

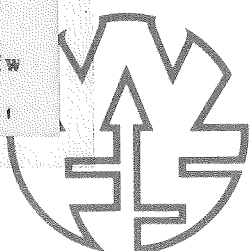
National Population Bureau  
Lagos

# THE NIGERIA FERTILITY SURVEY 1981/82

Principal Report

Volume I Methodology and Findings

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1984  
V.I. C.I



World Fertility Survey  
International Statistical Institute

National Population Bureau  
Lagos

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# PREFACE

In September 1979, the late Sir Maurice Kendall, then Project Director of the World Fertility Survey (WFS) London, invited me to attend a regional meeting in Nairobi, Kenya. It was organized to review the results of the Kenya Fertility Survey (KFS). I was so highly impressed by the results of the KFS that I told myself, 'Nigeria should join the WFS family'.

The Nigeria Fertility Survey (NFS) has opened a new chapter in the checkered history of demographic data collection in Nigeria. It is the first time that we have obtained very impressive data, on a nationwide basis, on: (a) fertility processes, (b) family planning activities and (c) household/environmental indicators. This, I must say, is a new dawn which has put to an end the paucity of demographic information in the country. Certainly, the multiplying effect that Nigeria will gain from the knowledge it has acquired from this project will open a new horizon in the field of fertility research in particular, and demographic data collection in general.

Until now, socio-economic planning in Nigeria was based on learned guesses. The scientific information now at our disposal will enhance the work of planners, particularly in the field of health and population. NFS has enabled us to gain some insight into the dynamics of our population. With available information demographers and planners are now in a better position to advise Government on its population policy. This study has revealed that in Nigeria, as in many developing countries, fertility is very high and contraceptive knowledge is at an embryonic stage. From other sources, we already know that our mortality is dropping precipitously.

The sum total of these phenomena is very high population growth rate. One can conjecture that with this situation Nigeria will be grappling with about twice its present population by the turn of the century. That is, Nigeria's population in the year 2000 might be close to 150-180 million. This is a proposition that must be firmly tackled now. In other words, Nigeria needs a well-articulated population policy.

There are two volumes to this First Country Report. Volume one gives a broad analysis of the results of the survey and Volume two contains the detailed statistical tables. An in-depth sectoral analysis will be embarked upon by the Research Division of the National Population Bureau\* in due course.

Finally, I acknowledge the immeasurable contributions of the United Nations Fund for Population Activities (UNFPA) and WFS for the funding by the former and the technical assistance in execution by the latter of this project. Nigeria is greatly indebted to these two agencies.

Chief F. J. Falodun  
Director,  
National Population Bureau  
June 1984

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\* The National Population Commission reverted to its former name, the National Population Bureau at the beginning of the present Federal Military Government.



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# ACKNOWLEDGEMENTS

To conduct a nationwide statistical survey in a country as large, as populous and as geographically and socio-culturally heterogeneous as Nigeria is certainly an onerous task. For such a survey to be conducted by a relatively young statistical organization with not much past track record in such exercises, on a nationally accepted sensitive and volatile issue and within the high standards set by the World Fertility Survey programme makes the uneasy task appear almost formidable. That this apparently formidable task was accomplished is due to the dedication, commitment, co-operation and contribution of several individuals and organizations all of whom cannot be listed here but whose involvement is hereby acknowledged. At the National Population Bureau, the singular contribution of the Director, Chief F.J. Falodun, is most gratefully acknowledged. As the head of the executing agency and as the National Project Director of the survey, his interest, insight, encouragement and participation not only saw the project through to completion, but prevented it from being aborted at some stages. The contributions of almost all the senior professional, administrative and accounting staff of the Bureau were also immense and are hereby acknowledged. Particular mention must be made here of the core project staff at the Bureau, namely Messers S.A. Ogunlade, C.C. Uchendu, J.E. Edochie and S.D. Olabiyi who, with the survey director, were involved in all stages of the planning and execution of the survey. The contributions of the project accountant, Mrs Oshigbohun, and her assistants, of the junior staff attached to the Research Division of the Bureau, of the drivers, secretaries (especially Miss Elizabeth Lambert) and keypunch staff of the Computer Division are gratefully acknowledged. So also are the contributions of the state officers of the Bureau, the numerous fieldstaff and of course, of the 9,000

households and 10,000 women who kindly responded to the questionnaires.

The very invaluable technical and other assistance of WFS central staff in London is also gratefully acknowledged. Many of them played significant roles at various stages of the project, right from the proposal to the report writing stage. We mention in particular the contributions of John Cleland, the country co-ordinator for Nigeria at the initial and most difficult stages of survey preparation and data collection; of Enrique Carrasco who took over as country co-ordinator at the data processing and report preparation stages; of Nuri Ozsever and his staff for all the computer processing of the data; of Alan Sunter on designing the sample; of the secretarial staff for the production of both the preliminary and first country reports, in addition to several other survey documents, and to Dr Chris Scott, Dr Trudy Harpham, Martin Vaessen, Jim Otto and several others for their various contributions, especially at the report writing stage.

The United Nations Fund for Population Activities (UNFPA) provided substantial financial support for the project. That support is gratefully acknowledged. So also are the interest, encouragement and assistance of its staff in Nigeria, especially John McWilliams, Dr Sagoe and John Kuriah.

Finally, the contributions of the many demographers and planners who participated in a workshop to review the survey documents and logistics, and of guest lecturers at the training sessions for the fieldstaff (especially Dr A.A. Okore, Dr. O.O. Arowolo and Mrs Grace Delano) are gratefully acknowledged.

Benson C. Morah, Ph.D  
Survey Director  
June 1984

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# CONTENTS

## PART I - BACKGROUND AND METHODOLOGY 1

### CHAPTER 1 - THE NIGERIAN SETTING 3

- 1.1 Geography 3
- 1.2 History of Political Development 3
- 1.3 Major Sources of Demographic Data 4
- 1.4 Population Size, Density, Distribution and Composition 5
  - 1.4.1 Size and rate of growth 5
  - 1.4.2 Density 5
  - 1.4.3 Distribution 5
  - 1.4.4 Age/sex composition 6
- 1.5 Ethnicity, Languages and Religion 6
  - 1.5.1 Ethnicity 6
  - 1.5.2 Language 7
  - 1.5.3 Religion 7
- 1.6 Family and Marriage Systems 8
- 1.7 Fertility and Mortality 8
  - 1.7.1 Fertility 8
  - 1.7.2 Mortality 9
- 1.8 Education and Literacy 9
- 1.9 Economy and Labour Force 9
  - 1.9.1 Economy 9
  - 1.9.2 Labour force 11

### CHAPTER 2 - METHODOLOGY OF THE SURVEY 15

- 2.1 Introduction 15
- 2.2 Organization of the Survey 15
  - 2.2.1 The role of the National Population Commission (NPC) 15
  - 2.2.2 International assistance and collaboration 15
  - 2.2.3 The language problem 16
- 2.3 Objectives of the Survey 16
  - 2.3.1 National objectives 16
  - 2.3.2 International comparability 16
- 2.4 Sample Design 16
  - 2.4.1 Sample size 16
  - 2.4.2 Sample frame and selection of PSUs 16
  - 2.4.3 Mapping and segmentation of primary sampling units (PSUs) 17
  - 2.4.4 Final selection of sampling units 17
  - 2.4.5 Weighting 18
  - 2.4.6 Sampling error 18
- 2.5 Survey Instruments 18
  - 2.5.1 Preparation of survey instruments 18
  - 2.5.2 The household schedule (NFS1) 18
  - 2.5.3 The individual questionnaire (NFS2) 19
  - 2.5.4 The community questionnaire (NFS8) 20
  - 2.5.5 Translation of the individual questionnaire and household questionnaire 20
  - 2.5.6 Instruction manuals and survey control documents 20
- 2.6 Pretest, Recruitment and Training of Fieldstaff 21
  - 2.6.1 Pretest 21
  - 2.6.2 Recruitment of fieldstaff 21
  - 2.6.3 Training of fieldstaff 21
  - 2.6.4 Training of statistical staff for coding, editing and data transcription 22
- 2.7 Publicity 22
- 2.8 The Main Fieldwork 23
  - 2.8.1 Duration of fieldwork 23
  - 2.8.2 Organization of fieldstaff 23
  - 2.8.3 Fieldwork procedures 23
  - 2.8.4 Co-ordination, supervision and data retrieval 24
  - 2.8.5 Major problems encountered in the fieldwork 24
- 2.9 Response Rates 25
  - 2.9.1 Analysis of sample returns 25
- 2.10 Office Editing and Coding 27

2.11	Data Processing	28
2.11.1	Data entry	28
2.11.2	Machine-edit	28
2.11.3	Recoding and tabulations	28
2.12	Timetable	30

## PART II - MAIN FINDINGS 31

### CHAPTER 3 - CHARACTERISTICS OF THE POPULATION ENUMERATED IN THE HOUSEHOLD SCHEDULE AND RESPONDENTS TO THE INDIVIDUAL QUESTIONNAIRE 33

3.1	Introduction	33
3.2	Population Enumerated in the Household Schedule	33
3.2.1	Coverage	33
3.2.2	Age-sex composition	33
3.2.3	Sex ratios	37
3.2.4	Age dependency ratios	37
3.3	Quality of Age Data	41
3.4	Household Size	43
3.5	Household Structure	43
3.6	Generations in the Household	46
3.7	Age and Sex of Household Heads	47
3.8	Prevalence of Polygamy	47
3.9	Age Difference Between Spouses	48
3.10	Environmental Conditions of Households	48
3.11	Ownership of Modern Consumer Durables	50
3.12	Description and Definition of Background Variables	50
3.12.1	Level of education	50
3.12.2	Literacy	51
3.12.3	Type of place of residence	56
3.12.4	Region of residence	56
3.12.5	Religion	57
3.12.6	Labour force participation	57
3.13	Current or Last Husband's Characteristics	59
3.14	Inter-Relationships Between Selected Background Variables	60
3.15	Summary	60

### CHAPTER 4 - NUPTIALITY 62

4.1	Introduction	62
4.2	The Incidence and Level of Nuptiality	62
4.3	Age at Marriage	62
4.4	Differentials in Age at Marriage	64
4.5	Stability of Marriages	66
4.5.1	Status of first marriage	67
4.5.2	Incidence of remarriage and number of times married	68
4.5.3	Proportion of time spent in the married state	68
4.5.4	Current marital status	68
4.6	Differentials in Marital Stability	68
4.7	Incidence of Prevalence of Polygamy	71
4.8	Summary	73

### CHAPTER 5 - FERTILITY AND INFANT MORTALITY 74

5.1	Introduction	74
5.2	Cumulative Fertility	74
5.3	Current Fertility	76
5.4	Nuptiality and Fertility	77
5.4.1	Age at first marriage and fertility	78
5.4.2	Marital duration	78
5.4.3	Premarital births and conceptions	78
5.4.4	Interval between first marriage and first birth	80
5.4.5	Births before the end of the fifth year of marriage	80
5.4.6	Age at birth of first child	81
5.5	Differentials in Fertility	81
5.5.1	Cumulative fertility	81
5.5.2	Current fertility	83
5.5.3	Median age at first birth	85
5.6	Fertility Trends	87
5.7	Infant and Childhood Mortality	88
5.8	Summary	92



CHAPTER 6 - FERTILITY PREFERENCES	94
6.1 Introduction	94
6.2 Desire to Cease Childbearing	94
6.3 Differentials in Desire to Cease Childbearing	96
6.4 Additional Number of Children Desired	96
6.5 Differentials in Additional Number of Children Desired	98
6.6 Desired Family Size	99
6.7 Differentials in Desired Family Size	101
6.8 Sex Preferences	101
6.9 Summary	103
CHAPTER 7 - KNOWLEDGE AND USE OF CONTRACEPTION	105
7.1 Official Attitude Towards Population Policy and Family Planning in Nigeria	105
7.2 Family Planning Situation in Nigeria	106
7.3 Knowledge and Ever-Use of Contraception	107
7.4 Current Use of Contraception	112
7.5 Contraceptive Use in Relation to Fertility Preferences	116
7.6 Intentions to Use Contraception in the Future	118
7.7 Pattern of Contraceptive Use	118
7.8 Knowledge of Source of Supply of Specified Methods	118
7.9 Summary	119
CHAPTER 8 - SOME NON-CONTRACEPTIVE FACTORS AFFECTING FERTILITY	120
8.1 Introduction	120
8.2 Breastfeeding	122
8.2.1 Importance, measures and problems	122
8.2.2 Duration of breastfeeding in the last closed birth interval	122
8.2.3 Differentials in breastfeeding in the closed birth interval	125
8.2.4 Breastfeeding in the open birth interval	126
8.3 Post-Partum Amenorrhoea	127
8.4 Post-Partum Sexual Abstinence	128
8.5 Marital Instability	134
8.6 Length of Exposure and Interval to Next Conception	135
8.7 Age at Menarche and Fecundity Status	137
8.7.1 Age at menarche	137
8.7.2 Fecundity status	138
8.8 Summary	140
CHAPTER 9 - SUMMARY AND RECOMMENDATIONS	142
REFERENCES	144
PART III - APPENDICES	147
Appendix I The Household Schedule	149
Appendix II The Individual Questionnaire	154
Appendix III The Community Questionnaire	200
Appendix IV Individual Data Extract	203
Appendix V Listing and Selection of Sampling Units	204
Appendix VI Sample Assignment and Outcome	206
Appendix VII Interviewer Record	207
Appendix VIII EA Summary and Checklist	208
Appendix IX Household Continuation Sheet	210
Appendix X Intermediate Coding Sheet for the Individual Questionnaire	211
Appendix XI Sample Design	213
Appendix XII Sampling Errors for Selected Estimates	223

# LIST OF TABLES AND FIGURES

## TABLES

- |      |   |    |      |  |    |
|------|---|----|------|--|----|
| 1.1  | Population size, density and percentage urban by state, 1963 census                                       | 6  | 3.4  | Per cent distribution of the population by age and sex, de facto population, 1963 census and NFS   | 38 |
| 1.2  | Population of Nigeria by nationality and ethnic group, 1963 census  | 7  | 3.5  | Dependency ratios by region and rural-urban status   | 41 |
| 1.3  | Per cent distribution of the population of Nigeria by region and religion, 1952/53 and 1963 censuses      | 8  | 3.6  | Myers' blended indices of digit preference for de jure population, 10-70 years   | 42 |
| 1.4  | Enrolment in Nigerian schools, 1975/76 to 1979/80   | 10 | 3.7  | Mortara index of heaping at specified ages ending in 5 and 0, de jure population   | 43 |
| 1.5  | Enrolment in Nigerian universities, colleges of technology and polytechnics, 1975/76 to 1979/80           | 10 | 3.8  | Per cent distribution of households according to number of usual members by region and rural-urban status, de jure population                | 44 |
| 1.6  | Gross domestic product at 1977/78 factor cost   | 11 | 3.9  | Household structure by region and rural-urban status   | 45 |
| 1.7  | Value of external and visible trade, 1970-83 (millions of naira)  | 11 | 3.10 | Per cent distribution of households according to number of generations by region and rural-urban status, de jure population                  | 46 |
| 1.8  | External trade of Nigeria by commodity section 1978-83 (millions of naira)                                | 12 | 3.11 | Percentage of household heads according to age and sex by rural and urban status, de jure population   | 47 |
| 1.9  | Percentage of the population aged 15 years and over in labour force by age and sex, 1963                  | 13 | 3.12 | Per cent distribution of households with married couples according to monogamous and polygynous unions, by region and rural-urban status     | 48 |
| 1.10 | Per cent distribution of the employed population by sex and occupation, 1963                              | 14 | 3.13 | Mean age difference between husband and (eldest) wife, by place of residence and age of husband  | 49 |
| 2.1  | NFS sample by state and rural-urban strata  | 17 | 3.14 | Per cent distribution of households according to certain environmental indicators, by rural-urban status                                     | 51 |
| 2.2  | Dates of fieldwork by state   | 23 | 3.15 | Per cent distribution of households according to certain environmental indicators, by region and rural-urban status                          | 52 |
| 2.3  | Summary of results for household and individual interviews by geographical regions and rural-urban status | 26 | 3.16 | Cross-tabulation of the de jure household members according to source of water supply and type of toilet facility, by rural and urban status | 53 |
| 2.4  | Distribution of individual interviews by number of visits   | 27 | 3.17 | Percentage of households which own certain modern consumer durable items, by rural-urban status  | 53 |
| 2.5  | Individual interviews by persons present  | 27 | 3.18 | Percentage of households which own certain modern consumer durable items, by region and rural-urban status                                   | 54 |
| 2.6  | Distribution of individual interviews by degree of co-operation of respondents                            | 28 | 3.19 | Distribution of respondents according to selected demographic and background characteristics   | 55 |
| 2.7  | Survey timetable: scheduled and actual dates and duration of major phases                                 | 29 |      |  |    |
| 3.1  | Distribution of the de facto and de jure populations enumerated in the household survey, by age and sex   | 34 |      |  |    |
| 3.2  | Per cent distribution of the de jure population according to age and sex, by rural-urban status           | 36 |      |  |    |
| 3.3  | Percentage of females aged 15-49 years, by region and rural-urban status, de jure population              | 37 |      |  |    |

- 3.20 Two-way inter-relationships between selected demographic and background characteristics 58
- 4.1 Per cent distribution of women ever and never married, by current age 62
- 4.2 Per cent distribution of ever-married women, by single years of age at first marriage 63
- 4.3 Per cent distribution of women according to age at first marriage, by current age 63
- 4.4 Median age at first marriage, by current age and background characteristics 65
- 4.5 Mean age at first marriage of women who married before the age of 25 and who are currently aged 25 and over, by current age and background characteristics 66
- 4.6 Per cent distribution of ever-married women according to status of first marriage, by years since first marriage and age at marriage 67
- 4.7 Percentage of ever-married women who remarried after the dissolution of their first marriage, by years since first marriage 68
- 4.8 Per cent distribution of ever-married women according to number of times married, by years since first marriage and age at marriage 69
- 4.9 Average percentage of time since first marriage spent in married state by ever-married women, by age at marriage and current age 69
- 4.10 Per cent distribution of ever-married women according to current marital status, by years since first marriage and age at first marriage 70
- 4.11 Indicators of marital stability for ever-married women, by selected background characteristics 71
- 4.12 Percentage of currently married women in polygynous unions, by selected background characteristics 72
- 5.1 Per cent distribution of all women according to number of children ever born, by current age 75
- 5.2 Per cent distribution of ever-married and currently married women according to the number of children ever born, by current age 75
- 5.3 Age-specific fertility rates and age-specific marital fertility rates for all and ever-married women 76
- 5.4 Percentage of all women reporting a current pregnancy, by age 77
- 5.5 Relative age-specific fertility and pregnancy rates 78
- 5.6 Mean number of children ever born to ever-married and currently married women according to age at first marriage and current age 79
- 5.7 Mean number of children ever born to ever-married and currently married women according to age at first marriage and years since first marriage 79
- 5.8 Per cent distribution of women who first married at least five years ago according to interval between first marriage and first birth, by age at first marriage and years since first marriage 80
- 5.9 Mean number of children born before the end of the fifth year of marriage by women first married at least five years ago according to age at first marriage and years since first marriage 81
- 5.10 Median age at first birth, by current age 81
- 5.11 Mean number of children ever born by all women by current age and by ever-married women by years since first marriage, according to background characteristics 82
- 5.12 Age-specific fertility rates for the period 0-4 years preceding the survey, by background characteristics 84
- 5.13 Median age at first birth, by current age and background characteristics 86
- 5.14 Age-specific fertility rates by age at maternity, and periods before the survey 86
- 5.15 Age-specific fertility rates by current age and age at maternity, in five-year groups 88
- 5.16 Infant and childhood mortality rates for specific periods 88
- 5.17 Mean number of children ever born and living at time of survey for all and ever-married women, by current age 89
- 5.18 Mean number of children ever born and living at time of survey for all and ever-married women, by duration of marriage 90
- 5.19 Per cent distribution of all women according to the number of living children and current age 90
- 5.20 Per cent distribution of ever-married and currently married women according to the number of living children, by years since first marriage 91
- 5.21 Per cent distribution of all women according to number of dead children and number of children ever born 91
- 5.22 Per cent distribution of all women according to the number of living children, number of children ever born and current age 92

- |  |  |
|--|--|
| <p>6.1 Percentage of currently married, fecund women not wanting any more children by age, marital duration and number of living children 94</p> <p>6.2 Percentage of currently married, fecund women not wanting any more children, by current age and number of living children 95</p> <p>6.3 Percentage of currently married, fecund women not wanting any more children according to number of living children and years since first marriage 95</p> <p>6.4 Percentage of currently married, fecund women not wanting more children, by number of living children and background characteristics 96</p> <p>6.5 Mean additional number of children and per cent non-numeric response for currently married, fecund women by age, marital duration and number of living children 97</p> <p>6.6 Mean number of additional children desired by currently married, fecund women by number of living children, current age and years since first marriage 97</p> <p>6.7 Mean number of additional children desired by currently married, fecund women, by background characteristics and current age 98</p> <p>6.8 Mean total number of children desired by current age, number of living children and duration of marriage 98</p> <p>6.9 Mean total number of children desired by all and currently married women according to number of living children, by current age 100</p> <p>6.10 Per cent distribution of all and ever-married women by total number of children desired, by current age 101</p> <p>6.11 Mean total number of children desired by currently married women according to number of living children, by selected background characteristics 102</p> <p>6.12 Percentage of currently married, fecund, non-pregnant women desiring another child who prefer their next child to be a son, by number of living sons and daughters 102</p> <p>6.13 Percentage of currently married, fecund, non-pregnant women wanting another child who prefer their next child to be a daughter, by number of living sons and daughters 103</p> <p>6.14 Distribution of currently married, fecund, non-pregnant women according to: (A) Percentage not wanting another child; (B) Mean additional number of children desired; and (C) Mean total number of children desired by number of living sons 104</p> <p>7.1 Presence of other persons at the start of interview on contraceptive knowledge and use 108</p> | <p>7.2 Percentage of all women who have heard of, and who have ever used specified contraceptive methods, including sterilization 109</p> <p>7.3 Percentage of ever-married and currently married women who have heard of and ever used specific contraceptive methods, including sterilization 110</p> <p>7.4 Percentage of all women who have heard of and who have ever used contraception, by current age 110</p> <p>7.5 Percentage of women who have heard of specific contraceptive methods (including sterilization), by number of living children 111</p> <p>7.6 Percentage of women who have ever used specific contraceptive methods (including sterilization), by number of living children 111</p> <p>7.7 Percentage of all women who have heard of any method of contraception (including sterilization), by current age and background characteristics 112</p> <p>7.8 Percentage of all women who have ever used any method of contraception (including sterilization), by current age and background characteristics 113</p> <p>7.9 Ratio of ever-use to awareness for specified contraceptive methods 114</p> <p>7.10 Per cent distribution of exposed women who are currently using specific contraceptive methods (including sterilization) 114</p> <p>7.11 Percentage of exposed women who are currently using contraception (including sterilization) according to number of living children, by background characteristics 115</p> <p>7.12 Percentage of women reporting ignorance at any method of contraception, by presence of other persons during interview on contraceptive knowledge and use 116</p> <p>7.13 Per cent distribution of exposed women who are currently using contraception (including sterilization), by number of living children and desire for more children 116</p> <p>7.14 Of all currently married, fecund women who have never used contraception, percentage who intend to use in the future, by current age and desire to have more children 117</p> <p>7.15 Per cent distribution of ever-married women according to pattern of contraceptive use, by selected demographic characteristics 117</p> <p>7.16 Per cent distribution of ever-married women according to pattern of contraceptive use, by background characteristics 118</p> |
|--|--|

- 7.17 Per cent distribution of women who have heard of methods of contraception but never used it, by knowledge of source of supply of the method 119
- 8.1 Distribution of women by type of birth intervals 121
- 8.2 Characteristics of the penultimate and last live births in the closed and open birth intervals for ever-married women 121
- 8.3 Per cent distribution of ever-married women according to the form of date of last live birth and form of date of penultimate live birth 122
- 8.4 Distribution of ever-married women according to duration of breastfeeding and full breastfeeding in the last closed birth interval 123
- 8.5 Per cent distribution of ever-married women according to length of breastfeeding and full breastfeeding in the last closed birth interval, by current age 126
- 8.6 Mean duration (months) of breastfeeding and full breastfeeding in the last closed birth interval for ever-married women by age and selected background characteristics 127
- 8.7 Distribution of ever-married women still breastfeeding and still fully breastfeeding at the time of survey (ie in the open birth interval), by duration 128
- 8.8 Distribution of ever-married women according to duration of amenorrhoea in the last closed birth interval 129
- 8.9 Per cent distribution of ever-married women according to duration of amenorrhoea in the last closed birth interval, by current age 129
- 8.10 Mean duration of amenorrhoea in the last closed interval for ever-married women by duration of breastfeeding (all ages) 130
- 8.11 Per cent distribution of ever-married women still amenorrhoeic at the time of interview (ie in the open birth interval) 131
- 8.12 Per cent distribution of ever-married women according to duration of post-partum abstinence in the last closed birth interval 132
- 8.13 Per cent distribution of ever-married women according to duration of post-partum abstinence in the last closed birth interval, by current age 132
- 8.14 Mean duration of post-partum abstinence for ever-married women in the last closed birth interval, by duration of breastfeeding 133
- 8.15 Mean duration of sexual abstinence in the last closed birth interval for ever-married women by current age and selected background characteristics 134
- 8.16 Distribution of ever-married women still abstaining at time of interview according to duration since last live birth (ie open interval) 135
- 8.17 Percentage of ever-married women who were continuously married throughout the last closed birth interval by current age and selected background characteristics 136
- 8.18 Mean length of exposure and non-exposure for ever-married women in the last closed birth interval, by current age 137
- 8.19 Mean length of exposure and of interval to conception in last interval for ever-married women by age and by whether or not contraception was used during the interval 137
- 8.20 Mean length of exposure and of interval to conception in the last closed birth interval by age of woman and whether or not contraception was used in the interval for ever-married women who stated both month and year of beginning and end of the interval 138
- 8.21 Per cent distribution of all women according to age at menarche 138
- 8.22 Per cent distribution of ever-married women according to age at menarche, by current age 139
- 8.23 Per cent distribution of currently married women according to self-reported fecundity status, by current age 139
- 8.24 Per cent distribution of currently married women according to detailed fecundity status and current age 140

#### FIGURES

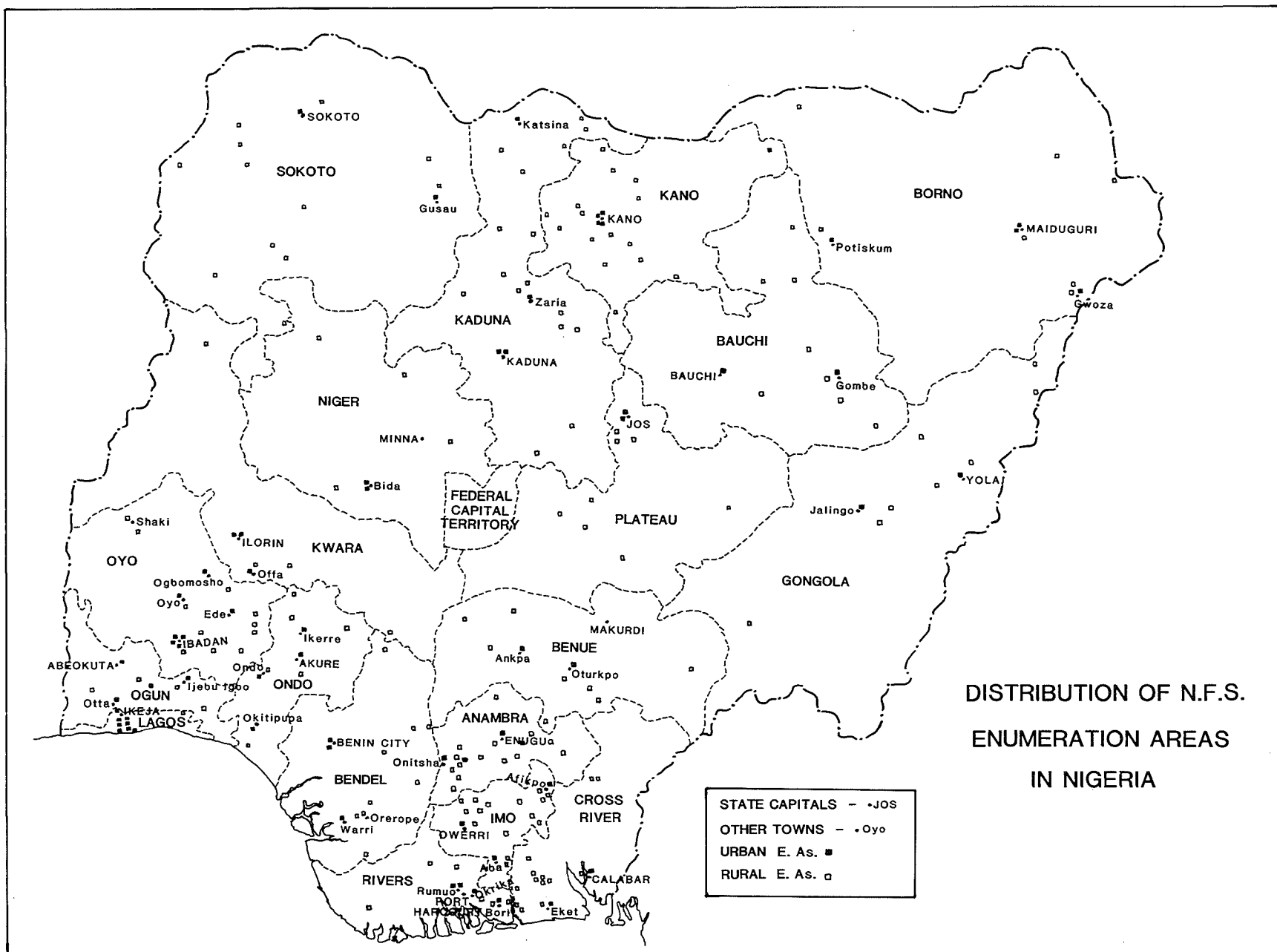
- 3.1 Age-sex composition of the de facto and de jure populations enumerated in the NFS household schedule 35
- 3.2 De facto and de jure female populations aged 15-49 enumerated in the NFS household schedule 37
- 3.3 Age-sex composition of the de facto population enumerated in the NFS household schedule and in the 1963 census 38
- 3.4 Per cent distribution of total de facto population enumerated in the NFS household schedule and in the 1963 census, by age 39
- 3.5 Per cent distribution of male de facto population enumerated in the NFS household schedule and in the 1963 census, by age 39



- |  |  |
|--|--|
| <p>3.6 Per cent distribution of the female de facto population enumerated in the NFS household schedule and in the 1963 census, by age 40</p> <p>3.7 Sex ratios by age, de facto population enumerated in the NFS household schedule and in the 1963 census 40</p> <p>3.8 Per cent distribution of de facto population enumerated in the NFS household schedule, by sex and single years of age 41</p> <p>3.9 Per cent distribution of the total de facto population enumerated in the NFS household schedule, by single years of age 42</p> <p>3.10 Per cent distribution of households enumerated in the NFS household schedule, by number of usual members and region of residence 44</p> <p>3.11 Per cent distribution of couples enumerated in the NFS household schedule according to age difference between husband and (eldest) wife, by type of place of residence 50</p> | <p>4.1 Per cent distribution of women according to age at first marriage, by birth cohort 64</p> <p>5.1 Age-specific fertility rates, 0-4 years before the survey, all women 77</p> <p>5.2 Age-specific fertility rates, 0-4 years before the survey, by selected background characteristics 85</p> <p>5.3 Age-specific fertility rates for (a) the last three quinquennia and (b) 15 years (average) before the survey 87</p> <p>8.1 Per cent distribution of women according to duration of breastfeeding and post-partum amenorrhoea in the last closed birth interval 124</p> <p>8.2 Per cent distribution of women according to duration of full breastfeeding in the last closed birth interval 125</p> <p>8.3 Mean duration of amenorrhoea in the last closed birth interval, by duration of breastfeeding 130</p> <p>8.4 Mean duration of post-partum abstinence in the last closed birth interval, by duration of breastfeeding 133</p> |
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PART I

BACKGROUND AND METHODOLOGY



# THE NIGERIAN SETTING

## 1.1 GEOGRAPHY

Nigeria is situated on the shores of the Gulf of Guinea along the coast of West Africa. It lies between latitudes 4° and 14° north of the Equator and between longitudes 2° 2' and 14° 30' east of the Greenwich meridian. Nigeria has a land area of about 923,766 sq km (ie 3 per cent of the continental land mass) and is the most populous country in Africa, with an estimated population in 1984 of 93.7 million. Well over half of the population of West Africa, and between one-fifth and one-sixth of that of Africa as a whole, lives in Nigeria.

Topographically, the country can be divided into two broad categories - the plains and lowlands of the south and the plateau area of the north. The lowlands are situated mainly along the coast and along the Niger-Benue valley. There are also some lowland in the far north. These include the plains of Sokoto in the north-west and the Lake Chad basin in the north-east. These lowlands are generally under 35m above sea level and have a gentle rolling topography.

The northern plateau area, sometimes referred to as the High Plains of Hausaland, occupies most of the region north of the Niger-Benue trough and is of varying elevations. The Jos plateau is about 1,200m above sea level, though heights of over 1,800m are reached near the city of Jos. Few areas of high elevation are, however, found in the south-eastern and south-western parts of the country.

The wide latitudinal stretch of the country means that almost every type of major West African climate is represented in Nigeria. The country is under the influence of two main wind systems; the moist, relatively cool monsoon wind which blows from the south-west across the Atlantic Ocean towards the country bringing rainfall to the area and the hot, dry, dust-laden wind generally known as the Harmattan which blows from the north-east across the arid Sahara desert bringing a spell of dry weather and sandy fog throughout the country. The meeting point (the convergence zone) of these two wind systems oscillates north and south with the movement of the overhead sun; this affects the temperatures and determines the incidence of rainfall.

Because of the abundant and constant sunshine due to Nigeria's latitude, atmospheric temperatures are continually high and relatively stable throughout the year. Both the mean daily and annual maximum temperatures increase from the coast towards the interior because of the moderating influence of the sea. Generally, the mean temperature ranges between 25°C (77°F) and 30°C (86°F). The relative humidities are equally high though

there are considerable daily and seasonal variations. The daily variation is largely a function of temperature while the seasonal variation is caused by other factors, especially the characteristics of the major air mass affecting the different areas. Consequently, relative humidities are higher in the south (usually above 80 per cent) than in the north (less than 60 per cent).

Many areas in the south receive rain all the year round. Rainfall is usually convectional in character and the amount varies from 1,500mm to 3,750mm. 'Double maximum' rainfall typical of an equatorial climate is generally experienced in April to July and September to October. There is no real period of drought since a weak monsoon blows onshore even during the dry season (November to March). The highest rainfall totals are usually recorded in the south-east. Farther north, the rainy season gets shorter and the total amount of rainfall decreases. In the far north, there are only four months (July-October) of rainy season and a long spell of dry season. Some of the latter areas receive less than 60mm of rainfall a year.

The country's vegetation can be broadly classified into two: the southern forests and the northern savannas. This contrast in vegetation from south to north is to a large extent the effect of the change in climate between the south and the north of the country. Within the southern forests are the swamp forests, which form a narrow stretch along the south-west coast broadening out in the Niger delta and around the estuary of the Cross river to the south-east, and the rain forests which are located towards the interior and stretch from east to west immediately north of the swamp forests. The rain forests are the source of valuable and good hardwood for the country's timber industry.

Three vegetational zones exist in the northern savannas. These include the Guinea Savanna which occupies the central portion of the country; the vegetation here is a mixture of trees and tall grasses. Farther north is the Sudan Savanna whose dominant vegetation is grass. In the most northerly part of the country is a small portion of scrub and grass land known as the Sahel Savanna.

## 1.2 HISTORY OF POLITICAL DEVELOPMENT

The various peoples that make up Nigeria previously existed as separate and autonomous political entities before they became part of a British colonial territory. They lived in kingdoms, emirates and empires with, sometimes, sophisticated systems of government. The Yoruba-land in the south-west was divided into

14 kingdoms, all basically similar. Each kingdom was ruled by a king (oba). In the north, the Hausa people lived in kingdoms before the holy war. The present Fulani emirates of northern Nigeria owe their origin to the holy war begun by Shehu Othman dan Fodio in 1804. The emirates were governed by emirs who were also the religious leaders of their people. East of the lower Niger, the Ibo system of government was based upon the extended family system. Each village had its own government carried out by all the family heads or elders of the village or community sitting together in what is now known as the Council of Elders. Apart from these three major ethnic groups, there were numerous minority groups whose systems of government were similar to those mentioned above, and at times more sophisticated.

The first step towards the establishment of a colonial regime in this region was taken in 1861 when the British established the Colony of Lagos. In 1886, the Royal Niger Company was granted a charter by the British Government to undertake trading operations and to exercise a certain measure of local administration along the upper Niger and Benue rivers and the adjoining hinterland. However, this charter was revoked in 1899 and the Protectorate of Northern Nigeria was declared on 1 January 1900. Earlier, protectorates had been declared in the south over the Niger delta and over Yorubaland. These Southern Protectorates were, in 1906, united with the Colony of Lagos to form the Colony and Protectorate of Southern Nigeria. In 1914, Nigeria became a single political entity following the amalgamation of the Colony and Protectorate of Southern Nigeria with the Protectorate of Northern Nigeria by Sir Frederick Lugard.

The pattern of government established by the British in Nigeria after the amalgamation was of the crown colony type. The affairs of the colonial administration were conducted by Britons up till 1942-43 when a few Nigerians, for the first time, were appointed non-official members of the Executive Council. Sir Frederick Lugard made full use of the knowledge and administrative skills of the Emirs as rulers in the north by applying the system of indirect rule there. He attempted to apply the same principle of indirect rule to the south, but was only successful among the Yorubas of the west. The predominantly Ibo area of the south-east had, since 1900, been subject to direct administration.

After the second world war, a series of constitutional developments took place in the country as a result of an increased political awareness of the people and a great upsurge of nationalism in all parts of the world, especially in Africa. In 1946, Nigeria was formally divided into three regions (Northern, Eastern and Western regions) by the Richard's Constitution, and each was given a regional assembly consisting of persons selected by the native authorities. By the early 1950s Nigeria had achieved partial self-government with a legislature in which the majority of the

members were elected, and an executive council in which most of the members were Nigerians. Under the Lyttleton Constitution of 1954, Nigeria became a federation of three regions which it remained until independence on 1 October 1960. The Lagos area was declared a federal territory. At independence, the country adopted the parliamentary system of government.

Three years after independence, Nigeria adopted three amendments in its constitution. The first amendment came as a result of plebiscites held on 11 and 12 February 1961, to decide whether the Northern and Southern Cameroons, which were trust territories, wished to join the Federation of Nigeria or the Republic of Cameroon. Northern Cameroon joined Nigeria as a result of the plebiscite. The mid-western region was carved out of the former western region on 9 August 1963 as a result of another constitutional amendment. Other regions, except the mid-west, were divided into provinces for administrative convenience. On 1 October 1963, Nigeria became a republic following the third amendment to the federal and regional constitutions.

Politics in what is now known as the First Republic were plagued by many teething problems. Hence, on 15 January 1966, the first administration of independent Nigeria was overthrown in a military coup and replaced by a military administration headed by Major General J.T.U. Aguiyi-Ironsi. This was followed by a series of counter coups, a three-year civil war, and a further ten years of military administration. On 27 May 1967, Major-General Yakubu Gowon issued a decree dividing the country into 12 states. The number of states was further increased to its present 19 in April 1976 by the government of General Murtala Mohammed. On 1 October 1979, the military administration of General Olusegun Obasanjo voluntarily handed over power to an elected civilian government headed by Alhaji Shehu Shagari. Meanwhile, a new constitution with presidential democracy was adopted. The period of military administration coincided with a period of economic boom brought about by increased exploitation and sales of petroleum resources.

This second civilian administration aimed at achieving national unity and self-sufficiency in food production. Unfortunately, the nation slipped into an unprecedented economic depression following the world oil glut of 1982. The President, Alhaji Shehu Shagari, therefore introduced the Economic Stabilisation Act, popularly known as an austerity measure, and a programme of ethical reorientation. The resultant inflation, scarcity of essential commodities and increased political opposition and bitterness, resulted in another military coup on 31 December 1983. Nigeria thus returned once more to a military administration.

### 1.3 MAJOR SOURCES OF DEMOGRAPHIC DATA

Nigeria is one of the countries of the Third World where reliable demographic data are



almost completely lacking. This is not because efforts have not been made in the past to collect such data through conventional methods such as censuses, vital registration and sample surveys. Unfortunately the numerous attempts that were made did not yield successful results. About 14 censuses have been conducted in the country since 1866. The earliest ones (prior to 1952) were actually enumerations of the population, although not often nationwide in character, and were executed by administrators who lacked the necessary technical expertise, facilities and infrastructure and whose primary purposes were administrative and only partially demographic. Other problems such as illiteracy, superstition, cultural taboos, poor transport and communications' systems further militated against the success of such exercises. The first modern census was conducted in 1952/53 though it was plagued by problems similar to those enumerated above; it also suffered many shortcomings such as underenumeration, poor coverage, non-simultaneity of enumeration and unusual age categories in the presentation of results. Another modern census was conducted in 1962; the results were, however, cancelled because of the political heat generated and another exercise was conducted in 1963. This returned a population figure of 55.7 million, a figure that is now considered to have been inflated. Many inconsistencies in the data from the census have also been observed (see Ekanem 1972). The last census conducted in the country was in 1973; the results of this were however cancelled because the obtained population of 79.8 million was considered to have been grossly inflated. Thus, to date (early 1984) data from the 1963 census remain the most current census data for Nigeria and, despite its questionable accuracy, all official population projections are based on it.

The Nigerian experience with vital registration has been even less rewarding. Though started as far back as 1863 shortly after the colonization of Lagos, and reinforced at different intervals since then, including a decree making the registration of births and deaths compulsory in 1979, available evidence shows that only as few as 8.0 per cent of the total estimated births and 2.1 per cent of the total estimated deaths in Nigeria respectively were registered in 1977 (Morah 1980).

With the failure to obtain good quality data from either the census or vital registration system, numerous sample surveys have been conducted to fill the gaps. These, however, varied in scope, coverage and detail since they were conducted by individuals or organizations to meet their own specific needs. There have been, however, two nationwide surveys conducted by agencies of the Federal Government with the object of obtaining national demographic estimates. The first was the 1965/66 Rural Demographic Sample Survey conducted by the Federal Office of Statistics (FOS 1968). The survey was planned to provide data for estimating the birth, death and natural increase rates for the Nigerian population. Such data were, however, only

collected for the rural population. The second survey, the National Demographic Sample Survey, was larger in scope and was conducted in 1980 by the National Population Bureau. The results of the survey have, however, not yet been published.

It is in the light of the above poor and outdated state of knowledge of the demographic situation in Nigeria that the Federal Government decided to participate in the World Fertility Survey programme. Furthermore, in her 1981-85 National Development Plan, the government regarded the need to make a serious beginning at generating adequate and reliable population data for planning and decision-making as one of its 'over-riding objectives' (National Planning Office 1981).

#### **1.4 POPULATION SIZE, DENSITY, DISTRIBUTION AND COMPOSITION**

##### **1.4.1 Size and rate of growth**

On 7 November 1963, the population of Nigeria was 55.7 million. The official annual rate of growth of the Nigerian population, as estimated from the 1965/66 Rural Demographic Sample Survey, is 2.5 per cent. The officially estimated population of Nigeria for 1984, using the above growth rate, is 93.7 million. The projected figure for the year 2000, again using the above rate, is 140.4 million (National Population Bureau 1978).

It is, however, generally accepted that the above official rate of growth is rather low; the actual rate is assumed to lie between 3.0 and 3.5 per cent. This rather high rate of growth is a function of a relatively high and stable birth rate combined with a steadily decreasing death rate. In addition, international migration is increasingly playing a significant part in the overall growth rate of the population. Prior to 1970, the role of international migration was relatively insignificant and the rate of growth of population was the same as its rate of natural increase. Recently, however, there has been a continuous influx of aliens from neighbouring West African countries as a result of the oil boom and international migration now plays a significant part in the country's level of population size.

##### **1.4.2 Density**

Nigeria is a relatively sparsely settled country with a 1963 population density of 60 persons per square kilometre. There are, however, striking differences in population density between the southern and northern parts of the country, with the south being far more densely populated than the north. This is evident from table 1.1 which shows the population density of each of the 19 states of the Federation as at 1963.

##### **1.4.3 Distribution**

In 1963, 18.9 per cent of the population lived in urban and 81.1 per cent lived in rural

Table 1.1: Population size, density and percentage urban by state, 1963 census

State	Area (sq km)	Population	Density (per sq km)	Percentage urban
Anambra	17,675	3,596,618	203	13.6
Bauchi	64,605	2,431,296	37	18.2
Bendel	35,500	2,460,962	69	11.5
Benue	45,174	2,427,017	53	6.3
Borno	116,400	2,997,498	25	11.2
Cross River	27,237	3,478,131	127	8.1
Gongola	91,390	2,605,263	28	3.2
Imo	11,850	3,672,654	309	9.9
Kaduna	70,245	4,098,306	58	12.3
Kano	43,285	5,774,840	133	6.0
Kwara	67,197	1,714,485	25	24.7
Lagos	3,345	1,443,568	431	72.3
Niger	70,824	1,194,508	16	11.7
Ogun	16,762	1,550,966	92	25.2
Ondo	20,959	2,729,690	130	43.8
Oyo	37,705	5,208,884	138	62.5
Plateau	59,231	2,026,657	34	6.5
Rivers	21,850	1,719,925	78	14.5
Sokoto	102,535	4,538,787	44	9.3
All states	923,768	55,670,055	60	18.9

areas. Over half (54.6 per cent) of the country's inhabitants lived in seven out of the 19 states (ie Kano, Oyo, Sokoto, Kaduna, Imo, Anambra and Cross River states). Kano state had the highest population of 5.8 million, closely followed by Oyo state with a population of 5.2 million. Niger state had the smallest population of 1.1 million.

Several factors govern the geographical distribution of the population. One of the most important is the pattern of rural-urban and interstate migration. Lagos, the seat of the Federal Government and the nerve-centre of Nigerian industry and commerce, attracts the largest number of migrants. The oil and shipping centres like Warri and Port Harcourt also attract many migrants. Increased job opportunities, especially in the urban centres, resulting from creation of states and from accelerated industrial activities due to the big oil revenues of the early and mid-1970s, have led to an increased rural-urban, as well as interstate migration. The socio-economic consequences of such migration flows for both the rural and urban areas are considerable and of great concern to the government. Since most of the migrants are young male adults, the rural areas are continually losing their more productive prime age adults, a phenomenon that currently hinders agricultural productivity in the country as a whole. Furthermore, the cities are over-burdened with an excess of marginally skilled persons who are mostly either unemployed or under-employed and whose presence exerts tremendous pressures on the scant social services.

#### 1.4.4 Age/sex composition

The sex ratio in Nigeria was 102.0 men per 100 women in 1963. In the urban areas it was 114.9 and in the rural 99.4 per 100. As much as 43 per cent of the population was reported to be under 15 years of age and only 2 per cent over 65 years of age in 1963. Similar proportions of 42.9 per cent and 2.9 per cent respectively were obtained for the rural population in the 1965/66 Rural Demographic Sample Survey (FOS 1968). The population thus has a very young age structure. Since available evidence shows that fertility has been high and relatively stable over time while mortality (especially infant mortality) has been on the decline, some researchers argue that presently between 47.0 and 50 per cent of the Nigerian population is under 15 years of age. One major implication of this is a very high dependency ratio with the attendant result that a considerable proportion of resources is directed to consumption and provision of services for the young, non-productive population.

#### 1.5 ETHNICITY, LANGUAGE AND RELIGION

##### 1.5.1 Ethnicity

Nigeria is a multi-ethnic society. Available evidence shows that the country is inhabited by over 200 different ethnic groups. Except for the effects of migration, ethnic groups are often geographically homogenous and often coincide with linguistic, cultural and religious groupings. The most populous of the

ethnic groups are the Hausas, Yorubas and Ibos, who, in 1963, constituted 20.9, 20.3 and 16.6 per cent of the population respectively and thus constitute over half (57.8 per cent) of the peoples of Nigeria. Twenty of the over 200 identifiable ethnic groups account for 36.2 per cent of the remaining 42.2 per cent, a fact that reflects that most of the other ethnic groups in the Nigerian ethnic mosaic are numerically small. Some of the larger ones are the Fulani (8.6 per cent), Kanuri (4.1 per cent), Ibibio (3.6 per cent), Tiv (2.5 per cent) and Ijaw (2.0 per cent).

Most of the ethnic groups are concentrated in particular parts of the country. The Hausas, Fulanis and Kanuris are found mostly in the traditional city states of the north; the Yorubas inhabit the former kingdoms of the south-west and the Ibos are found in the south-eastern part of the country.

Non-Nigerians made up only 0.2 per cent of the country's population in 1963. This reflects the then relatively negligible role of international migration into the country - a phenomenon that has rapidly changed since the 1970s (see table 1.2).

### 1.5.2 Language

There are as many local languages (and dialects) as there are ethnic groups since each ethnic group has its own peculiar language and dialects. But the most important languages spoken in the country (based on the large percentage of the ethnic groups that speak them) are Hausa, Igbo and Yoruba. These three languages were accorded official recognition by the 1979 constitution of the Federal Republic of Nigeria. However, English is the common official language used in all parts of the country.

### 1.5.3 Religion

Islam and Christianity are the two main religious groups in the country. The third important group is the indigenous traditional religion which comprises a number of traditional religious beliefs and practices. This group has, however, continued to suffer a major depletion in the number of its adherents since the advent of Islam and Christianity.

Data on religion from the 1952/53 and 1963 censuses showed that the proportion of the population adhering to the Islamic faith

Table 1.2: Population of Nigeria by nationality and ethnic group, 1963 census

Nationality and ethnic group	Population	Per cent
Nigerians	55,558,163	99.8
Hausa	11,652,745	20.9
Yoruba	11,320,509	20.3
Ibo	9,246,388	16.6
Fulani	4,784,366	8.6
Kanuri	2,259,091	4.1
Ibibio	2,006,489	3.6
Tiv	1,393,649	2.5
Ijaw	1,088,885	2.0
Edo	954,970	1.7
Annang	675,004	1.2
Nupe	656,296	1.2
Urhobo	639,251	1.1
Igala	581,551	1.0
Idoma	485,562	0.9
Igbirra	425,783	0.8
Gwari	378,168	0.7
Ekoi	344,514	0.6
Mumuye	294,208	0.5
Alago	249,537	0.4
Ogoni	202,567	0.4
Isoko	200,357	0.4
Higgi	176,969	0.3
Bura	171,875	0.3
Efik	166,297	0.3
Chamba	162,330	0.3
Other Nigerians	5,040,802	9.1
Non-Nigerians	101,461	0.2
Total	55,670,055	100.0

(Muslims) had increased slightly over the period from 44.0 per cent in 1952/53 to 47.2 per cent in 1963, and that they were mostly concentrated in the northern parts of the country. During the same period, the proportion of Christians increased markedly from 22.0 per cent in 1952/53 to 34.5 per cent in 1963. As a consequence of these changes, the proportion of adherents to the Traditional/others religious group declined from 34 per cent in 1952/53 to 18.3 per cent in 1963. Increases in the proportions of Christians occurred mostly in the east and mid-west regions where the proportions of the Traditional/others group correspondingly declined (see table 1.3).

## 1.6 FAMILY AND MARRIAGE SYSTEMS

Two types of families can be distinguished in contemporary Nigeria; these are the nuclear and the extended or joint types. The nuclear family is based on the husband-wife relationship and consists of the husband, wife or wives and their children. Some nuclear families are based on polygamous marriages. The extended family, in contrast, consists of two or more nuclear families joined through an extension of the parent-child relationship rather than the husband-wife relationship. An example of such a family is an older man, his wife or wives, his unmarried children, his married sons, their wives and the children of the latter. These three generations live under the same roof or in a cluster of adjacent buildings.

Marriage is very prevalent among Nigerian adults of all ethnic groups. The following types of marriages exist in the country: religious (Christian/Muslim) marriages which normally take place either in the church or mosque, civil marriages and traditional marriages.

In the rural areas of Nigeria marriage of females occurs soon after puberty; for men marriage comes much later. In the urban areas, however, age at marriage is fairly high as a consequence of higher living standards and the greater difficulty of accumulating enough money to meet marriage and wedding expenses -

expenses which are lower in the rural areas and can be met in part by the prospective bridegroom or members of his extended family rendering personal service to the family of the bride. Data on marriages were not collected in the 1963 census. Evidence from the 1965/66 Rural Demographic Sample Survey and other surveys show that marriage is generally universal and stable throughout the country. Some important differentials exist arising from ethnic, cultural or religious factors. For instance, age at first marriage is much lower in the north than anywhere else in the country. In the north, the majority of girls are married by about the age of 15; in the other parts of the country they marry at about the age of 20. Also, most of the men in the north marry by about the age of 20 as opposed to 25 in other parts of the country. In some parts of the south an appreciable number of men remain unmarried until their late thirties. By age of 25 almost all rural women are married. Although for younger women the incidence of divorce or separation is low, those whose marriages are dissolved, almost always remarry (FOS 1968).

## 1.7 FERTILITY AND MORTALITY

### 1.7.1 Fertility

Reliable information on fertility and mortality for the entire population of Nigeria, or any substantial proportion of it, is very scanty. This is a consequence of the low level of development of the major sources of demographic data for the country as described earlier. This situation has given rise to numerous direct and indirect estimates of demographic parameters with considerable variation in the obtained results. For instance, estimates of fertility for the decades of the 1950s and 1960s yield crude birth rates ranging from 41 to 66 births per 1,000 inhabitants. Similar estimates for the 1970s range from 50 to 60 births per 1,000. The range is even wider when estimates from sample surveys are included (UNFPA 1980).

Results from the 1965/66 Rural Demographic Sample Survey (FOS 1968) show a crude birth rate of 50 per 1,000 inhabitants for the rural

Table 1.3: Per cent distribution of the population of Nigeria by region and religion, 1952/53 and 1963 censuses

Region	Islam		Christianity		Other	
	1952/53	1963	1952/53	1963	1952/53	1963
North	73.0	71.1	2.7	9.7	24.3	18.6
East	0.3	0.3	50.1	77.2	49.6	22.5
West	32.4	43.4	36.2	48.7	31.4	7.9
Mid-West	4.2	4.2	22.8	54.9	73.1	40.9
Lagos	42.0	44.3	54.5	54.6	3.4	1.1
Nigeria	44.0	47.2	22.0	34.5	34.0	18.3

population of Nigeria. The average number of live births for rural women who had completed childbearing was 5.6, though Nigeria's Fourth National Development Plan quotes a figure of 6.9 (National Planning Office 1981). One common feature of all the estimates is that they indicate that both past and current levels of fertility have been high. There are also indications that recent trends may be on the increase, though evidence for this is still sketchy.

Considerable variations in the level of fertility by region, education, place of residence and occupation are reported in many surveys. Most of the evidence suggests that fertility is probably the lowest and mortality the highest in the northern parts of Nigeria (UNFPA 1980). Evidence of fertility differentials by rural-urban residence and education exist, though there are contradictions as to direction of such differentials (see Caldwell 1976; Lucas 1973; Okore 1980; Olusanya 1969).

Traditional attitudes and practices in Nigeria generally esteem and favour high fertility and the large family. Fertility preferences are consequently high, six or more children being usually preferred and most couples wish to have more. One source of the high fertility is, therefore, the continuing pervasive belief that it is good to have a large family, that having many children brings wealth and prestige and is indicative of the blessing of God and ancestors. For the individual, sterility or limited fertility is a humiliating misfortune; children, on the other hand, are an important visible sign of success and achievement and offer security in old age. For the father, children bring social status, proof of virility and help on the land; for the mother they are a justification of her existence.

### 1.7.2 Mortality

Reliable information on mortality is even scantier than is the case for fertility. All evidence, however, shows that mortality has been and continues to be high. The 1965/66 Rural Demographic Sample Survey indicated a crude death rate of 27 per 1,000 population and an infant mortality rate of 187 per 1,000 live births. The survey also indicated that nearly 40 per cent of all children born in the rural areas die before the age of 15 (FOS 1968).

More recent surveys indicate that both overall mortality and infant/child mortality have been decreasing steadily and significantly over time. Overall, crude death rates are presently estimated at between 18 and 20 per 1,000 persons. These decreases are a consequence of improvements in health and medical services and in the general standard of living of the population. Further evidence reveals considerable variations in both levels and extent of decline in mortality by region of residence, rural-urban status and education (see Okoroafor 1980; Olusanya 1980).

## 1.8 EDUCATION AND LITERACY

Data on education and literacy in Nigeria are also scanty; questions on neither topic were included in either the 1963 census or the 1965/66 Rural Demographic Sample Survey. Secondary sources such as statistics on school enrolment or number of educational institutions, however, show that the level of literacy of the population has been increasing systematically since independence in 1960. Successive governments, at state, regional and national levels have always accorded a prominent position in their plans to increasing the level of education of the population. It is presently estimated that 25 per cent of the population are literate.

Available statistics on the number of educational institutions and enrolment in such institutions indicate the magnitude of increase in the level of education in the country. For instance, at independence in 1960, 2,912,618 pupils were enrolled in primary schools. This number first stagnated at 2,849,488 in 1964, then grew to 3,894,539 in 1971, 4,746,808 in 1973 and to 5,950,296 in 1975/76, shooting up to 12,749,403 in 1979/80. The number of primary schools correspondingly increased from 21,223 in 1975/76 to 29,853 in 1976/77 and 37,469 in 1979/80 (see table 1.4).

Enrolment in secondary schools, polytechnics, teacher-training colleges and universities also showed tremendous increases. In 1960, only 135,364 students were enrolled in secondary schools; however, 704,917 were enrolled in 1975/76 and 1,557,877 in 1979/80. The number of secondary schools increased from 1,513 in 1975/76 to 2,908 in 1979/80. In 1960, there were only two universities in Nigeria. Their number increased to five by 1964, 13 in 1979 and more than 26 in 1984 (including state and privately owned universities). Enrolment in universities increased from 31,511 in 1975/76 to 57,772 in 1979/80. The increase in number of, and enrolment in, colleges of technology or polytechnics is even higher (table 1.5). This rapid increase in the number of, and enrolments in, educational institutions has come at a tremendous cost to the various levels of government in the country. Governments now find themselves unable to cope with most of the costs of educating the people which they had earlier assumed and are now shifting the responsibility to parents. Greater priority had been given to formal education although substantial attention to adult and non-formal education was included as part of the nation's Fourth National Development Plan of 1981-85. There are also attempts to remove existing contradictions, ambiguities and lack of uniform educational practices in the different parts of the country.

## 1.9 ECONOMY AND LABOUR FORCE

### 1.9.1 Economy

Prior to the mid-1960s, Nigeria was predominantly an agricultural country with over



1.4: Enrolment in Nigerian schools, 1975/76 to 1979/80

Year	Primary schools		Secondary schools (grammar, commercial)		Teacher education	
	No of schools	Enrolment	No of schools	Enrolment	No of schools	Enrolment
1975/76	21,223	5,950,296	1,513	704,917	250	123,627
1976/77	29,853	8,242,060	1,560	832,154	258	148,178
1977/78	34,310	9,845,838	1,928	1,007,902	254	183,724
1978/79	35,300	11,457,772	2,259	1,159,401	258	204,374
1979/80	37,469	12,749,403	2,908	1,557,877	260	247,478

Source: National Planning Office 1981, tables 19.1 - 19.5

Table 1.5: Enrolment in Nigerian universities, colleges of technology and polytechnics, 1975/76 to 1979/80

Year	Universities	Colleges of technology and polytechnics
1975/76	31,511	11,993
1976/77	38,877	17,452
1977/78	41,417	19,880
1978/79	45,201	29,829
1979/80	57,772	35,777

Source: National Planning Office 1981, tables 19.6 and 19.7

four-fifths of its population living and earning their livelihood in the rural, traditional sector of the economy. Agriculture was then primarily of the subsistence type, was non-mechanized and practised on small land holdings. It accounted for a substantial proportion of the country's gross domestic product and for almost all its external trade and foreign exchange earnings.

Since the late 1960s, however, the economic scene in Nigeria has changed dramatically with the discovery and exploitation of oil in large commercial quantities. While the country still remained essentially agricultural and of the subsistence type, the contribution of this sector to the country's gross domestic product, and particularly to the nation's external trade and foreign exchange earnings, started to decline substantially. Its previously predominant role was taken over by petroleum as the nation's principal export product and foreign exchange earner. This led to a consequent neglect of the agricultural sector, the emergence of manufacturing as an important economic sector and shifts in population from the rural to the urban centres. The impact of oil on the revenues of the country was even more dramatic. In 1963, oil accounted for only 3 per cent of the government's revenue; this

increased to 17 per cent in 1967, 25 per cent in 1972, 50 per cent in 1974 and about 70 per cent in 1977 and 1978. Correspondingly, from 1974 onwards, oil accounted for between 80 and 90 per cent of the nation's exports and foreign exchange earnings.

Thus, one constant factor in Nigeria's economic scene has been its dependence on one sector; previously agriculture and now oil. This makes the economy exceptionally vulnerable to fluctuations in the world market situation of each particular product and this explains Nigeria's economic situation at present. Between 1972 and 1974, revenues from oil changed the country's position of deficit into large surpluses. But with the glut in the oil market in recent years, demand decreased substantially and Nigeria's revenues from that source tumbled. For instance, between January and September 1983, the nation's level of oil production was about 1.2 million barrels per day, down from about 2.1 million barrels per day during the peak years of 1976-77. Exports decreased from 0.714 million barrels per day in December 1982 to 0.580 million barrels per day in January 1983 and further to 0.371 million barrels per day in February 1983 (Department of National Planning 1984).

The government thus had to borrow extensively on the Euro-dollar market and from multinational institutions to meet its huge import bills and to finance its development projects. Vigorous attempts are now being made

to diversify the economy and to achieve self-sustained growth. Programmes geared towards such objectives include import substitution, Operation Feed the Nation, Green Revolution, import restrictions, etc.

Table 1.6: Gross domestic product at 1977/78 factor cost

Sector	Millions of naira					Per cent distribution				
	1979/80	1980	1981	1982	1983	1979/80	1980	1981	1982	1983
1. Agriculture	4,274.7	4,087.8	3,872.2	3,706.9	3,817.2	13.8	13.1	13.1	13.0	14.0
2. Livestock	1,106.0	1,123.6	1,138.0	1,154.3	1,165.8	3.5	3.6	3.9	4.0	4.3
3. Forestry	275.4	270.7	264.5	259.4	248.0	0.9	0.9	0.9	0.9	0.9
4. Fishing	816.3	731.1	756.5	786.3	817.8	2.6	2.3	2.6	2.8	3.0
5. Crude petroleum	7,512.5	6,915.6	4,719.6	4,420.0	4,114.8	24.1	22.1	16.0	15.5	15.1
6. Other mining and quarrying	758.9	743.5	724.3	723.3	725.4	2.4	2.4	2.4	2.5	2.7
7. Manufacturing	1,908.6	2,244.8	2,508.4	2,359.3	2,300.3	6.1	7.2	8.5	8.3	8.4
8. Utilities	134.6	156.1	185.3	107.3	124.1	0.4	0.5	0.6	0.4	0.5
9. Construction	2,778.8	3,056.0	3,204.1	3,053.9	2,798.1	8.9	9.8	10.8	10.7	10.2
10. Transport	1,122.7	1,247.0	1,390.9	1,044.9	968.7	3.6	4.0	4.7	3.7	3.6
11. Communications	61.1	64.4	67.1	52.6	50.1	0.2	0.2	0.2	0.2	0.2
12. Wholesale and retail trades	6,911.5	6,928.8	6,919.9	7,273.2	6,481.8	22.1	22.1	23.4	25.5	23.7
13. Hotels and restaurants	92.3	101.1	109.7	122.7	127.7	0.3	0.3	0.4	0.4	0.5
14. Finance and insurance	770.8	801.7	832.2	905.6	973.5	2.5	2.6	2.8	3.2	3.6
15. Real estate and business service	108.0	110.6	114.2	117.0	119.3	0.3	0.4	0.4	0.4	0.4
16. Housing	1,077.2	1,091.5	1,105.9	1,120.8	1,100.8	3.5	3.5	3.7	3.9	4.0
17. Produce of government services	1,511.0	1,564.6	1,617.6	1,323.8	1,350.3	4.8	5.0	5.6	4.6	4.9
Total	31,220.4	31,238.9	29,530.3	28,531.3	27,283.7	100.0	100.0	100.0	100.0	100.0

Source: Department of National Planning 1984, pp 12 and 13

Table 1.7: Value of external and visible trade, 1970-83 (millions of naira)

Year	Import (cif)	Export (fob) (including re-export)	Balance
1970	756.4	885.4	+ 129.0
1971	1,078.9	1,221.3	+ 142.4
1972	990.1	1,434.2	+ 444.1
1973	1,224.8	2,277.4	+1,052.6
1974	1,737.3	5,794.8	+4,057.5
1975	3,721.5	4,925.5	+1,204.0
1976	5,148.5	6,751.1	+1,602.6
1977	7,089.7	7,630.7	+ 541.0
1978	8,211.7	6,056.0	-2,155.7
1979	6,169.2	10,397.6	+4,228.4
1980	9,095.6	13,812.3	+4,716.7
1981	12,919.6	11,145.5	-1,774.1
1982	9,130.0	9,071.5	- 58.5
1983 <sup>a</sup>	6,375.5	7,091.1	+ 715.6

a Provisional estimates by Department of National Planning.

Sources: Federal Office of Statistics 1981, p 107 (for 1970-77); Department of National Planning 1984, p 19 (for 1978-82)

Table 1.8: External trade of Nigeria by commodity section 1978-83 (millions of naira)

Section	1978		1979		1980		1981		1982		1983	
	Imports (cif)	Exports (fob)	Imports (cif)	Exports (fob)	Imports (cif)	Exports (fob)	Imports (cif)	Exports (fob)	Imports (cif)	Exports (fob)	Imports (cif)	Exports (fob)
0. Food and live animals	1,020.7	447.6	952.4	310.9	1,437.5	348.7	2,115.1	207.7	1,546.1	126.5	1,120.9	72.3
1. Beverage and tobacco	70.7	0.1	8.1	-	12.1	-	17.7	-	16.8	-	14.9	-
2. Crude material, mainly inedible, except fuel	108.4	58.2	117.4	84.1	156.7	76.9	301.9	29.9	156.9	25.6	139.4	11.9
3. Minerals, fuel, lubricants and related materials	174.6	5,473.2	126.8	9,894.6	154.8	13,245.2	176.4	10,804.2	122.2	8,816.6	113.0	6,914.8
4. Animal and vegetable oil, fat	73.3	3.9	98.0	17.8	115.0	15.6	123.1	5.3	104.9	3.8	93.2	1.2
5. Chemicals	467.9	N/A	467.0	1.6	913.5	2.7	1,255.7	2.4	950.4	2.6	689.9	-
6. Manufactured goods, classified chiefly by materials	1,850.3	31.6	1,442.6	34.5	1,981.5	41.1	2,640.5	26.9	2,123.5	24.8	1,554.6	6.5
7. Machinery and transport equipment	3,587.5	4.2	2,401.8	13.7	3,650.4	25.3	5,406.7	24.4	3,527.1	20.0	2,105.8	8.5
8. Miscellaneous manufactured articles	664.5	-	349.6	3.0	645.1	2.9	953.2	1.3	569.3	13.4	531.2	10.4
9. Commodities and transactions not classified according to kind	13.8	37.3	25.5	37.4	29.0	53.9	29.3	43.4	12.8	38.2	12.6	67.5
TOTAL	8,031.7	6,056.0	5,989.2	10,397.6	9,095.6	13,812.3	13,019.6	11,145.5	9,130.0	9,071.5	6,375.5	7,093.1

Source: Department of National Planning 1984, p 19

Other indicators of the economic scene in Nigeria show that the gross domestic product (GDP) at 1977/78 factor cost decreased from 31.2 billion naira in 1979/80 to 27.3 billion naira in 1983 - a decrease of 12.5 per cent. This decrease is essentially due to the declining fortunes from oil during the period. Over 60 per cent of the contributions to the GDP in the period was made by crude petroleum, wholesale and retail trade and agriculture. While the contribution of wholesale and retail trade remained relatively constant at about 23 per cent, and that of agriculture at around 13 per cent, the contribution of crude petroleum declined from 24.1 per cent in 1979/80 to 15.1 per cent in 1983 (see table 1.6).

In external trade, export earnings of the country had, up to 1977, been able to match import bills and so the country recorded some surpluses. This was as a result of huge revenues from oil. But in 1978, there was a fall in the demand for oil and revenues from oil consequently declined - and the country recorded a trade deficit of about 2.2 billion naira. Substantial surpluses were recorded in 1979 and 1980 (primarily due to import restrictions and higher oil sales) but, with the oil glut and worldwide economic recession, deficits were recorded again in 1981/1982 despite very stringent austerity programmes introduced by the government (see table 1.7).

An examination of table 1.8 shows that between a half and two-thirds of the import bill is on capital goods (especially raw materials) and between a quarter and a third on consumer items, especially food. These indicate the very high dependence of the manufacturing sector on imported raw materials and the increasing inability of the population to feed itself due to the neglect of the agricultural sector.

### 1.9.2 Labour force

Figures from the 1963 census show that, of the 31.7 million persons aged 15 years and above, 18.3 million (57.7 per cent) were in the labour force. Participation in the labour force varied markedly by sex and age; 88 per cent of males but only 27.7 per cent of females were employed (61.8 per cent of the females were reported as homemakers). Almost all adult males over 25 years of age were reported as employed (see table 1.9).

Of the persons employed, 56.8 per cent (67.7 per cent males and 22.5 per cent of females) worked in agriculture; 15.6 per cent (8.2 per cent males and 38.9 per cent females) were in sales (mainly trading) and 12.2 per cent (12.3 per cent for males and 11.8 per cent of females) were craftsmen, production-process workers and labourers. Very low proportions of the employed persons were in professional/technical, administrative or clerical occupations (see table 1.10).

Though more recent figures are not available, it is still assumed that over half of the people in Nigeria are employed in the agricultural sector. However, with the increasing level of education of the population and greater diversification of the economy, higher proportions than shown in the 1963 census are assumed to be in the professional, administrative and clerical categories. Also a substantially greater proportion of women are assumed to be employed outside agriculture.

Some aspects of the labour force situation in the country have been of concern to the government. One of them is the high rate of entry into the labour force. Because of the relatively high and stable fertility of the past, there is a continuing increase in the size of the young population joining the labour

Table 1.9 Percentage of the population aged 15 years and over in labour force by age and sex, 1963

Age group	Percentage of total population in labour force		
	Males	Females	Total
15-19	56.1	19.2	36.8
20-24	85.7	25.5	53.0
25-34	96.2	29.2	61.1
35-44	98.1	32.9	68.2
45-54	97.9	35.0	71.0
55-64	96.6	34.1	70.3
65-74	94.2	33.5	69.1
75+	86.0	26.4	61.4
Total	88.0	27.7	57.7

Source: Federal Office of Statistics 1963, Vol III, p 37

Table 1.10: Per cent distribution of the employed population by sex and occupation, 1963

Occupation	Both sexes	Male	Female
Professional, technical and related workers	2.5	2.8	1.5
Administrative, executive and managerial workers	0.2	0.3	0.2
Clerical workers	1.3	1.5	0.5
Sales workers	15.6	8.2	38.9
Farmers, fishermen, hunters, loggers and related workers	56.8	67.7	22.5
Miners, quarrymen and related workers	0.1	0.1	-
Transport and communications workers	1.6	2.0	0.1
Craftsmen, production-process workers and labourers	12.2	12.3	11.8
Service, sports and recreation workers	4.7	4.7	5.3
Unspecified workers	5.0	0.4	19.2
Total	100.0	100.0	100.0

Source: Federal Office of Statistics 1963, Vol III, pp 39-40

force. Since these younger entrants are relatively more educated (enough to make them expect better quality jobs but not enough to substantially increase their skill or productivity), they tend not to find adequate employment opportunities in the rural areas and

so move to the cities. There is thus the twin problem of creating enough jobs for them and stemming the flow to the urban areas since by such migration the rural areas tend to have an increasing proportion of women, children and older men whose productivity is very low.

# METHODOLOGY OF THE SURVEY

## 2.1 INTRODUCTION

The organization, objectives, methodology and execution of the Nigeria Fertility Survey are presented and discussed in this chapter. The chapter is divided into 12 sections. An outline of the survey organization is given in section 2.2. The objectives of the survey and the survey sample design are discussed in sections 2.3 and 2.4 respectively. Section 2.5 contains an exhaustive discussion of the survey instruments while the pretesting of the documents in a pilot survey and the recruitment and training of fieldstaff are discussed in section 2.6. Publicity for the survey and the execution of the fieldwork are presented in sections 2.7 and 2.8 respectively. A detailed description of the sample return (including response rates) is given in section 2.9. The processing of the data, the preparation of both the preliminary and first country reports and the survey timetable are discussed in sections 2.10, 2.11 and 2.12 respectively.

## 2.2 ORGANIZATION OF THE SURVEY

### 2.2.1 The role of the National Population Commission (NPC)

The government of the Federal Republic of Nigeria selected the National Population Commission (NPC) as both the administrative and executive agency for the Nigeria Fertility Survey. The NPC is the organ of government constitutionally responsible for conducting national censuses as well as collecting and publishing all forms of demographic information for the country. It has its headquarters in Lagos and branch offices in all the 19 states of the Federation. At the time of the survey, each state office was headed by a (politically appointed) resident commissioner and most were staffed by competent technical personnel.

At the initial stages, most professional staff of the technical wing of the Commission were involved in the planning of the survey. At a subsequent stage, an ad-hoc survey organization, with the research division of the NPC headquarters at its core, was formed to execute the survey. This survey organization consisted of the following five levels of personnel:

**Level 1 Directing staff:** This consisted of the national project director and the survey director. The director of the NPC, Chief F.J. Falodun, served as the national project director and had overall responsibility for all aspects of the survey. The survey director, Dr B.C. Morah, was responsible for supervising the day-to-day project activities as well as general planning and execution of the survey.

**Level 2 Senior professional staff:** This consisted of four senior professional staff of the National Population Commission headquarters (Messrs S.A. Ogunlade, C.C. Uchendu, J. Edochie and S. Olabiyi) who were designated as zonal co-ordinators. They assisted the directing staff in all aspects of the planning and execution of the survey.

**Level 3 State officers:** These are senior professional staff of the National Population Commission based in the various state capitals of the Federation. They were responsible for the day-to-day activities of the fieldstaff operating in their states and reported to the directing staff through the zonal co-ordinators who ensured uniformity of operations and procedures throughout the country. In some states where the National Population Commission did not have qualified staff, competent officers were deployed from the state governments.

**Level 4 Fieldstaff:** These consisted of the supervisors, editors and interviewers temporarily recruited for the survey and grouped into teams. The supervisor was the team leader and was responsible for the activities of the team; he/she liaised between the team and the state officer. The editor was responsible for the quality of work of the interviewers.

**Level 5 Office staff (checkers, coders and transcribers):** The coding of the questionnaires and other survey documents was done by a group of 20 junior staff specially recruited and trained for the exercise. They were supervised by four specially trained junior staff of the National Population Commission as well as the senior officers listed above. There was the need at a later stage to transcribe the coded data onto specially designed coding sheets. This transcription was done by the keypunch staff of the computer division of National Population Commission.

### 2.2.2 International assistance and collaboration

Substantial financial assistance for the survey was provided by the United Nations Fund for Population Activities (UNFPA). All aspects of the planning and execution of the survey were

done with the assistance and collaboration of the International Statistical Institute via the World Fertility Survey (WFS) headquarters in London. A country co-ordinator (based in London) was appointed for the survey and WFS experts made several visits to the country to assist with the survey and questionnaire design, the training of fieldstaff, the conduct of the pretest and main fieldwork and with the computer programming. All data entry and processing, as well as the preparation of the preliminary and first country reports, were done at WFS headquarters in London. There was, however, no WFS resident advisor or consultant on the survey in Nigeria.

### 2.2.3 The language problem

As already noted in sections 1.5.1 and 1.5.2, there are over 200 languages (and ethnic groups) in Nigeria. The organization, planning and execution of the survey had to take account of this phenomenon in the decision to translate some of the survey documents into the most popularly spoken languages, in the recruitment and training of fieldstaff, and in the use of interviewing teams working only in a particular state during the pretest and main fieldwork. Specific references to procedures adopted in particular instances in recognition of this problem are contained in subsequent sections of this chapter.

## 2.3 OBJECTIVES OF THE SURVEY

### 2.3.1 National objectives

The WFS represents, for Nigeria, the beginning of a new series of efforts geared towards generating the adequate and reliable demographic data needed for planning and decision-making, as set out in the nation's Fourth National Development Plan. The specific objectives of the survey, both immediate and long range, are as follows:

#### Immediate objectives:

- (a) to obtain reliable and scientific information on the levels and patterns of fertility in Nigeria;
- (b) to obtain information on fertility among the various subpopulations in Nigeria;
- (c) to obtain information on the knowledge and practice of contraception in the country;
- (d) to obtain information that will enhance understanding of the factors underlying the high level of fertility in the country; and
- (e) to provide information that will help develop a comprehensive population policy for Nigeria.

#### Long-range objectives:

- (a) to serve as a model for other surveys on specific aspects of the Nigerian population;

- (b) to provide data that will help various departments and agencies in the country (eg Ministry of National Planning, Ministry of Health and Social Welfare, Planned Parenthood Federation of Nigeria, etc) evaluate or formulate their programmes of services; and

- (c) to increase Nigeria's capacities for fertility or other demographic research.

### 2.3.2 International comparability

The NFS was carried out as part of the World Fertility Survey (WFS) programme. It is thus part of an international fertility survey research effort of which the primary objective is, for each participating country, to collect and analyse high quality data on levels, trends, patterns and differentials in fertility that are standardized and which, therefore, permit comparisons from one country to another. It is hoped that such data, which had been particularly lacking for Nigeria, will satisfy the need among policy-makers and experts throughout the world for more information and improved knowledge about population trends and associated factors.

## 2.4 SAMPLE DESIGN

### 2.4.1 Sample size

Nigeria is divided into 19 states. One of the earliest and most fundamental decisions in designing the NFS was that the survey would provide statistically reliable estimates of fertility and other related parameters for the country as a whole and not for its component states. Any attempt to provide reliable data for each of the 19 states would have necessitated a very large sample that would have tremendously increased the total cost of the exercise.

After considerations of cost and an optimal sample size for obtaining reliable estimates on a national level, a sample size of 10,000 women was decided upon. The survey universe was to consist of all Nigerian women aged between 15 and 49 years of age, irrespective of marital status. In order to allow for non-response and other possible losses, the target sample that would yield the desired completed interviews was set at 12,500.

### 2.4.2 Sample frame and selection of PSUs

The only existing sample frame from which the NFS sample could be drawn consisted of 111,831 enumeration areas (EAs) into which the country was divided for the purposes of the 1973 census exercise. As might be expected from a very large operation that was conducted over a decade ago using rather poorly trained staff operating under difficult conditions, the intrinsic quality of the EA sketches, as well as the exhaustiveness and exclusiveness of coverage of the mapping exercise, was relatively low. However, the National Population Commission had in 1980 conducted a nationwide National Demographic Sample Survey

(NDSS) using a sample stratified by state and rural-urban status and consisting of 912 EAs, made up of 48 EAs from each of the 19 states. The sketches for these EAs had been updated for the exercise and were available. Moreover, some estimates of population of the 912 sample EAs could be obtained from the first phase of the NDSS. For the above reasons, it was decided that the NFS sample should be a subsample of the NDSS sample, with the provision that the NFS sample be self-weighting.

A subsample of 250 EAs (182 rural and 68 urban) was consequently selected from the NDSS sample of 912 EAs (764 rural and 148 urban) to constitute the NFS sample. This subsample was drawn in such a way that the overall selection probabilities of each EA within the rural and urban sectors were proportionate to the population of the EAs as obtained in the first phase (quick-count) of the NDSS, thus yielding a probability proportionate to size (PPS) sample. By selecting households with probability inversely proportionate to size in each EA, it was planned to achieve a self-weighting sample in each sector, rural and urban.

The attempt to make the NFS sample self-weighting was, however, subsequently abandoned when it was realized that sample takes (ie the number of interviews) in each EA would vary very widely (between 20 and 200) because of the huge discrepancies between the quick-count population of the EAs and the current reality. This was confirmed by independent estimates made in a mapping

operation of the NFS sample EAs (see section 2.4.3). Such a huge variation in sample takes was considered not only statistically inefficient but also administratively inconvenient. It was therefore decided to adopt an equal sample take of approximately 50 women in each EA, and to subsequently weight the data to correct for the unequal sample probabilities that this implied. A detailed description of the sample design is given in appendix 11. A breakdown of NFS sample EAs by state and strata is shown in table 2.1.

#### 2.4.3 Mapping and segmentation of primary sampling units (PSUs)

A scrutiny of updated EA sketches prepared prior to the NDSS exercise and the sketches of the same EAs drawn up by the fieldstaff during the exercise revealed problems with respect to correct identification of EA boundaries. A preliminary field visit to nine EAs in two states (Lagos and Oyo) confirmed this observation. Accordingly, a major mapping operation was conducted for all 250 EAs selected for the NFS. During this operation, a population estimate for each EA was obtained and each EA estimated to have a population of more than 1,000 persons was subdivided into segments of 500-600 persons. One such segment was subsequently selected at random for the fieldwork in each such segmented EA.

