SECTION 8) | SECTION 8) |

710. Does he have any regular paid employees in his business/farm?

YES

NO 2
(SKIP TO SECTION 8)
711. How many paid employees does he have?
NUMBER
ISKIP TO SECTION 8)
KNOW
712. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

713. How much does he earn, on the average each month from the work he does? AMOUNT \$J $\qquad$ AMOUNT \$J $\qquad$ PER MONTH
(SKIP TO SECTION 8)


INTERVIEWER: QUESTIONS 714 TO 721 ARE FOR PARTNERS NOT WORKING CURRENTLY.
714. Has your partner ever worked?

$\qquad$
$\qquad$
716. Did he work for a wage or salary, did he have his own business or farm, or was he an unpaid worker?

717. Did he have any regular paid employees in his business?

YES

NO 2
(SKIP TO SECTION 8)
718. How many regular paid employees did he have?

(SKIP TO SECTION 8)
719. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

| VISITING 1 MARRIED/ | COMMON- <br> (SK.IP TO SECTION 8) |
| :--- | :--- |
| LAW |  |


721. When last did he work? $\qquad$
MONTH
YEAR
(SKIP TO SECTION 8)

INTERVIEWER: QUESTIONS 722 TO 736 ARE FOR WOMEN WITHOUT A CURAENT PARTNER; ASK ABOUT LAST PARTNER.
722. Did your last partner ever âtiend School?

YES

O.K. 3
(SKIP TO 726)
723. What was the highest level of education he attained - primary, secondary or university?

724. What was the highest standard he completed at that level?
(SKIP TO 726)
725. What was the highest certificate, diploma or degree that he earned?
$\qquad$
726. What religion did he belong to?

| ANGLICAN | 1 | BAPTIST | 2 | METHODIST | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| MORAVIAN | 4 | PRESBY./CONGREG. 5 | ROMAN CATHOLIC | 6 |  |
| OTHER | 7 |  |  |  |  |
| NONE | 8 |  |  |  |  |

727. Now I have some questions about your last partner's work experience. First, was he working when your relationship with him ended?
YES
NO
2
DON'T
KNOW
3
(SKIP TO 732)
728. What was his occupation i.e. what kind of work was he doing?
$\qquad$
$\qquad$
729. Did he work for a wage or salary, did he have his own business or farm, or was he an unpaid worker?

730. Did he have any regular paid employees?

731. How many paid employees did he have?

(END INTERVIEW)

INTEAVIEWER: QUESTIONS 732 TO 736 ARE FOR RESPONDENTS WITHOUT A PARTNER CURRENTLY, WHOSE LAST PARTNER WAS NOT WORKING WHEN THE RELATIONSHIP ENDED.
732. Did he work at anvime during vour relationship?

YES $1 \quad$ NO

735. Did he have any regular paid emplovees?

736. How many paid employees did he have?


INTERVIEWER: QUESTIONS 737 TO 756 ARE TO BE USED ONLY IF RESPON. DENT'S PARTNER IS BEING INTERVIEWED. IF RESPONDENT APPEARS TO HAVE HAD SOME FORMAL EDUCATION, SKIP TO 738. IF NOT, ASK:
737. Have you ever attended school?


1-13 IDENTIPICATION


14
739. What was the highest standard you completed at that level?
$\qquad$
(SKIP TO 741)
740. What was the highest certificate, diploma or degree that you earned?
$\qquad$
741. What religion do you belong to?

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| ANGLICAN | 1 | BAPTIST | 2 | METHODIST |

742. Now I have some questions about your work experience.

As you know, many men work either for a wage or salary or else in a business or firm owned by themselves or by some member of their family. Others are engaged in odd jobs through which they earn money towards their living. Are you doing any such work at the present time?

743. What is your occupation - that is, what kind of work do you do?
$\qquad$
$\qquad$
744. Do you work for a wage or salary, do you have your own business or farm, or are you an unpaid worker?


(SKIP TO SECTION 8)
747. INTERVIEWER: TICK APPROPRIATE BOX (SEE 311)

748. How much do you earn, on the average each month from the work you do?

AMOUNT \$J $\qquad$ AMOUNT \$J $\qquad$
PER MONTH
PER YEAR

(SKIP TO SECTION 8)
746. How many paid employees do you have?

NUMBER


(SKIP TO SECTION 8)

INTERVIEWER: OUESTIONS $7 A 9$ TO 756 ARE FOR PARTMERS NOT WORKING CURRENTLY
749. Have you ever worked?
YES 1 NO 2
(SKIP TO SECTION 8)
750. When you last worked, what kind of work were you doing?
$\qquad$
$\qquad$
751. Did you work for a wage or salary, did you have your own business or farm, or were you an unpaid worker?


| $7 \mid 2$ |
| :--- |
| 79 |

## SECTION 8. COSTS AND BENEFITS OF RAISING CHILDREN

## ONLY FOR WOMEN WHO CURRENTLY HAVE A PARTNER (SEE 311)

801. In your opinion, how much education does a boy from a family such as yours need to get along in the world these days?


| 802. Up to what grade would |
| :--- |
| that be? GRADE |

803. If a family in your circumstances were to educate sons to this level, would it be fairly easy economically, somewhat of a burden, or a heavy burden?

804. Why is this so? $\qquad$

805. At what age would you say sons usually begin to give help to parents?

806. In your opinion, how much education does a girl from a family as yours need to get along the world these days?

807. Up to what grade would that be? $\qquad$
808. If a family in your circumstances were to educate daughters to this level, would it be fairly easy economically, somewhat of a burden, or a heavy burden?


HEAVY BURDEN

809. Why is this so?

810. At what age would you say daughters usually begin to give help to parents?
$\qquad$
AGE
NEVER
HELP

811. INTERVIEWER: TICK APPROPRIATE BOX (See Pregnancy History 214, 216)
OLDEST LIVING CHILD 14 OR OVER

OLDEST LIVING
CHILD 13 OR UNDER
HAS NO LIVING
CHILD
INTERVIEWER: WRITE NONE AT 812 AND TICK BOX AT 813 ANO 814 AND BOX 2 AT 815 AND PROCEED TO 816
812. INTERVIEWER: Number of children living with respondent
(See 204) $\qquad$
(IF NONE, TICK BOX AT 813 AND 814 AND BOX 2 AT 815 AND PROCEED TO 816
813. You told me that you have ( $\qquad$ ) children living with you now. What age is the oldest child living with you?
OLDEST CHILD'S AGE

814. What age is the youngest child living with you?

YOUNGEST CHILD'S AGE

815. INTERVIEWER: TICK APPROPRIATE BOX (SEE 813) OLDEST CHILD IN H/H 10
10 OR OVER
(SKIP TO 818)
816. Do you, your partner, or some other member of your family run a business, farm or other family enterprise?



37

## SECTION 8. COSTS AND BENEFITS OF RAISING CHILDREN

ONLY FOR WOMEN WHO CURRENTLY HAVE A PARTNER (SEE 311)
801. In your opinion, how much education does a boy from a family such as yours need to get along in the world these days?


803. If a family in your circumstances were to educate sons to this level, would it be fairly easy economically, somewhat of a burden, or a heavy burden?

805. At what age would you say sons usually begin to ${ }^{\frac{\pi}{g}}$ ive help to parents?

NEVER
HELP
AGE

806. In your opinion, how much education does a girl from a family as yours need to get along the world these days?

807. Up to what grade would that be? $\qquad$ GRADE
808. If a family in your circumstances were to educate daughters to this level, would it be fairly easy economically, somewhat of a burden, or a heavy burden?

809. Why is this so?

810. At what age would you say daughters usually begin to give help to parents?

811. INTERVIEWER: TICK APPROPRIATE BOX (See Pregnancy History 214, 216)
OLDEST LIVING CHILD 14 OR OVER

OLDEST LIVING
CHILD 13 OR UNDER
HAS NO LIVING CHILD
INTERVIEWER: WRITE NONE AT 812 AND TICK BOX AT 813 AND 814 AND BOX 2 AT 815 AND PROCEED TO 816

812. INTERVIEWER: Number of children living wiüh respondent
(See 204) $\qquad$
IIF NONE, TICK BOX AT 813 AND 814 AND BOX 2 AT 815 AND PROCEED TO 816


29
913. You told me that you have ( $\qquad$ ) children living with you now. What age is the oldest child living with you?

> OLDEST CHILD'S AGE
NO CHILD IN H/H

814. What age is the youngest child living with you?


NO CHILD IN H/H
815. INTERVIEWER: TICK APPROPRIATE BOX (SEE 813)

816. Do you, your partner, or some other member of your family run a business, farm or other family enterprise?

817. What is the family enterprise?

818. Do any of your children help in and around the house?

819. Do they give a great deal of help, a moderate amount of help, or only a little help?

820. Do vor, your partner or some ounar member of your íamily fuñ a business, farm or Qther penoly enterprise?

824. INTERVIEWER: T!CK APPROPRIATE BOX (SEE 811)

825. Are any of your children working for money?

826. Do they contribute any money to this household?

| 827. | YES 1 | NO 2 |  |
| :---: | :---: | :---: | :---: |
|  | Do they contribute regularly? | (SKIP | TO 829) |
|  | YES 1 | NO | 2 |
|  | (SKIP TO 829) |  | TO 829) |

828. Do you expect your children to contribute to your household when they start working?
YES
1
NO
829. What means of financial support do you think you will have when you and your partner are old, or can no longer work for any other reason?

INTERVIEWER: TICK ALL THAT APPLY
HELP FROM CHILDREN

HELP 「ROM OTHER FAMILY

SAVING/INCOME FROM BUSINESS
FARM OR OTHER PROPERTY


PENSION/SOCIAL SECURITY


NONE

OTHER
(SPECIFY)
830. INTERVIEWER: TICK APPROPRIATE BOX (SEE 203)

| HAS LIVING |  |  |
| :--- | :--- | :--- | :--- |
| CHILDREN | 1 | HAS NO LIVING |

832. Do you expect to live with any of your children when you are old?

YES 1 1 NO 2 DEPENDS $\qquad$ 3 (SPECIFY)

833. INTERVIEWER: TICK APPROPRIATE BOX (SEE 816, 820)

| HAS FAMILY <br> ENTERPRISE |  |  |
| :--- | :--- | :--- |
|  | (SKIP TO 835) | HAS NO |
|  | FAMILY ENTERPRISE | 2 |

834. Would you please remind me: have you at any time during the past 12 months, worked for pay or profit?

| YES $1 \quad$ | NO 2 |
| :--- | :--- |
| (SKIP TO 838) | (SKIP TO 847) |

835. Would you please remind me: have you at any time during the past 12 months, worked in your family (farm/business/enterprise)?

836. How does your partner feel about your working for pay or profit. Does he approve, disapprove or doesn't he mind?

837. INTERVIEWER: TICK APPROPRIATE BOX (SEE 814)

838. Some women find that having to look after children makes it difficult for them to work. In your case, does caring for children interfere with your work?

| YES |  | $\begin{aligned} & \text { NO } 2 \\ & \text { ISKIP TO } 842 \end{aligned}$ |
| :---: | :---: | :---: |
| 841. Does it interfere a great deal, a moderate amount or only a little? |  |  |
| GREAT 1 DEAL | MODERATE AMOUNT | ONLY A LITTLE |



In your case how are the children cared for while you are
(INTERVIEWER: TICK AS MANY AS MENTIONED)

1. CHILDREN OLD ENOUGH
2. WORK AT HOME
3. I TAKE THEM WITH ME TO WORK
4. OLDER CHILDREN/OTHER FAMILY MEMBERS
5. DAY CARE CENTRE
6. HOUSEHOLD HELP

7. NEIGHBOURS, FRIENDS, PRIVATE CARE-TAKERS

8. OTHER $\qquad$
(SPECIFY)

9. INTERVIEWER: TICK APPROPRIATE BOX (SEE 506-508)
CAN HAVE

CANNOT HAVE CHILDREN 2 (END INTERVIEW)
10. Would having a/another baby make it inconvenient for you to work?