#### 2.4.4 Final selection of sampling units

The final stage of sampling was entrusted to the interview teams. Each team supervisor

Table 2.1: NFS sample by state and rural-urban strata

State	Number of EAs selected			Number of interviewing teams <sup>a</sup>
	Rural	Urban	Total	
Anambra	16	4	20	2
Bauchi	8	2	10	1
Bendel	8	4	12	2
Benue	8	2	10	1
Borno	8	4	12	2
Cross River	16	2	18	2
Gongola	8	2	10	1
Imo	16	2	18	2
Kaduna	16	4	20	2
Kano	16	4	20	2
Kwara	4	4	8	1
Lagos	2	8	10	1
Niger	4	2	6	1
Ogun	4	4	8	1
Ondo	8	4	12	2
Oyo	12	8	20	2
Plateau	8	2	10	1
Rivers	8	4	12	2
Sokoto	12	2	14	2
Total	182	68	250	30

a Size of teams varied according to workload.



compiled a listing of ultimate sampling units (SUs) in each EA (or segment of EA). The SU was normally a household but, in cases where household identification could not be made quickly, the dwelling unit (containing one or more households) or the structure (containing one or more dwelling units) was listed and thus became the SU. An estimate of the number of eligible respondents (ER), that is all women aged 15-49, was made for each SU. The number of ERs for all listed SUs was added up and divided by 50 to obtain a sampling interval for the EA (or segment thereof). The households to be interviewed were systematically selected from this list using the obtained sample interval (and a random start calculated as half of the sampling interval).

#### 2.4.5 Weighting

Since the NFS sample was eventually not self-weighting, the data had to be subsequently weighted to ensure unbiased estimates resulting from the unequal selection probabilities of respondents in each EA. The weighting procedure adopted also had to take two other factors into consideration: non-response and some observed defects in the estimation of EA population during the mapping exercise. Though the overall response rates, both for household and individual interviews, were high, there were some considerable variations by strata and regions as shown in section 2.8. Furthermore, experience during the fieldwork exercise showed some undercoverage in some areas. Adjustment for both had to be made in the weighting procedure.

Full details of the weighting procedure are contained in appendix 11. Basically, an overall probability of selection was calculated for each EA accounting for the interval of selection and the number of segments. The reciprocal of the overall probability constituted the absolute weight. This weight was further adjusted for non-response and possible effects of underlisting (separately for households and individual respondents). For the tabulations in this report, relative sample weights have been used such that the total weighted sample size is equal to the number of households or individuals actually interviewed.

Unless stated otherwise the data given in all tables of subsequent chapters of this report (ie from chapter 3 onwards) are weighted.

#### 2.4.6 Sampling error

As with any other survey, the particular sample of EAs selected for the NFS is only one of a very large number of possible probability samples that could have been selected using the same sample design. Estimates of fertility or other parameters obtained from these different possible samples would differ slightly from each other and from the true population value. The average of the estimates from the different possible samples is called the expected value. The sampling error of a survey estimate (or the standard error of an estimate) is a measure of

the (absolute) difference between the observed sample estimate and the expected value of that estimate.

To aid readers or users of data in this report, the standard error of estimates (or sampling error) of certain key variables, and the range in which the true population value of that variable should lie, have been calculated and presented in appendix 12. For readers unfamiliar with the concept of standard error, a brief description of the concept and its interpretation, as well as the methods used for their computation for the variables of interest, precede the tables of sampling errors.

### 2.5 SURVEY INSTRUMENTS

#### 2.5.1 Preparation of survey instruments

One of the first major tasks undertaken as part of the preparatory activities for the NFS was the design of instruments for the collection of information, for the training of the fieldstaff and for controlling, co-ordinating and documenting the activities of all staff involved in the execution of the survey, particularly the main fieldwork. Special efforts were made to prepare separate documents for the different units of observation, different categories of staff involved in the fieldwork and for different envisaged activities. Thus there was high degree of correspondence between units of observation, fieldstaff and activities and the survey documents. In all, 12 survey documents, including three instruction manuals, were prepared for the NFS. As is the case with all the surveys conducted as part of the WFS programme, most of these documents, particularly the household schedule, individual questionnaire and the training manuals, were prepared to conform to the relevant WFS prototypes, though with adaptations and extensions where necessary.

#### 2.5.2 The Household Schedule (NFS1)

A separate household schedule was prepared for the interview of selected households in the NFS sample of EAs. Generally the household schedule, as used in WFS surveys, fulfils three purposes, namely:

- (a) it provides a listing of all household members needed to identify respondents eligible for individual interview;
- (b) it provides denominators needed for calculating certain rates through data collected on household members (such as age, sex, residence etc); and
- (c) it provides useful contextual data on factors which may relate to fertility.

In the case of the NFS, the household schedule was used in collecting information on both the members of each household and on certain characteristics of the household.

The section on household members was a

shortened version of the WFS prototype. It provided for the collection of information for each household member regarding name, relationship, residence (de jure and de facto), sex, date of birth, age and eligibility for individual interview. To be eligible for the latter, a household member had to be female, aged between 15 and 49 years and must have spent the previous night in the household. The section on the household collected information on the environmental conditions of the household as well as the ownership or availability of certain items or amenities.

The decision to adopt a shortened version of the WFS prototype schedule was based on the following reasons:

- (a) the need to limit the workload and thus the cost of the survey;
- (b) the fact that most of the information left out in the prototype had been collected a year earlier in the National Demographic Sample Survey (NDSS); and
- (c) most of such information left out of the prototype applied to females in the reproductive ages to whom the individual questionnaire would be administered; thus the same information could be collected from that questionnaire.

Information to be collected from this household schedule was considered particularly important in that it could be used to compare estimates from the NDSS conducted in 1980. A copy of the household schedule is attached as appendix 1 of this report.

### 2.5.3 The individual questionnaire (NFS2)

The individual questionnaire was constructed from the WFS prototype core questionnaire and incorporated the module on factors other than contraception affecting fertility (FOTCAF) and elements of the family planning module. The modules are sets of supplementary questions on specific topics that can be added to the core questionnaire in whole or in part.

The NFS individual questionnaire consisted of eight sections, viz:

- (i) respondent's background;
- (ii) maternity history;
- (iii) birth intervals and breastfeeding;
- (iv) marriage history;
- (v) contraceptive knowledge and use;
- (vi) fertility preferences;
- (vii) work history; and
- (viii) current (or last) husband's background.

#### *Respondent's background*

In this section information about the respondent was collected on: location, type of place of past and present residence, age, educational level (or literacy), ethnic group and religion. Most of these were considered as part of the explanatory variables to be used in

the analysis of fertility and contraceptive behaviour.

#### *Maternity history*

Information on the lifetime reproductive performance of the respondent was collected in this section. This involved collecting very detailed information on the maternity history of the woman. In order to obtain as complete a record as possible a very elaborate and detailed procedure was adopted. Firstly the total number of living children the woman had was obtained by sex and current place of residence (at home or away from home). The number of the dead children by sex, if any was then obtained. The numbers from these two sources were added and probed for correctness (total number of children ever born). Information on the woman's age at menarche and at first intercourse, as well as her current pregnancy status, duration of pregnancy and sex preference of child was obtained. It was then ascertained whether the respondent had experienced pregnancies ending in a non-live birth, and if so, the total number of such events. Then followed the listing of all the live births using the integrated pregnancy history approach. For each pregnancy ending in a live birth, arranged in a chronological order from the first to the most recent, questions were asked on the name of child, sex, date of birth, current survival status, and, if dead, the age at or date of death. For pregnancies that did not end in live birth, the duration and cause of termination were ascertained. There were probes for stillbirths and pregnancy intervals.

#### *Birth intervals and breastfeeding*

Because of the important effects on fertility performance of breastfeeding, post-partum sexual abstinence and culturally determined sexual behaviour in traditional societies, section 3 of the NFS questionnaire was devoted to collecting information on such issues. The following information on the open and last two closed birth intervals was sought: incidence and duration of breastfeeding, supplementary feeding, post-partum amenorrhoea and post-partum sexual abstinence. Questions were also asked on ante- and post-natal care.

#### *Marriage history*

This section collected detailed information on the current and past marital or conjugal status of the respondent. This included, for the ever-married women, the dates of the beginning and end (or marital duration) of each marriage or union, the presence of other wives, current marital status and coital frequency and, for dissolved marriages, the cause of dissolution.

#### *Contraceptive knowledge and use*

Nowadays, there is no known society in which reproductive performance approaches its biological maximum. Some sort of fertility regulation is almost always practised, whether consciously or not. Thus an integral part of

most fertility surveys is to discover those practices which tend to affect reproductive performance. This was done in section 5 of the NFS questionnaire.

Questions in this section were concerned with obtaining information on the levels of awareness (or acquaintance with) and use of various contraceptive methods. First each respondent was asked to name the contraceptive methods she was aware of and if she had ever used them. For each method that was not spontaneously mentioned, a brief description of the method was read out to her and her knowledge of the method was ascertained; if she knew it she was asked whether she had ever used it. If a woman indicated knowledge (either spontaneously or after probing) of any female scientific method but had never used it, her knowledge of a source for obtaining that method was ascertained. Finally each respondent was asked if she had ever heard of or used any other method apart from those she had mentioned or which were described to her. The list of contraceptive methods in this section included the so-called folk methods such as herbs, armbands, waistbands, neckbands, rings and charms which previous experience showed as being used by some segments of the Nigerian population. There were also questions on current use and on the use of contraceptives in the open and last two closed birth intervals (where applicable). Respondents who had never used any method were asked whether they intended to use any in the future.

#### *Fertility preferences*

This section contained questions aimed at obtaining information on the future fertility intentions of the respondent, her spouse (and mother-in-law, if applicable), sex preference, ideal and desired birth intervals and family size.

#### *Work history*

Participation in the labour force at the time of interview, before and after marriage, the extent of such participation and the occupational status of the woman are known factors that affect her fertility behaviour. Questions in this section were aimed at obtaining all such information.

#### *Current (or last) husband's background*

Questions in this section enquired about the background characteristics of the respondent's current (or last) husband, if she had ever been married. Such characteristics include his age, education, literacy, religion, ethnic group and occupation.

A copy of the individual questionnaire is attached as appendix 2 of this report.

#### **2.5.4 The community questionnaire (NFS8)**

The reproductive behaviour of individuals is not only affected by their personal demographic and socio-economic characteristics but also by

the characteristics of the socio-cultural milieu in which they live and by the interaction of their personal and group characteristics. It was thus considered necessary to collect some information on the characteristics of the communities in which the respondents lived as such information might further enhance the understanding of their reproductive behaviour and attitudes.

Such information was collected only in the rural sector and by means of a community questionnaire which enquired about the availability of various communication, educational, social, health and public utilities and services. These community level data were obtained primarily from community leaders by the team supervisor. A copy of the community questionnaire is attached as appendix 3.

#### **2.5.5 Translation of the individual questionnaire and household schedule**

Both the individual questionnaire and the household schedule were translated into six Nigerian languages viz: Hausa, Ibo, Yoruba, Efik, Nupe and Kanuri. These languages were decided upon after obtaining a linguistic distribution of the sample EAs; they are spoken in about 90 per cent of the sample EAs.

The translation of these data-collecting instruments was done in accordance with WFS recommendations and procedures; the primary objective was to avoid any biases or misinterpretations that might arise if each interviewer was allowed to translate the questions during each interview since most of the potential respondents were not literate in the English language. The translation procedure followed the typical WFS procedure of using two translators for each language version. The first translated the documents from English to the local language and the second from the local language back to English. A reconciliation session was then held between the two translators and the survey director during which any inconsistencies in the two translations were reconciled.

#### **2.5.6 Instruction manuals and survey control documents**

A very comprehensive manual on all aspects of the survey was prepared separately for the interviewers and supervisors. The interviewer's manual included descriptions of the objectives and organization of the survey, the specific roles of the survey personnel, the techniques of interviewing, the tasks of the interviewer, definitions of key concepts or variables and step-by-step detailed instructions on how to complete each section of the household schedule and individual questionnaire. The supervisor's (and editor's) manual contained detailed instructions on the conduct of the listing and sample selection exercise, techniques of supervision and quality control of completed survey documents, how to handle and minimize non-response and

instructions on how to complete other survey documents.

The other survey documents include the following:

- (a) Individual data extract (NFS3): This is a one-page document on which responses to certain key questions (used for the preparation of the preliminary report) were transferred by the team editor after scrutinizing each completed questionnaire and finding it adequate (appendix 4).
- (b) Listing and sample selection form (NFS4): All sampling units (households, dwelling units or structures) in each sample EA were listed in this document. The households to be interviewed were selected from this list (appendix 5).
- (c) Sample assignment and outcome (NFS5): This is a control document for each EA kept by the supervisor and showing which selected sampling units were assigned to each interviewer and the outcome of such assignment (appendix 6).
- (d) Interviewer record sheet (NFS6): This is a record sheet kept by each interviewer showing what sampling units were assigned to her in each EA and the outcome of her attempts to secure interviews at those sampling units (appendix 7).
- (e) EA summary and checklist (NFS7): This document was completed by the supervisor after the team had finished interviewing in an EA. It is a record of all activities undertaken and the number of survey documents of different types completed for that EA (appendix 8).
- (f) Household continuation sheet (NFS9): The household schedule was designed to collect information for as many as 50 household members. If, however, any household exceeded this number, information on the other members was collected on this form (appendix 9).

## **2.6 PRETEST, RECRUITMENT AND TRAINING OF FIELDSTAFF**

### **2.6.1 Pretest**

As in any other survey, a pretest (pilot survey) of the NFS questionnaires and other survey documents was carried out. The primary objective of the pretest was to test the questionnaires with a view to ensuring that the questions were in a logical sequence, that the translations were comprehensible, appropriate and meaningful and that the precoded answers were adequate. Other objectives were:

- (i) to give the technical staff a chance to practice the execution of the survey on a small scale;
- (ii) to obtain an indication of the general receptivity of the population to the

survey in general and to some sensitive questions in particular;

- (iii) to ascertain the preference for using either males or females as interviewers, editors or supervisors;
- (iv) to obtain some information on operational characteristics of the survey such as average interview duration and the daily productivity of the interviewers; and
- (v) to test the effectiveness of specially designed techniques for obtaining more accurate data on age.

Owing to the number of fieldstaff needed and linguistic versions of the questionnaires, the pretest was carried out in three separate phases and centres at Ibadan (south-west) Kaduna (north) and Enugu (south-east). The pretest in each phase lasted for three weeks; two weeks were devoted to classroom training (including role playing) and one week to fieldwork in non-sample EAs, using the interviewer's manual as a guide. A total of 40 fieldstaff were employed and trained for this purpose. (Most of the staff were later deployed as either supervisors or editors during the main fieldwork.) All phases of the pretest were conducted between 3 March and 12 June 1981. Final modifications to the translations, content and design of the questionnaire, and to the interviewer's and supervisor's manuals were made on the basis of experience gained from the pretest.

### **2.6.2 Recruitment of fieldstaff**

Because of the language situation and the sensitivity to demographic issues in the country, fieldstaff for the NFS fieldwork were recruited separately (though simultaneously) for each of the 19 states of the Federation. The recruitment was done by NPC headquarters project staff with the assistance of NPC state officers. All fieldstaff were natives of the states they were to work in and, in most cases, possessed a minimum educational qualification of West African School Certificate or the General Certificate of Education (ordinary level). In addition, they were able to write, read and speak one of the local languages into which the household schedule and questionnaire were translated. Because of the experience gained from the pretest, preference was given to females as interviewers and field editors and to males as supervisors. A total of 232 fieldstaff were recruited and trained; of these 188 (30 supervisors, 30 editors and 128 interviewers) were finally deployed for the fieldwork.

### **2.6.3 Training of fieldstaff**

As was the case for the pretest, training of fieldstaff was carried out in three separate centres and phases. The duration of training in each of the centres was three weeks. The first two weeks were devoted to classroom lectures and demonstrations on the techniques of interviewing, the questionnaires and other

survey documents, using the instruction manuals as guides. Potential supervisors and editors (mostly pretest fieldstaff) were separated from the others and given special training in the second week. The third week was devoted to fieldwork. The trainees were divided into teams with prospective supervisors and editors as leaders. Each team was then taken to non-sample EAs near the training centres where they could interview respondents in the languages into which the questionnaire had been translated. A total of 232 trainees attended the training at the following centres and dates:

- Ibadan: 10-28 August 1981, for 76 fieldstaff from Bendel, Oyo, Ondo, Ogun, Lagos and Kwara states;
- Kaduna: 31 August - 18 September 1981 for 95 fieldstaff from Kaduna, Kano, Niger, Benue, Bauchi, Borno, Plateau, Gongola and Sokoto states;
- Enugu: 21 September - 9 October 1981, for 61 fieldstaff from Imo, Anambra, Rivers and Cross River states.

The original plan was to start the fieldwork immediately after the training in each centre. Unfortunately financial problems prevented the start of fieldwork after the training at Ibadan and Kaduna; the trainees had to be dispersed after the completion of training. However, these financial difficulties had been resolved by the time of the training at Enugu and fieldwork in the south-eastern states of Imo, Anambra, Rivers and Cross River started immediately after the training.

This dispersal of trainees from the Kaduna and Ibadan centres necessitated a second training session for the fieldwork. A decision was taken in March 1982 that the fieldwork could be completed for the rest of the country. The previously trained fieldstaff who were still available had to be recalled and new recruits employed to replace those no longer available. A two-day refresher course was designed for the former and a one-week crash course for the latter. The retraining took place at the following centres and on the following dates:

- Ibadan: 5-10 April 1982 for 53 trainees from Lagos, Ogun, Ondo, Oyo, Bendel and Kwara states;
- Kaduna: 19-24 April 1982 for 43 trainees from Kaduna, Kano, Sokoto and Niger states;
- Bauchi: 26 April - 1 May 1982 for 38 trainees from Bauchi, Plateau, Borno, Gongola and Benue states.

Fieldwork commenced in all the states immediately after this short retraining period.

#### **2.6.4 Training of statistical staff for coding, editing and data transcription**

Special training sessions were held for the statistical staff engaged in the checking,

coding and editing of the survey documents completed during the fieldwork. This special training lasted for one week and the staff involved were statistical clerks of the NPC, who had assisted in the NFS fieldwork, and 20 persons (some of whom were interviewers during the fieldwork) specifically recruited for the exercise.

The training centred on lectures and demonstrations on the entire range of NFS survey documents (the household schedule, individual questionnaire and control documents), and on the general principles of questionnaire editing and coding. The latter was done with the NFS codebook as a guide. The trainees were made to play the roles of field interviewers or editors, to complete the schedule, questionnaire and control documents in simulated interviews and to edit, check and code those completed documents. Special attention was paid during the training to the reconciliation of possible differences arising in the dating of events or live births.

Due to problems with the data entry system, the coded data were later transcribed onto intermediate coding sheets by the key punch staff of the computer division of the NPC. This category of staff was given a two-day intensive training on the nature of data they were to transcribe and the correspondence between the coding boxes in the questionnaires and boxes in the intermediate coding sheets. The intermediate coding sheet was designed to allow for checking of internal consistency of the information, especially the pregnancy and marriage histories and certain key variables.

## **2.7 PUBLICITY**

The survey was very widely and vigorously publicized throughout the country since such publicity was considered a prerequisite for obtaining the co-operation of local authorities and potential respondents. The publicity was carried out at four levels. First, two months before the start of the fieldwork, letters were sent to the heads of civil service and the permanent secretaries of the Ministries of Local Government and Economic Development of each state informing them of the survey and the need for the co-operation of their governments. Secondly, the resident commissioners of the National Population Commission in each state (or their officers) sent letters to the secretaries of all local government areas in which the sample EAs were located informing them of the objectives of the survey and the need to extend such information to the affected village or ward heads. Thirdly, in the week preceding the start of fieldwork, a publicity blitz was mounted through the national and state mass media. In many states, elaborate press conferences for representatives of all the mass media (radio, television, newspapers) were held. In other states, press releases were issued to these media houses; the releases were either read or published as news or advertisements not only in English but also in the local languages. Finally, and most

important of all, NPC officers in each state, as well as the team supervisors, paid visits to the local head of each EA before the arrival of the interviewing teams.

## 2.8 THE MAIN FIELDWORK

### 2.8.1 Duration of fieldwork

The main fieldwork was conducted first in the south-eastern states of Anambra, Imo, Rivers and Cross River between 12 October 1981 and 15 March 1982 and in the rest of the country between 13 April and 15 August 1982. Originally, it had been planned to carry out the fieldwork in a three-month period in all states simultaneously. Due to the financial and logistical problems mentioned above, the fieldwork had to be launched in four different phases, each one of them being completed in approximately three to four months. The actual dates of fieldwork in each state are shown in table 2.2.

### 2.8.2 Organization of fieldstaff

The fieldstaff were grouped into 30 teams for the main fieldwork. Each team consisted of a supervisor (usually male), a field editor and four to five interviewers (mostly females). Each team was assigned a number of enumeration areas (not necessarily geographically contiguous) within the state and was given a landrover and a driver for easy mobility between EAs. The number of teams in each state varied according to the number of EAs to be covered (see table 2.1). The supervisor was the team leader and all teams in each state worked directly under the state officer of the National Population Commission.

### 2.8.3 Fieldwork procedures

The main fieldwork consisted primarily of the following:

- listing of all sampling units (primarily households but sometimes dwelling units or structures) within each EA (or segment);
- selecting the sampling units to be interviewed from the above list through a standardized procedure;
- completing the household schedule for all selected sampling units and determining the eligible women for individual interview;
- completing individual questionnaires for all eligible women; and
- completing other control documents and, for rural EAs only, a community questionnaire.

The procedure for the fieldwork in each enumeration area was the same. First, the team supervisor, with or without the assistance of the team editor and other team members, compiled a comprehensive list of all sampling units (households, dwelling units or structures) in the EA or selected segment thereof, using NFS4, the sample listing and selection form. From such a listing, he/she selected the sampling units to be interviewed. The process of selection was standardized and the procedures were laid down in the sample listing form. Basically it involved dividing the estimated total number of eligible respondents by 50 (the target number of interviews to be conducted in each EA) to obtain a sampling interval which was then

Table 2.2: Dates of fieldwork by state

State	Date started	Date ended
Anambra	12 October 1981	31 January 1982 <sup>a</sup>
Imo	12 October 1981	31 January 1982 <sup>a</sup>
Rivers	12 October 1981	19 February 1982 <sup>a</sup>
Cross River	12 October 1981	15 March 1982 <sup>a</sup>
Lagos	13 April 1982	16 July 1982
Ogun	13 April 1982	17 July 1982
Ondo	13 April 1982	13 July 1982
Oyo	14 April 1982	21 July 1982
Bendel	14 April 1982	19 July 1982
Kwara	12 April 1982	12 July 1982
Kano	26 April 1982	14 August 1982
Kaduna	26 April 1982	9 August 1982
Sokoto	26 April 1982	4 August 1982
Niger	26 April 1982	9 August 1982
Gongola	3 May 1982	15 October 1982
Benue	3 May 1982	15 October 1982
Bauchi	3 May 1982	18 August 1982
Plateau	3 May 1982	15 October 1982
Borno	6 May 1982	13 August 1982

<sup>a</sup> Fieldwork was suspended between 19 December 1981 and 3 January 1982 to avoid heavy population movements during the Christmas and New Year period.

applied to the list, using a random start (computed as half the sampling interval). In any EA where the number of estimated eligible respondents was less than 50, the sampling interval would be less than one and all eligible respondents were interviewed.

After this initial selection, the supervisor assigned all selected sample units to the interviewers, using NFS5, the sample assignment and outcome form. Each interviewer then proceeded to the unit assigned to her and first administered the household schedule. The interviewer then completed the individual questionnaire for eligible respondents and handed over all such documents to the team editor who checked to ensure that all relevant questions were correctly answered, that the skip patterns were properly followed and that the obtained responses were internally consistent.

For each correctly completed and checked individual questionnaire, the editor completed NFS3, a single page individual data extract. A special form, the interviewer record sheet (NFS6), was kept by each interviewer to record all assignments and their outcome in each EA.

For all rural EAs, the supervisor completed the community questionnaire (NFS8). This document records information on the availability of certain facilities in the EA. Finally when all work had been finished in the EA, the supervisor completed NFS7, the EA summary and checklist. On this document are listed all types of activities undertaken by the team in the EA, the number of survey documents (of different types) completed and other characteristics of the interviewing situation in the EA (such as dates of arrival and departure, travel time, etc). The team then proceeded to another EA assigned to it and repeated the same procedures.

In all rural EAs, start of work by the teams was always preceded by a visit to the local headman by the team supervisor in order to secure the collaboration of the local people. This approach proved to be very effective. As will be seen further on in this chapter, individual refusal was almost non-existent, and a refusal for the full EA occurred only once.

#### **2.8.4 Co-ordination, supervision and data retrieval**

The activities of the interviewing team(s) in each state were directly supervised by the state officers of the NPC. Assignment of EAs to the team(s) and the logistics of their travel between EAs were worked out between the state officers and either the survey director or the zonal co-ordinators. All necessary fieldwork materials (survey documents, stationery, etc) were kept at state offices of the NPC for distribution to fieldstaff.

In most instances, the state officers visited each team in each EA to supervise their activities and solve any problems that might have arisen. In addition, the zonal

co-ordinator (each of whom was assigned to four states on average) visited the state officers and teams periodically to supervise their activities and liaise between them and the survey director at NPC headquarters.

At the end of interviews in an EA, all completed survey documents were returned to the state office of the NPC either by the team supervisor or were retrieved directly by the state officer within a week of completion of work in that EA. Final retrieval of all survey documents (completed or otherwise) and materials to NPC headquarters was done only after the completion of fieldwork in each state.

#### **2.8.5 Major problems encountered in the fieldwork**

As would be expected in any survey of the size of the NFS, many problems were encountered during the main data collection stage. Such problems included the following:

- (a) **Transportation:** Each interviewing team was given a landrover for ease of mobility within and between EAs. In a few instances, the vehicles were not immediately available when needed. Breakdowns were also common, often causing considerable delays in the fieldwork. In the river areas, boats had to be hired since the NPC did not have its own.
- (b) **Accessibility:** Access to some EAs, especially in the river and swampy areas, was difficult. Incidents of the only available roads to EAs being washed away by floods were common. In the northern parts of the country, the only access to some EAs was by foot from the nearest motorable road.
- (c) **Supervision:** Supervision of fieldwork was found to be weak in some instances. Some of the supervisors needed help to do their jobs properly, especially at the early stages of the fieldwork. Many of the state officers were not very capable of rendering the required level of assistance, thereby putting considerable supervisory burdens on the zonal co-ordinators who had huge areas to cover.
- (d) **Funds:** Release of funds for the payment of fieldstaff was sometimes erratic. This led to some frustration on the part of fieldstaff and, in two cases, to cessation of fieldwork until such payments were made. The delay in release of funds also affected operations of the team eg money for fuel or repairs.
- (e) **Survey materials:** All survey documents and materials were supplied to the fieldstaff in full and on schedule. The supply of tape recorders was, however, late in some states and not as many interviews as desired could be tape recorded. Temporary shortages of some survey documents were also experienced in a few states.

(f) Timing of fieldwork: The timing of the fieldwork in the south-eastern part of the country coincided with the Christmas and New Year period - a time of considerable population movement. The fieldwork had to be temporarily suspended then. In the other parts of the country, the fieldwork period coincided with the rainy season, with considerable slowing of work. The rains could be so heavy and long lasting that it was impossible to do any fieldwork.

(g) Non-co-operation: Despite the intensive publicity and public relations work undertaken to ensure the co-operation of potential respondents, residents in one EA bluntly refused to be interviewed.

On the whole, most of these problems were solved efficiently, as shown by the results of the fieldwork.

## 2.9 RESPONSE RATES

In almost all surveys, the number of completed interviews is less than the number anticipated in the survey design. A number of factors account for this. For instance, some clusters in the sample may not be covered due to inaccessibility, non-identifiability or refusal to be interviewed at the cluster level. Furthermore, the fieldstaff may be unable to contact selected households, or individuals in the cluster may refuse to be interviewed. Vigorous attempts were made during the NFS fieldwork to minimize the incidence of non-response and the fieldstaff had been drilled in the measures to take to achieve this. This section examines the effectiveness of these measures. The results are presented and discussed simultaneously for the household and individual interviews to show how both are intrinsically and procedurally related, and in detail for each sector and geographical region of the country because of the potential usefulness of the information in the planning of future social, economic or demographic surveys. As already stated in section 2.4.1, the sample design of the NFS was drawn in such a way as to secure completed interviews with 10,000 women aged 15-49 who were de facto residents of their respective EAs.

### 2.9.1 Analysis of sample returns

#### *Coverage*

Out of the 250 NFS sample EAs, household and individual interviews were successfully carried out in 248 EAs. One of the EAs not covered (in Anambra state) was an institutional EA (a technical college) with no resident population whatsoever. Residents in the other EA not covered (in Oyo state) completely refused to be interviewed.

#### *Listing and selection of sampling units*

As stated in section 2.4.4, the ultimate sampling unit for the NFS was the household. However, in instances where the fieldstaff

could not ascertain the exact number of households, the dwelling unit or structure was listed as the ultimate sampling unit. This was very rarely done and, in any case, the households were properly identified at the time of the actual interview.

According to table 2.3 (unweighted figures), a total of 21,453 sampling units were listed during the NFS. Out of this number, 15,231 (70.1 per cent) were located in rural, and 6,222 (29.9 per cent) in urban, EAs. Since the fieldwork was not designed to cover all ultimate sampling units, 9,361 (43.6 per cent of all listed sampling units) were selected for interview, with an overall sampling fraction of 2.3. Of the 9,361 selected, 6,709 (71.7 per cent) were in the rural, and 2,652 (28.3 per cent) in the urban, sector. These numbers, however, constitute almost the same proportion (43.9 per cent and 42.6 per cent) of all listed ultimate sampling units in the rural and urban sectors respectively (table 2.3).

Almost all (98.7 per cent) the selected ultimate sampling units were occupied at the time of interview. Only 81 (0.9 per cent) of them were unoccupied and the addresses of 44 (0.5 per cent) could not be found when the interviewers visited to conduct the interviews. There is virtually no regional or sectoral variation in the obtained occupancy rates (see table 2.3 b).

#### *Household interviews*

Interviews were successfully conducted in 8,624 of the 9,236 selected and occupied households. This represents a response rate of 93.4 per cent for the household survey. Non-response was primarily due to members of the sample households being away at the time the survey team was in the EA (3.7 per cent) or the survey staff not finding any competent respondent in the household to provide answers to the household schedule (1.9 per cent). Only 1.1 per cent of the households refused to be interviewed.

For the country as a whole and for each of the regions except the North-west, response rates were always slightly higher in the rural than in the urban areas. This is a typical phenomenon since urban residents are often more difficult to contact and are more likely to refuse to be interviewed. These observations are justified by an examination of reasons for non-response by sector; in all the regions (again except the North-west) and for the entire country, the proportion of households refusing to be interviewed and those with no competent respondent at home are often twice (or more) for the urban than for the rural sector (table 2.3c).

As many as 49,114 members were listed in the 8,624 successfully interviewed households, yielding an average household size of 5.70. The average household size was higher in the rural (5.84) than in the urban (5.32) areas; this pattern is consistent for the regions



Table 2.3: Summary of results for household and individual interviews by geographical regions<sup>a</sup> and rural-urban status

Activities		North-east		North-west		South-east		South-west		Total		Grand total
		Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	
(a) <u>Listing of sampling units (SUs)</u>												
Number of SUs listed		3,545	1,182	4,685	1,417	4,515	1,197	2,486	2,426	15,231	6,222	21,453
Number selected		1,635	507	1,484	421	2,088	415	1,502	1,309	6,709	2,652	9,361
Selection interval		2.2	2.3	3.2	3.4	2.2	2.9	1.7	1.9	2.3	2.3	2.3
Per cent of listed SUs selected		46.1	42.9	31.7	29.7	46.2	34.7	60.4	54.0	44.0	42.6	43.6
(b) <u>Selected sampling units</u>		1,635	507	1,484	421	2,088	415	1,497	1,314	6,704	2,657	9,361
Occupied:	number	1,605	501	1,476	409	2,078	406	1,464	1,297	6,623	2,613	9,236
	per cent	98.2	98.8	99.5	97.1	99.5	97.8	97.8	98.7	98.8	98.3	98.7
Unoccupied:	number	16	4	6	6	8	6	24	11	54	27	81
	per cent	0.9	0.8	0.4	1.4	0.4	1.4	1.6	0.8	0.8	1.0	0.9
Address not found:	number	14	2	2	6	2	3	9	6	27	17	44
	per cent	0.9	0.4	0.1	1.4	0.1	0.7	0.6	0.5	0.4	0.6	0.5
(c) <u>Occupied SUs (households)</u>		1,605	501	1,476	409	2,078	406	1,464	1,297	6,623	2,613	9,236
Successfully interviewed:												
	number	1,523	451	1,449	393	1,950	372	1,357	1,129	6,279	2,345	8,624
	per cent	94.9	90.0	98.2	96.1	93.8	91.6	92.7	87.0	94.8	90.0	93.4
Refusal:	number	8	15	2	2	14	8	11	43	36	67	103
	per cent	0.5	3.0	0.1	0.5	1.7	2.0	0.8	3.3	0.5	2.6	1.1
No competent person:	number	12	15	11	7	11	5	32	71	66	98	164
	per cent	0.8	3.0	0.7	1.7	0.5	1.2	2.2	5.5	1.0	3.8	1.9
Members away:	number	62	20	14	6	103	21	63	54	246	97	343
	per cent	3.9	4.0	1.0	1.5	5.0	5.2	4.3	4.2	3.7	3.7	3.7
Other reasons:	number	0	0	0	1	0	0	1	0	1	1	2
	per cent	-	-	-	0.2	-	-	-	-	-	-	-
(d) <u>Successfully interviewed households</u>		1,523	451	1,449	393	1,950	372	1,357	1,129	6,279	2,345	8,624
Household members listed		8,920	2,424	8,841	2,404	11,819	2,240	7,063	5,403	36,643	12,471	49,114
Average household size		5.86	5.37	6.10	6.12	6.06	6.02	5.20	4.79	5.84	5.32	5.70
Eligible respondents listed		1,669	485	1,891	503	2,436	453	1,428	1,269	7,414	2,710	10,134
Average ER per household		1.10	1.08	1.31	1.28	1.25	1.21	1.05	1.12	1.18	1.15	1.17
(e) <u>Eligible respondents listed</u>		1,669	485	1,891	503	2,436	453	1,428	1,269	7,424	2,710	10,134
Successfully interviewed:												
	number	1,575	456	1,818	472	2,373	433	1,380	1,220	7,146	2,581	9,727
	per cent	94.5	94.0	96.1	93.8	97.4	96.0	96.6	96.1	96.3	95.2	96.0
Refusal:	number	4	4	16	8	24	6	23	19	67	37	104
	per cent	0.3	0.8	0.8	1.6	1.0	1.3	1.6	1.5	0.9	1.4	1.0
Not at home:	number	25	10	15	7	24	4	13	15	77	36	113
	per cent	1.5	2.1	0.8	1.4	1.0	0.9	0.9	1.2	1.0	1.3	1.1
Other reasons:	number	63	15	42	16	13	10	12	15	130	56	186
	per cent	3.8	3.1	2.3	3.2	0.6	2.2	0.9	1.2	1.8	2.1	1.9

<sup>a</sup> See section 3.12.4 for division of the country into regions.

except in the South-east where the difference (6.06 rural and 6.02 urban) is minimal.

The number of women eligible for interview (ie women aged between 15 and 49 years who had slept in the household the previous night) among the listed household members was 10,134 (7,424 or 73.7 per cent in the rural and 2,710 or 26.7 per cent in the urban sectors). The national average of such eligible women per household is 1.17; this average is similar in the rural (1.18) and urban (1.15) areas.

#### Individual interviews

Interviews were successfully conducted with 9,727 of the 10,134 eligible respondents identified during the household interview. The response rate for the individual interview was thus 96.0 per cent. Reasons for non-response were refusal (1.0 per cent), the respondents not being found at home after four visits (1.1 per cent) and other reasons (1.9 per cent). The response rate was virtually the same for rural and urban areas.

Table 2.4: Distribution of individual interviews by number of visits

Number of visits	Number	Per cent
1	8,960	92.1
2	327	3.4
3	136	1.4
4	297	3.0
Not stated	9	0.1
Total	9,729	100.0

*Other characteristics of interviews with eligible women*

(i) Number of visits

The fieldstaff were instructed to make up to, but no more than, four visits to secure interviews with either households or eligible respondents. The average number of visits made to secure interviews with eligible respondents was 1.15. As is shown in table 2.4, 92.1 per cent of the eligible women were interviewed on the first visit.

(ii) Privacy of interview

The interviewers were instructed to try, as far as possible, to interview the eligible women in private since some of the questions were sensitive or very personal and the presence of other persons might influence their responses. Information on the presence of other persons during the interviews was collected just before asking the questions on knowledge and use of contraception in section 5. This information was deliberately not collected for respondents who had not reached the age at menarche or started sexual relations.

Table 2.5 shows that a considerable proportion of the interviews were not conducted in strict privacy. The ideal situation was achieved for only 38 per cent of the interviews. Assuming that children under 10 years of age are not inhibiting the respondent from providing reliable information on contraception, it might be said that half of the interviews (52 per cent) were conducted in

satisfactory conditions of privacy (nobody or children under 10). For nearly a quarter of the women (24 per cent), their husbands alone or with other persons were present, while for 11 and 13 per cent other adult males and females, alone or with other persons respectively, were present.

(iii) Degree of co-operation

Each interviewer was asked to assess the degree of co-operation of the respondent during the interview. This assessment was based on the interviewer's subjective perception of the situation and so should vary widely between interviewers.

The degree of co-operation was rated as either good or very good in 83.4 per cent of the interviews. For a very small proportion co-operation was rated as bad and for 15.3 per cent it was rated as fair (table 2.6).

## 2.10 OFFICE EDITING AND CODING

Though all completed survey documents were checked and edited in the field by the team editor, they were re-edited twice in the office. Such re-editing was done after the completion of the fieldwork and after all the documents were assembled at the head office of the National Population Commission. The office editing involved the verification of answers to certain key questions obtained in the field as well as the checking of all the filter questions in the questionnaire. Special attention was placed on checking responses in the birth history section of each questionnaire

Table 2.5: Individual interviews by persons present<sup>a</sup>

Persons present	Per cent
Nobody or children under 10 years	52.2
Husbands and other persons	23.9
Adult males and others	10.9
Adult females and others	12.9

<sup>a</sup> Excluding women who had not reached menarche or started sexual relations.

Table 2.6: Distribution of individual interviews by degree of co-operation of respondents<sup>a</sup>

Degree of co-operation	Number	Per cent
Bad	118	1.2
Fair	1,490	15.3
Good	5,143	52.9
Very good	2,964	30.5
Not stated	14	0.1
Total	9,729	100.0

a As assessed by the interviewers themselves.

and all the date and age information. Each document was edited twice by two separate editors. Most of the editors (and coders) were specially recruited and trained for one week for that purpose.

The coding procedure involved the manual transfer of numbers (codes) from the main body of the questionnaire or other documents to coding boxes provided in the right-hand margin of each page of the document. It also entailed the assignment of codes to the open-ended questions. Each completely coded document was rechecked for accuracy by another coder.

## 2.11 DATA PROCESSING

The original plan of the Nigeria Fertility Survey envisaged the data processing activities overlapping the main fieldwork; that is, office editing and coding starting a few weeks after the fieldwork, and the data entry starting a few weeks after the initiation of the coding. The data entry would be done straight to disk, through the VDU system available at the computer division of the National Population Commission in Lagos. All the WFS software suitable for the NPC computer was installed and tested before and during the training of the fieldstaff. Since the main fieldwork was launched in three different phases, the questionnaires from the first phase were entered first. The first set of corrections were about to be entered when the computer system failed so severely that, in spite of prolonged efforts to reactivate the data processing in Lagos, it was finally necessary to complete the work at WFS headquarters in London.

This decision implied performing the activities of data entry, machine-edit, recoding and tabulations for the country report in London. However, each one of these activities was undertaken with the participation of senior staff of the NPC, duly reinforced by WFS staff. Thus, it can be said that the project involved a national effort at every stage.

### 2.11.1 Data entry

For practical reasons, it was necessary to transcribe coded responses to the questionnaires (both household and individual) onto intermediate coding sheets. The household schedule had, in any case, been transferred onto coding sheets. A special intermediate coding sheet was designed for the individual questionnaire information (one such form for each individual questionnaire, see appendix 10 for more details). The design allowed for certain key editing, such as number of record types to be found, boxes which always had to be filled in and, most important, consistency of order for both the live-birth and marriage histories, to be performed simultaneously with the transcription. The staff of the computer division was trained for this clerical transcription in early June 1983, and the transcription was completed two months later. The data entry took place from August to September 1983.

### 2.11.2 Machine-edit

Although the machine-editing for the NFS had to be conducted under very unusual conditions, the standard WFS procedures for obtaining a clean data file were not relaxed. The principle of adopting corrections only after consulting the original questionnaire (in this particular case, the intermediate coding sheet) was maintained all through the editing. This activity was performed from October 1983 to January 1984.

### 2.11.3 Recoding and tabulations

The nature of the WFS programme implies obtaining tabulations of interest for the country but presented in an internationally comparable form. This is made possible through a recoding process in which the variables are recoded according to WFS standards. In the case of the NFS, an ad-hoc WFS program (BOXES), which facilitated production of the standard recoded file by the end of February 1984, was utilized. This was immediately followed by the

Table 2.7: Survey time table: scheduled and actual dates and duration of major phases

Phase	Scheduled		Actual	
	Dates	Duration (in months)	Dates	Duration (in months)
1. Project proposal and budget preparation	Sept 1980	1	Sept 1980	1
2. Questionnaire and manual preparation	Oct 1980-Jan 1981	4	Oct 1980-Jan 1981	4
3. Sample design and selection	Oct 1980	1	Nov 1980	1
4. Translation of questionnaires	Jan-March 1981	3	Jan-March 1981	3
5. Mapping of sample EAs	Jan-April 1981	4	Nov 1980-April 1981	6
6. Pretest training and fieldwork	April-June 1981	3	April-June 1981	3
7. Questionnaire and manual finalization	May-June 1981	2	June-Sept 1981	4
8. Printing of questionnaires	June-Aug 1981	3	June-Sept 1981	4
9. Fieldwork Preparation	July-Aug 1981	2	July-Sept 1981	3
10. Recruitment for main fieldwork	Aug 1981	1	Aug 1981	1
11. Training of fieldstaff	Aug-Oct 1981	3	Aug-Oct 1981	3
12. Main fieldwork	Oct 1981-Jan 1982	3	(1) Oct-Feb 1982	4
			(2) April-Aug 1982	4
13. Office editing and coding	Oct 1981-Feb 1982	5	Sept-Dec Dec 1982	4
14. Data entry	Jan-June 82	Lagos: London:	March-July 82	5
			Aug-Sept 83	2
15. Machine editing, correction and data imputation	Jan-Dec 1982	12	Oct 1983-Jan 1984	4
16. Recoding, tabulation and sampling errors	Sept-Dec 1982	4	Jan-April 1984	3
17. Writing of first country report	Jan-June 1983	6	March-May 1984	3
18. Printing and publication	July 1983	1	June-July 1984	2

standard set of tabulations included by the countries participating in the WFS programme, as well as those tabulations of particular interest to Nigeria. The preparation of the report involved two analysts of the NPC, supported by WFS staff, working from March to June 1984.

#### **2.12 TIMETABLE**

The scheduled dates for the implementation of various stages of the survey differed from the actual dates. Such differences were actually in the form of delays in the plan implementation towards the later stages rather than excesses in the planned duration of the different aspects. The scheduled and actual dates, as well as the duration, for the major survey activities are shown in table 2.7.

PART II

MAIN FINDINGS



# CHARACTERISTICS OF THE POPULATION ENUMERATED IN THE HOUSEHOLD SCHEDULE AND RESPONDENTS TO THE INDIVIDUAL QUESTIONNAIRE

## 3.1 INTRODUCTION

This chapter focuses on the characteristics of all individuals listed in the household schedule and of the respondents to the individual questionnaire. As already stated in section 2.8, each interviewer first listed all members of selected households before selecting and interviewing those members who were eligible for the individual interview. For each member of the household listed, the following information was collected: name, relationship to household head or other members, whether or not the person usually lives in the household, whether or not the person slept in the household the night prior to the interview date, sex, date of birth, age and eligibility for individual interview. To be eligible, a household member had to be female, aged between 15 and 49 years and must have slept in the household the night before the interview date. Information obtained on the above for all household members, as well as the socio-demographic characteristics of eligible respondents successfully interviewed and as obtained from the individual questionnaires, are presented in this chapter.

The findings presented are expected to serve various purposes. First, very little is known about household composition or characteristics in Nigeria since such information was not collected in previous censuses and national surveys. So the findings will help to fill gaps in the knowledge of Nigerian households. Secondly, knowledge of socio-economic characteristics of the survey sample, and particularly the explicit inter-relationships and possible interactions between those characteristics, will undoubtedly enhance the understanding of the substantive findings of the survey as presented in subsequent chapters. The reader will be in a better position to assess the findings in their proper context and more critically. The discussion on one of the most problematic factors in African demography, that of age reporting, is also included in the chapter. The extent of this problem as observed from information collected in the household schedule and its implications for the findings contained in subsequent chapters will be elaborated. The discussion on socio-economic characteristics always includes the definition of the characteristics as used in the NFS.

## 3.2 POPULATION ENUMERATED IN THE HOUSEHOLD SCHEDULE

### 3.2.1 Coverage

For the NFS, a household was defined as consisting of a person or group of persons who live together in the same structure or dwelling and who are answerable to the same head, have a common source of food or pool their resources together, share common housekeeping arrangements and are catered for as one unit.

As noted in section 2.9.1 and table 2.3, a total of 8,624 households were successfully interviewed out of the 9,236 selected for interview. The unweighted number of all members listed was given as 49,114.

Listing of household members was done on de jure and de facto basis. The de jure population includes all members who usually live in the households; the de facto population includes the members who slept in the household the night before the interview.

After the weighting of the data (a procedure which included adjustments for the non-respondent households), the de facto population enumerated in the survey is 46,622 while the de jure population is 50,214. The difference between the de jure population (50,214) and the unweighted total of 49,114 persons listed in the households is attributable partly to the adjustments for non-response and also to slight rounding errors in the weighting procedure.

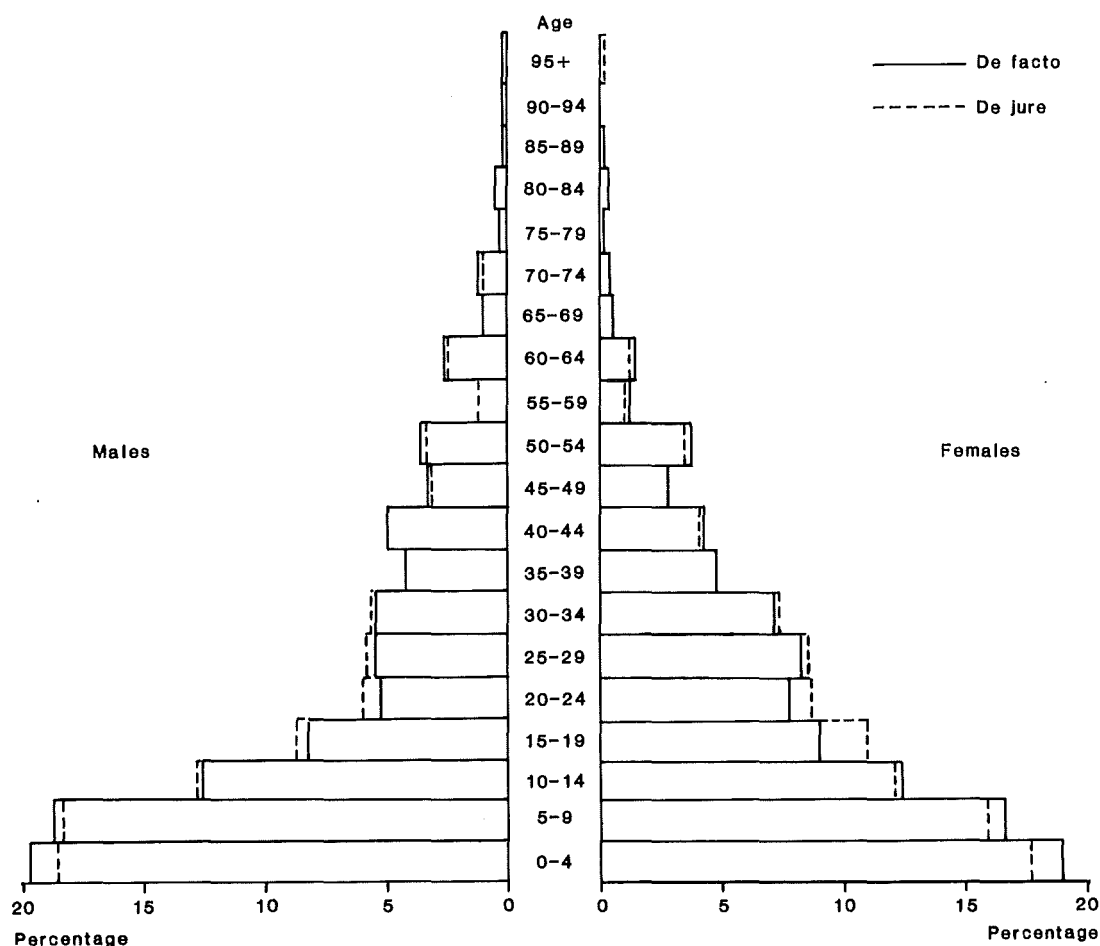
### 3.2.2 Age-sex composition

Table 3.1 shows the distribution of both the de facto and the de jure populations enumerated by age and sex; these distributions are also illustrated in figure 3.1. The distributions conform generally to the characteristic pattern of developing countries with high fertility levels and show a very young population. Almost half of both the de jure (47.7 per cent) and the de facto (49.4 per cent) populations are under 15 years of age. The proportion of the population aged 65 years and over is extremely low: 2.3 per cent (3.2 per cent for males and 1.3 per cent for females) for the de facto population and 2.2 per cent (3.1 per cent for males and 1.4 per cent for females) for the de jure population.



Table 3.1: Distribution of the de facto and de jure populations enumerated in the household survey, by age and sex

Age	De facto population							De jure population						
	Number			Per cent				Number			Per cent			
	Males	Females	Both sexes	Males	Females	Both sexes	Sex ratio	Males	Females	Both sexes	Males	Females	Both sexes	Sex ratio
0-4	4,497	4,480	8,977	19.5	19.0	19.3	100.4	4,555	4,587	9,142	18.6	17.8	18.2	99.3
5-9	4,352	3,921	8,273	18.9	16.6	17.7	111.0	4,502	4,094	8,596	18.4	15.9	17.1	110.0
10-14	2,913	2,848	5,761	12.7	12.1	12.4	102.3	3,127	3,077	6,204	12.8	12.0	12.4	101.6
15-19	1,907	2,288	4,195	8.3	9.7	9.0	83.3	2,162	2,832	4,994	8.8	11.0	9.9	76.3
20-24	1,204	1,867	3,071	5.2	7.9	6.6	64.5	1,466	2,240	3,706	6.0	8.7	7.4	65.4
25-29	1,275	1,942	3,217	5.5	8.2	6.9	65.7	1,443	2,185	3,628	5.9	8.5	7.2	66.0
30-34	1,262	1,676	2,938	5.5	7.1	6.3	75.3	1,375	1,842	3,217	5.6	7.2	6.4	74.6
35-39	992	1,131	2,123	4.3	4.8	4.6	87.7	1,062	1,238	2,300	4.3	4.8	4.6	85.8
40-44	1,160	992	2,152	5.0	4.2	4.6	116.9	1,231	1,058	2,289	5.0	4.1	4.6	116.4
45-49	786	639	1,425	3.4	2.7	3.1	123.0	818	700	1,518	3.3	2.7	3.0	116.9
50-54	839	864	1,703	3.6	3.7	3.6	97.4	862	892	1,754	3.5	3.5	3.5	96.6
55-59	320	266	586	1.4	1.1	1.3	120.3	328	271	599	1.3	1.0	1.2	121.0
60-64	610	316	926	2.6	1.3	2.0	193.0	617	321	938	2.5	1.2	1.9	192.2
65-69	224	117	341	1.0	0.5	0.7	191.5	233	118	351	1.0	0.5	0.7	197.5
70-74	246	103	349	1.1	0.4	0.7	238.8	251	102	353	1.0	0.4	0.7	246.1
75-79	78	33	111	0.3	0.1	0.2	236.4	80	35	115	0.3	0.1	0.2	228.6
80-84	112	56	168	0.5	0.2	0.4	200.0	113	55	168	0.5	0.2	0.3	205.5
85-89	28	18	46	0.1	0.1	0.1	155.6	29	18	47	0.1	0.1	0.1	161.1
90-94	24	8	32	0.1	-	0.1	300.0	24	8	32	0.1	-	0.1	300.1
95+	16	13	29	0.1	-	0.1	123.1	16	13	29	0.1	0.1	0.1	123.1
Not stated	170	29	199	0.7	0.1	0.4	-	192	42	234	0.8	0.2	0.4	-
Total	23,015	23,607	46,622	100.0	100.0	100.0	97.5	24,486	25,728	50,214	100.0	100.0	100.0	95.2



3.1 Age-sex composition of the de facto and de jure populations enumerated in the NFS household schedule

The pattern of age distribution is very similar for both populations. For the males, the de jure population is slightly less for the 0-4 and 5-9 age groups while it is slightly higher for the 20-24 and 25-29 age groups. For the females, the de jure population is slightly less for the 0-4, 5-9 and 50-54 age groups while it is slightly higher for the 15-19 and 20-24 age groups. Except for these, both distributions are almost identical in all the other age groups.

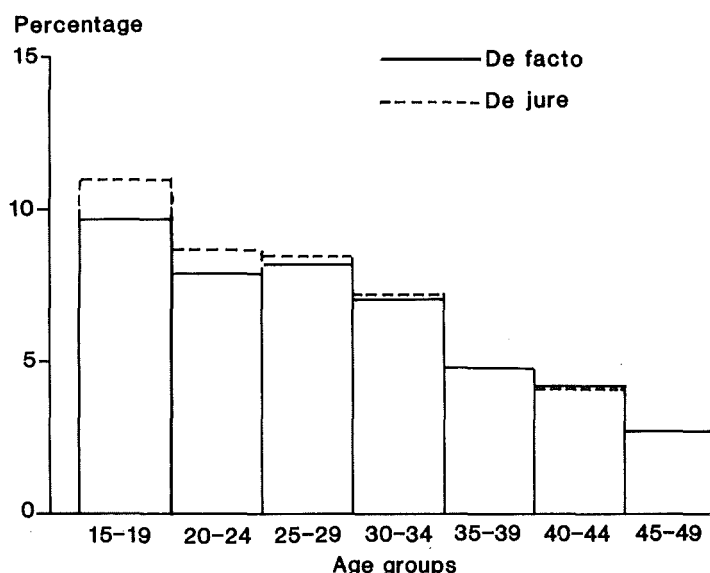
About 44.6 per cent and 47.0 per cent of the female de jure and de facto populations respectively are aged 15-49 years. These women constitute the universe of the individual survey, and make up 24.2 per cent of the de jure population of both sexes. Minor differences in the age distribution of these women between the de jure and de facto populations are further illustrated in figure 3.2. The differences occur only among the 15-19 and 20-24 age groups where the de jure population is 1.3 and 0.8 percentage points respectively higher than the de facto population. Confining eligible respondents for the individual survey to the de facto population thus does not in any significant manner detract from its representativeness of the survey universe. It is worth noting at this stage that the de facto female population

aged 20-24 and 45-49 are slightly under-represented since they have lower proportions compared with the next older age groups. While some of this could be due to misreporting of ages (as is discussed later), part of the case of the 45-49 age group could be due to deliberate misstatement of their ages by the interviewers so as to exclude the women from the individual survey and thus reduce the workload. Such a phenomenon seems common in almost all WFS-type surveys.

As many as 85.3 per cent of the enumerated persons in the household survey live in rural areas; 14.7 per cent live in urban areas. The distribution of both the rural and urban de jure population is shown in table 3.2. The pattern of age distribution in both sectors is almost identical; 47.6 per cent and 48.4 per cent of the rural and urban populations respectively are under 15 years old while only 2.2 per cent and 1.7 per cent of both the population of the rural and urban areas respectively is aged 65 years and over. The percentage of the individual survey universe in both the rural and urban areas according to region is shown in table 3.3; again the percentages are identical (24.1 per cent rural, 24.1 per cent urban) and do not vary by region of residence.

Table 3.2: Per cent distribution of de jure household population according to age and sex, by rural-urban status

Age	Rural							Urban						
	Number			Per cent				Number			Per cent			
	Males	Females	Both sexes	Males	Females	Both sexes	Sex ratio	Males	Females	Both sexes	Males	Females	Both sexes	Sex ratio
0-4	3,811	3,843	7,654	18.3	17.5	17.9	99.2	744	744	1,488	20.5	19.9	20.2	100.0
5-9	3,883	3,532	7,415	18.6	16.1	17.3	109.9	619	563	1,182	17.1	15.1	16.0	109.9
10-14	2,689	2,619	5,307	12.9	11.9	12.4	102.7	438	458	896	12.1	12.3	12.2	95.6
15-19	1,863	2,431	4,293	8.9	11.0	10.0	76.6	301	401	702	8.3	10.7	9.5	75.1
20-24	1,259	1,871	3,130	6.0	8.5	7.3	67.3	206	369	575	5.7	9.9	7.8	55.8
25-29	1,208	1,863	3,070	5.8	8.5	7.2	64.8	236	321	557	6.5	8.6	7.6	73.5
30-34	1,147	1,587	2,734	5.5	7.2	6.4	72.3	228	255	483	6.3	6.8	6.6	89.4
35-39	887	1,062	1,949	4.2	4.8	4.5	83.5	175	177	352	4.8	4.7	4.8	98.9
40-44	1,015	896	1,911	4.9	4.1	4.5	113.3	215	161	377	5.9	4.3	5.1	133.5
45-49	692	622	1,314	3.3	2.8	3.1	111.3	126	78	204	3.5	2.1	2.8	161.5
50-54	750	807	1,556	3.6	3.7	3.6	92.9	113	86	198	3.1	2.3	2.7	131.4
55-59	273	243	516	1.3	1.1	1.2	112.3	55	29	84	1.5	0.8	1.1	189.6
60-64	565	281	846	2.7	1.3	2.0	201.1	52	40	92	1.4	1.1	1.3	130.0
65-69	212	101	313	1.0	0.4	0.7	209.9	20	16	36	0.6	0.4	0.5	125.0
70-74	226	85	311	1.1	0.4	0.7	265.9	25	16	41	0.6	0.4	0.6	156.2
75-79	74	25	99	0.3	0.1	0.2	296.0	6	9	15	0.2	0.2	0.2	66.7
80+	163	85	248	0.8	0.4	0.6	191.8	20	9	29	0.6	0.2	0.4	222.2
Not stated	148	35	183	0.9	0.2	0.4	-	44	7	51	1.2	0.2	0.7	-
Total	20,865	21,986	42,849	100.0	100.0	100.0	94.9	3,623	3,739	7,362	100.0	100.0	100.0	97.2



3.2 De facto and de jure female populations aged 15-49 enumerated in the NFS household schedule

The only available data for comparative purposes are the age-sex distribution from the 1963 census which was conducted on a de facto basis. This is presented in table 3.4 and illustrated in figures 3.3 to 3.6 for both the census and the de facto NFS population. The two sets of data were collected approximately two decades apart. They also reflect wide divergencies, especially between the ages of 0-10 and 15-30 for the total and male populations and in the 10-30 age range for the female population.

### 3.2.3 Sex ratios

The sex ratios (ie the number of males for every 100 females) for both the de facto and the de jure populations are 97.5 and 95.2 respectively (table 3.1). Since 100 is the point of balance between the sexes according to this measure, there is a slight excess of females in the population. The values, however, fall within generally observed normal national ratios of between 95 and 102. The sex ratio in the 1963 census was 102, showing that there was a slight excess of males at that time. What is very abnormal are the sex ratios by age groups. Between the ages of 15 and 39, there is a tremendous excess of females over

males while from the age of 40 (except 50-54) and at age 5-9 there is a tremendous excess of males over females. A similar pattern, though to a lesser extent, was also obtained in the 1963 census; both are illustrated in figure 3.7. Such a pattern is atypical except in countries with a history of heavy selective emigration, immigration or war losses. The civil war of 1967-70 cannot explain this for the most vulnerable population then (males 20-35 years at that time) are actually far in excess of females. Emigration from the country is numerically insignificant to account for this. The only plausible explanation is that the accuracy of the age data is very suspect. That this is actually the case is confirmed in section 3.3. There appears to have been a tendency to exaggerate the age of males over 30 years old and to underestimate that of females aged between 15 and 30.

### 3.2.4 Age dependency ratios

It is possible to calculate age dependency ratios from the age distribution of the enumerated population. Such a ratio, defined as the proportion of persons aged 0-14 and 65 and above to the population in the working ages of 15-64, supposedly reflects the burden of

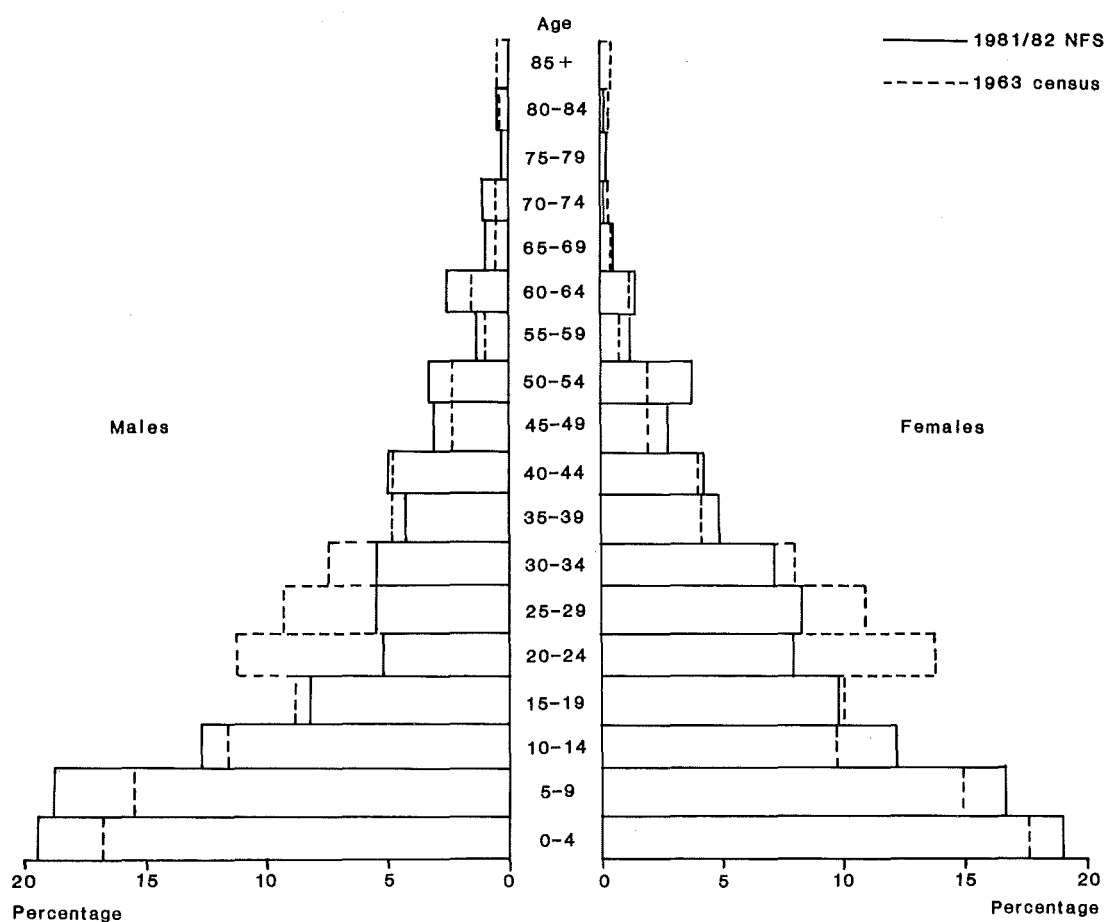
Table 3.3: Percentage of females aged 15-49 years, by region and rural-urban status, de jure population

Region	Rural	Urban	All
North-east	23.7	24.4	23.7
North-west	23.6	24.0	23.8
South-east	25.5	23.5	25.3
South-west	23.2	24.2	23.6
All	24.2	24.1	24.2

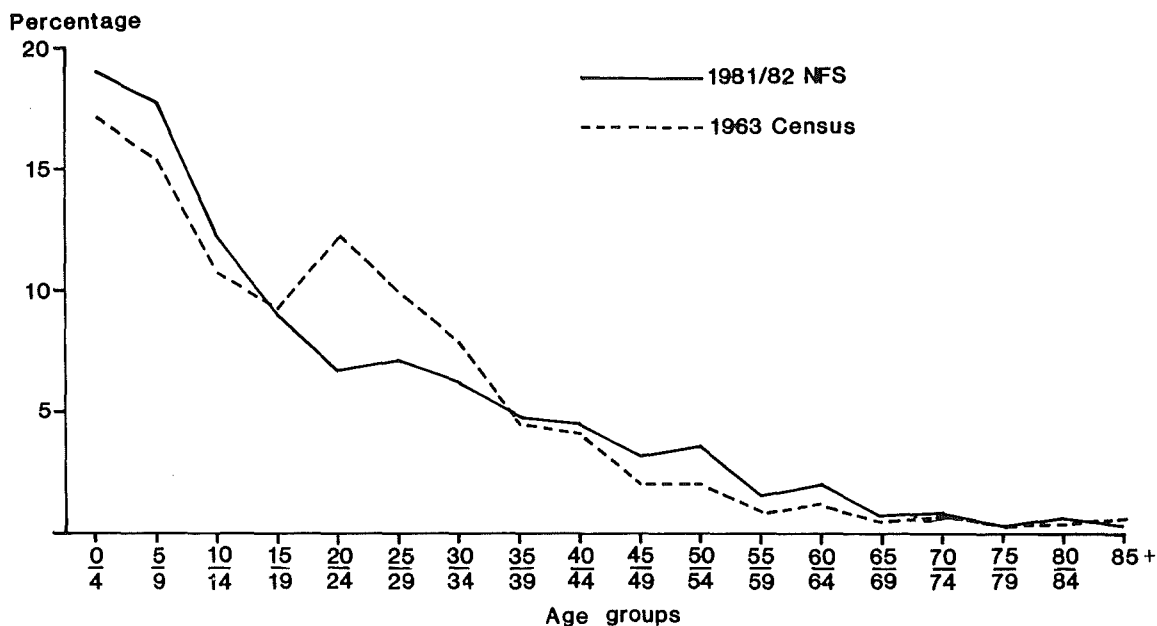
Table 3.4: Per cent distribution of the population by age and sex, de facto population, 1963 census and NFS

Age	1963 census				1981/82 NFS <sup>a</sup>			
	Males	Females	Both sexes	Sex ratio	Males	Females	Both sexes	Sex ratio
0-4	16.8	17.6	17.2	97.3	19.7	19.0	19.3	100.4
5-9	15.5	14.8	15.2	106.9	19.1	16.6	17.8	111.0
10-14	11.6	9.7	10.7	121.3	12.8	12.1	12.4	102.3
15-19	8.9	10.0	9.4	90.9	8.3	9.7	9.0	83.3
20-24	11.2	13.7	12.4	83.7	5.3	7.9	6.6	64.5
25-29	9.3	10.8	10.0	87.9	5.6	8.2	6.9	65.7
30-34	7.5	8.0	7.8	95.3	5.6	7.1	6.3	75.3
35-39	4.8	4.1	4.5	117.8	5.5	4.8	4.6	87.7
40-44	4.7	4.0	4.3	118.8	4.3	4.2	4.6	116.9
45-49	2.4	1.8	2.1	140.5	5.1	2.7	3.1	123.0
50-54	2.4	1.9	2.2	127.7	3.4	3.7	3.7	97.4
55-59	1.0	0.7	0.8	148.9	3.7	1.1	1.3	120.3
60-64	1.6	1.2	1.4	132.0	2.7	1.3	2.0	193.0
65-69	0.6	0.4	0.5	145.6	1.0	0.5	0.7	191.5
70-74	0.6	0.5	0.6	138.4	1.1	0.4	0.8	238.8
75-79	0.3	0.2	0.2	158.8	0.3	0.1	0.2	236.4
80-84	0.4	0.3	0.3	125.6	0.5	0.2	0.4	200.0
85+	0.5	0.4	0.4	148.4	0.3	0.2	0.2	174.0
Total	100.0	100.0	100.0	102.0	100.0	100.0	100.0	96.9

a Excluding not stated cases



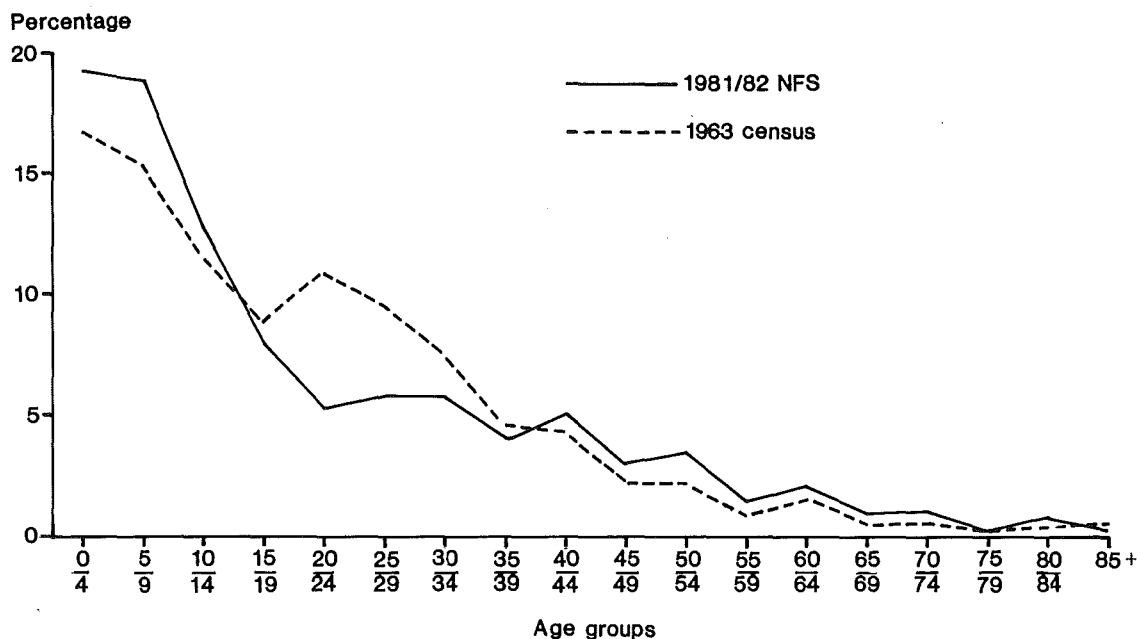
3.3 Age-sex composition of the de facto population enumerated in the NFS household schedule and in the 1963 census



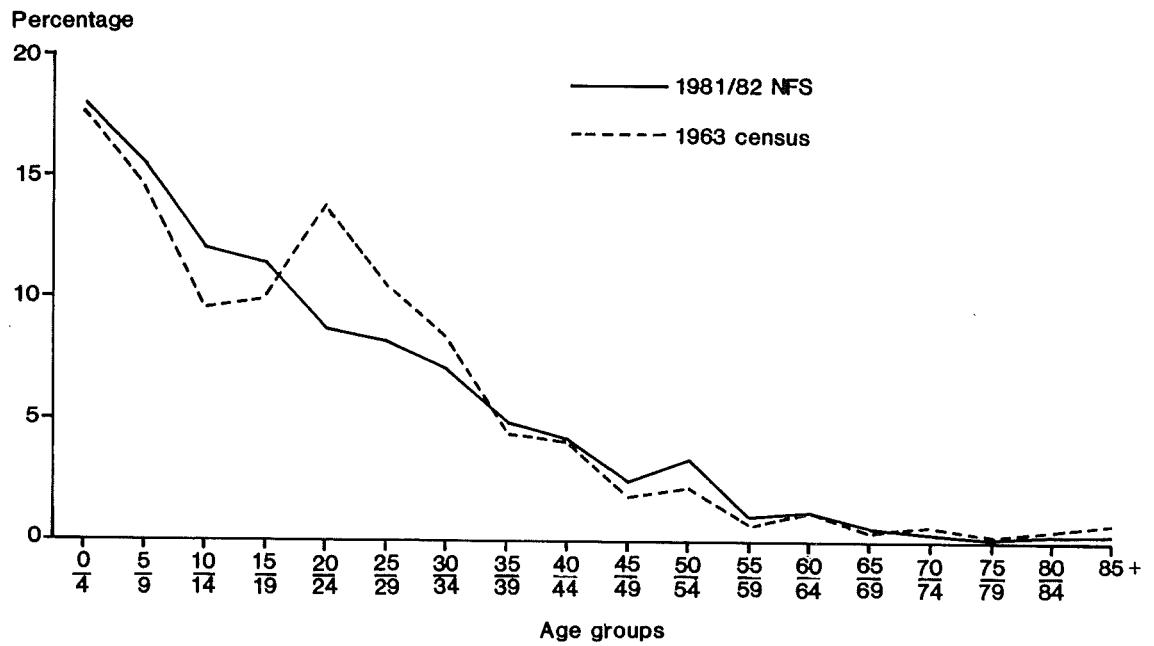
3.4 Per cent distribution of total de facto population enumerated in the NFS household schedule and in the 1963 census, by age

dependency which the productive segment of the population must bear. The extent to which this applies in societies where persons under 15 and over the age of 65 are economically productive, or in which a substantial proportion of persons aged 15-64 is either unemployed or under-employed, is subject to debate. The ratios therefore do not actually measure economic dependency per se but reflect the age composition of the population. The ratios can be further decomposed into child dependency ratio (to include only children 0-14 years old) and old-age dependency ratio (to include persons over 65 years of age).

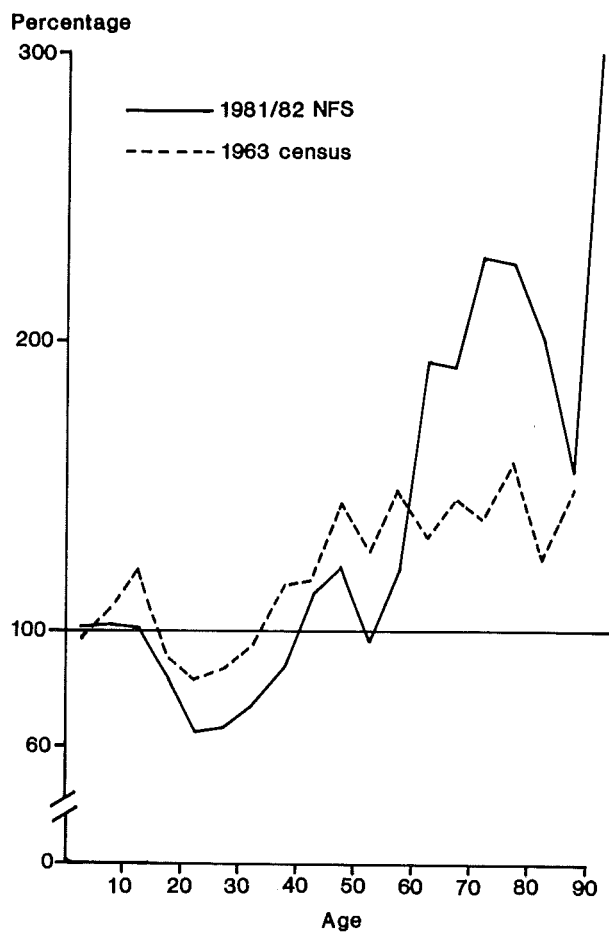
Dependency ratios calculated from the de jure household population by region and rural-urban sectors are presented in table 3.5. The ratios are generally high; the dependency ratio for the entire population is 100.4, ie every person of working age has another person dependent on him. This ratio is similar in rural (100.2) and urban (101.6) areas on the national level though not by regions. The ratios are substantially higher in urban than in rural areas among the regions, except the North-east where the difference is minimal. Among the regions, the ratio is highest in the South-west (105.9) and similar



3.5 Per cent distribution of male de facto population enumerated in the NFS household schedule and in the 1963 census, by age



3.6 Per cent distribution of the female de facto population enumerated in the NFS household schedule and in the 1963 census, by age



3.7 Sex ratios by age, de facto population enumerated in the NFS household schedule and in the 1963 census

Table 3.5: Dependency ratios by region and rural-urban status

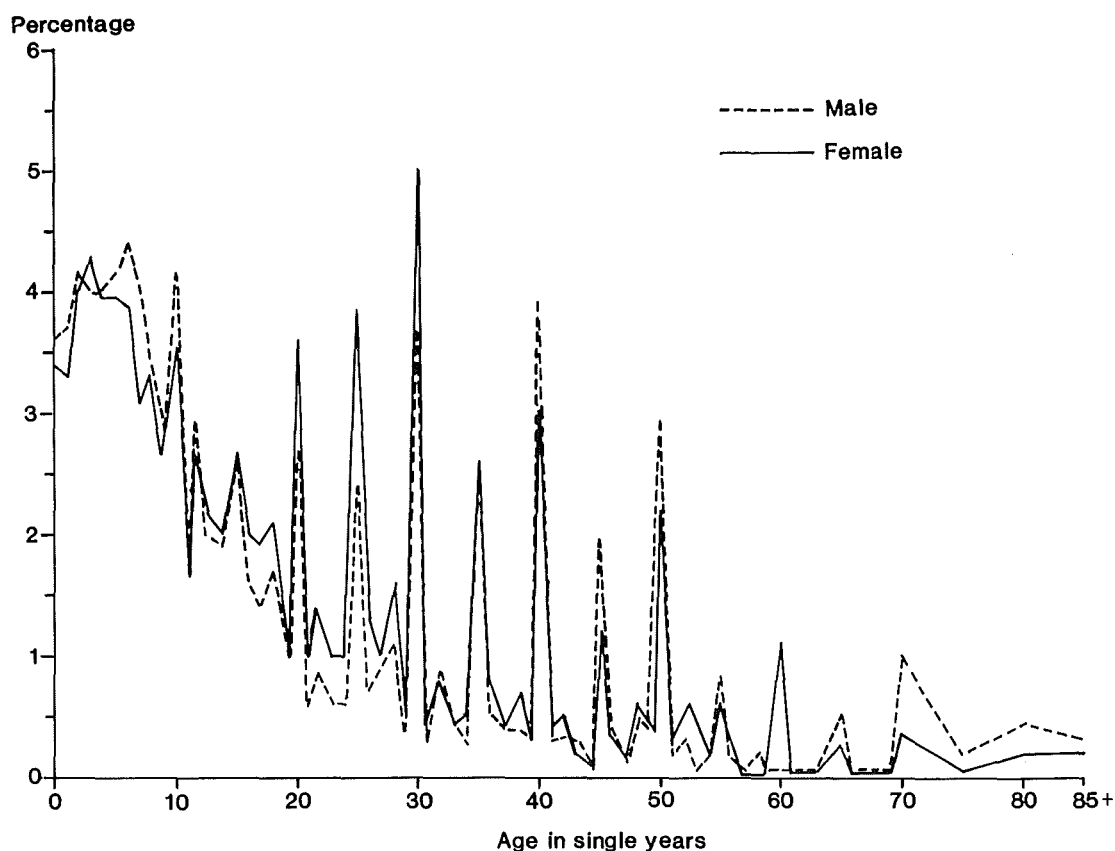
Region	Rural	Urban	All	Child dependency	Old age dependency
North-east	99.0	101.4	99.3	95.5	3.8
North-west	96.6	111.6	98.1	93.6	4.3
South-east	100.1	106.6	100.5	97.7	2.8
South-west	108.6	97.8	105.9	96.4	7.7
All	100.2	101.6	100.4	96.0	4.4

in other areas - North-east 99.3, North-west 98.1 and South-east 100.5. It may be pointed out that in many developed countries, this ratio is around 50, ie one dependant for two persons of working age.

Decomposition of these ratios to child dependency and old age dependency (table 3.5) shows that the contribution of persons aged 65 years and over is minimal. The high ratios are mostly because of the huge chunk of the population under 15 since the proportion of older (65 years and above) persons is small. For instance, the child dependency ratio on the national level is 96.0 compared with 4.4 for old age dependency.

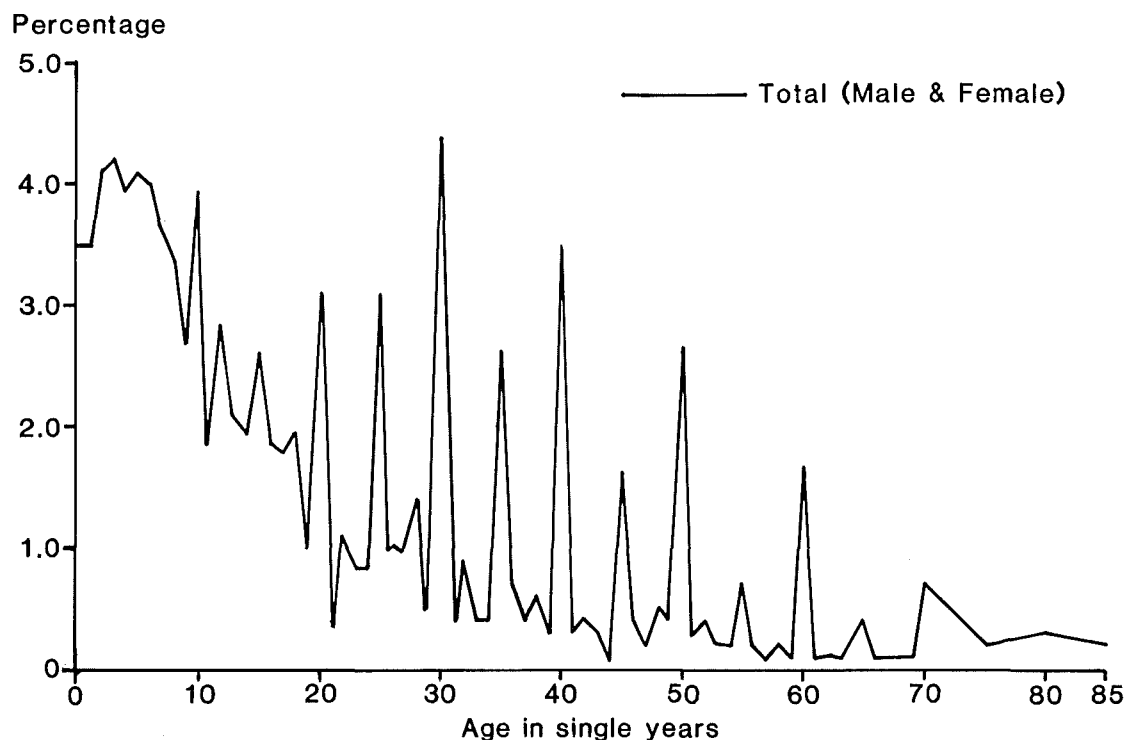
### 3.3 QUALITY OF AGE DATA

As has unfortunately become conventional in censuses and demographic surveys in developing countries, the quality of age data obtained in the NFS is poor - despite vigorous attempts to avoid this. The distribution of the de facto male, female and total populations by single years of age are shown in figures 3.8 and 3.9 respectively. The familiar saw-edged pattern with serious heaping at digits ending in 0 and 5 and, to a much lesser extent, in 2 and 4 are manifestly evident. The heaping is far greater for 0 digits than for 5. Below the age of 40, the heaping appears more pronounced for males than females; beyond that age (except at around 60 years) it is more pronounced for females.



3.8 Per cent distribution of de facto population enumerated in the NFS household schedule, by sex and single years of age





3.9 Per cent distribution of the total de facto population enumerated in the NFS household schedule, by single years of age

Heaping is essentially caused by misreporting of ages and particularly by the tendency, both among respondents and interviewers, to prefer or avoid certain digits. The extent of preference for, or avoidance of, various digits can be approximated by certain indices. These include the Myers', Whipple's and Mortara's indices, among many others. These three indices have been calculated for the de jure population. Myers' index, presented in table 3.6 for the population 10-70 years of age, shows very clearly the extreme preference for 0, followed

by 5. Theoretically this index should be 0 when there is no heaping (preference or avoidance) and 90 if all the ages ended in the same digit. The summary index is often interpreted as the minimum proportion of persons enumerated for whom age with an incorrect final digit has been obtained. This is thus the case with 35.2 per cent of the population aged 10-70, not including errors in age reporting from other sources. Whipple's index, measuring preference for digits 0 and 5 for the de jure population aged 10-70, is 248.9. This index typically varies between

Table 3.6: Myer's blended indices of digit preference for de jure population, 10-70 years

Terminal digit	Index <sup>a</sup>
0	24.22
1	5.41
2	3.03
3	4.51
4	4.77
5	11.02
6	2.45
7	9.35
8	0.69
9	5.02
Summary index	35.24 <sup>b</sup>

a Absolute values.

b Half of the sum of the indices.

Table 3.7: Mortara index<sup>a</sup> of heaping at specified ages ending in 5 and 0, de jure population

Age	Males	Females
10	1.44	1.36
15	1.31	1.19
20	1.90	1.90
25	1.97	1.87
30	2.51	2.53
35	2.25	2.01
40	2.61	2.45
45	2.33	2.26
50	2.55	2.22
55	1.97	1.77
60	2.75	2.68
65	2.41	2.52
70	2.68	2.48
75	2.50	2.30
80	2.86	2.56

<sup>a</sup> Mortara index =  $N_x \div \frac{1}{3} (N_{x-1} + N_x + N_{x+1})$ .

100, representing no heaping and 500 when all ages end in either 0 or 5. Finally Mortara's indices, which are here calculated as a third of the population around each age that ends in 0 or 5, are shown in table 3.7 for males and females separately. They further confirm preference for 0 and 5.

### 3.4 HOUSEHOLD SIZE

The distribution of the households by number of usual members (de jure population) is shown in table 3.8. The weighted average household size for all the households is 5.83 persons. This average size is higher in the rural (5.98) than in the urban (5.09) areas. About 7.8 per cent of all the households consist of one person only, 48.2 per cent of between two and five persons, 31.4 per cent of six to nine persons and 12.6 per cent of ten or more persons. This distribution again varies between the rural and urban areas; there are, understandably, proportionately more single-person households in the urban than the rural areas (11.3 per cent and 7.1 per cent respectively). There are also proportionately more smaller households in the urban than rural areas; 62.0 per cent and 54.8 per cent respectively have five members or less.

The average household size varies considerably by region; it is highest in the South-east (6.61), lowest in the South-west (4.89), and intermediate in the North-west and North-east (6.21 and 5.59 respectively). This pattern of regional differentials is observed for the urban but not exactly for the rural segments of the population. Urban household sizes are again highest in the South-east (6.65), lowest in the South-west (5.07) and intermediate in the North-west and North-east (6.21 and 5.63 respectively). For the rural households, however, highest mean size is

obtained for the North-west (6.25); average sizes for other regions are South-east, 6.03, North-east, 5.12 and South-west, 4.66. The internal distribution of usual members consequently varies between the regions as can be seen from table 3.8 and figure 3.10. Both for the rural and urban sectors, the South-west has almost twice as many single-person households as the other regions.

### 3.5 HOUSEHOLD STRUCTURE

It is possible to categorize the households by type (or structure) according to the marital characteristics of, and relationship between, the members. Such household types or categories can be defined as follows:

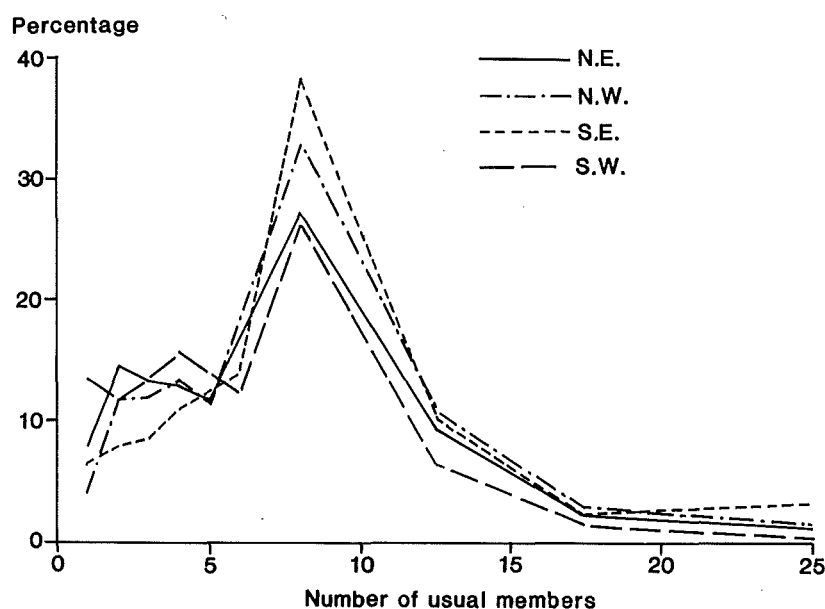
- (a) Nuclear - when the household consists of a married couple only, with or without their unmarried children;
- (b) Extended - when the household consists of a married couple, with or without their unmarried children and other relatives such as parent(s) of husband or wife, married brothers or sisters with or without their children, etc;
- (c) No couples - when the household does not contain any married couple but includes adult(s) who may or may not be related.

A married couple, in the context of NFS, includes a husband and his wife or wives.

A fifth (20.3 per cent) of all the households surveyed do not have any married couples and over half (56.1 per cent) are nuclear households consisting of only a married couple with or without their unmarried children; 23.6 per cent of the households are of the extended type (table 3.9).

Table 3.8: Per cent distribution of households according to number of usual members by region and rural-urban status, de jure population

Region and status	Number of usual members										Total	Mean	Number of households	Number of members
	1	2	3	4	5	6-9	10-14	15-19	20+					
(a) <u>Rural</u>														
North-east	7.8	14.2	13.4	12.8	11.5	27.3	9.5	2.4	1.1	100.0	5.63	2,101	11,827	
North-west	3.9	11.5	12.0	13.4	11.8	32.4	10.5	2.7	1.6	100.0	6.21	1,649	10,233	
South-east	6.2	7.5	8.4	10.7	13.8	38.2	10.2	1.9	3.2	100.0	6.65	2,202	14,645	
South-west	12.0	11.1	12.9	16.0	12.4	26.5	7.2	1.6	0.3	100.0	5.07	1,213	6,146	
Subtotal	7.1	11.0	11.5	12.8	12.4	31.7	9.5	2.2	1.7	100.0	5.98	7,164	42,846	
(b) <u>Urban</u>														
North-east	7.7	17.9	11.3	11.2	13.3	28.2	8.2	0.5	1.0	100.0	5.12	195	998	
North-west	2.6	11.3	11.3	11.3	8.8	39.7	12.4	1.5	1.0	100.0	6.25	194	1,212	
South-east	6.6	8.4	10.2	11.4	13.8	37.1	9.0	2.4	1.2	100.0	6.03	167	1,007	
South-west	14.7	12.0	13.7	14.9	12.5	26.4	4.5	0.8	0.4	100.0	4.66	890	4,147	
Subtotal	11.3	12.3	12.7	13.5	12.2	29.7	6.6	1.0	0.6	100.0	5.09	1,446	7,364	
(c) <u>All (rural and urban)</u>														
North-east	7.8	14.5	13.3	12.6	11.7	27.4	9.4	2.3	1.1	100.0	5.59	2,296	12,825	
North-west	3.8	11.5	11.9	13.2	11.5	33.2	10.7	2.6	1.5	100.0	6.21	1,843	11,445	
South-east	6.2	7.6	8.5	10.7	13.8	38.2	10.1	2.0	3.0	100.0	6.61	2,369	15,652	
South-west	13.2	11.5	13.3	15.5	12.4	26.4	6.1	1.2	0.4	100.0	4.89	2,103	10,293	
Total	7.8	11.2	11.7	12.9	12.4	31.4	9.1	2.0	1.5	100.0	5.83	8,611	50,210	



3.10 Per cent distribution of households enumerated in the NFS household schedule, by number of usual members and region of residence

Table 3.9: Household structure by region and rural-urban status

Structure	Region														
	North-east			North-west			South-east			South-west			All		
	Rural	Urban	Sub-total	Rural	Urban	Sub-total	Rural	Urban	Sub-total	Rural	Urban	Sub-total	Rural	Urban	Total
No couples	13.7	16.4	13.9	7.3	9.3	7.5	28.8	28.8	28.8	27.6	30.7	28.9	19.2	25.6	20.3
Nuclear	65.7	65.7	65.7	66.3	64.8	66.1	42.6	31.7	41.8	54.5	51.0	53.0	56.8	52.6	56.1
Extended	20.6	17.9	20.5	26.6	25.9	26.4	28.5	39.5	29.4	17.9	18.3	18.1	24.0	21.8	23.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

There are, understandably, proportionately more no couples and nuclear households in the urban than in the rural areas. This difference is less pronounced in the regions and virtually non-existent in the South-east and South-west. In the South-east, proportionately more of the urban than the rural households are of the extended type. Furthermore, while about two-thirds of the households in the North-east and North-west, and just over half in the South-west are of the nuclear type, only two-fifths in the South-east are nuclear.

### 3.6 GENERATIONS IN THE HOUSEHOLD

The households can also be classified according to the generations of the persons found in them. This is shown in table 3.10. By definition, one-generation households consist of only a married couple, their brothers or sisters or any other relatives of the same generation. Two-generation households consist of a married couple, their children, any one of their parents or brothers and sisters but without grandparents. Three-generation households include parent(s), their married children, grandchildren or other three-generation relatives.

Table 3.10 shows that 72.4 per cent of the households consist of two generations (mostly a married couple and their children); about a fifth consist of only one generation while 7.6 per cent and 0.2 per cent consist of three and four generations respectively. Thus the incidence of parents living in the same household with their married children and the children of the latter is relatively low. One-generation households are more common in the urban (24.3 per cent) than in the rural (18.9 per cent) areas, though the incidence of two-generation households is similar (70.3 per cent and 72.8 per cent respectively). About 8.3 per cent of the rural households, compared with 5.4 per cent of urban households, consist of three or more generations.

Some substantial regional variations can be observed from the table. Almost a quarter of the households in the North-east (24.4 per cent) and South-west (23.8 per cent) consist of only one generation, compared with about a sixth (17.3 per cent) and one-eighth (13.7 per cent) in North-west and South-east respectively. The proportion of three or more generation households in the North-west (10.6 per cent) and South-east (11.0 per cent) is almost double

Table 3.10: Per cent distribution of households according to number of generations by region and rural-urban status, de jure population

Region and status	Number of generations					Number of households
	1	2	3	4	Total	
<hr/>						
(a) <u>Rural</u>						
North-east	24.0	71.5	4.4	0.1	100.0	2,101
North-west	17.6	71.8	10.4	0.2	100.0	1,649
South-east	13.2	75.6	11.1	0.1	100.0	2,202
South-west	22.2	71.6	5.8	0.4	100.0	1,213
Subtotal	18.9	72.8	8.1	0.2	100.0	7,164
 (b) <u>Urban</u>						
North-east	28.3	69.1	2.6	-	100.0	194
North-west	14.8	74.4	10.3	0.5	100.0	195
South-east	21.0	71.9	7.2	-	100.0	167
South-west	26.1	69.4	4.3	0.2	100.0	890
Subtotal	24.3	70.3	5.2	0.2	100.0	1,446
 (c) <u>All (rural and urban)</u>						
North-east	24.4	71.3	4.3	0.1	100.0	2,295
North-west	17.3	72.1	10.4	0.2	100.0	1,843
South-east	13.7	75.3	10.9	0.1	100.0	2,369
South-west	23.8	70.7	5.1	0.3	100.0	2,103
Total	19.8	72.4	7.6	0.2	100.0	8,611

the number in North-east (4.4 per cent) and South-west (5.4 per cent). Similar differences can also be observed for rural and urban areas within the regions.

### 3.7 AGE AND SEX OF HOUSEHOLD HEADS

During the listing of household members, the person regarded as the head of the household by the members was listed first and relationships were mostly determined in relation to that person. Table 3.11 shows the percentage distribution of the heads of households by sex and age for the de jure population aged 10 years and above. As should be expected, the percentage of young persons (under 20 years) who are household heads is low. This percentage, however, increases consistently from 10.9 per cent for age group 20-24 to 74.9 per cent for persons 75 years and above. The data also demonstrate that the role of headship falls mostly on males. At each age group, whether in the rural or urban areas, remarkably higher percentages of males than females are heads. From the age of 40 onwards, more than 90 per cent of household heads are males. On the other hand, the percentage of household heads who are females is low, under 10 per cent below the age of 40; beyond that age, the percentage still remains under a quarter until after the age of 75. Variations between the urban and rural areas exist. There are proportionately more heads of households in the younger ages in the urban than in the rural areas, probably reflecting the greater incidence of (young) single person households in urban areas - since those persons are also regarded as heads of their households. The incidence of female headship is also higher in the urban than in the rural areas.

### 3.8 PREVALENCE OF POLYGyny

The marriage of one man to more than one wife at the same time (polygyny) is assumed to be a common phenomenon in Nigeria. It is widely encouraged and practiced by Muslims and among

the more traditional members of the society whether or not they belong to religious groups that condemn it. Reasons for marrying more than one wife at the same time vary among individuals but are strongly embedded in the pronatalist institutions of the society. The incidence of the phenomenon has never been measured on a national basis but it is possible to do so from the NFS household data. This can, however, be done only on a household basis since males (who do the marrying) were not specially interviewed; obtained results are to be regarded as estimates, but very proximate ones. Though the interviewed women were subsequently asked whether or not they had co-wives, their responses will indicate the proportion of women in polygynous marriages, but not the actual level or incidence of polygyny.

For the purposes of this analysis, households in which the household head, if male, had more than one wife, were defined as polygynous; if he had only one wife, the household was defined as monogamous. If the household head is female and she had co-wives, the household was again defined as polygynous; if not, it was defined as monogamous. With respect to the few laterally and vertically extended households, such households were defined as polygynous if any one of the couples consisted of one man and more than one wife. Such an analysis, of course, has to be restricted to households in which there were married couples. Thus, the 20.3 per cent (N=1,749) of the households with no couples are excluded.

As defined above, 22.3 per cent of the households are polygynous while 77.7 per cent are monogamous. Thus polygyny, though common, may not be as prevalent as generally assumed. The incidence of polygyny is understandably higher in the rural (23.7 per cent) than in the urban (14.8 per cent) areas though it is common practice for a man living in the bigger cities who has more than one wife to leave one or more of the wives in their home villages. This

Table 3.11: Percentage of household heads according to age and sex by rural and urban status, de jure population

Age	Rural			Urban			All		
	Male	Female	Sub-total	Male	Female	Sub-total	Male	Female	Both sexes
10-14	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
15-19	2.4	1.4	1.9	4.3	0.7	2.4	2.6	1.4	1.9
20-24	19.9	3.0	9.8	33.3	7.0	16.5	21.8	3.7	10.9
25-29	53.1	2.4	22.4	75.8	5.3	35.1	57.0	2.9	24.4
30-34	72.7	4.5	33.1	88.5	5.5	44.6	75.3	4.7	34.8
35-39	81.6	8.1	41.6	93.7	12.4	52.8	83.5	8.6	43.2
40-44	92.3	11.4	54.4	96.3	13.7	61.0	93.3	11.6	55.5
45-49	94.2	18.2	58.2	93.0	13.9	62.8	94.2	17.9	59.0
50-59	94.3	17.0	55.2	95.3	30.7	69.3	94.5	18.3	56.9
60-74	94.4	23.1	71.7	94.9	33.3	68.8	94.6	24.6	71.6
75 +	94.1	26.4	72.6	88.0	55.5	74.4	93.9	36.4	74.9

Table 3.12: Per cent distribution of households with married couples according to monogamous and polygynous unions, by region and rural-urban status

Region and status		Per cent monogamous	Per cent polygynous	Total	Number of households
North-east:	Rural	75.9	24.1	100.0	1,814
	Urban	81.0	19.0	100.0	163
	Subtotal	76.8	23.1	100.0	1,977
North-west:	Rural	68.1	31.9	100.0	1,529
	Urban	68.2	31.8	100.0	176
	Subtotal	68.2	31.8	100.0	1,705
South-east:	Rural	82.9	17.1	100.0	1,566
	Urban	89.9	10.1	100.0	119
	Subtotal	83.4	16.6	100.0	1,685
South-west:	Rural	79.5	20.5	100.0	878
	Urban	90.3	9.7	100.0	617
	Subtotal	83.9	16.1	100.0	1,495
All	Rural	76.3	23.7	100.0	5,787
	Urban	85.2	14.8	100.0	1,075
	Total	77.7	22.3	100.0	6,862

rural-urban differential also obtains in all the regions with the noticeable exception of the North-west where the levels of polygyny are the same in both the rural and urban areas. There are also substantial regional variations in the incidence of polygyny. Approximately a third (31.8 per cent) of the households in the North-west, and a quarter (23.1 per cent) in the North-east are polygynous, compared with about one-sixth in the South-east (16.6 per cent) and South-west (16.1 per cent). This differential may be attributable to the concentration of the Muslim population in the former regions, as shown in section 3.12.5.

### 3.9 AGE DIFFERENCE BETWEEN SPOUSES

It is possible to calculate the differences in age between husband and wife (or eldest wife if he has more than one wife) from the information on age. This is presented in table 3.13 by the current age of the husband. It is obvious from the table that men tend to marry women much younger than themselves. The average age difference between spouses is 12.6 years. This would imply that the average age at marriage for males is much higher than for females. Another observation is that such large differences in age are more characteristic of the older men than the younger ones. The tendency to marry much younger women is higher in rural than in urban areas. The mean age differences are 12.8 and 11.2 years, respectively. As illustrated in figure 3.11, there are proportionately more husbands in rural areas in the higher age difference categories.

### 3.10 ENVIRONMENTAL CONDITIONS OF HOUSEHOLDS

Information on the environmental conditions of households, such as whether or not they had

electricity, the source of water supply, the type of toilet and cooking facilities, was also collected. Such information may not seem to have a direct bearing on fertility performance but these factors most certainly affect morbidity and mortality, since their incidence is directly related to environmental and sanitary conditions. Moreover, such information had, hitherto, not been available on a national basis and could be of great assistance to health and economic planners.

The distribution of the households by environmental indicators is presented in table 3.14. It is observed that electricity is available to only a fifth (20.5 per cent) of the households. The most common sources of water supply are 'other sources' (40.3 per cent; which essentially include streams or rivers) and wells (36.2 per cent). Pipe borne water is available to about 21.4 per cent of the households; 7.5 per cent have it inside their buildings, 12.5 per cent have it outside and 1.4 per cent have public pumps. Pit latrine is the most common type of toilet facility; it is used by over half (53.6 per cent) of the households. 'Other facilities', which essentially include use of the bush or river, is the second most common toilet facility, used by over a third (36.3 per cent) of the households. Modern types, like flush toilet, are available to only 4.5 per cent of the households. The major type of cooking facility is use of firewood; well over seven out of every ten (74.2 per cent) households use this. About a fifth use kerosene stoves; the use of electricity and gas is minimal (1.0 per cent and 2.0 per cent respectively).

There are very definite differences in the availability of these facilities between the

Table 3.13: Mean age difference between husband and (eldest)<sup>a</sup> wife, by place of residence and age of husband

Residence and type of union		Age of husband				
		<25	25-39	40-54	55+	Total
(a) <u>Monogamous</u>						
Urban	M	3.57	8.10	12.21	19.89	11.21
	N	36	461	408	151	1,056
Rural	M	4.41	8.75	13.51	21.20	13.11
	N	251	2,109	2,174	1,297	5,831
Total	M	4.30	8.64	13.30	21.06	12.82
	N	287	2,570	2,582	1,448	6,887
(b) <u>Polygynous<sup>a</sup></u>						
Urban	M	-	8.02	10.52	15.77	11.15
	N	-	51	60	39	150
Rural	M	4.02	7.00	10.59	15.75	11.40
	N	12	325	533	451	1,321
Total	M	4.21	7.14	10.61	15.75	11.37
	N	12	376	593	490	1,471
(c) <u>Total</u>						
Urban	M	3.57	8.09	12.03	19.02	11.20
	N	36	512	468	190	1,206
Rural	M	4.39	8.52	12.93	19.80	12.79
	N	263	2,434	2,707	1,748	7,152
Total	M	4.30	8.44	12.80	19.71	12.56
	N	299	2,946	3,175	1,938	8,358

a Difference in respect of the eldest wife for polygynous unions.

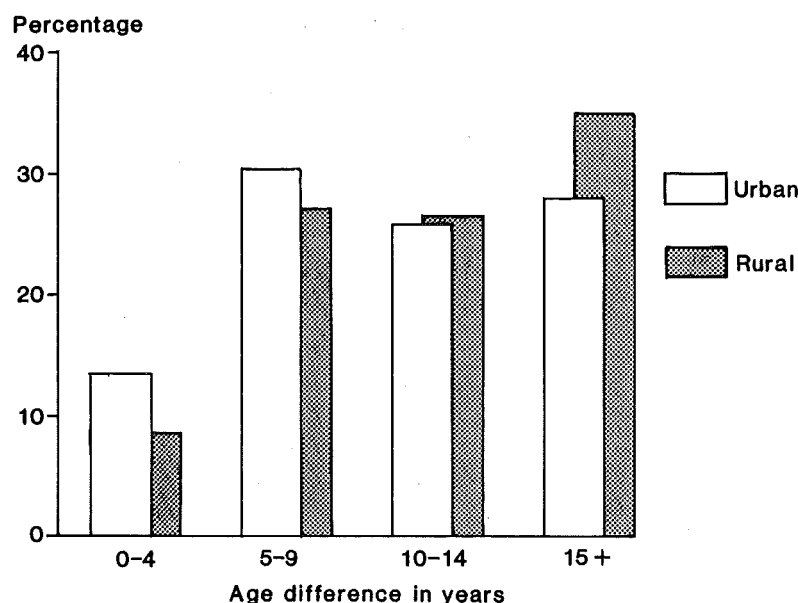
NOTE: M= mean (years), N= number of cases.

rural and urban areas. Availability of electricity, piped water inside or outside the buildings, flush toilet facilities and use of kerosene for cooking are very much higher in the urban than in the rural areas. There are also very substantial variations by regions in the availability of these facilities, as is shown in table 3.15. Electricity is available to almost half of the households in the South-west (49.5 per cent), compared with less than 15.0 per cent in all other areas. Piped water, use of flush toilet and cooking with kerosene are also available to proportionately more of the households in the South-west compared with other areas. Differentials between rural and urban areas are more acute within and between the regions than observed earlier for the entire country.

A cross-classification of the household members (de jure) according to the source of water supply and type of toilet facilities provides an interesting insight into the

sanitary conditions of the population enumerated in the survey. This is presented in table 3.16 for rural and urban areas separately and for the total population. What is immediately apparent is the sharp contrast in the sanitary conditions of the rural and urban populations. While half (49.7 per cent) of the urban population live in what can be described as adequate sanitary conditions (in that they have piped water inside or just outside their buildings as well as flush or pit toilets), only 7.6 per cent of the rural population do so. Consequently and correspondingly, while as much as a third (35.1 per cent) of the rural population use 'other toilet facilities' (bush or streams), have wells or 'other sources' (streams or rivers) of water supply, only 6.9 per cent of the urban population do so. The proportion of the total population living in households with adequate sanitary conditions as defined above (ie piped water, flush or pit toilets) is 13.7 per cent; about a third (31.0 per cent) live in 'inadequate' sanitary conditions.





3.11 Per cent distribution of couples enumerated in the NFS household schedule according to age difference between husband and (eldest) wife, by type of place of residence

### 3.11 OWNERSHIP OF MODERN CONSUMER DURABLES

Information was also obtained on the ownership of certain consumer durable items by the households. While such information is often used as a proxy for the social status or standard of living of the household in some fertility surveys, such is not attempted in this report. But again such information can be of invaluable help to planners in the determination of the delivery mechanisms or diffusion of information on particular programmes. The percentage distribution of the households owning selected consumer durables is presented in table 3.17. About half (49.0 per cent) of the households own either a radio or a television set; over a half (56.1 per cent) own clocks or watches; close to third own a car or motorcycle as well as a tape or cassette recorder while 11.2 per cent own a sewing machine, 8.3 per cent own a refrigerator and 14.6 per cent own an air-conditioner or fan. Again, a disproportionately larger number of households in the urban areas own these items compared with rural areas. Substantial regional variations exist and are shown in table 3.18.

### 3.12 DESCRIPTION AND DEFINITION OF BACKGROUND VARIABLES

The substantive findings of the survey are presented and discussed, not only for the total sample of the surveyed women but also for different subcategories of these women, based on their socio-economic and residential characteristics. Some of these characteristics include level of education, literacy, type of place of residence, region of residence, religion, occupation, pattern of work and husband's occupation. The definition of each of these variables, their modes of construction

and the distribution of the women along them are discussed in this section and presented in table 3.19. The inter-relationships between the variables form the subject matter of the next section.

#### 3.12.1 Level of education

All the surveyed women were asked whether or not they had attended school and, if so, the highest level of school they attended. Except for those who never attended school or those who attended Koranic school only, all other women were asked the highest class or form they completed, whether or not they had any other full-time education after the highest form and, if so, the sort of school or college and the number of years spent there (see questions 119 - 124 of Appendix 1.2).

From the responses to these questions, five levels of education were obtained, viz: none, Koranic, primary incomplete, primary complete, secondary and above. 'None' means the woman never attended any formal school. 'Koranic' includes attendance at Koranic schools only and not any of the other types of academic institutions. 'Primary incomplete' includes attendance at primary school for less than six years. 'Primary complete' covers completion of primary school, ie for six or more years; it also includes attendance at such post-primary institutions as middle or modern school, commercial, secretarial, teacher training, etc for a total period of less than four years. The rationale for this is that attendance for less than four years is not regarded as equivalent to completed secondary education nor is it accorded the same recognition. 'Secondary and above' covers attendance at secondary schools, polytechnics, colleges of technology, university etc as well as

Table 3.14: Per cent distribution of households according to certain environmental indicators, by rural-urban status

Environmental indicators	Rural	Urban	All
(a) <u>Electricity</u>			
Yes	8.9	77.8	20.5
No	88.6	20.6	77.2
Not stated	2.5	1.6	2.3
Total	100.0	100.0	100.0
(b) <u>Source of water supply</u>			
Piped water inside	2.6	31.9	7.5
Piped water outside	8.6	32.1	12.5
Pump	1.0	3.4	1.4
Well	38.4	25.3	36.2
Other sources	47.3	5.8	40.3
Not stated	2.2	1.6	2.1
Total	100.0	100.0	100.0
(c) <u>Type of toilet facilities</u>			
Flush	1.3	20.1	4.5
Pit	54.4	49.5	3.6
Bucket	0.8	17.1	3.6
Other facilities	41.3	11.7	36.3
Not stated	2.2	1.6	2.1
Total	100.0	100.0	100.0
(d) <u>Cooking facilities</u>			
Electric	0.7	2.2	1.0
Gas	1.4	5.1	2.0
Kerosene	12.1	60.8	20.3
Firewood	83.1	30.0	74.2
Other	0.4	0.3	0.4
Not stated	2.3	1.7	2.2
Total	100.0	100.0	100.0

attendance at middle or modern, commercial, secretarial, teacher training, technical and similar post-primary institutions for a period of four or more years.

The above delineation is definitely arbitrary but has been developed to accommodate different educational systems in the states and the changes that have occurred over the years that the respondents might have attended any of the educational institutions. According to this classification, 58.9 per cent of the sample women have no formal education whatsoever, 9.0 per cent have Koranic education, 10.9 per cent did not complete primary education while 9.9 per cent and 11.3 per cent are in the primary completed and

secondary and above categories respectively (table 3.19b).

### 3.12.2 Literacy

Minimal attendance at educational institutions, especially at the primary level, does not necessarily make an individual educated or literate. Consequently all respondents who had attended only primary or Koranic schools and those who had never attended any formal school, were asked whether they had attended any adult literacy classes and whether they could read, eg a letter, newspaper or magazine, in any language. Those who could read, together with those who had attended other post-primary institutions, were classified as literate. As

Table 3.15: Per cent distribution of households according to certain environmental indicators, by region and rural-urban status

[illegible]

Table 3.16: Cross-tabulation of the de jure household members according to source of water supply and type of toilet facility, by rural and urban status

Source of water supply	Type of toilet facility						Number of persons
	Flush	Pit	Bucket	Other	Not stated	All	
(a) <u>Rural</u>							
Inside piped	0.5	1.4	0.0	0.3	0.0	2.3	977
Outside piped	0.2	5.5	0.1	2.7	0.1	8.4	3,607
Pump	0.0	0.9	0.0	0.0	0.0	1.0	417
Well	0.1	27.3	0.4	10.4	0.0	38.2	16,380
Other	0.1	22.9	0.1	24.7	0.1	48.0	20,570
Not stated	0.0	0.1	0.0	0.0	1.9	2.1	897
Total	0.9	58.1	0.6	38.2	2.1	100.0	
Number of persons	402	24,898	274	16,363	911		42,849
(b) <u>Urban</u>							
Inside piped	15.2	15.1	2.6	0.9	0.0	33.8	2,491
Outside piped	2.4	17.0	5.9	4.8	0.0	30.0	2,211
Pump	0.7	1.8	0.3	0.1	0.0	3.0	218
Well	1.8	12.9	5.9	3.6	0.0	24.2	1,783
Other	0.3	3.1	0.6	3.3	0.0	7.4	545
Not stated	0.0	0.0	0.0	0.0	1.5	1.6	116
Total	20.3	50.0	15.3	12.8	1.6	100.0	
Number of persons	1,497	3,679	1,128	945	116		7,364
(c) <u>All (rural and urban)</u>							
Inside piped	2.7	3.4	0.4	0.4	0.0	6.9	3,468
Outside piped	0.5	7.1	0.9	3.0	0.0	11.6	5,818
Pump	0.1	1.0	0.1	0.0	0.0	1.3	636
Well	0.3	25.2	1.2	9.4	0.0	36.2	18,163
Other	0.1	20.0	0.2	21.6	0.1	42.1	21,115
Not stated	0.0	0.1	0.0	0.0	1.9	2.0	1,013
Total	3.8	56.9	2.8	34.5	2.0	100.0	
Number of persons	1,899	28,577	1,402	17,308	1,027		50,213

Table 3.17: Percentage of households which own certain modern consumer durable items, by rural-urban status

Consumer items	Rural	Urban	All
Television/radio	43.1	78.2	49.0
Clock/watch	50.7	82.9	56.1
Refrigerator	3.0	34.7	8.3
Air-conditioner/fan	5.0	61.8	14.6
Car/motor cycle	29.0	37.6	30.4
Sewing machine	9.6	19.1	11.2
Tape recorder/cassette	23.1	62.4	30.0

Table 3.18: Percentage of households which own certain modern consumer durable items, by region and rural-urban status

Consumer items	Rural				Urban				All (rural and urban)			
	North-east	North-west	South-east	South-west	North-east	North-west	South-east	South-west	North-east	North-west	South-east	South-west
Television/radio	36.7	34.2	51.6	50.9	73.3	65.2	78.2	82.1	39.8	37.5	53.5	64.1
Clock/watch	48.0	38.9	56.6	60.4	80.5	70.9	81.7	86.3	50.7	42.3	58.4	71.4
Refrigerator	2.3	1.6	2.6	7.0	28.1	23.9	32.4	38.9	4.5	3.9	4.6	20.5
Air conditioner/fan	2.9	1.6	4.1	14.8	37.4	29.6	50.4	76.3	5.9	4.5	7.4	40.8
Car/Motorcycle	32.5	31.7	26.5	23.5	50.8	55.8	33.1	31.5	34.0	34.2	27.0	26.9
Sewing machine	5.8	6.3	14.6	11.7	16.3	19.6	25.6	18.3	6.7	7.7	15.4	14.5
Tape-recorder/cassette	27.6	18.4	21.4	24.7	63.3	61.2	50.6	67.5	30.6	22.9	23.5	42.9

Table 3.19: Distribution of respondents according to selected demographic and background characteristics

Characteristics	Number of cases	Per cent
<u>(a) Current age</u>		
15-19	2,101	21.6
20-24	1,710	17.6
25-29	1,766	18.2
30-34	1,547	15.9
35-39	1,110	11.4
40-44	904	9.3
45-49	591	6.1
Total	9,729	100.0
<u>(b) Level of education</u>		
None	5,728	58.9
Koranic	872	9.0
Primary incomplete	1,059	10.9
Primary complete	965	9.9
Secondary and above	1,106	11.3
Total	9,729	100.0
<u>(c) Literacy</u>		
Can read	2,900	29.8
Cannot read	6,829	70.2
Total	9,729	100.0
<u>(d) Type of place of residence</u>		
Village	7,528	77.4
Town	1,426	14.6
City	776	8.0
Total	9,729	100.0
<u>(e) Region of residence</u>		
North-east	2,343	24.1
North-west	2,221	22.8
South-east	3,139	32.3
South-west	2,027	20.8
Total	9,729	100.0
<u>(f) Religion</u>		
Catholic	1,648	16.9
Protestant	1,377	14.2
Other Christian	1,340	13.8
Muslim	4,427	45.5
Traditional/others	936	9.6
Total	9,729	100.0
<u>(g) Occupation of husband</u>		
No work	3,407	35.0
Professional, technical, managerial	242	2.5
Clerical	128	1.3
Sales	2,279	23.4
Agriculture	3,095	31.8

Table 3.19 (cont'd)

Characteristics	Number of cases	Per cent
Private household worker	19	0.2
Other services	87	0.9
Skilled production	415	4.3
Unskilled production	19	0.2
Not stated	40	0.4
Total	9,729	100.0
(h) <u>Pattern of work</u>		
Now and before marriage	2,870	29.5
Now but, not before marriage	2,799	28.7
Since (not now) and before marriage	106	1.1
Since but not before marriage	122	1.3
Before marriage only	346	3.6
Never worked	1,877	19.3
Never married, currently working	351	3.6
Never married but has worked	73	0.8
Never married, never worked	1,184	12.2
Total	9,729	100.0
(i) <u>Most recent work status</u>		
Working in family farm	2,349	24.1
Working for family, paid in cash	64	0.7
Working for family, paid in kind	22	0.2
Working for family, unpaid	60	0.6
Other, paid in cash	644	6.6
Other, paid in kind	102	1.0
Other, unpaid	447	4.6
Self-employed	2,634	27.1
Did not work	3,407	35.0
Total	9,729	100.0

is shown in table 3.19c, 70.2 per cent of the women reported that they could not read and are thus classified as not literate; 29.8 per cent could read and are classified as literate. Thus, a substantial proportion of the respondents who attended Koranic or primary schools are, by definition, not literate.

### 3.12.3 Type of place of residence

The 250 enumeration areas comprising the NFS sample were supposed to be classified as either rural or urban according to how they had been classified during the 1980 NDSS. According to such classification, of the 248 EAs in which the fieldwork was completed, 73 per cent (N = 181) are rural and 27 per cent (N = 67) are urban. However, during the mapping exercise, it was discovered that one of the EAs classified as urban was actually rural and six classified as rural were actually urban in character, and were consequently reclassified. With this reclassification, 176 of the successfully interviewed EAs (70.9 per cent) were rural and 72 (29.1 per cent) urban. The rural-urban status of each respondent was taken

as the same as that of the EA in which she was located. Because of the weighting procedure, which also took into consideration differential response rates in the rural and urban sectors, 77.4 per cent of the women lived in rural and 22.6 per cent in urban areas.

The interviewers were, however, requested to categorize the urban EAs into town or cities according to the availability or otherwise of certain indicators of modernization. According to this, 8.0 per cent of the respondents were classified as living in cities and 14.6 in towns. All tabulations and discussions are, however, based on the rural-urban dichotomy (table 3.19d).

### 3.12.4 Region of residence

As already stated in the discussion on sample design (section 2.4.1), the NFS was designed to provide statistically reliable fertility and other demographic estimates on a national basis and not for the states since these were very large in number and would require a much larger sample size. But in order to accommodate the

needs of planners and policy makers in identifying areas of need or incidence and level of some of the characteristics, the states have been grouped into four broad geographic regions with respect to the place of residence of the women at the time of interview. Such grouping is purely arbitrary, pragmatic and of analytical, policy formulation and implementation importance since the components of each region are geographically, and to a lesser extent culturally and socio-economically, homogeneous.

The composition of the regions and the distribution of the women among them, are as follows (table 3.19e):

- (a) North-east: Gongola, Borno, Benue, Bauchi and Plateau states (24.1 per cent);
- (b) North-west: Sokoto, Niger, Kano and Kaduna states (22.8 per cent);
- (c) South-east: Anambra, Imo, Rivers and Cross River states (32.3 per cent); and
- (d) South-west: Lagos, Ondo, Ogun, Oyo, Bendel and Kwara states (20.8 per cent).

### 3.12.5 Religion

Each respondent was asked the question: 'What is your religion?' Those who responded that they were Christians were further asked: 'What denomination or church do you belong to?' From the responses to either or both of the above questions, the following religious categories were created: Catholic, Protestants, Other Christians, Muslims and Traditional/others. 'Catholic' here refers to membership in the Roman Catholic church or denomination. The category of 'Protestant' includes membership in Anglican, Methodist, Baptist, Lutheran, Salvation Army, Presbyterian, Jehovah's Witness and Seventh-Day Adventist churches or denominations. 'Other Christians' includes mostly the fundamentalist religious groups such as Assemblies of God, Cherubim and Seraphim, Apostolic, Celestial Church as well as Christians not classified elsewhere. 'Traditional/others' includes those who adhere to traditional religions of various types, those who adhere to no religious group or other religious groups not elsewhere classified.

Table 3.19f shows that 16.9 per cent of the respondents were Catholics, 14.2 per cent Protestants, 13.8 per cent Other Christians, 45.5 per cent Muslims and 9.6 per cent Traditional/others.

### 3.12.6 Labour force participation

Female labour force participation is a factor generally recognized as affecting fertility performance. The conventional argument is that childbearing, childrearing and employment all compete for the woman's time and energy resources. The result is that those women who

work (compared with those who do not) and those who work for considerably more years (compared with those who work for fewer years), tend to have lower fertility. The actual operation of this argument, particularly in developing countries, is still inconclusive since the type of work, more than the fact of working, seems to be of greater relevance. Some types of work seem compatible with, or even encourage, higher fertility.

Though the intricacies of this argument will not be explored in this report, enough information for such analysis was collected. This was done by obtaining a detailed work history of each respondent. From such information, many labour force participation variables were constructed; three of them discussed here are type of occupation, pattern of work and most recent work status.

#### *Type of occupation*

The categories of occupation adopted in the NFS conform generally with the International Labour Organization (ILO) classification. In principle, all forms of work, excluding housework, were included. The occupational categories, their definition where necessary, and the distribution of the women are as follows (table 3.19g):

- (a) Professional, technical and managerial occupations (2.5 per cent);
- (b) Clerical, including secretarial (1.3 per cent);
- (c) Sales including trading either at all types of markets (open, street, regular) or at home, as well as sales in shops, supermarkets or stores (23.4 per cent);
- (d) Agricultural, either in family or commercial farms (31.8 per cent);
- (e) Private household, including maids, domestic servants, cooks, etc (0.2 per cent);
- (f) Other services, catering trades, hairdressing, laundry and related work (0.9 per cent);
- (g) Skilled production, various trades and crafts (4.3 per cent); and
- (h) Unskilled production, as above (0.2 per cent).

About a third (35.0 per cent) of the women were not working at the time of the survey and the occupation of 0.4 per cent was not stated. There are essentially three major occupational categories among the women: no work (35.0 per cent), agricultural work (31.8 per cent) and sales, which is essentially trading (23.4 per cent). The analysis in subsequent chapters will focus on these since they constitute the bulk (90.2 per cent) of the surveyed women.



### Pattern of work

This variable was constructed to reflect the pattern of work of the women with respect to their marriage. Basically the following factors were taken into consideration: whether or not the woman had ever worked, whether or not she was working at the time of interview and, if married, whether she had worked before, after and since (first) marriage. The categories of this variable and their distribution (shown in table 3.19h) are as follows:

- (a) Was working at the time of interview (now) and before marriage (29.5 per cent);
- (b) Was working at the time of interview (now) but did not work before marriage (28.7 per cent);
- (c) Has been working since and before marriage (1.1 per cent);
- (d) Has been working since marriage but did not work before marriage (1.3 per cent);

- (e) Worked before marriage only (3.6 per cent);
- (f) Had never worked, but was married (19.3 per cent);
- (g) Was never married but was working at time of interview (3.6 per cent);
- (h) Was never married but had worked in the past, though not at time of interview (0.8 per cent); and
- (i) Was never married and had never worked (12.2 per cent).

Thus there are three major categories of work pattern amongst married women: now and before marriage (29.5 per cent), now but not before marriage (28.8 per cent) and never worked (19.3 per cent). Among the never-married women, most had never worked.

### Most recent work status

This variable was constructed to determine where the women worked and their mode of

Table 3.20: Two-way inter-relationships between selected demographic and background characteristics

	Current age								Education					
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total	None	Koranic	Primary incomplete	Primary complete	Secondary and above	Total
<b>(a) Current age</b>														
15-19									30.7	8.5	13.3	17.6	29.8	100.0
20-24									47.2	10.3	14.4	12.5	15.6	100.0
25-29									62.4	9.6	12.0	9.3	6.6	100.0
30-34									69.5	10.5	9.9	6.6	3.6	100.0
35-39									75.9	7.6	7.8	6.7	2.0	100.0
40-44									82.8	6.4	6.1	3.1	1.6	100.0
45-49									85.8	7.2	4.3	2.1	0.6	100.0
<b>(b) Education</b>														
None	11.3	14.1	19.2	18.8	14.7	13.1	8.9	100.0						
Koranic	20.6	20.3	19.4	18.5	9.7	6.6	4.9	100.0						
Primary incomplete	26.4	23.2	20.1	14.5	8.2	5.2	2.4	100.0						
Primary complete	38.3	22.2	17.1	10.5	7.7	2.9	1.3	100.0						
Secondary and above	56.5	24.1	10.6	5.0	2.0	1.3	0.6	100.0						
<b>(c) Place of residence</b>														
Village	21.1	16.9	17.8	16.5	11.8	9.5	6.4	100.0	64.1	8.5	10.9	8.2	8.3	100.0
Town/city	23.4	20.0	19.4	13.9	9.9	8.6	4.8	100.0	40.9	10.6	11.0	15.8	21.8	100.0
<b>(d) Region</b>														
North-east	18.5	17.8	20.3	17.4	13.9	7.8	4.2	100.0	81.2	7.9	6.3	3.2	1.5	100.0
North-west	18.4	18.0	20.7	18.1	10.1	9.0	5.6	100.0	67.1	29.4	1.5	1.1	0.8	100.0
South-east	26.1	17.5	16.0	13.2	11.0	8.8	7.5	100.0	44.1	0.1	19.2	17.8	18.8	100.0
South-west	21.6	17.0	16.2	16.0	10.5	12.1	6.6	100.0	47.0	1.4	13.5	15.2	22.8	100.0
<b>(e) Religion</b>														
Catholic									38.8	0.1	17.1	17.8	26.3	100.0
Protestant									39.1	0.0	20.3	20.3	20.3	100.0
Other Christian									46.4	0.2	19.3	16.9	17.2	100.0
Muslim									70.8	19.5	3.4	3.1	3.2	100.0
Traditional/others									85.0	0.2	9.7	3.0	2.0	100.0
All	21.6	17.6	18.2	15.9	11.4	9.3	6.1	100.0	58.9	9.0	10.9	9.9	11.4	100.0

payment. The categories of the most recent work status and distribution of women among them (table 3.19i) are as follows:

- (a) Working for themselves in the family farm (24.1 per cent);
- (b) Working in family farm, but paid in cash (0.7 per cent);
- (c) Working in family farm, paid in kind (0.2 per cent);
- (d) Working in family farm, not paid in cash or kind (0.6 per cent);
- (e) Working outside the farm and paid in cash (6.6 per cent);
- (f) Working outside the farm but unpaid (4.6 per cent);
- (g) Self-employed (27.1 per cent); and
- (h) Did not work (35.0 per cent).

Thus most of the women who worked in the

farms worked for themselves and a negligible proportion was paid either in cash or in kind. Besides the self-employed women who worked outside the farm, most work outside the farm was paid for in cash; those not paid might be apprentices or work in family enterprises other than farming.

### 3.13 CURRENT OR LAST HUSBAND'S CHARACTERISTICS

For the ever-married women in the sample, some information was collected on the socio-economic characteristics of their current or last husband. The design of the questions eliciting such information was identical to that used in obtaining similar information from the respondents. Such socio-economic characteristics include level of education, literacy, type of place of childhood residence, occupation and work status. The mode of construction of these variables is exactly the same as for the respondents. However, of all these characteristics, only the occupation of the husband has been used in the comparative analysis contained in this report.

Place of residence			Region					Religion					
Village	Town/ city	Total	NE	NW	SE	SW	Total	Cath- lic	Prot.	Other chr.	Muslim	Trad/ others	Total
75.5	24.5	100.0	20.7	19.5	39.0	20.8	100.0						
74.3	25.7	100.0	24.4	23.4	32.0	20.2	100.0						
75.8	24.2	100.0	26.9	26.1	28.4	18.6	100.0						
80.3	19.7	100.0	26.3	26.0	26.7	20.9	100.0						
80.2	19.8	100.0	29.4	20.2	31.2	19.2	100.0						
79.1	20.9	100.0	20.3	22.1	30.4	27.2	100.0						
82.1	17.9	100.0	16.8	21.0	39.7	22.6	100.0						
84.3	15.7	100.0	33.2	26.0	24.1	16.6	100.0	11.2	9.4	10.9	54.7	13.9	100.0
73.7	26.3	100.0	21.1	75.0	0.5	3.3	100.0	0.1	0.0	0.3	99.3	0.2	100.0
77.1	22.9	100.0	13.9	3.2	57.0	25.9	100.0	26.5	26.3	24.4	14.2	8.6	100.0
63.8	36.2	100.0	7.7	2.6	57.8	32.0	100.0	30.4	28.9	23.5	14.3	3.9	100.0
56.6	43.4	100.0	3.2	1.5	53.3	41.9	100.0	39.2	25.3	20.9	12.8	1.7	100.0
			25.9	24.9	36.9	12.3	100.0	18.1	12.9	13.5	44.6	11.0	100.0
			18.0	15.7	16.3	50.0	100.0	13.1	18.4	14.9	48.8	4.9	100.0
83.1	16.9	100.0						8.7	6.1	8.6	68.8	7.8	100.0
84.4	15.5	100.0						0.9	0.1	0.5	93.2	5.2	100.0
88.6	11.4	100.0						36.6	22.8	24.3	0.2	16.1	100.0
45.6	54.4	100.0						13.5	25.5	18.1	36.4	6.5	100.0
82.5	17.5	100.0	12.4	1.3	69.8	16.7	100.0						
70.5	29.5	100.0	10.4	0.2	51.9	37.5	100.0						
75.6	24.4	100.0	15.0	0.7	56.9	27.3	100.0						
75.7	24.3	100.0	36.4	46.8	0.1	16.6	100.0						
88.7	11.4	100.0	19.4	12.4	54.1	14.1	100.0						
77.4	22.6	100.0	24.1	22.8	32.3	20.8	100.0	16.9	14.2	13.8	45.5	9.6	100.0

### 3.14 INTER-RELATIONSHIPS BETWEEN SELECTED BACKGROUND VARIABLES

As might be expected, many of the background characteristics so far described are associated with one another; in some instances, they also interact with one another. It is then typical to expect that a respondent who possesses a particular characteristic is more likely than others to possess other characteristics. For instance, women with no education may be more likely to be found in farming occupations, or to belong to the traditional religious group or to reside mostly in rural areas. Similarly, Muslims may be more likely to have Koranic education than others. It is thus necessary to examine, even on a rudimentary basis, associations between the background variables. This is of particular importance in interpreting and understanding some of the differentials in fertility or other demographic parameters that may be observed in subsequent chapters in their proper context. For instance, fertility may be lower in one region compared with another but this may be due, for example, to the fact that there are proportionately more educated women who may be characterized by lower fertility in that region or that there are proportionately fewer women in the prime childbearing ages in that region and so forth. Knowledge and control for such inter-relationships (and interactions) are inevitable in the determination of the causal sequence of any phenomena. Such causal explanations are not attempted in the present report; a simple description of the relationships will, however, help the reader to critically appraise any patterns or differentials observed later.

Two-way associations between current age and four main background variables are presented in table 3.20. Within each specified category of each background variable, the table shows, by row, the per cent distributions of that category according to all the other background variables. For instance, of the women who live in rural areas (villages), 64.1 per cent have no formal education, 8.5 per cent have Koranic education, 10.9 per cent have incomplete primary education, 8.2 per cent have complete primary education and 8.3 per cent are in the secondary or higher educational category. Also, of these same women who live in rural areas, 25.9 per cent live in the North-east, 24.9 per cent in the North-west, 36.9 per cent in the South-east and 12.3 in the South-west. The table also shows, by column, the percentage of women within each category of a background variable according to all other background variables. As an illustration, 38.8 per cent of the Catholic women do not have any formal education; neither do 39.1 per cent of Protestants, 46.4 per cent of Other Christians, 70.8 per cent of Muslims and 85.0 per cent of women in the Traditional/others religious group. Similarly, 0.1 per cent of Catholics, 0.2 per cent of Other Christians, 19.5 per cent of Muslims, 0.2 per cent of Traditional/others and none of the Protestants have Koranic education. By definition the rows within each

category add up to 100.0 per cent since they show per cent distributions, but not the columns since they show percentages.

A lot of associations between variables can be observed from the table. Some of these are indicated below.

- (i) The younger women are more educated than the older women. As age increases, the proportion of women with no education increases; correspondingly as age decreases, the proportion with complete primary or secondary education increases;
- (ii) More women resident in urban areas are in higher educational categories;
- (iii) Region of residence is closely associated with education and religion. About 4.7 per cent and 1.9 per cent of the women in the North-east and North-west respectively have complete primary education or above compared with 36.6 per cent in the South-east and 38.0 per cent in the South-west. Also, the Muslims are concentrated mostly in the North-east and North-west and are extremely scarce in the South-east.
- (iv) Education and religion are closely associated. Almost all women with Koranic education are Muslims. Also, over two-thirds of the Muslims, and three-quarters of those in the Traditional/others have had no formal education compared with about two-fifths of all the Christian groups;
- (v) While a large majority of the women live in rural areas, proportionately more of the younger women are found in urban areas. The South-west region is exceptional in this case in that more of the women live in urban than rural areas;
- (vi) There are noticeable differences in the age composition of the women between the regions. The South-east has disproportionately more women aged 15-19 years and fewer women aged 30-34 years compared with other regions. Furthermore, age compositions are remarkably similar between the North-east and North-west and between the South-east and South-west.

### 3.15 SUMMARY

The discussion in this chapter was focused on the characteristics of the 8,624 households and 50,214 household members enumerated in the survey and the background characteristics of the 9,729 respondents to the individual interview. The quality of the age data was found to be poor and the implications of this for various parameters were pointed out. Dependency ratios, especially childhood dependency ratio, were observed to be high since almost half of the population was under 15 years of age. The average household size was observed to be 5.83. A majority of

households with married couples were found to be of the nuclear type and most consisted of two generations. There were substantial age differences between spouses since the men tended to marry women much younger than themselves. Between a quarter and a fifth of the households with married couples were polygynous. The environmental conditions of the households were also discussed. Electricity and pipe-borne water are available to about a fifth of the households; a very small proportion have flush toilets or use gas or electricity for cooking. Quite a substantial proportion of the population, especially in the rural areas, live in

relatively unsanitary conditions. The discussion on the socio-economic and background characteristics of the respondents showed that about six out of every ten do not have any formal education, seven out of every ten are not literate, eight out of every ten live in rural areas and close to half (45.5 per cent) are Muslims. About a third each had either never worked or worked in agricultural occupations while over a fifth were in sales (trading). Almost all the socio-economic and background variables were found to be highly inter-related and the implications of this for the findings reported in subsequent chapters were pointed out.

## CHAPTER 4

# NUPTIALITY

### 4.1 INTRODUCTION

In most human societies, reproduction of the population takes place in more or less stable sexual unions, though it is by no means confined to such unions. The timing of an individual's entry into unions, the procedures for entry, stability and composition of such unions are to a large extent determined by the religious, legal and other socio-cultural characteristics of the particular society. Such unions are almost universally known as marriages and they constitute a most important factor in population dynamics as they have direct effects on fertility and other demographic processes. The continuous exposure of a woman to childbearing usually commences with entry into a marital union and evidence abounds of a close relationship between marital status, marital stability, age at marriage and reproductive performance. It is thus pertinent to examine the nuptiality patterns of the survey population before looking into their fertility performance.

In the NFS, marriage is defined as including all legally, traditionally and religiously contracted unions of man and woman as husband and wife as well as other stable cohabitations (or consensual unions) without the blessings of the law, tradition or religion. Information on the marital characteristics and history of the women was collected in section 4 of the individual questionnaire. Such information includes the date of the start of each union, the current status of the union, the date and reason for dissolution for unions which have been dissolved, and whether or not the husband has other wives.

### 4.2 THE INCIDENCE AND LEVEL OF NUPTIALITY

With the NFS definition of marriage as including both legalized and consensual unions, 83.5 per cent of the surveyed women reported themselves as ever married at the time of interview. As expected, the proportion of women ever married increases with age. Thus 59.7 per cent of the women aged 15-19 had never been married. This proportion, however, declines to 15.2 per cent for women in the next age group (20-24) and to 3.2 per cent for women aged 25-29. Thus, before the age of 30, almost all women (96.8 per cent) are or have been in a marital union. By the age of 34, 99.0 per cent of all the women were or had been married. The proportion of women who had never been married among the oldest cohort (45-49) is only 0.6 per cent (table 4.1).

It is thus evident that marriage is a universal phenomenon for the surveyed women since virtually all of the adults among them have been in unions. Moreover, a large majority of them first entered into such unions relatively early in life.

### 4.3 AGE AT MARRIAGE

The above observation is confirmed by an examination of the age at marriage of the women. The distribution of the ever-married women by single years of age at first marriage shows that a quarter (24.3 per cent) were first married by the age of 13, over a third (37.0 per cent) by the age of 14 and half (51.8 per cent) by the age of 15. More than eight out of every ten had married before their 20th birthday, and 99.0 per cent had been married before the age of 28. It is also observed that

Table 4.1: Per cent distribution of women ever and never married, by current age

Current age	Ever married	Never married	Total
15-19	40.3	59.7	100.0
20-24	84.8	15.2	100.0
25-29	96.8	3.2	100.0
30-34	99.0	1.0	100.0
35-39	99.1	0.9	100.0
40-44	99.0	1.0	100.0
45-49	99.4	0.6	100.0
All	83.5	16.5	100.0

Source: Vol II, table 1.1.1

Table 4.2: Per cent distribution of ever-married women, by single years of age at first marriage

Age at first marriage	Relative per cent	Cumulative per cent
9	1.1	1.1
10	2.4	3.5
11	3.5	7.0
12	7.2	14.2
13	10.1	24.3
14	12.7	37.0
15	14.8	51.8
16	10.2	62.0
17	8.5	70.5
18	7.6	78.1
19	5.3	83.4
20	5.5	88.9
21	3.2	92.1
22	2.1	94.2
23	1.4	95.6
24	1.1	96.7
25	1.0	97.7
26	0.7	98.4
27	0.6	99.0
28	0.2	99.2
29	0.2	99.4
30	0.2	99.6
31	0.1	99.7
32	0.1	99.8
33+	0.2	100.0
Total	100.0	

Source: Vol II, table 1.1.1

Table 4.3: Per cent distribution of women according to age at first marriage, by current age

Current age	Age at first marriage							Never married	Total	Median	Mean	Number of women
	<15	15-17	18-19	20-21	22-24	25-29	30+					
15-19	22.1	(-)	(-)	(-)	(-)	(-)	(-)	59.7	(-)	(-)	(-)	2,101
20-24	33.9	31.3	10.5	(-)	(-)	(-)	(-)	15.2	100.0	(-)	16.2	1,710
25-29	37.9	30.0	11.8	8.2	6.4	(-)	(-)	3.2	100.0	16.5	16.0	1,766
30-34	35.6	33.9	13.7	8.3	4.7	2.5	(-)	1.0	100.0	16.5	16.0	1,547
35-39	32.7	33.4	13.2	10.5	5.0	3.2	1.1	0.9	100.0	17.0	16.2	1,110
40-44	23.8	28.4	17.7	14.1	5.8	7.3	2.0	1.0	100.0	18.3	17.7	904
45-49	27.6	27.2	15.6	11.2	8.4	5.4	3.9	0.6	100.0	17.4	18.2	591

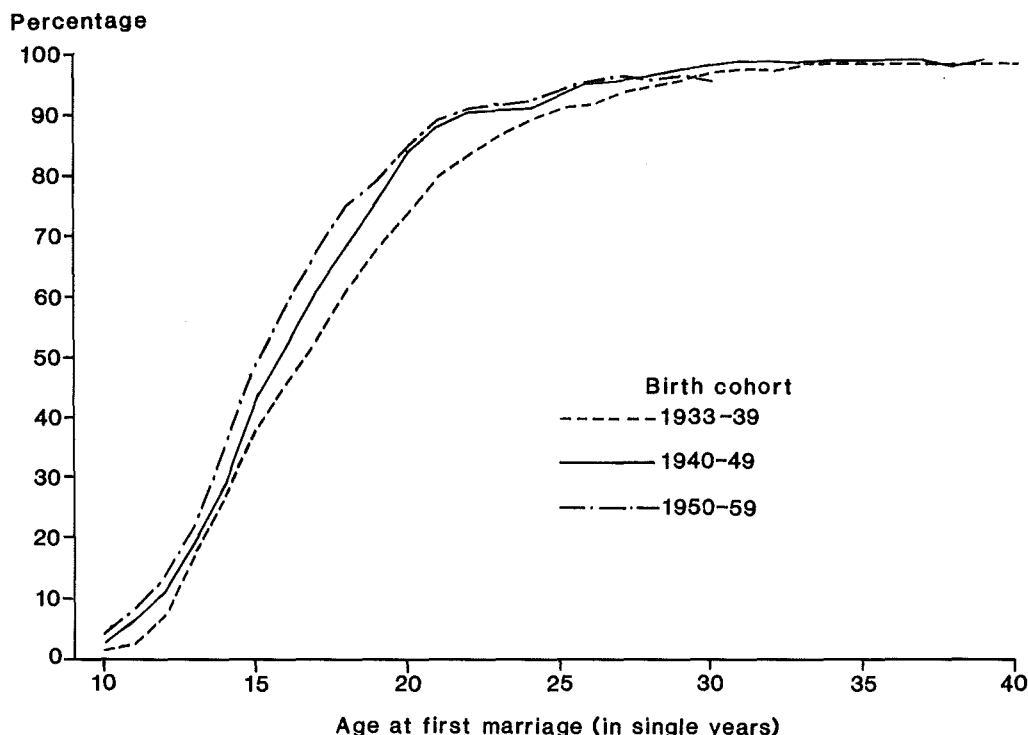
NOTE: (-) indicates suppressed values because very few proportions married in that category.

Source: Vol II, table 1.1.1

most of the women, as in many other societies, entered into first marriage within a rather narrow age range: 71.1 per cent between the ages of 12 and 18 (see table 4.2).

The distribution of all women by current age and age at first marriage, as well as the

mean and median ages at first marriage, is shown in table 4.3. The figures reveal, at face value, that the age at first marriage of the women seems to have been declining over time. For instance, the mean and median ages at first marriage for women aged 25-29 (96.8 per cent of whom were already married) are 16.0



4.1 Per cent distribution of women according to age at first marriage, by birth cohort

and 16.5 years respectively compared with 17.7 and 18.3 respectively for women aged 40-44 and 18.2 and 17.4 respectively for those aged 45-49. Furthermore, while 79.7 per cent of the women aged 25-29 were first married before the age of 20, the comparable proportions for women aged 40-44 is 69.9 per cent and 70.4 per cent for those aged 45-49. A similar pattern of lower proportions of women married at a particular age for the older women is evident from figure 4.1, which presents the distribution of women according to year of birth and age at marriage. For example, 45.2 per cent of the women born between 1933 and 1939 were married by the age of 16, compared with 52.9 per cent and 59.0 per cent for women born between 1940 and 1949 and 1950 and 1959 respectively.

The above observations, however, are contrary to expectations and cast doubts whether they are real or a function of poor reporting of age at first marriage, particularly by the older women. It is well known that recall-lapse increases with age and the older women, who were first married many years ago, might have misreported their ages. Moreover, despite the possible effects of truncation, the partial data for the younger women under 25 suggest a decline in very young marriages. For instance, only 22.1 per cent of the women aged 15-19, compared with 33.9 per cent for those aged 20-24, had been first married by the age of 15. This observation is further substantiated by the singulate mean ages at marriage (SMAM) for the women at the time of interview and five years before the interview. This value indicates the mean number of years spent single among persons

ultimately marrying. The SMAM was 18.5 years at the time of interview and 17.7 years five years before the interview. Based on the above, the available evidence tends to indicate a modest recent increase in the age at first marriage rather than a decrease.

#### 4.4 DIFFERENTIALS IN AGE AT MARRIAGE

Just as the age at marriage varies between societies based on their legal, religious and other socio-economic characteristics, so it also varies within subgroups in the same society. As is shown in table 4.4, the median age at first marriage varies substantially and significantly among the surveyed women. Such substantial variations are observed for all the background characteristics in the table. If attention is focused on women aged 20-24 for whom the data on age at first marriage are recent and probably reasonably reliable, it is observed that the median age at marriage is lowest for women with only Koranic education (13.9) followed by women with no education whatsoever (15.9) and highest for the more educated women: 16.5 for women who did not complete primary education and 19.0 for those who completed primary education. The value is even higher for women with secondary or higher education, though there are few ever-married women in this age group. The level of education of the women is thus an important factor affecting their age at marriage; the higher the level of education, the later the age at first marriage. The differences are quite substantial - 2.5, 3.7 and 5.1 years between women in the 20-24 age group who completed primary education and those who did not complete, never had any formal education or

Table 4.4: Median age at first marriage, by current age and background characteristics

Background characteristics	Current age						Total <sup>a</sup>	Number of women <sup>a</sup>
	20-24	25-29	30-34	35-39	40-44	45-49		
<u>(a) Level of education</u>								
None	15.3	15.5	15.9	16.0	17.6	17.5	15.9	5,728
Koranic	13.9	14.2	14.7	13.7	14.5	14.6	14.2	872
Primary incomplete	16.5	16.9	17.1	18.6	19.0	20.8	18.0	1,059
Primary complete	19.0	18.7	18.2	18.1	21.8	(16.7)	20.4	965
Secondary and above	-	22.6	20.8	21.3	(23.8)	(24.2)	-	1,106
<u>(b) Type of place of residence</u>								
Village (rural)	15.8	15.7	15.8	16.1	17.4	17.1	16.5	7,527
Town/city (urban)	18.2	17.0	16.8	17.0	19.2	18.8	18.4	2,202
<u>(c) Region of residence</u>								
North-east	14.9	14.9	15.7	15.5	16.6	15.4	15.4	2,343
North-west	14.6	14.7	14.8	14.8	15.5	15.1	14.8	2,221
South-east	18.8	17.2	16.8	16.9	17.9	17.9	18.8	3,139
South-west	18.9	18.5	19.0	18.9	20.1	20.5	20.1	2,027
<u>(d) Religion</u>								
Catholic	19.5	17.5	17.5	17.0	17.7	18.5	19.3	1,648
Protestant	18.6	17.7	18.2	18.2	19.7	19.1	19.0	1,377
Other Christian	18.1	17.3	16.9	17.2	19.1	18.2	18.6	1,340
Muslim	14.8	15.0	15.2	15.4	16.2	15.6	15.3	4,427
Traditional/others	16.2	16.5	16.6	16.6	17.7	17.6	17.0	936
<u>(e) Pattern of work</u>								
Now and before marriage	16.3	16.4	17.0	17.5	18.8	18.6	17.0	2,870
Now but not before marriage	15.5	15.5	16.0	16.1	16.7	16.0	15.8	2,799
Since (not now) and before marriage	17.1	(15.8)	(12.8)	(15.5)	(15.2)	(12.9)	15.5	106
Since but not before marriage	15.5	(16.4)	16.6	13.7	(16.8)	(19.3)	15.8	122
Before marriage only	15.5	15.7	15.3	15.5	(14.9)	(15.9)	15.3	346
Never worked	15.0	15.6	14.7	14.7	16.3	16.7	15.0	1,877
<u>(f) Occupation of husband</u>								
No work	16.3	19.1	15.7	(14.9)	(17.5)	(20.9)	16.0	137
Professional, technical, managerial, and clerical	16.7	17.7	17.5	17.3	18.4	16.7	16.8	1,007
Sales	15.3	16.1	16.0	16.0	17.3	18.4	15.8	1,041
Agriculture	15.3	15.3	15.8	16.0	17.5	17.1	15.7	4,334
Services	15.0	14.8	16.7	15.9	19.1	16.4	15.7	498
Production workers	16.3	16.8	15.7	16.4	19.2	19.2	16.2	1,104

a Figures are for all women aged 15-49.

NOTE: Figures in brackets are based on less than 20 cases.

had only Koranic education respectively. Large differences are also observed according to the region of residence, religion and type of place of residence of the women. Again, for the same group of women median age at marriage is low for women in the North-west (14.6) and North-east (14.9) and higher for those in the South-east (18.8) and South-west (18.9) - a range of over four years. When the religious affiliation of the women is considered, it is

found that the Muslim women married earlier (14.8) than Christians or those who adhere to the traditional religions. Women resident in the rural areas (villages) at the time of interview have lower median ages at first marriage than women residing in the towns or cities.

A similar pattern of differentials by all background characteristics is observed if the



Table 4.5: Mean age at first marriage of women who married before the age of 25 and who are currently aged 25 and over, by current age and background characteristics

Background characteristics	Current age					Total	Number of women
	25-29	30-34	35-39	40-44	45-49		
<u>(a) Level of education</u>							
None	15.9	16.1	16.3	17.2	17.1	16.4	4,071
Koranic	14.4	14.7	14.2	14.6	15.3	14.6	503
Primary incomplete	16.9	17.2	17.8	17.8	19.5	17.4	493
Primary complete	18.0	17.9	18.0	(19.8)	(17.8)	18.0	330
Secondary and above	20.0	17.6	(20.1)	(21.9)	(23.8)	19.5	153
<u>(b) Type of place of residence</u>							
Village	16.0	16.1	16.3	17.1	16.9	16.3	4,433
Town/city	16.9	16.8	16.9	17.7	18.0	17.1	1,118
<u>(c) Region of residence</u>							
North-east	15.5	15.8	15.9	16.2	16.0	15.8	1,438
North-west	14.8	14.8	15.2	15.5	15.1	15.0	1,381
South-east	17.1	16.5	16.8	17.6	17.4	17.0	1,626
South-west	18.3	18.2	18.2	18.9	19.4	18.5	1,106
<u>(d) Religion</u>							
Catholic	17.4	17.2	17.0	17.7	18.2	17.4	761
Protestant	17.5	17.4	17.7	18.6	18.1	17.8	722
Other Christian	16.8	16.7	16.7	17.9	17.2	16.9	715
Muslim	15.4	15.5	15.7	16.4	16.0	15.7	2,715
Traditional/others	16.7	16.5	16.8	17.3	17.3	16.9	637
<u>(e) Pattern of work</u>							
Now and before marriage	16.7	16.9	17.4	18.1	17.9	17.3	2,098
Now but not before marriage	15.9	16.3	16.3	16.7	16.4	16.3	2,048
Since (not now) and before marriage	(16.2)	(13.6)	(16.4)	(15.7)	(14.0)	15.3	73
Since but not before marriage	(17.1)	16.7	14.9	(16.9)	(18.2)	16.5	86
Before marriage only	16.5	15.5	15.3	(16.4)	(17.2)	16.1	155
Never worked	16.0	14.8	15.1	15.9	16.4	15.6	1,090
<u>(f) Occupation of husband</u>							
No work	(17.8)	16.8	(16.6)	(17.1)	(19.4)	17.5	86
Professional, technical, and managerial	17.2	16.9	17.1	17.5	16.6	17.1	417
Clerical	18.6	17.2	17.3	18.0	(17.4)	17.9	172
Sales	16.6	15.9	16.4	17.1	17.7	16.5	711
Agriculture	15.7	16.1	16.3	17.1	17.0	16.3	3,196
Private household worker	(15.4)	(15.8)	(18.3)	(17.0)	(16.0)	16.0	50
Other services	14.9	16.9	16.5	18.7	(17.3)	16.4	180
Skilled production	16.9	16.0	16.5	16.8	17.3	16.6	569
Unskilled production	17.1	(16.2)	(17.1)	(17.0)	18.0	17.1	67
All	16.2	16.2	16.4	17.2	17.1	16.5	5,550

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 1.1.3

mean age at first marriage for women who married before the age of 25 and are currently aged 25 and above is considered, as shown in table 4.5. Restriction to this group of women eliminates the effect of few late marriages on the means since 98 per cent of the women had been first married before that age. A further observation here is that women who never worked tend to have married earliest. No consistent

differentials by type of occupation of husband is observed.

#### 4.5 STABILITY OF MARRIAGES

Just as the formation of stable sexual unions (marriages) provides the social setting in which most of the reproduction of the human population occurs, so marital dissolution (by

means of divorce, separation or death of spouse) directly diminishes effective participation in this reproductive process. This is because women whose marriages have been dissolved (and have not remarried) are no longer as continuously exposed to the risk of childbearing as other married women. If such women remarry, the net loss of exposure is confined to the period they had spent between the first and second (or subsequent) marriages; if they do not remarry, then they are effectively excluded from this continuous exposure for the rest of their (childbearing) lives. It is thus important to examine the stability of marriages among the women surveyed since it may be an important influence on their reproductive performance. This aspect of nuptiality is examined by means of the following indicators: the status of the first marriage, the incidence of remarriage and number of times married, the proportion of time spent in the married state since the first marriage and current marital status.

#### 4.5.1 Status of first marriage

Table 4.6 presents the distribution of the ever-married women according to the status of their first marriage. The figures indicate a moderate level of marital instability; overall, 85.0 per cent of the women are still in their first marriages while the first marriages of 15.0 per cent have been dissolved. Dissolution of marriages was mostly due to divorce and separation (9.8 per cent) rather than death of husband (5.2 per cent).

The proportion of women whose first marriages were dissolved increases with the duration of marriage as would be expected, simply on the basis of accumulated risk. This proportion increases from 3.9 per cent for women married less than 5 years ago to 17.5 per cent for those married 15-19 years ago and finally to as much as 36.3 per cent for those married for 30 years or more. Divorce or separation remains the major cause of marital

Table 4.6: Per cent distribution of ever-married women according to status of first marriage, by years since first marriage and age at marriage

Years since marriage	First marriage undissolved	First marriage dissolved by			Total	Number of women
		Death of husband	Divorce/separation	Sub-total		
(a) <u>All ever-married women</u>						
Under 5 years	96.1	0.4	3.4	3.9	100.0	1,430
5-9	89.6	2.7	7.8	10.4	100.0	1,586
10-14	88.0	3.6	8.4	12.0	100.0	1,744
15-19	82.5	5.0	12.4	17.5	100.0	1,342
20-24	75.5	9.2	15.3	24.5	100.0	1,088
25-29	71.6	13.2	15.2	28.4	100.0	582
30 years and over	63.7	20.1	16.2	36.3	100.0	319
All	85.0	5.2	9.8	15.0	100.0	8,120
(b) <u>Women married before the age of 20</u>						
Under 5 years	96.4	0.4	3.2	3.6	100.0	1,060
5-9	89.5	2.8	7.8	10.5	100.0	1,300
10-14	88.3	3.5	8.2	11.7	100.0	1,525
15-19	81.8	5.1	13.1	18.2	100.0	1,118
20-24	75.2	8.9	15.9	24.8	100.0	927
25-29	72.2	12.3	15.5	27.8	100.0	517
30 years and over	63.7	20.1	16.2	36.3	100.0	319
All	84.6	5.3	10.1	15.4	100.0	6,766
(c) <u>Women married after the age of 19</u>						
Under 5 years	95.4	0.4	4.1	4.6	100.0	370
5-9	90.1	2.2	7.7	9.9	100.0	286
10-14	86.2	4.0	9.8	13.8	100.0	249
15-19	86.2	4.8	9.0	13.8	100.0	224
20-24	77.0	10.9	12.1	23.0	100.0	160
25-29	67.4	20.0	12.6	32.6	100.0	65
30 years and over	0.0	0.0	0.0	0.0	0.0	0.0
All	87.5	4.4	8.1	12.5	100.0	1,354

Source: Vol II, table 1.2.1

dissolution, not only in the early years of marriage but also in the later years. The only exception are women in the oldest marriage cohort (30 years or more) for whom widowhood accounted for 20.1 per cent of the dissolutions while 16.2 per cent were due to divorce or separation. The pattern is similar when examined by the age at marriage of the women.

#### 4.5.2 Incidence of remarriage and number of times married

The incidence of remarriage is relatively high among the surveyed women. As many as seven out of every ten women whose first marriage was dissolved had already remarried by the time of the survey and thus resumed continuous exposure to the risk of childbearing. The proportion of these women who remarried increases from 59.0 per cent for those married for less than five years to 80.3 per cent for those married 10-14 years and then declines - but only to 61.9 per cent for women married for 30 or more years. Thus the incidence of remarriage is high for all marriage cohorts (table 4.7).

Eighty-nine per cent of all ever-married women have been married only once, 9.3 per cent have been married twice and 1.4 per cent three or more times. As marital duration increases, the proportion of women who have been married more than once also increases - again an expected phenomenon based on the principle of accumulated risk. Thus, while 8.1 per cent of women first married 5-9 years ago have been married more than once, the equivalent proportion for women married 30 or more years is 22.5 per cent. The average number of marriages per woman also increases by duration since first marriage - 1.36 for women married for 30 years and above and 1.08 for those married between 5-9 years. The average for all ever-married women is 1.13. The pattern is consistent when considered by the age of the woman at first marriage (table 4.8).

#### 4.5.3 Proportion of time spent in the married state

Despite the observed moderate level of marital instability and because of the high incidence

of remarriage for those whose first (and subsequent) marriages were dissolved, each woman, once married, lives most of her life in the married state. The average percentage of time spent by all ever-married women in the married state since first marriage is 95.7 per cent. Thus only 4.3 per cent of the total time duration since first marriage was spent outside marriage. The net effect of marital instability on fertility performance should thus be low. Consequently, fertility measures for ever-married women should approximate closely their fertility, as if they had been continuously married prior to the survey (table 4.9).

#### 4.5.4 Current marital status

The distribution of ever-married women by their marital status at the time of the survey is shown in table 4.10. It is observed that as many as 95.3 per cent were currently married, 2.8 per cent were widowed and 1.9 per cent divorced or separated. A comparison of the 93.5 per cent currently married with the 85.0 per cent whose first marriage was not dissolved yields an excess of 10.3 per cent, representing the net effect of remarriage on current marital status.

The proportion of women currently married decreases with increasing marital duration; 98.4 per cent for the women married less than five years ago and 84.2 per cent for those married 30 or more years ago. The proportion of women who were not married at the time of the survey correspondingly increases with marital duration - reflecting greater risk of marital dissolution over time as well as the decreasing probability of remarriage for older women.

#### 4.6 DIFFERENTIALS IN MARITAL STABILITY

The stability of marriages varies to some extent according to the background characteristics of the women. However some of the indicators of stability, such as the percentage of the women currently married and the percentage of time since first marriage spent in the married

Table 4.7: Percentage of ever-married women who remarried after the dissolution of their first marriage, by years since first marriage

Years since first marriage	Percentage	Number whose first marriage was dissolved
Under 5 years	59.0	55
5-9	77.1	166
10-14	80.3	212
15-19	76.9	234
20-24	67.1	267
25-29	65.5	165
30 years and over	61.9	116
All	71.6	1,214

Source: Vol II, table 1.3.2

Table 4.8: Per cent distribution of ever-married women according to number of times married, by years since first marriage and age at marriage

Years since first marriage	Number of times married				Total	Number of women
	1	2	3+	Mean		
(a) <u>All ever-married women</u>						
Under 5 years	97.7	2.3	0.0	1.02	100.0	1,430
5-9	91.9	7.7	0.4	1.08	100.0	1,586
10-14	90.4	8.6	1.1	1.11	100.0	1,774
15-19	86.6	12.1	1.3	1.15	100.0	1,342
20-24	83.6	13.6	2.9	1.20	100.0	1,088
25-29	81.4	14.3	4.3	1.24	100.0	582
30 years and over	77.5	16.0	6.5	1.36	100.0	319
All	89.3	9.3	1.4	1.13	100.0	8,120
(b) <u>Women married before the age of 20</u>						
Under 5 years	97.6	2.4	0.0	1.02	100.0	1,060
5-9	91.4	8.2	0.4	1.09	100.0	1,300
10-14	90.4	8.7	0.9	1.11	100.0	1,525
15-19	85.6	12.9	1.5	1.17	100.0	1,118
20-24	82.2	14.8	3.0	1.21	100.0	927
25-29	80.7	14.4	4.8	1.25	100.0	517
30 years and over	77.5	16.0	6.5	1.36	100.0	319
All	88.5	9.9	1.6	1.14	100.0	6,766
(c) <u>Women married after the age of 19</u>						
Under 5 years	98.2	1.8	0.0	1.02	100.0	370
5-9	94.6	5.4	0.0	1.05	100.0	286
10-14	90.1	8.0	1.9	1.12	100.0	249
15-19	91.4	8.4	0.3	1.09	100.0	224
20-24	91.7	6.2	2.1	1.10	100.0	160
25-29	86.9	13.1	0.0	1.13	100.0	65
30 years and over	-	-	-	-	-	-
All	93.5	5.9	0.6	1.07	100.0	1,354

Source: Vol II, table 1.3.1

Table 4.9: Average percentage of time since first marriage spent in married state by ever-married women, by age at marriage and current age

Current age	Age at first marriage					All	Number of women
	< 15	15-19	20-24	25-29	30+		
15-19	98.0	99.3	-	-	-	98.3	846
20-24	97.9	98.0	98.6	-	-	98.0	1,450
25-29	97.7	98.1	96.6	100.0	-	97.8	1,710
30-34	97.2	97.1	98.3	99.7	*	97.3	1,532
35-39	94.9	94.1	97.6	98.9	78.8	94.9	1,100
40-44	93.3	95.4	95.8	95.0	93.9	94.8	895
45-49	94.4	90.7	89.4	91.8	92.9	91.7	588
All	96.1	95.4	95.3	95.2	91.7	95.7	8,120

\* Less than 10 cases.

Source: Vol II, table 1.4.1

Table 4.10: Per cent distribution of ever-married women according to current marital status, by years since first marriage and age at first marriage

Years since first marriage and age at marriage	Currently married	Not currently married			Total	Number of women
		Widowed	Divorced/ separated	Sub- total		
(a) <u>All ever-married women</u>						
Under 5 years	98.4	0.2	1.4	1.6	100.0	1,430
5-9	97.4	0.7	1.9	2.6	100.0	1,586
10-14	97.4	1.7	0.8	2.6	100.0	1,774
15-19	95.7	3.0	1.4	4.3	100.0	1,342
20-24	91.1	5.4	3.5	8.9	100.0	1,088
25-29	88.3	8.0	3.7	11.7	100.0	582
30 years and over	84.2	12.7	3.9	15.8	100.0	319
All	95.3	2.8	1.9	4.7	100.0	8,120
(b) <u>Women married before the age of 20</u>						
Under 5 years	98.8	0.2	1.0	1.2	100.0	1,060
5-9	97.8	0.5	1.7	2.2	100.0	1,300
10-14	97.7	1.5	0.8	2.3	100.0	1,525
15-19	95.9	2.8	1.4	4.1	100.0	1,118
20-24	92.3	5.0	2.8	7.7	100.0	927
25-29	90.2	7.0	2.8	9.8	100.0	517
30 years and over	84.2	12.7	3.1	15.8	100.0	319
All	95.6	2.7	1.6	4.4	100.0	6,766
(c) <u>Women married after the age of 19</u>						
Under 5 years	97.0	0.3	2.7	3.0	100.0	370
5-9	95.5	1.4	3.1	4.5	100.0	286
10-14	96.0	3.0	1.0	4.0	100.0	249
15-19	94.8	3.8	1.4	5.2	100.0	224
20-24	84.2	7.6	8.1	15.8	100.0	160
25-29	73.4	16.2	10.4	26.6	100.0	65
30 years and over	0.0	0.0	0.0	0.0	0.0	0.0
All	93.5	3.2	3.3	6.5	100.0	1,354

Source: Vol II, table 1.5.1

state, do not vary much. Almost all subgroups of women have spent over 95 per cent of the time since first marriage in the married state (the only exception is women in the South-east region where the figure is 92.8 per cent). The proportion of women currently married is also high and over 95 per cent for all subgroups, again with the exception of the South-east region (88.5 per cent) and most religious groups other than Muslims. The other indicators, however, show some substantial and significant variations (table 4.11). Dissolution of first marriage is inversely related to the level of education of the women; 5.3 per cent of women with secondary education or above compared with 15.3 per cent and 16.2 per cent of women with only Koranic and no formal education respectively have had their first marriage dissolved. Incidence of remarriage is also inversely related to level

of education with only 50.7 per cent and 53.5 per cent of women with secondary or more and with completed primary education respectively remarrying after the dissolution of their first marriage compared with 92.3 per cent and 70.8 per cent respectively for women with Koranic and no formal education. The South-east region stands out as the area with the lowest incidence of remarriage; only 44.5 per cent of the women whose first marriages were dissolved remarried compared with 88.5 per cent for the North-east, 90.6 per cent for the North-west and 77.2 per cent for the South-west. The South-east also has the highest proportion of women whose first marriages were dissolved (19.7 per cent). Dissolution of first marriage is noticeably low for Catholics (12.3 per cent) and Muslims (14.3 per cent). Remarriage is almost universal among Muslims (90.4 per cent) and much less among Catholics (36.9 per cent).