11. Would it be a great deal of inconvenience, a moderate amount, or only a littie inconvenience?

| GREAT | 1 | MODERATE <br> AMOUNT | 2 | ONLYA |
| :--- | :--- | :--- | :--- | :--- |
| DEAL |  |  |  |  |

(END INTERVIEW)

OUESTIONS 847-853 ARE FOR WOMEN WHO HAVE NOT WORKEO DURING PAST 12 MONTHS.
847. How would your partner feel about if if you were to take a job? Would he approve, disapprove, or wouldn't he mind?

848. What is your attitude towards women working outside the home?

849. Are you interested in finding work?

YES 1
NO
OTHER
 3 (SPECIFY)
850. INTERVIEWER: TICK APPROPRIATE BOX (SEE 814)

851. If you were to take a job, how would your children be cared for while you are at work?
(INTERVIEWER: TICK AS MANY AS MENTIONED)

1. CHILDREN OLD ENOUGH
2. COULD WORK AT HOME
3. COULD TAKE WITH HER TO WORK
4. OLDER CHILDREN/OTHER FAMILY MEMBERS
5. DAY CARE CENTRE

6. NEIGHBOURS, FRIENDS, PRIVATE CARE TAKER

7. Would you have to pay someone to look after
8. OTHER $\qquad$ $\square \rightarrow$ the children? YES 1 NO 2
9. NONE, DIFFICULT TO PROVIDE ADEQUATE CARE

10. If you wanted to work to earn money, do you think you could find a job you could take?


END OF INTERVIEW


## INTERVIEWER'S OBSERVATIONS

(TO BE FILLED IN AFTER COMPLETING INTERVIEW)

1. DID YOU HAVE DIFFICULTIES IN INTRODUCING YOURSELF TO THE RESPONDENT?


SPECIFY: $\qquad$
$\qquad$
2. DID THE RESPONDENT(S) MISUNDERSTAND YOUR INTRODUCTION AND ASSUME THAT YOU CAME FROM ANOTHER INSTITUTION, AND/OR DEPARTMENT SUCH AS MINISTRY OF HOUSING, ELECTORAL OFFICE, etc.
YES

NO

3. HOW WAS THE INFORMATION ON DATES MAINLY OBTAINED?

|  | Given <br> immediately | Had to probe <br> and calculate | Got it from <br> other sources |
| :--- | :---: | :---: | :---: |
| RESPONDENT'S AGE | $\square$ | $\square$ | $\square$ |
| DATES OF BIRTHS OF CHILDREN | $\square$ | $\square$ | $\square$ |
| DATES OF DEATHS OF CHILDREN | $\square$ | $\square$ | $\square$ |
| DATES OF OTHER PREGNANCIES | $\square$ | $\square$ | $\square$ |
| DATE(S) OF UNIONS | $\square$ | $\square$ |  |

4. DEGREE OF CO-OPERATION:

5. DID THE RESPONDENT SHOW EMBARRASSMENT OR RESISTANCE WHEN ANSWERING QUESTIONS?

| YES | NO |  |
| :---: | :---: | :---: |
| Sections | Q. No's | Comment |
| . . . . . | $\cdots \cdot$ |  |
| . . . . . | . . . . . | ....... |
| . . . . | . . . . . |  |
|  |  |  |
| . . . . . | $\cdots \cdot . \cdot$. | . . . . . $\cdot$ |

6. PRIVACY DURING INTERVIEW:

| COMPLETE PRIVACY, NO ONE IN THE HOUSE | $\square$ |
| :--- | :---: |
| SOMEONE IN THE ROOM PUT NOT TOO NEAR |  |
| SOMEONE PRESENT AND COULD HEAR QUES- | $\square$ |
| TIONING DURING PART OF THE INTERVIEW |  |

7. ANY INTERRUPTIONS OR INTERFERENCE DURING INTERVIEW?


IF YES SPECIFY:
8. WERE OBJECTIONS MADE TO ANY QUESTIONS OF THE QUESTIONNAIRE?

| YES | NO |  |
| :---: | :---: | :---: |
| Section | Q. No's | By Whom |
|  | $\cdots \cdot \cdots \cdot$ | -• |
|  | -••••' | - |
| . . . . . $\cdot$ | . . . . . | . . . . . . |
| . | . . . . . $\cdot$. |  |

9. ANY OTHER PROBLEMS OR OBSERVATIONS RELATING TO COMPLETION OF QUESTIONNAIRE?
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## APPENDIX II

SAMPLING ERRORS FOR SELECTED VARIABLES

## SAMPLING ERRORS FOR SELECTED VARIABLES

Section II. 1 introduces some basic ideas about sampling errors; readers already familiar with them may skip to Section II.2. For the more specialized readers, in Section II. 3 we discuss some technical considerations on the basis of which the tables in II. 2 were constructed.

## II. 1 INTERPRETATION OF SAMPLING ERRORS

The sample used in the survey is one of a large number of possible probability samples which could have been selected using the same sample design. The estimates derived from different samples would differ from each other. However, apart from non-sampling errors and bias, all estimates considered in this study are approximately unbiased, meaning that the true population value of the variable of interest is approximated by the average of the estimates from all possible samples. This average from different samples is called the 'expected value'. The sampling or standard error of an estimate is a measure of the difference between the observed sample estimate and the expected value of the estimate. Apart from nonsampling errors, the standard error in the present context measures the size of the expected deviation of the sample estimate from the true population value of interest.

A common and convenient criterion asserts that the true value lies within a range of twice the standard error on either side of the sample value. The range (sample mean) $\pm 2 \times$ (standard error) is called the ' 95 per cent confidence interval', and one can say that odds are one in twenty that the true value lies outside this range. If, for example, the sample mean for a variable is 3.5 and if the standard error has been estimated as 0.2 , then the '95 per cent confidence interval' is $3.5 \pm 2 \times(0.2)$, i.e. 3.1 to 3.9 , and for practical purposes, one asserts that (apart from non-sampling errors) the true population value of interest lies in the range 3.1 to 3.9 .

## Computation of Sampling Errors

One of the advantages of a probability sample such as the present one is that the sampling errors can be estimated from the results of the sample which is used in the survey.

The computation procedures must take into account the actual structure of the sample, and in particular the fact that the sample is a stratified, multistage clustered sample.

The results given in the appendix have been computed by using the WFS package program CLUSTERS. An outline of the procedure for estimating sampling errors is given in Section II. 3 below.

## Sampling Errors for Subclass and Subclass Differences

To be useful in interpretation of the substantive results presented in the form of detailed cross tabulations, sampling errors for each of the important variables have to be computed over various subclasses of the sample. By subclass is meant a subset of the sample cases defined in terms of characteristics, such as current age or marriage duration groups, or groups by socio-economic background variables, etc. Due to the smaller sample bases involved, sampling errors for individual subclasses will tend to be larger than the error in an estimate based on the entire sample.

The computation formulae given in Section II. 3 apply also for estimates computed over a particular subclass of the sample. Individuals or PSUs not belonging to the subclass are simply ignored in the computation. Interpretation of the standard error in terms of the ' 95 per cent confidence interval' applies equally to the whole sample as well as to any particular sample subclass.

Sampling errors for differences between subclass means can be particularly relevant in interpretation of fertility and other differentials observed from the survey results. These determine the likelihood that an observed difference is caused merely by sampling variation. Even for a relatively 'efficient' sample such as the present one, many observed differentials may not be statistically significant once the sample has been subdivided by the introduction of necessary control variables.

For differences between subclass means, an observed difference is regarded to be 'statistically significant' if the magnitude of the difference is not smaller than twice its standard error. 'Statistically significant', of course, does not necessarily mean substantively significant or meaningful; it implies rather that the observed difference is real in the sense that it is unlikely to be caused merely by sampling variation. If the magnitude of the observed difference is smaller than twice its standard error, we may take it to be statistically 'not significant', implying that it cannot be asserted that the observed difference is not caused merely by sampling variation.

If, for example, two sample subclasses are compared, and the subclass means for a variable are 3.0 and 3.5 , respectively, and if for the difference of the two means (3.5-3.0 $=0.5$ ), the standard error has been computed to be 0.1 , then the ' 95 per cent confidence interval' for the difference is $0.5 \pm 2 \times(0.1)$, that is 0.3 to 0.7 . In this example, one may assert that the true difference lies in the range 0.3 to 0.7 . The observed difference is 'statistically significant' (the observed magnitude of the difference 0.5 , is greater than twice the standard error). Now if in the above example, the standard error for the difference was 0.4 , the 95 per cent confidence interval for the difference would be $0.5 \pm 2$ ( 0.4 ), that is -0.3 to 1.3 . In this second case, the observed difference is statistically not significant; the observed difference (0.5) is smaller than twice its standard error ( 0.8 ), it cannot be asserted that the difference is real, and not caused merely by sampling variation.

## Effect of Clustering of the Sample

In the present sample, the individuals interviewed are taken from a number of sample areas, the clusters. Compared to a sample of individuals selected entirely at random, clustering tends to reduce efficiency of the sample (i.e. for a given sample size sampling errors will be larger). This is because individuals from a cluster tend to be more uniform compared to individuals from outside the cluster. In a sense, less new information is obtained by interviewing a number of individuals from the same sample area as compared to that obtained from an entirely random sample of the same size.

A measure comparing the standard error of an estimate from a clustered sample with what the error would have been had the sample been selected by simple random sampling is called the 'Design Effect' or DEFT.

$$
\begin{equation*}
\mathrm{DEFT}=\mathrm{SE} / \mathrm{SR} \tag{1}
\end{equation*}
$$

where SE is the standard error for the clustered sample (computed from equation (2) given in Section II.3), and SR is the standard error computed as if the sample had been selected by simple random sampling (equation (3) in Section II.3).

For a particular sample design, cluster size and variable, DEFT is a measure of the loss of sampling precision due to clustering of the sample. The two main factors on which its magnitude depends are the average cluster size and the relative homogeneity (corresponding to a particular variable) within these clusters. For samples (or subclasses thereof) with very small clusters, or for
variables with little within-cluster homogeneity, DEFT can be expected to approach unity, which implies that no sampling precision has been lost through clustering.

The last point mentioned above is of particular relevance in the present context where sampling errors for sample subclasses or subclass differences rather than for the sample as a whole, are the main concern. The effective cluster sizes for sample subclasses or their differences can be much smaller than the cluster sizes for the total sample, making DEFT smaller (nearer unity), that is, making the loss in sampling efficiency due to clustering generally much less significant than would be the case if estimates based on the total sample were the main objective of the survey.

## II.2. DISCUSSION OF THE MAIN RESULTS

The WFS package program CLUSTERS has been used to compute sampling errors for 30 variables of substantive interest. For each variable sampling errors were computed over the whole sample, as well for 15 subclasses and differences between pairs of subclasses.