Table 4.11: Indicators of marital stability for ever-married women, by selected background characteristics

Background characteristics	Percentage whose first marriage was dissolved	Percentage of those whose first marriage was dissolved that remarried	Percentage of time since first marriage spent in married state	Percentage currently married
<u>(a) Level of education</u>				
None	16.2	70.8	95.4	94.7
Koranic	15.3	92.3	96.6	98.4
Primary incomplete	13.3	67.9	96.1	95.6
Primary complete	10.3	53.5	95.9	94.8
Secondary and above	5.3	50.7	97.8	97.1
<u>(b) Type of place of residence</u>				
Village (rural)	15.0	70.2	94.8	95.1
Town/city (urban)	14.6	77.0	96.0	95.8
<u>(c) Region of residence</u>				
North-east	14.6	88.5	96.6	97.5
North-west	13.3	90.6	97.2	98.7
South-east	19.7	44.5	92.8	88.5
South-west	11.2	77.2	96.6	97.1
<u>(d) Religion</u>				
Catholic	12.3	36.9	94.6	92.3
Protestant	16.9	57.7	94.5	92.1
Other Christian	15.5	62.7	95.1	93.7
Muslim	14.3	90.4	96.7	98.1
Traditional/others	18.6	55.4	94.5	91.2
<u>(e) Pattern of work</u>				
Now and before marriage	16.2	74.6	95.3	95.4
Now but not before marriage	16.0	65.5	95.5	93.9
Since (not now) and before marriage	21.5	90.2	96.8	97.7
Since but not before marriage	19.8	21.0	94.8	83.4
Before marriage only	9.9	83.5	96.4	98.4
Never worked	11.7	79.4	96.5	97.3
<u>(f) Occupation of husband</u>				
No work	24.1	52.4	89.2	87.1
Professional, technical, managerial	11.1	76.2	96.5	97.0
Clerical	10.1	58.5	97.3	95.8
Sales	16.6	67.7	94.2	94.3
Agriculture	15.0	72.8	95.9	95.6
Private household worker	15.9	91.4	96.6	98.6
Other services	17.2	78.0	93.6	95.0
Skilled production	13.0	79.8	97.1	96.6
Unskilled production	22.0	54.1	95.5	89.9
Not stated	24.7	72.1	93.7	95.5
All	15.0	71.6	95.7	95.3

Source: Vol II, tables 1.2.2, 1.3.2, 1.4.2 and 1.5.2

#### 4.7 INCIDENCE AND PREVALENCE OF POLYGAMY

Polyandry, the marriage of one woman to more than one man at the same time, is not common in Nigeria. However, polygyny, the marriage of

one man to more than one woman at the same time, is common as was observed in section 3.8. As many as 42.6 per cent of the women currently married at the time of the survey reported themselves as being in polygynous

unions; 56.7 per cent were in monogamous unions and the type of union of 0.7 per cent was not given.

Polygyny seems to be a common phenomenon permeating the entire social fabric in Nigeria. A substantial proportion of the women in almost all socio-economic categories reported themselves as being in polygynous unions (table 4.12). Some differentials, however, exist, the most noticeable being in

the education of the women. The higher the level of education, the lower the proportion in polygynous unions (19.7 per cent for secondary and above compared and 47.0 per cent for women with no formal education). Slightly fewer of the women (37.1 per cent) in the towns and cities are in polygynous unions compared with 44.2 per cent for women in the villages. It is common practice for polygamous men in towns or cities to leave one or more of their wives in their villages and have only one living with

Table 4.12: Percentage of currently married women in polygynous unions, by selected background characteristics

Background characteristics	Percentage	Number of women
<u>(a) Level of education</u>		
None	47.0	5,213
Koranic	42.1	831
Primary incomplete	36.9	788
Primary complete	25.0	609
Secondary and above	19.7	297
<u>(b) Type of place of residence</u>		
Village	44.2	6,069
Town/city	37.1	1,668
<u>(c) Region of residence</u>		
North-east	42.6	2,131
North-west	46.6	2,109
South-east	39.3	1,952
South-west	41.4	1,545
<u>(d) Religion</u>		
Catholic	31.3	1,009
Protestant	33.9	952
Other Christian	45.5	958
Muslim	45.8	4,039
Traditional/others	48.3	779
<u>(e) Occupation of husband</u>		
No work	33.8	119
Professional, technical, managerial, clerical	37.1	972
Sales	42.4	982
Agriculture	46.2	4,141
Services	46.6	463
Production workers	33.2	1,060
<u>(f) Pattern of work</u>		
Now and before marriage	44.4	2,738
Now but not before marriage	43.3	2,628
Since (not now) and before marriage	38.3	103
Since but not before marriage	45.4	102
Before marriage only	35.2	340
Never worked	40.6	1,826
All	42.6	7,737

them in the cities at the same time. Substantial variations by region, religion, pattern of work of the women and the occupations of their husbands do not seem to exist.

#### 4.8 SUMMARY

An examination of the nuptiality patterns of the surveyed women shows that marriage is universal among them; all adult women have been in marital unions at one time or another. Entry into marriage also occurs early in life. By the age of 16 exactly half of the ever-married women aged 20-24 have been married for the first time. Both the mean and median ages at first marriage vary positively with level of education and size of place of residence. The higher the level of education of the women and the larger the type of place of residence, the higher the age at first marriage. Age at first entry into unions is substantially lower among Muslims and women in the North-east and North-west regions.

Marriages are relatively stable among the surveyed women. About 15 per cent of all first

marriages had been dissolved by the time of the survey. Remarriage is common and frequent; over seven out of ten women whose first marriages were dissolved had remarried. Consequently, once first married, the proportion of time a woman spends in the married state is very high, 95.7 per cent on the average. Divorce and separation combined constitute a more important reason for marital dissolution, even in later years of marriage, than widowhood. Because of the high incidence of remarriage, 93.5 per cent of all ever-married women were married at the time of the survey.

Polygyny, the marriage of one man to more than one wife at the same time, was found to be common and to pervade the entire social fabric. About four out of every ten of the currently married women were in polygynous unions at the time of the survey. Except among women with completed primary and with secondary or higher education, about a fifth and a quarter respectively of whom are in polygynous unions, between a third and a half of all the other women in various background categories are in polygynous unions.



# FERTILITY AND INFANT MORTALITY

## 5.1 INTRODUCTION

One of the primary and immediate objectives of the NFS was to obtain national estimates of fertility levels and trends, as well as to examine any differentials in these levels and trends that might exist for the various sub-groups in the country. In order to obtain the necessary information for this, a complete maternity history of each woman interviewed in the survey was obtained. This was done in two stages. First, for each woman who had given birth to a child (irrespective of her marital status), questions were asked on the number of boys and girls she had given birth to who were then living with her in the same household and the number living with someone else. Questions were also asked on the number of her live births (boys and girls separately) who had died. Responses to these two questions were then summed to obtain the total number of live births for each woman; that total was checked with the woman for correctness. Secondly, the interviewer proceeded to list all the children ever born to the woman, whether dead or alive, starting with the first child. The listing included the name of the child, the sex, month and year of birth (or years ago that the child was born), the survival status and, if dead, the age at death. Finally the interviewer ascertained if there were any other pregnancies between live births. The duration of each such pregnancy was then determined; if the duration was seven months or more, an attempt was made to establish if it was a live birth or a still birth. If less than seven months, the cause of termination (whether induced or spontaneous) was determined. The number of children ever born from both sources was then checked for consistency.

The findings presented in this chapter concern live births to the women surveyed. It is, however, pertinent to point out that retrospective fertility data of the type collected above are rarely free from error, except in highly numerate and literate societies. Such errors can be in the form of total omission of births, especially births to older women which might have occurred many years before the survey. They could also be in the form of mis-statement of age or dates of birth of the children. When these two potential sources of error are combined with errors in the recorded ages of the women themselves (which was shown to exist in chapter 3), the obtained age pattern of fertility, as well as the timing of fertility in the life cycles of the women, may be distorted. Evaluation techniques for the detection of such errors exist but are too complex to be undertaken in this report. Many of the findings reported in this chapter should therefore be accepted with caution until

adjustments have been made to correct for these potential sources of error.

The fertility of the women interviewed in the NFS is presented and discussed in this chapter along two dimensions: (a) the number of children they have given birth to throughout their reproductive lives and (b) the timing of such births. Section 5.2 is concerned with the former while section 5.3 deals with recent levels of fertility. As was noted in chapter 4, reproduction of the human population takes place mostly within marriage. The incidence of fertility before marriage, the effect of age at first marriage on fertility performance and the tempo of fertility, ie how early in life and in marriage the women had their children are discussed in section 5.4. Fertility differentials by various background characteristics and any observed trends in fertility performance over time are presented in sections 5.5 and 5.6 respectively. Section 5.7 focuses on the incidence and level of infant and child mortality.

## 5.2 CUMULATIVE FERTILITY

The number of children ever born is often used as a summary measure of the cumulative fertility of a population. The per cent distribution of all women surveyed according to the number of children ever born by current age is shown in table 5.1. The mean number of children born to all the women is 3.07. As expected, this mean increases steadily by age since the older women have been exposed to the risk of childbearing for a greater length of time than the younger women. It increases from 1.79 for women aged 20-24 to 4.32 for women aged 30-34 to 5.84 for women aged 45-49. Since this last cohort of women has virtually reached the end of its reproductive life, the mean value of 5.84 can be regarded as a measure of the completed fertility of the population. This mean appears low in relation to neighbouring countries and may reflect omission of births by these older women, though it is slightly higher than the completed fertility of 5.6 obtained for the rural population of Nigeria in the 1965/66 Rural Demographic Sample Survey (FOS 1968).

The table also reveals that over half (55.3 per cent) of the women aged 45-49 have had six or more children and that over a fifth (22.7 per cent) have had nine or more children. The equivalent proportions for the next group (40-44) are 43.6 per cent and 15.5 per cent respectively. These differences in adjacent age groups are rather large and probably reflect errors in the reporting of current age by the women. For the younger women, about three out of every ten aged 20-24, and six out of every ten aged 25-29 have had three or more

Table 5.1: Per cent distribution of all women according to number of children ever born, by current age

Current age	Number of children ever born															Number of women
	0	1	2	3	4	5	6	7	8	9	10	11+	Mean	% Masc	Total	
15-19	75.3	17.3	5.0	1.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	55.6	100.0	2,101
20-24	25.5	21.9	22.9	15.7	8.8	3.5	1.1	0.2	0.2	0.2	0.0	0.0	1.79	53.1	100.0	1,710
25-29	10.0	10.8	17.7	19.1	17.9	11.3	7.4	3.0	1.4	0.8	0.1	0.4	3.21	51.7	100.0	1,766
30-34	6.0	6.0	10.3	13.9	19.3	14.9	13.1	8.5	4.3	1.0	1.5	1.2	4.32	54.0	100.0	1,547
35-39	5.9	6.5	7.1	11.0	10.8	15.4	12.5	11.0	8.2	4.8	3.9	2.8	5.07	54.6	100.0	1,110
40-44	7.4	6.7	7.3	10.7	12.5	11.7	10.2	9.7	8.2	7.1	4.5	3.9	5.13	53.3	100.0	904
45-49	8.3	4.1	7.0	6.9	9.5	9.0	12.2	11.4	9.0	7.0	6.4	9.3	5.84	50.8	100.0	591
All	25.4	12.1	11.9	11.5	11.0	8.4	6.7	4.8	3.2	2.0	1.5	1.5	3.07	53.1	100.0	9,729

Source: Vol II, table 2.2.1 - 3.1

children. A quarter of all the women interviewed have not had any children. This proportion is understandably very high for the youngest women (75.3 per cent) because of their short exposure; it declines sharply to 25.5 per cent and 10.0 per cent for women aged 20-24 and 25-29 respectively. The lowest values of around 6.0 per cent are observed for women between the ages of 30 and 39 after which the proportion childless increases slightly to 8.3 per cent for the oldest cohort. The proportion childless for the women 30 years can be taken as an indicator of primary sterility in the society. The higher proportions observed for the oldest women could have been caused by the omission of births or may indicate lowered incidence of sterility due to improved health

conditions and standards of living in the country in the recent past.

About 53.1 per cent of the children born to all women were reported as males and 46.9 per cent as females. Since the expected sex ratio at birth is 105 males to 100 females, the obtained proportion is indicative of some under-reporting of female births. However, no definite pattern of such under-reporting by the age of the women is manifestly evident.

Similar distributions of the number of children ever born by current age for ever-married and currently married women are shown in table 5.2. The tables exclude the never-married women who are, by definition, not

Table 5.2: Per cent distribution of ever-married and currently married women according to the number of children ever born, by current age

Current age	Number of children ever born													Mean	% Masc	Total	Number of women
	0	1	2	3	4	5	6	7	8	9	10	11+					

(a) Ever-married women																	
15-19	41.6	40.8	12.3	3.9	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.83	55.6	100.0	846	
20-24	12.7	25.5	26.7	18.5	10.4	4.1	1.3	0.3	0.2	0.2	0.0	0.0	2.10	53.2	100.0	1,450	
25-29	7.4	11.0	18.3	19.7	18.5	11.7	7.6	3.1	1.4	0.9	0.1	0.4	3.31	51.7	100.0	1,710	
30-34	5.1	6.0	10.4	14.0	19.5	15.0	13.2	8.5	4.4	1.0	1.5	1.2	4.36	54.0	100.0	1,532	
35-39	5.2	6.6	7.1	11.1	10.8	15.5	12.6	11.1	8.3	4.8	4.0	2.9	5.12	54.6	100.0	1,100	
40-44	6.9	6.8	7.3	10.8	12.5	11.9	10.3	9.7	8.2	7.2	4.6	3.9	5.15	53.4	100.0	895	
45-49	8.0	3.9	7.0	6.9	9.6	9.0	12.3	11.5	9.0	7.0	6.4	9.3	5.87	50.7	100.0	588	
All	11.2	14.2	14.1	13.7	13.1	10.1	8.1	5.7	3.8	2.4	1.8	1.8	3.67	53.2	100.0	8,120	

(b) Currently married women																	
15-19	41.4	40.9	12.3	3.9	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.83	55.6	100.0	840	
20-24	12.7	25.1	26.8	18.7	10.4	4.2	1.4	0.3	0.2	0.2	0.0	0.0	2.11	53.6	100.0	1,421	
25-29	6.7	10.9	18.5	19.8	18.6	11.6	7.8	3.2	1.5	0.9	0.1	0.4	3.34	51.8	100.0	1,668	
30-34	5.1	6.1	10.3	14.0	19.7	15.1	13.1	8.3	4.5	1.0	1.5	1.3	4.36	54.1	100.0	1,480	
35-39	4.8	6.7	7.1	10.0	11.2	16.2	12.3	11.0	8.2	5.1	4.2	3.1	5.18	54.8	100.0	1,025	
40-44	7.1	6.2	7.3	11.2	12.7	11.2	10.6	10.0	8.1	7.3	4.3	4.0	5.16	53.5	100.0	822	
45-49	6.1	4.2	7.1	7.0	10.1	9.6	12.9	10.3	9.6	7.1	6.2	9.5	5.95	49.6	100.0	482	
All	11.0	14.4	14.4	13.8	13.3	10.1	8.0	5.5	3.7	2.3	1.7	1.8	3.64	53.2	100.0	7,737	

Source: Vol II, tables 2.2.1 - 1.1 and 2.2.1 - 2.1

continuously exposed to the risk of childbearing. Slightly higher values of completed fertility (ie mean number of children ever borne by women aged 45-49) are obtained, 5.87 for ever-married women and 5.95 for currently married women. The proportion of the youngest women who do not have any children is very much lower for the ever-married (41.6 per cent) and the currently married (41.4 per cent) women when compared with all women (75.3 per cent). Childlessness at the older ages, however, remains almost the same, showing that it is not much affected by non-exposure to risk. The pattern of childbearing for the older (40-49) ever-married or currently married women is almost the same as for all women in the same age cohorts, indicating the minimal role of marital dissolution on fertility at such ages. There are, however, some substantial changes for the youngest (15-24) ever-married or currently married women; proportionately more of them, compared with all women in those age cohorts, have gone on to have the first, second or third children. Evidence for the slight under-reporting of female births still persists.

### 5.3 CURRENT FERTILITY

Number of children ever born yields information on lifetime, but not on current, fertility since it does not take into account when the children were born. Two indicators of the current fertility of the women are presented and discussed here; they are the age-specific fertility rates (for the five-year period before the survey) and current pregnancy rates, ie the proportion of women reporting themselves as pregnant at the time of the survey. Average age-specific rates have been calculated for the five years before the date of interview so as to minimize the effects of misdating of births which is a very common problem when only births for the 12 months preceding the interview are considered. Despite this precaution, there could still be errors due to the mis-statement of the age of the women themselves. Pregnancy rates, on the other hand, are not prone to misdating but are highly susceptible to under-reporting.

Pregnancies of less than or around three months' duration are commonly omitted by the women either because they are not very sure that they were pregnant or are unwilling to report it. This is likely to be true for women of all ages and it is assumed that any under-reporting of early pregnancies is equally distributed over all the age groups.

The age-specific fertility rates for all women are shown in table 5.3. The rates increase from an average of 173.3 births per 1,000 women aged 15-19 to a peak of 283.5 births per 1,000 women aged 20-24 and then gradually decline to 274.0, 230.5 and 146.9 for women aged 25-29, 30-34 and 35-39 years respectively. The rates, as expected, are considerably lower for the older women who are approaching the end of their childbearing - 99.5 and 59.6 for women aged 40-44 and 45-49 respectively.

The observed age pattern of fertility is represented graphically in figure 5.1. It is pertinent to note that, as in many other developing countries, peak fertility occurs at a relatively young age (20-24) and is indicative of intensive childbearing early in life. The contribution of the very young women aged 15-19 is also high (13.7 per cent of reported births). Approximately six out of every ten births (57.7 per cent) occurring in the five year period before the survey were to women under 30 years of age; 40.0 per cent were to women aged between 20 and 30 years. Fertility is thus very high in early life.

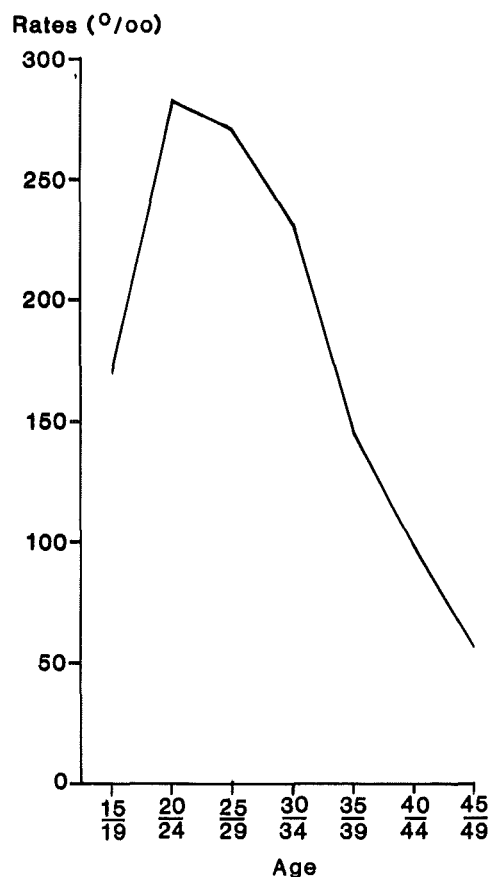
Table 5.3 also shows that the total fertility rate (TFR) for the five-year period preceding the survey is 6.34. The TFR is interpreted as the total number of births a woman would bear if she experienced the observed age-specific fertility rates throughout her reproductive span. Thus, should each woman interviewed experience the ASFRs shown above throughout her childbearing years, she would give birth to 6.34 children by the age of 50.

As for the second measure of current

Table 5.3: Age-specific fertility rates and age-specific marital fertility rates for all and ever-married women

Current age	ASFR <sup>a</sup> (all women)	ASMFR <sup>a</sup> (ever-married women)
15-19	173.3	309.0
20-24	283.5	324.3
25-29	274.0	283.1
30-34	230.5	239.4
35-39	146.9	156.4
40-44	99.5	108.6
45-49	59.6	74.9
T F R	6.34	7.48

a Average of births for the five years before the survey.



5.1 Age-specific fertility rates, 0-4 years before the survey, all women

fertility, table 5.4 shows that 12.5 per cent of all the women (14.8 per cent for ever-married women) reported themselves as pregnant at the time of the survey. As noted earlier, this is most likely to have been under-reported. Again the proportion of women pregnant is highest for women in the peak years of childbearing, ie in the 20-24 and 25-29 age groups (17.4 per cent and 18.4 per cent respectively).

The two measures of current fertility used here can be compared to see if they reflect a

consistent age pattern, if not level, of fertility. This can be done by scaling each of the two measures to add up to 1.00 as shown in table 5.5. The two relative distributions correspond very closely; this suggests that the age pattern of fertility derived from births in the five years preceding the survey is not distorted by differential misdating of births.

#### 5.4 NUPTIALITY AND FERTILITY

The overall effect of marriage on fertility is evident from a comparison of ASFRs for all

Table 5.4: Percentage of all women reporting a current pregnancy, by age

Current age	Per cent	Number of women
15-19	8.1	2,101
20-24	17.4	1,710
25-29	18.4	1,766
30-34	15.4	1,547
35-39	10.7	1,110
40-44	6.1	904
45-49	1.5	591
Total	12.5	9,729

Source: Vol II, table 2.4.6

Table 5.5: Relative age-specific fertility and pregnancy rates

Current age	ASFR <sup>a</sup>	Current pregnancy rate
15-19	0.137	0.104
20-24	0.224	0.224
25-29	0.216	0.237
30-34	0.182	0.199
35-39	0.116	0.138
40-44	0.079	0.079
45-49	0.046	0.019
Total	1.00	1.00

a Average based on births for five years before the survey.

women and the age-specific marital fertility rates (ASMF<sub>MR</sub>s) for ever-married women as given in table 5.3. For every age group, especially those under 25, fertility is higher among married than all women. The total fertility rates differ by over one child; 6.34 for all women and 7.48 for ever-married women.

Further relationships between fertility and nuptiality are examined along the following dimensions: (a) age at first marriage and fertility; (b) duration of marriage and fertility; (c) the incidence of premarital births and conceptions; (d) the interval between first marriage and first birth; (e) births by the end of the fifth year after marriage and (f) median age at birth of the first child. In order to avoid the effects of truncation in the duration of exposure of the women, most analysis will be restricted to women who first married at least five years before the survey.

#### 5.4.1 Age at first marriage and fertility

In most traditional societies where the practice of contraception is not widespread, early marriage for a woman means longer exposure to childbearing and consequently more births, while late marriage implies shorter exposure and fewer births, all other factors remaining constant. However, very young women are not as fecund as more mature ones because of adolescent sterility or subfecundity; it is also possible that childbearing at very young ages may cause secondary infertility.

The mean number of children ever born to ever-married and currently married women according to their current age and age at marriage is shown in table 5.6. It is immediately evident that younger ages at marriage are associated with higher mean numbers of children ever born within each age group. The figures for the older women (45 years and over) show systematically higher completed family sizes for women married at earlier ages compared with those married later; the minor deviations that exist could be due to

reporting errors. Among ever-married women aged 30-34, the mean number of children ever born is 4.70 for those who married before the age of 15, compared with 3.95 and 2.42 for those who married between the ages of 18-19 and 25-29 respectively. These observations apply also to the currently married women.

#### 5.4.2 Marital duration

The duration of marriage should have a similar effect on fertility since the longer a woman is in the married state, the longer her period of continuous exposure to the risk of childbearing. Table 5.7 confirms this; the longer the duration of marriage, the higher the average number of children ever born. Ever-married women married for 5-9 years have, on average, given birth to 2.50 children compared with 3.85 for those married for 10-14 years and 6.09 for those married for 30 years or more. An interesting observation from this table is that, for marital durations under 20 years, women who first married at older ages have higher mean numbers of children ever born than those who married at earlier ages. This appears contrary to the earlier observation in section 5.4.1 but actually reflects the tendency for women marrying late to have had more premarital births and perhaps to have children more quickly after marriage. These features are elaborated below.

#### 5.4.3 Premarital births and conceptions

The proportion of births occurring before, and less than seven months after, marriage gives an indication of the extent of premarital births and conceptions respectively. These are presented for women who first married at least five years ago in the first two columns of table 5.8. A negative interval means that the first birth occurred before first marriage. The figures in the entire table should, however, be regarded with caution since the calendar month of occurrence of substantial proportions of the first births and first marriages were not given and had to be randomly imputed.

Table 5.6: Mean number of children ever born to ever-married and currently married women according to age at first marriage and current age

Current age	Age at first marriage								Number of women
	< 15	15-17	18-19	20-21	22-24	25-29	30+	All	
(a) <u>Ever-married women</u>									
15-19	1.06	0.57	0.40	0.0	0.0	0.0	0.0	0.83	846
20-24	2.69	2.03	1.40	0.96	0.99	0.0	0.0	2.10	1,450
25-29	4.03	3.45	3.05	2.03	1.55	0.71	0.0	3.31	1,710
30-34	4.70	4.62	3.95	3.90	3.24	2.42	0.0	4.36	1,532
35-39	5.67	5.10	4.90	4.64	4.16	3.95	(4.43)	5.12	1,100
40-44	5.80	5.42	4.68	5.10	5.04	4.13	(2.26)	5.15	895
45-49	6.10	5.92	6.59	6.01	4.94	4.88	4.12	5.87	588
(b) <u>Currently married women</u>									
15-19	1.07	0.57	0.38	0.0	0.0	0.0	0.0	0.83	840
20-24	2.70	2.03	1.41	0.96	1.01	0.0	0.0	2.11	1,421
25-29	4.04	3.45	3.07	2.19	1.56	0.71	0.0	3.34	1,668
30-34	4.71	4.65	3.90	3.90	3.28	2.43	0.0	4.36	1,480
35-39	5.79	5.09	5.14	4.68	4.16	3.95	(2.94)	5.18	1,025
40-44	5.83	5.33	4.78	5.12	5.02	4.19	(2.32)	5.16	822
45-49	5.95	5.87	6.60	6.09	6.30	5.26	4.25	5.95	482
All	3.85	3.54	3.60	3.56	3.19	3.21	2.97	3.64	7,737

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, tables 2.2.4-1 and 2.2.4-2

Table 5.7: Mean number of children ever born to ever-married and currently married women according to age at first marriage and years since first marriage

Years since first marriage	Age at first marriage								Number of women
	< 15	15-17	18-19	20-21	22-24	25-29	30+	All	
(a) <u>Ever-married women</u>									
Under 5 years	0.82	0.95	1.02	1.18	1.27	1.29	2.25	1.02	1,430
5-9	2.19	2.65	2.79	2.45	2.78	3.06	(3.33)	2.50	1,586
10-14	3.65	3.83	3.96	4.43	4.09	4.20	(4.47)	3.85	1,774
15-19	4.67	5.18	4.80	4.84	4.92	4.93	(3.36)	4.85	1,342
20-24	5.45	5.40	4.69	5.33	4.93	4.00	0.0	5.26	1,088
25-29	6.13	5.05	6.37	5.89	(4.93)	0.0	0.0	5.79	582
30 years and over	5.83	6.45	6.59	0.0	0.0	0.0	0.0	6.09	319
All	3.17	3.59	3.66	3.55	3.14	3.21	3.27	3.87	8,120
(b) <u>Currently married women</u>									
Under 5 years	0.82	0.95	1.03	1.22	1.28	1.29	(1.79)	1.02	1,407
5-9	2.21	2.66	2.81	2.54	2.81	3.08	(2.23)	2.52	1,545
10-14	3.66	3.84	3.90	4.43	4.13	4.28	(4.61)	3.85	1,728
15-19	4.68	5.20	5.02	4.90	4.92	4.88	(3.73)	4.88	1,284
20-24	5.55	5.33	4.74	5.33	5.80	(4.51)	0.0	5.32	991
25-29	6.22	5.12	6.68	5.92	(6.43)	0.0	0.0	5.92	514
30 years and over	5.68	6.44	(6.37)	0.0	0.0	0.0	0.0	5.94	268
All	3.85	3.54	3.60	3.56	3.19	3.21	2.97	3.64	7,737

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, tables 2.2.3-1 and 2.2.3-2

Table 5.8: Per cent distribution of women who first married at least five years ago according to interval between first marriage and first birth, by age at first marriage and years since first marriage

Demographic characteristic	Interval from first marriage to first birth									Number of women
	Negative interval	0-7 months	8-11 months	One year	Two years	Three years	Four years +	Per cent childless	Mean	
(a) <u>Age at first marriage</u>										
Under 15	6.6	8.2	5.1	17.9	13.4	7.5	6.4	34.7	24.4	2,692
15-17	12.5	12.4	10.1	20.1	10.7	7.9	3.8	22.4	20.2	2,162
18-19	12.7	11.2	12.0	23.0	12.0	6.9	4.8	17.5	20.4	851
20-21	19.5	14.8	10.4	17.4	11.4	4.8	4.4	17.2	19.0	541
22-24	21.5	14.5	11.0	19.4	10.0	6.3	2.7	14.6	18.4	255
25-29	29.0	12.6	5.0	13.3	12.3	10.8	2.3	14.6	22.3	152
30 or more	49.1	15.9	10.0	6.5	4.9	4.5	0.8	8.2	14.6	37
(b) <u>Years since first marriage</u>										
5-9	14.0	12.3	9.9	21.2	14.7	8.0	4.6	15.3	21.1	1,586
10-19	12.8	10.7	8.0	19.4	12.4	8.0	5.1	23.7	22.1	3,115
20 or more	8.1	10.0	7.3	17.0	9.3	5.8	5.0	37.4	21.4	1,988
All	11.7	10.9	8.3	19.1	12.0	7.4	4.9	25.8	21.6	6,690

Source: Vol II, table 2.1.1

It is observed from the table that about one out of every ten first births either occurred before first marriage (11.7 per cent), or was conceived before first marriage (10.9 per cent). The proportion of births occurring before first marriage is understandably lowest (though high at 6.6 per cent) for the women who married very early but increases to around one out of every five first births for women marrying between 20 and 24 years of age and to three out of ten for women marrying between the ages of 25 and 29. The proportion of premaritally conceived first births does not vary much by age at first marriage. It is possible that the incidence of premarital conceptions and births is increasing since both proportions decline slightly with increasing duration of marriage.

#### 5.4.4 Interval between first marriage and first birth

Table 5.8 further shows that the mean interval between first marriage and first birth is 21.6 months for the women who have been married for at least five years and who have had a birth. This interval seems to be slightly negatively related to age at first marriage; the younger the age at first marriage, the longer the interval. The highest mean interval of 24.4 months, observed for women who married before the age of 15 is probably due to adolescent subfecundity referred to above.

As many as a quarter of the women were reported childless after at least five years of marriage. This proportion is a third for women who married before the age of 15, declines

sharply to 22.4 per cent for those married between 15 and 17 years of age, then declines gradually to 14.6 per cent for women marrying at relatively old ages. This pattern is probably a further reflection of adolescent subfecundity. The proportion childless, though decreasing by increasing age at first marriage, increases by duration of marriage and probably reflects the quality of data rather than a genuine change.

#### 5.4.5 Births before the end of the fifth year of marriage

The mean number of children born before the end of the fifth year of marriage is 1.48. This, however, includes premarital births. The mean is negatively related to the duration of marriage, women who have been married for longer periods have lower means than women who have been married for shorter lengths of time. This largely reflects the differences in the proportion having no birth in the first five years noted in the preceding section and the higher incidence of premarital births in the younger marriage cohorts (see table 5.9). An increasing tempo of fertility is also observed with increasing age at first marriage; within each duration of marriage, women who married at older ages have higher mean numbers of births than those who married at younger ages. This pattern is very consistent and the differences are large. This again is partly due to the greater incidence of premarital births and conceptions among women who marry at older ages. It may also reflect the tendency of women who married late in life to 'catch up' with those who married early in life with respect to fertility performance.

Table 5.9: Mean number of children born before the end of the fifth year of marriage by women first married at least five years ago according to age at first marriage and years since first marriage

Years since first marriage	Age at first marriage								Number of women
	< 15	15-17	18-19	20-21	22-24	25-29	30+	All	
5-9	1.48	1.79	1.96	1.85	2.08	2.58	2.89	1.75	1,586
10-19	1.23	1.57	1.67	1.90	2.05	2.03	2.63	1.51	3,115
20 or more	0.99	1.34	1.41	1.66	1.50	1.35	-	1.23	1,988
All	1.21	1.55	1.66	1.82	1.93	2.08	2.72	1.48	6,690

Source: Vol II, table 2.1.2A

#### 5.4.6 Age at birth of first child

The age of the woman at the birth of her first child is not, strictly speaking, indicative of the relationship between nuptiality and fertility. It is, however, an important indicator of reproductive performance in the life cycle of a woman. Typically, the lower the age of woman at first birth, just as is the case with age at first marriage, the higher her completed fertility.

The median age at first birth of the women interviewed is 19.5 years (see table 5.10). The median is stable around 19 years for women under 35 but increases slightly thereafter. The higher values for older women many reflect greater misreporting of ages among them.

#### 5.5 DIFFERENTIALS IN FERTILITY

This section focuses attention on differentials in the reproductive performance according to background characteristics. These differentials are examined separately for cumulative and current fertility.

##### 5.5.1 Cumulative fertility

Differentials in lifetime or cumulative fertility are examined by an analysis of the

mean number of children ever born for all women by age groups and for ever-married women by marital duration as presented in table 5.11. Emphasis is given to differentials for the oldest cohort of women (45-49) since their mean number of children ever born closely approximates the completed fertility of the women in each subcategory.

It is observed from the table that cumulative fertility varies substantially and significantly by almost all the background characteristics of the women. The variations by educational level are large and complex. Higher education is clearly associated with lower fertility at earlier ages (under 25 years) but, at later ages, women with higher education have substantially higher fertility. For instance, among women in the oldest age group (45-49), the completed fertility of women with no formal schooling is 5.84, compared with 7.32 and 7.06 for women who did not complete and those who completed primary education respectively. The same pattern is observed for women in the 35-44 age group; those women with primary education have higher fertility than those without or with only Koranic education. Those with secondary or higher education clearly have the lowest fertility.

Substantial differentials by level of

Table 5.10: Median age at first birth, by current age

Current age	Median
15-19	*
20-24	18.6
25-29	19.0
30-34	19.0
35-39	19.8
40-44	20.9
45-49	20.9
All	19.5

\* Median not yet reached by this age group.



Table 5.11: Mean number of children ever born by all women by current age and by ever-married women by years since first marriage, according to background characteristics

Background characteristics	Current age <sup>a</sup>					Years since first marriage <sup>b</sup>			
	<25	25-34	35-44	45+	All	<10	10-19	20+	All
<u>(a) Level of education</u>									
None	1.43	3.75	5.04	5.84	3.71	1.82	4.13	5.53	3.85
Koranic	1.51	3.75	5.07	4.83	3.10	1.60	3.91	5.05	3.20
Primary incomplete	1.16	4.23	5.69	7.32	2.98	2.10	5.05	6.83	3.81
Primary complete	0.70	3.78	5.39	(7.06)	2.13	1.71	5.25	5.79	3.17
Secondary and above	0.18	2.25	4.56	(3.77)	0.66	1.55	4.32	3.67	2.37
<u>(b) Type of place of residence</u>									
Village	1.04	3.84	5.16	6.01	3.20	1.80	4.29	5.68	3.77
Town/city	0.86	3.32	4.84	5.10	2.62	1.81	4.21	4.94	3.30
<u>(c) Region</u>									
North-east	1.33	3.84	4.53	5.65	3.16	1.57	4.18	4.94	3.37
North-west	1.32	3.29	4.39	4.13	2.83	1.51	3.47	4.33	2.94
South-east	0.74	4.21	6.03	6.77	3.25	2.15	5.07	6.80	4.60
South-west	0.74	3.47	5.11	5.95	2.95	2.03	4.50	5.82	3.76
<u>(d) Religion</u>									
Catholic	0.60	3.86	5.55	6.24	2.65	1.94	4.76	6.18	3.99
Protestant	0.85	3.85	5.87	7.00	3.27	2.11	5.00	6.81	4.32
Other Christian	0.99	4.13	5.75	6.73	3.35	2.15	5.02	6.72	4.36
Muslim	1.22	3.51	4.55	4.73	2.95	1.57	3.80	4.69	3.17
Traditional/others	1.19	3.95	5.10	5.76	3.68	1.89	4.40	5.63	4.02
<u>(e) Pattern of work</u>									
Now and before marriage						1.94	4.32	5.69	3.88
Now but not before marriage						2.04	4.43	5.46	3.94
Since (not now) and before marriage						2.14	4.34	7.80	4.93
Since but not before marriage						1.67	4.53	5.50	3.91
Before marriage only						1.38	4.33	5.35	2.66
Never worked						1.48	3.91	5.21	3.04
<u>(f) Occupation of husband</u>									
No work						1.33	4.03	4.26	2.89
Professional, technical, managerial, clerical						1.84	4.28	5.71	3.28
Sales						1.90	4.16	5.50	3.61
Agriculture						1.71	4.18	5.50	3.81
Services						1.73	4.73	5.64	3.98
Production						1.98	4.67	5.95	3.49

a For all women.

b For ever-married women.

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, tables 2.2.6 and 2.2.7

education also exist for the ever-married women within marital duration groups, though not to the same extent. Between 10 and 19 years after marriage, women with incomplete and complete primary education have higher fertility (5.05 and 5.25 respectively) than women with no formal education (4.13). A similar pattern holds after 20 years of marriage. For almost all age groups over 25 and all marital durations, women with only Koranic education

have substantially lower fertility than women without any formal and those with primary education. Whether all the observed differentials reflect omission of children by older uneducated women or a genuine divergence of behaviour, must remain uncertain at this stage of analysis.

Some earlier surveys in Nigeria (eg Lucas 1973; Caldwell 1976) and WFS surveys in other

developing countries (eg Ghana, Kenya and Senegal) have observed a similar inconsistent pattern of differentials by level of education. Possible explanations are likely to be found in the differential tempo of fertility before and after marriage, varying degrees of efficacy of traditional birth control mechanisms and taboos on sexual abstinence as well as the incidence of pathological sterility. These explanations are not explored in this report but will be part of subsequent detailed analysis of the survey data.

Unlike level of education, the fertility of the women living in the urban areas is clearly and consistently lower than that of women in the rural areas over all age groups. Completed fertility for women in urban areas is 5.10, almost one child less than that of women in rural areas (6.01). Their fertility performance is, however, very similar during the first ten years of marriage; the real divergence occurs after 20 years of marriage.

Substantial variations are also observed for region of residence and religious affiliation. Completed fertility is highest in the South-east (6.77), lowest in the North-west (4.13) and intermediate in the South-west (5.95) and North-east (5.65). The age pattern of fertility also varies; women in the North-east and North-west record higher fertility at younger ages (under 25 years) than women in the South-east and South-west, but older women report fewer children. Marital fertility is also highest in the South-east and lowest in the North-west (6.80 and 4.33 respectively after 20 years of marriage).

When the religious affiliation of the women is considered, it is found that completed fertility is lowest for Muslims (4.73), highest for Christians (range: 6.24 to 7.00) and intermediate for women adhering to Traditional/others group (5.76). Muslim women, however, record the highest fertility at the younger ages (under 25) but are overtaken by other religious groups after the age of 35.

The relationship between pattern of work and cumulative fertility for ever-married women is not very consistent. Within most age groups all women who were employed at the time of the survey or had been employed any time after marriage tend to have higher fertility than women who had never worked or worked only before marriage. No consistent pattern by either the current age of the woman or the duration of marriage is evident.

### 5.5.2 Current fertility

The differentials in current fertility are examined along the following dimensions: the age-specific fertility rates (ASFR) and the total fertility rates (TFR), both for the five-year period preceding the survey. These measures are presented in table 5.12. The ASFRs present the age pattern of fertility for each subgroup of women; the TFRs are summary measures of the number of children women in each subgroup would have at the end of their

reproductive years, should they experience the ASFRs by the age of 50.

The ASFRs for selected background characteristics are presented graphically in figure 5.2. The pattern of relationship between current fertility and level of education is similar to that observed for cumulative fertility: while education up to and above the secondary level is clearly associated with lower fertility, primary education is associated with higher fertility compared with no formal education whatsoever. Women with secondary or higher education have a total fertility rate of 3.94, compared with 7.56, 7.08 and 6.58 for women with complete primary, incomplete primary and no education respectively. Section a of figure 5.2 further reveals differences in the age pattern of fertility by educational level. Women with no education and those with only Koranic education seem to have a similar pattern of high fertility at the younger ages with a peak at the age of 20-24 and gradual decline thereafter. Women with incomplete primary education have lower initial fertility than the uneducated women, probably because of later age at marriage, but overtake them shortly afterwards (at the age of 20-24), reach their peak (of over 370 births per 1,000) at 25-29, after which their fertility drops sharply. The pattern for women with complete primary education is, however, different: their fertility at the youngest age (15-19) is lower, they catch up with the less educated women at 20-24 and, unlike the others, maintain virtually the same level until the age of 34, after which the decline starts. Thus their fertility level is high and virtually the same between the ages of 20 and 34 and declines only thereafter, unlike other educational sub groups where the decline is much earlier. This is probably why their overall fertility is usually the highest. Women with secondary or higher education have the lowest fertility at all age groups, have very low initial fertility, reach a peak between 25-29 and start a gradual decline thereafter.

There is not much difference in the measure of current fertility by type of place of residence; total fertility rate for women in the urban areas is 6.16, compared with 6.39 for women in the rural areas. There are, however, differences in the age pattern of fertility worth noting; while both groups of women reach their peak fertility performance at ages 20-24, women in the urban areas maintain that level until the age of 35, unlike women in the rural areas for whom the decline starts much earlier.

Some differentials in level and pattern of fertility exist by region of residence and religion. Total fertility rate is lowest in the South-east (6.02), highest in the North-west (6.75) and intermediate in the North-east (6.41) and South-west (6.61). Initial fertility (15-19) is also highest in the North-east and North-west; fertility levels at other ages, are, however, substantially lower in these regions until the age of 30

Table 5.12: Age-specific fertility rates for the period 0-4 years preceding the survey, by background characteristics

Background characteristics	Current age							TFR
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
<u>(a) Level of education</u>								
None	241.2	287.0	262.8	224.8	141.7	96.8	60.9	6.58
Koranic	254.0	295.6	237.2	252.8	127.7	120.4	65.2	6.76
Primary incomplete	204.6	321.0	372.7	212.9	189.3	86.3	29.6	7.08
Primary complete	128.5	312.2	309.4	286.8	212.6	204.6	58.7	7.56
Secondary and above	27.4	170.8	245.3	213.1	115.5	15.8	-	3.94
<u>(b) Type of place of residence</u>								
Village	182.4	282.3	270.7	218.3	150.8	101.5	67.0	6.39
Town/city	145.4	272.3	286.5	280.7	131.2	91.8	23.4	6.16
<u>(c) Region</u>								
North-east	235.3	285.6	267.3	221.3	143.4	93.1	36.2	6.41
North-west	245.9	251.0	229.0	217.0	127.9	111.7	(167.7)	6.75
South-east	112.9	295.5	322.3	219.9	151.0	84.7	17.8	6.02
South-west	119.2	301.9	278.6	273.6	161.2	114.7	73.0	6.61
<u>(d) Religion</u>								
Catholic	98.6	269.3	309.9	238.9	136.6	76.8	32.4	5.81
Protestant	130.3	298.5	291.2	282.0	202.9	125.5	16.7	6.73
Other Christian	152.6	324.3	341.1	196.9	154.7	79.2	46.1	6.47
Muslim	227.0	273.7	246.3	221.9	129.0	103.0	98.0	6.49
Traditional/others	192.4	270.6	264.8	235.7	148.1	104.7	79.9	6.48
<u>(e) Pattern of work<sup>a</sup></u>								
Now and before marriage	256.7	305.3	283.5	227.4	147.8	95.0	73.3	6.95
Now but not before marriage	275.8	312.2	282.6	229.5	166.1	95.5	26.5	6.94
Since (not now)and before marriage	320.2	251.9	331.6	354.8	321.8	135.8	-	8.58
Since but not before marriage	279.5	290.5	308.4	305.8	117.8	72.0	35.9	7.05
Before marriage only	229.9	281.7	260.9	263.3	77.4	129.1	-	6.21
Never worked	237.2	298.8	255.4	232.6	107.5	124.8	139.0	6.98
<u>(f) Occupation of husband</u>								
No work	241.7	210.5	340.5	158.9	55.6	90.2	107.9	6.03
Professional, technical, managerial, clerical	250.9	316.4	282.3	269.3	155.4	86.3	73.9	7.17
Sales	256.5	300.2	280.4	251.3	156.6	98.8	55.3	7.00
Agriculture	257.4	277.7	261.1	216.3	143.1	92.9	64.9	6.57
Services	239.3	348.4	321.4	217.8	125.6	112.6	3.4	6.84
Production workers	258.3	362.2	309.3	281.0	188.9	167.2	48.4	8.08

a For ever-married women only.

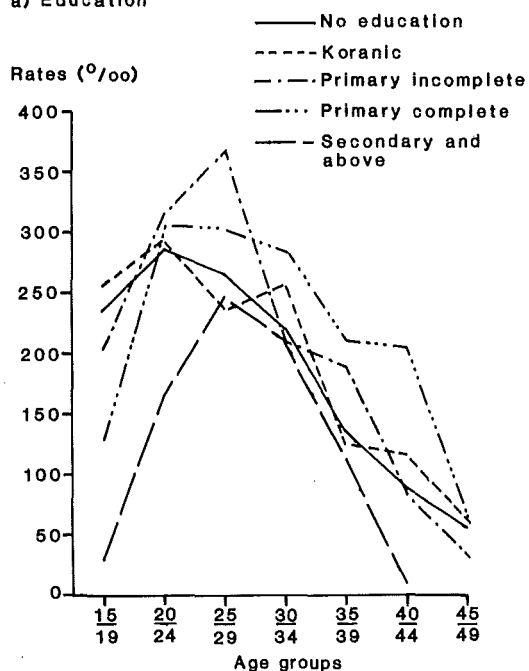
NOTES: Figures in brackets are based on less than 20 cases.

(section c of figure 5.2). Of the religious groups, the lowest total fertility rate of 5.81 is recorded for the Catholics; all the other groups are bunched together between 6.47 and 6.73.

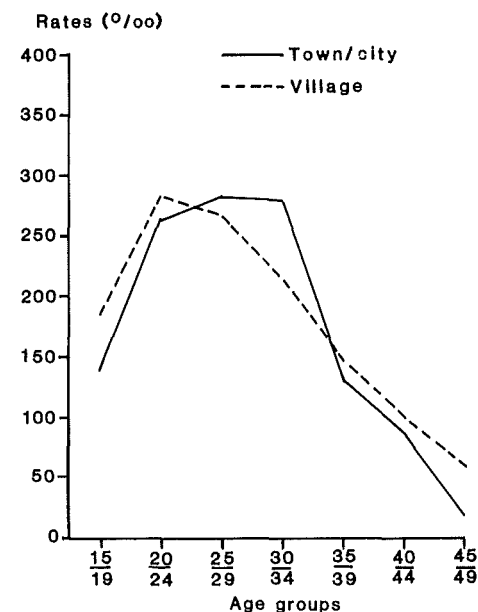
The relationship between current fertility and pattern of work for the ever-married women

is, again, not consistent. Women whose husbands had no work at the time of interview, had the lowest total fertility rate in the period (6.03). Women whose husbands were employed in agriculture had lower rates (6.57) than those whose husbands were in sales (7.00) or in professional, technical, managerial or clerical occupations (7.17).

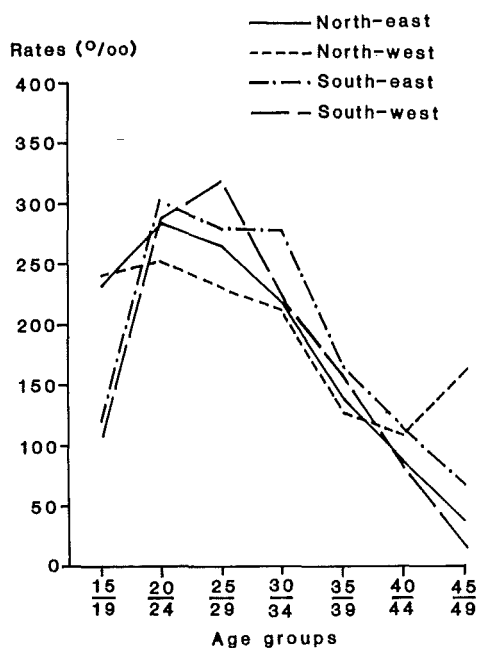
a) Education



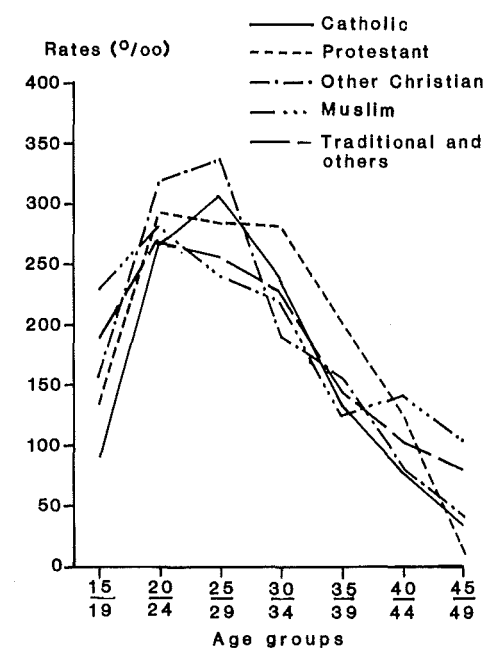
b) Type of place of residence



c) Region



d) Religion



5.2 Age-specific fertility rates, 0-4 years before the survey, by selected background characteristics

### 5.5.3 Median age at first birth

The median age at the birth of the first child varies by level of education, especially within specific age groups. Except for the oldest age cohort, women with Koranic education have lower median values than other women while those with secondary or higher education almost always have higher values. For women under 30 years

of age, those who completed primary school have their first child at slightly older ages; this differential is, however, not consistent for women over 30 years of age. Variation by other characteristics is small overall except within specific groups. For women aged 20-24, median age at first birth is low in the North-east and North-west (17.2 and 17.0 years respectively) compared with the South-east (20.2) and

Table 5.13: Median age at first birth, by current age and background characteristics

Background characteristics	Current age							Number of women
	20-24	25-29	30-34	35-39	40-44	45-49	All <sup>a</sup>	
<u>(a) Level of education</u>								
None	17.5	18.7	19.1	19.7	20.7	21.7	19.8	4,933
Koranic	16.5	17.3	17.5	16.0	18.2	23.0	17.9	720
Primary incomplete	18.0	18.9	18.3	20.7	22.2	21.2	19.5	786
Primary complete	20.2	19.6	18.7	20.0	25.3	20.1	19.7	557
Secondary and above	*	23.9	21.4	22.7	24.0	24.2	21.5	263
<u>(b) Type of place of residence</u>								
Village	18.3	18.7	18.7	19.6	20.7	21.6	19.4	5,707
Town/city	19.6	19.7	20.1	20.8	21.6	22.6	20.2	1,553
<u>(c) Region of residence</u>								
North-east	17.2	18.3	18.9	21.0	22.1	22.1	19.3	1,899
North-west	17.0	18.8	19.1	18.8	22.6	25.1	19.1	1,777
South-east	20.2	19.1	18.2	19.2	19.7	20.4	19.4	2,084
South-west	19.8	19.8	20.1	20.5	21.8	22.7	21.0	1,500
<u>(d) Religion</u>								
Catholic	20.9	19.6	18.7	19.1	20.1	21.5	19.8	1,012
Protestant	20.1	19.5	19.3	20.2	21.3	20.2	20.1	983
Other Christians	19.5	18.7	18.7	19.9	21.5	21.8	19.9	969
Muslim	17.4	18.8	20.1	19.8	21.1	23.2	19.3	3,514
Traditional/others	17.5	18.2	18.3	19.7	20.3	22.0	19.8	782
All	18.6	19.0	19.0	19.8	20.9	21.9	19.5	7,259

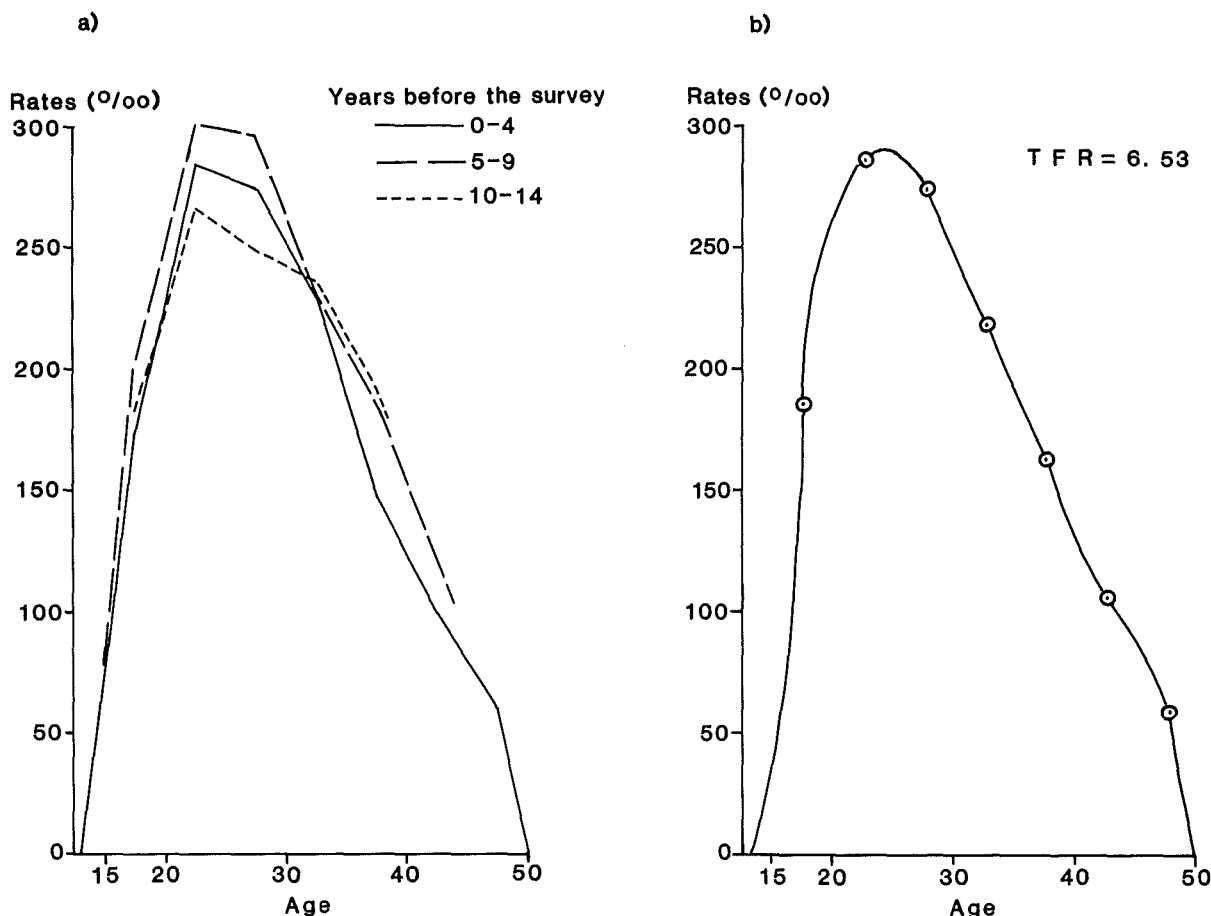
a Including women aged 15-19.

\* Excluded due to few cases involved.

Table 5.14: Age-specific fertility rates by age at maternity, and periods before the survey

Age at maternity	Five-year periods before survey						
	0-4	5-9	10-14	15-19	20-24	25-29	30-34
15-19	173.3	202.7	182.5	174.9	141.9	110.6	117.8
20-24	283.5	300.6	265.8	244.8	230.1	226.7	
25-29	274.0	296.3	248.8	264.4	273.7		
30-34	230.5	229.2	234.9	258.6			
35-39	146.9	185.1	191.5				
40-44	99.5	120.0					
45-49	59.6						
TFR	6.34	6.97 <sup>a</sup>	6.52 <sup>a</sup>				

a Calculated by assigning values for adjacent periods to missing ASFRs.



5.3 Age-specific fertility rates for (a) the last three quinquennia and (b) 15 years (average) before the survey

South-west (19.8). Muslim women in the same age group (20-24) have their first child at the same age as women who belong to the Traditional/others group (17.4 and 17.5 years respectively) and much earlier than Christians. These differences, however, are not observed for the older women (table 5.13).

## 5.6 FERTILITY TRENDS

Having discussed both the cumulative and current levels of fertility and differentials by background characteristics, this section focuses attention on any trends in fertility levels that are observable over time. Two measures are used in this assessment of trends: fertility rates by age of mother at maternity for five-year periods before the survey (age-period rates) and fertility rates cross-classified by age of woman at interview and age at maternity (cohort-age rates). It is pertinent to note that both of these measures are particularly sensitive to errors in the reporting of the ages of the women and their children and the omission of births. It has been observed that these errors are quite substantial (as indicated by the indices of age heaping and the proportion of women and their children whose ages had to be estimated or imputed) and that they are greater for the older than for younger women.

The impression given by table 5.14 (which shows the age-specific fertility rates by age at maternity for five-year periods preceding the survey) and figure 5.3 (which illustrates these rates for the three five-year periods before the survey) is one of increasing fertility up to the period 5-9 years before the survey and then a decline in the last five-year period. Fertility appears to have been increasing from the early 1960s up to the mid-1970s after which there seems to be a slight decline. This is reflected in the total fertility rates for the periods: 6.52 and 6.97 for the periods 10-14 and 5-9 years respectively and 6.34 for the five-year period immediately before the survey. It should be noted that the farther back the period, the greater the effects of omission and poor reporting and that the differences in rates are not sufficiently large to warrant any definitive statement about a decline over time.

A more erratic pattern is observed in table 5.15, which shows the fertility rates by current age of the women and age at maternity. For the younger ages at maternity (under 24 years), the rates increase steeply and monotonically from the oldest cohort to the youngest. For the older ages at maternity, no clear pattern can be discerned and there is clear evidence of distortion in the figures.

Table 5.15: Age-specific fertility rates by current age and age at maternity, in five-year groups

Current age	Approximate period of birth of the women	Age at maternity						
		15-19	20-24	25-29	30-34	35-39	40-44	45-49
15-19	1963-67	(114.0)						
20-24	1958-62	207.8	(276.2)					
25-29	1953-57	195.6	297.3	(304.8)				
30-34	1948-52	187.8	292.8	277.1	(258.7)			
35-39	1943-47	175.6	261.5	275.3	226.3	(162.7)		
40-44	1938-42	119.3	234.7	247.4	223.5	158.8	(96.0)	
45-49	1933-37	122.4	216.9	260.9	243.5	173.5	109.1	59.6

NOTE: Figures in brackets are based on women with incomplete exposure.

For instance, among the oldest cohort, the rate at ages 30-34 is higher than at 20-24 when fertility is usually at its peak.

Because of the above, the earlier observation of an apparent increase in fertility from the early 1960s to the mid-1970s followed by a slight decline around the turn of the decade should be regarded as tentative and accepted with scepticism until a more thorough evaluation and adjustment of the data has taken place.

#### 5.7 INFANT AND CHILDHOOD MORTALITY

Information on the survival status of each live birth recorded in a woman's maternity history was collected in the NFS. If the child had died, the age at death was obtained. From these data, it is possible to calculate infant

and childhood mortality rates for specific periods. These rates are of intrinsic value in themselves since they are good indicators of the health situation or the standard of living in the society. They are also relevant to the analysis of fertility rates since it is often theorized that high infant or child mortality is positively associated with high levels of fertility. In situations of high infant or child mortality, parents (consciously or otherwise) tend to have more children than they would otherwise wish either anticipating that all will not survive or to replace those who died.

The infant and childhood mortality rates from 1965 to 1979 are shown in table 5.16. The years during which the survey fieldwork took place (1981 and 1982) have been deliberately excluded from the analysis. So also is the

Table 5.16: Infant and childhood mortality rates for specific periods

Period	Infant mortality rate			Childhood mortality rate		
	Both sexes	Males	Females	Both sexes	Males	Females
(a) <u>All</u>						
1975-79	84.8	93.9	74.8	144.5	155.0	132.6
1970-74	96.6	103.7	88.0	178.7	183.5	173.0
1965-69	109.7	122.4	96.0	202.2	216.1	187.7
(b) <u>Rural</u>						
1975-79	88.5	-	-	150.6	-	-
1970-74	101.7	-	-	183.7	-	-
1965-69	108.3	-	-	203.3	-	-
(c) <u>Urban</u>						
1975-79	63.8	-	-	116.4	-	-
1970-74	70.3	-	-	127.1	-	-
1965-69	97.9	-	-	175.4	-	-

year preceding the fieldwork (1980). This is primarily to avoid the effects of incomplete exposure to risk. It should also be borne in mind that, in surveys like the NFS, omission of births and deaths often occurs. This is particularly the case with deaths since experience during the fieldwork showed that women were sometimes reluctant to discuss their dead children. The rates have been presented for five-year periods and not in single years as might be preferred. The rationale behind this is to minimize the effects of sampling variation which will be considerable since the number of births and deaths for the sample population in particular years is relatively small.

The data show that both infant and childhood mortality have been on the decline and that both rates are considerably higher for males than females. The infant mortality rate was 84.8 per 1,000 live births in 1975-79; 96.6 per 1,000 live births in 1970-74 and 109.7 per 1,000 in 1965-69. This represents a decline of 22.7 per cent from 1965 to 1979. Throughout the period under consideration, the infant mortality rate was higher for males than females, though both sexes experienced almost the same extent of decline (22.3 per cent for males and 22.1 per cent for females).

Childhood mortality, ie mortality of children under the age of five, has also declined. In 1965-69, 202.2 out of every 1,000 children under five died before their fifth birthday; the rates for 1970-74 and 1975-79 are 178.7 and 144.5 respectively, a decline of 28.5 per cent. Again childhood mortality is higher among males than females and the extent of decline is again similar for both sexes - 28.3 per cent for males and 29.3 per cent for females. The table further shows that both infant and childhood mortality were considerably higher in the rural than in the urban areas. The decline during the period has also been greater (twice for childhood mortality) in the urban areas.

Another crude measure of the level of infant or child mortality is the proportion of

all live births that did not survive up to the time of interview. This is obtained by comparing the mean number of children ever born to each woman in her lifetime with the mean number surviving at the time of interview. The primary limitation of this measure is that it does not yield direct information as to the age of the children at death or the period of death. Some of the live births that did not survive may have been adults at the time of death. It is thus a better measure of overall rather than infant, mortality. This notwithstanding, the necessary information for such a comparison is presented in tables 5.17 to 5.20. It is observed from table 5.17 that out of the mean 3.07 children ever born to the women, 2.53 were alive at the time of the survey; thus 17.6 per cent of the children had died. As expected, the proportion of dead children increases by age of the woman on the basis of accumulated risk and higher fertility by age. That proportion is stable around 15 per cent for the women under 35 years of age but increases to 22.0 per cent and 23.5 per cent for women aged 40-44 and 45-49 years respectively. The pattern is similar for ever-married women except that the increase in proportion of dead children occurs earlier, just after 30 years. Thus, on average, each of the women would expect to lose approximately one out of every four or five children she has given birth to before the end of her reproductive period.

The proportion of dead children understandably increases with duration of marriage (for the same reasons that it increases with age) as shown in table 5.18. For ever-married women, the proportion is 11.8 per cent for marriages under 5 years, increases to around 15 per cent for marriages of between 5 and 19 years' duration then increases further to 20.0 per cent, 23.3 per cent and 28.2 per cent for marital durations of 20-24, 25-29 and 30 years and over respectively. A similar pattern is observed for currently married women. Thus women married for 30 or more years should expect to lose approximately one out of every three or four children on the average.

Table 5.17: Mean number of children ever born and living at time of survey for all and ever-married women, by current age

Current age	All women				Ever-married women			
	Mean ever born	Mean living	Dead children		Mean ever born	Mean living	Dead children	
			Mean	%			Mean	%
15-19	0.35	0.30	0.05	14.3	0.83	0.72	0.11	13.3
20-24	1.79	1.52	0.27	15.1	2.10	1.79	0.31	14.8
25-29	3.21	2.72	0.49	15.3	3.31	2.80	0.51	15.4
30-34	4.32	3.67	0.65	15.0	4.36	3.70	0.66	22.9
35-39	5.07	4.16	0.91	17.9	5.12	4.20	0.92	18.0
40-44	5.13	4.00	1.13	22.0	5.15	4.02	1.13	21.9
45-49	5.84	4.47	1.37	23.5	5.87	4.49	1.38	23.5
All	3.07	2.53	0.54	17.6	3.67	3.02	0.65	17.7



Table 5.18: Mean number of children ever born and living at time of survey for ever-married and currently married women, by duration of marriage

Duration of marriage	Ever-married women				Currently married women			
	Mean ever born	Mean living	Dead children		Mean ever born	Mean living	Dead children	
			Mean	%			Mean	%
Under 5 years	1.02	0.90	0.12	11.8	1.02	0.91	0.11	10.8
5-9	2.50	2.13	0.37	14.8	2.52	2.14	0.38	15.1
10-14	3.85	3.28	0.57	14.8	3.85	3.28	0.57	14.8
15-19	4.85	4.09	0.76	15.7	4.88	4.13	0.75	15.4
20-24	5.26	4.21	1.05	20.0	5.32	4.29	1.03	19.4
25-29	5.79	4.44	1.35	23.3	5.92	4.54	1.38	23.3
30 years and over	6.09	4.37	1.72	28.2	5.94	4.27	1.67	28.1
All	3.67	3.02	0.65	17.7	3.64	3.01	0.63	17.3

Table 5.19: Per cent distribution of all women according to the number of living children and current age

Current age	Number of living children												Number of women	
	0	1	2	3	4	5	6	7	8	9+	Mean	% Masc Total		
(a) <u>All women</u>														
15-19	77.2	16.8	4.5	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.30	55.1	100.0	2,101
20-24	28.0	25.5	24.0	14.6	5.5	1.5	0.4	0.4	0.0	0.0	1.52	52.3	100.0	1,710
25-29	11.3	14.4	21.1	23.1	15.3	8.3	4.1	1.1	0.5	0.7	2.72	51.0	100.0	1,766
30-34	7.4	8.0	14.4	17.8	19.5	15.4	9.2	5.5	1.1	1.7	3.67	54.1	100.0	1,547
35-39	8.5	7.4	9.8	15.4	13.3	18.0	11.1	8.0	3.5	4.9	4.16	54.2	100.0	1,110
40-44	9.2	9.3	9.8	13.5	16.1	16.4	10.4	6.8	4.2	4.3	4.00	52.8	100.0	904
45-49	9.7	7.4	9.0	12.7	14.3	13.1	11.5	7.0	5.9	9.4	4.47	49.4	100.0	591
All	27.2	14.2	13.9	13.7	10.7	8.6	5.2	3.1	1.4	1.9	2.53	52.6	100.0	9,729
(b) <u>Ever-married women</u>														
15-19	45.8	39.8	11.1	3.0	0.2	0.1	0.0	0.0	0.0	0.0	0.72	54.9	100.0	846
20-24	15.6	29.8	28.0	17.3	6.5	1.8	0.5	0.5	0.0	0.0	1.79	52.5	100.0	1,450
25-29	8.7	14.7	21.8	23.9	15.8	8.6	4.2	1.1	0.5	0.7	2.80	50.9	100.0	1,710
30-34	6.6	8.1	14.5	17.9	19.7	15.5	9.3	5.6	1.1	1.7	3.70	54.1	100.0	1,532
35-39	7.7	7.5	9.8	15.5	13.3	18.1	11.2	8.1	3.6	5.0	4.20	54.2	100.0	1,100
40-45	8.7	9.4	9.8	13.7	16.0	16.6	10.5	6.8	4.2	4.4	4.02	52.9	100.0	895
45-49	9.4	7.3	9.0	12.7	14.4	13.2	11.5	7.1	5.9	9.5	4.49	49.4	100.0	588
All	13.3	16.7	16.5	16.3	12.8	10.3	6.3	3.7	1.7	2.3	3.02	52.7	100.0	8,120
(c) <u>Currently married women</u>														
15-19	45.7	40.0	11.1	3.0	0.2	0.1	0.0	0.0	0.0	0.0	0.72	54.9	100.0	840
20-24	15.6	29.4	28.2	17.4	6.6	1.8	0.5	0.5	0.0	0.0	1.80	52.8	100.0	1,421
25-29	8.1	14.6	22.1	24.0	15.7	8.8	4.3	1.2	0.5	0.7	2.83	51.1	100.0	1,668
30-34	6.5	7.7	14.7	18.0	19.9	15.5	9.1	5.6	1.1	1.8	3.72	54.2	100.0	1,480
35-39	7.5	7.0	9.6	14.8	13.7	18.0	11.9	8.4	3.7	5.3	4.28	54.5	100.0	1,025
40-45	8.4	9.1	9.8	14.0	16.0	17.1	10.7	6.8	4.4	3.7	4.02	53.0	100.0	822
45-49	7.7	7.1	9.6	12.7	14.1	14.4	11.3	7.7	5.8	9.3	4.57	48.3	100.0	482
All	13.2	16.7	16.9	16.4	12.8	10.3	6.2	3.7	1.7	2.2	3.01	52.8	100.0	7,737

Source: Vol II, table 2.3.1

Table 5.20: Per cent distribution of ever-married and currently married women according to the number of living children, by years since first marriage

Years since first marriage	Number of living children													Number of women
	0	1	2	3	4	5	6	7	8	9+	Mean	% masc	Total	
(a) <u>Ever-married women</u>														
Under 5 years	35.9	43.6	15.8	4.0	0.4	0.1	0.1	0.1	0.0	0.0	0.90	54.2	100.0	1,436
5-9	12.5	19.3	31.0	23.4	9.8	2.9	0.8	0.3	0.0	0.0	2.13	50.9	100.0	1,586
10-14	6.6	9.5	16.5	24.1	19.4	13.0	7.0	3.3	0.3	0.3	3.28	53.1	100.0	1,774
15-19	5.5	7.1	10.8	15.0	19.2	18.7	11.7	6.3	3.0	2.6	4.09	53.4	100.0	1,342
20-24	7.4	8.1	10.2	14.6	15.2	17.2	10.7	7.3	3.6	5.6	4.21	53.0	100.0	1,088
25-29	11.5	7.0	9.4	11.3	11.2	12.4	11.7	10.6	6.1	8.6	4.44	51.4	100.0	582
30 years and over	9.8	10.2	7.0	14.0	15.1	15.1	8.8	3.7	5.0	11.3	4.37	51.4	100.0	319
All	13.3	16.7	16.5	16.3	12.8	10.3	6.3	3.7	1.7	2.3	3.02	52.7	100.0	8,120
(b) <u>Currently married women</u>														
Under 5 years	35.8	43.6	15.9	4.0	0.4	0.1	0.1	0.1	0.0	0.0	0.91	54.6	100.0	1,407
5-9	12.1	19.1	31.2	23.7	9.9	3.0	0.9	0.2	0.0	0.0	2.14	51.2	100.0	1,545
10-14	6.7	9.4	16.5	24.0	19.3	13.1	7.0	3.4	0.3	0.3	3.28	53.3	100.0	1,728
15-19	5.3	6.8	11.1	14.6	19.3	19.0	11.8	6.3	3.1	2.7	4.13	53.6	100.0	1,284
20-24	6.3	7.8	10.4	14.5	15.5	17.0	11.3	7.6	3.8	5.6	4.29	53.3	100.0	991
25-29	10.5	6.4	8.9	11.9	11.4	12.8	11.1	11.9	6.5	8.5	4.54	51.3	100.0	514
30 years and over	10.7	9.8	8.0	13.8	13.9	16.5	9.0	3.7	4.1	10.6	4.27	50.1	100.0	268
All	13.2	16.7	16.9	16.4	12.8	10.3	6.2	3.7	1.7	2.2	3.01	52.8	100.0	7,737

Source: Vol II, tables 2.3.2-1 and 2.3.2-2

Further details on the number of children ever born by parity and current age of the women as well as by parity and marital duration are shown in tables 5.19 and 5.20. Comparison with tables 5.2 and 5.7 respectively gives an indication of cumulative child mortality by age and parity of the women or by the duration of their marriages and parity.

The distribution of the women according to the number of children ever born and number dead and according to number living and number ever born is presented in tables 5.21 and 5.22 respectively. They show how pervasive the

experience of infant or child mortality is among the women. They also show the relationship between achieved parity and mortality. For instance, of the women who have given birth to only one child, 89.9 per cent still have that child living while 10.1 per cent have lost it. As parity increases, the proportion not experiencing any mortality decreases drastically to the extent that only 38.7 per cent of the women with nine or more live births have all their children living at the time of the survey. Fourteen per cent have experienced the loss of one child, 11.2 per cent the loss of two children, 14.6 per cent

Table 5.21: Per cent distribution of all women according to number of dead children and number of children ever born

Number of children ever born	Number of dead children				
	0	1	2	3	4+
1	89.9	10.1	-	-	-
2	83.1	13.9	3.0	-	-
3	76.2	15.7	7.3	0.8	-
4	61.6	21.7	12.5	3.6	0.6
5	57.7	19.0	14.5	5.3	3.5
6	44.7	24.9	15.7	10.2	4.5
7	40.0	17.0	18.1	15.8	9.2
8	22.7	20.1	20.6	19.0	17.5
9+	38.7	13.7	11.2	14.6	21.7

Source: Vol II, table 2.3.3

Table 5.22: Per cent distribution of all women according to the number of living children, number of children ever born and current age

Children ever born	Number of living children												Number of women
	0	1	2	3	4	5	6	7	8	9+	Mean	Total	
0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2,470
1	10.1	89.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90	100.0	1,178
2	3.0	13.9	83.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.80	100.0	1,154
3	0.8	7.3	15.7	76.2	0.0	0.0	0.0	0.0	0.0	0.0	2.67	100.0	1,118
4	0.6	3.6	12.5	21.7	61.6	0.0	0.0	0.0	0.0	0.0	3.40	100.0	1,068
5	0.9	2.6	5.3	14.5	19.0	57.7	0.0	0.0	0.0	0.0	4.21	100.0	821
6	0.5	0.7	3.3	10.2	15.7	24.9	44.7	0.0	0.0	0.0	4.93	100.0	656
7	0.1	0.1	2.4	6.6	15.8	18.1	17.0	40.0	0.0	0.0	5.60	100.0	466
8	0.0	2.3	1.1	4.3	9.8	19.0	20.6	20.1	22.7	0.0	5.98	100.0	312
9+	0.0	0.7	0.7	3.9	5.0	11.4	14.6	11.2	13.7	38.7	7.57	100.0	485
All	27.2	14.2	13.9	13.7	10.7	8.6	5.2	3.1	1.4	1.9	2.53	100.0	9,729

Source: Vol II, table 2.3.3

the loss of three children and 21.7 per cent the loss of four or more children. For women who have given birth to six children or more, less than half of them have all the children living. Not only is the level of infant and child mortality high, the experience is also pervasive among the women.

#### 5.8 SUMMARY

The data presented in this chapter show that the level of past and present fertility is moderately high. Completed fertility, as evidenced by the number of children ever born to women who have virtually reached the end of their reproductive lives, is 5.84 for all women and six children (5.95) for the women married at the time of the survey. The total fertility rate for the five-year period before the survey is 6.34 for all women and 7.48 for ever-married women. About 12.5 per cent of the women reported themselves as pregnant and approximately 11 per cent of the married women (25.4 per cent of all women) were childless at the time of the interview. The actual level of primary infertility is, however, about 6-7 per cent, not far above the natural minimum in any human population.

Teenage childbearing was found to be very common and peak fertility occurs at relatively young ages. Younger age at marriage was found to be strongly associated with higher fertility. One out of every five first births was either conceived or occurred before first marriage. This ratio is particularly high among women who married after the age of 20. On average, the women waited for slightly under two years after marriage before giving birth to their first child; the younger the age of the woman at first marriage, the longer the interval between first marriage and first birth.

Substantial differentials in fertility performance were observed according to the background characteristics of the women. The

level of education seems to constitute the basis for the largest differentials but, as in some other developing countries, the relationship between education and fertility is rather complex. On the whole, education up to and beyond the secondary school level is directly associated with lower past and current fertility and higher age at first birth. But women who have attended primary school, whether or not they completed it, have substantially higher fertility than the women who have not had any formal education whatsoever or those who had only Koranic education. The women with completed primary education reach peak fertility at the same age as the non-educated but stay at that peak level for a considerably longer period than the former.

Women who live in urban areas have lower past, though not current, fertility levels than women who live in rural areas. Their fertility performance is, however, relatively similar at the earlier stages of married life while their age-specific reproductive patterns are slightly different with higher initial fertility among women in rural areas. Some important differentials also exist by region of residence and religion. Completed fertility is higher in the South-east and South-west and lower in the North-east and North-west. But fertility at younger ages is appreciably higher in these latter regions. Current fertility rates are, however, relatively lower in the South-east and highest in North-east. With respect to religious groups, the Muslims have the highest levels of early (particularly teenage) fertility, the highest current fertility rate but the lowest completed fertility.

There are indications of a recent decline in fertility levels, though the quality of the available data does not warrant a conclusive statement. The incidence and level of infant and childhood mortality were found to be 84.8 and 144.5 per 1,000 respectively between 1975

and 1979. The rates are higher for males than females and seem to have declined by about 22.7 per cent and 28.5 per cent for infant and childhood mortality respectively between 1965-69 and 1975-79. The rates are also lower and have declined more in urban than in rural areas. About a fifth (17.6 per cent) of the children ever borne by the women surveyed had

died at the time of interview. Approximately one out of every four of the children a woman has given birth to is likely to die before the woman reaches the end of her reproductive life. The experience of child or infant mortality was found to be pervasive among the women; only slightly over a third (38.7 per cent) have not experienced the death of a child.

## FERTILITY PREFERENCES

## 6.1 INTRODUCTION

Information was collected on the number and sex of additional children women desired and the total number of children they would like to have in their whole life. When such information is combined with the data on achieved fertility (ie number of children ever born) or with data on number of surviving children, a clear picture of the future fertility potentials of the women emerges. Moreover, a comparison of the number of children the women have and the number they would like to have (ie actual and desired family sizes) may be indicative of the need for fertility control programmes in the society. Such a need is manifestly evident when women actually have more children than they wish to.

The usefulness of such attitudinal questions in societies that are largely uninformed about methods of controlling fertility to the desired level or with a high degree of fatalism (or personal feeling of lack of control) towards fertility is, however, limited. Responses to the questions may be vague or have very little relationship to intended actions. The responses therefore may have little intrinsic meaning in themselves and little value in predicting future fertility behaviour.

These observations should be borne in mind while assessing the importance of the information presented in this chapter. Despite the stated limitations, it is interesting to obtain a picture of the fertility intentions of

the women. These intentions will be related to their contraceptive behaviour in chapter 7. Future fertility intentions and preferences are examined with the following indicators: the desire to cease childbearing, the number of additional children desired, preferences for the sex of children and the total number of children the woman would wish to have in her lifetime. Information on the first three measures was collected for currently married women who believed themselves capable of having children (ie fecund) and on the last for all women surveyed.

## 6.2 DESIRE TO CEASE CHILDBEARING

An overwhelming majority (83.7 per cent) of the 7,089 currently married, fecund women do not desire to cease childbearing; 11.3 per cent were undecided and only 5.0 per cent expressed a desire to do so. The proportion desiring to cease childbearing is extremely low and is indicative of strong pronatalist tendencies among the women.

Table 6.1 shows that the proportion desiring to cease childbearing is directly related to the age of the women, the duration of their marriage and the number of living children they have. This proportion is understandably lowest (under 3 per cent) among the younger women (under 30 years) and increases to 13.1 per cent and 21.6 per cent for women aged 40-44 and 45-49 years respectively. These proportions are, however, exceedingly low for women who have, to all intents and purposes, approached the end of

Table 6.1: Percentage of currently married, fecund women not wanting any more children by age, marital duration and number of living children

Current age	Per cent	Years since first marriage	Per cent	Number of living children <sup>a</sup>	Per cent
15-19	2.6	Under 5	1.2	0	3.6
20-24	1.0	5-9	1.8	1	2.5
25-29	2.3	10-14	3.0	2	2.2
30-34	4.6	15-19	6.3	3	4.4
35-39	7.6	20-24	10.4	4	5.4
40-44	13.1	25-29	15.7	5	6.7
45-49	21.6	30 and over	29.3	6	6.7
				7	8.8
				8	23.0
				9+	24.4
All	5.0		5.0		5.0

a Including current pregnancy.