In addition to a selection of detailed results for various variables computed over a large number of subclasses, the appendix describes the main features of the results, and presents results in a way convenient for the user who may be interested in obtaining an approximate value of the standard error for the estimate in any 'cell' of the detailed tabulations presented in the Report.

A selection of the result from computations is shown in three tables: II. 1 to II.3. Comments on each table follow.

## Table II.1. Definition of Variables and Results over the Total Sample

The 30 variables for which sampling errors have been computed and analysed are defined in Table II.1. Variable numbers $1-7$ relate to nuptiality and exposure; variables $8-16$ to fertility; variables $16-17$ to fertility preferences; and $18-30$ to knowledge and use of contraception. Generally, each variable is defined only over the population for which it has been defined in tabulation of substantive results. For example, the variable 'Births in Past 5 Years' has been defined only for women who have been continuously in the same union for the past five years.

Table II. 1 shows for each variable the relevant statistics, computed over the total sample (ignoring, of course, sample cases to which a particular variable does not apply).

Table II. 1
DEFINITION OF VARIABLES AND SAMPLING ERRORS FOR THE TOTAL SAMPLE

|  | Variable Name | Base Population | $r$ | SE | $n$ | SD | DEFT | $b$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Per Cent Currently in Union | All Women Ever in a Union | 82.893 | 0.801 | 2,765 | 37.664 | 1.118 | 6.7 |
| 2 | Per Cent Currently Married | All Women Ever in a Union | 31.971 | 0.956 | 2,765 | 46.645 | 1.077 | 6.7 |
| 3 | Per Cent Currently Common Law | All Women Ever in a Union | 28.897 | 0.951 | 2,765 | 45.337 | 1.102 | 6.7 |
| 4 | Per cent Currently Visiting | All Women Ever in a Union | 22.025 | 0.764 | 2,765 | 41.449 | 0.969 | 6.7 |
| 5 | Mean Number of Relationships | All Women Ever in a Union | 2.448 | 0.032 | 2,765 | 1.267 | 1.316 | 6.7 |
| 6 | Mean Number of Partners | All Women Ever in a Union | 1.805 | 0.022 | 2,765 | 1.006 | 1.168 | 6.7 |
| 7 | Age at Initial Union | In Union Before Age 25, Current Age 25 or Over | 17.840 | 0.074 | 1,733 | 2.886 | 1.061 | 4.2 |
| 8 | Per Cent Currently Pregnant | Women Currently in a Union | 8.377 | 0.606 | 2,292 | 27.710 | 1.047 | 5.6 |
| 9 | Mean Number of Children Ever Born | All Women Ever in a Union | 3.565 | 0.061 | 2,765 | 3.019 | 1.069 | 6.7 |
| 10 | Mean Number of Living Children | All Women Ever in a Union | 3.297 | 0.057 | 2,765 | 2.774 | 1.080 | 6.7 |
| 11 | Mean Number of Births in First 5 years | At least 5 years in first union | 1.761 | 0.029 | 2,208 | 1.219. | 1.128 | 5.4 |
| 12 | Mean Number of Births in Last 5 years | Currently in Union with Duration of at Least Five Years | 0.901 | 0.030 | 1,107 | 1.018 | 0.990 | 2.7 |
| 13 | Mean Length of First Birth Interval | All Women Ever in a Union with at Least One Birth | 26.046 | 0.628 | 2,071 | 26.994 | 1.058 | 5.1 |
| 14 | Mean Length of Open Interval | All Women Ever in a Union with at Least 2 Live Births and Last Closed interval < 5 years | 27.417 | 0.291 | 1,627 | 11.914 | 0.986 | 4.0 |
| 15 | Mean Length of Open Interval | Exposed with at Least 1 Live Birth | 54.886 | 1.603 | 1,517 | 60.828 | 1.027 | 3.7 |
| 16 | Number of Additional Children Wanted | Currently in a Union, Fecund | 0.856 | 0.031 | 2,124 | 1.315 | 1.095 | 5.2 |
| 17 | Total Number of Children Wanted | Currently in a Union | 4.162 | 0.061 | 2,287 $\dagger$ | 2.556 | 1.147 | 5.6 |
| 18 | Per Cent Knuwing Pill | All Womeñ Evêri in a Union | 94.102 | 0.554 | 2,765 | 21.587 | 1.346 | 6.7 |
| 19 | Per Cent Knowing IUD | All Women Ever in a Union | 84.769 | 0.839 | 2,751 $\dagger$ | 35.939 | 1.225 | 6.7 |
| 20 | Per Cent Knowing Condom | All Women Ever in a Union | 90.007 | 0.713 | 2,752† | 29.996 | 1.246 | 6.7 |
| 21 | Per Cent Knowing Female Sterilization | All Women Ever in a Union | 88.291 | 0.751 | 2,750 $\dagger$ | 32.159 | 1.225 | 6.7 |
| 22 | Per Cent Knowing Efficient Method | All Women Ever in a Union | 97.938 | 0.318 | 2,765 | 14.212 | 1.176 | 6.7 |
| 23 | Per Cent Ever Used Pill | All Women Ever in a Union | 29.790 | 0.995 | 2,756 $\dagger$ | 45.742 | 1.142 | 6.7 |
| 24 | Per Cent Ever Used IUD | All Women Ever in a Union | 7.815 | 0.523 | 2,751 $\dagger$ | 28.846 | 1.021 | 6.7 |
| 25 | Per Cent Ever Used Condom | All Women Ever in a Union | 25.000 | 0.909 | 2,752 $\dagger$ | 43.309 | 1.101 | 6.7 |
| 26 | Per Cent Sterilized | All Women Ever in a Union | 7.993 | 0.541 | 2,765 | 27.123 | 1.050 | 6.7 |
| 27 | Per Cent Ever Used any Method | All Women Ever in a Union | 65.859 | 1.023 | 2,765 | 47.427 | 1.135 | 6.7 |
| 28 | Per Cent Ever Used Efficient Method | All Women Ever in a Union | 56.166 | 1.025 | 2,765 | 49.627 | 1.086 | 4.8 |
| 29 | Per Cent Currently Using Any Method | Exposed | 45.436 | 1.172 | 1,939 | 49.804 | 1.036 | 4.8 |
| 30 | Per Cent Currently Using Efficient Method | Exposed | 42.857 | 1.127 | 1,939 | 49.500 | 1.113 | 4.8 |

$\dagger$ Sample base is different from 2,765 due to 'Not stated' cases.
$r=$ the ratio, mean or percentage estimated for the whole sample. Occasionally these estimates differ slightly from those shown in the detailed tabulations of substantive results, mainly due to rounding or slight differences between coverage in the two cases.
$\mathrm{SE}=$ Standard error for the actual clustered sample (defined by equation (2) given below). The ' 95 per cent confidence interval' defined earlier is $r \pm 2$ SE.
$n \quad=$ The appropriate sample base. The total sample size is 2,765 . However, many variables are relevant only for subpopulations satisfying certain criteria, as mentioned earlier.
$\mathrm{SD}=$ Standard deviation, defined as $\mathrm{SD}=\mathrm{SR} n$, where SR is the standard error computed on the assumption that the sample of individuals was selected by simple random sampling. Though SD is estimated from the sample results, it is a characteristic of the study population, not of a particular sample design or sample size.

DEFT $=$ The 'Design Effect', DEFT $=\mathrm{SE} / \mathrm{SR}$ (see equation (1) above). It measures the sampling efficiency lost due to clustering of the sample. DEFT values near unity imply that little has been lost by clustering of respondents into sample areas.
$b \quad=$ The average 'cluster size' i.e. the average number of interviews per PSU. The average size for the individual interview sample as a whole is around 7.

The standard errors (SE) for the total sample are very small. For most variables the standard error is less than 2 per cent of the mean, and for all but three variables, its value is under 4 per cent. For the variables 8,33 and 26 the standard errors are about 7 per cent of the mean. However, it must be pointed out that the percentage of
these variables are small, therefore although the value of their standard errors are low, their relative value appears to be high.

The value for DEFT range from 1.0 to 1.3 , but most of the variables have a DEFT value of around 1.1. The
over-all average for the 30 variables is 1.11 . This implies that the deviation from a simple random sample design is minimal. The mean value of 1.1 for DEFT implies that the standard errors are on the average 10 per cent higher than those for a simple random sample. The variance (square standard error) is on the average 21 per cent higher than that of a simple random sample. The loss of efficiency is very small, and for all practical purposes the sample of the JFS can be considered a simple random sample. The reason why the loss in efficiency is minimal is the fact that a 'large' number of 'small' clusters was selected. To illustrate the fact that the loss of efficiency is small one can compare the actual sample size with the size of a simple random sample that would give the same result. The actual size of the JFS sample is 2,765 respondents, and a simple random sample of 2,285 respondents would yield the sample values for the standard errors.

## Tabie ili.2. Definition of Subclasses

Table II. 2 defined the 15 subclasses for which sampling errors for each of the variables were computed. Subclasses defined in terms of the Type of Place of Residence are confined to certain segments or clusters of the sample, and that is why the average cluster size for any of these classes is similar to that for the whole sample. Other subclasses, such as current age or marriage duration groups, are well distributed over the sample clusters.

The table shows $n$, the sample size for the various subclasses; the average cluster size, i.e. the number of interviews, belonging to the subclass per PSU; C/V the coefficient of variation of cluster size for each subclass; and the DEFT, simply averaged over all 30 variables for each subclass.
$\mathrm{C} / \mathrm{V}$ is a measure of the variability of cluster size. The values shown are quite low, not only for the sample as a whole, but also for each of the subclasses. ${ }^{1}$

The average DEFT are of limited significance since they are based on aggregating results for variables of different kinds for which the individual results show considerable scatter. Nevertheless, they illustrate the point that DEFT tends to become smaller as one moves from the total sample to particular subclasses. For the latter,

[^27]Table 11.2
DEFINITIONS AND CHARACTERISTICS OF THE SUBCLASSES OVER WHICH SAMPLING VARIABLES HAVE BEEN COMPUTED

| Subclass | Sample Size | Average Cluster Size | C/V | Average value of DEFT for Variables |
| :---: | :---: | :---: | :---: | :---: |
| Total Sample | 2,765 | 6.7 | $\dagger$ | 1.108 |
| Type of Place of Residence |  |  |  |  |
| Urban | 1,319 | 8.2 | 0.04 | 1.164 |
| Rural | 1,446 | 5.7 | 0.04 | 1.066 |
| Level of Education |  |  |  |  |
| Primary <4 years | 383 | 1.2 | 0.06 | 1.013 |
| Primary 4+ years | 1,758 | 4.3 | 0.03 | 1.087 |
| Secondary or Higher | 624 | 2.0 | 0.06 | 1.111 |
| Current Age |  |  |  |  |
| $<25$ years | 868 | 2.2 | 0.04 | 1.070 |
| 25-34 years | 869 | 2.2 | 0.04 | 1.037 |
| 35-44 years | 704 | 1.8 | 0.04 | 1.028 |
| 45-49 years | 324 | 1.1 | 0.04 | 1.013 |
| Years since First Union |  |  |  |  |
| <5 years | 557 | 1.6 | 0.05 | 1.016 |
| 5-9 years | 623 | 1.7 | 0.04 | 1.067 |
| 10-19 years | 873 | 2,2 | 0.04 | 1.017 |
| $20+$ years | 119 | 0.7 | 0.10 | 1.014 |
| Age Entry First Union |  |  |  |  |
| <18 years | 1,519 | 3.7 | 0.03 | 1.066 |
| $18+$ years | 1,246 | 3.1 | 0.04 | 1.068 |

$\dagger$ Undefined.
loss in sampling precision due to clustering of the sample is generally not very significant in the present case.