Source: Vol II, tables 3.1.1 and 3.1.2

Table 6.2: Percentage of currently married, fecund women not wanting any more children, by current age and number of living children<sup>a</sup>

Current age	Number of living children <sup>a</sup>											Number of women
	0	1	2	3	4	5	6	7	8	9+	All	
15-19	2.5	2.0	1.4	18.6	(3.9)	0.0	0.0	0.0	0.0	0.0	2.6	820
20-24	1.7	0.8	0.4	0.6	3.2	2.0	0.0	0.0	0.0	0.0	1.0	1,400
25-29	1.1	2.8	0.6	1.3	3.7	2.7	1.8	7.1	(42.3)	(5.1)	2.3	1,625
30-34	6.5	1.1	5.7	3.3	2.9	4.1	6.4	4.1	40.9	0.0	4.6	1,385
35-39	2.7	0.0	4.8	9.6	6.2	8.1	4.7	16.1	9.7	17.9	7.6	893
40-44	13.9	8.0	5.5	12.0	13.7	10.4	9.2	6.9	30.8	47.4	13.1	678
45-49	(16.8)	(59.1)	16.1	21.5	13.1	26.1	20.9	11.3	9.5	33.1	21.6	288
All	3.6	2.5	2.2	4.4	5.4	6.7	6.7	8.8	23.0	24.4	5.0	7,089

a Including current pregnancy.

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 3.1.1

their childbearing years. Less than 2 per cent of the women who have been married for less than ten years desire to stop childbearing. This proportion increases gradually to 15.7 per cent for women married 25-29 years and then to 29.3 per cent for women married for 30 years or more. A direct relationship between proportion wishing to cease childbearing and number of living children is also evident; this proportion, however, only reaches 5 per cent for women who have four living children, 8.8 per cent for women who have seven living children and only 23.0 per cent and 24.4 per cent for women who have eight and nine or more living children respectively.

A cross-classification of the proportion desiring to cease childbearing by number of living children and age (table 6.2) shows that it is only at the older ages (40 and above) and very high parities (eight and above) that between a quarter and a third of the women desire to cease childbearing. A similar pattern is observed for duration of marriage; only after 25 or more years of marriage and eight or more surviving children do between a quarter and a third of the women desire to cease childbearing (table 6.3). Beneath these age and marital duration groups, little variation in the low proportions desiring to cease childbearing is evident.

Table 6.3: Percentage of currently married, fecund women not wanting any more children according to number of living children<sup>a</sup> and years since first marriage

Years since first marriage	Number of living children <sup>a</sup>											Number of women
	0	1	2	3	4	5	6	7	8	9+	All	
Under 5	2.0	1.2	0.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1,386
5-9	1.8	3.5	0.7	1.6	1.9	4.6	0.0	0.0	0.0	0.0	1.8	1,517
10-14	2.7	0.0	1.6	4.0	4.4	2.3	2.6	5.1	(8.5)	(17.2)	3.0	1,642
15-19	14.5	1.2	8.6	4.1	3.7	4.6	7.0	7.1	18.0	14.8	6.3	1,200
20-24	7.0	1.1	8.0	10.8	9.0	10.2	9.2	12.2	31.2	19.9	10.4	818
25-29	5.2	32.6	11.4	10.5	22.6	16.2	11.9	7.7	25.5	22.3	15.7	391
30 and over	(6.3)	(86.9)	0.0	22.3	(16.8)	36.5	(11.4)	(47.1)	(24.9)	(65.4)	29.3	135
All	3.6	2.5	2.2	4.4	5.4	6.7	6.7	8.8	23.0	24.4	5.0	7,089

a Including current pregnancy.

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 3.1.2

### 6.3 DIFFERENTIALS IN DESIRE TO CEASE CHILDBEARING

With such a small proportion of women desiring to cease childbearing, any substantial differences between subgroups of the women cannot be expected. This is actually the case as is shown in table 6.4. Noticeable differences are observed only when the number of surviving children is taken into consideration.

Higher level of education is associated with increased desire to cease childbearing, but only for women who have at least four surviving children. Among the regions, desire to cease childbearing is slightly, though almost consistently, highest in the North-east. Variation by religion is substantial at the highest parity levels (eight or more living children) where as many as 36.8 per cent of women who adhere to Traditional/others group do not want to have any more children, compared with between 12.9 per cent and 26.7 per cent for the other religious groups. There is virtually no variation by type of place of residence.

### 6.4 ADDITIONAL NUMBER OF CHILDREN DESIRED

The women who indicated a desire to have more children were asked the number of additional children they wished to have. For the women who had indicated that they desired to cease childbearing, their number of desired additional children was set at zero. The mean number of desired additional children by current age, marital duration and number of living children is shown in table 6.5.

The most glaring observation from the table is the large proportion of women (42.6 per cent) who did not give a numeric response to the question; these women could not specify exactly the number of additional children they desire. They gave such answers as 'up to God' (20.1 per cent), as many as possible (4.0 per cent), were undecided (11.3 per cent) or gave other answers (7.2 per cent). This type of response is indicative of the fatalistic approach of the women to childbearing and the rather pervasive feeling among them of lack of control over their reproductive behaviour. This seems to be particularly the case among the older women and those in the longer marital

Table 6.4: Percentage of currently married, fecund women not wanting more children, by number of living children<sup>a</sup> and background characteristics

Background characteristics	Number of living children <sup>a</sup>			
	0-3	4-7	8+	All
<u>(a) Level of education</u>				
None	3.4	6.3	23.9	5.3
Koranic	2.8	5.3	20.2	3.7
Primary incomplete	3.1	5.5	15.1	4.4
Primary complete	1.2	8.1	27.3	4.5
Secondary and above	2.6	14.6	40.6	5.6
<u>(b) Place of residence</u>				
Village	3.2	5.8	23.6	5.0
Town/city	2.5	8.8	24.5	5.1
<u>(c) Region of residence</u>				
North-east	4.3	7.9	29.7	6.4
North-west	3.2	4.9	20.3	3.9
South-east	1.8	5.1	21.4	4.6
South-west	2.1	8.2	21.7	5.1
<u>(d) Religion</u>				
Catholic	2.8	7.3	26.7	6.1
Protestant	3.0	7.5	22.6	6.0
Other Christian	1.6	4.5	12.9	3.5
Muslim	3.6	6.6	26.0	5.0
Traditional/others	2.0	6.2	36.8	4.4
All	3.1	6.4	23.7	5.0

a Including current pregnancy.

Source: Vol II, table 3.1.3

Table 6.5: Mean additional number of children and per cent non-numeric response for currently married, fecund women by age, marital duration and number of living children

Current age	Mean	% non-numeric	Marital duration	Mean	% non-numeric	No of living children <sup>a</sup>	Mean	% non-numeric
15-19	6.98	37.3	Under 5 years	6.57	38.4	0	7.49	34.2
20-24	6.27	40.5	5-9	5.95	38.7	1	6.34	40.4
25-29	5.40	42.4	10-14	5.19	46.3	2	5.53	42.1
30-34	4.70	42.5	15-19	4.25	44.3	3	4.99	44.8
35-39	4.26	47.3	20-24	3.94	45.1	4	4.44	45.1
40-44	3.29	44.9	25-29	3.21	45.2	5	3.90	45.0
45-49	2.08	48.5	30 years +	1.77	43.2	6	3.71	46.4
						7	3.95	46.8
						8	1.71	36.1
						9+	3.03	39.6
All	5.20	42.6		5.20	42.6		5.20	42.6

a Including current pregnancy.

Source: Vol II, tables 3.2.1 and 3.2.2

Table 6.6: Mean number of additional children desired by currently married, fecund women by number of living children,<sup>a</sup> current age and years since first marriage

	Number of living children <sup>a</sup>											Number of women
	0	1	2	3	4	5	6	7	8	9+	All	
(a) <u>Current age</u>												
15-19	7.91	6.65	6.89	(3.05)	(2.99)	-	-	-	-	-	6.98	507
20-24	7.53	6.81	6.05	6.05	4.61	4.79	(6.30)	(4.22)	-	-	6.27	819
25-29	7.95	6.02	5.56	5.02	4.91	5.32	4.65	4.76	(0.93)	(2.19)	5.40	913
30-34	6.14	5.85	4.88	5.06	4.63	4.22	4.00	3.99	(1.64)	(3.69)	4.70	782
35-39	9.02	5.70	4.04	4.20	4.28	3.35	3.40	4.15	1.98	5.75	4.26	460
40-44	4.76	5.03	4.15	3.76	3.37	2.69	3.21	3.06	1.84	1.11	3.29	364
45-49	(4.29)	(0.87)	(3.01)	1.81	(2.48)	1.37	(1.95)	(3.56)	(1.22)	(1.60)	2.08	147
All	7.49	6.34	5.53	4.99	4.44	3.90	3.71	3.95	1.71	3.03	5.20	3,993
(b) <u>Years since first marriage</u>												
Under 5	7.52	6.61	5.81	5.11	(3.04)	(4.00)	-	-	-	-	6.57	842
5-9	8.41	6.31	6.17	5.33	4.81	4.29	(3.56)	(2.00)	-	-	5.95	910
10-14	5.95	6.48	5.30	5.20	5.13	4.76	4.88	4.25	(1.66)	(3.94)	5.19	860
15-19	6.62	5.64	4.08	4.86	4.02	4.14	3.47	3.73	2.08	3.19	4.25	659
20-24	8.67	5.91	4.25	4.12	3.66	2.77	3.41	4.70	1.20	(2.99)	3.94	439
25-29	(6.53)	(2.17)	3.76	3.74	2.40	2.98	2.38	3.13	(1.99)	4.01	3.21	208
30 and over	(6.31)	-	(5.05)	(2.03)	(1.21)	(1.19)	(1.98)	(0.14)	(0.99)	(0.57)	1.77	75
All	7.49	6.34	5.53	4.99	4.44	3.90	3.71	3.95	1.71	3.03	5.20	3,993

a Including current pregnancy.

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, tables 3.2.3 and 3.2.4



durations as the proportion of women giving a non-numeric response increases by age and duration of marriage. In addition to these women, about 3.0 per cent did not respond to the question on the number of desired additional children.

The mean number of desired additional children for currently married fecund women who gave a numeric answer to the question is 5.20. Table 6.5 shows that the mean additional number desired is inversely related to the age of the woman, the duration of her marriage and the number of living children that she already has.

A cross-classification of the mean number of additional children desired by parity (living children) and age shows that at the younger ages (under 30 years), there is little variation in the number of desired additional children by age within each specific parity. The same can also be said for duration of marriage (table 6.6).

## 6.5 DIFFERENTIALS IN ADDITIONAL NUMBER OF CHILDREN DESIRED

The mean number of additional children desired is inversely related to the level of education and size of place of residence of the women. Women with no formal or only Koranic education consistently desire more additional children (5.2 and 6.2 respectively) than women with incomplete (5.0), or complete (4.5), primary education and those with secondary or higher education (4.1). This observation is consistent within all age groups, except among the oldest women (table 6.7). Similarly, women resident in the rural areas desire more additional children than women resident in towns or cities (5.4 and 4.3 respectively); this is consistent within all age groups.

Desire for additional children varies by region of residence. The mean is 3.84 in the South-west, 5.02 in the South-east, 5.62 in the North-east and 5.74 in the North-west. With

Table 6.7: Mean number of additional children desired by currently married, fecund women, by background characteristics and current age

Background characteristics	Current age					Number of women
	<25	25-34	35-44	45-49	All	
(a) <u>Level of education</u>						
None	6.82	5.16	4.06	2.20	5.23	2,623
Koranic	6.98	6.31	4.20	(2.33)	6.22	413
Primary incomplete	6.56	4.66	2.75	(1.27)	5.02	426
Primary complete	5.51	4.05	2.44	(1.57)	4.53	332
Secondary and above	5.07	3.90	1.87	0.0	4.13	198
(b) <u>Type of place of residence</u>						
Village	6.82	5.29	4.13	2.23	5.43	3,170
Town/city	5.56	4.21	2.64	1.39	4.28	828
(c) <u>Region</u>						
North-east	6.72	5.33	4.51	2.03	5.62	1,291
North-west	6.79	5.58	4.50	2.32	5.74	1,029
South-east	6.67	5.03	3.44	2.61	5.02	971
South-west	5.33	3.91	2.81	1.48	3.84	701
(d) <u>Religion</u>						
Catholic	5.74	4.82	3.04	1.16	4.61	508
Protestant	6.20	4.27	2.98	(1.60)	4.44	480
Other Christian	5.93	4.35	3.33	2.79	4.58	479
Muslim	6.87	5.43	4.46	1.79	5.65	2,114
Traditional/ others	6.79	5.33	3.76	2.91	5.17	412
Total	6.54	5.08	3.83	2.08	5.20	3,993

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 3.2.5

respect to the religious groups, the number of additional children desired is consistently highest for the Muslims (5.65) closely followed by women who belong to the Traditional/others group (5.17) and lower for Christians for whom this mean ranges between 4.61 and 4.44 (table 6.7).

#### 6.6 DESIRED FAMILY SIZE

In an attempt to find out the desired family size (ie the total number of children desired), all the women interviewed were asked the question: 'if you could choose exactly the number of children to have in your whole life, how many children would that be?' The possible expected responses would be either numeric or non-numeric. Typically, answers to such a question are taken as indicative of the

fertility intentions or expectations of the women. It is, however, commonly observed that women hardly ever give less than the number of children they already have as the number they desire to have; ie they often give responses that would rationalize their past fertility performance. This is the case for the surveyed women, for only 1.1 per cent indicated a desire for fewer than the number of living children they already have, 8.0 per cent desired as many as they have and the vast majority (90.9 per cent) indicated a desire for more children than the number they have living at the time of the survey. Moreover, in traditional, pronatalist societies, women are often reluctant to give exact numbers of the children they desire to have since they feel they have little or no control over that number. In the case of Nigerian women, Farooq and Adekun (1976) note

Table 6.8: Mean total number of children desired by current age, number of living children<sup>a</sup> and duration of marriage

Demographic characteristics	All women		Ever-married women		Currently married women	
	Mean	% non-numeric	Mean	% non-numeric	Mean	% non-numeric
(a) <u>Current age</u>						
15-19	8.02	30.0	8.28	31.3	8.30	31.3
20-24	8.13	32.1	8.29	32.8	8.31	32.8
25-29	8.48	31.2	8.51	31.5	8.54	31.4
30-34	8.41	32.9	8.43	33.1	8.48	32.8
35-39	8.73	34.7	8.76	34.9	8.66	34.1
40-44	8.01	31.7	8.01	31.6	8.04	31.3
45-49	7.35	35.1	7.36	35.0	7.57	35.3
(b) <u>Number of living children</u>						
0	7.46	32.3	7.74	35.3	7.67	34.6
1	7.90	31.9	7.93	31.7	7.89	31.5
2	7.61	31.8	7.61	31.9	7.63	31.4
3	8.01	33.5	8.02	33.6	8.12	33.4
4	8.20	35.7	8.21	35.7	8.33	35.9
5	8.88	31.0	8.88	31.0	8.99	30.2
6	9.32	32.1	9.32	32.1	9.45	32.4
7	9.88	28.9	9.89	29.0	9.90	29.4
8	10.45	25.4	10.45	25.3	10.61	25.0
9+	13.18	31.4	12.13	31.4	12.61	30.8
(c) <u>Marital duration</u>						
Under 5 years	-	-	7.83	32.2	7.84	32.3
5-9	-	-	8.25	31.6	8.27	31.3
10-14	-	-	8.53	33.0	8.57	32.8
15-19	-	-	8.70	35.3	8.75	34.5
20-24	-	-	8.44	31.6	8.37	30.9
25-29	-	-	8.24	33.0	8.47	33.3
30 years and over	-	-	8.11	32.6	8.34	33.6
All	8.25	32.3	8.33	32.8	8.36	32.5

a Including current pregnancy.

Source: Vol II, tables 3.3.1, 3.3.2 and 3.3.3

that 'a non-numerical response is a way of avoiding direct confrontation with an issue that is believed to be beyond the respondent's control'. Consequently non-numeric responses are high and the numeric ones, apart from rationalizing past performance, are hardly predictive of future intentions. Acceptance of the responses, especially for planning purposes, should be with considerable caution.

The mean total number of children desired by the women, as well as the proportion of women giving non-numeric responses to the question according to current age, number of living children and marital duration is presented in table 6.8. As many as a third of the women gave such non-numeric responses, and there is hardly any variations in the proportion giving such responses by age, marital duration or number of living children. Non-numeric responses were mainly in the form of 'up to God or fate' (21.2 per cent), 'as many as possible' (4.3 per cent) or some other answers like 'as many as my husband wishes' or 'I don't know or care'. These types of responses again indicate the fatalistic approach of the women towards, or their feeling of personal lack of control over, their reproductive performance. (Three per cent of the women did not respond to the question.)

The figures for the women who gave numeric answers to the question show that the desire for children, not just a few but very many, is pervasive among the women. Their mean desired family size is as many as 8.3 children for all and for ever-married women and 8.4 for the currently married women. The number desired is relatively stable among the various age groups (it being lowest among the oldest) and the various durations of marriage, except for women married for less than five years for whom the number is slightly smaller (7.8). The number desired, however, is directly related to achieved parity - probably reflecting the effects of rationalization.

Further details shown in table 6.9 indicate that for nulliparous women, or those that have only one or two surviving children, desired family size decreases as age increases. This pattern however appears reversed at higher parities. Table 6.10 shows further that virtually no women do not want to have any children and that the proportions desiring less than five children are extremely low. On the other hand, the proportions desiring larger numbers of children are consistently high; the proportion desiring nine or more children ranges between 30 per cent and 44 per cent for all age groups.

Table 6.9: Mean total number of children desired by all and currently married women according to number of living children, by current age

Current age	Number of living children <sup>a</sup>										
	0	1	2	3	4	5	6	7	8	9+	All
(a) All women											
15-19	7.61	8.37	8.72	6.18	(8.45)	-	-	-	-	-	8.02
20-24	7.18	8.04	8.02	8.62	9.00	8.76	(12.17)	(10.10)	-	-	8.13
25-29	8.04	7.27	7.89	8.11	8.86	9.55	10.44	11.71	(12.00)	(13.26)	8.48
30-34	6.61	6.72	7.47	7.89	8.35	8.93	9.21	9.92	12.27	14.12	8.41
35-39	8.50	8.11	7.23	7.69	7.85	9.00	9.02	10.22	9.45	12.09	8.73
40-44	7.18	6.61	4.90	7.39	7.48	7.62	9.68	10.40	9.73	11.34	8.01
45-49	(5.06)	7.62	6.15	5.89	6.08	7.72	7.61	8.47	9.80	11.42	7.35
All	7.47	7.82	7.62	7.90	8.22	8.72	9.23	10.15	10.26	12.24	8.25
(b) Currently married women											
15-19	8.13	8.38	8.75	(6.36)	(8.45)	-	-	-	-	-	8.30
20-24	7.94	8.08	8.04	8.69	9.02	8.97	(12.17)	(10.10)	-	-	8.31
25-29	8.34	7.35	7.91	8.15	8.87	9.55	10.44	11.71	(12.00)	(13.26)	8.54
30-34	6.57	6.83	7.48	7.98	8.36	8.99	9.29	9.80	(12.46)	14.12	8.48
35-39	7.53	6.90	7.19	7.76	7.90	9.18	9.07	10.25	9.45	12.09	8.66
40-44	6.98	6.59	4.72	7.46	7.52	7.79	9.82	10.67	9.74	11.75	8.04
45-49	(4.47)	7.41	6.19	6.35	6.65	7.87	7.73	8.42	(10.42)	11.60	7.57
All	7.75	7.80	7.64	8.01	8.33	8.84	9.35	10.19	10.39	12.45	8.36

a Including current pregnancy.

Figures in brackets are based on less than 20 cases.

Source: Vol II, table 3.3.4

Table 6.10: Per cent distribution of all and ever-married women by total number of children desired, by current age<sup>a</sup>

Current age	Total number of children desired <sup>a</sup>											Mean	Number of women
	0	1	2	3	4	5	6	7	8	9+			
(a) <u>All women</u>													
15-19	0.0	0.6	1.6	2.6	7.2	12.4	21.2	9.2	10.3	34.8	8.02	679	
20-24	0.1	0.2	0.5	1.2	6.9	13.2	20.4	11.1	12.2	34.1	8.13	1,016	
25-29	0.0	0.6	0.9	1.0	4.8	12.2	16.6	9.9	12.3	41.8	8.48	1,145	
30-34	0.0	0.6	1.2	2.1	4.6	8.5	16.9	10.6	15.7	39.8	8.41	1,000	
35-39	0.0	0.9	1.0	3.1	6.6	7.4	13.8	11.1	12.5	43.7	8.73	702	
40-44	0.0	1.6	4.0	4.1	5.2	10.7	13.0	7.8	13.7	40.0	8.01	581	
45-49	0.1	1.8	4.8	8.9	10.4	7.3	14.8	7.1	14.5	30.2	7.35	364	
All	0.0	0.7	1.6	2.6	6.1	10.6	17.1	9.9	13.0	38.4	8.25	5,487	
(b) <u>Ever-married women</u>													
15-19	0.0	0.7	1.6	3.1	6.7	10.7	20.7	8.0	10.5	38.1	8.28	560	
20-24	0.0	0.2	0.5	0.9	6.6	11.4	20.4	11.7	12.6	35.6	8.29	948	
25-29	0.0	0.6	0.7	1.1	4.4	11.9	16.8	9.9	12.4	42.2	8.51	1,124	
30-34	0.0	0.6	1.2	2.1	4.5	8.5	16.2	10.7	15.8	40.2	8.43	990	
35-39	0.0	0.9	1.0	3.1	6.5	7.5	13.1	11.2	12.6	44.1	8.76	694	
40-44	0.0	1.6	4.0	4.1	5.3	10.7	12.9	7.7	13.7	40.1	8.01	578	
45-49	0.1	1.8	4.8	9.0	10.4	7.1	14.9	7.2	14.6	30.3	7.36	363	
All	0.0	0.8	1.5	2.6	5.9	10.0	16.7	9.9	13.2	39.4	8.33	5,259	

a Includes only respondents who gave numeric responses.

Source: Vol II, tables 3.3.1-2 and 3.3.1-3

## 6.7 DIFFERENTIALS IN DESIRED FAMILY SIZE

Desired family size varies inversely with level of education and size of place of residence. Women with higher levels of education, even within each achieved parity level, consistently desire fewer children than women without any formal, or with only lower, education. The mean desired family size for women with secondary education is 6.2, compared with 7.7 and 8.6 respectively for women with complete or incomplete primary education and 8.9 and 8.5 respectively for women with Koranic or no formal education. Table 6.11 shows that women who live in towns or cities, again even within each specific parity level, desire to have fewer children (7.3) than women who live in rural areas (8.6).

Variations between geographical regions are not very substantial except for the South-west where desired family size is consistently lower overall and within each parity level. Though the range is relatively narrow for the other regions (between 8.34 and 8.83), desired family sizes are consistently higher in the North-east and North-west at the higher parities (five or more living children) than in the South-east. There is less variation by religion than by region. However, Muslims and women belonging to the Traditional/others group tend to

consistently desire more children than the Christians, especially at higher parity levels.

## 6.8 SEX PREFERENCES

In an attempt to find out the preferences of the women for either boys or girls, all currently married, fecund and non-pregnant women who indicated a desire for another child (N=4,822) were asked whether they preferred their next child to be a boy or girl. In conformity with earlier observations about fatalistic attitudes to individual fertility behaviour, over half of these women (57.8 per cent) were either undecided or unwilling to state the sex they prefer; 28.2 per cent preferred their next child to be a boy and 14.0 per cent preferred it to be a girl. It can thus be said that there is a definite preference for males among the women who expressed a preference.

Preference for males is particularly high among women who do not have any living sons especially if they already have two or more living daughters. Between one half and one third of these women want their next child to be a son. There is also a tendency for the proportion preferring a son to increase as the number of living daughters increases, especially among women with less than three

Table 6.11: Mean total number of children desired by currently married women according to number of living children, by selected background characteristics

Background characteristics	Number of living children <sup>a</sup>											Number of women
	0	1	2	3	4	5	6	7	8	9+	All	
(a) <u>Level of education</u>												
None	7.84	7.83	7.79	8.06	8.35	8.91	9.37	10.40	10.55	12.29	8.48	3,395
Koranic	8.12	8.31	8.23	8.58	9.29	9.83	11.28	(9.48)	(11.34)	(14.45)	8.85	511
Primary incomplete	(8.74)	8.50	7.89	8.18	8.37	8.80	8.53	(9.55)	(9.88)	(14.50)	8.56	520
Primary complete	6.81	7.44	6.42	8.02	7.28	7.42	9.13	9.88	(8.98)	(11.26)	7.67	385
Secondary and above	5.98	6.08	6.08	5.69	6.73	(6.55)	(8.33)	(7.78)	(9.45)	(9.00)	6.23	223
(b) <u>Type of place of residence</u>												
Village	8.01	8.10	7.83	8.23	8.64	9.12	9.68	10.60	10.46	12.69	8.64	3,987
Town/city	6.51	6.75	6.88	7.33	7.18	7.72	8.25	8.71	10.05	(9.66)	7.31	1,047
(c) <u>Region</u>												
North-east	7.34	7.98	8.14	8.61	9.67	9.44	9.89	12.28	11.73	13.59	8.83	1,623
North-west	8.39	7.59	7.85	8.21	8.39	9.79	9.99	9.67	(10.33)	(12.84)	8.34	1,299
South-east	8.29	8.55	7.47	7.94	8.28	8.50	9.38	9.56	9.51	12.47	8.61	1,203
South-west	6.67	6.83	6.63	6.97	6.75	7.64	8.31	8.39	9.50	(10.05)	7.23	909
(d) <u>Religion</u>												
Catholic	7.99	7.28	7.09	6.85	7.49	7.70	9.04	9.11	(10.11)	(10.52)	7.69	627
Protestant	7.20	8.10	7.16	7.68	8.19	9.04	8.75	10.27	9.08	(12.01)	8.29	634
Other Christian	7.56	6.85	7.45	8.59	7.89	7.68	8.29	9.19	(9.31)	13.16	8.28	603
Muslim	7.89	7.86	7.90	8.22	8.51	9.65	10.00	11.42	11.43	13.28	8.53	2,657
Traditional/others	6.14	8.45	7.46	8.18	9.57	8.77	9.65	9.06	(10.11)	(10.23)	8.50	514
All	7.75	7.80	7.64	8.01	8.33	8.84	9.35	10.19	10.39	12.45	8.36	5,034

a Including current pregnancy.

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 3.3.7

Table 6.12: Percentage of currently married, fecund, non-pregnant women desiring another child who prefer their next child to be a son, by number of living sons and daughters

Number of living daughters		Number of living sons						All
		0	1	2	3	4	5+	
0	%	30.5	14.7	8.8	4.5	7.1	0.3	18.9
	N	625	485	219	128	52	33	1,542
1	%	48.2	27.4	15.7	15.6	13.5	12.1	28.4
	N	417	440	301	174	77	37	1,445
2	%	52.4	36.1	22.2	20.0	25.2	5.0	33.0
	N	242	282	225	136	73	28	986
3	%	63.9	36.3	38.3	24.7	28.8	41.0	38.6
	N	80	113	176	96	49	33	547
4	%	51.7	43.4	37.2	27.7	15.6	24.0	37.8
	N	34	65	42	37	11	14	203
5+	%	57.5	25.7	26.3	34.1	78.0	73.1	44.5
	N	16	25	25	8	15	10	99
All	%	42.2	26.2	20.8	16.7	21.8	19.6	28.2
	N	1,414	1,410	987	579	277	156	4,822

Source: Vol II, table 3.4.3-1

surviving sons (table 6.12). Conversely, the proportion of women preferring their next child to be a daughter increases as the number of living sons increases, particularly among those who have none or only one living daughter (table 6.13). It is interesting to note that only 5.6 per cent of the women who do not have a living son prefer their next child to be a daughter, compared with 42.2 per cent who prefer it to be a boy.

Despite the above manifest preference for boys, the percentage of women wishing to cease childbearing is not strongly related to the number of living sons a woman already has; the desire to continue childbearing strongly persists. The total number of children already born seems to be a more important factor than the sex composition of the children. Similarly, the number of sons already born does not strongly affect the additional desired number of children or desired family size (table 6.14). It is probable that the women expect a mixture of both sexes among the large number of children they desire to have in their lifetime.

## 6.9 SUMMARY

Available information on the fertility preferences of the surveyed women show that the desire to cease childbearing is extremely low while the desire to continue is extremely high, even among women who have approached the end of their childbearing years and those who already

have many living children. Only 5 per cent of the currently married fecund women indicated a desire to cease childbearing.

More than two out of every five and one out of every three of the currently married fecund women could not give a numeric response to the number of additional children and the total number of children they would wish to have respectively. This reflects the extent of their feeling of personal lack of control over their reproductive behaviour or unwillingness to dabble into affairs that, to them, are 'up to God'. Those who gave numeric responses indicated a desire to have, not just a few, but very many children - 5.2 additional children and 8.4 desired total number of children. They also indicated a strong preference for male children; this preference is particularly strong among women who have no living children or many living daughters but no sons. Despite this preference, the number of living sons a woman already has does not increase her desire to cease childbearing nor is it related to desires for fewer additional children and smaller total family size.

Level of education and size of place of residence are inversely related to the desire to cease childbearing, the number of additional children desired and ultimate desired family size, though mostly at higher parity levels. Some variations by religious affiliation and region of residence also exist, though again mostly after achieving high parity levels.

Table 6.13: Percentage of currently married, fecund, non-pregnant women wanting another child who prefer their next child to be a daughter, by number of living sons and daughters

Number of living daughters		Number of living sons						All
		0	1	2	3	4	5+	
0	%	9.0	25.9	37.4	46.9	49.7	18.6	23.1
	N	625	485	219	128	52	33	1,542
1	%	3.1	7.8	19.1	24.9	23.6	27.4	12.2
	N	417	440	301	174	77	37	1,445
2	%	3.5	4.1	9.4	20.5	11.7	34.6	8.8
	N	242	282	225	136	73	28	986
3	%	1.7	2.8	7.0	11.2	19.6	14.7	7.7
	N	80	113	176	96	49	33	547
4	%	0.0	2.0	8.9	9.4	0.0	17.8	5.5
	N	34	65	42	37	11	14	203
5+	%	0.0	11.2	2.9	0.0	0.0	13.2	4.9
	N	16	25	25	8	15	10	99
All	%	5.6	12.7	18.0	25.1	22.4	22.3	14.0
	N	1,414	1,410	987	579	277	156	4,822

Source: Vol II, table 3.4.3-2

Table 6.14 Distribution of currently married, fecund, non-pregnant women according to: (A) Percentage not wanting another child; (B) Mean additional number of children desired; and (C) Mean total number of children desired by number of living sons

Number of living children and living sons	A	B	C
None	3.6	7.49	7.75
<u>One child</u>			
No son	1.8	7.05	8.37
One son	3.1	5.90	7.46
<u>Two children</u>			
No son	0.7	5.91	7.66
One son	2.8	5.59	7.93
Two sons	3.9	4.74	6.96
<u>Three children</u>			
No son	4.8	6.31	8.97
One son	5.8	4.71	8.24
Two sons	3.7	4.86	7.62
Three sons	7.1	4.83	7.97
<u>Four children</u>			
No son	3.9	4.28	7.79
One son	5.5	4.83	8.38
Two sons	6.9	4.09	8.33
Three sons	7.3	4.06	7.70
Four sons	6.6	5.14	9.84
<u>Five children</u>			
No son	10.4	(2.42)	(10.30)
One son	9.3	3.93	8.70
Two sons	4.4	3.87	8.72
Three sons	10.9	3.74	8.83
Four sons	9.2	4.23	9.42
Five or more sons	2.2	3.94	9.62

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, tables 3.4.1, 3.4.5 and 3.4.6

These differentials are, however, not as pronounced as those for education.

The value of the above observations in predicting the future fertility performance of

the women is expected to be limited since, with the observed fatalistic stance towards reproductive behaviour, the link between the expressed desires of the women and their eventual actions seems tenuous.

# KNOWLEDGE AND USE OF CONTRACEPTION

## 7.1 OFFICIAL ATTITUDE TOWARDS POPULATION POLICY AND FAMILY PLANNING IN NIGERIA

A careful examination of the attitude of the Federal Government towards a national population policy (understood in its widest sense as including both implicit and explicit policies affecting demographic phenomena) and family planning indicates a shift in attitude over time, especially since the 1970s. Up to this time, official interest in population matters was primarily restricted to collecting relevant population statistics for the purposes of socio-economic and political planning - hence the censuses of 1952/53, 1962, 1963 and the 1965/66 Rural Demographic Sample Survey. Some concern over population growth and spatial distribution of the population and their effect on socio-economic development was, however, expressed as early as 1966 in the Guideposts for Second National Development Plan. It was not until this Second National Development Plan was officially released in November 1970 that the Federal Government made its first official standpoint on population policy clear though in a passive and evasive manner. The official standpoint reads as follows:

'The issue of population policy in contemporary Nigerian context must be handled with perception and discretion. A nation's population policy is influenced by the interplay of many factors: magnitude of utilizable natural resources, the growth rate of the population, the level of per capita income, the age structure of the population and the employment potential. Firm data on Nigerian demographic characteristics are still scanty, though improving. Available evidence suggests an estimated population growth rate of 2.5 per cent per annum. Per capita income level is, by world level, still low. The youth dependency ratio is quite high. So is the rate of urbanization. Given the structure and techniques of production, a high proportion of the gainfully employed population is concentrated in low productivity sectors of national economic activity. There is therefore a high rate of urban employment. Thus in Nigeria, these factors combined would have suggested stringent population control measures on a national scale but for her resource base and development potentials. The magnitude of the country's population problem is unlikely to be such that calls for extensive or emergency panic action. Given the promising resource base of the economy, the country can, through careful planning, succeed in buying time to ward off undue population growth ... what seems appropriate in the present circumstances of Nigeria is for government to encourage the

citizens to develop a balanced view of the opportunities for individual family planning on a voluntary basis, with a view to raising the quality of life of the offsprings. Facilities are to be designed to protect mothers, on a long-range basis, from repeated and unwanted pregnancies, as well as to enable parents to space their children for better feeding, clothing and education. During the plan period, the Government will pursue a qualitative population policy by integrating the various family planning schemes into the overall health and social welfare program of the country. Families would have access to information, facilities and services that will allow them freedom to choose the number and spacing of their children ...' (Federal Republic of Nigeria 1970.)

The document further included the plan to establish a National Population Council to implement the above policy and advise the government. That Council was subsequently established in 1975 with the added function of securing internal and external assistance for family planning and channelling such assistance to appropriate organizations within the country.

An apparently more definite stand on population policy and problems appeared in 1974. In an address to the inaugural meeting of the Population Association of Africa held at Ibadan in May of that year, the then head of state (General Gowon) stated that population growth rate was outstripping the rate of food production and creating concern with respect to fixed assets such as land and so must be slowed down for Nigeria to achieve sustained social and economic development (see Nortman 1974; Ukaegbu 1980). This definitive stand was not, however, reiterated in the Third National Development Plan 1975-79, published in 1975. The plan stated that:

'... although Nigeria has (by world standards) a large and rapidly growing population, these demographic factors do not appear as yet to constitute a significant or serious obstacle to domestic economic progress. The country is fortunate in possessing a large land area well endowed with natural resources which, if carefully exploited, should provide a basis for building a viable economy which would ensure a steadily rising standard of living for the population within the foreseeable future and especially during the current phase of the country's demographic transition which is characterized by rapid growth'.

It further asserted that the:

'emphasis of policy is, therefore, being



deliberately placed on accelerating the rate of growth of the economy rather than on direct action to achieve a drastic or immediate reduction in overall birth rate. It is believed that the tempo of social and economic development will itself help to accentuate the forces already at work which will tend to bring down the birth rate in the long run. The newly established National Population Council will be strengthened so that it can, in association with the Family Planning Council of Nigeria and other non-governmental agencies in the field, accelerate the provision of family planning information and services on a voluntary basis to the people in all parts of the country ...' (Federal Republic of Nigeria 1975.)

The plan further included policies geared towards reducing mortality and morbidity, on integrated rural-urban development and on improvements of the physical environment and sanitation, all of which will help achieve the stated population policy objectives.

The next development plan was drawn up in 1980 for the period 1981-85 by the civilian administration. Before that date, the National Population Bureau (NPB) had been established in 1976 to collect demographic information and advise the government on population matters. This organization later became the executive arm of the National Population Commission which was established by the 1979 Constitution of Nigeria and formally inaugurated early in April 1981 with similar functions to those of the NPB. The existence of this organization notwithstanding, the government's attitude to population policy, as outlined in the Fourth National Development Plan 1981-85, was again not definitive. There was, however, the assertion that a more definitive stand or action should be taken. The plan states:

'Government is aware of the close relationship between population dynamics and economic development. The absence of a comprehensive population policy indicating desirable trends in the size and growth rate of our population and also in fertility, internal and external migration and spatial distribution should therefore not be regarded as indicative of governments' insensitivity to the effects of these factors on the development prospects of the country. Given the sensitive nature of the subject, the cultural diversity of the country and the lack of firm statistical basis for decision making, the successive governments have simply found it more convenient to accept somewhat passively the developments on the population front than attempt to control or modify the 'natural' trends. With the transition to democratic civilian government, perhaps the time has come to endeavour to grapple more actively with the country's population problems instead of continuing to react passively to them. It is fully realized that for meaningful and sustained economic development which will

have positive and visible effects on the living standards of the people of this country to take place, population growth trends will have to be more closely monitored and shaped in a way that will make them consistent with our resource potentials. Consequently, appropriate measures will be introduced to influence vital population variables such as fertility, mortality, migration, etc along directions that will enhance the country's growth and development prospects. Since mortality rate is already on the decline, it is clear that fertility rate will have to move in the same direction in order to bring the overall growth rate of our population down to a level which will not impose excessive burden on the economy on the long run. Forces of social and economic change are already at work especially in urban centres which are tending to bring about smaller average family sizes. Government will strengthen these forces during the plan period by encouraging the provision of facilities for family planning in its health institutions and educating couples to take advantage of such facilities to regulate the sizes of their families. The use of such facilities, however, will continue to be on a purely voluntary basis ...' (National Planning Office, 1981.)

It is evident from the above that there is now greater concern on the part of the Federal Government over population issues and greater expression of intent to influence those issues than had hitherto been the case. What is not explicit, however, are the ways and means of such influence except the usual provision of information and access to family planning to those who voluntarily need it. The rationale for the provision of family planning facilities seems also to have shifted. In the Second Development Plan, it was essentially to 'protect mothers ... from repeated and unwanted pregnancies as well as to enable parents to space their children'; in the Fourth Development plan, it was to enable parents to 'regulate the size of their families'. That shift is, however, too recent to have any impact at the present. What has always been absent, both in policy, organization and implementation, is a definite effort to promote or publicize family planning.

## 7.2 FAMILY PLANNING SITUATION IN NIGERIA

Section 7.1 represents the official position on family planning. But even before the government started expressing any views on the subject, some individuals and organizations had been engaged in the provision of family planning advice and assistance. The origins of such advice and assistance date back to the early 1960s as a result of concern over the increasing incidence of illegal abortions, particularly in the city of Lagos (Akingba 1971). The first family planning association - The Family Planning Council of Nigeria - was formed in November 1964. It was essentially a

voluntary, non-profit making body with the following objectives:

- (a) to encourage the building of happy, healthy families;
- (b) to encourage proper spacing of children among families with a view to protecting the health of mothers and children;
- (c) to help parents understand the values of having only those children for whom they can provide adequate care, nutrition, housing, clothing and education;
- (d) to educate women about unwanted pregnancies;
- (e) to help and advise those who want children; and
- (f) to enable women to take a more active part in the affairs of the community (Huponu-Wusu 1979).

The organization further aimed to form branches throughout the country, support researchers in family planning and provide family planning services nationwide. It was primarily funded by charitable overseas organizations and became a full member of the International Planned Parenthood Federation (IPPF) in 1969. It was officially recognized (but not funded) by the Federal Government of Nigeria in 1966 as a voluntary organization and by most state governments a year later. It was subsequently allowed to run some clinics at government (state and federal) hospitals especially in the state capitals and, from 1970 onwards, some funding for its activities was provided by the governments. In 1978, the organization changed its name to the Planned Parenthood Federation of Nigeria (PPFN) in an attempt to correct the public misconception of its former name as an agent of population control and birth limitation per se. It remains today the most important national family planning organization in the country, with clinics and staff in almost all the states of the federation and provides modern family planning services as well as family life education to interested persons.

The annual reports of the organization show that its number of new acceptors has been increasing over time though, in absolute terms, those numbers are very low for a country as large as Nigeria. The numbers of new acceptors are as follows:

1968	4,299
1969	7,494
1970	9,737
1971	14,577
1972	20,169
1973	24,576
1974*	29,239
1975*	27,617
1976*	30,907
1977*	34,372

\* Number recruited by fieldworkers.

These numbers represent a negligible proportion of the women of childbearing age in Nigeria. Besides the clinics run by the PPFN, many hospitals in Nigeria, especially those affiliated with university teaching hospitals and many private and government hospitals, provide family planning services as an integral part of maternal and childcare programmes. Statistics on the numbers of acceptors from such sources on a national scale are, however, hardly available. Moreover, almost all types of contraceptive methods (except IUD) are available without prescriptions in drug stores all over the country. Despite these, many researchers are of the unanimous opinion that family planning services have not yet reached a significant proportion of the target population in Nigeria (see, for instance, Ukaegbu 1977).

### 7.3 KNOWLEDGE AND EVER-USE OF CONTRACEPTION

The knowledge of the surveyed women about contraception was determined on two levels. First, each woman was asked the following question:

'As you may know, there are various methods that women or men can use to delay or avoid becoming pregnant. These ways or methods are called family planning or contraception. Do you know of, or have you heard of, any of these methods?'

If the woman answered 'yes', she was then asked to state the methods she knew or had heard of. This is referred to in this report as spontaneous knowledge of the method. If the woman, however, answered 'no' to the above question, specific contraceptive methods were described to her and she was asked whether she had heard of each method. If she had heard of the method after such a description, this is taken as knowledge after probing in this report. All the women who indicated awareness or knowledge of any method with or without probing were then asked whether or not they had ever used that method. If she was aware of, but had never used any of the following methods: the pill, injection, loop or IUD or other scientific methods (such as jelly, cream, diaphragm, tampon, sponge or foam tablets), she was further asked: 'If you yourself wanted to use this method, do you know any place or person where you would get it?' The object of this question was to determine the accessibility of modern contraceptive methods to non-users. Finally, all the women were asked if they knew any other contraceptive method(s) which were not described to them. If they did know, the name of the method was obtained and whether or not she (or her husband) had ever used it. A cross-check question was asked of all the women who indicated that they had never used any method, just to make sure they had not actually used a method; this was followed by a question on their future intentions about contraceptive use.

The detailed list of contraceptive methods in the questionnaire and their descriptions are contained in section 5 of appendix 2. For the discussion in this chapter these methods have

been grouped into two categories: efficient and inefficient methods. Efficient methods include the pill, condom, injection, loop or IUD, vasectomy, female sterilization, and other female scientific methods (ie diaphragm, tampon, sponge, foam tablets, jelly or cream). Inefficient methods include douche, rhythm, withdrawal, abstinence, herbs, armbands, waistbands, neckbands, rings on finger and charms.

Since most women in Nigeria regard discussions on sexual matters and contraception particularly sensitive and the presence of others might affect the responses they give, the interviewers were asked to indicate the type of persons present just before the interview on knowledge and use of contraception. The interview at this stage was conducted in strict privacy with 38.4 per cent of the women only. For another 13.8 per cent of the women, only children under ten years of age were present, in which case the responses might not be affected by their presence. However, for 23.9 per cent of the women, this sensitive section of the interview was conducted in the presence of their husbands and various combinations of other adults and children; for 10.9 and 12.9 per cent of the women the interview was conducted without the presence of the husbands but in the presence of male and female adults respectively. Women who had not reached the age of menarche or had not started sexual relations (13.2 per cent of the surveyed women) were not asked the questions on contraceptive knowledge and use (table 7.1); they are excluded from all subsequent tables in this chapter.

Knowledge of contraception is remarkably low among the surveyed women. As many as two out of every three of them have not heard of any method of contraception whatsoever; only a third have heard of any method. Among these women, 21.1 per cent have heard of at least one efficient method while 12.5 per cent have heard of at least one inefficient method (see table 7.2). Abstinence, the pill and injection are the most commonly known contraceptive methods; 19.4 per cent, 13.4 per cent and 10.7 per cent of the women respectively have heard of these methods. The rhythm method has been heard of by 9.3 per cent of the women, rings on finger as a contraceptive method by 7.0 per cent, female sterilization by 6.9 per cent, herbs by 6.7 per cent, withdrawal by 6.3 per cent and the condom by 5.6 per cent. All the other methods have been heard of by less than 5.0 per cent of the women. Spontaneous knowledge of the methods is extremely low: the pill, abstinence and injection were spontaneously mentioned by 4.4 per cent, 3.0 per cent and 2.2 per cent of the women respectively. Less than one per cent of the women spontaneously mentioned any of the other methods. Abortion, which is not considered here as a contraceptive method and so excluded from all the tables, has been heard of by 26.8 per cent of the women, 3.5 per cent spontaneously and 23.3 per cent after probing.

With such low level of knowledge or awareness, ever-use of contraception should be, and is, correspondingly low. An overwhelming majority of the women (84.9 per cent) have never used any method of contraception; 12.5 per cent have used at least one inefficient

Table 7.1: Presence of other persons at the start of interview on contraceptive knowledge and use

Persons present	Per cent
No one	33.2
Children (under 10 years)	12.0
Husband	5.6
Husband and children	6.7
Other males (over 10 years)	1.5
Other males and children	1.9
Husband and other males	0.6
Husband, other males and children	1.1
Other females (over 10 years)	6.2
Other females and children	5.0
Husband and other females	1.1
Husband, other females and children	1.6
Other males and females (over 10 years)	1.9
Husband, other males and females (over 10 years)	4.2
Husband, other males, females and children	0.9
Not stated	3.3
Not applicable <sup>a</sup>	13.2
Total	100.0

a Those women who had not reached menarche or had not started sexual relations at time of interview were excluded from this section.

Table 7.2: Percentage of all women who have heard of, and who have ever used specified contraceptive methods, including sterilization

Method	Heard of			Ever used
	Spontaneously	After Probing	Total	
No method	-	-	66.3	84.9
Inefficient method	-	-	12.5	12.5
Efficient method	-	-	21.1	2.6
<u>Specific methods</u>				
Pill	4.4	9.0	13.4	1.8
IUD	0.7	3.7	4.4	0.3
Female scientific	-	2.0	2.0	0.2
Douche	0.2	3.0	3.2	0.7
Condom	0.8	4.8	5.6	0.8
Rhythm	0.9	8.4	9.3	3.4
Withdrawal	0.4	5.9	6.3	1.8
Abstinence	3.0	16.4	19.4	12.1
Injection	2.2	8.5	10.7	0.6
Herbs	0.6	6.1	6.7	0.2
Bands	0.3	4.5	4.8	0.2
Rings	0.3	6.7	7.0	0.2
Male sterilization	-	2.1	2.1	0.0
Female sterilization	0.7	6.2	6.9	0.1

Source: Vol II, tables 4.2.1-3 and 4.3.1-3

method and only 2.6 per cent have used at least one efficient method. Of the specific methods, sexual abstinence is the most commonly used by 12.1 per cent of the women. The rhythm method has been used by 3.4 per cent, the pill and withdrawal by 1.8 per cent each. All the other methods have each ever been used by less than 1 per cent of the women. The pattern of knowledge and ever-use by ever-married and currently married women is shown in table 7.3. There is virtually no difference between these two groups of women or between them and all women.

Knowledge and ever-use also do not vary much by the age of the women. Knowledge and use of at least one efficient method are slightly higher for the younger women while proportionately more of the older women have heard of and ever used any of the inefficient methods (table 7.4). Knowledge and ever-use, however, vary with number of living children. Tables 7.5 and 7.6 show that both among all the women and among those currently married and fecund (but more particularly among the former), the proportion of women who know or have used each method, is slightly higher among women who have four or more living children compared with those who have less than four living children.

There are, however, considerable variations in knowledge and ever-use when the background characteristics of the women are considered. Higher education is most definitely associated with greater knowledge of contraception. As

many as 70.0 per cent of women with secondary or higher education, compared with 55.9 per cent and 58.7 per cent of those with complete and incomplete primary education respectively, 18.6 per cent of those with Koranic and 26.1 per cent of those with no formal education, have heard of at least one method of contraception. Similarly, knowledge is higher among women who live in urban than in rural areas; 45.1 per cent and 30.5 per cent respectively have heard of any method of contraception. Among the regions, contraceptive awareness is lowest in the North-east (14.8 per cent) and North-west (17.6 per cent) and higher in the South-west (49.0 per cent) and South-east (54.4 per cent). Among the religious groups, it is lowest among the Muslims (19.2 per cent) and relatively similar for the various groups of Christians (between 48.5 per cent and 50.2 per cent). All these differentials remain after controlling for the age of the women (table 7.7).

Differentials in the extent of contraceptive use follow a similar pattern. The higher the level of education of the women, the greater the proportion who have ever used any contraceptive methods - 41.6 per cent of women with secondary or higher education, 25.2 per cent and 29.6 per cent of those with complete and incomplete primary education respectively, 7.4 per cent of those with Koranic education and 10.4 per cent of those without formal education. The proportion of women who have ever used any method is slightly higher in urban (19.1 per cent) than in rural (14.0 per

Table 7.3: Percentage of ever-married and currently married women who have heard of and ever used specific contraceptive methods, including sterilization

Method	Ever-married		Currently married	
	Heard of	Ever used	Heard of	Ever used
No method	67.3	85.8	67.1	85.5
Inefficient method	12.7	12.3	12.6	12.4
Efficient method	20.0	2.0	20.3	2.2
<u>Specific methods</u>				
Pill	12.3	1.3	12.5	1.4
IUD	4.2	0.3	4.4	0.3
Female scientific	2.0	0.1	2.1	0.2
Douche	2.9	0.7	3.1	0.8
Condom	5.0	0.6	5.1	0.7
Rhythm	8.5	3.0	8.7	3.1
Withdrawal	5.7	1.4	5.6	1.4
Abstinence	18.7	11.6	18.8	11.8
Injection	9.9	0.5	10.1	0.5
Herbs	6.4	0.1	6.5	0.2
Bands	4.7	0.2	5.0	0.2
Rings	6.9	0.2	6.9	0.2
Male sterilization	2.0	0.0	2.0	0.0
Female sterilization	6.6	0.1	7.0	0.1

Source: Vol II, tables 4.2.1 and 4.3.1

cent) areas. The North-east and the North-west regions have lower proportions ever using (3.2 per cent and 6.4 per cent respectively) than the South-west (22.4 per cent) and the South-east (28.5 per cent). Ever use among the Muslims is particularly low (6.6 per cent) when compared with other religious groups (range: 22.0-24.6 per cent). All these differentials remain after controlling for the age of the women, and when ever-use of only the efficient methods is considered (see table 7.8).

The ratio of knowledge to ever-use of specified contraceptive methods is presented in descending order in table 7.9. The ratios can be interpreted as summary measures relating awareness of a specific method to ever-use of that method. This ratio is 1:1 for the inefficient methods and 1:8 for the efficient methods. This means that every woman who has heard of at least one of the inefficient methods has tried at least one of those inefficient methods while only one out of every

Table 7.4 Percentage of all women who have heard of and who have ever used contraception, by current age

Current age	Heard of			Ever used		
	One or more efficient methods	Only inefficient methods	Any method	One or more efficient methods	Only inefficient methods	Any method
15-19	20.2	10.3	30.5	4.7	9.1	13.8
20-24	24.8	13.9	38.7	3.5	15.4	18.9
25-29	21.8	11.5	33.3	2.2	11.8	14.0
30-34	20.2	12.1	32.3	1.9	13.0	14.9
35-39	21.8	10.1	31.9	2.1	11.2	13.3
40-44	17.7	14.6	32.3	2.1	12.5	14.6
45-49	17.4	18.3	35.7	2.1	13.3	15.4

Source: Vol II, tables 4.2.1-3 and 4.3.1-3

Table 7.5: Percentage of women who have heard of specific contraceptive methods (including sterilization), by number of living children

Method	All women		Currently married, fecund women	
	Less than four children	Four or more children	Less than four children	Four or more children
No method	68.4	62.7	69.5	62.9
Inefficient method	11.7	14.0	11.9	13.8
Efficient method	19.9	23.3	18.6	23.3
<u>Specific methods</u>				
Pill	12.7	14.6	11.3	14.6
IUD	3.9	5.3	3.7	5.5
Female scientific	1.6	2.8	1.6	3.0
Douche	3.2	3.3	3.0	3.4
Condom	5.6	5.7	4.7	5.8
Rhythm	8.8	10.3	7.8	10.2
Withdrawal	6.2	6.6	5.1	6.6
Abstinence	18.0	22.0	17.2	21.6
Injection	10.1	11.8	9.3	11.6
Herbs	6.2	7.6	5.7	8.0
Bands	4.7	5.0	4.9	5.1
Rings	6.7	7.5	6.8	7.3
Male sterilization	1.7	3.0	1.6	2.8
Female sterilization	6.4	7.8	6.4	8.1

Source: Vol II, table 4.2.1-3

Table 7.6: Percentage of women who have ever used specific contraceptive methods (including sterilization), by number of living children

Method	All women		Currently married, fecund women	
	Less than four children	Four or more children	Less than four children	Four or more children
No method	86.1	82.7	87.0	82.7
Inefficient method	10.8	15.5	10.8	15.2
Efficient method	3.1	1.8	2.2	2.1
<u>Specific methods</u>				
Pill	2.1	1.2	1.4	1.4
IUD	0.2	0.4	0.2	0.5
Female scientific	0.1	0.2	0.1	0.3
Douche	0.7	0.9	0.6	1.0
Condom	1.0	0.6	0.7	0.7
Rhythm	3.5	3.2	3.0	3.2
Withdrawal	2.1	1.3	1.4	1.4
Abstinence	10.7	14.7	10.3	14.4
Injection	0.8	0.4	0.5	0.5
Herbs	0.1	0.2	0.1	0.2
Bands	0.2	0.1	0.2	0.1
Rings	0.2	0.2	0.2	0.2
Male sterilization	0.0	0.0	0.0	0.0
Female sterilization	0.0	0.1	0.0	0.1

Source: Vol II, table 4.3.1-3

Table 7.7: Percentage of all women who have heard of any method of contraception (including sterilization), by current age and background characteristics

Background characteristics	Current age					Number of women
	15-24	25-34	35-44	45+	All	
<u>(a) Level of education</u>						
None	22.9	24.5	27.6	36.2	26.1	5,553
Koranic	16.6	21.6	18.6	10.0	18.6	848
Primary incomplete	54.6	60.9	62.3	62.3	58.7	869
Primary complete	54.8	55.4	63.3	(34.3)	55.9	699
Secondary and above	71.2	66.2	75.5	(100.0)	70.0	481
<u>(b) Type of place of residence</u>						
Village	32.5	29.0	28.9	35.5	30.5	6,619
Town/city	44.9	46.9	44.3	36.7	45.1	1,830
<u>(c) Region of residence</u>						
North-east	15.4	14.0	13.8	21.9	14.8	2,204
North-west	16.8	19.0	15.9	17.3	17.6	2,143
South-east	62.8	52.7	48.2	53.0	54.4	2,433
South-west	58.6	48.6	45.4	32.8	49.0	1,669
<u>(d) Religion</u>						
Catholic	57.8	47.3	38.4	48.4	48.5	1,191
Protestant	54.1	49.4	50.7	40.6	50.2	1,125
Other Christian	55.2	49.0	38.7	50.8	48.6	1,111
Muslim	19.7	19.1	19.2	16.4	19.2	4,155
Traditional/others	39.8	39.5	44.6	50.8	42.1	866
All	24.5	32.9	32.1	35.7	33.7	8,448

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 4.2.2

eight women who have heard of at least one efficient method has tried at least one of them. Of all the specific methods, abstinence, rhythm and withdrawal (all inefficient methods) have the highest ever-use to knowledge ratios of 1:2, 1:3 and 1:4 respectively. The pill and condom have the same ratio of 1:7 and herbs for contraceptive purposes have a higher ratio than the IUD or injection - 1:10, 1:15 and 1:18 respectively.

#### 7.4 CURRENT USE OF CONTRACEPTION

With the observed low proportions of women who have ever used contraceptive methods, one would expect an even lower proportion to be using any methods at the time of the survey. Table 7.10 shows that only 6.2 per cent of the women exposed to the risk of childbearing (ie currently married, fecund, non-pregnant women, including those sterilized for non-contraceptive purposes) were actually using any form of contraception at the time of the survey; 93.8 per cent were not contracepting. And almost all of the women using any methods (5.5 per

cent) were using the inefficient methods; 0.7 per cent were using the efficient methods. The proportions using contraception are highest among the oldest age groups. Abstinence is almost the only method being used, and by only 4.9 per cent of the women; less than 0.5 per cent of the women were using each of the other methods.

Current use also varies by level of education, region of residence and religion but not by type of place of residence. The higher the level of education of the women, the greater the proportion currently using contraception; this more or less holds true even within specific parity levels. About a fifth (18.7 per cent) of the women with secondary or higher education, compared with 9.6 per cent, 10.4 per cent, 5.4 per cent and 4.7 per cent of those with complete primary, incomplete primary, Koranic and no formal education were currently using contraception. Current use was almost non-existent in the North-east, with only 0.6 per cent of the women using at the time of the survey. About 5.4 per

Table 7.8: Percentage of all women who have ever used any method of contraception (including sterilization), by current age and background characteristics

Background characteristics	Current age					Number of women
	15-24	25-34	35-44	45+	All	
1. <u>ALL METHODS</u>						
(a) <u>Level of education</u>						
None	8.7	9.5	11.6	15.5	10.4	5,553
Koranic	8.7	7.6	4.5	4.5	7.4	848
Primary incomplete	24.5	33.2	33.0	25.8	29.6	869
Primary completed	27.0	25.0	22.1	(7.6)	25.2	699
Secondary and above	43.6	34.7	53.3	(95.6)	41.6	481
(b) <u>Type of place of residence</u>						
Village	16.4	13.1	11.9	15.4	14.0	6,619
Town/city	18.3	19.1	21.5	15.2	19.1	1,830
(c) <u>Region of residence</u>						
North-east	3.4	2.3	4.6	3.7	3.2	2,204
North-west	6.8	6.5	4.9	7.4	6.4	2,143
South-east	36.6	27.5	22.4	24.9	28.5	2,433
South-west	26.1	22.8	20.8	14.8	22.4	1,669
(d) <u>Religion</u>						
Catholic	30.5	23.2	18.8	25.6	24.6	1,191
Protestant	29.5	22.1	21.6	16.4	23.6	1,125
Other Christian	27.8	22.0	15.8	19.0	22.0	1,111
Muslim	6.8	6.6	6.3	6.6	6.6	4,156
Traditional/others	22.2	21.9	24.9	22.7	22.9	866
All	16.9	14.4	13.8	15.4	15.1	8,448
2. <u>EFFICIENT METHODS ONLY</u>						
(a) <u>Level of education</u>						
None	0.4	0.5	0.6	1.9	0.7	5,553
Koranic	0.0	0.5	0.0	0.8	0.2	848
Primary incomplete	4.3	3.9	6.2	3.0	4.4	869
Primary complete	4.7	5.5	10.5	(2.0)	5.8	699
Secondary and above	23.9	16.1	34.0	(42.5)	22.1	481
(b) <u>Type of place of residence</u>						
Village	3.1	1.0	0.7	1.6	1.6	6,619
Town/city	6.7	5.8	7.4	4.3	6.4	1,830
(c) <u>Region of residence</u>						
North-east	0.7	0.5	0.4	0.7	0.5	2,204
North-west	0.2	0.4	0.4	0.9	0.4	2,143
South-east	7.5	3.0	1.6	3.0	3.9	2,433
South-west	10.5	5.1	6.0	2.6	6.5	1,669
(d) <u>Religion</u>						
Catholic	7.9	4.9	3.6	3.6	5.4	1,191
Protestant	10.1	4.2	4.4	1.2	5.7	1,125
Other Christian	5.1	2.7	2.7	6.4	3.7	1,111
Muslim	0.9	0.7	1.2	0.6	0.9	4,156
Traditional/others	5.6	1.3	0.5	0.0	1.9	866
All	4.0	2.1	2.1	2.1	2.6	8,448

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 4.3.2



Table 7.9: Ratio of ever-use to awareness for specified contraceptive methods

Method	Ratio <sup>a</sup>
Inefficient methods	1:1
Efficient methods	1:8
<u>Specific methods</u>	
Abstinence	1:2
Rhythm	1:3
Withdrawal	1:4
Condom	1:7
Pill	1:7
Herbs	1:10
IUD	1:15
Injection	1:18
Bands	1:24
Rings	1:35
Female sterilization	1:69
Male sterilization	-

a Ratio = Per cent heard of method: per cent ever used method.

Table 7.10: Per cent distribution of exposed women who are currently using specific contraceptive methods (including sterilization)

Methods	Current age of women				All
	<25	35-34	35-44	45+	
No method	93.6	93.9	95.1	87.1	93.8
Inefficient method	6.1	5.4	4.1	9.8	5.5
Efficient method	0.4	0.6	0.9	3.0	0.7
<u>Specific methods</u>					
Pill	0.3	0.3	0.3	0.1	0.3
IUD	0.0	0.1	0.2	0.3	0.1
Female scientific	0.0	0.0	0.0	0.0	0.0
Douche	0.1	0.0	0.1	0.0	0.0
Condom	0.0	0.0	0.1	0.0	0.0
Rhythm	0.4	0.4	0.3	0.0	0.4
Withdrawal	0.1	0.2	0.1	0.0	0.1
Abstinence	5.5	4.8	3.4	9.8	4.9
Injection	0.0	0.2	0.1	2.1	0.2
Herb	0.0	0.0	0.0	0.0	0.0
Band	0.0	0.0	0.0	0.0	0.0
Ring	0.0	0.1	0.1	0.0	0.0
Male sterilization	0.0	0.0	0.0	0.0	0.0
Female sterilization	0.0	0.0	0.2	0.5	0.1

Source: Vol II, table 4.4.1

cent, 7.6 per cent and 12.7 per cent were using in the North-west, South-west and South-east regions respectively. A greater proportion of the Catholics (12.7 per cent), compared with other religious groups, were contracepting. Current use was particularly low among Muslims (3.4 per cent), and was almost the same among women in rural (6.1 per cent) and urban (6.8

per cent) areas. Current use of efficient methods, which is negligible, follows a similar pattern of differentials (see table 7.11).

It may be necessary to mention at this stage that many past KAP or similar surveys in various parts of the country had come up with comparably low levels of knowledge, ever-use

Table 7.11: Percentage of exposed women who are currently using contraception (including sterilization) according to number of living children, by background characteristics

Background characteristics	Number of living children											Number of women
	0	1	2	3	4	5	6	7	8	9+	Total	
(a) <u>Level of education</u>												
None	0.2	3.2	4.2	5.5	7.0	4.5	5.0	12.8	9.1	5.9	4.7	3,988
Koranic	0.0	7.5	4.9	6.3	7.1	9.4	1.5	(14.1)	0.0	0.0	5.4	637
Primary incomplete	5.9	6.0	5.1	15.2	18.4	4.5	3.2	(13.9)	(39.7)	(56.8)	10.4	615
Primary complete	1.2	11.3	9.4	8.4	14.7	16.4	6.4	2.9	(17.5)	(10.2)	9.6	453
Secondary and above	5.8	15.5	22.5	19.9	(22.7)	(13.9)	(49.6)	(23.4)	(12.0)	0.0	18.7	208
(b) <u>Type of place of residence</u>												
Village	0.8	4.9	5.7	7.1	9.8	5.5	3.9	12.2	11.2	10.6	6.1	4,610
Town/city	0.5	6.4	5.3	8.4	8.1	7.2	10.4	11.1	(11.1)	(10.2)	6.8	1,291
(c) <u>Region</u>												
North-east	0.0	0.5	0.2	0.7	0.4	0.0	0.7	5.2	0.0	4.6	0.6	1,674
North-west	0.0	4.3	5.8	7.9	10.9	6.1	1.7	9.4	0.0	0.0	5.4	1,622
South-east	4.6	13.5	12.7	11.9	14.5	10.2	7.0	20.0	25.6	16.7	12.7	1,407
South-west	1.8	6.6	6.4	10.2	8.9	7.0	9.9	5.7	(12.0)	8.3	7.6	1,198
(d) <u>Religion</u>												
Catholic	3.8	13.4	11.0	12.5	10.5	8.0	13.1	33.3	(27.4)	8.7	12.7	736
Protestant	0.8	8.6	6.9	9.7	8.5	5.3	3.1	7.8	12.1	(3.4)	7.1	736
Other Christian	4.7	5.9	4.9	6.3	11.5	9.9	3.0	8.0	(15.7)	16.5	7.7	727
Muslim	0.0	3.0	3.9	4.9	7.2	3.2	2.5	3.4	0.0	4.9	3.4	3,132
Traditional/others	0.8	6.1	8.6	14.1	15.7	7.5	14.5	6.3	(34.6)	(40.3)	10.1	570
All	0.7	5.3	5.6	7.4	9.4	5.8	5.3	12.0	11.2	10.5	6.2	5,901

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 4.4.5

and current use of contraception. A few such studies include those in western Nigeria (Acsadi et al 1972; Caldwell and Igun 1970), in the city of Ibadan (Caldwell and Ware 1978), in rural parts of eastern Nigeria (Ukaegbu 1977), in Lagos (Morgan 1975) and in some rural areas of Lagos state (Morah 1979). Other studies have cast doubts on the reliability and validity of responses to questions on knowledge and practice of family planning in (south-western) Nigeria (eg Ekanem 1977). Moreover, because of the sensitivity of questions on sexual matters and contraception, the presence of others, particularly husbands or other adults, might have negatively affected their responses. This actually seems to have happened among the surveyed women.

Among women who were interviewed in the presence of their husbands, 79.8 per cent indicated complete lack of knowledge of any method of contraception whatsoever. Similarly, among women who were interviewed in the presence of adult males, 70.5 per cent reported not knowing any method. The

comparable proportions for women interviewed in the presence of adult females and children or in the absence of anybody else except children are 57.1 per cent and 61.5 per cent (see table 7.12). Although these figures may change substantially when other variables are controlled, it seems that women were more liable to report ignorance of contraceptive methods if their husbands or other males were around during the interview. A similar observation is also true, though to a lesser extent, in the proportion reporting ever-use. What is pertinent, however, is that if the woman, because of the presence of some persons, did not report knowledge of any method(s), she was not asked questions on ever-use. One last point about the observed levels of awareness and ever and current use of contraception should be made. While assessing the data it is important to recall that, as stated in sections 7.1 and 7.2, no efforts have been made on a national (or even sectoral) level to promote or publicize family planning or its use.

Table 7.12: Percentage of women reporting ignorance of any method of contraception, by presence of other persons during interview on contraceptive knowledge and use

Presence of others	Number	Percentage
No one or only children (under 10 years)	4,392	61.5
Other females (with or without children)	1,088	57.1
Husband (alone or with anybody else)	2,008	79.8
Other males (alone or with anybody else)	918	70.5
Total	8,406	66.3

#### 7.5 CONTRACEPTIVE USE IN RELATION TO FERTILITY PREFERENCES

Typically, women who do not desire to have any more children should be expected to use contraception to a greater extent than women who are either undecided or want to have more children. This is actually the case with the

surveyed women, as shown in table 7.13. About 5.5 per cent of the exposed women who desire to have more children, compared with 14.3 per cent of those who do not desire more children and 7.1 per cent of those undecided about more children, were using contraception at the time of the survey. The proportion using increases by the number of living children, particularly

Table 7.13: Per cent distribution of exposed women who are currently using contraception (including sterilization), by number of living children and desire for more children

Desire for, and number of living children	Not using	Using contraception			Total	Number of women
		Inefficient method	Efficient method	Sub- total		
(a) <u>Desires more children</u>						
Less than 3 children	95.7	3.9	0.4	4.3	100.0	2,428
3 children	93.1	6.1	0.8	6.9	100.0	791
4 children	90.6	9.3	0.1	9.4	100.0	597
5 children or more	94.7	4.4	0.9	5.3	100.0	1,005
Subtotal	94.5	5.0	0.5	5.5	100.0	4,822
(b) <u>Does not desire more children</u>						
Less than 3 children	95.9	2.1	2.0	4.1	100.0	75
3 children	82.1	12.7	5.2	17.9	100.0	50
4 children	85.5	11.5	3.0	14.5	100.0	50
5 children or more	81.8	13.4	4.7	18.1	100.0	151
Subtotal	85.7	10.4	3.9	14.3	100.0	326
(c) <u>Undecided about more children</u>						
Less than 3 children	95.5	4.5	-	4.5	100.0	215
3 children	93.5	4.3	2.3	6.6	100.0	137
4 children	92.6	7.4	-	7.4	100.0	115
5 children or more	90.6	8.9	0.5	9.4	100.0	274
Subtotal	92.9	6.5	0.6	7.1	100.0	741
All	93.8	5.5	0.7	6.2	100.0	5,889

Source: Vol II, table 5.2.1

Table 7.14: Of all currently married, fecund women who have never used contraception, percentage who intend to use in the future, by current age and desire to have more children

Current age	Desire for more children			All
	Desires more children	Does not desire more children	Undecided	
15-24	1.9	5.4	1.4	1.9
25-34	2.5	2.5	0.7	2.3
35-44	1.5	2.4	1.2	1.6
45-49	0.3	-	0.2	0.2
All	2.1	2.3	0.9	2.0

Source: Vol II, table 5.3.1

Table 7.15: Per cent distribution of ever-married women according to pattern of contraceptive use, by selected demographic characteristics

Demographic characteristics	Never used				Has used				Currently using	Total	Number of women
	Intend to use	Do not intend to use	Not fecund	Sub-total	Open interval	Closed interval	Used earlier	Sub-total			
(a) <u>Age</u>											
15-19	2.1	85.9	3.1	91.1	1.0	1.6	2.8	5.4	3.5	100.0	846
20-24	1.7	77.4	2.9	82.1	1.8	3.8	6.5	12.1	5.8	100.0	1,450
25-29	2.8	79.3	4.6	86.6	1.0	2.1	5.9	9.0	4.4	100.0	1,710
30-34	1.5	75.5	8.3	85.3	1.3	2.5	6.0	9.8	4.9	100.0	1,532
35-39	1.2	68.9	16.6	86.8	0.7	2.0	7.2	9.8	3.4	100.0	1,100
40-44	1.3	63.5	20.7	85.4	2.6	2.4	6.1	11.1	3.5	100.0	895
45-49	0.1	39.5	45.0	84.6	1.8	2.1	5.4	9.3	6.1	100.0	588
(b) <u>Years since first marriage</u>											
< 10	2.3	79.3	3.2	84.8	1.5	2.9	5.9	10.3	4.8	100.0	3,017
10-19	1.8	76.9	7.7	86.4	1.1	2.1	5.9	9.1	4.5	100.0	3,115
20-29	0.8	61.5	24.0	86.4	1.7	2.3	6.1	10.1	3.4	100.0	1,670
30+	0.2	33.1	51.8	85.1	1.8	1.7	4.4	7.8	7.0	100.0	319
(c) <u>Age at first marriage</u>											
<15	1.1	76.9	11.5	89.5	0.8	1.7	3.7	6.3	4.2	100.0	3,006
15-19	2.0	72.3	10.4	84.6	1.7	2.7	6.6	11.1	4.4	100.0	3,760
20-24	2.6	66.1	12.0	80.7	1.2	2.8	9.3	13.4	6.0	100.0	1,081
25-29	1.6	67.8	13.4	82.7	2.8	3.4	7.3	13.6	3.7	100.0	216
30+	1.6	56.3	18.6	76.5	6.7	9.7	1.6	18.1	5.4	100.0	58
(d) <u>Number of living children</u>											
0	1.1	78.2	15.3	94.6	1.6	2.1	1.3	4.9	0.4	100.0	1,083
1	1.8	76.4	9.1	87.2	0.8	2.1	6.0	8.9	3.9	100.0	1,354
2	1.4	78.2	7.7	87.3	1.3	2.6	4.4	8.3	4.3	100.0	1,344
3	1.7	70.7	10.0	82.4	2.0	2.4	7.7	12.1	5.5	100.0	1,327
4	1.8	69.4	10.1	81.3	1.4	3.5	6.9	11.8	6.9	100.0	1,042
5	2.0	71.2	12.2	85.4	1.1	2.4	6.7	10.3	4.3	100.0	836
6	1.5	70.3	11.6	83.4	1.2	2.7	8.8	12.7	3.9	100.0	508
7	1.2	65.0	12.5	78.7	1.8	1.4	9.2	12.4	8.9	100.0	303
8	2.8	60.4	20.7	83.8	2.9	1.8	3.5	8.3	7.9	100.0	138
9+	5.3	51.1	26.1	82.5	1.6	1.2	8.2	11.0	6.5	100.0	188
All	1.7	72.9	11.1	85.8	1.4	2.4	5.9	9.7	4.5	100.0	8,120

Source: Vol II, tables 4.5.1, 4.5.2 and 4.5.3

for the women who desire to cease childbearing. Among these women, 4.1 per cent of those who have less than three children, 17.9 per cent and 18.1 per cent of those who have three and five or more children respectively were using contraception. As observed earlier, most current use is of inefficient methods.

#### 7.6 INTENTIONS TO USE CONTRACEPTION IN THE FUTURE

All the currently married fecund women who had never used any method of contraception were asked whether or not they intended to use one in the future. The pattern of responses, classified by age of woman and her desire for more children, is presented in table 7.14. It shows that almost all of them do not intend to use any method of contraception in the future; only 2.0 per cent intend to do so. The situation is the same whether or not the women desire to have more children.

#### 7.7 PATTERN OF CONTRACEPTIVE USE

The entire contraceptive experience of ever-married women, in terms of current, past and intended contraceptive use as well as use in the open and last closed birth intervals and self-reported fecundity status of the women are presented in table 7.15 by selected demographic characteristics and in table 7.16 by selected

background characteristics. Table 7.15 shows that 11.1 per cent are no longer fecund and that desire to use contraception in the future is so small as to be non-existent. Use in the open or last closed interval was minimal; only 1.4 per cent and 2.4 per cent respectively had used contraception in both intervals. Current use is very low (4.5 per cent) and is highest for women with seven living children (8.9 per cent) and women who had been married 30 years or more (7.0 per cent).

The data for background characteristics (table 7.16) show that the proportion intending to use contraception is low even among the educated women. Use in the open and last closed intervals, as well as earlier, is low but highest for women with secondary or higher education and lowest for Muslims and women with only Koranic education. Ever-use is relatively high in the South-east (19.5 per cent) and South-west (15.6 per cent) and among the educated women. Current use is again highest for the most educated women, Catholics and women in the South-east region. Almost all current and ever-use is of inefficient methods.

#### 7.8 KNOWLEDGE OF SOURCE OF SUPPLY OF SPECIFIED METHODS

The women who had indicated knowledge of some of the contraceptive methods (pill, injection,

Table 7.16: Per cent distribution of ever-married women according to pattern of contraceptive use, by background characteristics

Background characteristics	Never used				Has used				Currently using	Total	Number of women
	Intend to use	Do not intend to use	Not fecund	Sub-total	Open interval	Closed interval	Used earlier	Sub-total			
(a) <u>Level of education</u>											
None	1.1	75.3	13.2	89.6	1.0	1.9	4.2	7.1	3.4	100.0	5,504
Koranic	1.3	81.2	10.2	92.7	0.3	1.1	1.9	3.2	4.1	100.0	844
Primary incomplete	2.6	63.0	5.2	70.8	2.8	3.8	14.8	21.4	7.8	100.0	824
Primary complete	5.0	65.5	5.9	76.4	2.6	4.4	9.9	16.9	6.8	100.0	643
Secondary and above	5.0	49.7	4.0	58.6	5.3	8.7	14.7	28.7	12.7	100.0	306
(b) <u>Type of place of residence</u>											
Village	1.3	73.4	12.0	86.7	1.3	2.3	5.3	8.9	4.4	100.0	6,380
Town/city	3.1	71.2	7.9	82.2	1.8	2.9	8.1	12.8	5.1	100.0	1,741
(c) <u>Region</u>											
North-east	0.5	86.2	10.1	96.8	0.4	0.3	2.1	2.7	0.5	100.0	2,185
North-west	1.2	81.4	11.1	93.7	0.4	1.5	0.4	2.3	4.1	100.0	2,137
South-east	2.0	55.5	14.9	72.4	3.0	4.7	11.8	19.5	8.1	100.0	2,207
South-west	3.7	67.4	7.5	78.6	1.9	3.5	10.2	15.6	5.8	100.0	1,591
(d) <u>Religion</u>											
Catholic	2.3	62.2	12.8	77.3	2.2	3.5	8.5	14.1	8.6	100.0	1,093
Protestant	3.8	62.5	11.9	78.2	2.4	3.3	11.0	16.7	5.0	100.0	1,034
Other Christian	2.2	64.4	11.7	78.3	2.0	2.4	11.9	16.3	5.5	100.0	1,023
Muslim	1.0	82.5	10.0	93.5	0.5	1.2	2.1	3.9	2.6	100.0	4,115
Traditional/others	1.2	63.1	13.2	77.4	2.6	5.7	7.5	15.9	6.7	100.0	855
All	1.7	72.9	11.1	85.8	1.4	2.4	5.9	9.7	4.5	100.0	8,120

Source: Vol II, table 4.5.5

Table 7.17: Per cent distribution of women who have heard of specified methods of contraception but never used it, by knowledge of source of supply of the method

Specified method	Knows source of supply	Does not know source of supply	Total	Number of women
Pill	25.4	74.6	100.0	812
IUD	31.5	68.5	100.0	324
Injection	29.1	70.9	100.0	659
Female scientific	37.5	62.5	100.0	144

IUD and female scientific methods) but had never used them were asked the question: 'If you yourself wanted to use this method, do you know any place or person where you could get it?' The objective was to find out whether non-use is in any way related to lack of knowledge or access to a source of supply of the method. Table 7.17 shows that well over a third of the women who knew some of the methods did not know where to get them, should they ever want to use any of the methods. About 74.6 per cent, 70.9 per cent, 68 per cent and 62.5 per cent of the women who knew the pill, injection, IUD and other female scientific methods respectively but had never used them did not know where to get them should they desire to use the methods. Lack of knowledge of source of supply, for those who know the methods and may wish to use them is thus relatively high.

## 7.9 SUMMARY

The data presented in this chapter show that the levels of knowledge and use of contraception among the surveyed women are very low. Only a third of the women have ever heard of any methods of contraception. Sexual abstinence, the contraceptive pill and injection are the most commonly known of the methods. Ever-use of contraception is consequently and correspondingly low; only 15.1 per cent have ever used any method, mostly inefficient methods (12.5 per cent). Ever-use among the women is essentially abstinence from sex, most probably for short intervals of time. Use of

contraception at the time of interview is very low; only 6.2 per cent of the women exposed to the risk of childbearing were using contraception. Almost all of these current users (5.5 per cent) were using an inefficient method, again mostly abstinence. Contraceptive use in the open or last closed interval was minimal.

The level of knowledge, past and current use all varied substantially by the socio-economic and demographic characteristics of the women. Proportionately more of the more educated women, those that live in towns or cities and those that live in the South-east or South-west have heard of, have ever used and were using contraception. Of the religious groups, the Muslims stand out in their low levels of knowledge, past and present use. About three times the proportion of women who do not wish to have any more children use contraception, compared with those who want more or are undecided about it. Ever and current use are, however, essentially of inefficient methods.

Almost all of the women who had never used any form of contraception in the past do not intend to use any in the future - 98.0 per cent of the currently married fecund women who had never used do not intend to use at any time in the future. Approximately two-thirds of women who know the pill, injection, IUD or other female scientific methods, but have never used them, do not know a source of supply of the methods.

## SOME NON-CONTRACEPTIVE FACTORS AFFECTING FERTILITY

### 8.1 INTRODUCTION

Besides the deliberate use of contraception to avoid or delay pregnancy and the effect of the marriage systems prevalent in any society on the fertility of the population, there are a number of other biological, cultural, social or behavioural practices which also affect reproductive performance. These practices or factors are often referred to in demographic literature as 'intermediate variables' according to the conceptual framework developed by Davis and Blake (1956). These factors are more often than not related to parturition and include breastfeeding, post-partum abstinence and post-partum infecundability; other factors include age at menarche and at menopause, marital instability, temporary absence of spouse, terminal sexual abstinence and fecundity. These factors form the subject matter of this chapter.

Information on most of the above factors was collected in section 3 of the NFS questionnaire in relation to three periods in the maternity history of each respondent: in details about the last child, last-but-one child and last-but-two child, if the child was born in the last five years preceding the interview. Intervals from one birth to another were reconstructed from the birth-history section of the questionnaire. The type of information collected about these periods include whether or not the child was breastfed, the duration of breastfeeding, at what age (if at all) the breastfeeding was supplemented with any other food and the durations of post-partum amenorrhoea and sexual abstinence.

For the purposes of this chapter, attention is focused on two periods: the open and the last closed birth intervals. Open interval here refers to the period since the birth of the last child. Last closed interval (or simply closed interval) refers to the period between the last-but-one (or penultimate) and the last birth. Using these definitions, we see that certainly not all the surveyed women will be included in the analysis. First, women who have never been pregnant or have never given birth to a child are excluded; 23.4 per cent (N = 2,274) of all the surveyed women have never been pregnant. Secondly, currently pregnant women are defined as not having an open interval and are thus excluded from all analysis on open intervals. A total of 1,215 (12.5 per cent) of the surveyed women were pregnant at the time of interview and 2.0 per cent (N = 195) were pregnant for the first time. The analysis on open intervals thus includes only the women who have given birth to at least one child and were not pregnant at the

time of interview. About 12.5 per cent (N = 1,212) had an open interval only. Thirdly, to have a closed interval, a woman must have had at least two pregnancies that resulted in live births or have had one birth and be pregnant at the time of interview. Some of these women (ie who have had two live births but were not pregnant at the time of interview) have both closed and open intervals and so are included in the analysis on both intervals. Those who were pregnant at the time of interview were considered for the closed but not the open interval analysis. All women who had not had at least two pregnancies or live births or at least one birth and were pregnant at the time of the interview are thus excluded from the analysis of closed birth intervals. The majority of the women - 62.2 per cent (N = 6,048) - had both an open and a closed interval. Further explanations on the birth interval characteristics of all the women are provided in the notes at the foot of table 8.1.