## Table II.3. Computed Results by Variable and Subclass

Table II. 3 displays detailed results for computed sampling errors (SE) along with estimated means or percentages ( $r$ ) and relevant sample bases ( $n$ ) for all variables and subclasses considered. The entire set is based on about 450 separate 'variable by subclass' estimates.

The general conclusion is that as the subclasses become smaller, the values of DEFT tend to become smaller. Individual results do not always follow. Since the estimates of sampling errors from a sample are themselves subject to sampling fluctuation, attention should be focused on the general pattern of results rather than on individual figures.

The results obtained in the analysis of the standard errors and the associated DEFT indicate that the sample is relatively efficient although a clustered design was used. Especially when subclasses are compared, the loss of efficiency of the present design can practically be neglected.

Table II. 3

| Variable Name |  | Urban |  |  | Rural |  |  | Education: <br> Primary <4 years |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $r$ | SE | $n$ | $r$ | SE | $n$ | $r$ | SE | $n$ |
| 1 | Per Cent Currently in a Union | 84.003 | 1.243 | 1,319 | 81.881 | 1.033 | 1,446 | 81.984 | 2.131 | 383 |
| 2 | Per Cent Currently Married | 30.553 | 1,388 | 1,319 | 33.264 | 1.387 | 1,446 | 35.770 | 2.247 | 383 |
| 3 | Per Cent Currently Common Law | 30.478 | 1.607 | 1,319 | 27.455 | 1.324 | 1,446 | 36.031 | 2.657 | 383 |
| 4 | Per Cent Currently Visiting | 22.972 | 1.258 | 1,319 | 21.162 | 0.993 | 1,446 | 10.183 | 1.577 | 383 |
| 5 | Mean Number of Relationships | 2.479 | 0.054 | 1,319 | 2.420 | 0.035 | 1,446 | 2.645 | 0.060 | 383 |
| 6 | Mean Number of Partners | 1.817 | 0.034 | 1,319 | 1.795 | 0.029 | 1,446 | 1.869 | 0.054 | 383 |
| 7 | Age at Initial Union | 18.080 | 0.113 | 823 | 17.622 | 0.094 | 910 | 17.629 | 0.165 | 302 |
| 8 | Per Cent Currently Pregnant | 6.949 | 0.697 | 1,108 | 9.713 | 0.980 | 1,184 | 7.325 | 1.448 | 314 |
| 9 | Mean Number of Children Ever Born | 2.984 | 0.075 | 1,319 | 4.095 | 0.095 | 1,446 | 4.744 | 0.195 | 383 |
| 10 | Mean Number of Living Children | 2.792 | 0.072 | 1,319 | 3.758 | 0.087 | 1,446 | 4.305 | 0.182 | 383 |
| 11 | Mean Number of Births in First 5 Years | 1.626 | 0.036 | 1,045 | 1.883 | 0.045 | 1,163 | 1.839 | 0.067 | 355 |
| 12 | Mean Number of Births in Last 5 Years | 0.791 | 0.043 | 489 | 0.987 | 0.043 | 618 | 0.804 | 0.075 | 194 |
| 13 | Mean Length of First Birth Interval | 27.316 | 0.941 | 986 | 24.891 | 0.851 | 1,085 | 29.854 | 2.140 | 281 |
| 14 | Mean Length of Last Closed Interval | 27.737 | 0.430 | 720 | 27.162 | 0.391 | 907 | 26.907 | 0.732 | 257 |
| 15 | Mean Length of Open Interval | 55.434 | 2.299 | 753 | 54.345 | 2.239 | 764 | 71.750 | 5.118 | 192 |
| 16 | Number of Additional Children Wanted | 0.881 | 0.044 | 1,037 | 0.833 | 0.044 | 1,087 | 0.732 | 0.078 | 272 |
| 17 | Total Number of Children Wanted | 3.726 | 0.081 | 1,107 | 4.570 | 0.092 | 1,180 | 5.080 | 0.198 | 312 |
| 18 | Per Cent Knowing Pill | 96,646 | 0.767 | 1,312 | 93.698 | 0.797 | 1,444 | 90.526 | 1.543 | 380 |
| 19 | Per Cent Knowing IUD | 88.064 | 1.243 | 1,307 | 81.787 | 1.171 | 1,444 | 77.895 | 2.082 | 380 |
| 20 | Per Cent Knowing Condom | 93.125 | 1.001 | 1,309 | 87.179 | 0.985 | 1,443 | 82.058 | 2.049 | 379 |
| 21 | Per Cent Knowing Female Sterilization | 90.527 | 1.237 | 1,309 | 86.260 | 0.885 | 1,441 | 85.263 | 1.670 | 380 |
| 22 | Per Cent Knowing Efficient Method | 97.650 | 0.545 | 1,319 | 98.202 | 0.341 | 1,446 | 94.517 | 1.092 | 383 |
| 23 | Per Cent Ever Used Pill | 37.500 | 1.426 | 1,312 | 22.784 | 1.209 | 1,444 | 18.684 | 1.977 | 380 |
| 24 | Per Cent Ever Used IUD | 8.187 | 0.758 | 1,307 | 7.479 | 0.723 | 1,444 | 9,737 | 1.627 | 380 |
| 25 | Per Cent Ever Used Condom | 28.801 | 1.557 | 1,309 | 21.552 | 1.088 | 1,443 | 12.665 | 1.720 | 379 |
| 26 | Per Cent Sterilized | 6.141 | 0.695 | 1,319 | 9.683 | 0.812 | 1,446 | 12.272 | 1.722 | 383 |
| 27 | Per Cent Ever Used Any Method | 73.389 | 1.514 | 1,319 | 58.990 | 1.384 | 1,446 | 53.264 | 2.522 | 383 |
| 28 | Per Cent Ever Used Efficient Method | 63.760 | 1.474 | 1,319 | 49.239 | 1.349 | 1,446 | 44.125 | 2.612 | 383 |
| 29 | Per Cent Currently Using any Method | 50.780 | 1.700 | 961 | 40.184 | 1.583 | 978 | 36.546 | 2.973 | 249 |
| 30 | Per Cent Currently Using Efficient Method | 47.971 | 1.634 | 961 | 37.832 | 1.557 | 978 | 34.137 | 3.020 | 249 |


| Variable Name |  | Education: Primary $\geq 4$ years |  |  | Education: <br> Secondary or Higher |  |  | Current Age 15-24 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $r$ | SE | $n$ | $r$ | SE | $n$ | $r$ | SE | $n$ |
| 1 | Per Cent Currently in a Union | 82.082 | 1.010 | 1,758 | 85.737 | 1.361 | 624 | 83.525 | 1.209 | 868 |
| 2 | Per Cent Currently Married | 29.184 | 1.125 | 1,758 | 37.660 | 2.345 | 624 | 9.793 | 0.969 | 868 |
| 3 | Per Cent Currently Common Law | 33.390 | 1.055 | 1,758 | 11.859 | 1.353 | 624 | 29.954 | 1.696 | 868 |
| 4 | Per Cent Currently Visiting | 19.568 | 0.942 | 1,758 | 36.218 | 1.924 | 624 | 43.779 | 1.676 | 868 |
| 5 | Mean Number of Relationships | 2,615 | 0.037 | 1,758 | 1.859 | 0.044 | 624 | 1.904 | 0.034 | 868 |
| 6 | Mean Number of Partners | 1.911 | 0.027 | 1,758 | 1.466 | 0.033 | 624 | 1.545 | 0.027 | 868 |
| 7 | Age at Initial Union | 17.555 | 0.081 | 1,169 | 19.351 | 0.205 | 262 | 0.000 | 0.000 | 0 |
| 8 | Per Cent Currently Pregnant | 8.455 | 0.748 | 1,443 | 8.785 | 1.193 | 535 | 14.207 | 1.291 | 725 |
| 9 | Mean Number of Children Ever Born | 3.972 | 0.076 | 1,758 | 1.694 | 0.074 | 624 | 1.464 | 0.046 | 868 |
| 10 | Mean Number of Living Children | 3.672 | 0.072 | 1,758 | 1.623 | 0.072 | 624 | 1.393 | 0.042 | 868 |
| 11 | Mean Number of Births in First 5 Years | 1.854 | 0.034 | 1,470 | 1.332 | 0.058 | 383 | 1.603 | 0.060 | 375 |
| 12 | Mean Number of Births in Last 5 Years | 0.966 | 0.040 | 732 | 0.740 | 0.076 | 181 | 1.816 | 0.097 | 103 |
| 13 | Mean Length of First Birth Interval | 24.686 | 0.740 | 1,358 | 27.842 | 1.366 | 432 | 21.780 | 0.712 | 592 |
| 14 | Mean Length of Last Closed Interval | 27.586 | 0.340 | 1,140 | 27.148 | 0.841 | 230 | 25.097 | 0.551 | 349 |
| 15 | Mean Length of Open Interval | 54.393 | 2.059 | 981 | 46.878 | 2.989 | 344 | 20.430 | 0.987 | 463 |
| 16 | Number of Additional Children Wanted | 0.739 | 0.036 | 1,337 | 1.227 | 0.066 | 515 | 1.450 | 0.057 | 714 |
| 17 | Total Number of Children Wanted | 4.294 | 0.080 | 1,440 | 3.269 | 0.075 | 535 | 3.503 | 0.071 | 725 |
| 18 | Per Cent Knowing Pill | 95.268 | 0.679 | 1,754 | 97.427 | 0.781 | 622 | 97.001 | 0.727 | 867 |
| 19 | Per Cent Knowing IUD | 84.874 | 0.994 | 1,752 | 88.691 | 1.686 | 619 | 82.217 | 1.442 | 866 |
| 20 | Per Cent Knowing Condom | 89.789 | 0.926 | 1,753 | 95.483 | 1.071 | 620 | 94.463 | 0.903 | 867 |
| 21 | Per Cent Knowing Female Sterilization | 88.514 | 0.842 | 1,750 | 89.516 | 1.582 | 620 | 86.605 | 1.267 | 866 |
| 22 | Per Cent Knowing Efficient Method | 98.236 | 0.421 | 1,758 | 99.198 | 0.272 | 624 | 99.193 | 0.412 | 868 |
| 23 | Per Cent Ever Used Pill | 28.563 | 1.142 | 1,754 | 40.032 | 2.396 | 622 | 27.912 | 1.681 | 867 |
| 24 | Per Cent Ever Used IUD | 8.447 | 0.664 | 1,752 | 4.847 | 0.949 | 619 | 3.002 | 0.680 | 866 |
| 25 | Per Cent Ever Used Condom | 22.476 | 1.054 | 1,753 | 39.677 | 2.349 | 620 | 34.371 | 1.755 | 867 |
| 26 | Per Cent Sterilized | 9.101 | 0.693 | 1,758 | 2.244 | 0.584 | 624 | 0.346 | 0.199 | 868 |
| 27 | Per Cent Ever Used Any Method | 64.903 | 1.331 | 1,758 | 76.282 | 1.947 | 624 | 66.244 | 1.761 | 868 |
| 28 | Per Cent Ever Used Efficient Method | 54.664 | 1.295 | 1,758 | 67.788 | 2.121 | 624 | 55.645 | 1.919 | 868 |
| 29 | Per Cent Currently Using any Method | 44.298 | 1.481 | 1,219 | 53.078 | 2.711 | 471 | 42.764 | 2.104 | 615 |
| 30 | Per Cent Currently Using Efficient Method | 41.837 | 1.386 | 1,219 | 50.106 | 2.661 | 471 | 40.813 | 2.064 | 615 |

Table 11.3-continued

| Variable Name |  | Current Age 25-34 |  |  | Current Age 35-44 |  |  | Current Age 45-49 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $r$ | SE | $n$ | $r$ | SE | $n$ | $r$ | SE | $n$ |
| 1 | Per Cent Currently in a Union | 84.349 | 1.306 | 869 | 84.233 | 1.420 | 704 | 74.382 | 2.433 | 324 |
| 2 | Per Cent Currently Married | 33.947 | 1.741 | 869 | 48.863 | 1.964 | 704 | 49.383 | 2.727 | 324 |
| 3 | Per Cent Currently Common Law | 35.443 | 1.808 | 869 | 24.432 | 1.656 | 704 | 18.210 | 2.218 | 324 |
| 4 | Per Cent Currently Visiting | 14.960 | 1.292 | 869 | 10.937 | 1.105 | 704 | 6.790 | 1.511 | 324 |
| 5 | Mean Number of Relationships | 2.556 | 0.055 | 869 | 2.805 | 0.050 | 704 | 2.843 | 0.079 | 324 |
| 6 | Mean Number of Partners | 1.892 | 0.040 | 869 | 1.696 | 0.043 | 704 | 1.914 | 0.063 | 324 |
| 7 | Age at Initial Union | 17.399 | 0.108 | 835 | 18.081 | 0.111 | 627 | 18.638 | 0.163 | 271 |
| 8 | Per Cent Currently Pregnant | 9.140 | 1.034 | 733 | 3.373 | 0.861 | 593 | 0.830 | 0.582 | 241 |
| 9 | Mean Number of Children Ever Born | 3.473 | 0.080 | 869 | 5.315 | 0.131 | 741 | 5.636 | 0.203 | 324 |
| 10 | Mean Number of Living Children | 3.283 | 0.070 | 869 | 4.849 | 0.120 | 704 | 5.065 | 0.187 | 324 |
| 11 | Mean Number of Births in First 5 Years | 1.739 | 0.039 | 811 | 1.847 | 0.052 | 699 | 1.817 | 0.074 | 323 |
| 12 | Mean Number of Births in Last 5 Years | 1.233 | 0.057 | 386 | 0.706 | 0.044 | 435 | 0.148 | 0.031 | 183 |
| 13 | Mean Length of First Birth Interval | 25.099 | 1.010 | 696 | 29.493 | 1.395 | 543 | 31.512 | 2.529 | 240 |
| 14 | Mean Length of Last Closed Interval | 27.558 | 0.532 | 595 | 28.322 | 0.553 | 475 | 28.837 | 0.879 | 208 |
| 15 | Mean Length of Open Interval | 46.703 | 2.230 | 546 | 86.646 | 4.094 | 387 | 122.074 | 6.500 | 121 |
| 16 | Number of Additional Children Wanted | 0.776 | 0.043 | 714 | 0.360 | 0.040 | 539 | 0.229 | 0.056 | 157 |
| 17 | Total Number of Children Wanted | 4.063 | 0.088 | 729 | 4.725 | 0.131 | 592 | 5.058 | 0.231 | 241 |
| 18 | Per Cent Knowing Pill | 97.225 | 0.597 | 865 | 93.152 | 1.000 | 701 | 88.545 | 1.785 | 323 |
| 19 | Per Cent Knowing IUD | 89.467 | 1.074 | 864 | 85.571 | 1.296 | 700 | 77.258 | 2.420 | 321 |
| 20 | Per Cent Knowing Condom | 92.931 | 0.909 | 863 | 84.857 | 1.448 | 700 | 81.366 | 2.027 | 322 |
| 21 | Per Cent Knowing Female Sterilization | 91.088 | 1.031 | 864 | 88.751 | 1.302 | 700 | 84.687 | 2.060 | 320 |
| 22 | Per Cent Knowing Efficient Method | 98.734 | 0.383 | 869 | 96.448 | 0.692 | 704 | 95.679 | 1.144 | 324 |
| 23 | Per Cent Ever Used Pill | 43.006 | 1.724 | 865 | 24.394 | 1.710 | 701 | 11.145 | 1.836 | 323 |
| 24 | Per Cent Ever Used IUD | 10.532 | 1.028 | 864 | 11.000 | 1.202 | 700 | 6.542 | 1.418 | 321 |
| 25 | Per Cent Ever Used Condom | 29.432 | 1.626 | 863 | 15.857 | 1.200 | 700 | 7.764 | 1.526 | 322 |
| 26 | Per Cent Sterilized | 7.020 | 0.789 | 869 | 17.898 | 1.441 | 704 | 9.568 | 1.657 | 324 |
| 27 | Per Cent Ever Used Any Method | 76.639 | 1.340 | 869 | 61.079 | 1.926 | 704 | 56.296 | 3.098 | 324 |
| 28 | Per Cent Ever Used Efficient Method | 67.779 | 1.529 | 869 | 53.551 | 1.826 | 704 | 32.009 | 2.769 | 324 |
| 29 | Per Cent Currently Using any Method | 52.623 | 1.674 | 648 | 43.654 | 2.366 | 520 | 32.051 | 3.774 | 156 |
| 30 | Per Cent Currently Using Efficient Method | 49.691 | 1.635 | 648 | 40.961 | 2.298 | 520 | 28.846 | 3.690 | 156 |
| Variable Name |  | Years since First Union $<5$ Years |  |  | Years since First Union 5-9 Years |  |  | Years since First Union 10-19 Years |  |  |
|  |  | $r$ | SE | $n$ | $r$ | SE | $n$ | $r$ | SE | $n$ |
| 1 | Per Cent Currently in a Union | 82.944 | 1.521 | 557 | 85.393 | 1.486 | 623 | 83.505 | 1.400 | 873 |
| 2 | Per Cent Currently Married | 11.131 | 1.272 | 557 | 23.595 | 1.792 | 623 | 35.853 | 1.623 | 873 |
| 3 | Per Cent Currently Common Law | 24.057 | 1.902 | 557 | 34.029 | 2.116 | 623 | 34.708 | 1.685 | 873 |
| 4 | Per Cent Currently Visiting | 47.756 | 1.986 | 557 | 27.769 | 1.826 | 623 | 12.944 | 1.168 | 873 |
| 5 | Mean Number of Relationships | 1.548 | 0.033 | 557 | 2.230 | 0.047 | 623 | 2.704 | 0.051 | 873 |
| 6 | Mean Number of Partners | 1.289 | 0.025 | 557 | 1.717 | 0.036 | 623 | 1.968 | 0.039 | 873 |
| 7 | Age at Initial Union | 22.515 | 0.185 | 33 | 19.566 | 0.145 | 226 | 17.367 | 0.098 | 785 |
| 8 | Per Cent Currently Pregnant | 15.368 | 1.637 | 462 | 10.338 | 1.342 | 532 | 7.133 | 1.025 | 729 |
| 9 | Mean Number of Children Ever Born | 0.955 | 0.051 | 557 | 2.299 | 0.068 | 623 | 4.239 | 0.088 | 873 |
| 10 | Mean Number of Living Children | 0.923 | 0.049 | 557 | 2.181 | 0.066 | 623 | 3.967 | 0.084 | 873 |
| 11 | Mean Number of Births in First 5 Years | 0.000 | 0.000 | 0 | 1.668 | 0.053 | 623 | 1.887 | 0.041 | 873 |
| 12 | Mean Number of Births in Last 5 Years | 0.000 | 0.000 | 0 | 1.619 | 0.077 | 202 | 1.037 | 0.048 | 463 |
| 13 | Mean Length of First Birth Interval | 16.757 | 0.614 | 305 | 24.538 | 0.864 | 491 | 26.205 | 1.081 | 691 |
| 14 | Mean Length of Last Closed Interval | 24.500 | 0.864 | 120 | 26.751 | 0.586 | 397 | 27.576 | 0.443 | 628 |
| 15 | Mean Length of Open Interval | 18.415 | 1.556 | 248 | 28.749 | 1.413 | 410 | 59.391 | 2.521 | 516 |
| 16 | Number of Additional Children Wanted | 1.571 | 0.068 | 455 | 1.113 | 0.068 | 521 | 0.565 | 0.042 | 683 |
| 17 | Total Number of Children Wanted | 3.208 | 0.088 | 462 | 3.730 | 0.081 | 530 | 4.304 | 0.093 | 727 |
| 18 | Per Cent Knowing Pill | 96.942 | 0.805 | 556 | 97.101 | 0.796 | 621 | 95.512 | 0.752 | 869 |
| 19 | Per Cent Knowing IUD | 78.777 | 1.760 | 556 | 88.567 | 1.569 | 621 | 88.581 | 1.025 | 867 |
| 20 | Per Cent Knowing Condom | 95.855 | 0.804 | 555 | 92.431 | 1.153 | 621 | 89.977 | 1.002 | 868 |
| 21 | Per Cent Knowing Female Sterilization | 85.225 | 1.577 | 555 | 88.405 | 1.260 | 621 | 91.129 | 1.050 | 868 |
| 22 | Per Cent Knowing Efficient Method | 99.102 | 0.400 | 557 | 98.876 | 0.528 | 623 | 97.823 | 0.519 | 873 |
| 23 | Per Cent Ever Used Pill | 25.360 | 1.995 | 556 | 39.291 | 2.148 | 621 | 36.824 | 1.667 | 869 |
| 24 | Per Cent Ever Used IUD | 1.439 | 0.561 | 556 | 4.509 | 0.858 | 621 | 13.379 | 1.088 | 867 |
| 25 | Per Cent Ever Used Condom | 34.775 | 1.999 | 555 | 32.689 | 2.002 | 621 | 24.654 | 1.556 | 868 |
| 26 | Per Cent Sterilized | 0.180 | 0.180 | 557 | 2.087 | 0.583 | 623 | 11.455 | 1.011 | 873 |
| 27 | Per Cent Ever Used Any Method | 62.298 | 2.053 | 557 | 73.033 | 1.686 | 623 | 72.966 | 1.439 | 873 |
| 28 | Per Cent Ever Used Efficient Method | 51.167 | 2.220 | 557 | 65.188 | 1.827 | 623 | 63.803 | 1.515 | 873 |
| 29 | Per Cent Currently Using any Method | 41.299 | 2.250 | 385 | 47.234 | 2.422 | 470 | 53.639 | 1.797 | 632 |
| 30 | Per Cent Currently Using Efficient Method | 39.480 | 2.262 | 385 | 44.893 | 2.386 | 470 | 50.158 | 1.801 | 632 |