In subsequent sections of this chapter the durations of both the open and closed intervals, as well as the durations of breastfeeding, amenorrhoea and post-partum sexual abstinence, will be given in months. Furthermore, restrictions may be made for the analysis to include only ever-married women whose last or penultimate (last-but-one) birth survived for at least a year. This is considered necessary for a more appropriate interpretation of the data. Table 8.2 presents the characteristics of the penultimate and last births, the survival status of children and the dating of events. The dating is important here because there could be considerable misreporting or heaping at particular intervals which would affect the values of duration obtained for the different measures. The table shows that 84.8 per cent of the penultimate children were alive at the time of the interview; 15.1 per cent had died. Of the last children born to the women, 10.8 per cent had died while 89.2 per cent were alive at the time of the survey. The higher proportion of penultimate children dying by the time of interview compared with last children (15.1 per cent and 10.8 per cent) should be expected since the former are older. The starting date of the open interval was obtained in almost equal proportions by calendar month and year (34.0 per cent), calendar year only (31.5 per cent) and years ago only (34.4 per cent). For the closed interval, however, the date of the start was given in calendar month and year in a quarter (25.4 per cent) of the cases, in calendar year only for a third (35.2 per cent) and in years ago for 39.3 per cent. The greater proportions of calendar year and month for the last live birth compared with the

Table 8.1: Distribution of women by type of birth intervals

Type of birth interval	Number of cases	Per cent
<u>No birth interval</u>		
Never pregnant	2,274	23.4
Pregnant for first time	195	2.0
<u>Open interval only</u>	1,212	12.5
<u>Both open and closed intervals</u>	6,048	62.2
Total	9,729	100.0

NOTES:

- (a) 889 women (9.1 per cent of total) were currently pregnant and had the last child living at time of interview;
- (b) 131 women (1.3 per cent of total) were currently pregnant but their last child had died at time of interview;
- (c) thus  $889 + 131 + 195 = 1,215$  (12.5 per cent) of all the women were pregnant at time of survey;
- (d) 5,586 women (57.4 per cent) were not pregnant and had their last child living at time of survey;
- (e) 654 women (6.7 per cent of total) were not pregnant but their last child had died at time of survey;
- (f)  $131 + 654 = 785$  (8.1 per cent) of all the women had their last child dead at time of interview;
- (g) thus the last live births to  $889 + 5,586 = 6,475$  (66.6 per cent of all women and 89.2 per cent of the 7,260 women who had actually given birth to a child) women were still surviving at the time of interview.

Table 8.2: Characteristics of the penultimate and last live births in the closed and open birth intervals for ever-married women

Characteristics	Closed interval <sup>a</sup>		Open interval <sup>b</sup>	
	Number	Per cent	Number	Per cent
Child living at time of survey	5,131	84.8	6,435	89.2
Child dead at time of survey	916	15.1	779	10.8
Total	6,048	100.0	7,214	100.0
<u>Date of start of interval stated in</u>				
Calendar month and year	-	25.4	-	34.0
Calendar year only	-	35.2	-	31.5
Years ago only	-	39.3	-	34.4
Total	-	100.0	-	100.0

a Ever-married women who have had at least two live births or one live birth and are currently pregnant.

b Ever-married non-pregnant women who have had at least one live birth.

Source: Vol II, tables 6.8.1 and 6.8.2



penultimate birth is probably due to the former being more recent. Table 8.3 indicates the high degree of correspondence in the form of reporting of dates for both the last and the penultimate births. In 71.3 per cent of the cases the calendar month and year was given for both the last and the penultimate birth; for 89.7 per cent only the calendar year of both events was given while for 97.6 per cent, both events were given in years ago.

## 8.2 BREASTFEEDING

### 8.2.1 Importance, measures and problems

Both demographers and medical scientists often show considerable interest in the study of breastfeeding patterns from sometimes similar and at other times divergent points of view. This interest arises from the fact that breastmilk provides one of the most wholesome sources of nutrition available to babies and at the same time breastfeeding is nature's own form of contraception. Thus medical scientists are interested in breastfeeding as it relates to the health of the infant and consequently to infant morbidity and mortality. Demographers are also interested in these phenomena and in the effect of breastfeeding on the fecundability of a woman (in that it prolongs the period of post-partum infecundity), the spacing of births and contraception. It is common knowledge that a woman nursing a baby is unlikely to conceive in that period. The precise mechanism by which breastfeeding inhibits fecundability is not certain though medical scientists think that it is the process of suckling itself, rather than the release or production of milk, which causes the hormonal contraceptive effect (Short 1984).

Two measures are used here in the analysis of breastfeeding patterns among the surveyed women; both measures are duration specific. The first is the duration of 'full breastfeeding' which is the length of time the child was fed solely on breastmilk without use

of supplementary milk or any solid food. The second is referred to simply as the duration of breastfeeding and is the length of time the child was fed on breastmilk with or without use of supplementary food, until the child was weaned. Thus full breastfeeding covers only the period before use of supplementary food (if it was ever used before weaning) while breastfeeding covers the entire period until weaning (ie it also includes the period of full breastfeeding).

Some problems are associated with the use of these measures. The first is the shortening of the period that occurs with the death of the child prior to weaning. To minimize the effect of this problem, the analysis of data on closed birth intervals is restricted to women whose last-but-one (penultimate) birth survived for at least 12 months. About 626 (6.4 per cent) of all the surveyed women reported that their last-but-one children had died by the age of 12 months and so are excluded from the analysis of closed birth intervals. No similar exclusions were made for the analysis of data on open intervals; ie all women with open birth intervals, whether or not their last children died before weaning or before the age of 12 months are included (except for other restrictions, like marital status).

The second problem arises from the 'circular-causality' phenomenon in the breastfeeding/fertility relationship. This includes cases where breastfeeding stopped because the woman became pregnant while still breastfeeding. Very few of the women surveyed fell into this category; they were, however, not excluded from any of the analyses in this chapter.

### 8.2.2 Duration of breastfeeding in the last closed birth interval

Taking account of the definition in section 8.1 and restrictions in section 8.2.1, we present in table 8.4 the distribution of ever-married

Table 8.3: Per cent distribution of ever-married women<sup>a</sup> according to the form of date of last live birth and form of date of penultimate live birth

Form of date of last live birth	Form of date of penultimate live birth			Number of women
	Calendar month and year	Calendar year only	Years ago	
Calendar month and year	71.3	17.6	11.1	2,023
Calendar year only	4.3	89.7	5.9	1,935
Years ago	0.5	1.8	97.6	2,090
All	25.4	35.2	39.3	6,048

a Women who have had at least two live births and are currently not pregnant.

Source: Vol II, table 6.8.3

Table 8.4 Distribution of ever-married women<sup>a</sup> according to duration of breastfeeding and full breastfeeding in the last closed birth interval

Duration (in months)	Breastfeeding				Full breastfeeding			
	Number	Per cent	Adjusted per cent <sup>b</sup>	Cumulative per cent	Number	Per cent	Adjusted per cent <sup>b</sup>	Cumulative per cent
Less than 1 month	18	0.3	0.3	0.3	380	6.3	7.0	7.0
1	14	0.2	0.3	0.6	414	6.8	7.6	14.6
2	20	0.4	0.4	1.0	491	8.1	9.0	23.6
3	41	0.7	0.8	1.8	900	14.9	16.5	40.1
4	45	0.8	0.9	2.7	674	11.1	12.3	52.4
5	57	1.0	1.1	3.8	586	9.7	10.7	63.1
6	140	2.5	2.7	6.5	633	10.5	11.6	74.7
7	65	1.2	1.3	7.8	330	5.5	6.0	80.7
8	115	2.1	2.2	10.0	245	4.1	4.5	85.2
9	227	4.1	4.4	14.4	161	2.7	2.9	88.1
10	153	2.8	3.0	17.4	159	2.6	2.9	91.0
11	76	1.4	1.5	18.9	23	0.4	0.4	91.4
12	782	14.2	15.1	34.0	272	4.5	5.0	96.4
13	129	2.3	2.5	36.5	15	0.2	0.3	96.7
14	163	3.0	3.2	39.7	16	0.2	0.3	97.0
15	200	3.6	3.9	43.6	12	0.2	0.2	97.2
16	189	3.4	3.6	47.2	13	0.2	0.2	97.4
17	193	3.5	3.7	50.9	11	0.2	0.2	97.6
18	703	12.7	13.6	64.5	43	0.7	0.8	98.4
19	149	2.7	2.9	67.4	6	0.1	0.1	98.5
20	225	4.1	4.4	71.8	13	0.2	0.2	98.7
21	67	1.2	1.3	73.1	2	-	-	98.7
22	95	1.7	1.8	74.9	4	0.1	0.1	98.8
23	20	0.4	0.4	75.3	-	-	-	98.8
24	1,045	18.9	20.2	95.5	63	1.0	1.2	100.0
25	26	0.5	0.5	96.0	-	-	-	-
26	17	0.3	0.3	96.3	-	-	-	-
27+	191	3.5	3.7	100.0	-	-	-	-
Did not breastfeed	36	0.7	-	-	108	1.8	-	-
Breastfed until child died	183	3.3	-	-	212	3.5	-	-
Not stated	138	2.5	-	-	262	4.4	-	-
Total	5,522	100.0	100.0	-	6,048	100.0	100.0	-

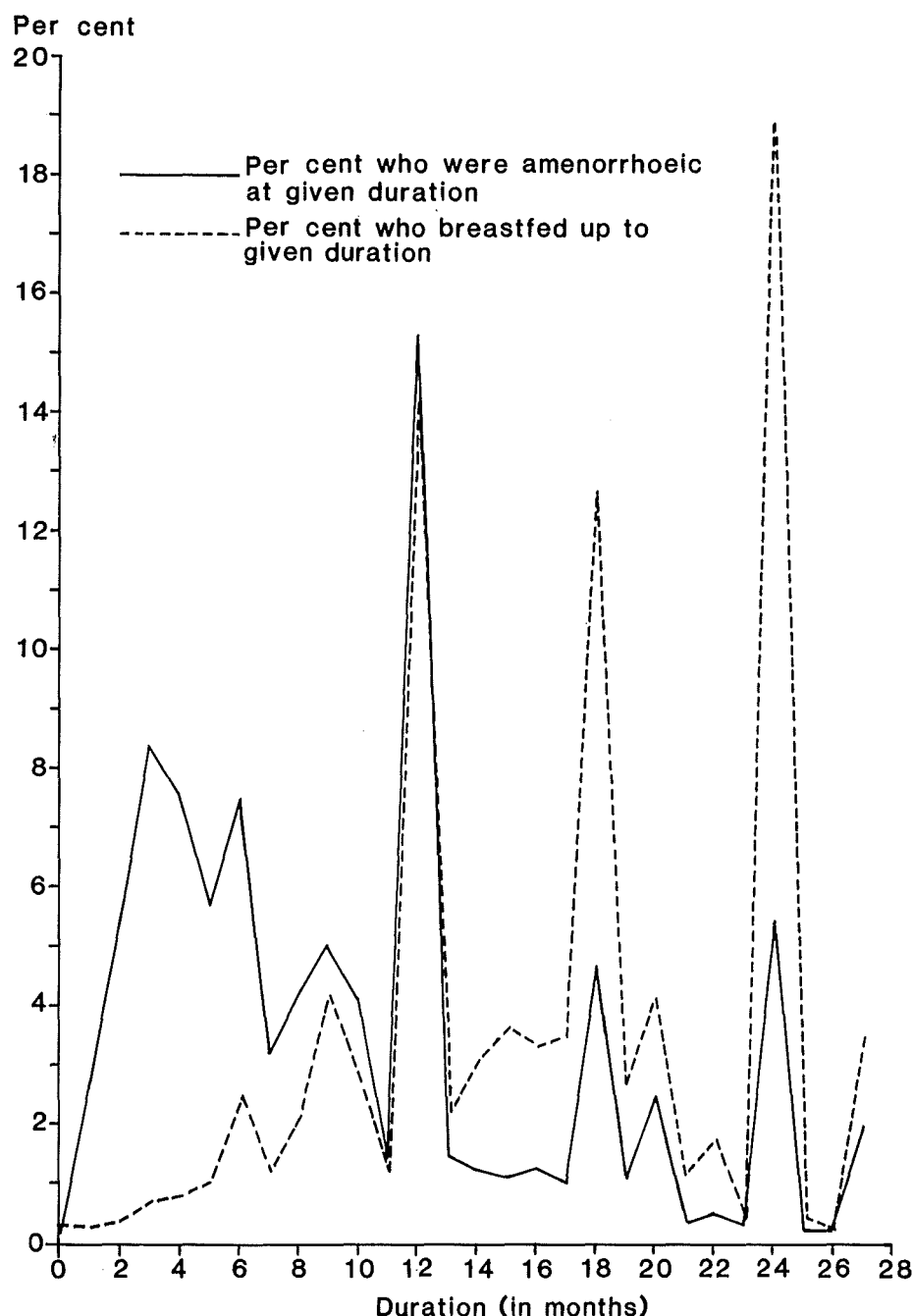
a Ever-married women, in this and subsequent tables in this chapter so designated, refers only to those who have had at least two live births including a current pregnancy and whose penultimate birth resulted in a live birth which survived for at least 12 months in figures for breastfeeding. For full breastfeeding, the survival status of the penultimate birth is not taken into consideration.

b Adjusted for not stated cases, children not breastfed or those breastfed until death.

Source: Vol II, tables 6.6.1 and 6.6.2

women according to the duration of full breastfeeding and breastfeeding in single months. Two observations stand out clearly. One is the heaping at six-month intervals starting particularly from the 12th month. For instance, 14.2 per cent of the women reported durations of breastfeeding of 12 months (compared with 1.4 per cent and 2.3 per cent for 11 and 13 months respectively), 12.7 per cent reported durations of 18 months (compared with 3.5 per cent and 2.7 per cent for 17 and 19 months respectively) and 18.9 per cent reported durations of 24 months (compared with 0.4 per cent and 0.5 per cent for 23 and 25 months respectively). This is illustrated in figure 8.1. A similar pattern, though to a much lesser extent, is observable for durations

of full breastfeeding, as is illustrated in figure 8.2. Though these results could reflect cultural patterns with respect to the weaning of children, it is more likely that they are attributable to the pattern of responses of 'one year', 'one and a half years' or 'two years' obtained in answer to the question 'for how many months altogether did you breastfeed him/her?' and thus indicative of preference for certain digits. The second observation is the universality of the practice of breastfeeding. As in many developing countries, all (99.3 per cent) ever-married women surveyed breastfed their last-but-one children. Three per cent breastfed until the children died while the duration of breastfeeding was not stated by 2.5 per cent of the women.

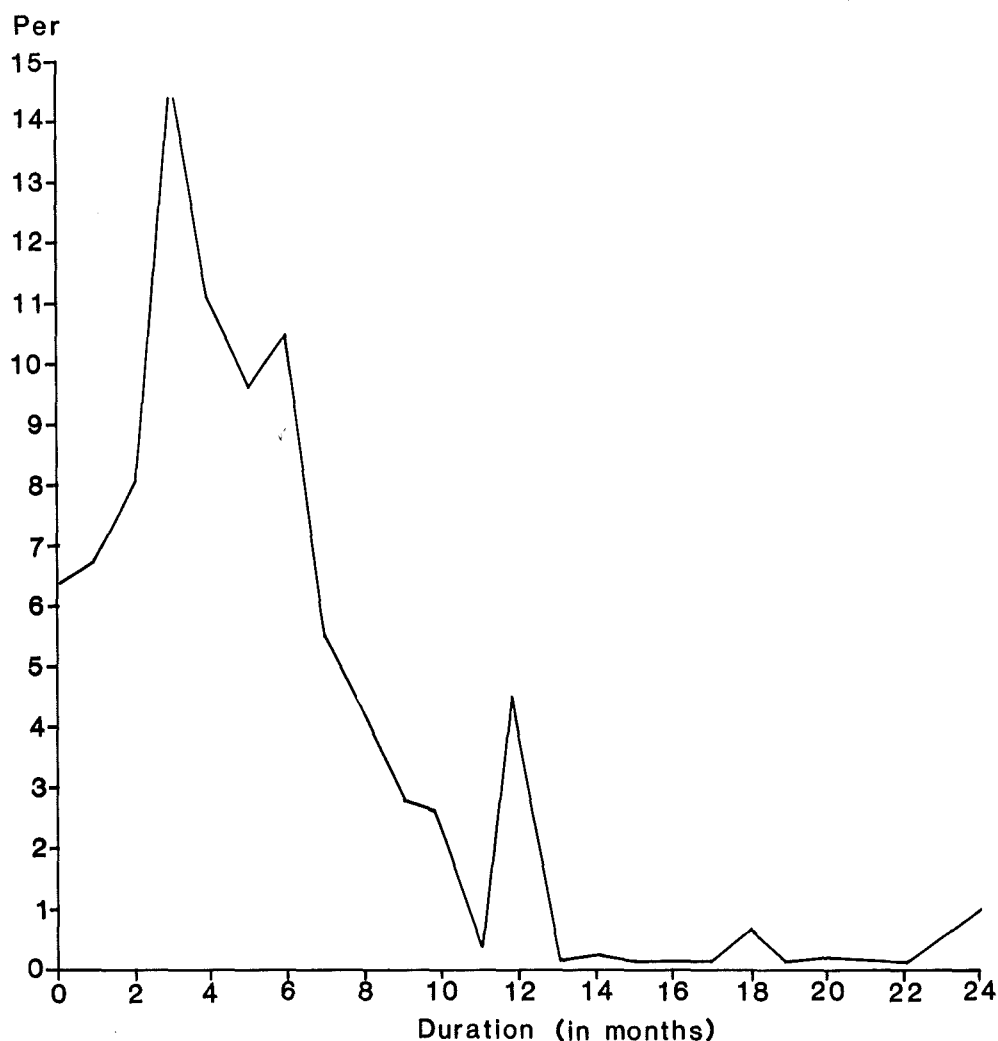


8.1 Per cent distribution of women according to duration of breastfeeding and post-partum amenorrhoea in the last closed birth interval

The women breastfed their last-but-one children for an average period of 16.6 months. Only 6.5 per cent breastfed for six months or less, 18.9 per cent for less than one year and a half (50.9 per cent) for less than one and a half years. The median duration of breastfeeding is 17 months; a third (35.5 per cent) breastfed for more than one and a half years and a quarter (24.7 per cent) for two years or more.

The average duration of full breastfeeding, ie breastfeeding without the introduction of any solid or liquid supplementary food, is 5.1

months. Four out of every ten women (40.1 per cent) started use of supplementary food by the time their babies were three months old, about two thirds (63.1 per cent) by the time the babies were five months old and 96.4 per cent by the time the babies were a year old. Information on full breastfeeding was not provided by 4.4 per cent of the women while 3.5 per cent fully breastfed the babies until they died. About 1.8 per cent of the women did not fully breastfeed their last-but-one child. It should be noted that this and subsequent discussions on full breastfeeding include all last-but-one live births, even if they had died



8.2 Per cent distribution of women according to duration of full breastfeeding in the last closed birth interval

before they were 12 months old (see explanation at the foot of table 8.2).

The mean duration of breastfeeding is about the same for women 20-39 years of age (around 16 months) and is slightly higher for women aged 40 and above - at between 17.6 and 17.9 months. The mean duration varies only by 1.5 months. With the exception of women aged 45-49, the very few women who did not breastfeed at all seem to be among the youngest women while the proportion breastfeeding until the child died very slightly increases by age. Mean duration of full breastfeeding is also relatively stable among all age groups with a range of less than a month, again disregarding women aged 15-19. This implies that the women introduce their children to the use of supplementary food at almost the same age (table 8.5).

### 8.2.3 Differentials in breastfeeding in the closed birth interval

The mean durations of both breastfeeding and full breastfeeding vary substantially by all

background characteristics. Average duration of breastfeeding is inversely related to level of education. Women with secondary or higher education breastfed their last-but-one children for approximately 10 months, compared with 12.8 and 13.5 months for women with complete and incomplete primary education, and 17.4 and 20.2 for women with no formal education and those with only Koranic education respectively. The range by education is over 10 months. A similar pattern is observed for full breastfeeding. Women with secondary or higher education fully breastfed their children in the last closed interval for only 2.7 months, compared with 3.3, 3.6, 5.4 and 7.4 months for women with complete primary, incomplete primary, no formal and Koranic education respectively, with a range of approximately five months. Thus, better educated women breastfed for shorter periods and gave supplementary food earlier.

Rural women breastfed for an average of 17.1 months compared with 14.8 months for the urban women - a difference of only 2.3 months. The difference is even smaller with respect to

Table 8.5: Per cent distribution of ever-married women<sup>a</sup> according to length of breastfeeding and full breastfeeding in the last closed birth interval, by current age

Current age	Duration of breastfeeding (months)					Sub- total	Not stated	Number of women	
	Not breastfed until died	Breastfed 0-6	7-11	12+	Mean				
(a) <u>Full breastfeeding</u>									
15-19	1.8	0.0	60.9	24.5	12.9	5.6	122	9	131
20-24	1.0	0.9	73.4	17.1	7.4	4.7	763	34	797
25-29	0.9	1.1	72.3	19.4	6.3	5.1	1,240	36	1,276
30-34	0.7	0.3	73.9	16.3	8.7	5.2	1,203	51	1,253
35-39	0.2	0.8	75.8	15.7	7.5	5.1	851	38	890
40-44	0.2	0.8	72.5	15.5	10.9	5.3	677	23	700
45-49	1.2	1.1	71.4	13.7	12.7	5.5	451	23	475
All	0.7	0.8	73.2	17.0	8.5	5.1	5,307	214	5,522
(b) <u>Breastfeeding</u>									
15-19	1.9	2.2	3.7	8.7	83.5	17.2	120	11	131
20-24	1.0	2.2	6.4	12.6	78.0	16.1	770	27	797
25-29	0.9	3.3	7.0	11.5	77.3	16.2	1,245	32	1,276
30-34	0.6	3.5	6.1	14.5	75.3	16.3	1,230	23	1,253
35-39	0.2	3.7	6.4	13.2	76.3	16.4	872	18	890
40-44	0.2	4.0	6.3	8.6	80.9	17.9	681	19	700
45-49	1.1	4.2	4.7	7.4	82.4	17.6	465	9	475
All	0.7	3.4	6.3	11.9	77.9	16.6	5,383	138	5,522

a As defined in table 8.4.

Source: Vol II, tables 6.1.2-2 and 6.2.2-2

full breastfeeding - 5.3 for rural and 4.7 for urban women. More substantial variation is observed by region of residence with the lowest breastfeeding duration of 13.9 months in the South-east and highest of 21.0 months in the North-west, a range of seven months. The mean durations of breastfeeding for the South-west and North-east are 16.0 and 16.5 months respectively. Similar variations, though understandably with a narrower range, obtain for full breastfeeding. Muslim women and those who belong to the Traditional/other religious group breastfed longer (18.9 and 18.0 months respectively) than the Christian women (between 13.4 and 14.8 months). Again a similar pattern is observed for full breastfeeding (table 8.6).

#### 8.2.4 Breastfeeding in the open birth interval

More emphasis has been placed on the analysis of breastfeeding in the last closed interval than is done here in the open interval. The reasons are obvious. First is the huge effect of truncation in this interval. As will be seen later, quite a substantial proportion of the women were still breastfeeding their last child at the time of interview. Thus the process of breastfeeding had been truncated,

compared with breastfeeding in the closed interval which must have been completed before the birth of the last child. Secondly, some of the women with an open interval may never have a closed interval since they may cease childbearing or be unable to have another child after the last one. The open interval for these women may be longer than the closed interval simply because there is no subsequent pregnancy. The two subgroups of women with closed and with open intervals are thus not theoretically comparable.

Approximately 40.0 per cent of the women with an open interval were still breastfeeding, and 9.8 per cent were still fully breastfeeding at the time of the survey. About 6.4 per cent breastfed their last child until he died and 2.3 per cent did not breastfeed at all. Also, 3.0 per cent of the women were fully breastfeeding their last child when he died. The distribution of the women still breastfeeding at the time of the survey by age of child is shown in table 8.7. The heaping at six-month intervals observed for the closed interval is conspicuously absent. It is worth noting that close to a fifth of these women were still breastfeeding their last child two

Table 8.6: Mean duration (months) of breastfeeding and full breastfeeding in the last closed birth interval for ever-married women<sup>a</sup> by age and selected background characteristics

Background characteristics	Full breastfeeding			Breastfeeding			Number of women <sup>b</sup>
	All ages	< 30	30+	All ages	< 30	30+	

<u>(a) Level of education</u>							
None	5.4	5.5	5.4	17.4	17.6	17.3	3,793
Koranic	7.4	6.9	7.8	20.2	19.3	21.1	532
Primary incomplete	3.6	3.4	3.8	13.5	13.4	13.6	601
Primary complete	3.3	3.2	3.4	12.8	11.7	13.8	410
Secondary and above	2.7	3.1	2.1	9.8	9.7	9.9	185

<u>(b) Type of place of residence</u>							
Village (rural)	5.3	5.2	5.3	17.1	17.0	17.2	4,338
Town/city (urban)	4.7	4.5	5.0	14.8	13.7	15.5	1,184

<u>(c) Region of residence</u>							
North-east	6.0	6.0	6.0	16.5	16.4	16.6	1,355
North-west	6.7	6.5	6.9	21.0	20.6	21.4	1,309
South-east	3.9	3.5	4.1	13.9	13.5	14.1	1,672
South-west	4.4	3.5	4.8	16.0	13.8	17.0	1,186

<u>(d) Religion</u>							
Catholic	3.8	3.8	3.8	13.5	13.4	13.5	797
Protestant	4.1	3.3	4.5	14.8	13.2	15.6	784
Other Christian	4.1	3.8	4.3	13.4	12.6	13.9	776
Muslim	6.3	6.2	6.4	18.9	18.5	19.3	2,557
Traditional/others	4.9	4.7	5.0	18.0	18.5	17.8	608
All	5.1	5.0	5.2	16.6	16.3	16.9	5,522

a As defined in table 8.4.

b Including not stated cases.

Source: Vol II, tables 6.1.3 and 6.2.3

years after birth and about a half were still breastfeeding after one year.

### 8.3 POST-PARTUM AMENORRHOEA

There is typically a time lag between the termination of a pregnancy (whether it results in a live or non-live birth) and the resumption of ovulation and consequently of menstruation. The duration of this time lag varies according to the physiological characteristics of the woman and according to other factors such as nutrition and the length of time she breastfeeds her child. This period between childbirth (or pregnancy termination) and the resumption of menstruation is referred to as post-partum amenorrhoea. Typically most women are infecund during this period and so its duration has a direct bearing on fertility.

The distribution of the ever-married women according to the duration of post-partum

amenorrhoea in the closed birth interval is presented in table 8.8. As was the case with breastfeeding, this distribution shows substantial heaping at six-monthly intervals from the 12th month and is more indicative of the tendency to respond in terms of half-yearly intervals (one year, one-and-a half years etc) than possible true variations. This heaping is illustrated in figure 8.1, with the greatest heaping occurring on 12 months. Information on duration of amenorrhoea was not obtained for 4.0 per cent of the women.

The mean duration of post-partum amenorrhoea was 10.4 months, with a median of approximately 9.0 months. Resumption of menstruation occurred three months after childbirth or earlier for 14.7 per cent of the women, and six months or earlier for 36.5 per cent. About 15.4 per cent of the women had not resumed menstruation 18 months after childbirth and 2.9 per cent after two years.

Table 8.7: Distribution of ever-married women<sup>a</sup> still breastfeeding and still fully breastfeeding at the time of survey (ie in the open birth interval), by duration

Duration (in months)	Breastfeeding			Full breastfeeding		
	Number	Per cent	Cumulative per cent	Number	Per cent	Cumulative per cent
Less than 1 month	76	2.6	2.6	56	7.9	7.9
1	172	6.0	8.6	100	14.1	22.0
2	176	6.1	14.7	50	7.1	29.1
3	136	4.7	19.4	41	5.8	34.9
4	153	5.3	24.7	49	6.9	41.8
5	150	5.2	29.9	48	6.8	48.6
6	121	4.2	34.1	23	3.2	51.8
7	121	4.2	38.3	24	3.4	55.2
8	81	2.8	41.1	19	2.7	57.9
9	87	3.0	44.1	14	2.0	59.9
10	90	3.1	47.2	29	4.1	64.0
11	98	3.4	50.6	20	2.8	66.8
12	80	2.8	53.4	8	1.1	67.9
13	109	3.8	57.2	227**	32.1	100.0
14	106	3.7	60.9			
15	67	2.3	63.2			
16	80	2.8	66.0			
17	78	2.7	68.7			
18	80	2.8	71.5			
19	56	1.9	73.4			
20	53	1.8	75.2			
21	53	1.8	77.0			
22	59	2.0	79.0			
23	69	2.4	81.4			
24	21	0.7	82.1			
25+	512	17.9	100.0			
Total	2,884	100.0		708	100.0	

\* As defined in table 8.2.

\*\* 13 months and above.

Source: Volume II, tables 6.1.4 and 6.2.4

The mean duration of post-partum amenorrhoea does not vary much by the age of the women. Disregarding women 15-19 years of age, very few of whom have a closed interval, mean duration is virtually the same for women in the 20-29 age range and about only a month shorter than women above that age (table 8.9).

Duration of breastfeeding, however, affects the duration of post-partum amenorrhoea in the interval; the longer the duration of breastfeeding, the longer the period of amenorrhoea. This is particularly the case after the eighth month, as shown in table 8.10 and illustrated in figure 8.3. For instance, women who breastfed for 7-8 months resumed menstruation 6.1 months after childbirth compared with 11.1 and 13.6 months for women who breastfed for 18 and 24 months respectively.

With respect to the open interval, about 29.8 per cent of the women were still amenorrhoeic at the time of the survey. The distribution of these women is shown in table

8.11. The heaping at six-monthly intervals observed for the closed interval is noticeably absent here; a third of the women were still amenorrhoeic 18 months and a fifth two years after the birth of their last child.

#### 8.4 POST-PARTUM SEXUAL ABSTINENCE

Abstinence from sexual relations immediately after childbirth is a common phenomenon in all societies. This is primarily a consequence of the physiological condition of the woman after parturition. The duration of such abstinence, however, is determined largely by cultural taboos and practices. Whatever the reasons and the duration, such abstinence affects the reproductive performance of a woman, especially when such abstinence extends beyond the period of post-partum amenorrhoea when the woman is once more fecund.

The distribution of the ever-married women according to the duration of post-partum sexual abstinence in the last closed birth interval is

Table 8.8: Distribution of ever-married women<sup>a</sup> according to duration of amenorrhoea in the last closed birth interval

Duration (in months)	Number	Per cent	Adjusted per cent <sup>b</sup>	Cumulative per cent
0	12	0.2	0.2	100.0
1	171	2.8	2.9	99.8
2	331	5.5	5.7	94.1
3	510	8.4	8.8	85.3
4	465	7.7	8.0	77.3
5	350	5.8	6.0	71.3
6	451	7.5	7.8	63.5
7	186	3.1	3.2	60.3
8	261	4.3	4.5	55.8
9	304	5.0	5.2	50.6
10	254	4.2	4.4	46.2
11	91	1.6	1.6	44.6
12	925	15.3	15.9	28.7
13	94	1.6	1.6	27.1
14	93	1.6	1.6	25.5
15	75	1.2	1.3	24.2
16	84	1.4	1.4	22.8
17	72	1.2	1.4	21.4
18	287	4.7	4.9	16.5
19	66	1.1	1.1	15.4
20	156	2.6	2.7	12.7
21	20	0.3	0.3	12.4
22	33	0.5	0.6	11.8
23	20	0.3	0.3	11.5
24	335	5.5	5.8	5.7
25+	160	2.6	2.8	2.9
Not stated	243	4.0	-	-
Total	6,048	100.0	100.0	

a As defined in table 8.2.

b Excluding not stated cases (N = 243).

Source: Vol II, table 6.3.1-1

Table 8.9: Per cent distribution of ever-married women<sup>a</sup> according to duration of amenorrhoea in the last closed birth interval, by current age

Current age	Duration of amenorrhoea (in months)					Not stated	Total	Mean	Number of women
	0-3	4-6	7-12	13-18	19+				
15-19	13.4	26.2	24.2	16.8	13.4	6.0	100.0	10.7	148
20-24	18.7	23.8	29.9	10.2	12.9	4.4	100.0	9.8	890
25-29	17.7	21.5	35.8	11.9	11.1	2.2	100.0	9.9	1,390
30-34	15.1	20.7	33.6	11.3	14.3	5.1	100.0	10.8	1,360
35-39	15.2	18.8	36.7	11.4	12.9	4.8	100.0	10.7	970
40-44	17.5	18.0	35.2	11.4	15.2	2.8	100.0	10.9	772
45-49	20.1	22.6	26.9	13.3	12.2	4.8	100.0	10.4	517
All	16.9	20.9	33.4	11.7	13.1	4.0	100.0	10.4	6,048

a As defined in table 8.2.

Source: Vol II, table 6.3.1



Table 8.10: Mean duration of amenorrhoea in the last closed interval for ever-married women<sup>a</sup> by duration of breastfeeding (all ages)

Duration of breastfeeding (in months)	Mean duration of amenorrhoea (in months)	Number of cases
Did not breastfeed	8.0	108
0	8.1	153
1	5.6	38
2	7.2	53
3	6.2	64
4-5	5.6	155
6	6.9	175
7-8	6.1	209
9-11	7.5	478
12	9.2	867
13-17	10.4	895
18	11.1	723
19-23	11.9	573
24	13.6	1,097
25-29	13.5	74
30	11.8	67
31-35	(11.7)	6
36+	15.7	141
Not stated	9.1	173
All	10.4	6,048

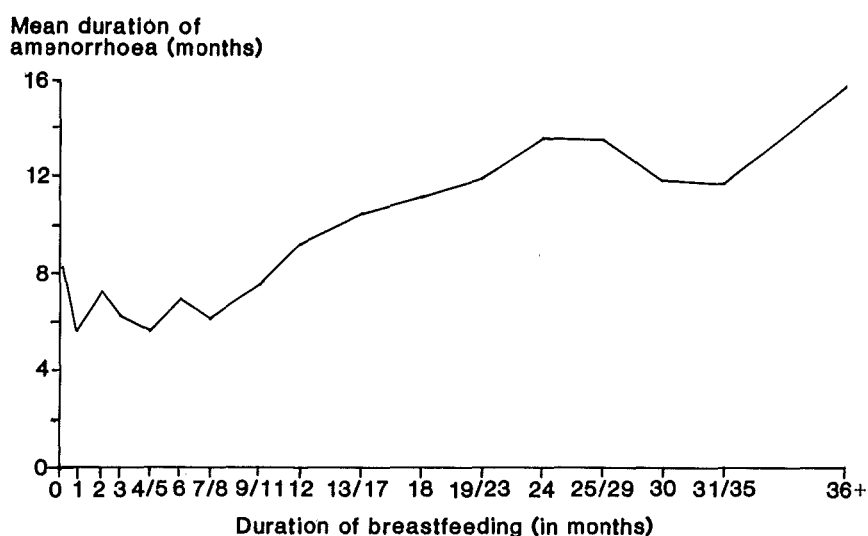
a As defined in table 8.2.

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, table 6.3.1-2

shown in table 8.12. The heaping of responses at six-monthly intervals is once more evident, particularly at the 12th and 24th months. Information on post-partum abstinence was not available for 4.8 per cent of the women. The average duration of abstinence after childbirth is 14.1 months; the median lies between the

11th and 12th months. This means that, on average, the women did not resume sexual relations until well after their anovulatory period. About 11.5 per cent of the women resumed sexual relations by three months after childbirth, a quarter by the sixth month and a third by the ninth month. By one year after



8.3 Mean duration of amenorrhoea in the last closed birth interval, by duration of breastfeeding

Table 8.11: Per cent distribution of ever-married women<sup>a</sup> still amenorrhoeic at the time of interview (ie in the open birth interval)

Duration (in months)	Number	Per cent	Cumulative per cent
0	72	3.3	100.0
1	159	7.4	96.7
2	151	7.0	89.3
3	120	5.6	82.3
4	135	6.3	76.7
5	124	5.8	70.4
6	88	4.1	64.6
7	87	4.1	60.5
8	57	2.6	56.4
9	56	2.6	53.8
10	66	3.1	51.2
11	52	2.4	48.1
12	54	2.4	45.7
13	75	3.5	43.3
14	44	2.0	39.8
15	37	1.7	37.8
16	55	2.6	36.1
17	47	2.2	33.5
18	50	2.3	31.3
19	32	1.5	29.0
20	30	1.4	27.5
21	26	1.2	26.1
22	26	1.2	24.9
23	51	2.4	23.7
24	6	0.3	21.3
25+	453	21.0	21.0
Total	2,153	100.0	

a As defined in table 8.2 for open interval.

Source: Vol II, table 6.3.2

childbirth, over half (53.5 per cent) had resumed sexual relations. About 27.7 per cent still abstained from sex after 18 months and almost all had resumed two years after childbirth.

The duration of post-partum sexual abstinence varies to some extent by the age of the women (table 8.13). Again disregarding women aged 15-19, few of whom have a closed birth interval, the mean is similar among women aged 20-24 and 25-29 (13.0 and 13.6 months respectively), increases slightly for women aged 30-34 and 35-39 (14.4 and 13.8 months respectively) and then further increases for the oldest women aged 40-44 and 45-49 (15.1 and 15.7 months respectively). A positive variation is also observed by duration of breastfeeding, particularly when the breastfeeding exceeds 12 months. After this period, women who breastfed their children for longer periods abstained from sex for longer durations after childbirth (table 8.14 and figure 8.4). It is important to note that for durations of breastfeeding up to 12 months, the mean duration of abstinence is longer than the period of breastfeeding. This conforms with the common belief that sexual intercourse

during breastfeeding is detrimental to the health of the babies. It would appear that other pressures make the women disregard this belief for periods over a year after childbirth.

Mean duration of post-partum sexual abstinence varies substantially by the level of education of the women and their region of residence. The higher the level of education the shorter the duration of abstinence (table 8.15). Duration of abstinence varies minimally by type of place of residence, being 14.2 and 13.6 months for women in rural and urban areas respectively. Larger variations are observed for region of residence: 11.2 months in the South-east, 12.8 in the North-east, 16.0 in the North-west and 17.6 in the South-west. With respect to religious groups, Muslims and women belonging to the Traditional/others group abstain, on average, for slightly longer periods than Christians.

Over a third (38.0 per cent) of the women with an open birth interval were still abstaining from sexual relations since the birth of their last child at the time of the survey. Their distribution by duration is shown in table 8.16. Once more the heaping at

Table 8.12: Per cent distribution of ever-married women<sup>a</sup> according to duration of post-partum abstinence in the last closed birth interval

Duration (in months)	Number	Per cent	Adjusted per cent <sup>b</sup>	Cumulative per cent
< 1	2	-	-	100.0
1	94	1.6	1.6	98.4
2	243	4.0	4.2	94.2
3	326	5.4	5.7	88.5
4	218	3.6	3.8	84.7
5	227	3.8	3.9	80.8
6	353	5.8	6.1	74.7
7	147	2.5	2.6	72.1
8	215	3.6	3.7	68.4
9	176	2.9	3.1	65.3
10	260	4.3	4.5	60.8
11	79	1.3	1.4	59.4
12	745	12.3	12.9	46.5
13	146	2.4	2.5	44.0
14	137	2.3	2.4	41.6
15	138	2.3	2.4	39.2
16	116	1.9	2.0	37.2
17	61	1.0	1.1	36.1
18	390	6.4	6.8	29.3
19	90	1.5	1.6	27.7
20	164	2.7	2.8	24.8
21	38	0.6	0.7	24.2
22	32	0.5	0.6	23.6
23	17	0.3	0.3	23.3
24	843	13.9	14.6	8.7
25+	504	8.3	8.8	0.1
Not stated	288	4.8	-	
Total	6,048	100.0	100.0	

a As defined in table 8.2.

b Excluding not stated cases (N = 288).

Source: Vol II, table 6.4.1-1

Table 8.13: Per cent distribution of ever-married women<sup>a</sup> according to duration of post-partum abstinence in the last closed birth interval, by current age

Current age	Duration of abstinence (in months)						Total	Mean	Number of women
	0-6	7-12	13-18	19-24	25+	Not stated			
15-19	36.3	20.5	9.6	25.3	1.4	6.8	100.0	12.0	148
20-24	26.5	27.5	17.1	18.0	5.4	5.3	100.0	13.0	890
25-29	26.1	27.1	15.6	21.9	6.4	3.1	100.0	13.6	1,390
30-34	21.5	27.6	16.5	19.0	9.0	6.2	100.0	14.4	1,360
35-39	24.2	29.0	16.1	16.5	9.3	4.9	100.0	13.8	970
40-44	24.5	24.1	15.8	19.6	12.6	3.5	100.0	15.1	772
45-49	18.4	24.8	19.5	22.1	9.8	5.6	100.0	15.7	517
Total	24.2	26.8	16.3	19.6	8.3	4.8	100.0	14.1	6,048

a As defined in table 8.2.

Source: Vol II, table 6.4.1

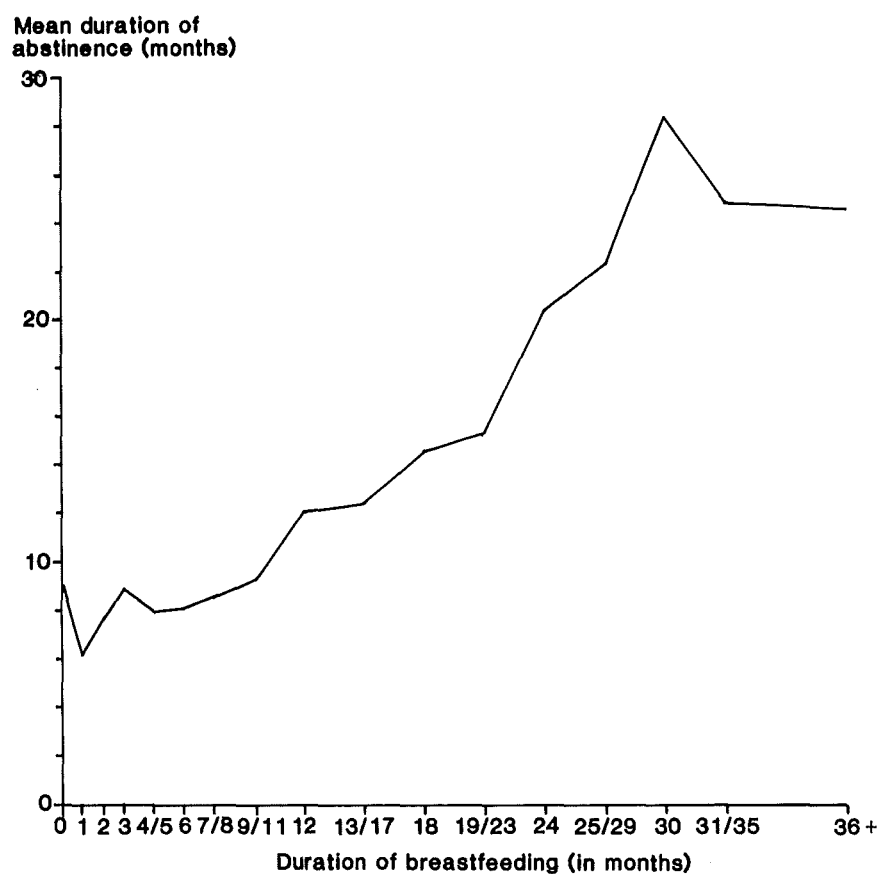
Table 8.14: Mean duration of post-partum abstinence for ever-married women<sup>a</sup> in the last closed birth interval, by duration of breastfeeding

Duration of breastfeeding (in months)	Mean duration of abstinence (all ages)	Number of women
Did not breastfeed	8.3	108
0	8.9	153
1	6.2	38
2	7.7	53
3	8.8	64
4-5	8.0	155
6	8.1	175
7-8	8.6	209
9-11	9.3	478
12	12.1	867
13-17	12.4	895
18	14.5	723
19-23	15.3	573
24	20.4	1,097
25-29	22.3	74
30	28.4	67
31-35	(24.9)	6
36+	24.5	141
Not stated	12.5	173
Total	14.1	6,048

a As defined in table 8.2.

NOTE: Figure in bracket is based on less than 20 cases.

Source: Vol II, table 6.4.1-2



8.4 Mean duration of post-partum abstinence in the last closed birth interval, by duration of breastfeeding

Table 8.15: Mean duration of sexual abstinence in last closed birth interval for ever-married women<sup>a</sup> by current age and selected background characteristics

Background characteristics	Mean duration of abstinence (in months)			Number of women <sup>b</sup>
	All ages	< 30	30+	
<u>(a) Level of education</u>				
None	14.8	14.5	15.1	4,188
Koranic	13.8	13.8	13.8	589
Primary incomplete	12.2	11.0	13.7	648
Primary complete	11.4	10.0	12.9	432
Secondary and above	9.3	9.6	8.9	191
<u>(b) Type of place of residence</u>				
Village	14.2	13.8	14.4	4,789
Town/city	13.6	11.4	15.4	1,258
<u>(c) Region</u>				
North-east	12.8	12.8	12.8	1,522
North-west	16.0	16.0	16.0	1,426
South-east	11.2	10.3	11.6	1,836
South-west	17.6	14.5	19.1	1,264
<u>(d) Religion</u>				
Catholic	12.1	11.4	12.5	859
Protestant	14.2	12.4	15.2	844
Other Christian	11.7	10.3	12.5	844
Muslim	15.1	14.5	15.7	2,816
Traditional/others	15.0	15.2	15.0	685
All	14.1	13.3	14.6	6,048

a As defined in table 8.2.

b Including not stated cases.

Source: Vol II, table 6.4.2

six-month intervals is conspicuously absent. About half of them were still abstaining 12 months after the birth of the last child, a third 18 months after and a quarter two years after.

### 8.5 MARITAL INSTABILITY

It was pointed out in chapter 4 that marital instability, especially in the form of permanent dissolutions due to death of spouse, divorce or separation, when not followed by remarriage, is one of the many factors that can affect reproductive performance. Even when remarriage takes place, the time gap between the dissolution of one marriage and the contraction of another is often lost in reproductive terms since the woman, by definition, was not continuously exposed to the risk of conception in that interval. As observed in chapter 4, though 85.0 per cent of the ever-married women were still in their first marriages, all ever-married women spent

95.7 per cent of the time since their first marriage in the married state. Thus the effect of marital dissolution on fertility performance was not expected to be, and was actually not, great, as was observed in the analysis of fertility parameters for ever-married and currently married women in chapter 5. Temporary separation of spouses for long durations can also inhibit fertility. While information on the incidence of such separations was collected in the NFS, its duration was not and so cannot be considered here. However it is estimated to be of minor importance.

The relatively low effect of marital instability is further evidenced in table 8.17 which shows the proportion of ever-married women who were continuously married throughout the last closed interval. This proportion is 92.8 per cent. Disregarding women aged 15-19, few of whom have a closed interval, this proportion assumes an inverted U pattern by age

Table 8.16: Distribution of ever-married women<sup>a</sup> still abstaining at time of interview according to duration since last live birth (ie open interval)

Duration (in months)	Number	Per cent	Cumulative per cent
< 1	79	2.9	100.0
1	170	6.2	97.1
2	169	6.2	90.9
3	139	5.1	84.7
4	141	5.1	79.6
5	131	4.8	74.5
6	117	4.3	69.7
7	103	3.8	65.4
8	72	2.6	61.6
9	60	2.2	59.0
10	74	2.7	56.8
11	83	3.0	54.1
12	63	2.3	51.1
13	87	3.2	48.8
14	88	3.2	45.6
15	51	1.9	42.4
16	61	2.2	40.5
17	61	2.2	38.2
18	61	2.2	36.1
19	40	1.5	33.9
20	50	1.8	32.4
21	45	1.6	30.6
22	37	1.5	29.0
23	50	1.8	27.5
24	15	0.5	25.7
25+	690	25.2	25.2
Total	2,738	100.0	

a As defined in table 8.2 for open interval.

Source: Vol II, table 6.4.3

- 88.3 per cent for the 20-24 age group, increasing slightly to 94.5 per cent, 95.0 per cent and then 94.0 per cent for the three subsequent age groups respectively, and then 93.3 per cent and 90.4 per cent for the women aged 40-44 and 45-49 respectively. The variations by all background characteristics are generally slight and nowhere substantial.

#### 8.6 LENGTH OF EXPOSURE AND INTERVAL TO NEXT CONCEPTION

Having discussed the incidence and the duration of post-partum amenorrhoea and sexual abstinence, it may be interesting to see how they relate to the period of exposure or non-exposure of the women to the risk of conception and, ultimately, to the interval from the birth of the penultimate child to the conception of the last child or start of current pregnancy. This is done here by examining the durations of non-exposure and exposure. The duration of non-exposure refers to the period when the woman is still amenorrhoeic or still abstaining from sexual relations (whichever is longer) after the birth of the penultimate child. It is assumed that during this period she is not exposed to the

risk of conception. The duration of exposure, on the other hand, refers to the interval between the end of amenorrhoea or abstinence (whichever is longer) and the date of the conception that resulted in the last birth. This date of conception, which is definitely difficult to obtain, has been set nine months before the birth of the last child. The sum total of these periods of non-exposure and exposure is referred to as the interval to conception.

The mean duration of the period of non-exposure due to post-partum amenorrhoea and sexual abstinence in the last closed interval is 13.5 months. This duration is similar for women aged 20-24 and 25-29 (12.4 and 12.8 months respectively) and increases only by a month or two for the older women. The mean duration of exposure after post-partum amenorrhoea or sexual abstinence and before conception is 12.8 months, about half a month shorter than the mean duration of non-exposure. Thus the two durations are, on average, the same. The mean duration of exposure, however, varies positively with the age of the woman; the older she is, the longer the duration. This duration increases from 7.5

months for women aged 20-24, to 14.2 months for women aged 35-39 and 20.3 months for women aged 45-49. As a consequence of the above age variations, the entire interval from the birth of the penultimate child to the conception of the last child or start of current pregnancy varies directly with age, with a mean of slightly over two years (26.3 months). This interval is 19.9 months for women aged 20-24 and increases steadily and consistently up to 35.3 months for the oldest age group (45-49) as shown in table 8.18.

As was observed in chapter 5, ever-use of contraception was very low among the surveyed

women. Among the ever-married women with a closed birth interval (and excluding non-stated cases among them), only 6.7 per cent had used a method of contraception during that interval. Table 8.19 shows that there is virtually no difference in the duration of periods of exposure or in the interval to the conception of the last child among women who used or did not use contraception in this interval. Further refinement of this table by restricting the analysis to women who gave the exact calendar month and year of the beginning and end of the last closed interval reveal a slight difference of 1.8 months for the duration of exposure and 1.2 months for the interval to

Table 8.17: Percentage of ever-married women<sup>a</sup> who were continuously married throughout the last closed birth interval by current age and selected background characteristics

Background characteristics	Percentage	Number of women
<u>(a) Current age</u>		
15-19	80.8	148
20-24	88.3	890
25-29	94.5	1,390
30-34	95.0	1,360
35-39	94.0	970
40-44	93.3	772
45-49	90.4	517
<u>(b) Level of education</u>		
None	92.2	4,188
Koranic	95.4	589
Primary incomplete	94.4	648
Primary complete	91.9	432
Secondary and above	93.6	191
<u>(c) Type of place of residence</u>		
Village	92.7	4,789
Town/city	93.0	1,258
<u>(d) Region</u>		
North-east	94.6	1,522
North-west	91.4	1,426
South-east	92.3	1,836
South-west	92.8	1,264
<u>(e) Religion</u>		
Catholic	94.3	859
Protestant	91.5	844
Other Christian	94.8	844
Muslim	92.9	2,816
Traditional/others	89.5	685
All	92.8	6,048

a As defined in table 8.2.

Source: Vol II, table 6.5.1

Table 8.18: Mean length of exposure and non-exposure for ever-married women<sup>a</sup> in the last closed birth interval, by current age

Current age	Mean length (in months)		Interval to conception (c) = (a) + (b)	Not stated	Number of women
	Non-exposure (a)	Exposure (b)			
15-19	12.0	6.5	18.5	10	148
20-24	12.4	7.5	19.9	55	890
25-29	12.8	10.6	23.4	55	1,390
30-34	14.0	12.0	26.0	97	1,360
35-39	13.6	14.2	27.8	65	970
40-44	14.6	18.8	33.4	32	772
45-49	15.0	20.3	35.3	36	517
All	13.5	12.8	26.3	350	6,048

a As defined in table 8.2.

Source: Vol II, tables 6.6.1-5 and 6.6.2-8

conception in favour of women who used contraception in the last closed interval (table 8.20). This should not be surprising since ever-use of contraception was almost wholly of inefficient methods, mostly temporary abstinence.

## 8.7 AGE AT MENARCHE AND FECUNDITY STATUS

The factors other than contraception discussed so far in this chapter are those that relate to practices or physiological conditions after childbirth. But there are still other factors

which affect fertility; these include age at menarche, menopause, infecundity and sterility, whether primary or secondary. These are discussed in this section.

### 8.7.1 Age at menarche

The first menstruation of a woman is a physiological event that marks the beginning of her fecund life. The age at this first menstruation is referred to as age at menarche, the onset of which varies to some extent according to nutritional status. It, however,

Table 8.19: Mean length of exposure and of interval to conception in last interval for ever-married women<sup>a</sup> by age and by whether or not contraception was used during the interval<sup>a</sup>

Current age	Mean length of exposure (in months)			Mean length of interval to conception (in months)		
	Used	Not used	Number of women <sup>b</sup>	Used	Not used	Number of women
15-19	(12.3)	6.0	138	(23.5)	17.7	148
20-24	5.3	7.8	836	18.1	20.4	890
25-29	14.2	10.3	1,335	26.9	23.3	1,390
30-34	11.3	12.1	1,263	26.3	26.1	1,360
35-39	15.4	14.1	905	33.0	27.9	970
40-44	24.6	18.4	740	37.4	33.3	772
45-49	18.8	20.4	481	35.4	34.5	517
All	13.2	12.8	5,697	27.3	26.4	6,048

a As defined in table 8.2.

b Excluding not stated cases (N = 350).

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, tables 6.6.3-1 and 6.6.4



Table 8.20: Mean length of exposure and of interval to conception in the last closed birth interval by age of woman and whether or not contraception was used in the interval for ever-married women<sup>a</sup> who stated both month and year of beginning and end of the interval<sup>a</sup>

Current age	Mean length of exposure				Mean length of interval to conception			
	Used	Not used	Total	Number of women <sup>b</sup>	Used	Not used	Total	Number of women
15-19	(3.6)	7.5	7.2	42	(10.4)	18.0	17.5	43
20-24	5.8	7.8	7.5	283	16.6	19.0	18.7	293
25-29	13.2	9.7	10.0	365	24.1	21.2	21.4	375
30-34	11.6	10.9	11.0	295	25.3	24.6	24.7	328
35-39	(18.4)	10.0	10.5	171	(39.7)	26.6	27.3	190
40-44	(17.6)	19.2	19.1	138	(28.6)	33.9	33.3	140
45-49	(35.9)	20.6	22.3	70	(53.7)	36.9	38.8	73
All	12.8	11.0	11.2	1,363	25.4	24.2	24.3	1,442

a As defined in table 8.2.

b Excluding not stated cases (N = 79).

NOTE: Figures in brackets are based on less than 20 cases.

Source: Vol II, tables 6.6.3-1 and 6.6.4

typically occurs within a narrow age range for most healthy women.

All the women interviewed in the NFS were asked the following question: 'How old were you when you had your first menstrual period?' The distribution of responses for all the women is shown in table 8.21. Only 2.4 per cent had not started menstruating; 86.1 per cent reported starting menstruating between the ages of 12 and 16. About six out of every ten reported starting at the age of 14 or 15. The distribution of all ever-married women by

current age and age at menarche is shown in table 8.22. The mean age at menarche for these women is 14.0 years. About a fifth had entered into their fecund lifecycles by the age of 12, over half (59.3 per cent) by the age of 14 and almost all (93.0 per cent) by the age of 16.

#### 8.7.2 Fecundity status

A woman who has entered into the fecund stage does not remain fecund throughout her lifetime. At some stage in her life, she becomes anovulatory and consequently infecund.

Table 8.21: Per cent distribution of all women according to age at menarche

Age at menarche	Number	Per cent	Cumulative per cent
10	187	1.9	1.9
11	265	2.7	4.6
12	1,340	13.8	18.4
13	1,528	15.7	34.1
14	2,213	22.8	56.9
15	2,555	26.3	83.2
16	729	7.5	90.7
17	321	3.3	94.0
18	197	2.0	96.0
19	50	0.5	96.5
20	59	0.6	97.1
21	1	0.0	97.1
Not yet begun	234	2.4	99.5
Not stated	50	0.5	100.0
Total	9,729	100.0	

Table 8.22: Per cent distribution of ever-married women according to age at menarche, by current age

Current age	Age at menarche											Mean	Number of women <sup>a</sup>
	10	11	12	13	14	15	16	17	18	19	20		
15	2.4	7.4	17.7	30.1	33.4	8.9	-	-	-	-	-	13.1	145
16	3.2	8.8	16.6	24.2	26.1	17.2	3.9	-	-	-	-	13.3	124
17	0.7	3.0	15.7	20.6	30.7	23.9	5.3	0.1	-	-	-	13.7	193
18	1.9	6.0	20.7	20.7	21.3	22.1	6.7	0.4	-	-	-	13.5	223
19	4.9	5.5	16.3	14.4	21.2	23.6	11.8	0.7	1.6	-	-	13.7	159
20-24	3.5	3.4	15.1	17.5	22.9	23.0	9.2	3.2	1.6	0.5	0.2	13.9	1,436
25-29	2.8	3.3	15.2	17.7	22.9	26.6	5.9	2.7	1.6	0.6	0.7	13.9	1,706
30-34	1.6	4.0	14.6	15.7	21.3	25.7	8.4	5.2	2.3	0.4	0.7	14.1	1,525
35-39	1.0	1.9	15.4	17.7	22.2	27.7	8.2	2.7	2.2	0.4	0.5	14.1	1,094
40-44	1.2	1.3	12.8	13.9	19.6	29.6	8.6	5.3	4.6	1.6	1.5	14.5	887
45-49	2.0	1.3	12.7	12.4	18.1	31.8	8.6	6.4	3.8	1.0	1.8	14.5	579
All	2.2	3.2	14.9	16.9	22.1	25.9	7.8	3.6	2.2	0.6	0.6	14.0	8,071
Cumulative percentage	2.2	5.4	20.3	37.2	59.3	85.2	93.0	96.6	98.8	99.4	100.0		

a Excluding not stated cases (N = 49).

Source: Vol II, table 6.7.1

The age at which a woman reaches the end of her fecund or reproductive life is referred to as the age at menopause. Like age at menarche, this also occurs within a narrow age range among women, usually around 45 years.

The fecundity status of the women was measured in two ways. The first is the status as perceived by the women themselves. This is

referred to here as self-reported fecundity status and is shown in table 8.23 for currently married women. Eight out of every ten of these women considered themselves capable of having another child (ie fecund) if they wanted to at the time of the survey; 11.4 per cent were not certain. However, 8.2 per cent considered themselves incapable of having another child; 3.7 per cent had completely

Table 8.23: Per cent distribution of currently married women according to self-reported fecundity status by current age

Current age	Self-reported fecundity status					Total	Total number of women
	Fecund	Undecided	Infecund, not menopausal	Infecund, menopausal	Sterilized		
15-19	88.5	9.4	1.5	0.6	-	100.0	839
20-24	91.9	6.7	0.7	0.6	-	100.0	1,421
25-29	89.9	7.5	2.0	0.5	0.1	100.0	1,668
30-34	82.9	10.8	3.9	2.3	-	100.0	1,480
35-39	72.0	15.1	7.6	5.2	0.1	100.0	1,025
40	59.7	22.3	5.4	12.4	0.2	100.0	535
41	64.6	23.1	4.2	8.1	-	100.0	123
42	60.0	24.6	6.3	9.1	-	100.0	84
43	59.3	8.9	20.6	11.2	-	100.0	51
44	69.9	14.2	1.1	14.8	-	100.0	27
45	49.4	17.5	8.0	24.9	0.2	100.0	219
46	46.6	20.5	11.2	21.6	-	100.0	61
47	41.2	29.2	7.5	17.8	4.3	100.0	27
48	32.2	16.6	11.3	39.8	-	100.0	109
49	27.4	14.3	11.3	47.0	-	100.0	66
All	80.3	11.4	3.7	4.5	0.1	100.0	7,737

Source: Vol II, table 6.7.2

stopped menstruating (ie were menopausal) while 4.5 per cent had not reached the stage of menopause. As the age of the women increases, the proportion reporting themselves fecund decreases while the proportion infecund increases.

The second measure, referred to here as 'detailed fecundity status' decomposes the women who were uncertain about their fecundity status or had reported themselves as infecund in table 8.23 into whether they had ever given birth to a child or to only one child. If they have not had a livebirth, they are considered to be sterile; if only one livebirth, they are considered secondarily infecund. The rest are simply considered as infecund, as shown in table 8.24. This measure is of relevance to women over 30 years of age since younger women have not been exposed for very long. The incidence of primary sterility is 4.0 per cent, almost the minimum level that is observed for human populations. About 14.6 per cent are considered as being secondarily infecund. The proportion of women either just infecund or secondarily infecund, but not the primarily infecund group, consistently increases by age.

## 8.8 SUMMARY

The focus of attention in this chapter has been on some of the factors other than contraception that could affect the fertility of the surveyed women. The factors discussed include breastfeeding, post-partum amenorrhoea, post-partum sexual abstinence, marital instability, exposure and interval to conception (all for the last closed and open birth intervals), age at menarche and current fecundity status. Considerable heaping at six-monthly intervals

was observed for breastfeeding, post-partum amenorrhoea and sexual abstinence in the closed birth interval; such heaping was considered as most likely due to misreporting.

The mean durations of breastfeeding and of full breastfeeding in the last closed interval were 16.6 and 5.1 months respectively. The practice of breastfeeding and use of supplementary food were found to be universal. Duration of breastfeeding did not vary much by the age of the women but varied considerably by their background characteristics. A higher level of education and residence in urban areas were associated with shorter durations of breastfeeding and full breastfeeding. Differentials by region and religion also exist.

The mean and median durations of post-partum amenorrhoea were 10.4 and 9.0 months respectively and varied positively with duration of breastfeeding when the latter exceeded eight months. Average duration of post-partum sexual abstinence was 14.1 months and it appeared as if the women, on average, did not resume sexual relations until well after their anovulatory period. Duration of abstinence varied positively with age and duration of breastfeeding, but inversely with education; type of place of residence did not exert much influence. Similar variations by religion and region as for breastfeeding were also observed for post-partum sexual abstinence.

Marital instability did not appear to be a potential factor affecting the fertility of the women since, once first married, almost all of them spent over 90 per cent of their lives in the married state. The average duration of non-exposure to the risk of childbearing due to

Table 8.24: Per cent distribution of currently married women according to detailed fecundity status and current age

Current age	Fecund	Probably infecund (primary)	Infecund (secondary)	Infecund	Total	Not stated	Number of women
15-19	97.9	-	-	2.1	100.0	-	839
20-24	86.0	7.5	5.1	1.4	100.0	27	1,421
25-29	83.2	3.9	10.3	2.6	100.0	19	1,668
30-34	71.3	3.7	18.6	6.4	100.0	41	1,480
35-39	58.5	3.8	24.3	13.4	100.0	32	1,025
40	46.7	3.0	31.8	18.5	100.0	12	535
41	46.6	7.7	32.7	12.9	100.0	5	123
42	41.0	12.1	30.6	16.3	100.0	4	84
43	51.0	4.9	11.4	32.7	100.0	1	51
44	47.7	4.2	29.7	18.5	100.0	1	27
45	36.8	2.1	26.5	34.6	100.0	1	219
46	37.2	-	28.0	34.8	100.0	3	61
47	51.4	1.9	15.8	30.9	100.0	-	27
48	16.7	4.8	26.4	52.1	100.0	1	109
49	21.5	-	18.4	60.2	100.0	2	66
All	72.8	4.0	14.6	8.5	100.0	149	8,120

Source: Vol II, table 6.7.3

post-partum amenorrhoea or sexual abstinence was 13.5 months and increased only slightly with age. The women waited, on average, for about a year (12.8 months) after post-partum amenorrhoea or abstinence before becoming pregnant with their last child. This period increased with age of the women but did not vary whether the women used contraception in the interval or not.

The mean age at which the women entered their fecund life cycle was 14.0 years; almost all (93.0 per cent) had reported becoming

fecund by the age of 16. About eight out of every ten of the women reported themselves as still fecund at the time of interview. Detailed analysis of their fecundity status revealed that the incidence of primary sterility is almost at the natural minimum of 4.0 per cent.

The extent to which these factors have actually affected the reproductive performance of the women has not been examined in this first report but will form part of subsequent and more detailed analysis of the data.

## SUMMARY AND RECOMMENDATIONS

The Nigeria Fertility Survey was conducted between October 1981 and August 1982. During the survey, information was collected from a scientifically designed and nationally representative sample of 8,624 households and 9,729 women aged between 15 and 49 years. The primary objectives of the survey were to obtain reliable information on the levels, patterns, trends and differentials in fertility as well as knowledge and use of contraception. An attempt was also to be made towards identifying the factors underlying the observed levels and patterns. Some of the major findings are summarized here lest they be lost in the mass of details presented earlier in this report. Their implications for policy are also noted.

A total of 50,214 persons were enumerated as usual members of the 8,624 sample households. Half of these persons were under the age of 15 indicating that Nigeria has a very young population; only 2.2 per cent were aged 65 years and over. A large majority of these persons (85.3 per cent) live in rural areas and the overall sex ratio is 95.2 males per 100 females. The age dependency ratio, particularly child dependency ratio, is high; every person of working age has another person dependent on him. The average Nigerian household consists of 5.83 persons and about a quarter of households are of the extended type. Heads of households are typically adult males and about a fifth of all households (22.3 per cent) are of the polygynous type. Most of the men, especially the older ones, married wives much younger than themselves; the average age difference between husbands and their (eldest) wives is 12.6 years. The environmental conditions in which most households live are poor. Only a fifth of the households have electricity or pipe-borne water; about a third do not have adequate toilet facilities and three-quarters cook with firewood. There are very substantial differences in household characteristics and environmental conditions between the rural and urban areas and between various geographical regions.

About six out of every ten of the surveyed women have no formal education and seven out of every ten cannot read nor write. About 77 per cent live in rural areas and about half (45.5 per cent) are Muslims. A third were not gainfully employed at the time of survey and most of those employed were either in agricultural or sales occupations.

Marriage is universal and almost all women over the age of 30 have been in a marital union. Entry into marriage occurs very early in life; by the age of 16, half of the women aged 20-24 had been married. There are, however, indications of a slight increase in age at marriage. Marriages are relatively

stable; 85 per cent of the ever-married women were still in their first marriages. Remarriage is common and frequent with the result that once married, most women spend most (96 per cent) of their life in the married state. Marital dissolutions are due more to divorce or separation than death of spouse. Approximately four out of every ten women were in polygamous unions.

As in many other developing countries, the level of fertility is relatively high. The total fertility rate for the five-year period preceding the survey is 6.34; the total marital fertility rate for the same period is 7.48. Completed fertility for women aged 45-49 is 5.84 children; over a fifth of these women have nine or more children. Between 6 and 8 per cent of the women over 30 years of age were childless. Age at first marriage is very strongly related to fertility; the lower the age at first marriage the higher the lifetime fertility. About one out of every ten first children was either born or conceived before first marriage. These proportions are particularly high for women who married after the age of 20. The average interval between first marriage and first birth is 21.6 months; this interval is longer for women who married very early. Analysis of fertility levels over the past 15 years gives the impression of an apparent increase from the early 1960s to the mid-1970s followed by a slight decline around the turn of the decade. The quality of the data does not, as yet, warrant a conclusive statement on this.

Both infant and childhood mortality levels were found to be high and to have declined substantially in the past 15 years. Approximately 85 out of every 1,000 livebirths died before their first birthday between 1975 and 1979; the rate for 1965-69 was 110. Childhood mortality rate was approximately 145 per 1,000 in 1975-79, down from 202 in 1965-69. Both rates were found to be higher for males than for females and in rural than in urban areas. The extent of decline has been similar for both sexes but appreciably more in urban areas. About 18 per cent of the children ever borne by the surveyed women had died by the time of interview; this proportion is about 24 per cent for women aged 45-49 indicating that, at observed level, one out of every four children borne by a woman may not survive until the woman reaches the age of 50. Experience of the death of a child is very pervasive among the women; only a third have never lost a child through death.

The attitudes of the women are very strongly pronatalist. Only 5 per cent of the currently married fecund women desire to cease childbearing; 84 per cent want to continue.

The proportion wishing to stop childbearing reaches a quarter only at older ages (40 years and over) and high parities (8 or more children). Most of the women do not feel they have any control over the number of children they will have; about four out of every ten did not give numeric answers to questions on additional children desired or desired family size. On average, those who gave numeric responses desire 5.2 additional children and a family size of 8.3 children. Over 90 per cent of the women desired more children than they had living at the time of the survey. There is a strong preference for males, particularly among those who already have two or more daughters but no sons. Despite this, the desire to cease childbearing is not related to the number of sons a woman already has.

Knowledge and use of contraception are very low among the women. Two out of every three have never heard of any method of contraception and 85 per cent have never used any method. Only 6.5 per cent were using any method at the time of the survey. Awareness, ever-use and current use were mostly of the inefficient, traditional methods, most particularly abstinence. Of the women who have never used any method, only 2.0 per cent intend to do so in the future. Of the women who have heard of some efficient methods but never used them, over two thirds do not know any source of supply.

Breastfeeding is a universal practice among the women. Less than 1 per cent of the women did not breastfeed their penultimate or last children. Use of supplementary food for the babies is also universal. The mean duration of breastfeeding for the penultimate children is 16.6 months; supplementary food was given to those children at the age of five months on average. The average durations of post-partum amenorrhoea and sexual abstinence are 10.4 and 14.1 months respectively. The women thus abstained from sex for most of the period they were breastfeeding and throughout their non-susceptible period. The mean duration of non-exposure to conception because of abstinence or amenorrhoea is 13.5 months; the mean duration of exposure before the conception of the last child is 12.8 months. The total interval from the birth of the penultimate to the conception of the last child is thus slightly over two years (26.3 months). The average age at which the women entered their reproductive life cycle (age at menarche) is 14 years and about eight of out every ten married women reported themselves as fecund at the time of interview. The incidence of primary sterility among the women is 4 per cent.

Substantial differentials were found to exist in the levels and incidence of almost all the above phenomena according to the background and socio-economic characteristics of the women. Generally education, especially up to or above secondary level, was found to be

negatively related to age at first marriage, current and cumulative fertility, additional children desired, desired family size, and durations of breastfeeding and post-partum sexual abstinence, and positively related to knowledge and use of contraception. Education to primary level is, however, associated with higher fertility levels when compared with no formal education. Variations by region of residence and religion were also substantial in most instances and more important than variations by rural-urban residence.

The implications of the above findings for policy formulation, implementation or evaluation would certainly vary according to the needs of interested agencies, organizations or departments. Some implications are, however, obvious. There is need for the improvement of the sanitary conditions under which most of the population live, especially in rural areas. Some substantial improvements have been made in the past 15 years in the reduction of infant and childhood mortality. Despite this, the levels are still high and greater efforts towards further reductions have to be made, especially in the rural areas where most of the people live and where the observed decline has been less. Since it was observed that the fertility of women with minimal (primary) education is higher than that of women with no education (an observation that applies to many African countries), there may be a further increase in the already high fertility levels as young women benefiting from the universal primary education scheme marry and start childbearing.

The implications of the findings for the formulation of population-related policies by the Federal Government are numerous. For instance, should the government wish to implement the desire stated in its Fourth National Development Plan to 'influence vital population variables such as fertility, mortality, migration etc along directions that will enhance the country's growth and development prospects', the findings of the survey may be invaluable in establishing the mechanisms for influencing fertility. The survey furthermore shows that merely providing family planning facilities only in hospitals and medical centres for people who may voluntarily need them without publicizing family planning, as has been the case, has not yielded encouraging results. People can use, or know they can use, facilities when they are aware of what those facilities are and what they can do for them. The need for publicity for the programme is thus apparent. The government may also wish to 'influence' the societal mechanisms and institutions on which the pronatalist attitudes of the people are based. These are just a few of the various means by which the findings of the survey can assist planners in policy formulation and implementation.

## REFERENCES

- Akingba, J.B. (1971). The Problem of Unwanted Pregnancies in Nigeria Today. Lagos: University of Lagos Press.
- Ascardi, G.T., A.A. Igun and G.Z. Johnson (1972). Survey of Fertility, Family and Family Planning in Nigeria. Ile, Ife: Institute of Population and Manpower Studies. Publication No 2.
- Caldwell, J.C. (1976). Population Growth and Socio-Economic Change in West Africa. New York: Population Council.
- Caldwell, J.C. and A. Igun (1970). The Spread of Anti-Natal Knowledge and Practice in Nigeria. Population Studies 23(1): 21-34.
- Caldwell, J.C. and H. Ware (1978). The Evolution of Family Planning in an African City: Ibadan, Nigeria. Population Studies 31(3): 487-507.
- Davies, K. and J. Blake (1956). Social Structure and Fertility: An Analytical Framework. Economic Development and Cultural Change 4(3): 211-35.
- Department of National Planning (1984). Report on the Nigeria Economic and Statistical Review 1983. Lagos: National Planning Office.
- Ekanem, I.I. (1972). The 1963 Nigerian Census: A Critical Appraisal. Benin City, Ethiope Press.
- Ekanem, I.I. (1977). The Reliability and Validity of KAP of Family Planning Responses in South-western Nigeria. Paper presented at the IUSSP Mexico Conference.
- Family Planning Council of Nigeria. Annual Reports for 1969-1977.
- Farooq, G.M. and L.A. Adeokun 1976. Impact of a Rural Family Planning Program in Ishan, Nigeria, 1969-1972. Studies in Family Planning 7(6): 158-69.
- Federal Republic of Nigeria (1970). Second National Development Plan 1970-1974. Lagos: Federal Ministry of Information.
- Federal Republic of Nigeria (1975). Third National Development Plan 1975-1980. Lagos: Central Planning Office, Federal Ministry of Economic Development.
- Federal Office of Statistics (FOS) (1963). Population Census of Nigeria, 1963 Combined National Figures. Lagos.
- Federal Office of Statistics (FOS) (1968). Rural Demographic Sample Survey 1965/66. Lagos.
- Federal Office of Statistics (FOS) (1981). Annual Abstract of Statistics. Lagos.
- Huponu-Wusu (1979). The Organization and Implementation of Family Planning Programmes in Nigeria. Unpublished Mimeograph: Department of Mass Communications, University of Lagos.
- Lucas, D. (1973). Survey of Women's Occupation in Lagos. Human Resources Unit, Research Bulletin No 3/001, University of Lagos.
- Morah, B.C. (1979). Knowledge, Attitude and Practice of Family Planning in a Rural Nigerian Community: Igbogbo, Lagos State. Mimeograph: Department of Mass Communication, University of Lagos.
- Morah, B.C. (1980). Registered Births and Deaths in Nigeria. Paper Presented at the Annual Conference of the Population Association of Nigeria, Benin City.
- Morgan, R.W. (1975). Fertility Levels and Fertility Change. In J.C. Caldwell, ed. Population Growth and Socio-Economic Change in West Africa. New York: Population Council.
- National Planning Office (1981). Federal Republic of Nigeria: Fourth National Development Plan 1981-85. Lagos: Federal Ministry of National Planning.
- National Population Bureau (1978). Federal Republic of Nigeria: Mid-year Population Projections by States. Lagos.
- Nortman, Dorothy (1974). Population and Family Planning Programmes: A Fact Book. Reports on Population/Family Planning (December).
- Ogunode, F.A. (1979). Nigeria's Population Policy in Retrospect. Paper Presented at the United Nations Seminar on Population Policies in Nigeria in the 1980s at the University of Lagos.
- Okore, A. (1980). Rural-Urban Fertility Differentials in Southern Nigeria: An Assessment of Some Available Evidence. Population Studies 34(1): 171-9.
- Okoroafor, A.E. (1980). Mortality Differentials in Africa. In UNECA Population Dynamics: Fertility and Mortality in Africa. Addis Ababa.
- Olusanya, P.O. (1969). Rural-Urban Fertility Differentials in Western Nigeria. Population Studies 23(3): 363-78.
- Olusanya, P.O. (1980). Evidence for the Variation and Decline of Mortality in Nigeria. In UNECA Population Dynamics: Fertility and Mortality in Africa. Addis Ababa.

Short, R.V. (1984). Breastfeeding. Scientific American 250(4): 23-9.

Ukaegbu, A.O. (1977). Family Planning Attitudes and Practices in Rural Eastern Nigeria. Studies in Family Planning 8(7): 21-34.

Ukaegbu, A.O. (1980). Nigeria's Population Policy in the 1980s: The Relevance of World

Population Plan of Action and Lessons from Other Developing Countries. Paper Presented at the United Nations Seminar on Population Policies in Nigeria in the 1980s at the University of Lagos.

United Nations Fund for Population Activities (UNFPA) (1980). Nigeria: Report of Mission on Needs Assessment for Population Assistance. New York.





PART III

APPENDICES



## APPENDIX I

## THE HOUSEHOLD SCHEDULE

STRICTLY CONFIDENTIAL

ADDRESS				
STATE _____				
TOWN/VILLAGE _____				
STRUCTURE/COMPOUND NUMBER _____				
ADDRESS/DESCRIPTION OF STRUCTURE/COMPOUND _____				
DWELLING NUMBER _____				
HOUSEHOLD NUMBER _____				
NAME OF HOUSEHOLD HEAD _____				

IDENTIFICATION

E. A. NUMBER \_\_\_\_\_

FINAL HOUSEHOLD NUMBER \_\_\_\_\_

INTERVIEWER CALLS	1	2	3	4
DATE				
INTERVIEWER NAME				
RESULT*				

**\* RESULT CODES**

Completed _____	1	Dwelling unoccupied _____	5
No Competant R. at home _____	2	Dwelling occupied but family away _____	6
Deferred _____	3	Dwelling/household not found or non-existent _____	7
Refused _____	4	Other (specify) _____	

TOTAL NUMBER OF PERSONS LISTED \_\_\_\_\_

TOTAL NUMBER OF ELIGIBLE WOMEN \_\_\_\_\_

LINE NO.	NAMES OF USUAL RESIDENTS AND VISITORS LAST NIGHT	RELATIONSHIP	RESIDENCE		SEX M/F	DATE OF BIRTH		AGE	ELIGIBILITY
			USUAL Y/N	LAST NIGHT Y/N		MONTH	YEAR		
	1	2	3	4	5	6	7	8	9
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

LINE NO.	NAMES OF USUAL RESIDENTS AND VISITORS LAST NIGHT	RELATIONSHIP	RESIDENCE		SEX M/F	DATE OF BIRTH		AGE	EL-IGI-BIL-ITY
			USUAL Y/N	LAST NIGHT Y/N		MONTH	YEAR		
	1	2	3	4	5	6	7	8	9
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									

1. Are there any other persons such as small children or infants that we have not listed?

YES ☐ (ENTER EACH IN TABLE) NO ☐

2. In addition, are there any other people who may not be members of your family, such as domestic servants, friends or lodgers who usually live here?