Table II. 3 - continued

| Variable Name |  | Years since First Union 20 or More Years |  |  | Age at First Union $<18$ Years |  |  | Age at First Union 18 or More Years |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $r$ | SE | $n$ | $r$ | SE | $n$ | $r$ | SE | $n$ |
| 1 | Per Cent Currently in a Union | 71.429 | 4.050 | 119 | 83.212 | 1.044 | 1,519 | 82.504 | 1.117 | 1,246 |
| 2 | Per Cent Currently Married | 46.219 | 4.781 | 119 | 23.173 | 1.081 | 1,519 | 42.696 | 1.490 | 1,246 |
| 3 | Per Cent Currently Common Law | 19.328 | 3.692 | 119 | 33.399 | 1.239 | 1,519 | 23.114 | 1.277 | 1,246 |
| 4 | Per Cent Currently Visiting | 5.882 | 2.022 | 119 | 26.399 | 1.091 | 1,519 | 16.693 | 1.080 | 1,246 |
| 5 | Mean Number of Relationships | 3.160 | 0.128 | 119 | 2.577 | 0.039 | 1,519 | 2.292 | 0.040 | 1,246 |
| 6 | Mean Number of Partners | 2.092 | 0.100 | 119 | 1.945 | 0.029 | 1,519 | 1.635 | 0.029 | 1,246 |
| 7 | Age at Initial Union | 15.849 | 0.178 | 119 | 15.438 | 0.050 | 853 | 20.167 | 0.066 | 880 |
| 8 | Per Cent Currently Pregnant | 1.176 | 1.171 | 85 | 10.918 | 0.839 | 1,264 | 5.253 | 0.737 | 1,028 |
| 9 | Mean Number of Children Ever Born | 6.546 | 0.380 | 119 | 3.536 | 0.074 | 1,519 | 3.600 | 0.095 | 1,246 |
| 10 | Mean Number of Living Children | 5.773 | 0.345 | 119 | 3.264 | 0.070 | 1,519 | 3.338 | 0.090 | 1,246 |
| 11 | Mean Number of Births in First 5 Years | 1.571 | 0.100 | 119 | 1.607 | 0.029 | 1,192 | 1.943 | 0.047 | 1,016 |
| 12 | Mean Number of Births in Last 5 Years | 0.186 | 0.055 | 70 | 1.052 | 0.046 | 563 | 0.744 | 0.038 | 544 |
| 13 | Mean Length of First Birth Interval | 35.103 | 4.669 | 107 | 26.483 | 0.797 | 1,243 | 25.390 | 0.907 | 828 |
| 14 | Mean Length of Last Closed Interval | 30.145 | 1.441 | 76 | 27.143 | 0.398 | 922 | 27.774 | 0.424 | 705 |
| 15 | Mean Length of Open Interval | 120.689 | 11.584 | 45 | 48.789 | 2.316 | 858 | 62.824 | 2.469 | 659 |
| 16 | Number of Additional Children Wanted | 0.172 | 0.069 | 58 | 0.944 | 0.043 | 1,202 | 0.742 | 0.041 | 922 |
| 17 | Total Number of Children Wanted | 5.588 | 0.383 | 85 | 4.213 | 0.067 | 1,261 | 4.098 | 0.090 | 1,026 |
| 18 | Per Cent Knowing Pill | 85.714 | 3.257 | 119 | 95.640 | 0.714 | 1,514 | 94.444 | 0.714 | 1,242 |
| 19 | Per Cent Knowing IUD | 73.109 | 4.314 | 119 | 84.513 | 1.029 | 1,511 | 85.080 | 1.087 | 1,240 |
| 20 | Per Cent Knowing Condom | 80.672 | 3.873 | 119 | 91.005 | 0.863 | 1,512 | 88.790 | 1.106 | 1,240 |
| 21 | Per Cent Knowing Female Sterilization | 86.555 | 3.291 | 119 | 87.434 | 0.990 | 1,512 | 89.337 | 0.973 | 1,238 |
| 22 | Per Cent Knowing Efficient Method | 95.798 | 1.826 | 119 | 98.486 | 0.439 | 1,519 | 97.271 | 0.419 | 1,246 |
| 23 | Per Cent Ever Used Pill | 5.042 | 1.974 | 119 | 29.128 | 1.181 | 1,514 | 30.596 | 1.498 | 1,242 |
| 24 | Per Cent Ever Used IUD | 3.361 | 1.654 | 119 | 7.545 | 0.679 | 1,511 | 8.148 | 0.783 | 1,240 |
| 25 | Per Cent Ever Used Condom | 6.723 | 2.322 | 119 | 25.661 | 1.251 | 1,512 | 24.193 | 1.383 | 1,240 |
| 26 | Per Cent Sterilized | 10.924 | 3.007 | 119 | 7.242 | 0.677 | 1,519 | 8.908 | 0.864 | 1,246 |
| 27 | Per Cent Ever Used Any Method | 38.655 | 4.676 | 119 | 66.293 | 1.274 | 1,519 | 65.329 | 1.568 | 1,246 |
| 28 | Per Cent Ever Used Efficient Method | 26.050 | 4.190 | 119 | 56.484 | 1.378 | 1,519 | 55.778 | 1.554 | 1,246 |
| 29 | Per Cent Currently Using any Method | 26.316 | 6.014 | 57 | 44.423 | 1.541 | 1,067 | 46.674 | 1.778 | 872 |
| 30 | Per Cent Currently Using Efficient Method | 26.316 | 6.014 | 57 | 42.455 | 1.461 | 1,067 | 43.348 | 1.769 | 872 |

## II. 3 SOME TECHNICAL CONSIDERATIONS

## 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,
$y_{h i j}=$ value of variable $y$ for the individual $j$, in PSU $i$ and stratum $h$,
$w_{h i j}=$ sample weight for the individual
$y_{h i}=\sum_{j} w_{h l j} \cdot y_{h l j}$, the weighted sum of $y$ 's for all individuals in PSU,
$y_{h}=\sum_{i} y_{h i}$, the sum of $y_{h i}$ 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 $\mathrm{SE}^{2}$ ( $=$ square if the standard error) of the ratio estimate $r=y / x$ is estimated as

$$
\begin{equation*}
\mathrm{SE}^{2}=\operatorname{var}(r)=\frac{1-f}{x^{2}} \sum_{h=1}^{H} \frac{m_{h}}{m_{h}-1} \sum_{i=1}^{m_{h}} z_{h i}^{2}-\frac{z_{h}^{2}}{m_{n}} \tag{2}
\end{equation*}
$$

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 $x$,
$z_{h i}=y_{h i}-r \cdot x_{h i}$, and
$z_{h}=\sum z_{h i}=y_{h}-r \cdot x_{h}$.

In the present sample, the PSUs were sampled systematically within each stratum, i.e. by applying a predetermined sampling interval to two random starts to an ordered list of PSUs. This produce of selection is equivalent to further implicit stratification within each main stratum. For sampling error computations, adjacent sample PSUs can generally be paired to form strata. (The computation formula requires at least two PSUs for stratum, i.e. $m_{h} \geqslant 2$.)

Equation (2) 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 $\mathrm{DEFT}=\mathrm{SE} / \mathrm{SR}$, and is given by

$$
\begin{equation*}
\mathrm{SR}^{2}=\frac{1-f}{n-1} \sum w_{h l j} \sum w_{h i j} \tag{3}
\end{equation*}
$$

where $z_{h i j}=\left(y_{h i j}-r x_{h j}\right)$, and $r$ is the ratio estimate, $r=y / x=\sum w_{h i j} y_{h i j} / \sum w_{h i j} x_{h i j}$.
$n$ 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 (').

$$
\begin{equation*}
\mathrm{SE}_{r-r^{\prime}}^{2}=\operatorname{var}\left(r-r^{\prime}\right)=\operatorname{var}(r)+\operatorname{var}\left(r^{\prime}\right)-2 \operatorname{cov}\left(r, r^{\prime}\right) \tag{4}
\end{equation*}
$$

where $\operatorname{var}(r)$ and $\operatorname{var}\left(r^{\prime}\right)$ are given by equation (2) and the covariance is given by

$$
\operatorname{cov}\left(r, r^{\prime}\right)=\frac{1-f}{x \cdot x^{\prime}} \sum_{h=1}\left(\frac{m_{h}}{m_{h}-1} \sum_{i=1}^{m_{h}} z_{h l} z_{h l}^{\prime}-\frac{z_{h} z_{h}^{\prime}}{m_{h}}\right)
$$

Usually cov $\left(r, r^{\prime}\right)$ is positive due to positive correlation betwen individuals in the two subclasses who belong to the same clusters in the sample.

APPENDIX III

## GLOSSARY IN ENGLISH, FRENCH AND SPANISH

Background Variables
Level of education
Primary - less than 4 years
Primary - 4 or more years
Secondary or Higher
Pattern of work history
Currently working and worked before birth of first child
Currently working but did not work before birth of first child
Currently working, no live births
Not currently working, worked before and after first birth

Not currently working, worked before, but not after first birth

Not currently working, worked after but not before first birth

Never worked
Place of residence
Urban
Rural
Religion
Anglican
Baptist
Protestant/Non-Conformist
Roman Catholic
Church of God
Others
None
Occupation (last or present partner; woman)
Professional, Technical and Related
Administrative, Executive and Managerial
Clerical and Sales
Self-employed Independent
Service, Sport and Recreation
Craftsmen, Production Process and Operating
Fitting, Assembling and Repairing of electrical and Electronic equipment
Unskilled Manual and General
Never worked

## Age, Nuptiality and exposure to child bearing

Age at entry into initial union
Age cohort
Calendar year of birth
Continuously in a union for the past five years

## Current age

Current union status
married
common law
visiting
single
Currently in union
and fecund
fecund and wants no more
and non-pregnant
with at least one live birth or current pregnancy
Ever in union
with at least two live-births (including current pregnancy)
at least 5 years
Exposure status
pregnant
not in union
woman/partner sterilized
fecund

Variables socio-économiques
Niveau d'instruction
Primaire - moins de 4 ans
Primaire - 4 ans ou plus
Secondaire et plus
Période d'occupation
Travaille actuellement et a travaillé avant la naissance du premier enfant
Travaille actuellement mais n'a pas travaillé avant la naissance du premier enfant
Travaille actuellement pas de naissances vivantes
Ne travaille pas actuellement; a travaillé après et avant la naissance du premier enfant
Ne travaille pas actuellement; a travaillé avant mais pas aprés la naissance du premier enfant
Ne travaille pas actuellement; a travaillé après mais pas avant la naissance du premier enfant
N'a jamais travaillé
Lieu de résidence
Urbain
Rural
Religion
Anglican
Baptiste
Protestant
Catholique
'Church of God'
Autres religions
Sans religion
Occupation (dernier conjoint ou conjoint actuel de la femme)
Professions liberales et Cadres superieurs
Cadres moyens et techniciens
Employés de bureau et de commerce
Commerçant travaillant à son compte
Employés dans le secteur tertiaire
Artisans, ouvriers qualifiés, ouvriers travaillant à la chaîne.
Personnel employé dans le secteur électrique et électronique
Manoeuvres et ouvriers non-qualifiés
N'a jamais travaillé
Age, nuptialité et exposition au risque de grossesse
Age à la première union
Cohorte d'âge
Millésime de naissance
Toujours en union durant les cinq dernières années
Age actuel
Statut actuel d'union
mariée
unie selon les lois de coutume
'visiteur'
célibataire
Actuellement en union
et 'fertile'
fertile et ne veut plus d'enfants
et non-enceiente
avec au moins une naissance vivante ou actuellement enceinte
A déjà été ou est actuellement en union avec au moins deux naissances vivantes (y compris la grossesse actuelle) pour au moins 5 ans
Statut d'exposition au risque de grossesse enceinte
pas en union
femme/partenaire stérilisé
fertile

Características socio-económicas
Nivel de educación
Primaria - menos de 4 años
Primaria - 4 años o más
Secundaria o superior
Historia laboral
Trabaja actualmente y trabajó antes de tener su primer hijo
Trabaja actualmente pero no trabajó antes de tener su primer hijo
Trabaja actualmente y no tiene nacidos vivos
No trabaja actualmente; trabajó antes y después de tener su primer hijo

No trabaja actualmente; trabajó antes pero no después de tener su primer hijo

No trabaja actualmente; trabajó después pero no antes de tener su primer hijo

No ha trabajado nunca
Lugar de residencia
Urbano
Rural
Religión
Anglicana
Bautista
Protestante/No Conformista
Católica romana
'Church of God'
Otras
Ninguna
Ocupación del ultimo (o actual) Eposo (a)
Profesionales, técnicos.
Administración, Ejecutivos y Directores.
Oficinistas, vendedores
Trabajadores por cuenta propia
Servicios, Deportes y Recreación
Artesanos, Produción et Operadores
Instalación, Armaduria, Manutención y Reparación de equipos electrónicos.
Obreros no especializados
Nunca ha trabajado

## Edad, nupcialidad y exposición al riesgo de embarazo

Edad al comienzo de su primera unión
Cohorte de edad
Año calendario de nacimiento
Ha estado continuamente unida durante los
últimos cinco años
Edad actual
Estado civil actual
casada
conviviente
'visitada'
soltera
Actualmente unida
y 'fertil'
fertil y no desea más hijos
y 'no-embarazada'
tiene por lo menos un nacido vivo o está actualmente embarazada
Ha estado unida alguna vez
tiene por lo menos dos nacidos vivos (incluyendo embarazo actual)
por lo menos cinco años
Exposición al riesgo de ambarazo
embarazada
no está actualmente unida
esterilizada (ella o su compañero)
fertil
'Exposed' women currently using an efficient contraceptive (including sterilization) and want no more children)

First entered a union at least five years ago
First in union before age 25
Interval between initial union and first birth
Lived continuously with the same partner for the past five years
Number of partners
Number of unions
Pattern of union history:
Initial union/current union visiting/married common law/married
married/married visiting/common law common law or married/common law visiting, common law, married/visiting visiting, common law, married/single
Per cent of time since entry into initial union spent in unions

Per cent of time since age 15 spent in unions

Type of initial union
Years since initial union
Knowledge and Use of Contraception
Contraceptive use in the open interval, by length of the interval
Contraceptive use in the last closed interval, by length of the interval

Current use of specified contraceptive methods
Currently using contraception (any method)
Currently using an efficient contraceptive method
Ever-used any contraceptive method
Ever-used specified contraceptive methods
Heard of any contraceptive method
Heard of specified contraceptive methods
Pattern of contraceptive use never used: intends future use - yes/no
past user:
in the open interval
in the last closed interval
in an earlier closed interval
current user:
sterilized
other methods
Specified contraceptive methods
none
efficient
inefficient
pill
IUD
other female scientific methods
douche
condom
rhythm
withdrawal

Femmes 'exposées' utilisant actuellement une méthode contraceptive efficace (y compris la stérilisation) et ne voulant plus avoir d'enfant
En union pour la première fois il y a au moins 5 ans
En union pour la première fois avant d'atteindre 25 ans
Intervalle entre la première union et la premiere naissance
A vécu continuellement avec le même partenaire durant les cinq dernières années
Nombre de partenaires
Nombre de relations
Types d'unions:
Union Initiale/union actuelle visiteur/mariée
lois de coutume/mariée
mariée/mariée
visiteur/lois de coutume
lois de coutume ou mariée/lois de coutume visiteur, lois de coutume, mariée/visiteur visiteur, lois de coutume, mariée/célibataire
Pourcentage du temps passé en état d'union effective par rapport à la période totale écoulée depuis l'entrée en union pour la lère fois
Pourcentage du temps passé en état d'union effective par rapport à la période totale écoulée depuis l'âge de 15 ans
Type de la premiềe union contráctée
Nombre d'années écoulées depuis la première
Connaissance et pratique de la contraception
Contraception utilisée dans l'intervalle ouvert, par la longueur de l'intervalle
Contraception utilisée dans le dernier intervalle fermé, par la longueur de l'intervalle
Utilisation actuelle de méthodes
contraceptives spécifiques
Utilise actuellement une méthode (quelle qu'elle soit)
Utilise actuellement une méthode contraceptive efficace
A déjà utilisé une quelconque méthode contraceptive
A déjà utilisé une méthode contraceptive spécifique
A entendu parler de n'importe quelles méthodes contraceptives
A entendu parler de méthodes contraceptives spécifiques
Types de pratique contraceptive
n'a jamais pratiqué la contraception: compte pratiquer dans le future oui/non
a utilisé dans le passé:
dans l'intervalle ouvert
dans le dernier intervalle fermé
dans un quelconque intervalle fermé précédant le dernier
pratique actuellement:
sterilisée
autres méthodes
Méthodes contraceptives spécifiques
aucune
efficace
inefficace
pilule
DIU ou stérilet
autres méthodes scientifiques pour la femme
douche
préservatif
continence périodique
retrait

Mujeres 'expuestas' que usan actualmente un anticonceptivo eficaz (incluyendo esterilizacion) y no desean mas hijos

Unida por primera vez hace por lo menos 5 años
Unida por primera vez antes de los 25 años
Intervalo entre la primera union y el primer nacimiento
Ha vivido continuamente con el mismo compañero durante los últimos cinco años
Número total de compañeros que ha tenido
Número total de uniones
Historia de uniones:
primera/actual unión
visitada/casada
conviviente/casada
casada/casada
visitada/conviviente
conviviente o casada/conviviente
visitada, conviviente, casada/visitada
visitada, conviviente, casada/soltera
Porcentaje del tiempo pasado en una unión, desde la primera unión

Porcentaje del tiempo pasado en uniones, desde los 15 años de edad

Típo de ia primera unión
Años transcurridos desde la primera unión
Conocimiento y uso de anticoncepción
Uso de ancticoncepión en el intervalo abierto, por duración del intervalo
Uso de anticoncepción en el último intervalo cerrado, por duración del intervalo

Uso actual de métodos anticonceptivos especificos
Usa anticoncepción actualmente (cualquier método)
Usa actualmente un método anticonceptivo eficaz
Ha usado algún método anticonceptivo alguna vez
Ha usado alguna vez métodos anticonceptivos específicos
Ha oido hablar de algún método anticonceptivo
Ha oido hablar de métodos anticonceptivos espeḉficos
Patrón de uso de métodos anticonceptivos
no ha usado nunca: piensa usar en el futuro - si/no
ha usado en el pasado:
en el intervalo abierto
en el último intervalo cerrado en un intervalo cerrado anterior
usa actualmente: esterilizada otros métodos
Métodos anticonceptivos especificos ninguno
eficaz
ineficaz
pildora
DIU (dispositivo intra-uterino)
otros métodos científicos femeninos
ducha
condón
ritmo
retiro
abstention
female sterilization
male sterilization
injection
autre
Level of contraceptive knowledge
knows no method at all
inefficient only
at least 1 efficient method

Fertility and child Mortality
Birth order of child
Birth intervals
length of the open interval
length of the last closed interval
Children ever born
number of children ever born
mean number of children ever born
mean number of children born in the past five years
mean number of children ever born, still alive, deceased
mean number of children born before or within the first five years of entry into initial union

## Current pregnancy

Breast-feeding
breast-feeding in the last closed interval length of breast-feeding in the closed interval, confined to women ever in a union with at least 2 live births (including current pregnancy) whose last closed interval exceeded 32 months and whose child survived at least 24 months

## Calendar year of child birth

Initial Fertility
Interval between initial union and first birth
Live-births in the past seven years classified according to year of birth, survivorship status and age at death
Number of living children (including current pregnancy)
Number of living children at the beginning of the last closed interval

Preferences for number of children
Additional children wanted (number of, mean)
Did not want last (or current pregnancy)
Desire for more children
wants future birth
wants no more
undecided
Total number of children desired (mean)
Whether wanted last (or current) pregnancy
Wants no more children
Whether total number of children desired exceeds number of living children

Desired greater than living
Desired equal to living
Desired less than living
abstention
ligature des trompes
vasectomie
injection
autre
Niveau de la connaissance contraceptive
ne connait aucune méthode
méthodes efficaces seulement
au moins une méthode efficace

## Fécondité et mortalité infantile

Rangs de naissance
Intervalles entre naissances:
longueur de l'intervalle ouvert
longueur du dernier intervalle fermé
Enfants nés-vivants
nombre d'enfants nés-vivants (descendance actuelle)
nombre moyen d'enfants nés-vivants
nombre moyen d'enfants nés-vivants dans les 5 dernières années
nombre moyen d'enfants nés-vivants, encore en vie, décédés
nombre moyen d'enfants nés-vivants avant ou durant les 5 premieres annees qui ont suivi l'entrée en union pour la première fois
Grossesse actuelle
Allaitement
allaitement dans îe dernier intervaile fermé
durée de l'allaitement das le dernier intervalle fermé limitée aux femmes ayant déjà été (ou sont) en union avec au moins 2 naissances vivantes (y compris la grossesse actuelle), dont le dernier intervalle fermé dépasse 32 mois et dont l'enfant a survécu au moins 24 mois
Millésime de naissance de l'enfant
Fécondité initiale de l'union
Intervalle entre l'union initiale et la première naissance
Naissances vivantes durant les sept dernières années classées selon l'année de naissance, la survie et l'âge au décès
Nombre d'enfants vivants (y compris la grossesse actuelle)
Nombre d'enfants vivants au début du dernier intervalle fermé

Préférences pour le nombre d'enfants
Enfants supplémentaires désirés (nombre, moyenne)
Dernière (ou actuelle) grossesse non désirée
Désir pour plus d'enfants
désire une future naissance
désire ne plus avoir d'enfant indécise
Nombre total d'enfants désirés (moyenne)
A-t-elle désiré oui ou non sa dernière (ou actuelle) grossesse
Ne désire plus avoir d'enfants
Le nombre total d'enfants désirés excède-t-il oui ou non le nombre de ses enfants actuellement vivants
Désire avoir plus d'enfants que le nombre de ses enfants actuellement vivants
Désire un nombre d'enfants égal à celui de ses enfants actuellement vivants
Aurait désiré avoir moins d'enfants que le nombre de ses enfants actuellement en vie
abstención
esterilización feminina
esterilización masculina
inyección
otro
Nivel de conocimiento de métodos anticonceptivos
no conoce ningún método
conoce solamente métodos ineficaces
conoce por lo menos un método eficaz

## Fecundidad y Mortolidad Infantil

Rango de nacimiento
Intervalos genésicos
duración del intervalo abierto
duracion del último intervalo cerrado
Hijos tenidos
número de hijos tenidos
promedio de hijos tenidos
promedio de hijos nacidos en los últimos cinco años
promedio de hijos tenidos actualmente vivos, fallecidos
promedio de hijos tenidos antes o durante los primeros cinco años de la primera unión

## Embarazo actual

## Lactancia

lactancia en el tutimo intervalo cerrado
duración de la lactancia en el último
intervalo cerrado, para mujeres qu han estado unidas alguna vez, qu tienen por lo menos dos nacidos vivos (incluyendo embarazo actual), cuyo último intervalo cerrado duró más de 32 meses y cuyo
hijo sobrevivió por lo menos 24 meses
Año calendario de nacimiento del hijo
Fecundidad inicial
Intervalo entre la primera unión y el primer nacimiento
Nacidos vivos en los últimos siete años, clasificados de acuerdo al año de naimiento, supervivencia y edad al fallacer
Número de hijos actualmente vivos
(incluyendo embarazo actual)
Número de hijos vivos al comienzo del
último intervalo cerrado
Preferencia por un cierto número de hijos
Deseo de tener más hijos (cantidad, promedio)
No deseaba el último (o actual) embarazo
Déseo de más hijos
desea tener más hijos
no desea tener más hijos
indecisa
Número total de hijos deseados (promedio)
Si deseaba o no el último (o actual) embarazo
No desea tener más hijos
Si el número total de hijos deseados supera el número de hijos actualmente vivos

Número de hijos deseados es mayor que el número de hijos actualmente vivos
Número de hijos deseados es igual al número de hijos actualmente vivos
Número de hijos deseados es menor que el número de hijos actualmente vivos

## APPENDIX IV <br> CONTROL FORMS USED IN THE JFS

1. INTERVIEWER'S NAME :
2. NAME OF SURVEY $\qquad$
3. INTERVIEWER'S NO $\qquad$
ASSIGNMENT AND CONTROL FORM
(PREFARED IN DUPLICATE)

出


1. parss ...Hanover
2. Consritrancer ....Wes?