YES ☐ (ENTER EACH IN TABLE) NO ☐

3. Do you have any guests or visitors temporarily staying with you?

YES ☐ (ENTER EACH IN TABLE) NO ☐

IF CONTINUATION  
SHEET USED TICK  
BOX:

☐

# HOUSEHOLD AMENITIES AND POSSESSIONS

## 10. PRESENCE OF ELECTRICITY INSIDE DWELLINGS

YES ☐ 1

NO ☐ 2

## 11. SOURCE OF WATER SUPPLY

PIPED SUPPLY INSIDE DWELLING ☐ 1

PIPED SUPPLY OUTSIDE DWELLING ☐ 2

HAND/ELECTRIC WATER PUMP ☐ 3

WELL ☐ 4

OTHER ☐ 5

(SPECIFY)

## 12. TOILET FACILITIES

FLUSH ☐ 1

PIT ☐ 2

BUCKET ☐ 3

OTHER ☐ 4

(SPECIFY)

## 13. COOKING FACILITIES

ELECTRIC ☐ 1

GAS ☐ 2

KEROSENE ☐ 3

FIRE-WOOD ☐ 4

OTHER ☐ 5

(SPECIFY)

## DOES HOUSEHOLD OR ANY HOUSEHOLD MEMBER OWN THE FOLLOWING:

YES

NO

14. T.V./RADIO ☐ 1 ☐ 2

15. CLOCK/WATCH ☐ 1 ☐ 2

16. REFRIGERATOR ☐ 1 ☐ 2

17. AIR CONDITIONER/FAN ☐ 1 ☐ 2

18. MOTOR-BICYCLE/CAR ☐ 1 ☐ 2

19. SEWING MACHINE ☐ 1 ☐ 2

20. CASSETTE OR TAPE RECORDER ☐ 1 ☐ 2





# APPENDIX II

## THE INDIVIDUAL QUESTIONNAIRE

CONFIDENTIAL

ADDRESS	
STATE	_____
TOWN/VILLAGE	_____
STRUCTURE/COMPOUND NUMBER	_____
ADDRESS/DESCRIPTION OF STRUCTURE/COMPOUND	_____
DWELLING NUMBER	_____
HOUSEHOLD NUMBER	_____
NAME OF HOUSEHOLD HEAD	_____
NAME OF ELIGIBLE RESPONDENT	_____

IDENTIFICATION
E. A. NUMBER _____
FINAL HOUSEHOLD NUMBER _____
LINE NUMBER OR E. R. _____

21
1
3
8
11

INTERVIEWER CALLS	1	2	3	4
DATE				
INTERVIEWER NAME				
RESULT*				

* RESULT CODES	Spot checked?
Completed _____ 1	YES <input type="checkbox"/> NO <input type="checkbox"/>
R. not at home _____ 2	Re-interviewed?
Deferred _____ 3	YES <input type="checkbox"/> NO <input type="checkbox"/>
Refused _____ 4	Tape-recorded?
Partly completed _____ 5	YES <input type="checkbox"/> NO <input type="checkbox"/>
Other (specify) _____ 6	

13
14
16
18
21
22
23
24

SECTION 1  
RESPONDENT'S BACKGROUND

101. INTERVIEWER: RECORD THE TIME: Hour \_\_\_\_\_ Minute \_\_\_\_\_ 25 27

102. INTERVIEWER: ENTER NAME OF LOCATION AND CIRCLE TYPE OF PLACE

\_\_\_\_\_ (NAME OF LOCATION)

VILLAGE ☐

TOWN ☐

CITY ☐

29

103. Do you live in this house/compound?

YES ☐

NO ☐

(SKIP TO 106)

30

104. Do you live in \_\_\_\_\_ (NAME OF LOCATION)?

YES ☐

NO ☐

(SKIP TO 106)

31

105. Where do you live? PROBE Is this a town or village?  
Which state?

\_\_\_\_\_ (NAME OF LOCATION)

INTERVIEWER: ENTER NAME OF STATE AND CIRCLE TYPE  
OF PLACE

\_\_\_\_\_ (NAME OF STATE)

VILLAGE ☐

TOWN ☐

CITY ☐

32

34

106. Have you lived in \_\_\_\_\_ (NAME OF LOCATION) since  
you were born?

YES ☐

NO ☐

(SKIP TO 109)

35

107. INTERVIEWER: SEE 102 OR 105. PLACE OF RESIDENCE  
IS:

VILLAGE ☐

TOWN ☐

CITY ☐

(SKIP TO 114)

(SKIP TO 114)

36

108. What kind of place would you say this was when  
you were growing up, say to age 12?  
Was it a village or a town?

VILLAGE ☐

TOWN ☐

(SKIP TO 114)

(SKIP TO 114)

37

109. In what kind of area did you live mostly when you were growing up, say up to age 12?  
Was it a village or a town?

VILLAGE ☐ 1  
↓

TOWN/CITY ☐ 2  
(SKIP TO 114)

☐  
38

110. INTERVIEWER: SEE 102 OR 105: PRESENT TYPE OF PLACE OF RESIDENCE IS:

VILLAGE ☐ 1  
↓

TOWN/CITY ☐ 2  
↓

☐  
39

111. Since the age of 12, have you ever lived in any town or city?

YES ☐ 1  
↓

NO ☐ 2  
(SKIP TO 114)

☐  
40

112. Since the age of 12, for how many years altogether did you live in a town or city?

\_\_\_\_\_  
(YEARS)

113. Since the age of 12 for how many years have you lived in this town/city or any other town or city?

\_\_\_\_\_  
(YEARS)

☐  
41

114. Do you know your date of birth?

YES ☐ 1  
↓

NO ☐ 2  
(SKIP TO 116)

☐  
43

115. In what month and year were you born?

\_\_\_\_ 19\_\_\_\_  
(MONTH) (YEAR)

☐  
44 ☐  
46

116. How old are you?

\_\_\_\_\_  
(AGE IN COMPLETED YEARS)

☐  
48

INTERVIEWER: PROBE AND CORRECT ANY INCONSISTENCY BETWEEN 115 AND 116

117. INTERVIEWER: DID RESPONDENT KNOW AGE OR YEAR OF BIRTH?

BOTH AGE AND YEAR  
OF BIRTH UNKNOWN

☐ 1

AGE OR YEAR OF  
BIRTH KNOWN

☐ 2

(SKIP TO 119)

☐  
50

118. INTERVIEWER: CIRCLE BOX TO INDICATE HOW AGE OR YEAR OF BIRTH  
WAS ESTIMATED

CERTIFICATE

☐ 1

HISTORICAL CALENDAR

☐ 2

PERSONAL EVENT

☐ 3

OTHER MEMBER OF H/HOLD

☐ 4

UNRELATED PERSON

☐ 5

APPEARANCE

☐ 6

OTHER

☐ 7

(SPECIFY)

☐  
51

119. Have you ever attended school? IF NO PROBE Any Koranic school?

YES ☐ 1

NO ☐ 2

(SKIP TO 126)

☐  
52

120. What was the highest level of school you attended? Was it  
primary, middle or modern, secondary or university?

KORANIC ☐ 1

PRIMARY ☐ 2

MIDDLE/MODERN ☐ 3

(SKIP TO 126)

SECONDARY ☐ 4

UNIVERSITY ☐ 5

☐  
53

121. What was the highest class or form you completed?

(CLASS OR FORM)

☐  
54

122. After leaving (HIGHEST LEVEL) did you have any other full  
time education?

YES ☐ 1

NO ☐ 2

(SKIP TO 125)

☐  
55

123. What sort of school or college was that?

COMMERCIAL/SECRETARIAL ☐ 1

TEACHERS TRAINING ☐ 2

TECHNICAL ☐ 3

OTHER ☐ 4

(SPECIFY)

☐  
56

124. How many years did you complete at that (SCHOOL/COLLEGE)?

(YEARS)

☐  
57

125. INTERVIEWER: SEE 120. HIGHEST LEVEL ATTENDED WAS:

PRIMARY ☐ 1

MIDDLE/MODERN  
SCHOOLING AND ABOVE ☐ 2

(SKIP TO 128)

☐  
58

126. Have you ever attended any adult literacy class?

YES ☐ 1

NO ☐ 2

☐  
59

127. Can you read - say a letter, newspaper or magazine -  
in any language?

YES ☐ 1

NO ☐ 2

☐  
60

128. What is your tribe?

\_\_\_\_\_  
(SPECIFY)

☐  
61

129. What is your religion?

CHRISTIAN ☐ 1

MOSLEM ☐ 2

TRADIT-  
IONAL ☐ 3

NO  
RELIGION ☐ 4

OTHER ☐ 5

☐  
63

( SKIP TO SECTION 2 )

130. What denomination or church do you belong to?

\_\_\_\_\_  
(SPECIFY)

(SKIP TO SECTION 2)

☐  
64

131.

VERSION OF QUESTIONNAIRE: ENGLISH

☐ 1  
65

SECTION 2  
MATERNITY HISTORY

201. We would like to get a complete record of all the children you have given birth to in all your life. Have you ever given birth to any children?

YES ☐ 1  
(SKIP TO 203)

NO ☐ 2

202. Some children are born alive but die within a few hours or days. Other children die at older ages. Have you ever given birth to any children who have died?

YES ☐ 1  
(SKIP TO 212)

NO ☐ 2  
(SKIP TO 213)

203. Do you have any sons you have given birth to, who are now living with you in this household?

YES ☐ 1

NO ☐ 2  
(SKIP TO 205)

204. How many live with you?

205. Do you have any sons you have given birth to who live somewhere else - not with you in this household?

YES ☐ 1

NO ☐ 2  
(SKIP TO 207)

206. How many do not live with you?

207. Do you have any daughters you have given birth to who are now living with you in this household?

YES ☐ 1

NO ☐ 2  
(SKIP TO 209)

208. How many live with you?

☐ 3 ☐ 1

☐ ☐ ☐ ☐ ☐ ☐  
3

☐ ☐ ☐ ☐  
8

☐ ☐  
11

☐  
13

☐  
14

☐  
15

☐ ☐  
16

☐  
18

☐ ☐  
19

☐  
21

☐ ☐  
22

209. Do you have any daughters you have given birth to who live somewhere else - not with you in this household?

YES ☐ 1

NO ☐ 2

(SKIP TO 211)

☐  
24

210. How many do not live with you?

25

211. Some children are born alive but die within a few hours or days. Others die at older ages. Have you ever given birth to any children who have died?

YES ☐ 1

NO ☐ 2

(SKIP TO 213)

☐  
27

212. How many of your children have died?

BOYS

28

GIRLS

29

213. INTERVIEWER: ADD ANSWERS TO 204, 206, 208, 210, 212 AND ENTER TOTAL HERE

TOTAL

30

NOW ASK:

Just to make sure I have this right, you have had \_\_\_\_\_ births? Is that correct?

(TOTAL)

YES ☐

NO ☐

(PROBE AND CORRECT RESPONSES AS NECESSARY AND THEN PROCEED TO 214)

214. How old were you when you had your first menstrual period?  
IF DK PROBE TO OBTAIN BEST ESTIMATE.

\_\_\_\_\_  
(YEARS OLD)



BECAME PREGNANT ☐ 95  
BEFORE FIRST  
MENSTRUAL PERIOD



NOT YET STARTED ☐ 96  
(SKIP TO SECTION 7)

32

215. How old were you when you first had sexual relations?  
IF DK PROBE TO OBTAIN BEST ESTIMATE

\_\_\_\_\_  
(YEARS OLD)



NOT YET STARTED ☐ 96  
(SKIP TO SECTION 7)

34

216. Are you now pregnant?

YES ☐ 1

NO ☐ 2  
(SKIP TO 219)

DK ☐ 3  
(SKIP TO 219)

☐ ☐  
3 6

217. For how many months have you been pregnant?

\_\_\_\_\_  
(MONTHS)

☐ ☐  
3 7

218. Would you prefer to have a boy or a girl?

BOY ☐ 1

GIRL ☐ 2

EITHER ☐ 3  
UNDECIDED

☐ ☐  
3 9

OTHER ANSWER \_\_\_\_\_ ☐ 4  
(SPECIFY)  
(SKIP TO 220)

219. How many weeks ago did your last period start?

\_\_\_\_\_  
(WEEKS)

MORE THAN ☐ 95  
10 WEEKS AGO

NOT STARTED ☐ 96  
SINCE LAST BIRTH

☐ ☐  
4 0

220. Have you ever had a pregnancy that did not end in a baby born alive? IF NO PROBE I mean have you ever had a pregnancy that lasted for only a few weeks or months?

YES ☐ 1

NO ☐ 2  
(SKIP TO 222;  
IF NO LIVE BIRTH  
SKIP TO SECTION 4)

☐ ☐  
4 2

221. How many such pregnancies have you had?

\_\_\_\_\_  
(NUMBER)

☐ ☐  
4 3

PROCEED WITH 222: IF NO LIVE BIRTH SKIP TO 228,  
LIST EACH NON-LIVE BIRTH AND THEN SKIP TO SECTION 4.



Now I want to ask you some questions about each of your children, whether they are alive or dead, starting from the first one you had

222	223	224	225	226	227
ENTER LIVE-BIRTH NUMBER AND ASK: What was the name of your (first, second, ..... ) child?	Was that child a boy or a girl?	In what month and year was (NAME) born?  IF D.K. YEAR How many years ago was (NAME) born?	Is he/she still living	IF DEAD IN 225 How many years and months old was the child when he/she died?	Was there any time (STATE INTERVAL) when you were pregnant even if only for a few weeks?
					BEFORE 1ST BIRTH YES <input type="checkbox"/> → NO <input type="checkbox"/>
NUMBER NAME	<input type="checkbox"/> 1 BOY <input type="checkbox"/> 2 GIRL	MONTH YEAR IF DK → YEAR YEARS AGO	<input type="checkbox"/> 1 YES <input type="checkbox"/> 2 NO	MONTHS + YEARS	BETWEEN 1ST AND 2ND BIRTH YES <input type="checkbox"/> → NO <input type="checkbox"/>
<input type="checkbox"/> 1 3	<input type="checkbox"/> 1 5	<input type="checkbox"/> 1 6 <input type="checkbox"/> 1 8	<input type="checkbox"/> 2 0	<input type="checkbox"/> 2 1 <input type="checkbox"/> 2 3	
NUMBER NAME	<input type="checkbox"/> 1 BOY <input type="checkbox"/> 2 GIRL	MONTH YEAR IF DK → YEAR YEARS AGO	<input type="checkbox"/> 1 YES <input type="checkbox"/> 2 NO	MONTHS + YEARS	BETWEEN 2ND AND 3RD BIRTH YES <input type="checkbox"/> → NO <input type="checkbox"/>
<input type="checkbox"/> 1 3	<input type="checkbox"/> 1 5	<input type="checkbox"/> 1 6 <input type="checkbox"/> 1 8	<input type="checkbox"/> 2 0	<input type="checkbox"/> 2 1 <input type="checkbox"/> 2 3	
NUMBER NAME	<input type="checkbox"/> 1 BOY <input type="checkbox"/> 2 GIRL	MONTH YEAR IF DK → YEAR YEARS AGO	<input type="checkbox"/> 1 YES <input type="checkbox"/> 2 NO	MONTHS + YEARS	BETWEEN 3RD AND 4TH BIRTH YES <input type="checkbox"/> → NO <input type="checkbox"/>
<input type="checkbox"/> 1 3	<input type="checkbox"/> 1 5	<input type="checkbox"/> 1 6 <input type="checkbox"/> 1 8	<input type="checkbox"/> 2 0	<input type="checkbox"/> 2 1 <input type="checkbox"/> 2 3	
NUMBER NAME	<input type="checkbox"/> 1 BOY <input type="checkbox"/> 2 GIRL	MONTH YEAR IF DK → YEAR YEARS AGO	<input type="checkbox"/> 1 YES <input type="checkbox"/> 2 NO	MONTHS + YEARS	BETWEEN 4TH AND 5TH BIRTH YES <input type="checkbox"/> → NO <input type="checkbox"/>
<input type="checkbox"/> 1 3	<input type="checkbox"/> 1 5	<input type="checkbox"/> 1 6 <input type="checkbox"/> 1 8	<input type="checkbox"/> 2 0	<input type="checkbox"/> 2 1 <input type="checkbox"/> 2 3	
NUMBER NAME	<input type="checkbox"/> 1 BOY <input type="checkbox"/> 2 GIRL	MONTH YEAR IF DK → YEAR YEARS AGO	<input type="checkbox"/> 1 YES <input type="checkbox"/> 2 NO	MONTHS + YEARS	BETWEEN 5TH AND 6TH BIRTH YES <input type="checkbox"/> → NO <input type="checkbox"/>
<input type="checkbox"/> 1 3	<input type="checkbox"/> 1 5	<input type="checkbox"/> 1 6 <input type="checkbox"/> 1 8	<input type="checkbox"/> 2 0	<input type="checkbox"/> 2 1 <input type="checkbox"/> 2 3	

228(a)	229(a)	230(a)	231	228(b)	229(b)	230(b)
How long did that pregnancy last?	IF 7+ MONTHS IN 228 Did that baby show any sign of life?	IF 0-6 MONTHS IN 228 Did you or a doctor or someone else do anything to end that pregnancy?	Was there any other time (STATE INTERVAL) when you were pregnant even if only for a few weeks?	How long did that pregnancy last?	IF 7+ MONTHS IN 228 Did that baby show any sign of life?	IF 0-6 MONTHS IN 228 Did you or a doctor or someone else do anything to end that pregnancy?
MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (SKIP TO 231)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/> (SKIP TO NEXT L.B.)	MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (GO TO NEXT LB)	YES <input type="checkbox"/> NO <input type="checkbox"/>
13 15		17		18		20
MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (SKIP TO 231)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/> (SKIP TO NEXT L.B.)	MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (GO TO NEXT LB)	YES <input type="checkbox"/> NO <input type="checkbox"/>
13 15		17		18		20
MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (SKIP TO 231)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/> (SKIP TO NEXT L.B.)	MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (GO TO NEXT LB)	YES <input type="checkbox"/> NO <input type="checkbox"/>
13 15		17		18		20
MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (SKIP TO 231)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/> (SKIP TO NEXT L.B.)	MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (GO TO NEXT LB)	YES <input type="checkbox"/> NO <input type="checkbox"/>
13 15		17		18		20
MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (SKIP TO 231)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/> (SKIP TO NEXT L.B.)	MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (GO TO NEXT LB)	YES <input type="checkbox"/> NO <input type="checkbox"/>
13 15		17		18		20
MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (SKIP TO 231)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/> (SKIP TO NEXT L.B.)	MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (GO TO NEXT LB)	YES <input type="checkbox"/> NO <input type="checkbox"/>
13 15		17		18		20
MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (SKIP TO 231)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/> (SKIP TO NEXT L.B.)	MONTHS	YES <input type="checkbox"/> (TRANSFER TO L.B.) NO <input type="checkbox"/> (GO TO NEXT LB)	YES <input type="checkbox"/> NO <input type="checkbox"/>
13 15		17		18		20

233. INTERVIEWER: SEE BIRTH HISTORY

ONE OR MORE LIVING  
SONS AGED 15 YEARS  
OR MORE (BORN IN  
1966 OR EARLIER)

1



NO LIVING  
SON AGED  
15 YEARS  
OR MORE

2

(SKIP TO 237)

234. Have any of your sons attended secondary,  
secretarial, commercial or trade school?

YES 1



NO 2



235. Do any of your sons have children of their own?

YES 1



NO 2



(SKIP TO 237)

236. How old is the eldest of your son's children?

(AGE)



237. INTERVIEWER: SEE BIRTH HISTORY

ONE OR MORE LIVING  
DAUGHTERS AGED 15  
YEARS OR MORE (BORN  
IN 1966 OR EARLIER)

1



NO LIVING  
DAUGHTER AGED  
15 YEARS OR  
MORE

2

(SKIP TO SECTION 3)

238. Have any of your daughters attended secondary,  
secretarial, commercial or trade school?

YES 1



NO 2



239. Do any of your daughters have children of their  
own?

YES 1



NO 2



(SKIP TO SECTION 3)

240. How old is the eldest of your daughter's children?

(AGE)

5 1

1

3

8

11

13

14

15

16

18

19

20

21

SECTION 3  
BIRTH INTERVALS AND BREAST-FEEDING

A. DETAILS ABOUT LAST CHILD

301. INTERVIEWER: SEE BIRTH HISTORY

ONE OR MORE LIVE-BIRTHS ☐

NO LIVE-BIRTH ☐

(SKIP TO SECTION 4)

☐  
23

302. Now I would like to ask you some more questions about  
(NAME OF LAST CHILD OR "YOUR MOST RECENT  
CHILD WHO LATER DIED"). When you were pregnant with this  
child, did you go to any clinic, health centre or hospital  
for treatment or check-up?

YES ☐

NO ☐

☐  
24

303. Was this child delivered at home, clinic or hospital?

HOME ☐

CLINIC/HOSPITAL ☐

OTHER ☐

(SPECIFY)

☐  
25

304. Who attended you during the delivery?

NO ONE ☐

FAMILY MEMBER ☐

TRADITIONAL BIRTH  
ATTENDANT ☐

TRAINED MIDWIFE  
OR NURSE ☐

DOCTOR ☐

OTHER ☐

(SPECIFY)

☐  
26

305. Was (NAME OF LAST CHILD) given any injection/innoculation in  
the arm at any time in the first few months to prevent him/her  
getting diseases?

YES ☐

NO ☐

☐  
27

306. Did you ever breast-feed this child?

YES ☐

NO ☐

(SKIP TO 316)

☐  
28

307. INTERVIEWER: SEE BIRTH HISTORY

LAST CHILD DIED BEFORE AGE 5 YEARS ☐ 1 ALL OTHERS ☐ 2  
↓ (SKIP TO 311)

☐  
29

308. Did you breast-feed him/her right up until the day of death?

YES ☐ 1 NO ☐ 2  
(SKIP TO 314) ↓

☐  
30

309. Why did you stop breast-feeding him/her?

CHILD TOO ☐ 1 OTHER ☐ 2  
WEAK OR ILL (SKIP TO 313)  
↓

☐  
31

310. How long after you stopped breast-feeding did the child die?

\_\_\_\_ + \_\_\_\_  
(MONTHS) (WEEKS)  
(SKIP TO 314)

☐ ☐ ☐  
32 34

311. INTERVIEWER: SEE BIRTH HISTORY

CHILD ALIVE AND ☐ 1 ALL OTHERS ☐ 2  
AGED LESS THAN 5 YEARS (SKIP TO 313)  
(BORN 1976 OR LATER) ↓

☐  
36

312. Are you still breast-feeding him/her?

YES ☐ 1 NO ☐ 2  
(SKIP TO 314) ↓

☐  
37

313. For how many months altogether did you breast-feed him/her?  
PROBE How many months old was he/she when you completely stopped breast-feeding?

\_\_\_\_  
(MONTHS)  
(SKIP TO 315)

☐ ☐  
38

314. Did you ever give (NAME OF LAST CHILD) bottle milk, pap or any solid food?

YES ☐ 1 NO ☐ 2  
↓ (SKIP TO 316)

☐  
40

315. How many months old was the child when you began giving him/her bottle milk, pap or any solid food?

\_\_\_\_  
(MONTHS)

☐ ☐  
41

316. INTERVIEWER: SEE BIRTH HISTORY AND 216 ON PAGE 8.

NO PREGNANCIES SINCE  
BIRTH OF LAST CHILD

☐ 1



ONE OR MORE  
PREGNANCIES  
(INCLUDING CURRENT)  
SINCE BIRTH OF  
LAST CHILD

☐ 2

(SKIP TO 318)

☐  
4 3

317. Since the birth of (NAME OF LAST CHILD) have your  
periods come back?

YES

☐ 1



NO

☐ 2

(SKIP TO 320)

☐  
4 4

318. How many months after the birth of this child did your  
periods come back?

\_\_\_\_\_  
(MONTHS)

BECAME PREGNANT AGAIN,  
BEFORE MENSTRUATION RETURNED

☐ 96

☐  
4 5

319. INTERVIEWER: SEE 316

NO PREGNANCIES SINCE  
BIRTH OF LAST CHILD

☐ 1



ONE OR MORE  
PREGNANCIES  
(INCLUDING CURRENT)  
SINCE BIRTH OF LAST CHILD

☐ 2

(SKIP TO 321)

☐  
4 7

320. Since the birth of (NAME OF LAST CHILD) have you started  
sexual relations?

YES

☐ 1



NO

☐ 2

(SKIP TO 322)

☐  
4 8

321. How many months after the birth of this child did  
you resume sexual relations?

\_\_\_\_\_  
(MONTHS)

(SKIP TO 324)

☐  
4 9

322. In how many months do you expect to resume sexual relations?

NEVER

☐ 96

OTHER

☐ 97

\_\_\_\_\_  
(MONTHS)

(SKIP TO 324)

(SPECIFY)

(SKIP TO 324)

☐  
5 1

323. Why not?

.....  
.....

☐  
5 3

B. DETAILS ABOUT LAST-BUT-ONE CHILD

324. INTERVIEWER: SEE BIRTH HISTORY

2 OR MORE  
LIVE-BIRTHS ☐

☐


ONLY ONE  
LIVE-BIRTH ☐

(SKIP TO SECTION 4)

☐

13

325. Now I would like to ask you some questions about  
(NAME OF LAST-BUT-ONE CHILD OR "YOUR LAST-BUT-ONE CHILD WHO  
DIED"). When you were pregnant with this child, did you  
go to any clinic, health centre or hospital for treatment  
or check-up?

YES ☐

NO ☐

☐

14

326. Was this child delivered at home, clinic or hospital?

HOME ☐

CLINIC/HOSPITAL ☐

OTHER ☐

(SPECIFY)

☐

15

327. Who attended you during the delivery?

NO ONE ☐

FAMILY MEMBER ☐

TRAD. BIRTH ☐

ATTENDANT

☐

16

TRAINED ☐  
MIDWIFE  
OR NURSE

DOCTOR ☐

OTHER ☐

(SPECIFY)

☐

17

328. Was (NAME OF LAST-BUT-ONE CHILD) given any injection/  
innoculation in the arm at any time in the first few  
months to prevent him/her getting diseases?

YES ☐

NO ☐

☐

17

329. Did you ever breast-feed this child?

YES ☐



NO ☐

(SKIP TO 337)

☐

18

330. INTERVIEWER: SEE BIRTH HISTORY

LAST-BUT-ONE CHILD DIED ☐ 1  
BEFORE AGE 5 YEARS

ALL OTHERS ☐ 2  
(SKIP TO 334)

☐  
19

331. Did you breast-feed him/her right up until the day of death?

YES ☐ 1  
(SKIP TO 336)

NO ☐ 2  
↓

☐  
20

332. Why did you stop breast-feeding him/her?

CHILD TOO WEAK OR ILL ☐ 1  
↓

OTHER ☐ 2  
(SKIP TO 334)

☐  
21

333. How long after you stopped breast-feeding did the child die?

\_\_\_\_\_ + \_\_\_\_\_  
(MONTHS) (WEEKS)  
(SKIP TO 336)

☐ ☐ ☐  
22 24

334. For how many months altogether did you breast-feed him/her?  
PROBE How many months old was he/she when you completely stopped breast-feeding?

\_\_\_\_\_  
(MONTHS)

☐ ☐  
26

335. Were you still breast-feeding him/her when you became pregnant again or had you stopped?

STILL WAS ☐ 1  
BREAST-FEEDING

HAD ☐ 2  
STOPPED

☐  
28

336. How many months old was the child when you began giving him/her bottle milk, pap or any solid food?

\_\_\_\_\_  
(MONTHS)

CHILD DIED BEFORE ☐ 96  
SUPPLEMENTARY FOOD

☐ ☐  
29

337. How many months after the birth of (NAME OF LAST-BUT-ONE CHILD), did your periods come back?

\_\_\_\_\_  
(MONTHS)

BECAME PREGNANT ☐ 96  
AGAIN BEFORE  
MENSTRUATION RETURNED

☐ ☐  
31

338. How many months after the birth of this child, did you resume sexual relations?

\_\_\_\_\_  
(MONTHS)

☐ ☐  
33



C. DETAILS ABOUT LAST-BUT-TWO CHILD

339. INTERVIEWER: SEE BIRTH HISTORY

3 OR MORE  
LIVE BIRTHS ☐ 1  
↓

ONLY TWO  
LIVE BIRTHS ☐ 2  
(SKIP TO SECTION 4)

☐  
35

340. LAST-BUT-TWO LIVE  
BIRTH OCCURRED  
LESS THAN 5 YEARS  
AGO (BORN 1977 OR  
LATER) ☐ 1  
↓

LAST-BUT-TWO  
LIVE BIRTH  
OCCURRED 5 OR  
MORE YEARS AGO ☐ 2  
(SKIP TO SECTION 4)

☐  
36

341. Now I would like to ask you some questions about \_\_\_\_\_  
(NAME OF LAST-BUT-TWO CHILD OR "YOUR LAST-BUT-TWO CHILD WHO  
LATER DIED"). When you were pregnant with this child, did  
you go to any clinic, health centre or hospital for treatment  
or check-up?

YES ☐ 1

NO ☐ 2

☐  
37

342. Was this child delivered at home, clinic or hospital?

HOME ☐ 1

CLINIC/HOSPITAL ☐ 2

OTHER \_\_\_\_\_ ☐ 3  
(SPECIFY)

☐  
38

3.3. Who attended you during the delivery?

NO ONE ☐ 1

FAMILY MEMBER ☐ 2

TRADITIONAL BIRTH  
ATTENDANT ☐ 3

☐  
39

TRAINED MIDWIFE  
OR NURSE ☐ 4

DOCTOR ☐ 5

OTHER \_\_\_\_\_ ☐ 6  
(SPECIFY)

344. Was (NAME OF LAST-BUT-TWO CHILD) given any injection/  
innoculation in the arm at any time in the first few months  
to prevent him/her getting diseases?

YES ☐ 1

NO ☐ 2

☐  
40

345. Did you ever breast-feed this child?

YES ☐ 1  
↓

NO ☐ 2

(SKIP TO 353)

☐  
41

346. INTERVIEWER: SEE BIRTH HISTORY

LAST-BUT-TWO CHILD  
DIED BEFORE AGE 5 YEARS ☐ 1

ALL OTHERS ☐ 2  
(SKIP TO 350)

☐  
42

347. Did you breast-feed the child right up until the day of death?

YES ☐ 1  
(SKIP TO 352)

NO ☐ 2  
↓

☐  
43

348. Why did you stop breast-feeding him/her?

CHILD TOO WEAK OR ILL ☐ 1  
↓

OTHER ☐ 2  
(SKIP TO 350)

☐  
44

349. How long after you stopped breast-feeding did the child die?

\_\_\_\_\_  
(MONTHS) + \_\_\_\_\_  
(WEEKS)  
(SKIP TO 352)

☐☐☐ ☐☐☐  
45 47

350. For how many months altogether did you breast-feed him/her?  
PROBE How many months old was he/she when you completely stopped breast-feeding?

\_\_\_\_\_  
(MONTHS)

☐☐☐  
49

351. Were you still breast-feeding him/her when you became pregnant again or had you stopped?

STILL WAS  
BREAST-FEEDING ☐ 1

HAD  
STOPPED ☐ 2

☐  
51

352. How many months old was the child when you began giving him/her bottle milk, pap or any solid food?

\_\_\_\_\_  
(MONTHS) CHILD DIED BEFORE  
SUPPLEMENTARY FOOD ☐ 96

☐☐☐  
52

353. How many months after the birth of (NAME OF LAST-BUT-TWO CHILD) did your periods come back?

\_\_\_\_\_  
(MONTHS) BECAME PREGNANT  
AGAIN BEFORE ☐ 96  
MENSTRUATION RETURNED

☐☐☐  
54

354. How many months after the birth of this child, did you resume sexual relations?

\_\_\_\_\_  
(MONTHS)

☐☐☐  
56

SECTION 4  
MARRIAGE HISTORY

401. Have you ever been married?

YES ☐ 1  
↓

NO ☐ 2  
(SKIP TO 403)

☐  
13

402. Are you now married, widowed, divorced or separated?

MARRIED ☐ 1  
(SKIP TO 405)

WIDOWED ☐ 2  
(SKIP TO 404)

DIVORCED/  
SEPARATED ☐ 3  
(SKIP TO 404)

☐  
14

403. Have you ever had a husband or a male partner?

YES ☐ 1  
↓

NO ☐ 2  
(SKIP TO 409 AND CIRCLE BOX 3)

☐  
15

404. Do you now have a husband or a male partner?

YES ☐ 1  
↓

NO ☐ 2  
(SKIP TO 409 AND CIRCLE BOX 2)

☐  
16

405. Are you and your husband/partner now living for most of the time together in the same household/compound?

YES ☐ 1  
(SKIP TO 407)

NO ☐ 2  
↓

☐  
17

406. Is he away for the time being, or do you live in different households or have you stopped living as husband and wife for good?

AWAY FOR  
TIME BEING ☐ 1  
↓

LIVE IN  
DIFFERENT  
HOUSEHOLDS ☐ 2  
↓

STOPPED LIVING  
AS HUSBAND AND  
WIFE FOR GOOD ☐ 3  
(SKIP TO 409 AND  
CIRCLE BOX 2)

☐  
18

6	1
1	
3	
8	
11	

407. In what month and year did you and your husband/partner begin living as man and wife? PROBE Did you start sexual relations with your husband at this time?

\_\_\_\_\_  
MONTH                      19 \_\_\_\_  
YEAR  
(SKIP TO 409 AND CIRCLE BOX 1)

D.K. ☐ 98

☐ ☐ ☐ ☐  
19                      21

408. How old were you at that time? PROBE Did you start sexual relations with your husband at this age?

\_\_\_\_\_  
(AGE IN COMPLETED YEARS)

(CIRCLE BOX 1 in 409)

☐ ☐  
23

409.

CURRENTLY  
MARRIED/  
IN A UNION ☐ 1

WIDOWED,  
DIVORCED,  
SEPARATED ☐ 2

NEVER  
MARRIED ☐ 3

(SKIP TO 420)

(SKIP TO SECTION 5)

☐  
25

410. Does your husband have other wives?

YES ☐ 1

NO ☐ 2

D.K. ☐ 3

(SKIP TO 413)

(SKIP TO 413)

☐  
26

411. How many wives, including yourself, does he have?

\_\_\_\_\_  
NUMBER                      D.K. ☐ 98

☐ ☐  
27

412. Are you the first, second ..... wife?

\_\_\_\_\_  
NUMBER                      D.K. ☐ 98

☐ ☐  
29

413. INTERVIEWER: SEE 320, PAGE 20

ALL OTHERS ☐ 1

SEXUAL RELATIONS ☐ 2  
NOT RESUMED  
SINCE LAST BIRTH  
(SKIP TO 419)

414. Have you had sexual relations with your husband/partner in the last one month?

YES ☐ 1  
(SKIP TO 419)

NO ☐ 2

415. How many months have passed since you last had sexual relations with your husband/partner?

\_\_\_\_\_  
(MONTHS)

416. Do you expect to resume sexual relations with your husband sometime in the future?

YES ☐ 1

NO ☐ 2

OTHER \_\_\_\_\_ ☐ 3

\_\_\_\_\_  
(SPECIFY)  
(SKIP TO 419)

417. In how many months do you expect to resume sexual relations with your husband/partner?

\_\_\_\_\_  
MONTHS  
D.K. ☐ 9 ☐ 8

418. Why not?

419. Have you been married more than once?

YES ☐ 1

NO ☐ 2  
(SKIP TO SECTION 5)

420. How many times altogether have you been married?

\_\_\_\_\_  
(NUMBER OF MARRIAGES INCLUDING CURRENT IF ANY)

INTERVIEWER: FOR EACH MARRIAGE ASK 421-427 (IF CURRENTLY MARRIED THE NUMBER OF ENTRIES WILL BE ONE LESS THAN THE ANSWER TO 420.)			
<p>421. In what month and year did you and your (first, second) husband/partner begin living together as man and wife?</p> <p>IF D.K. YEAR</p> <p>422. How old were you at that time? PROBE Did you start sexual relations with him at that time/age?</p>	<p>423. While you were married to him, did your (first, second) husband/partner have any other wives?</p> <p>IF YES.</p> <p>424. How many?</p>	<p>425. How did the marriage end?</p>	<p>426. IF DEATH In what month and year did he die?</p> <p>IF DIVORCE/ SEPARATION</p> <p>In what month and year did you stop living together?</p> <p>IF D.K. YEAR</p> <p>427. How long did the marriage last?</p>
<p>1. MONTH</p> <p>YEAR</p> <p>IF DK</p> <p>AGE</p>	<p>YES 1 NO/ DK 2</p> <p>NUMBER</p>	<p>DEATH 1</p> <p>DIVORCE/ SEPARATION 2</p>	<p>MONTH</p> <p>YEAR</p> <p>IF DK</p> <p>DURATION IN YEARS</p>
<p>2. MONTH</p> <p>YEAR</p> <p>IF DK</p> <p>AGE</p>	<p>YES 1 NO/ DK 2</p> <p>NUMBER</p>	<p>DEATH 1</p> <p>DIVORCE/ SEPARATION 2</p>	<p>MONTH</p> <p>YEAR</p> <p>IF DK</p> <p>DURATION IN YEARS</p>
<p>3. MONTH</p> <p>YEAR</p> <p>IF DK</p> <p>AGE</p>	<p>YES 1 NO/ DK 2</p> <p>NUMBER</p>	<p>DEATH 1</p> <p>DIVORCE/ SEPARATION 2</p>	<p>MONTH</p> <p>YEAR</p> <p>IF DK</p> <p>DURATION IN YEARS</p>
<p>4. MONTH</p> <p>YEAR</p> <p>IF DK</p> <p>AGE</p>	<p>YES 1 NO/ DK 2</p> <p>NUMBER</p>	<p>DEATH 1</p> <p>DIVORCE/ SEPARATION 2</p>	<p>MONTH</p> <p>YEAR</p> <p>IF DK</p> <p>DURATION IN YEARS</p>

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SECTION 5  
CONTRACEPTIVE KNOWLEDGE AND USE

501. INTERVIEWER: CIRCLE ALL BOXES THAT APPLY:  
PRESENCE OF OTHERS AT THIS POINT

	PRESENT	NOT PRESENT
CHILDREN UNDER 10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HUSBAND	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
OTHER MALES AGED 10+	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
OTHER FEMALES AGED 10+	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

502. Now I want to talk about a somewhat different topic. As you may know, there are various methods that women or men can use to delay or avoid becoming pregnant. These ways or methods are called family planning or contraception. Do you know of, or have heard of, any of these methods?

YES ☒

NO ☒

(SKIP TO 505)

503. Which methods do you know of? PROBE Do you know of any others including traditional ones?

(SPECIFY)

INTERVIEWER: RECORD ANSWERS. THEN PROCEED TO COLUMN 1 AND CIRCLE THE BOXES CORRESPONDING TO THE METHODS MENTIONED. FOR EACH METHOD ASK THE QUESTIONS THAT APPLY TO THAT METHOD. THEN ASK 504.

504. There are some other methods which you have not mentioned, and I would like to find out if you have heard of them.

INTERVIEWER: FOR EACH METHOD NOT CIRCLED READ THE DESCRIPTION AND ASK THE QUESTIONS THAT APPLY TO THAT METHOD THEN CONTINUE WITH 528.

505. Just to make sure, let me describe some methods to see if you have heard of them.

INTERVIEWER: FOR EACH METHOD IN THE TABLE READ THE DESCRIPTION AND ASK THE QUESTIONS THAT APPLY TO THAT METHOD THEN CONTINUE WITH 528.

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COL. 1 FROM 502, 503		COL. 2 EVER-USED
PILL <input type="checkbox"/>	<p>506(a) One way a woman can delay, or avoid getting pregnant, is to take a pill every day. Have you ever heard of this method?</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/>  ↓ (SKIP TO NEXT UNCIRCLED METHOD)</p> <p>506(b) Have you ever used this method?</p> <p>CIRCLE RESPONSE IN COL. 2</p> <p>IF YES, GO TO NEXT UNCIRCLED METHOD  IF NO  ↓</p> <p>506(c) If you yourself wanted to use this method, do you know any place or person where you could get it?</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/></p>	<p><input type="checkbox"/> 18</p> <p><input type="checkbox"/> 19</p> <p><input type="checkbox"/> 20</p>
INJECTION <input type="checkbox"/>	<p>507(a) A woman may have an injection which will prevent her from getting pregnant. Have you ever heard of this method?</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/>  ↓ (SKIP TO NEXT UNCIRCLED METHOD)</p> <p>507(b) Have you ever used this method?</p> <p>CIRCLE RESPONSE IN COL. 2</p> <p>IF YES, GO TO NEXT UNCIRCLED METHOD  IF NO  ↓</p> <p>507(c) If you yourself wanted to use this method, do you know any place or person where you would get it?</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/></p>	<p><input type="checkbox"/> 21</p> <p><input type="checkbox"/> 22</p> <p><input type="checkbox"/> 23</p>



COL. 1 FROM 502, 503		COL. 2 EVER-USED
<p>LOOP 1</p>	<p>508(a) A woman may have a loop or coil of plastic or metal, the intra-uterine device (IUD) inserted in her womb by a doctor or nurse and left there. Have you ever heard of this method?</p> <p>YES 2                      NO 3</p> <p>↓ (SKIP TO NEXT UNCIRCLED METHOD)</p> <p>508(b) Have you ever used this method?</p> <p>CIRCLE RESPONSE IN COL. 2</p> <p>IF YES, GO TO NEXT UNCIRCLED METHOD</p> <p>IF NO ↓</p> <p>508(c) If you yourself wanted to use this method, do you know any place or person where you could get it?</p> <p>YES 1                      NO 2</p>	<p>24</p> <p>25</p> <p>26</p>
<p>OTHER FEMALE SCIENTIFIC 1</p>	<p>509(a) A woman may also use other methods to avoid getting pregnant, such as placing a diaphragm or tampon or sponge or foam tablets, such as rendells, or jelly or cream in themselves before sex. Have you ever heard of any of these methods?</p> <p>YES 2                      NO 3</p> <p>↓ (SKIP TO NEXT UNCIRCLED METHOD)</p> <p>509(b) Have you ever used any of these methods?</p> <p>CIRCLE RESPONSE IN COL. 2</p> <p>IF YES, GO TO NEXT UNCIRCLED METHOD</p> <p>IF NO ↓</p> <p>509(c) If you yourself wanted to use any of these methods, do you know any place or person where you could get them?</p> <p>YES 1                      NO 2</p>	<p>27</p> <p>28</p> <p>29</p>

COL. 1 FROM 502, 503		COL. 2 EVER-USED
<p>DOUCHE</p> <p><input type="checkbox"/> 1</p>	<p>510(a) Some women wash themselves out immediately after sex, with water or perhaps some other liquid for the purpose of avoiding pregnancy. Have you ever heard of this method?</p> <p>YES <input type="checkbox"/> 2                      NO <input type="checkbox"/> 3</p> <p>↓</p> <p>(SKIP TO NEXT UNCIRCLED METHOD)</p> <p>510(b) Have you ever used this method?</p> <p>CIRCLE RESPONSE IN COL. 2</p>	<p>YES <input type="checkbox"/> 1</p> <p>NO <input type="checkbox"/> 2</p>
<p>ABORTION</p> <p><input type="checkbox"/> 1</p>	<p>511(a) Some women do something or have something done after they become pregnant in order to avoid having a child. This is called an abortion. Have you ever heard of this method?</p> <p>YES <input type="checkbox"/> 2                      NO <input type="checkbox"/> 3</p>	
<p>RHYTHM</p> <p><input type="checkbox"/> 1</p>	<p>512(a) Some couples avoid having sex on particular days of the month between menstruation periods 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?</p> <p>YES <input type="checkbox"/> 2                      NO <input type="checkbox"/> 3</p> <p>↓</p> <p>(SKIP TO NEXT UNCIRCLED METHOD)</p> <p>512(b) Did you (and your husband) ever do this?</p> <p>CIRCLE RESPONSE IN COL. 2</p>	<p>YES <input type="checkbox"/> 1</p> <p>NO <input type="checkbox"/> 2</p>

☐ 30

☐ 31

☐ 32

☐ 33

☐ 34

COL. 1 FROM 502, 503		COL. 2 EVER-USED
<p>WITHDRAWAL</p> <p><input type="checkbox"/> 1</p>	<p>513(a) Some men practise withdrawal: that is, they are careful and pull out before climax. Have you ever heard of this method?</p> <p>YES <input type="checkbox"/> 2      NO <input type="checkbox"/> 3</p> <p>↓ (SKIP TO NEXT UNCIRCLED METHOD)</p> <p>513(b) Did you (and your husband) ever use this method?</p> <p>CIRCLE RESPONSE IN COL. 2</p>	<p>YES <input type="checkbox"/> 1</p> <p>NO <input type="checkbox"/> 2</p>
<p>ABSTAIN</p> <p><input type="checkbox"/> 1</p>	<p>514(a) Another way is to go without sex for several months or longer to avoid getting pregnant. Have you ever heard of this being used?</p> <p>YES <input type="checkbox"/> 2      NO <input type="checkbox"/> 3</p> <p>↓ (SKIP TO NEXT UNCIRCLED METHOD)</p> <p>514(b) Have you ever done this to avoid getting pregnant?</p> <p>CIRCLE RESPONSE IN COL. 2</p>	<p>YES <input type="checkbox"/> 1</p> <p>NO <input type="checkbox"/> 2</p>
<p>CONDOM</p> <p><input type="checkbox"/> 1</p>	<p>515(a) A method men use so that their wives will not get pregnant is to use a rubber or durex or condom during sex. Have you ever heard of this method?</p> <p>YES <input type="checkbox"/> 2      NO <input type="checkbox"/> 3</p> <p>↓ (SKIP TO NEXT UNCIRCLED METHOD)</p> <p>515(b) Did you (and your husband) ever use this method?</p> <p>CIRCLE RESPONSE IN COL. 2</p>	<p>YES <input type="checkbox"/> 1</p> <p>NO <input type="checkbox"/> 2</p>

☐ 35

☐ 36

☐ 37

☐ 38

☐ 39

☐ 40

COL. 1 FROM 502, 503		COL. 2 EVER-USED
<b>FEMALE STER- ILIZATION</b> <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center; margin: 5px auto;">1</div>	<p>516. 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?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             YES <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">2</div>              ↓           </div> <div style="text-align: center;">             NO <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">3</div>              (SKIP TO NEXT UNCIRCLED METHOD)           </div> </div> <p>517. INTERVIEWER: SEE 216, PAGE 8</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             CURRENTLY PREGNANT <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">1</div>              (SKIP TO NEXT UNCIRCLED METHOD)           </div> <div style="text-align: center;">             NOT PREGNANT DK <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">2</div>              ↓           </div> </div> <p>518. Have you had such an operation in order not to have any more children?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             YES <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">1</div>              ↓           </div> <div style="text-align: center;">             NO <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">2</div>              (SKIP TO NEXT UNCIRCLED METHOD)           </div> </div> <p>519. In what month and year did you have the operation?</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">             _____              MONTH           </div> <div style="text-align: center;">             19_____              YEAR           </div> </div>	<div style="text-align: center; margin-top: 20px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              41           </div> <div style="text-align: center; margin-top: 20px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              42           </div> <div style="text-align: center; margin-top: 20px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              43           </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              44           </div> <div style="text-align: center;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              46           </div> </div>
<b>VASECTOMY</b> <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center; margin: 5px auto;">1</div>	<p>520. Some men have an operation called vasectomy in order not to have more children. Have you heard of this method?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             YES <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">2</div>              ↓           </div> <div style="text-align: center;">             NO <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">3</div>              (SKIP TO NEXT UNCIRCLED METHOD)           </div> </div> <p>521. INTERVIEWER: SEE 409, PAGE 26</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             CURRENTLY MARRIED <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">1</div>              ↓           </div> <div style="text-align: center;">             NEVER MARRIED, SEPARATED, DIVORCED, WIDOWED <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">2</div>              (SKIP TO NEXT UNCIRCLED METHOD)           </div> </div> <p>522. Has your husband had such an operation?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             YES <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">1</div>              ↓           </div> <div style="text-align: center;">             NO <div style="border: 1px solid black; width: 20px; height: 20px; text-align: center;">2</div>              (SKIP TO NEXT UNCIRCLED METHOD)           </div> </div> <p>523. In what month and year did he have the operation?</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">             _____              MONTH           </div> <div style="text-align: center;">             19_____              YEAR           </div> </div>	<div style="text-align: center; margin-top: 20px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              48           </div> <div style="text-align: center; margin-top: 20px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              49           </div> <div style="text-align: center; margin-top: 20px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              50           </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              51           </div> <div style="text-align: center;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div>              53           </div> </div>

COL. 1 FROM 502, 503		COL. 2 EVER-USED
<p>HERBS 1</p>	<p>524(a) Some women drink herbs to avoid getting pregnant. Have you heard of this method?</p> <p>YES 2                      NO 3</p> <p style="text-align: center;">↓</p> <p style="text-align: right;">(SKIP TO NEXT UNCIRCLED METHOD)</p> <p>524(b) Did you ever use this method?</p> <p style="text-align: center;">CIRCLE RESPONSE IN COL. 2</p>	<p>YES 1</p> <p>NO 2</p>
<p>ARMBANDS, WAISTBANDS 1 OR NECKBANDS</p>	<p>525(a) Some women wear a special band round their arms, or neck, or waist in order to avoid getting pregnant. Have you heard of this method?</p> <p>YES 2                      NO 3</p> <p style="text-align: center;">↓</p> <p style="text-align: right;">(SKIP TO NEXT UNCIRCLED METHOD)</p> <p>525(b) Did you ever use this method?</p> <p style="text-align: center;">CIRCLE RESPONSE IN COL. 2</p>	<p>YES 1</p> <p>NO 2</p>
<p>RINGS ON 1 FINGER</p>	<p>526(a) Some women wear special rings on their fingers to avoid getting pregnant. Have you ever heard of this method?</p> <p>YES 2                      NO 3</p> <p style="text-align: center;">↓</p> <p style="text-align: right;">(SKIP TO NEXT UNCIRCLED METHOD)</p> <p>526(b) Did you ever use this method?</p> <p style="text-align: center;">CIRCLE RESPONSE IN COL. 2</p>	<p>YES 1</p> <p>NO 2</p>

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529. INTERVIEWER: SEE 506 - 528 (Col. 2)

AT LEAST ONE ☐ 1  
'YES' IN COL. 2  
= EVER USED  
(SKIP TO 533)

NOT A SINGLE ☐ 2  
YES IN COL. 2  
= NEVER USED

530. I want to make sure that I have the correct information. Have you ever done anything or tried in any way to delay or avoid getting pregnant?

YES ☐

NO ☐

531. What method was that?  
INTERVIEWER: GO BACK  
AND CORRECT LIST OF  
METHODS AND 529 AS  
APPROPRIATE AND PROCEED  
WITH 533

532. Do you think that you will use any method at any time in the future so that you will not become pregnant?

YES ☐ 1 NO ☐ 2 D.K. ☐ 3  
(SKIP TO SECTION 6)

533. INTERVIEWER: SEE 409, PAGE 26.

CURRENTLY ☐ 1  
MARRIED

NEVER MARRIED, ☐ 2  
DIVORCED, SEPARATED,  
WIDOWED

(SKIP TO 537)

534. INTERVIEWER: SEE 216, PAGE 8.

CURRENTLY ☐ 1  
PREGNANT

NOT CURRENTLY ☐ 2  
PREGNANT

(SKIP TO 537)

535. Are you or your husband (partner) currently using any method to keep you from getting pregnant?

YES ☐ 1

NO ☐ 2  
(SKIP TO 537)

536. What method are you or your husband (partner) using?

\_\_\_\_ (METHOD)  
( SKIP TO 541 )

7	2
1	
3	
8	
11	
13	

14

15

16

17

18	

537. INTERVIEWER: SEE BIRTH HISTORY

NO LIVE BIRTH

☐ 1

ONE OR MORE  
LIVE-BIRTHS

☐ 2

(SKIP TO 539)

☐  
2 0

538. What was the last contraceptive method you used?

\_\_\_\_\_ (METHOD)

(SKIP TO SECTION 6)

☐  
2 1

539. Have you used any contraceptive method since the birth  
of \_\_\_\_\_ (NAME OF LAST LIVE-BIRTH)?

YES

☐ 1

NO

☐ 2

(SKIP TO 541)

☐  
2 3

540. What was the last contraceptive method you used?

\_\_\_\_\_ (METHOD)

☐  
2 4

541. INTERVIEWER: SEE BIRTH HISTORY

ONLY ONE-LIVE  
BIRTH

☐ 1

TWO OR MORE  
LIVE BIRTHS

☐ 2

(SKIP TO 544)

☐  
2 6

542. Think back to the time before you became pregnant  
with \_\_\_\_\_ (NAME OF LAST LIVE-BIRTH).  
Was there any time when you were using any method  
to keep you from getting pregnant?

YES

☐ 1

NO

☐ 2

(SKIP TO SECTION 6)

☐  
2 7

543. What method were you using?

\_\_\_\_\_ (METHOD)

(SKIP TO SECTION 6)

☐  
2 8



544. Think back to the time between the birth of \_\_\_\_\_  
(NAME OF LAST-BUT-ONE LIVE-BIRTH) and of \_\_\_\_\_  
(NAME OF LAST LIVE-BIRTH). Was there any time in that  
interval when you were using a method to keep you from  
getting pregnant?

YES ☐ 1



NO ☐ 2

(SKIP TO 546)

☐  
30

545. What method were you using?

\_\_\_\_\_ (METHOD)

☐  
31

546. INTERVIEWER: SEE BIRTH HISTORY

ONLY TWO  
LIVE-BIRTHS ☐ 1

(SKIP TO SECTION 6)

THREE OR  
MORE LIVE-  
BIRTHS ☐ 2



☐  
33

547. INTERVIEWER: SEE 340, PAGE 23.

LAST-BUT-TWO LIVE  
BIRTH OCCURRED  
LESS THAN 5 YEARS  
AGO (BORN 1977 OR  
LATER) ☐ 1



LAST-BUT-TWO  
LIVE-BIRTH  
OCCURRED ☐ 2  
5 OR MORE  
YEARS AGO

(SKIP TO SECTION 6)

☐  
34

548. Think back to the time between the birth of \_\_\_\_\_  
(NAME OF LAST-BUT-TWO LIVE-BIRTH) and of \_\_\_\_\_  
(NAME OF LAST BUT-ONE LIVE-BIRTH). Was there any time in  
that interval when you were using a method to keep you  
from getting pregnant?

YES ☐ 1



NO ☐ 2

(SKIP TO SECTION 6)

☐  
35

549. What method were you using?

\_\_\_\_\_ (METHOD)

☐  
36

SECTION 6  
FERTILITY PREFERENCES

601. INTERVIEWER: SEE 409 PAGE 26

CURRENTLY  
MARRIED

☐ 1



NEVER MARRIED  
SEPARATED, DIVORCED  
WIDOWED

☐ 2

(SKIP TO 630)

☐  
3 8

602. INTERVIEWER: SEE 216 PAGE 8

CURRENTLY  
PREGNANT

☐ 1

(SKIP TO 608)

NOT  
PREGNANT

☐ 2



☐  
3 9

603. INTERVIEWER: SEE 535 PAGE 37

CURRENTLY USING  
CONTRACEPTION

☐ 1

(SKIP TO 607)

NOT CURRENTLY  
USING

☐ 2



☐  
4 0

604. INTERVIEWER: SEE 518 and 522, PAGE 34

RESPONDENT OR  
HUSBAND  
STERILIZED

☐ 1

(SKIP TO 630)

NOT  
STERILIZED

☐ 2



☐  
4 1

605. Some women experience difficulty in having as many children as they want. Do you think that you are capable of having another child, if you and your husband wanted one?

YES, CAPABLE ☐ 1

(SKIP TO 607)

NOT CAPABLE ☐ 2



UNCERTAIN ☐ 3

(SKIP TO 607)

☐  
4 2

606, Do you think that you have reached the menopause?

YES ☐ 1

(SKIP TO 630)

NO ☐ 2

(SKIP TO 630)

☐  
4 3

607. INTERVIEWER: SEE BIRTH HISTORY

NO LIVE BIRTH ☐ 1

(SKIP TO 614)

ONE OR MORE  
LIVE BIRTHS

☐ 2

(SKIP TO 620)

☐  
4 4

608. Do you want to have another child at any time in the future in addition to the one you are expecting?

YES ☐ 1  
(SKIP TO 610)

NO ☐ 2  
↓

UNDECIDED ☐ 3  
(SKIP TO 611)

☐  
4 5

609. Do you mean no more children at all or no more for the time being?

NO MORE ☐ 1  
AT ALL  
(SKIP TO 611)

NO MORE FOR ☐ 2  
THE TIME BEING  
↓

☐  
4 6

610. How many more children do you want to have, after the one you are expecting?

\_\_\_\_\_ (NUMBER)

OTHER  
ANSWER

\_\_\_\_\_  
(SPECIFY)

(SKIP TO 628)

(SKIP TO 628)

☐  
4 7

611. Does your husband want you to have another child at any time in the future in addition to the one that you are expecting?

YES ☐ 1  
↓

NO ☐ 2  
↓

HUSBAND ☐ 3  
UNDECIDED  
↓

D.K.  
HUSBAND'S  
OPINION ☐ 4  
↓

☐  
4 9

612. Is the mother of your husband still living?

YES ☐ 1  
↓

NO ☐ 2  
(SKIP TO 630)

☐  
5 0

613. Does she want you to have another child at any time in the future, in addition to the one that you are expecting?

YES ☐ 1

NO ☐ 2

MOTHER-  
IN-LAW ☐ 3  
UNDECIDED

D.K.  
MOTHER-  
IN LAW'S  
OPINION ☐ 4

( SKIP TO 630 )

☐  
5 1

614. Do you want to have any children at any time in the future?

YES ☐ 1

NO ☐ 2  
(SKIP TO 617)

UNDECIDED ☐ 3  
(SKIP TO 617)

☐  
52

615. Would you rather have a baby in the next year or so or would you prefer to wait for several years?

NEXT YEAR ☐ 1  
OR SO

LATER ☐ 2

DO NOT ☐ 3  
MIND

☐  
53

616. Would you prefer your first child to be a boy or a girl?

BOY ☐ 1

GIRL ☐ 2

EITHER ☐ 3  
UNDECIDED

☐  
54

OTHER ANSWER \_\_\_\_\_ ☐ 4  
(SPECIFY)  
( SKIP TO 628 )

617. Does your husband want you to have any children?

YES ☐ 1

NO ☐ 2

HUSBAND ☐ 3  
UNDECIDED

D.K. ☐ 4  
HUSBAND'S  
OPINION

☐  
55

618. Is the mother of your husband still living?

YES ☐ 1

NO ☐ 2  
(SKIP TO 630)

☐  
56

619. Does she want you to have any children?

YES ☐ 1

NO ☐ 2

MOTHER- ☐ 3  
IN-LAW  
UNDECIDED

D.K. ☐ 4  
MOTHER-  
IN-LAW'S  
OPINION

☐  
57

( SKIP TO 630 )

620. Do you want to have another child at any time in the future?

YES ☐ 1

(SKIP TO 622)

NO ☐ 2

UNDECIDED ☐ 3

(SKIP TO 625)

☐  
58

621. Do you mean no more children at all or no more for the time being?

NOT AT ☐ 1  
ALL

(SKIP TO 625)

NOT FOR ☐ 2  
TIME BEING

(SKIP TO 623)

☐  
59

622. Would you rather have a baby in the next year or so or would you prefer to wait for several years?

NEXT YEAR ☐ 1  
OR SO

LATER ☐ 2

DO NOT ☐ 3  
MIND

☐  
60

623. Would you prefer your next child to be a boy or a girl?

BOY ☐ 1

GIRL ☐ 2

EITHER ☐ 3  
UNDECIDED

☐  
61

OTHER ANSWER ☐ 4  
(SPECIFY)

624. How many more children do you want to have?

\_\_\_\_\_ (NUMBER)

(SKIP TO 628)

OTHER ANSWER \_\_\_\_\_  
(SPECIFY)

(SKIP TO 628)

☐  
62

625. Does your husband want you to have another child at any time in the future?

YES ☐ 1

NO ☐ 2

HUSBAND  
UNDECIDED ☐ 3

D.K.  
HUSBAND'S  
OPINION ☐ 4

☐  
64

626. Is the mother of your husband still living?

YES ☐ 1

NO ☐ 2

(SKIP TO 630)

☐  
65

627. Does she want you to have another child at any time in the future?

YES ☐ 1

NO ☐ 2

MOTHER  
IN-LAW  
UNDECIDED ☐ 3

D.K.  
MOTHER-  
IN-LAW'S  
OPINION ☐ 4

( SKIP TO 630 )

☐  
66

628. How long an interval after the birth of a child should a couple wait before resuming sexual relations?

\_\_\_\_\_ YEARS \_\_\_\_\_ MONTHS OTHER  
ANSWER \_\_\_\_\_

(SPECIFY)

☐  
67

629. If you could choose, how long an interval would you like between having one baby and the next?

\_\_\_\_\_ YEARS \_\_\_\_\_ MONTHS OTHER  
ANSWER \_\_\_\_\_

(SPECIFY)

☐  
69

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

\_\_\_\_\_ (NUMBER) OTHER  
ANSWER \_\_\_\_\_

(SPECIFY)

☐  
71

SECTION 7  
WORK HISTORY

701. As you know, many women work - I mean, aside from doing their own housework. Some take up jobs for which they are paid in cash or kind. Others sell things, or have some business, or work on the family farm. Are you at the present time working in any of these ways?

YES ☐ 1  
(SKIP TO 707)

NO ☐ 2

702. INTERVIEWER: SEE 409, PAGE 26

EVER-  
MARRIED ☐ 1

NEVER  
MARRIED ☐ 2

703. Have you ever worked since the day when you were first married?  
IF NO PROBE Any marketing or farming?

YES ☐ 1 NO ☐ 2  
(SKIP TO 715)

704. In what year did you last work?

19\_\_\_\_  
(YEAR)

705. Have you ever worked?  
IF NO PROBE Any marketing or farming?

YES ☐ 1 NO ☐ 2  
(SKIP TO 821)

706. In what year did you last work?

19\_\_\_\_  
(YEAR)

707. I would like to ask 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? OBTAIN DETAILED DESCRIPTION OF MAIN WORK

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---

---

---

8 1

1

3

8

11

13

14

15

16

18

708. INTERVIEWER: SEE 707

WORK IS  
FARMING ☐ 1  
↓

WORK IS  
NOT FARMING ☐ 2  
(SKIP TO 710)

☐  
21

709. Is/was this your (husband's) family farm?

YES ☐ 1  
(SKIP TO 712)

NO ☐ 2  
(SKIP TO 711)

☐  
22

710. Do/did you work mostly at home or do/did you work mostly away from home in that job?

HOME ☐ 1

AWAY ☐ 2

OTHER  
ANSWERS \_\_\_\_\_ ☐ 3

☐  
23

711. Are/were you employed by some member of your family, or by someone else, or are/were you self-employed?

FAMILY  
MEMBER ☐ 1

SOMEONE  
ELSE ☐ 2

SELF-  
EMPLOYED ☐ 3

☐  
24

712. Do/did you get paid mostly in cash or mostly in kind?

CASH ☐ 1

KIND ☐ 2

UNPAID ☐ 3

☐  
25

713. INTERVIEWER: SEE 409, PAGE 26

EVER-MARRIED ☐ 1  
↓

NEVER MARRIED ☐ 2  
(SKIP TO 821)

☐  
26

714. About how many years in all have you worked since you were first married?

\_\_\_\_\_  
(YEARS)

☐  
27



715. Now let us go back to the time before you were first married.  
Did you work at any time before you were first married? IF  
NO PROBE Any marketing or farming?

YES ☐ 1  
↓

NO ☐ 2  
(SKIP TO SECTION 8)

☐  
29

716. What kind of work did you do? OBTAIN DETAILED DESCRIPTION  
OF MAIN WORK

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

☐  
30

717. INTERVIEWER: SEE 716

WORK WAS  
FARMING ☐ 1  
↓

WORK WAS  
NOT FARMING ☐ 2  
(SKIP TO 719)

☐  
33

718. Was that your family farm?

YES ☐ 1  
(SKIP TO 721)

NO ☐ 2  
(SKIP TO 720)

☐  
34

719. Did you work mostly at home or did you work mostly away from  
home in that job?

HOME ☐ 1

AWAY ☐ 2

OTHER  
ANSWERS \_\_\_\_\_ ☐ 3

☐  
35

720. Were you employed by some member of your family, or by  
someone else or were you self-employed?

FAMILY  
MEMBER ☐ 1

SOMEONE  
ELSE ☐ 2

SELF-  
EMPLOYED ☐ 3

☐  
36

721. Did you get paid mostly in cash or mostly in kind?

CASH ☐ 1

KIND ☐ 2

UNPAID ☐ 3

☐  
37

722. Before you were first married, how many years in all did you  
work?

\_\_\_\_\_  
(YEARS)

☐  
38

# SECTION 8

## CURRENT (LAST) HUSBAND'S BACKGROUND

801. INTERVIEWER: SEE 409, PAGE 26

CURRENTLY MARRIED ☐ 1  
(SKIP TO 804)

WIDOWED/  
DIVORCED/  
SEPARATED ☐ 2

☐  
4 0

INTERVIEWER: ASK ALL THE QUESTIONS IN SECTION 8 ABOUT  
RESPONDENT'S LAST HUSBAND

802. Was your last husband older or younger than you?

HUSBAND ☐ 1  
OLDER

HUSBAND ☐ 2  
YOUNGER

SAME ☐ 3  
AGE

☐  
4 1

(SKIP TO 805)

803. How many years older/younger?.

(YEARS DIFFERENCE)

( SKIP TO 805 )

☐  
4 2

804. How old is your husband?

RECORD BEST ESTIMATE

AGE

☐  
4 4

805. Did your (last) husband ever attend school? IF NO PROBE  
Any Koranic school?

YES ☐ 1

NO ☐ 2

DK ☐ 9

☐  
4 6

(SKIP TO 812)

(SKIP TO 812)

806. What was the highest level of school he attended? Was it  
primary, middle or modern, secondary or university?

KORANIC ☐ 1

PRIMARY ☐ 2

MIDDLE/MODERN ☐ 3

☐  
4 7

(SKIP TO 812)

SECONDARY ☐ 4

UNIVERSITY ☐ 5

807. What was the highest class or form he completed?

(CLASS OR FORM)

DK ☐ 9

☐  
4 8

808. After leaving (HIGHEST LEVEL) did he have any other full time education?

YES ☐ 1  
↓

NO ☐ 2  
(SKIP TO 811)

☐  
49

809. What sort of school or college was that?

COMMERCIAL/SECRETARIAL ☐ 1

TEACHERS TRAINING ☐ 2

TECHNICAL ☐ 3

OTHER ☐ 4  
(SPECIFY)

☐  
50

810. How many years did he complete at that (SCHOOL/COLLEGE)?

\_\_\_\_ (YEARS)  
↓

DK ☐ 9  
↓

☐  
51

811. INTERVIEWER: SEE 806

PRIMARY ☐ 1  
↓

MIDDLE/MODERN  
OR ABOVE ☐ 2  
(SKIP TO 814)

☐  
52

812. Did he ever attend adult literacy classes?

YES ☐ 1

NO ☐ 2

DK ☐ 9

☐  
53

813. Can/could he read - say a letter, newspaper or magazine in any language?

YES ☐ 1  
↓

NO ☐ 2  
↓

☐  
54

814. In what kind of area did your (last) husband live mostly when he was growing up, say to age 12? Was it a village or a town?

VILLAGE ☐ 1

TOWN ☐ 2

DK ☐ 9

☐  
55

815. What is/was his tribe?

(SPECIFY)

816. What is/was his occupation, that is what kind of work does/did he do?

OBTAIN DETAILED DESCRIPTION OF MAIN WORK. IF DEAD, UNEMPLOYED OR RETIRED, ASK LAST OCCUPATION.

(IF NEVER WORKED SKIP TO 821)

817. Is/was he employed by some member of his family or by someone else, or is/was he self-employed?

FAMILY  
MEMBER

1



SOMEONE  
ELSE

2



SELF-EMPLOYED 3

(SKIP TO 819)

818. Does/did he get paid mostly in cash or mostly in kind?

CASH

1

KIND

2

UNPAID

3

( SKIP TO 821 )

819. Does/did he have any regular paid employees in this business/farm?

YES

1



NO

2

(SKIP TO 821)

820. How many regular paid employees does/did he have?

NUMBER

821. INTERVIEWER: RECORD THE TIME: HOUR \_\_\_\_\_ MINUTE \_\_\_\_\_

56

58

61

62

63

64

66 68

# OBSERVATIONS

901. MAIN LANGUAGE USED IN INTERVIEW \_\_\_\_\_  
 FOR SPEAKING TO RESPONDENT (SPECIFY)

70

902. WAS AN INTERPRETER USED?

YES ☒ 1

NO ☐ 2

72

903. DEGREE OF CO-OPERATION OF THE RESPONDENT.

POOR ☐ 1

AVERAGE ☐ 2

GOOD ☐ 3

VERY GOOD ☐ 4

73

904. Did the husband or the respondent answer the questions  
 in Section 8?

HUSBAND ☐ 1

RESPONDENT ☐ 2

74

905. ENTER COMMENTS AND EXPLAIN ANY DIFFICULTIES ABOUT  
 INTERVIEW.

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# DATE EVENT CHART

25				25
26	1955	1956	1957	24
27	1954		1958	23
28	1953		1959	22
29	1952		1960	21
30	1951		1961	20
31	1950		1962	19
32	1949		1963	18
33	1948		1964	17
34	1947		1965	16
35	1946		1966	15
36	1945		1967	14
37	1944		1968	13
38	1943		1969	12
39	1942		1970	11
40	1941		1971	10
41	1940		1972	9
42	1939		1973	8
43	1938		1974	7
44	1937		1975	6
45	1936		1976	5
46	1935		1977	4
47	1934		1978	3
48	1933		1979	2
49	1932		1980	1
50	1931		1981	0
			1982	

# APPENDIX III

## THE COMMUNITY QUESTIONNAIRE

NATIONAL POPULATION COMMISSION  
LAGOS

(TO BE COMPLETED FOR EACH RURAL EA)

Name of Locality: .....

9	3
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1

EA No: .....

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3

7

State: .....

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8

10

Name and Code of Supervisor: .....

Date of Interview: .....

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11

14

Name of Respondent	Age	Sex	Level of Education	Occupation	Status in Locality
1					
2					
3					

Facility/Service	Q1 Present/ available in this locality		Q2 IF YES IN Q1 WAS..... Present/avail- able in locality five years ago?		Q3 IF NO IN Q1 What is the distance in kilometers to the nearest locality where..... is present/ available?
	YES	NO	YES	NO	
<b>A. COMMUNICATION</b>					
(i) Telephone	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 17
(ii) Post Office or Postal Agency	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21
(iii) Cinema (at least once a week)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 23 <input type="checkbox"/> 24 <input type="checkbox"/> 25
<b>B. EDUCATION</b>					
(i) Primary School	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 27 <input type="checkbox"/> 28 <input type="checkbox"/> 29
(ii) Secondary School or Teacher Training College	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 31 <input type="checkbox"/> 32 <input type="checkbox"/> 33
(iii) Commercial/Vocational/ Trade School	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 35 <input type="checkbox"/> 36 <input type="checkbox"/> 37
<b>C. HEALTH SERVICES</b>					
(i) Hospital	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 39 <input type="checkbox"/> 40 <input type="checkbox"/> 41
(ii) Health Centre	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 43 <input type="checkbox"/> 44 <input type="checkbox"/> 45
(iii) Dispensary	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 47 <input type="checkbox"/> 48 <input type="checkbox"/> 49
(iv) Maternity Home	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 51 <input type="checkbox"/> 52 <input type="checkbox"/> 53
(v) Qualified nurse or midwife	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 55 <input type="checkbox"/> 56 <input type="checkbox"/> 57
(vi) Family Planning Clinic	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 59 <input type="checkbox"/> 60 <input type="checkbox"/> 61



Facility/Service	Q1 Present/ available in this locality?		Q2 IF YES IN Q1 WAS..... Present/avail- able in locality five years ago?		Q3 IF NO IN Q1 What is the distance in kilometers to the nearest locality where..... is present/ available?	9 4	
	YES	NO	YES	NO		1	7
D. <u>PUBLIC SERVICES</u>							
(i) Police Station	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
(ii) Bank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
(iii) Magistrate Court	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
(iv) Native Court	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
E. <u>MODERNIZATION</u>							
(i) Electricity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
(ii) Pipe-borne water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
(iii) Tarred road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
F. <u>CONSUMER ITEMS</u>							
(i) Pencils	<input type="checkbox"/>	<input type="checkbox"/>					
(ii) Kerosene	<input type="checkbox"/>	<input type="checkbox"/>					
(iii) Salt	<input type="checkbox"/>	<input type="checkbox"/>					
(iv) Soap	<input type="checkbox"/>	<input type="checkbox"/>					
(v) Razor blades	<input type="checkbox"/>	<input type="checkbox"/>					
(vi) Aspirin	<input type="checkbox"/>	<input type="checkbox"/>					
(vii) Sugar	<input type="checkbox"/>	<input type="checkbox"/>					
(viii) Powdered milk	<input type="checkbox"/>	<input type="checkbox"/>					
(ix) Newspaper	<input type="checkbox"/>	<input type="checkbox"/>					

## APPENDIX IV

## INDIVIDUAL DATA EXTRACT

Item No.	Page or Question No.			
1	Page 1	EA Number		<u>9</u> <u>1</u> 1
2	" "	Household/Line Number		<u>3</u> 3
3	" "	Interviewer Code		<u>8</u> <u>11</u> 8 11
4	" "	Month of Interview		<u>13</u> 13
5	" "	Result of Final Visit		<u>16</u> 16
6	Q115	Age (CALCULATE)	<u>    </u>	<u>18</u> 18
7	Q116	Age as Entered	<u>    </u>	<u>19</u> 19
8	Q118/Q120	Education	<u>    </u>	<u>21</u> 21
9	Q211/Q212	No. Dead Children	<u>    </u>	<u>22</u> 22
10	Q225 etc.	No. Dead Children Listed	<u>    </u>	
11	Q213	No. Children Ever Born	<u>    </u>	<u>23</u> 23
12	Q222	No. Children Ever Born Listed	<u>    </u>	
13	Q214	Age First Menstruation	<u>    </u>	
14	Q215	Age First Sex	<u>    </u>	
15	Q224	Age First Live Birth	<u>    </u>	
16 or 17	Q224	Date, Last Live Birth or Years Ago, Last Live Birth	<u>    </u>	<u>25</u> <u>27</u> 25 27
17	Q224		<u>    </u>	<u>29</u> 29
18	Q409	Current Marital Status	<u>    </u>	<u>31</u> 31
19	Q407/Q408	Age, This Marriage	<u>    </u>	<u>32</u> 32
20	Q421/Q422	Age, First Marriage	<u>    </u>	<u>34</u> 34
21	Q529	Ever Used Any Method	<u>    </u>	<u>36</u> 36
22	Q535	Current Use, Any Method	<u>    </u>	<u>37</u> 37
23	Q608/Q614 /Q620	Wants at Least 1 More Child	<u>    </u>	<u>38</u> 38
24	Q703/Q705	Ever Worked	<u>    </u>	
25	Q804	Age of Current Husband	<u>    </u>	

22/6/81

LISTING AND SELECTION OF SAMPLING UNITS

APPENDIX V

EA NUMBER

SAMPLING INTERVAL = <sup>A</sup>  /50= <sup>B</sup>  <sup>C</sup>  RANDOM START

ER's

LISTING							SELECTION	
STRUCTURE		DWELLING		HOUSEHOLD				
Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9
No.	DESCRIPTION OR ADDRESS	No.	DESCRIPTION	No.	NAME OF HEAD	EST. NUMBER ER's	SERIAL No. SU	SEL- ECTION

Number of Selections = .....

SUB-TOTAL

CHECK: Number of Selections X Interval B + Random Start C = Serial Number of Last Selected S.U + Interval B

\_\_\_\_\_ X \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ + \_\_\_\_\_

EA NUMBER

LISTING							SELECTION	
STRUCTURE		DWELLING		HOUSEHOLD				
Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9
No.	DESCRIPTION OR ADDRESS	No.	DESCRIPTION	No.	NAME OF HEAD	EST. NUMBER ER'S	SERIAL No. SU	SEL- ECTION

SUB-TOTAL

## SAMPLE ASSIGNMENT AND OUTCOME

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[illegible]

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## INTERVIEWER RECORD

INTERVIEWER NAME	CODE	EA NUMBER

Col 1	Col 2	Col 3	Col 4	Col 5	Col 6							Col 7					
FIELD IDENTIFICATION OF SAMPLING UNIT				DATE OF	HOUSEHOLD RESULTS							INDIVIDUAL RESULTS					
S	DU	HH	ADDRESS OR DESCRIPTION (AND NAME OF HEAD)	ASSIGNMENT	1	2	3	4	5	6	7	1	2	3	4	5	6

# APPENDIX VIII

## EA SUMMARY AND CHECKLIST

			9 2
1.	EA NUMBER		3
2.	EA Section Probability		8
3.	Number of Segments		13
4.	Sampling Interval		14
5.	Number of Sampling Units Listed		16
6.	Number of Sampling Units Selected		19
7.	Number of Completed Household Schedules		22
8.	Number of Non-Respondent Households (or SU's)		24
9.	Number of Completed Individual Questionnaires		26
10.	Number of Non-Respondent Eligible Women		29
11.	Distance (kms by vehicle odometer) from last EA or HQ		
12.	Date of Arrival of Team in EA		
13.	Date of Departure of Team from EA		
14.	Was Listing Done by Supervisor in Advance of Team Arrival?	YES <input type="checkbox"/> NO <input type="checkbox"/>	
15.	Number of Interviewers in team		
16.	Number of Working Days (to nearest 1/4 day) elapsed from time of arrival of team in EA to beginning of interviewing		
17.	Number of interviews:		
	listened		
	spot-checked		
	re-interviewed		
	tape-recorded		

Lodging Arrangements (describe)

.....

.....

.....

.....

Any Special Problems (Describe)

.....

.....

.....

.....

E.A. CHECK LIST

	No. Completed	No. Non-Respondents
1. Household Schedules	<input type="text"/>	<input type="text"/>
2. Individual Questionnaires	<input type="text"/>	<input type="text"/>
3. Individual Data Extracts (NFS3)	<input type="text"/>	<input type="text"/>
4. EA File (+ map)	<input type="checkbox"/>	check or explain below
5. Listing and Selection of SU Forms (NFS4)	<input type="checkbox"/>	check or explain below
6. Sample Assignment and Outcome Forms (NFS5)	<input type="checkbox"/>	check or explain below
7. Interviewer's Records (NFS6)	<input type="checkbox"/>	check or explain below
8. Community Questionnaire (NFS8)	<input type="checkbox"/>	check or explain below
9. Taped interviews	<input type="checkbox"/>	check or explain below

Team Supervisor  Signature  
Zonal Coordinator  
or State Officer

Date

Signature  
Date



## HOUSEHOLD CONTINUATION SHEET

[illegible]

## APPENDIX X

# INTERMEDIATE CODING SHEET FOR THE INDIVIDUAL QUESTIONNAIRE

**NATIONAL POPULATION COMMISSION**

Cards 24, 31, 81 : ALWAYS

DAY		MONTH		YEAR	
2	1			19	43
43		14		16	
				18	
37	38	39	40	41	42
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46	47	48	49	50	51
				52	
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				55	56
				57	58
				59	60

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Intermediate coding sheet for the individual  
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MARR 3 ☐ 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

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## APPENDIX XI

# SAMPLE DESIGN

### XI.1 SAMPLE FRAME

In preparation for the 1973 census, the whole of Nigeria was subdivided, within the existing administrative divisions, into enumeration areas (EAs) which were supposed to contain a population of some 600-1,000 people. The 1973 census itself was, however, abandoned before completion and, as a result, no population counts are available for the approximately 120,000 EAs. Descriptions and sketch maps for the EAs do exist although, as might be expected from a very large exercise operating under very difficult conditions, the quality of the work was rather low. This is true not only of the intrinsic quality of the sketches and descriptions but also, as experience has shown, of their exhaustiveness and exclusiveness of coverage.

For the purposes of the 1980 National Demographic Sample Survey (NDSS) the National Population Bureau (NPB) drew up a stratified sample of 912 EAs. The 38 strata are the urban and rural sectors respectively of each of the 19 states of the Federation, the 48 EAs from each state being allocated to the urban and rural sectors roughly proportional to the estimated sector populations - subject to the constraint that not less than two EAs be allocated to each stratum (state/sector). It was then decided that the Nigeria Fertility Survey sample would be a subsample of the NDSS.

### XI.2 METHODOLOGICAL ASPECTS OF THE DESIGN

The original WFS proposal for the Nigeria Fertility Survey (NFS) was to draw subsamples of 88 urban and 279 rural EAs from the NDSS sample of 146 and 766 EAs respectively in such a way that the overall selection probabilities within the (national) urban and rural sectors respectively would be proportional to a measure of size. Within-EA sampling rates would then be calculated in the usual way to make the household sample self-weighting overall. The measure of size as to be the quick-count population of the NDSS sample EAs obtained in a listing operation before the NDSS (and the NFS). Thus, if:

$P_h$  denotes the NDSS (equal) selection probability in stratum  $h$

$Q_{hi}$  denotes the quick count for the  $i$ -th EA in stratum  $h$

then

$$Z_{hi} = Q_{hi}/P_h$$

was the measure of size to be used in the usual PPS systematic selection procedure. The overall selection probabilities ( $\prod_{hi}$ ), at

the EA level, are

$$\prod_{hi} = P_h Q_{hi} \div P_h I = Q_{hi} \div I$$

where  $I$  is the sampling interval in the PPS systematic procedure, giving us a sample of EAs with probabilities proportional to quick-count population, even though these populations had been obtained only for the NDSS sample.

The expression above is, however, strictly correct only if the NDSS sample was drawn systematically from the whole (national) population of EAs. In fact, it was drawn systematically, but independently in each stratum. For this reason, we decided to modify the original scheme slightly by drawing the proposed subsample independently in each stratum (state/sector). The NFS sample allocation of EAs was to be proportional to the number of EAs in each stratum, subject to the constraints:

- (a) that wherever possible the number of EAs would be a multiple of 2;
- (b) that the number of EAs in a stratum would never be less than 2.

We may note here that the method of selection and the constraints on allocation mean that we have a departure from overall PPS selection of EAs. In some strata, for example, the NDSS sample is no larger than the NFS allocation and, hence, we are obliged to accept the existing NDSS equal probability sample of EAs in these strata.

These plans were made before the NDSS quick counts became available and while we were still under the impression that EA populations would not depart too much from the expected 600 to 1,000. This turned out not to be the case. In fact, according to the quick counts, the populations ranged from 30 to 7,000 with a mean of about 880 and a standard deviation of about 730. This implied that, were we to stick to our original scheme, we could expect very large variations in EA sample takes. Further examination of the NDSS updated sketches against the original EA sketches led to the conclusion that the discrepancies would often be attributable to errors in EA identification. This led to the decision to undertake a corrective mapping exercise for our subsample of EAs and also to modify the size measures to be used for the selection of the samples of EAs. We had also decided, partly as a result of a more stringent budget and partly as a result of an analysis of efficient sample allocation, to reduce the sample of EAs from the originally proposed 367 (with about 30 women per EA) to about 250 (with about 45 women per EA). The sample allocation is given in table 2.1.

The modification of the size measure was designed to reduce the impact of errors in the NDSS quick counts. We argued that this would be achieved by replacing the NDSS quick count ( $Q_{hi}$ ) by

$$Z_{hi} = \begin{cases} (Q_{hi}/600)^{0.5} & \text{for } Q_{hi} < 600, \text{ or} \\ (Q_{hi}/600)^{0.7} & \text{for } Q_{hi} \geq 600 \end{cases}$$

Where the quick-count ( $Q_{hi}$ ) was correct, this modification would allow the sample take of eligible women to vary between 20 for a population of 150 and 90 for a population of 6,000, given that we chose an overall sampling ratio that would give an average sample take of 44 women. The final EA selection probabilities are:

$$P_{hi} = \begin{cases} P_h & \text{the NDSS selection probability for strata in which the whole NDSS sample had to be accepted,} \\ \text{or} \\ P_h Z_{hi} / I_h & \text{where } I_h \text{ was the sampling interval required to yield the allocated number of EAs in stratum } h \end{cases}$$

The underlying assumption was that very low quick-count populations would be corrected upwards by the mapping exercise while those that were very high would be corrected downwards.

As part of the mapping work we required population estimates to be made by the teams responsible for identifying and mapping the selected EAs. These estimates were to be used both to facilitate segmentation (where required) of EAs and to reach a final decision whether to maintain self-weighting in the sample design or whether to abandon it in favour of a procedure that would give approximately equal sample takes of eligible women in each selected EA.