3. FNUMERATION DISTRICT NO....O.
4. PANEL NO. ....0.0.0.0.0.0.0
5. STRATUM NO.
6. AREA NO 000000002000 ONE NO

LIST OF HOUSEHOLDS TO BE ENUMERATED

| CSDS | Serial \& Block No. CSDS 15 | Name of Household Head and Address of Dwelling | Population |  | Written Description of Dwelling | Pictorial Description of Dwelling | occupancy Characteristics |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NO. |  |  | Total | $14+$ |  |  |  |
| $16$ | $12$ | Name: Vincert $\qquad$ WH1TE | 7 | 4 |  KTTCHEM. Kivriv Roms SECTION.ONR1GATAK BSAGCINAY OCCUOLLO LEFI OF DRSSEGE WHYY VACANT: |  | $\begin{aligned} & 2 \\ & \text { Astos } \\ & \text { / oecip } \\ & 1 \text { VACAN } \end{aligned}$ |
|  |  | Address: |  |  |  |  |  |
|  |  | KrNGSVACG PA. |  |  |  |  |  |
| 17 | $22$ | Name: Horace Bropoles- | 2 | $2$ | Tow . TOON . boxed Lokce."Font room - S.an. offce (Tras Pubut <br>  ROOM. O\&世世. PIN |  | $\begin{aligned} & 2 \\ & \text { EftoB. } \\ & \text { occup. } \end{aligned}$ |
|  |  | Address: MARY HICL $K I{ }^{\prime} G S \cup A C E P A$. |  |  |  |  |  |
| $\%$ | $32$ | Name: Ma SomxT Hurter | 1 | 1 | Ont Rogm EC: ROLEG: S!TUATED PT. THE.FR?. PF. THENBRIDLE KROCAE OR OOD of TAS fice. |  | \% |
|  |  | Address: HeL ToD |  |  |  |  | ocecer |
|  |  |  |  |  |  |  |  |

1. Area No.
2. Interviewer
3. Zone No.
4. Interviewer's No.
5. 1.0. No.
6. Date
7. Name of Survey

RECORD OF COMPLETED WORK ASSIGNMENT

| Household Listing No. | POPULATION |  |  |  |  | Women 15-49 yrs. |  | Questionnaires Completed | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Given |  | Found |  |  | Total in Household | Eligible for Survey |  |  |
|  | Total | $14+$ | Total | $14+$ | No. of Visitors |  |  |  |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|  |  |  |  |  |  |  |  |  |  |
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[^28]Signature of Senior Supervisor
Date

DEPARTMENT OF STATISTICS - JAMAICA CONTINUOUS SOCIAL AND DEMOGRAPHIC SURVEY

ENUMERATOR'S DAILY PROGRESS REPORT


# DEPARTMENT OF STATISTICS - JAMAICA CONTINUOUS SOCIAL AND DEMOGRAPHIC SURVEY ITIAERARY SHEET 

Complete, in triplicate, retaining one copy after it has been approved

1. Name
2. Zone No.
3. No.
4. Area
5. Period
6. Name of Survey

| Day | Date | E.D. No. <br> (give complete <br> Ident No.) | Area | Purpose <br> of <br> visit | Trans <br> portation <br> io be used | Remarks |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
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```
JARAICA FERTILITY SURVEY (JFS/WFS)
    HOUSEHOLD SCHEDULE
```

Section 1.

1. Household Identification

| Parish | Const. | E.D. No. |  |  | Household No. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |

2. Resulto of Visits

3. Interviewer Number
4. Checked by $\qquad$ Date $\qquad$

Section 2
Now we would like some information about the people who are now living or staying here.

|  | NAME OF INDIVIDUAL | Relation ship 10 head of Household | Usual Resident or Visitor | Sex | Age | School Attendance (for Females aged 15-19 years) | Respondent |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Please give me the names of persons who usually live here? Please give me also the name of anyone staying temporarily. | What is the relationship of this person to the head of the household? (2) | Does this person usually live here? (If "Yes" enter $Y$ if "No" enter $N$ ) <br> (3) | Is this person male or female? (F/M) <br> (4) | How old was he/she on his/her last birthday? <br> (5) | Is she a fulltime student at a primary, secondary or high school? (Y/N) (6) | Line number of person giving data about the individual <br> (7) |
| 01 |  |  |  |  |  |  |  |
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| 03 |  |  |  |  |  |  |  |
| 04 |  |  |  |  |  |  |  |
| 55 |  |  |  |  |  |  |  |
| 66 |  |  |  |  |  |  |  |
| 07 |  |  |  |  |  |  |  |
| 88 |  |  |  |  |  |  |  |
| ) |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |



Section 3

INTERVIEWER: FILL IN THE FOLLOWING INFORMATION ON ELECTRICITY AND MAIN WATER SUPPLY FROM OBSERVATION IF POSSIBLE; IF YOU CANNOT, ASK:

1. Does the house have electricity
 Yes
2. How do you get your main supply of water for drinking and cooking? INTERVIEWER: TICK ONE BOX ONLY.
Running water piped into the dwelling unit
Water available in the yard and used only by this household
Water available in the yard used by other households
Standpipe, Public Tank. Well or other public water supply
accessible to anyone
River or Stream
Other (Specity)

INTERVIEWER: DID YOU HAVE ANY DIFFICULTIES IN COMPLETING THE HOUSEHOLD SCHEDULE?

YES


NO


IF YES SPECIFY:
COLUMNNO. COMMENTS (DIFFICULTIES, SOLUTIONS, ETC.)
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$


[^0]:    4242

[^1]:    40

[^2]:    ${ }^{1}$ See for example, G. W. Roberts, Population of Jamaica; Cambridge, 1957.

[^3]:    Source: 1960 and 1970 Population Census Reports.

[^4]:    ${ }^{1}$ Harewood, R. J. 'West Indian Peoples', Caribbean Economy ed., George Beckford; ISER, 1975.

[^5]:    ${ }^{1}$ See Leslie Kish, Survey Sampling, New York and London, John Wiley and Sons, 1965, pp. 191-195.

[^6]:    ${ }^{1}$ The Trinidad and Tobago questionnaire incorporating adaptations of the Abortion Module in Section 4 represents an extension of the WFS Caribbean CORE Questionnaire.

[^7]:    $\dagger$ Visiting included (wholly 1960, mainly 1970) in Never Had a Partner.
    $\ddagger$ Includes some element of Visiting (1960), but excludes No Longer with Visiting Partner.

[^8]:    $\dagger$ No work done in two EDs involving 38 households; the workload was therefore of the order of 361 dwellings.
    $\ddagger$ This includes 163 households not done after repeated visits and 11 not done because of civil disturbances.
    § This total is greater than the final total used in the report because 6 cases were found to be incomplete during data processing.

[^9]:    $\dagger$ See Machine Edit Flow Chart, pp. 27-28.

[^10]:    Source: Derived from Appendix Table 1.5.1A.

[^11]:    $\dagger$ Methodist, Moravian, Presbyterian, and Congregational. Source: Derived from Appendix Table 1.5.1C.

[^12]:    ${ }^{1}$ All mean ages in the text and tables have been calculated on the basis of completed years. The correct means, therefore, are in all cases 0.5 years greater than those shown in the text and tables in this Report.

[^13]:    ${ }^{1}$ See G. W. Roberts and Lloyd Braithwaite: 'Fertility Differentials by Family Type in Trinidad'. Annals of the New York Academy of Sciences, Vol. 84, Article 17, December 1960, and G. W. Roberts: Fertility and Mating in Four West Indian Populations. I.S.E.R., University of the West Indies, Jamaica. 1975.
    ${ }^{2}$ See G. E. Ebanks, P. M. George and C. E. Nobbe: 'Fertility and Number of Partnerships in Barbados'. Population Studies. Volume 28, Number 3, 1974.

[^14]:    ${ }^{1}$ 'Duration' is used in this report to mean years since entry into initial union.

[^15]:    Note: Pattern of Union history: First Union/Current Union.
    Note: An asterisk (*) indicates percentage was not calculated because base was less than 20; brackets [] indicate percentage was calculated on a base of at least 20 but less than 50 .

    Source: Appendix Table 1.4.2(1)D.

[^16]:    Note: An asterisk $\left(^{*}\right.$ ) indicates the mean was not calculated because base was less than 20; brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .

    Source: Appendix Table 2.1.1.

[^17]:    Source: Appendix Table 2.1.2D.

[^18]:    Note: An asterisk (*) indicates mean was not calculated because base was less than 20 ; brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .

    Source: Appendix Tables 2.2.6E, 2.2.1 and 2.2.3.

[^19]:    Note: An asterisk ( ${ }^{*}$ ) indicates mean was not calculated because base was less than 20; brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .

    Source: Appendix Table 2.2.5E.

[^20]:    Note: An asterisk ( ${ }^{(4)}$ indicates the mean was not calculated because the base was less than 20 ; brackets I I indicate the mean was calculated on a base of at least 20 but less than 50 . Source: Appendix Table 2.4.1.

[^21]:    Note: An asterisk $\left(^{*}\right)$ indicates that the mean was not calculated because the base was less than 20 ; brackets [ ] indicate that the mean was calculated on a base of at least 20 but less than 50 .

    Source: Appendix Table 3.1.2.

[^22]:    Note: Brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .

    Source: Appendix Table 3.2.3C.

[^23]:    $\dagger$ Excluding not stated.
    Source: Appendix Tables 4.1.3 and 4.1.4.

[^24]:    Note: An asterisk $\left(^{*}\right.$ ) indicates mean was not calculated because base was less than 20 ; brackets [ ] indicate mean was calculated on a base of at least 20 but less than 50 .
    Source: Appendix Table 4.1.6.

[^25]:    Source: Appendix Tables 4.3.2A, 4.3.2B and 4.3.2D.

[^26]:    $\dagger$ Note: The Balancing Column Not in a Union or Not Fecund has been excluded from the group Never Used and the columns Used in an Earlier Interval and Fecundity Impairment have been excluded from the group Past User.
    $\ddagger$ Reported fecund, that is, 'exposed' in WFS terminology.
    Source: Appendix Tables 4.5.1, 4.5.3, and 4.5.4.

[^27]:    ${ }^{1}$ The implication of these generally low values of CV is that cluster sizes are fairly uniform within strata, and that the 'ratio estimates' derived from the sample are effectively unbiased estimates of the true population values - apart from non-sampling errors, of course.

[^28]:    Signature of Supervisor
    Date