### XI.3 THE DECISION ON FIXED SAMPLE TAKE

Inspection of the population estimates made by the mapping teams showed that, in spite of the modification of size measures described earlier, we would still have sample takes (under a self-weighting procedure) varying between 20 or 30 women and 200 women, a variation that seemed not only statistically inefficient but administratively inconvenient. Furthermore, since the mappers' population estimates were themselves very rough, we had some basic uncertainty as to the overall sampling rate required to yield the desired overall sample of about 10,000 women. Our decision, therefore, was to adopt a simple procedure for approximately equal sample takes, in each selected EA, of about 50 women. If all EAs were successfully identified and interviewed this would yield a sample of about 12,500 women (50 x 250). However, since we expected that a few EAs would be non-respondent

through non-identifiability, inaccessibility, or refusal at the village level to be interviewed, our achieved sample size, after non-response at the household or individual level, should be close to the required 10,000.

### XI.4 SEGMENTATION, LISTING AND SELECTION OF SAMPLING UNITS

The final stage of sampling, under this procedure, had to be entrusted to the interview teams. They were required to complete a listing of sampling units in the selected EA or EA segment (see below) and to associate with each such SU an estimate of the number of eligible respondents (ERs) in the SU. The sampling unit would normally be a household but, in cases in which the lister was unable (for one reason or another) to list households in the time available he could list the dwelling unit (containing one or more households) or the structure (containing one or more dwellings). In any event he had to associate, either by enquiry or by estimate, a number of ERs with each SU. The total of ERs for all listed SUs divided by 50 gave the sampling interval for the EA or segment listing. All households within selected SUs and all ERs within these households constituted the household and individual samples respectively for the EA.

Wherever feasible (ie wherever enough detail was provided on the EA sketches) EAs estimated to contain a population of more than 1,000 persons were subdivided into segments containing 500-600 persons. One such segment was selected at random from those delineated for the EA. The interview sample was then selected, by the procedure described above, from this segment only. In some EAs the boundary (or contents) could not be identified with certainty in the mapping phase due to inadequacies in the original EA mapping work, to changes in local nomenclature, or to physical changes (new roads, construction, etc.) since the original mapping. Where it was impossible to assign ambiguous areas with any confidence to the selected EA or to an adjoining one, we assigned to one or the other with equal probability. This solution was not entirely satisfactory since it leaves the selection probabilities of such ambiguous areas essentially undetermined. Any other solution appeared, however, either to be equally indeterminate (eg always assign ambiguous areas to the northernmost EA) or to require information about the adjoining EAs not available to us. The procedure adopted rests on the arguments that it gives correct weights on the average and that it is simple and fully, though stochastically, determined.

### XI.5 SAMPLE ESTIMATES

In addition to the previous notation, we let:

$N_{hi}$  denote the number of segments in the  $i$ -th EA,  $h$ -th stratum

$f_{hi}$  the sampling interval adopted for the

sampling of SUs within the i-th EA (or segment), h-th stratum.

Then the overall selection probability for households or individuals (since it will be recalled that all households and all individuals within households within selected SUs are in-sample) is

$$\Pi_{hij} = (P_h Z_{hi} / I_h) / N_{hi} f_{hi}$$

The sampling weight associated with the hij-th individual or household is, of course, the inverse of  $\Pi_{hij}$ . For the tabulations only the relative sample weights are important and the absolute values may be multiplied by a convenient factor, which makes the sample weights sum to the sample size.

On the other hand, the relative weights should account for the different response rates (both at the household and individual level) which could occur in the 38 domains of the sample. The table below clearly shows that the response rates vary widely across the domains, although the values for the country as a whole or for the geographical regions (as commented in chapter 2) are similarly acceptable.

State	Household questionnaire		Individual questionnaire	
	Urban	Rural	Urban	Rural
Anambra	94.0	97.7	98.2	97.5
Bauchi	90.6	92.8	98.8	95.8
Bendel	82.9	83.5	98.5	97.8
Benue	100.0	95.5	94.5	96.4
Borno	87.3	87.7	89.2	87.0
Cross River	75.6	93.6	91.7	94.3
Gongola	86.2	96.9	92.3	93.3
Imo	98.7	90.9	100.0	99.7
Kaduna	98.3	94.7	90.6	93.3
Kano	100.0	99.6	97.1	98.6
Kwara	95.1	93.1	97.3	99.3
Lagos	86.7	100.0	96.9	97.5
Niger	100.0	100.0	98.7	97.2
Ogun	76.4	97.7	89.9	96.3
Ondo	93.8	88.5	97.7	97.1
Oyo	84.9	94.1	96.0	92.9
Plateau	78.2	91.9	98.7	99.2
Rivers	90.8	90.0	93.6	96.2
Sokoto	88.1	94.1	89.8	95.2
Total	88.9	93.4	95.7	96.2

Finally, the underestimates noted for certain domains of the NFS sample had to be adjusted according to the NDSS results. Accordingly, the procedure to calculate the relative weights was as follows. Each of the 38 domains (urban and rural sector in each of the 19 states) is indicated by the suffix h. Let the suffix i denote the selected EA, then:

$\Phi_i$  = selection probability of i-th EA

$S_{hi}$  = number of segments created in the i-th EA

$V_{hi}$  = sampling interval for the last stage selection used in the i-th EA

$R_h$  = response rate (households), in each domain

$r_h$  = response rate for women found in the interviewed households, in each domain

Let the suffix j designate the selected household, then

$n_{hij}$  = number of individuals (HH members) in the j-th household

For each of the domains, the correction factor  $C_h$  is obtained as

$$C_h = \left[ \frac{\sum_{i=1}^2 \sum_{j=1}^2 F_{hi} N_{hi}}{R} \right] \div \left[ \frac{\sum_{i=1}^2 \sum_{j=1}^2 F_{hi} N_{hi}}{R} \right]$$

where  $F_{hi} = (S_{hi} V_{hi}) \div P_{hi}$

$$N_{hi} = \sum_{j=1}^j n_{hij}$$

and 1,2 indicate the NDSS and NFS estimates, respectively. Hence, the absolute weight to be applied to each women in the NFS sample, for the i-th EA of the h-th domain is

$$W_{ni} = (C_h F_{hi}) \div r_h$$

These weights were normalized in the usual way, ie if we designate  $f_{hi}$  = the number of completed individual questionnaires in the i-th EA of the h-th domain, then

$$\frac{\sum_{i=1}^2 \sum_{h=1}^2 W_{hi} f_{hi}}{\sum_{i=1}^2 \sum_{h=1}^2 f_{hi}} = \text{normalizing factor}$$

Each  $W_{hi}$  was then multiplied by the normalizing factor, thus obtaining the set of relative weights which make the figures of the tables based on individual data to come up to the observed total number of interviews. Due to rounding effect, the figures of the individual tables add up to 9,729, instead of the 9,727 women actually interviewed.

For the household tables, an independent set of relative weights were calculated, since they are not affected by  $r_h$  (the response rate for the individual questionnaires). When the details are altered, the procedure turns out

$W_{hi} = C_h F_{hi}$ , where  $W_{hi}$  denotes the absolute weight to be applied to each household in the NFS sample. The normalizing factor is thus given by

$$\frac{\sum_{i=1}^2 \sum_{h=1}^2 W_{hi} f_{hi}}{\sum_{i=1}^2 \sum_{h=1}^2 f_{hi}}$$

where  $f_{hi}$  indicates the number of completed household questionnaires. The values of the relative weights for the household data are very similar, as might be expected, to those of the individual data. However, the existence of the two different sets of relative weights should be borne in mind when obtaining any table for the household or individual data.

# SAMPLING ERRORS FOR SELECTED ESTIMATES

Section XII.1 introduces certain basic ideas about sampling errors; readers already familiar with them may skip to section XII.2. Section XII.3 presents procedures for approximating sampling errors when sampling errors are not given and the computational formulae used in the sampling error calculations.

## XII.1 INTRODUCTION

### Interpretation of sampling errors

The particular sample obtained in the survey is one of a large number of all possible probability samples which could have been selected using the given 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 interest is approximated by an average of the estimates from the various possible samples. This average from different samples is called the 'expected value'. The sampling error or standard error of an estimate is a measure of the (absolute) difference between the observed sample estimate and the expected value of the estimate. Apart from non-sampling errors, the standard error in the present context measures the size of the expected (absolute) 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 value)  $\pm 2$  (standard error) is called the '95 per cent confidence interval', and one can say that the odds are only one in twenty that the true value lies outside this range. If, for example, the observed sample mean for a variable is 3.5 and if the standard error (to an appropriate sample base) has been estimated as 0.2, then the '95 per cent confidence interval' is  $3.5 \pm 2(0.2)$ , ie 3.1 to 3.9, and for practical purposes, ie with 95 per cent confidence, 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 one sample which is actually available.

The computational procedure must take into account the actual structure of the sample and in particular the fact that the sample is a stratified clustered sample. The results given in this appendix have been computed by using

the WFS package program CLUSTERS. An outline of the procedure for estimating sampling errors is given in section XII.3 below.

### Sampling errors for subclasses and subclass differences

To be useful in the 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 individual age or marriage duration groups, or groups by socio-economic background, etc. Due to the smaller sample bases involved, sampling errors for individual subclasses obviously tend to be larger than the error in an estimate based on the entire sample.

The computational formulae given in section XII.3 below apply also for estimates computed over a particular subclass of the sample. Individuals or primary sampling units (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' given above 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 the interpretation of fertility and other differentials observed from the survey results. These determine the likelihood that an observed difference is real and not 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, we may regard an observed difference 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 (and hence substantively) 'not significant', implying that it cannot be asserted that the observed difference is not caused merely by sampling variation.

If, for example, for two sample subclasses

being compared, the observed 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  $0.5 \pm 2(0.1)$ , 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).<sup>1</sup> 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, it cannot be asserted that the observed difference is real, and not caused merely by sampling variation. Note that in the second example, the observed difference (0.5) is smaller than twice its standard error (0.8), which is the same as the observation that the '95 per cent confidence interval' includes the value zero.

### Effect of clustering of the sample

In the present sample, the individuals interviewed are clustered into a number of sample areas. Compared to a sample of individuals selected entirely at random, clustering tends to reduce efficiency of the sample (ie increase associated sampling errors, for a given sample size). This is because individuals from within a cluster tend to be more uniform compared to individuals in the sample (or the population) as a whole. 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 the actual clustered sample with what the error would have been had the sample been selected entirely at random is called the 'design factor' or DEFT.

$$\text{DEFT} = \text{SE}/\text{SR} \quad (1)$$

where SE is the standard error for the clustered sample (computed from equation (2) given in section XII.3, and SR is the standard error computed as if the sample had been selected entirely at random (equation (3) in section XII.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 little 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 size for sample subclasses, and specially for 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 less significant than would be the case if estimates based on the total sample were the main objective of the survey.

## XII.2 DISCUSSION OF THE MAIN RESULTS

The WFS package program CLUSTERS has been used to compute sampling errors for variables of substantive interest. For each variable, sampling errors were computed over the whole sample, as well as for various subclasses and differences for pairs of subclasses.

### Definition of the variables

Sampling errors have been computed for the following variables based on the individual questionnaire:

1. Age at first marriage - Mean age at first marriage for ever-married women aged 15-49.
2. Age at first marriage (< 25) - Mean age at first marriage for women aged 25-49 who married before age 25.
3. First marriage dissolved - Percentage of ever-married women whose first marriage was dissolved.
4. Time spent in union - Percentage of time spent in union since first marriage.
5. Currently married - Percentage of ever-married women who are currently married.
6. Births in first five years (married) - Mean number of births before or during the first five years of first marriage, for women married at least five years ago.
7. Births in past five years (married) - Mean number of births during the past five years, for women who have been continuously married in the past five years.
8. Currently pregnant (married) - Percentage of

1 This assertion can be made with 95 per cent confidence. Incidentally, it follows, with even greater confidence, that in the example the difference is not zero - in other words, that the two subclasses differ for the variable concerned. Sampling errors for differences are often used in this way to test whether two subclasses differ.



currently married women who are currently pregnant.

9. Children ever born (all women) - Mean number of children ever born to all women.
10. Living children (all women) - Mean number of living children born to all women.
11. Additional number wanted - Mean additional number of children wanted by currently married, fecund women.
12. Breastfed in closed interval - Percentage of women who breastfed in the last closed pregnancy interval.
13. Months breastfed in closed interval - Mean number of months breastfed in the last closed pregnancy interval (until child died cases excluded from base).
14. Wants no more children (married) - Percentage of currently married, fecund women who want no more children.
15. Desired family size (married) - Mean total of children desired by currently married women.
16. Knows effective methods (all) - Percentage of all<sup>2</sup> women who have heard of at least one effective method of contraception.
17. Ever used contraceptives (all) - Percentage of all<sup>2</sup> women who have ever used any method of contraception.
18. Ever used effective methods (all) - Percentage of all<sup>2</sup> women who have ever used any effective method of contraception.
19. Currently using (exposed) - Percentage non-pregnant currently married fecund or contraceptively sterilized women who are currently using any method of contraception.
20. Using effective (exposed) - Percentage non-pregnant currently married, fecund or contraceptively sterilized women who are currently using any effective method of contraception.
21. Wants no more children and using effective methods (exposed) - Of non-pregnant currently married, fecund or contraceptively sterilized women who want no more children, the percentage who are currently using any effective method of contraception.
22. Never used contraception (married) - Percentage of ever-married women who have never used contraception.
23. Used in past (married) - Percentage ever-married women who have used contraception in the past.

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2 Women who have not had their first menstruation or started sexual relations are excluded.

24. Currently using (married) - Percentage ever-married women who are currently using contraception.

#### Estimates over the total sample

Table XII.1 shows sampling errors computed over the total sample for the variables based on the individual questionnaire. For each variable the following quantities are shown.

$r$  = the ratio, mean, proportion or percentage estimated for the whole sample. Note that estimates given as proportions may be changed to percentages by shifting the decimal point two places to the right. In such cases, the standard errors given for the proportions must be multiplied by 100 to correspond to percentages. Similarly, estimates given as percentages may be changed to proportions by shifting the decimal point two places to the left. In such cases, the standard errors given for the percentages must be divided by 100 to correspond to proportions.

SE = standard error for the actual clustered sample (defined by equation (2) given below).

95% CON. INT. = the '95 per cent confidence interval', defined earlier as  $r \pm 2SE$ .

$n$  = the appropriate unweighted sample base. The sample for Nigeria consists of 9727 completed individual interviews. However, only a minority of the variables are defined for the entire sample of 9727 women. Many of the variables are relevant only for subpopulations satisfying certain criteria; for example, the variable 'Births in past five years (married)' has been defined only for the 6075 women who have been continuously married for the past five years.

$s$  = standard deviation, defined as  $s = SR / n$ , where  $SR$  is the standard error computed on the assumption that the sample of individuals was selected entirely at random. Though  $s$  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 Factor,  $DEFT = SE/SR$ . 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.

$b$  = the average 'cluster size', ie the (unweighted) average number of interviews per PSU. For the sample as a whole,  $b = 9727/248 = 39.2$ . The value is smaller if a variable is not applicable to all individuals in the sample. (Note that the average cluster size can be used to calculate rates of homogeneity - see equation (6) below.)

For the total sample, sampling errors for variable taken from the individuals questionnaire are relatively small - under 5 per cent of the mean.<sup>3</sup> However, the DEFT values encountered are large. The overall average DEFT is around 2.17, implying that the variance (the square of the standard error) is almost five times as large as it would have been for a sample of the same size selected entirely at random. Of course, the average DEFT values for sample subclasses are smaller.

## XII.3 SOME TECHNICAL CONSIDERATIONS

### Computational formulae

In outline, the procedure used 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 the suffix  $j$  represent an individual, suffix  $i$  the PSU to which the individual belongs, and suffix  $h$  the stratum in which the PSU lies. Hence,

$Y_{hij}$  = value of variable  $y$  for the individual  $j$ , in PSU  $i$  and stratum  $h$

$w_{hij}$  = sample weight for the individual

$Y_{hi} = \sum_j w_{hij} \cdot Y_{hij}$ . The weighted sum of  $y$ 's for all individuals in the PSU

$Y_h = \sum_i Y_{hi}$ , the sum of  $Y_{hi}$  for all PSUs in the stratum

$Y = \sum_h Y_h$ , the sum of  $Y_h$  for all strata in the sample.

Similar expressions can be defined for variable  $x$ .

The variance ( $=SE^2$ , square of the standard error) of the ratio estimate  $r = y/x$  is estimated as

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

where

$f$  = overall sampling fraction, here negligible

3 Of the twenty four variables considered, the standard error over the sample is under 1 per cent of the mean for five, between 1-3 per cent for eight, between 3-7 per cent for three and above 7 per cent for seven.

$m_h$  = number of PSUs in the stratum  $h$

$H$  = number of strata in the sample

$r$  = ratio of the two sample aggregates  $y$  and  $x$

$z_{hi} = Y_{hi} - r \cdot X_{hi}$

$z_h = \sum_i z_{hi} = Y_h - r \cdot X_h$

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 DEFT = SE/SR, and is given by

$$SR^2 = \frac{1-f}{n-1} \left( \sum w_{hij} z_{hij}^2 / \sum w_{hij} \right) \quad (3)$$

where  $z_{hij} = Y_{hij} - r \cdot X_{hij}$   
and  $r$  is the ratio estimate,

$$r = y/x = \sum w_{hij} Y_{hij} / \sum w_{hij} X_{hij}$$

$n$  is the total sample size, and  $\sum$  is the sum for all individuals over the sample. As before, means, proportions or percentages are merely special cases of ratios.

The 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 a prime ('),

$$SE_{r-r'}^2 = \text{var}(r-r') = \text{var}(r) + \text{var}(r') - 2\text{cov}(r, r') \quad (4)$$

where  $\text{var}(r)$  and  $\text{var}(r')$  are given by equation (2) and the covariance is given by

$$\text{cov}(r, r') = \frac{1-f}{xx'} \sum_{h=1}^H \left[ \frac{m_h}{m_h-1} \left( \sum_{i=1}^{m_h} z_{hi} \cdot z'_{hi} - \frac{z_h z'_h}{m_h} \right) \right] \quad (5)$$

Usually  $\text{cov}(r, r')$  is positive due to positive correlation between individuals in the two sub-classes who belong to the same cluster in the sample.

Rates of homogeneity (ROH), which indicate to what extent responses for a particular variable are more homogeneous within PSUs than in the sample as a whole, may be calculated from the average PSU size and DEFT. ROH is calculated as:

$$ROH = \frac{DEFT^2 - 1}{b - 1} \quad (6)$$

where  $b$  is the mean PSU size.

## Strata needed for the sampling errors computations

Before selection of a sample, the population is usually divided into a number of parts called strata which are expected to be homogeneous in some way, and PSUs are then selected from each stratum independently. The aim of stratification is to reduce sampling errors, or sometimes to permit a change in sample design or sampling rate between strata. It should be noted that the strata used for computation of sampling errors are not necessarily identical to the original explicit strata used in sample selection. The difference between the two may arise for two main reasons.

- i) Whenever PSUs are selected by systematic sampling from an ordered list, ie selection at a fixed interval from a list starting from a randomly determined point, neighbouring selected PSUs should be grouped, two at a time if possible, three if not, within explicit strata to form new smaller 'implicit' strata which are used for sampling error computations. In the case of an explicit stratum in which an odd number of PSUs (greater than 3) have been selected by systematic sampling, there will be a choice to be made as to where in the ordered list to make the grouping of three. A simple rule for this is as follows: Look for the smallest sized PSU. If this is at the beginning (end) of the list in that explicit stratum, make the group of three the first (last) three members of the list. Otherwise, make the group of three around the smallest PSU and the smaller of its two neighbours, bearing in mind that the first member of any group (whether of two or of three) must be odd-numbered as counted from the beginning of the list in that explicit stratum.

- ii) Sampling error computations require that there be at least two PSUs per stratum. Any strata from each of which only one PSU has been selected must be 'collapsed' together to form pairs (or other groups) of PSUs. Such grouping is done on the basis of characteristics of the whole strata population (pairing most similar strata), and not on the characteristics of selected PSUs. Collapsing of strata in this way tends to lead to slight overestimation of the sampling error.

For CLUSTERS, the strata to be defined are obviously those which are to be used for sampling error computations and these strata are identified on the WFS standard recode tapes. The original explicit strata, if they differ from the above, are of no interest.

## Approximating standard errors when standard errors are not given

### Approximating standard errors for sample subclasses

Under the assumption that only the size of a

subclass, not its nature, affects the sampling error, the standard error for a subclass of any size is well approximated from the results computed over the total sample as follows. We use the suffix  $t$  to refer to the total sample (of size  $n_t$ ) and the suffix  $s$  to refer to any subclass (of size  $n_s$ ). The approximate relationship (empirically valid in an approximate sense).

$$SE_s = f_s \cdot SE_t \quad (7)$$

where  $f_s$  is a factor determined semi-empirically as

$$f_s = \left[ \left( \frac{n_t}{n_s} \right) + \left( \frac{n_t}{n_s} \right)^{2/3} \cdot (DEFT_t^2 - 1) \right]^{1/2} / DEFT_t \quad (8)$$

can be used to approximate the standard error for a sample subclass. Note that  $f_s$  depends only on the results for the total sample and the proportion of the sample belonging to the subclass. Note that the above equations are applied separately to each of the substantive variables of interest. For certain variables, eg the mean number of children ever born, these equations were found inadequate for predicting SEs for certain subclasses and the values determined from the above equations required some adjustment to make them better correspond to the results actually computed. Those variables strongly related to the life cycle, ie to age or marriage duration, have a standard error which is obviously related to the mean or proportion being estimated, which in turn varies considerably from one subclass to another. Nevertheless we find that in these particular cases, the exceptional subclasses (with, say, an exceptionally low value of the mean or proportion for the variable) can be dealt with by multiplying SEs by a simple adjustment factor such as 0.5.

### Approximating standard errors for subclass differences

The standard error for subclass differences can be approximated by assuming that the standard error for the difference is mid-way between two limits: the higher limit assuming that there is no covariance term in equation (4) (actually the covariance is generally positive), and the lower limit assuming that there is no effect at all of clustering of the sample. The procedure is based on the assumption that equations (7) and (8) are valid also for the standard error of the difference of two subclass means if  $n_s$  in (8) is replaced by  $n_d$ , half the harmonic mean of the two subclass sizes, ie

$$n_d = \frac{n_1 \cdot n_2}{n_1 + n_2} \quad (9)$$

Note that the upper and lower limits are usually not widely apart in practice, since  $n_d$  tends to be much smaller than  $n_s$ .

### Variation of DEFT with subclass size

Under the assumption that only the size of a

subclass, not its nature, affects the sampling error, equations (7) and (8) are equivalent to:

$$\frac{DEFT_s^2 - 1}{DEFT_t^2 - 1} = (n_s/n_t)^{1/3} \quad (10)$$

Equation (10) implies that for small subclasses, ie subclasses with size  $n_s$  much smaller than  $n_t$ , DEFT for the subclass tends to one. In

other words, loss in sampling precision due to clustering of the sample tends to become smaller for smaller subclasses. In the present context, this means that where survey estimates for relatively small subclasses such as five-year age of marriage cohorts are of major interest, the effect of clustering of the sample tends to be relatively less important. For example, for a subclass with  $n_s/n_t = 0.1$  and  $DEFT_t = 2.0$ , the corresponding  $DEFT_s$  is around 1.5.



# LIST OF TABLES

XII.1a	Sampling errors over the total sample	224	XII.8a	Sampling errors by type of place of residence	240
XII.2a	Sampling errors by current age	225	XII.8b	Sampling errors for differences between type of place of residence subclasses	241
XII.3a	Sampling errors by age at first marriage	228	XII.9a	Sampling errors by woman's level of education	242
XII.4a	Sampling errors by years since first marriage	230	XII.9b	Sampling errors for differences between woman's level of education subclasses	244
XII.5a	Sampling errors by number of living children	232	XII.10a	Sampling errors by woman's pattern of work	246
XII.6a	Sampling errors by region of residence	234	XII.11a	Sampling errors by husband's occupation	248
XII.6b	Sampling errors for differences between region of residence subclasses	235	XII.12a	Sampling errors by women's most recent occupation	250
XII.7a	Sampling errors by religion	237	XII.12b	Sampling errors for differences between women's most recent occupation subclasses	252

Table XII.1a - Sampling errors over the total sample

Variable name	Mean or per cent	SE	Mean or per cent		n	s	DEFT	b
			-2SE	+2SE				
Age at first marriage	16.59	.12	16.36	16.82	8188	3.83	2.75	33.0
Age at first marriage (<20)	16.48	.12	16.24	16.73	5512	3.29	2.79	22.2
First marriage dissolved	14.95	.77	13.42	16.48	8188	35.66	1.95	33.0
Time spent in union	95.67	.30	95.06	96.28	8188	17.12	1.60	33.0
Currently married	95.28	.52	94.24	96.32	8188	21.21	2.21	33.0
Births in first 5 years	1.48	.03	1.42	1.54	6703	1.21	1.97	27.0
Births in past 5 years	1.23	.03	1.18	1.28	6075	1.07	2.00	24.5
Currently pregnant	15.36	.60	14.16	16.56	7809	36.06	1.47	31.5
Children ever born	3.07	.09	2.90	3.24	9727	2.86	2.96	39.2
Living children	2.53	.07	2.39	2.67	9727	2.39	2.92	39.2
Additional children wanted	5.20	.15	4.90	5.49	3990	3.83	2.42	16.1
Breastfed last closed interval	98.17	.21	97.75	98.59	5979	13.40	1.21	24.1
Months breastfed closed interval	16.31	.31	15.69	16.94	5502	7.18	3.23	22.2
Wants no more children	5.01	.61	3.79	6.23	7168	21.81	2.37	28.9
Desired family size	8.36	.12	8.12	8.61	5063	3.88	2.25	20.4
Knows an effective method	21.13	1.16	18.80	23.45	8535	40.82	2.63	34.4
Ever used contraceptives	15.09	.94	13.21	16.97	8535	35.80	2.42	34.4
Ever used any effective method	2.64	.28	2.07	3.21	8535	16.03	1.64	34.4
Currently using (exposed)	6.23	.57	5.08	7.38	5908	24.17	1.83	23.8
Using effective (exposed)	.72	.15	.42	1.02	5908	8.46	1.37	23.8
Wants no more and using eff.(exp)	3.92	1.43	1.07	6.77	321	19.43	1.31	1.5
Never used contraception	85.77	.95	83.86	87.67	8188	34.94	2.46	33.0
Used contraception in past	9.71	.84	8.04	11.38	8188	29.61	2.56	33.0
Currently using contraception	4.53	.42	3.69	5.36	8188	20.79	1.82	33.0

Table XII.2a - Sampling errors by current age

Variable name	<20				20-24				25-29				30-34			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	14.71	.13	858	1.83	15.91	.14	1521	1.92	16.49	.19	1716	2.11	16.52	.16	1516	1.70
Age at first marriage (<20)	.00	.00	0	.00	.00	.00	0	.00	16.24	.19	1682	2.27	16.19	.15	1465	1.75
First marriage dissolved	5.06	1.01	858	1.35	8.84	.95	1521	1.30	10.51	1.06	1716	1.42	14.61	1.51	1516	1.66
Time spent in union	98.34	.40	858	1.29	97.98	.28	1521	1.15	97.79	.37	1716	1.54	97.28	.42	1516	1.50
Currently married	99.20	.29	858	.94	98.02	.44	1521	1.24	97.53	.70	1716	1.87	96.61	.67	1516	1.44
Births in first 5 years	1.17	.11	140	1.33	1.61	.05	950	1.33	1.54	.05	1565	1.76	1.54	.05	1488	1.55
Births in past 5 years	1.26	.10	120	1.18	1.62	.05	865	1.47	1.57	.04	1463	1.69	1.32	.04	1380	1.49
Currently pregnant	19.80	2.07	846	1.51	20.27	1.38	1486	1.32	19.30	1.40	1680	1.46	15.74	1.36	1460	1.43
Children ever born	.35	.04	2083	2.38	1.79	.07	1762	1.93	3.21	.11	1757	2.17	4.32	.10	1524	1.56
Living children	.30	.03	2083	2.35	1.52	.06	1762	1.93	2.72	.09	1757	2.07	3.67	.10	1524	1.83
Additional children wanted	6.98	.25	514	1.42	6.27	.21	846	1.65	5.40	.22	903	1.91	4.70	.19	754	1.53
Breastfed last closed interval	98.38	1.63	139	1.51	97.28	1.26	899	2.33	97.97	.44	1379	1.16	98.51	.47	1325	1.40
Months breastfed closed interval	17.18	.76	124	1.36	15.65	.39	827	1.64	15.96	.42	1278	2.15	16.12	.40	1227	2.00
Wants no more children	2.59	.83	825	1.50	.98	.30	1463	1.18	2.32	.51	1626	1.36	4.57	1.20	1365	2.12
Desired family size	8.30	.27	564	1.54	8.31	.19	986	1.61	8.54	.20	1095	1.77	8.48	.19	945	1.59
Knows an effective method	20.18	1.96	1043	1.58	24.80	1.73	1632	1.62	21.82	1.71	1743	1.72	20.22	1.59	1523	1.54
Ever used contraceptives	13.81	1.77	1043	1.66	18.85	1.61	1632	1.66	14.08	1.34	1743	1.61	14.82	1.24	1523	1.37
Ever used any effective method	4.69	.97	1043	1.48	3.49	.51	1632	1.12	2.23	.53	1743	1.50	1.86	.35	1523	1.00
Currently using (exposed)	4.49	.83	640	1.01	7.56	1.50	1143	1.92	5.66	.95	1299	1.48	6.53	.95	1130	1.29
Using effective (exposed)	.07	.06	640	.53	.53	.28	1143	1.30	.43	.16	1299	.87	.85	.29	1130	1.07
Wants no more and using eff.(exp)	.00	.00	9	.00	.00	.00	12	.00	3.99	3.19	29	.86	2.34	1.47	53	.70
Never used contraception	91.09	1.01	858	1.03	82.09	1.65	1521	1.68	86.64	1.40	1716	1.70	85.29	1.27	1516	1.40
Used contraception in past	5.44	.93	858	1.20	12.11	1.30	1521	1.56	9.05	1.07	1716	1.54	9.79	1.11	1516	1.46
Currently using contraception	3.47	.65	858	1.04	5.80	1.17	1521	1.96	4.31	.74	1716	1.50	4.91	.69	1516	1.24

[Table continues]



Table XII.2a - Sampling errors by current age (cont.)

Variable name	35-39				40-44				45-49			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	16.95	.19	1055	1.51	18.26	.25	935	1.65	18.24	.33	587	1.60
Age at first marriage (<20)	16.42	.15	1002	1.44	17.20	.17	841	1.53	17.09	.27	522	1.82
First marriage dissolved	22.13	1.68	1055	1.31	22.93	1.85	935	1.35	32.49	2.25	587	1.16
Time spent in union	94.88	.72	1055	1.50	94.81	.71	935	1.42	91.74	.85	587	1.15
Currently married	93.19	1.56	1055	2.01	91.80	1.18	935	1.32	82.06	2.25	587	1.42
Births in first 5 years	1.45	.06	1046	1.51	1.35	.06	927	1.36	1.34	.08	587	1.49
Births in past 5 years	1.06	.06	951	1.73	.67	.04	824	1.40	.49	.07	472	1.66
Currently pregnant	11.27	1.21	995	1.20	6.69	.98	857	1.15	1.84	.62	485	1.02
Children ever born	5.07	.16	1061	1.77	5.13	.16	946	1.63	5.84	.21	594	1.49
Living children	4.16	.14	1061	1.82	4.00	.13	946	1.63	4.47	.22	594	1.82
Additional children wanted	4.26	.31	454	1.57	3.29	.27	364	1.50	2.08	.31	155	1.27
Breastfed last closed interval	98.65	.54	927	1.42	98.19	.55	803	1.16	98.35	.61	507	1.08
Months breastfed closed interval	16.17	.43	861	1.81	17.43	.51	725	1.72	17.30	.61	460	1.69
Wants no more children	7.61	.98	887	1.10	13.10	1.70	709	1.34	21.58	4.02	293	1.67
Desired family size	8.66	.22	627	1.35	8.04	.25	540	1.47	7.57	.27	306	1.09
Knows an effective method	21.76	2.04	1058	1.61	17.73	1.53	944	1.23	17.38	2.63	592	1.69
Ever used contraceptives	13.21	1.48	1058	1.42	14.59	1.73	944	1.51	15.37	2.48	592	1.67
Ever used any effective method	2.05	.58	1058	1.33	2.08	.56	944	1.20	2.05	1.05	592	1.80
Currently using (exposed)	4.84	.82	770	1.05	5.06	1.01	645	1.16	12.89	2.96	281	1.48
Using effective (exposed)	.71	.38	770	1.26	1.10	.54	645	1.32	3.04	2.16	281	2.11
Wants no more and using eff.(exp)	6.33	3.99	61	1.27	4.68	2.43	88	1.08	3.68	2.36	69	1.03
Never used contraception	86.75	1.50	1055	1.43	85.40	1.74	935	1.51	84.56	2.49	587	1.67
Used contraception in past	9.83	1.39	1055	1.51	11.08	1.50	935	1.46	9.31	1.56	587	1.30
Currently using contraception	3.42	.60	1055	1.07	3.52	.69	935	1.15	6.13	1.44	587	1.46

Table XII.2a - Sampling errors by current age (cont.)

Variable name	<25				25-34				35-44				45-49			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	15.47	.13	2379	2.30	16.50	.14	3232	2.24	17.54	.17	1990	1.69	18.24	.33	587	1.60
Age at first marriage (<20)	.00	.00	0	.00	16.22	.14	3147	2.48	16.76	.13	1843	1.73	17.09	.27	522	1.82
First marriage dissolved	7.45	.72	2379	1.34	12.45	.90	3232	1.55	22.49	1.40	1990	1.49	32.49	2.25	587	1.16
Time spent in union	98.06	.24	2379	1.21	97.50	.29	3232	1.56	94.85	.50	1990	1.43	91.74	.85	587	1.15
Currently married	98.45	.31	2379	1.23	97.09	.53	3232	1.80	92.57	1.16	1990	1.97	82.06	2.25	587	1.42
Births in first 5 years	1.55	.04	1090	1.34	1.54	.04	3053	1.84	1.41	.04	1973	1.50	1.34	.08	587	1.49
Births in past 5 years	1.57	.05	985	1.52	1.45	.04	2843	1.90	.88	.05	1775	1.85	.49	.07	472	1.66
Currently pregnant	20.10	1.17	2332	1.40	17.63	1.05	3140	1.54	9.23	.87	1852	1.29	1.84	.62	485	1.02
Children ever born	1.00	.06	3845	2.66	3.73	.09	3281	2.33	5.10	.13	2007	2.01	5.84	.21	594	1.49
Living children	.85	.05	3845	2.69	3.16	.09	3281	2.48	4.09	.11	2007	2.07	4.47	.22	594	1.82
Additional children wanted	6.54	.17	1360	1.69	5.08	.18	1657	2.06	3.83	.22	818	1.64	2.08	.31	155	1.27
Breastfed last closed interval	97.44	1.12	1038	2.29	98.23	.31	2704	1.22	98.45	.38	1730	1.27	98.35	.61	507	1.08
Months breastfed closed interval	15.86	.38	951	1.73	16.04	.36	2505	2.55	16.73	.37	1586	2.00	17.30	.61	460	1.69
Wants no more children	1.58	.33	2288	1.27	3.36	.74	2991	2.26	9.98	.97	1596	1.29	21.58	4.02	293	1.67
Desired family size	8.31	.17	1550	1.70	8.51	.16	2040	1.92	8.38	.19	1167	1.59	7.57	.27	306	1.09
Knows an effective method	22.97	1.51	2675	1.86	21.07	1.38	3266	1.93	19.95	1.54	2002	1.73	17.38	2.63	592	1.69
Ever used contraceptives	16.86	1.40	2675	1.94	14.43	1.05	3266	1.71	13.83	1.31	2002	1.70	15.37	2.48	592	1.67
Ever used any effective method	3.96	.57	2675	1.52	2.06	.33	3266	1.32	2.06	.40	2002	1.27	2.05	1.05	592	1.80
Currently using (exposed)	6.42	1.06	1783	1.82	6.07	.77	2429	1.59	4.94	.66	1415	1.14	12.89	2.96	281	1.48
Using effective (exposed)	.36	.18	1783	1.25	.62	.16	2429	1.03	.88	.33	1415	1.31	3.04	2.16	281	2.11
Wants no more and using eff.(exp)	.00	.00	21	.00	2.95	1.48	82	.79	5.38	2.25	149	1.21	3.68	2.36	69	1.03
Never used contraception	85.41	1.25	2379	1.72	86.00	1.08	3232	1.77	86.15	1.32	1990	1.70	84.56	2.49	587	1.67
Used contraception in past	9.65	1.01	2379	1.68	9.40	.90	3232	1.76	10.39	1.19	1990	1.75	9.31	1.56	587	1.30
Currently using contraception	4.94	.83	2379	1.87	4.60	.58	3232	1.57	3.46	.47	1990	1.14	6.13	1.44	587	1.46

Table XII.3a - Sampling errors by age at first marriage

Variable name	<15				15-17				18-19			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	13.14	.05	2960	2.18	16.31	.03	2714	1.63	18.91	.02	1115	1.40
Age at first marriage (<20)	13.11	.07	1932	2.17	16.33	.03	1796	1.73	18.92	.02	851	1.37
First marriage dissolved	16.65	1.21	2960	1.77	14.30	.95	2714	1.41	15.01	1.57	1115	1.46
Time spent in union	96.14	.37	2960	1.31	95.82	.45	2714	1.43	94.28	.88	1115	1.38
Currently married	96.72	.60	2960	1.85	95.42	.61	2714	1.52	93.09	1.02	1115	1.34
Births in first 5 years	1.21	.03	2653	1.37	1.55	.05	2128	1.84	1.66	.07	888	1.71
Births in past 5 years	1.26	.03	2417	1.45	1.21	.04	1938	1.73	1.28	.06	797	1.59
Currently pregnant	14.25	1.01	2848	1.55	15.74	1.00	2602	1.41	15.72	1.57	1051	1.40
Children ever born	3.87	.16	2960	2.93	3.59	.10	2714	1.95	3.66	.12	1115	1.61
Living children	3.10	.16	2960	3.48	2.97	.09	2714	2.11	3.13	.11	1115	1.67
Additional children wanted	5.25	.22	1422	2.12	5.44	.17	1391	1.59	5.15	.21	549	1.36
Breastfed last closed interval	98.30	.34	2204	1.23	98.03	.57	1932	1.82	98.13	.58	817	1.23
Months breastfed closed interval	16.93	.51	1991	3.31	16.39	.36	1773	2.10	16.06	.38	771	1.38
Wants no more children	5.63	1.38	2580	3.04	4.50	.56	2399	1.31	4.05	.62	987	.99
Desired family size	8.95	.18	1839	1.83	8.40	.18	1726	1.98	7.96	.18	670	1.38
Knows an effective method	13.49	1.27	2960	2.01	19.72	1.29	2714	1.69	26.88	2.09	1115	1.58
Ever used contraceptives	10.53	.99	2960	1.76	15.12	1.15	2714	1.67	16.17	1.51	1115	1.37
Ever used any effective method	.96	.23	2960	1.30	1.61	.28	2714	1.14	2.11	.55	1115	1.27
Currently using (exposed)	5.80	.77	2163	1.54	6.02	.80	1954	1.48	5.83	.92	810	1.12
Using effective (exposed)	.63	.29	2163	1.71	.48	.15	1954	.96	.46	.20	810	.84
Wants no more and using eff.(exp)	2.34	1.27	113	.89	4.11	1.80	102	.91	1.82	1.32	42	.63
Never used contraception	89.47	.99	2960	1.76	84.88	1.15	2714	1.67	83.83	1.51	1115	1.37
Used contraception in past	6.26	.76	2960	1.71	10.72	1.04	2714	1.76	11.93	1.52	1115	1.56
Currently using contraception	4.27	.58	2960	1.55	4.40	.59	2714	1.50	4.23	.67	1115	1.12

Table XII.3a - Sampling errors by age at first marriage (cont.)

Variable name	20-21				22-24				25+			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	20.86	.02	709	1.23	23.29	.07	393	1.71	28.17	.23	297	1.22
Age at first marriage (<20)	20.86	.02	577	1.21	23.33	.07	356	1.71	.00	.00	0	.00
First marriage dissolved	11.93	2.13	709	1.75	13.54	2.17	393	1.26	12.32	2.30	297	1.21
Time spent in union	95.74	.89	709	1.26	94.19	1.20	393	1.13	94.56	1.37	297	1.23
Currently married	94.32	1.53	709	1.76	93.32	1.77	393	1.41	91.57	2.11	297	1.30
Births in first 5 years	1.82	.08	535	1.56	1.93	.10	281	1.25	2.21	.17	218	1.25
Births in past 5 years	1.17	.07	488	1.41	1.24	.09	246	1.34	1.00	.10	189	1.33
Currently pregnant	17.36	1.93	669	1.31	15.00	2.35	367	1.26	18.13	3.93	272	1.68
Children ever born	3.55	.18	709	1.88	3.14	.21	393	1.64	3.23	.24	297	1.54
Living children	2.97	.14	709	1.65	2.70	.18	393	1.60	2.77	.21	297	1.58
Additional children wanted	4.58	.29	332	1.53	4.52	.31	179	1.28	4.56	.33	117	1.05
Breastfed last closed interval	98.31	.60	515	1.05	97.15	1.83	276	1.82	99.15	.52	210	.82
Months breastfed closed interval	15.33	.47	484	1.36	14.78	.59	262	1.31	14.71	.64	200	1.37
Wants no more children	5.42	1.12	609	1.22	6.05	1.54	350	1.20	4.47	1.23	243	.93
Desired family size	7.53	.19	445	1.23	7.01	.29	218	1.26	6.81	.29	165	1.11
Knows an effective method	28.75	3.16	709	1.86	30.81	4.25	393	1.82	29.55	3.34	297	1.26
Ever used contraceptives	17.92	2.17	709	1.50	22.00	3.44	393	1.64	18.61	2.61	297	1.16
Ever used any effective method	4.15	.87	709	1.16	6.49	2.35	393	1.89	4.62	1.00	297	.82
Currently using (exposed)	7.95	1.49	492	1.22	9.16	3.25	289	1.91	6.21	1.87	200	1.09
Using effective (exposed)	1.06	.44	492	.96	2.68	1.37	289	1.44	1.64	.90	200	1.00
Wants no more and using eff.(exp)	7.38	5.37	32	1.14	10.88	6.00	21	.86	10.30	7.21	11	.75
Never used contraception	82.08	2.17	709	1.50	78.00	3.44	393	1.64	81.39	2.61	297	1.16
Used contraception in past	12.45	1.97	709	1.59	15.14	2.46	393	1.36	14.51	2.35	297	1.15
Currently using contraception	5.47	.98	709	1.15	6.86	2.41	393	1.89	4.10	1.24	297	1.07

Table XII.4a - Sampling errors by years since first marriage

Variable name	<5				5-9				10-14				15-19			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	17.97	.22	1485	2.08	16.70	.16	1638	1.70	16.55	.14	1769	1.51	16.17	.18	1360	1.73
Age at first marriage (<20)	22.81	.19	117	1.49	19.28	.12	648	1.32	16.40	.11	1520	1.63	15.81	.15	1316	1.66
First marriage dissolved	3.85	.63	1485	1.26	10.44	1.11	1638	1.47	11.96	1.04	1769	1.34	17.45	1.34	1360	1.30
Time spent in union	98.60	.33	1485	1.43	97.73	.33	1638	1.43	97.56	.30	1769	1.26	96.38	.47	1360	1.33
Currently married	98.35	.49	1485	1.47	97.41	.59	1638	1.50	97.44	.55	1769	1.46	95.68	.82	1360	1.49
Births in first 5 years	.00	.00	0	.00	1.75	.05	1638	1.72	1.56	.05	1769	1.59	1.45	.05	1360	1.46
Births in past 5 years	.00	.00	0	.00	1.58	.05	1491	2.01	1.44	.04	1655	1.62	1.25	.06	1247	1.80
Currently pregnant	22.07	1.56	1463	1.44	19.94	1.48	1592	1.48	16.39	1.25	1722	1.40	14.55	1.40	1293	1.42
Children ever born	1.02	.03	1485	1.33	2.50	.07	1638	1.96	3.85	.09	1769	1.92	4.85	.10	1360	1.56
Living children	.90	.03	1485	1.35	2.13	.06	1638	1.95	3.28	.08	1769	1.89	4.09	.11	1360	1.90
Additional children wanted	6.57	.19	855	1.51	5.95	.19	917	1.53	5.19	.18	872	1.48	4.25	.18	637	1.34
Breastfed last closed interval	98.32	.92	346	1.33	97.34	.96	1209	2.07	98.50	.44	1527	1.40	98.12	.52	1198	1.33
Months breastfed closed interval	15.09	.64	319	1.64	15.44	.35	1122	1.72	16.28	.29	1423	1.61	16.46	.45	1110	2.07
Wants no more children	1.15	.25	1437	.89	1.83	.47	1562	1.40	3.04	.56	1636	1.32	6.29	1.16	1191	1.65
Desired family size	7.84	.19	959	1.54	8.27	.16	1055	1.41	8.57	.19	1109	1.70	8.75	.19	837	1.48
Knows an effective method	22.92	1.72	1485	1.58	21.68	1.84	1638	1.81	19.44	1.30	1769	1.38	19.44	2.01	1360	1.87
Ever used contraceptives	14.69	1.45	1485	1.58	15.60	1.39	1638	1.55	13.58	1.28	1769	1.57	13.65	1.28	1360	1.37
Ever used any effective method	3.02	.57	1485	1.29	2.30	.40	1638	1.08	1.37	.27	1769	.99	1.81	.46	1360	1.26
Currently using (exposed)	6.31	1.17	1092	1.59	6.51	1.21	1243	1.72	5.05	.88	1326	1.46	7.14	1.33	1016	1.65
Using effective (exposed)	.51	.28	1092	1.28	.49	.19	1243	.98	.56	.20	1326	.98	.97	.36	1016	1.19
Wants no more and using eff.(exp)	.00	.00	9	.00	3.95	3.95	20	.88	5.23	3.01	44	.89	4.35	1.84	60	.69
Never used contraception	85.31	1.45	1485	1.58	84.40	1.39	1638	1.55	86.42	1.28	1769	1.57	86.35	1.28	1360	1.37
Used contraception in past	9.95	1.19	1485	1.54	10.64	1.19	1638	1.57	9.71	1.09	1769	1.55	8.26	1.04	1360	1.40
Currently using contraception	4.75	.88	1485	1.59	4.96	.91	1638	1.70	3.86	.67	1769	1.46	5.39	.99	1360	1.62

Table XII.4a - Sampling errors by years since first marriage (cont.)

Variable name	20-24				25-29				30+			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	16.38	.17	1024	1.53	15.50	.26	607	2.01	14.53	.25	305	1.94
Age at first marriage (<20)	16.20	.16	999	1.55	15.50	.26	607	2.01	14.53	.25	305	1.94
First marriage dissolved	24.51	1.79	1024	1.33	28.36	2.60	607	1.42	36.29	3.21	305	1.17
Time spent in union	95.20	.59	1024	1.37	92.66	.92	607	1.21	92.31	1.15	305	1.28
Currently married	91.08	1.84	1024	2.06	88.30	1.52	607	1.16	84.21	3.34	305	1.60
Births in first 5 years	1.35	.06	1024	1.62	1.11	.06	607	1.46	1.01	.10	305	1.46
Births in past 5 years	.87	.06	912	1.62	.59	.05	519	1.41	.40	.06	251	1.24
Currently pregnant	7.18	1.09	944	1.30	4.99	1.10	539	1.17	1.16	.65	256	.96
Children ever born	5.26	.19	1024	2.03	5.79	.21	607	1.53	6.09	.31	305	1.47
Living children	4.21	.16	1024	2.02	4.44	.21	607	1.83	4.37	.33	305	1.91
Additional children wanted	3.94	.33	420	1.60	3.21	.37	219	1.44	1.77	.48	70	1.33
Breastfed last closed interval	98.44	.51	892	1.24	97.63	.74	523	1.11	99.91	.09	259	.50
Months breastfed closed interval	16.71	.57	812	2.13	17.89	.58	469	1.60	17.22	.99	226	2.11
Wants no more children	10.38	1.28	801	1.19	15.73	2.46	411	1.37	29.32	6.81	130	1.70
Desired family size	8.37	.25	611	1.44	8.47	.36	330	1.59	8.34	.43	162	1.15
Knows an effective method	19.31	1.74	1024	1.41	13.92	1.54	607	1.09	16.64	4.34	305	2.03
Ever used contraceptives	13.78	1.58	1024	1.46	13.25	1.77	607	1.29	14.86	3.68	305	1.80
Ever used any effective method	1.75	.48	1024	1.17	.80	.34	607	.95	2.81	1.82	305	1.92
Currently using (exposed)	4.90	.90	726	1.13	5.81	1.53	380	1.27	16.95	4.97	125	1.47
Using effective (exposed)	.70	.33	726	1.07	.16	.12	380	.57	6.02	4.45	125	2.08
Wants no more and using eff.(exp)	5.22	2.85	86	1.18	.56	.57	62	.59	4.93	3.65	40	1.05
Never used contraception	86.22	1.58	1024	1.46	86.75	1.77	607	1.29	85.14	3.68	305	1.80
Used contraception in past	10.41	1.44	1024	1.51	9.61	1.54	607	1.29	7.84	1.96	305	1.27
Currently using contraception	3.37	.62	1024	1.10	3.65	1.00	607	1.32	7.02	2.02	305	1.38

Table XII.5a - Sampling errors by number of living children

Variable name	0				1				2				3			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	16.54	.23	1025	1.97	16.85	.18	1392	1.76	16.75	.20	1392	1.80	16.54	.14	1343	1.34
Age at first marriage (<20)	16.50	.31	373	1.75	17.03	.26	525	1.58	16.88	.23	820	1.93	16.65	.14	1007	1.39
First marriage dissolved	18.96	2.33	1025	1.91	14.10	1.29	1392	1.38	12.57	1.08	1392	1.21	14.43	1.32	1343	1.38
Time spent in union	91.71	1.17	1025	1.31	93.70	.77	1392	1.14	96.07	.54	1392	1.24	95.54	.64	1343	1.32
Currently married	94.14	1.73	1025	2.36	95.46	.82	1392	1.46	97.15	.63	1392	1.42	95.55	.77	1343	1.38
Births in first 5 years	.17	.03	504	1.30	.84	.05	741	1.41	1.28	.04	1153	1.33	1.62	.03	1286	1.10
Births in past 5 years	.17	.04	404	1.51	.74	.06	622	1.83	1.19	.05	1057	1.59	1.36	.04	1193	1.50
Currently pregnant	22.67	1.75	970	1.30	17.04	1.13	1326	1.10	14.29	1.20	1345	1.25	15.51	1.42	1284	1.40
Children ever born	.11	.02	2517	1.77	1.46	.04	1418	1.56	2.56	.04	1399	1.43	3.74	.05	1349	1.40
Living children	.00	.00	2517	.00	1.00	.00	1418	.00	2.00	.00	1399	.00	3.00	.00	1349	.00
Additional children wanted	7.13	.26	529	1.29	6.33	.21	747	1.68	5.42	.20	700	1.58	4.92	.20	645	1.51
Breastfed last closed interval	95.15	2.53	50	.82	89.19	2.76	256	1.42	98.47	.52	1358	1.56	98.04	.54	1332	1.41
Months breastfed closed interval	15.54	1.69	16	.92	12.75	1.11	140	1.38	17.08	.35	1274	1.73	16.68	.35	1248	1.72
Wants no more children	3.30	.84	876	1.38	2.14	.39	1259	.96	2.16	.58	1250	1.41	4.41	.87	1196	1.47
Desired family size	7.67	.25	604	1.41	7.89	.19	870	1.48	7.63	.20	886	1.57	8.12	.20	827	1.61
Knows an effective method	20.44	2.04	1325	1.84	17.32	1.39	1418	1.38	19.52	1.67	1399	1.58	22.45	2.24	1349	1.97
Ever used contraceptives	12.04	1.63	1325	1.82	13.07	1.39	1418	1.55	12.82	1.21	1399	1.35	17.60	1.87	1349	1.81
Ever used any effective method	5.63	1.02	1325	1.61	1.84	.35	1418	.99	2.04	.59	1399	1.57	2.81	.53	1349	1.17
Currently using (exposed)	.71	.37	655	1.14	5.30	.98	1004	1.39	5.64	1.06	1036	1.48	7.43	1.13	1003	1.36
Using effective (exposed)	.09	.06	655	.49	.42	.18	1004	.88	.61	.32	1036	1.33	1.23	.42	1003	1.20
Wants no more and using eff.(exp)	.00	.00	17	.00	4.08	4.00	19	.86	2.04	2.08	24	.70	5.21	3.05	43	.89
Never used contraception	94.64	1.01	1025	1.43	87.21	1.33	1392	1.48	87.31	1.20	1392	1.35	82.40	1.88	1343	1.81
Used contraception in past	4.91	.99	1025	1.46	8.87	.99	1392	1.30	8.33	1.12	1392	1.52	12.11	1.49	1343	1.67
Currently using contraception	.45	.24	1025	1.13	3.92	.72	1392	1.39	4.36	.86	1392	1.56	5.48	.87	1343	1.40

Table XII.5a - Sampling errors by number of living children (cont.)

Variable name	4				5				6				7+			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	16.42	.17	1089	1.48	16.61	.16	822	1.32	16.76	.24	525	1.46	16.01	.38	600	2.28
Age at first marriage (<20)	16.30	.16	954	1.61	16.44	.14	765	1.28	16.43	.20	497	1.44	15.55	.35	571	2.56
First marriage dissolved	15.56	1.44	1089	1.31	13.92	1.87	822	1.55	16.39	1.90	525	1.18	15.26	1.80	600	1.22
Time spent in union	95.68	.73	1089	1.48	97.69	.37	822	1.14	96.73	.70	525	1.19	96.85	.45	600	.95
Currently married	95.06	.93	1089	1.42	95.35	1.10	822	1.49	94.43	1.39	525	1.39	93.22	1.25	600	1.22
Births in first 5 years	1.73	.05	1079	1.39	1.83	.05	818	1.17	2.09	.08	524	1.43	2.12	.07	598	1.21
Births in past 5 years	1.36	.05	999	1.62	1.40	.06	765	1.57	1.52	.08	485	1.65	1.73	.07	550	1.35
Currently pregnant	15.50	1.35	1034	1.20	11.61	1.66	789	1.45	12.70	2.38	498	1.60	8.05	1.64	563	1.43
Children ever born	4.81	.05	1094	1.22	5.92	.07	823	1.51	6.93	.09	526	1.45	8.94	.23	601	3.02
Living children	4.00	.00	1094	.00	5.00	.00	823	.00	6.00	.00	526	.00	8.13	.24	601	3.94
Additional children wanted	4.27	.18	504	1.16	3.84	.33	383	2.04	3.76	.30	221	1.27	3.05	.31	261	1.27
Breastfed last closed interval	99.32	.30	1073	1.19	98.72	.46	799	1.16	98.94	.47	518	1.03	98.71	.60	593	1.30
Months breastfed closed interval	16.79	.42	1003	1.92	15.92	.41	757	1.64	15.89	.50	491	1.57	14.92	.83	573	2.84
Wants no more children	5.70	.98	957	1.31	7.97	2.11	712	2.08	6.03	1.27	446	1.12	17.49	2.96	472	1.69
Desired family size	8.33	.20	658	1.40	8.99	.19	521	1.20	9.45	.21	314	1.17	10.84	.36	383	1.86
Knows an effective method	22.33	1.69	1094	1.34	21.90	1.96	823	1.36	24.61	2.48	526	1.32	25.76	2.79	601	1.56
Ever used contraceptives	18.70	1.74	1094	1.48	14.59	1.80	823	1.46	16.62	2.28	526	1.40	19.14	2.38	601	1.48
Ever used any effective method	1.24	.33	1094	.97	1.81	.74	823	1.60	2.60	.84	526	1.21	2.21	.65	601	1.08
Currently using (exposed)	9.44	1.25	790	1.20	5.82	1.22	610	1.28	5.34	1.12	387	.98	11.42	2.48	423	1.60
Using effective (exposed)	.29	.16	790	.84	1.51	.96	610	1.94	.63	.38	387	.94	1.21	.47	423	.89
Wants no more and using eff.(exp)	2.98	2.11	51	.88	3.60	2.41	50	.91	8.13	5.23	36	1.13	4.38	2.07	81	.90
Never used contraception	81.29	1.75	1089	1.48	85.40	1.80	822	1.46	83.40	2.28	525	1.40	80.97	2.38	600	1.49
Used contraception in past	11.79	1.61	1089	1.65	10.26	1.40	822	1.33	12.66	2.13	525	1.46	11.06	1.68	600	1.31
Currently using contraception	6.92	.93	1089	1.21	4.33	.92	822	1.29	3.94	.81	525	.95	7.96	1.72	600	1.56



Table XII.6a - Sampling errors by region of residence

Variable name	North east				North west				South east				South west			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	15.63	.22	1921	2.85	14.94	.14	2206	2.35	17.37	.24	2089	2.79	19.05	.14	1972	1.51
Age at first marriage (<20)	15.78	.25	1238	2.77	14.98	.13	1426	1.87	17.02	.28	1486	3.33	18.48	.14	1362	1.60
First marriage dissolved	14.55	1.35	1921	1.68	13.26	1.73	2206	2.40	19.68	1.56	2089	1.80	11.21	1.42	1972	2.00
Time spent in union	96.63	.37	1921	1.17	97.22	.42	2206	1.45	92.79	.93	2089	1.98	96.63	.58	1972	1.55
Currently married	97.50	.82	1921	2.30	98.65	.45	2206	1.84	88.48	1.37	2089	1.96	97.11	.60	1972	1.59
Births in first 5 years	1.26	.05	1577	1.91	1.06	.04	1827	1.45	1.89	.03	1745	1.16	1.80	.05	1554	1.74
Births in past 5 years	1.24	.06	1470	2.22	1.10	.04	1708	1.53	1.35	.06	1452	2.15	1.24	.04	1445	1.66
Currently pregnant	13.30	1.00	1874	1.28	13.03	1.26	2170	1.75	19.56	.89	1855	.97	16.09	1.52	1910	1.81
Children ever born	3.16	.17	2069	2.74	2.83	.10	2290	1.85	3.25	.22	2806	3.60	2.95	.11	2562	2.12
Living children	2.57	.13	2069	2.54	2.29	.08	2290	1.88	2.66	.18	2806	3.50	2.53	.09	2562	2.08
Additional children wanted	5.62	.33	1109	2.61	5.74	.24	1075	2.01	5.02	.29	930	2.53	3.84	.12	876	1.28
Breastfed last closed interval	97.58	.53	1326	1.26	98.51	.36	1404	1.12	98.18	.39	1728	1.22	98.48	.37	1521	1.18
Months breastfed closed interval	16.12	.38	1216	2.04	20.88	.33	1282	1.93	13.56	.56	1567	3.73	15.71	.45	1437	2.11
Wants no more children	6.37	1.87	1731	3.19	3.87	.47	1927	1.07	4.62	.92	1716	1.82	5.14	.70	1794	1.35
Desired family size	8.83	.19	1382	1.58	8.34	.24	1401	2.41	8.61	.34	1143	3.25	7.23	.12	1137	1.37
Knows an effective method	9.33	1.32	1937	2.00	7.41	.97	2210	1.74	33.46	2.67	2292	2.71	36.34	2.98	2096	2.84
Ever used contraceptives	3.23	.94	1937	2.33	6.35	.85	2210	1.64	28.48	2.03	2292	2.16	22.45	2.30	2096	2.52
Ever used any effective method	.52	.29	1937	1.77	.39	.16	2210	1.25	3.87	.47	2292	1.17	6.52	.99	2096	1.83
Currently using (exposed)	.61	.26	1469	1.28	5.38	.90	1624	1.60	12.70	1.58	1341	1.73	7.64	1.13	1474	1.64
Using effective (exposed)	.05	.04	1469	.72	.31	.15	1624	1.08	1.37	.45	1341	1.40	1.45	.43	1474	1.38
Wants no more and using eff.(exp)	.00	.00	73	.00	2.81	1.62	70	.81	5.49	2.07	91	.86	9.77	5.61	87	1.75
Never used contraception	96.79	.94	1921	2.33	93.66	.86	2206	1.66	72.37	2.28	2089	2.33	78.60	2.30	1972	2.49
Used contraception in past	2.75	.82	1921	2.19	2.26	.49	2206	1.55	19.53	2.31	2089	2.66	15.65	1.95	1972	2.39
Currently using contraception	.47	.20	1921	1.28	4.08	.71	2206	1.69	8.10	1.05	2089	1.75	5.75	.83	1972	1.58

Table XII.6b - Sampling errors for differences between region of residence subclasses

Variable name	(North east) - (North west)				(North east) - (South east)				(North east) - (South west)			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	.69	.26	2053	2.67	-1.73	.32	2001	2.82	-3.41	.26	1946	2.17
Age at first marriage (<20)	.81	.28	1325	2.48	-1.24	.37	1350	3.05	-2.70	.28	1297	2.29
First marriage dissolved	1.30	2.20	2053	2.03	-5.13	2.07	2001	1.74	3.34	1.96	1946	1.83
Time spent in union	-.59	.55	2053	1.31	3.84	1.00	2001	1.78	-.01	.69	1946	1.41
Currently married	-1.15	.94	2053	2.16	9.02	1.59	2001	2.03	.39	1.02	1946	1.96
Births in first 5 years	.20	.07	1692	1.70	-.63	.06	1656	1.57	-.54	.07	1565	1.83
Births in past 5 years	.14	.07	1580	1.95	-.11	.09	1460	2.19	.00	.08	1457	1.98
Currently pregnant	.27	1.61	2011	1.51	-6.26	1.34	1864	1.11	-2.79	1.82	1891	1.59
Children ever born	.32	.19	2173	2.42	-.10	.28	2381	3.20	.20	.20	2289	2.50
Living children	.28	.15	2173	2.30	-.09	.22	2381	3.06	.03	.16	2289	2.35
Additional children wanted	-.12	.41	1091	2.34	.60	.44	1011	2.58	1.78	.35	978	2.21
Breastfed last closed interval	-.92	.64	1363	1.21	-.60	.66	1500	1.24	-.90	.65	1416	1.23
Months breastfed closed interval	-4.76	.50	1248	1.99	2.56	.68	1369	2.82	.41	.59	1317	2.08
Wants no more children	2.50	1.93	1823	2.63	1.75	2.09	1723	2.69	1.23	2.00	1761	2.55
Desired family size	.48	.31	1391	1.96	.21	.39	1251	2.45	1.60	.23	1247	1.51
Knows an effective method	1.92	1.64	2064	1.89	-24.14	2.98	2099	2.51	-27.01	3.26	2013	2.63
Ever used contraceptives	-3.12	1.27	2064	1.93	-25.25	2.24	2099	2.19	-19.21	2.48	2013	2.49
Ever used any effective method	.14	.33	2064	1.58	-3.35	.55	2099	1.27	-6.00	1.03	2013	1.82
Currently using (exposed)	-4.77	.94	1542	1.57	-12.09	1.60	1402	1.71	-7.03	1.16	1471	1.61
Using effective (exposed)	-.26	.15	1542	1.03	-1.33	.45	1402	1.39	-1.41	.43	1471	1.36
Wants no more and using eff.(exp)	-2.81	1.62	71	.81	-5.49	2.07	81	.86	-9.77	5.61	79	1.75
Never used contraception	3.13	1.27	2053	1.94	24.42	2.47	2001	2.33	18.18	2.48	1946	2.46
Used contraception in past	.49	.95	2053	1.95	-16.78	2.45	2001	2.59	-12.90	2.12	1946	2.36
Currently using contraception	-3.61	.74	2053	1.65	-7.63	1.06	2001	1.72	-5.28	.85	1946	1.56

[Table continues]

Table XII.6b - Sampling errors for differences between region of residence subclasses (cont.)

Variable name	(North west) - (South east)				(North west) - (South west)				(South east) - (South west)			
	Mean or				Mean or				Mean or			
	per cent	SE	n	DEFT	per cent	SE	n	DEFT	per cent	SE	n	DEFT
Age at first marriage	-2.43	.28	2145	2.65	-4.11	.20	2082	1.82	-1.68	.27	2028	2.20
Age at first marriage (<20)	-2.04	.31	1455	2.85	-3.51	.19	1393	1.71	-1.46	.31	1421	2.60
First marriage dissolved	-6.43	2.33	2145	2.06	2.05	2.24	2082	2.21	8.48	2.12	2028	1.88
Time spent in union	4.43	1.02	2145	1.85	.59	.71	2082	1.51	-3.84	1.10	2028	1.83
Currently married	10.17	1.44	2145	1.95	1.54	.75	2082	1.67	-8.63	1.49	2028	1.88
Births in first 5 years	-.83	.05	1785	1.31	-.74	.06	1679	1.60	.09	.06	1643	1.47
Births in past 5 years	-.24	.07	1569	1.92	-.13	.06	1565	1.60	.11	.08	1448	1.95
Currently pregnant	-6.53	1.54	2000	1.32	-3.06	1.98	2031	1.78	3.47	1.76	1882	1.41
Children ever born	-.42	.24	2521	3.01	-.12	.15	2418	2.00	.30	.25	2678	3.06
Living children	-.37	.20	2521	2.97	-.24	.12	2418	1.99	.13	.20	2678	2.96
Additional children wanted	.72	.38	997	2.27	1.90	.27	965	1.76	1.18	.32	902	2.11
Breastfed last closed interval	.32	.53	1549	1.17	.02	.52	1460	1.15	-.30	.54	1617	1.20
Months breastfed closed interval	7.32	.65	1410	2.87	5.16	.56	1355	2.04	-2.15	.72	1499	2.75
Wants no more children	-.75	1.04	1815	1.55	-1.27	.85	1858	1.24	-.52	1.16	1754	1.60
Desired family size	-.27	.42	1258	2.88	1.11	.27	1255	2.01	1.38	.36	1139	2.62
Knows an effective method	-26.06	2.84	2250	2.51	-28.93	3.14	2151	2.64	-2.88	4.01	2189	2.78
Ever used contraceptives	-22.13	2.21	2250	2.05	-16.10	2.45	2151	2.34	6.04	3.07	2189	2.34
Ever used any effective method	-3.49	.50	2250	1.18	-6.14	1.00	2151	1.80	-2.65	1.09	2189	1.62
Currently using (exposed)	-7.33	1.81	1468	1.70	-2.26	1.45	1545	1.62	5.06	1.94	1404	1.70
Using effective (exposed)	-1.06	.47	1468	1.36	-1.15	.45	1545	1.33	-.08	.62	1404	1.39
Wants no more and using eff.(exp)	-2.68	2.63	79	.84	-6.96	5.84	77	1.55	-4.27	5.98	88	1.49
Never used contraception	21.29	2.44	2145	2.20	15.06	2.45	2082	2.32	-6.23	3.24	2028	2.41
Used contraception in past	-17.27	2.36	2145	2.55	-13.38	2.01	2082	2.30	3.88	3.02	2028	2.54
Currently using contraception	-4.02	1.27	2145	1.73	-1.67	1.09	2082	1.63	2.35	1.33	2028	1.68

Table XII.7a - Sampling errors by religion

Variable name	Catholic				Protestant				Other Christian			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	17.68	.19	1117	1.66	18.16	.22	1088	1.79	17.50	.41	1123	3.27
Age at first marriage (<20)	17.41	.22	746	1.82	17.79	.18	748	1.48	16.93	.50	766	3.92
First marriage dissolved	12.25	1.52	1117	1.55	16.86	1.93	1088	1.70	15.51	1.36	1123	1.26
Time spent in union	94.62	.98	1117	1.62	94.55	.93	1088	1.58	95.06	.99	1123	1.81
Currently married	92.27	1.56	1117	1.95	92.09	1.48	1088	1.81	93.65	.95	1123	1.31
Births in first 5 years	1.84	.05	900	1.28	1.86	.05	866	1.17	1.77	.07	906	1.55
Births in past 5 years	1.30	.09	822	2.44	1.37	.06	766	1.59	1.42	.06	796	1.32
Currently pregnant	19.22	1.68	1051	1.38	15.19	1.41	1014	1.25	15.98	1.22	1046	1.08
Children ever born	2.65	.18	1612	2.50	3.27	.16	1463	2.06	3.35	.23	1397	2.68
Living children	2.30	.14	1612	2.20	2.72	.13	1463	1.91	2.87	.24	1397	3.10
Additional children wanted	4.61	.25	527	1.76	4.44	.21	519	1.37	4.58	.21	534	1.50
Breastfed last closed interval	98.67	.45	859	1.14	98.82	.41	872	1.13	98.00	.61	898	1.31
Months breastfed closed interval	13.28	.50	805	2.51	14.45	.33	815	1.52	13.08	.91	837	3.91
Wants no more children	6.07	1.41	990	1.85	6.02	1.01	931	1.30	3.47	.59	975	1.01
Desired family size	7.69	.29	639	2.31	8.29	.19	680	1.39	8.28	.40	672	2.79
Knows an effective method	31.88	3.59	1223	2.69	37.13	2.89	1192	2.06	35.60	2.24	1207	1.62
Ever used contraceptives	24.59	2.00	1223	1.62	23.61	2.81	1192	2.28	21.97	2.65	1207	2.22
Ever used any effective method	5.41	.78	1223	1.21	5.69	1.09	1192	1.63	3.72	.51	1207	.94
Currently using (exposed)	12.75	2.00	788	1.68	7.14	1.59	768	1.71	7.69	1.90	808	2.03
Using effective (exposed)	1.80	.53	788	1.11	1.60	.60	768	1.33	1.43	.71	808	1.70
Wants no more and using eff.(exp)	11.77	5.59	59	1.32	3.73	2.11	56	.83	5.10	3.58	38	.99
Never used contraception	77.31	2.22	1117	1.77	78.20	2.77	1088	2.21	78.25	3.31	1123	2.69
Used contraception in past	14.12	2.48	1117	2.38	16.71	2.14	1088	1.89	16.28	2.39	1123	2.17
Currently using contraception	8.57	1.40	1117	1.67	5.08	1.15	1088	1.73	5.47	1.25	1123	1.84

[Table continues]

Table XII.7a - Sampling errors by religion (cont.)

Variable name	Moslem				Traditional and others				All Christian			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	15.56	.15	3911	2.83	17.16	.15	949	1.24	17.78	.18	3328	2.61
Age at first marriage (<20)	15.67	.17	2556	2.75	16.86	.14	696	1.30	17.38	.22	2260	3.08
First marriage dissolved	14.29	1.21	3911	2.16	18.60	2.26	949	1.79	14.82	.92	3328	1.50
Time spent in union	96.66	.35	3911	1.49	94.47	1.00	949	1.71	94.74	.55	3328	1.64
Currently married	98.14	.34	3911	1.58	91.16	1.75	949	1.90	92.66	.85	3328	1.88
Births in first 5 years	1.21	.03	3220	1.50	1.57	.08	811	2.02	1.82	.03	2672	1.35
Births in past 5 years	1.15	.04	2986	1.97	1.13	.06	705	1.60	1.36	.05	2384	2.08
Currently pregnant	13.73	.86	3822	1.55	18.27	1.49	876	1.14	16.84	.92	3111	1.37
Children ever born	2.95	.10	4223	2.55	3.68	.15	1032	1.73	3.06	.16	4472	3.39
Living children	2.39	.08	4223	2.51	2.81	.11	1032	1.58	2.61	.13	4472	3.35
Additional children wanted	5.65	.22	1961	2.37	5.17	.42	449	2.45	4.54	.15	1580	1.84
Breastfed last closed interval	98.01	.36	2597	1.33	97.61	.69	753	1.25	98.50	.28	2629	1.18
Months breastfed closed interval	18.65	.34	2374	2.37	17.45	.61	671	2.08	13.60	.42	2457	3.36
Wants no more children	4.99	.97	3478	2.63	4.36	1.12	794	1.54	5.20	.68	2896	1.65
Desired family size	8.53	.14	2511	1.75	8.50	.44	561	2.76	8.09	.21	1991	2.67
Knows an effective method	10.32	.97	3946	2.01	18.84	2.30	967	1.83	34.81	2.19	3622	2.76
Ever used contraceptives	6.59	.81	3946	2.06	22.93	2.94	967	2.17	23.42	1.52	3622	2.16
Ever used any effective method	.88	.23	3946	1.57	1.92	.62	967	1.39	4.96	.52	3622	1.44
Currently using (exposed)	3.45	.60	2912	1.78	10.07	2.14	632	1.79	9.20	1.15	2364	1.93
Using effective (exposed)	.19	.08	2912	1.02	.22	.14	632	.73	1.61	.34	2364	1.33
Wants no more and using eff.(exp)	1.60	.90	141	.85	3.27	2.43	27	.70	7.16	2.59	153	1.24
Never used contraception	93.52	.79	3911	2.00	77.40	2.86	949	2.10	77.91	1.69	3328	2.35
Used contraception in past	3.86	.57	3911	1.87	15.89	2.66	949	2.24	15.67	1.52	3328	2.41
Currently using contraception	2.62	.47	3911	1.85	6.71	1.47	949	1.81	6.42	.79	3328	1.85

Table XII.7b - Sampling errors for differences between religion subclasses

Variable name	(All Christian) - (Moslem)				(All Christian) - (Traditional & others)				(Moslem) - (Traditional & others)			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	2.22	.23	3596	2.60	.62	.22	1476	1.60	-1.60	.21	1527	1.64
Age at first marriage (<20)	1.71	.27	2398	2.89	.52	.25	1064	1.94	-1.19	.22	1094	1.80
First marriage dissolved	.53	1.57	3596	1.88	-3.78	2.18	1476	1.55	-4.31	2.56	1527	1.85
Time spent in union	-1.92	.68	3596	1.67	.27	1.00	1476	1.48	2.19	1.07	1527	1.70
Currently married	-5.48	.89	3596	1.77	1.50	1.69	1476	1.65	6.98	1.74	1527	1.83
Births in first 5 years	.62	.04	2920	1.38	.25	.09	1244	1.87	-.37	.09	1295	1.87
Births in past 5 years	.21	.06	2651	2.10	.23	.07	1088	1.71	.02	.07	1140	1.69
Currently pregnant	3.11	1.24	3430	1.42	-1.42	1.83	1367	1.25	-4.54	1.70	1425	1.20
Children ever born	.11	.19	4343	3.05	-.62	.21	1677	2.13	-.72	.19	1658	1.91
Living children	.22	.15	4343	3.01	-.21	.17	1677	2.12	-.43	.15	1658	1.93
Additional children wanted	-1.11	.29	1750	2.28	-.63	.40	699	2.10	.48	.47	730	2.38
Breastfed last closed interval	.49	.48	2612	1.33	.88	.76	1170	1.25	.40	.78	1167	1.26
Months breastfed closed interval	-5.05	.58	2414	3.02	-3.85	.75	1054	2.36	1.20	.68	1046	2.09
Wants no more children	.21	1.21	3160	2.18	.84	1.26	1246	1.51	.62	1.17	1292	1.43
Desired family size	-.44	.27	2220	2.33	-.41	.46	875	2.56	.03	.44	917	2.46
Knows an effective method	24.49	2.42	3777	2.60	15.97	3.10	1526	2.09	-8.52	2.45	1553	1.82
Ever used contraceptives	16.83	1.73	3777	2.15	.49	3.13	1526	2.05	-16.35	3.10	1553	2.20
Ever used any effective method	4.08	.56	3777	1.44	3.03	.78	1526	1.37	-1.05	.66	1553	1.41
Currently using (exposed)	5.75	1.31	2609	1.92	-.88	2.50	997	1.87	-6.63	2.23	1038	1.79
Using effective (exposed)	1.43	.35	2609	1.27	1.39	.36	997	1.13	-.04	.16	1038	.78
Wants no more and using eff.(exp)	5.56	2.30	146	.98	3.89	3.31	45	.81	-1.66	2.55	45	.70
Never used contraception	-15.61	1.86	3596	2.27	.51	3.15	1476	2.05	16.12	3.02	1527	2.13
Used contraception in past	11.82	1.60	3596	2.28	-.21	2.78	1476	2.07	-12.03	2.76	1527	2.25
Currently using contraception	3.79	.93	3596	1.88	-.30	1.69	1476	1.85	-4.09	1.55	1527	1.82

Table XII.8a - Sampling errors by type of place of residence

Variable name	Village				Town and city			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	16.37	.14	5895	2.93	17.38	.32	2293	3.67
Age at first marriage (<20)	16.33	.15	4041	2.98	17.10	.29	1471	3.11
First marriage dissolved	15.04	.95	5895	2.05	14.62	1.64	2293	2.22
Time spent in union	95.69	.35	5895	1.61	95.58	.59	2293	1.51
Currently married	95.13	.61	5895	2.19	95.83	.73	2293	1.75
Births in first 5 years	1.48	.03	4934	1.95	1.50	.06	1769	2.34
Births in past 5 years	1.22	.03	4466	2.01	1.28	.04	1609	1.44
Currently pregnant	14.88	.64	5605	1.35	17.13	1.49	2204	1.86
Children ever born	3.20	.10	6887	2.95	2.62	.12	2840	2.51
Living children	2.61	.09	6887	2.97	2.26	.09	2840	2.24
Additional children wanted	5.43	.17	2843	2.30	4.28	.16	1147	1.74
Breastfed last closed interval	98.12	.23	4343	1.10	98.35	.45	1636	1.41
Months breastfed closed interval	16.77	.40	3965	3.47	14.63	.43	1537	2.42
Wants no more children	4.97	.70	5091	2.29	5.13	.68	2077	1.40
Desired family size	8.64	.15	3616	2.26	7.31	.12	1447	1.51
Knows an effective method	17.22	1.20	6097	2.48	35.26	3.18	2438	3.28
Ever used contraceptives	13.97	1.11	6097	2.50	19.15	2.14	2438	2.68
Ever used any effective method	1.61	.25	6097	1.57	6.36	1.00	2438	2.03
Currently using (exposed)	6.07	.71	4213	1.94	6.80	1.08	1695	1.77
Using effective (exposed)	.43	.16	4213	1.55	1.78	.47	1695	1.46
Wants no more and using eff.(exp)	1.22	.63	226	.87	13.71	5.50	95	1.55
Never used contraception	86.75	1.12	5895	2.55	82.17	2.08	2293	2.60
Used contraception in past	8.87	.95	5895	2.56	12.79	1.77	2293	2.54
Currently using contraception	4.39	.51	5895	1.92	5.04	.78	2293	1.70

Table XII.8b - Sampling errors for differences between type of place of residence subclasses

Variable name	(Village) - (Town and city)			
	Mean or per cent	SE	n	DEFT
Age at first marriage	-1.01	.38	3301	3.86
Age at first marriage (<20)	-.77	.35	2156	3.32
First marriage dissolved	.42	2.04	3301	2.34
Time spent in union	.11	.69	3301	1.55
Currently married	-.70	.90	3301	1.80
Births in first 5 years	-.02	.08	2604	2.31
Births in past 5 years	-.06	.05	2365	1.59
Currently pregnant	-2.25	1.61	3163	1.73
Children ever born	.58	.16	4021	2.72
Living children	.35	.13	4021	2.54
Additional children wanted	1.16	.21	1634	1.80
Breastfed last closed interval	-.22	.47	2376	1.26
Months breastfed closed interval	2.14	.60	2215	2.88
Wants no more children	-.15	.79	2950	1.37
Desired family size	1.33	.19	2066	1.77
Knows an effective method	-18.04	3.50	3483	3.24
Ever used contraceptives	-5.18	2.53	3483	2.78
Ever used any effective method	-4.75	1.05	3483	2.02
Currently using (exposed)	-.73	1.37	2417	1.93
Using effective (exposed)	-1.35	.50	2417	1.49
Wants no more and using eff.(exp)	-12.49	5.54	133	1.53
Never used contraception	4.58	2.48	3301	2.72
Used contraception in past	-3.92	2.03	3301	2.57
Currently using contraception	-.66	.98	3301	1.85



Table XII.9a - Sampling errors by woman's level of education

Variable name	None				Koranic				Primary incomplete			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	16.40	.11	5440	2.23	14.51	.23	809	2.28	17.29	.20	911	1.51
Age at first marriage (<20)	16.37	.12	3981	2.35	14.56	.24	502	2.01	17.36	.24	541	1.58
First marriage dissolved	16.22	.96	5440	1.92	15.30	2.21	809	1.75	13.30	1.80	911	1.60
Time spent in union	95.43	.33	5440	1.45	96.62	.72	809	1.25	96.06	.74	911	1.26
Currently married	94.72	.59	5440	1.94	98.38	.53	809	1.20	95.57	.92	911	1.34
Births in first 5 years	1.40	.03	4732	1.92	1.27	.07	671	1.52	1.90	.06	706	1.46
Births in past 5 years	1.14	.03	4262	1.86	1.23	.05	629	1.19	1.57	.05	635	1.23
Currently pregnant	13.36	.65	5155	1.37	14.47	2.04	796	1.64	17.79	2.13	867	1.64
Children ever born	3.71	.11	5622	2.94	3.10	.11	844	1.24	2.98	.14	1159	1.68
Living children	3.01	.10	5622	3.07	2.44	.09	844	1.30	2.53	.13	1159	1.90
Additional children wanted	5.23	.18	2536	2.35	6.22	.38	400	1.84	5.02	.28	458	1.64
Breastfed last closed interval	97.85	.28	4070	1.22	99.32	.28	543	.80	98.81	.50	700	1.21
Months breastfed closed interval	17.03	.32	3728	2.67	20.12	.37	492	1.52	13.36	.42	643	1.94
Wants no more children	5.33	.66	4646	2.00	3.74	1.77	708	2.48	4.45	.90	836	1.27
Desired family size	8.48	.15	3307	2.09	8.85	.30	510	1.67	8.56	.36	564	2.26
Knows an effective method	13.42	.90	5480	1.96	7.27	1.71	813	1.88	43.82	2.13	955	1.33
Ever used contraceptives	10.44	.88	5480	2.13	7.37	2.29	813	2.49	29.57	3.47	955	2.35
Ever used any effective method	.65	.15	5480	1.38	.22	.14	813	.87	4.39	.95	955	1.43
Currently using (exposed)	4.68	.65	3928	1.93	5.42	2.11	584	2.25	10.41	1.90	647	1.58
Using effective (exposed)	.34	.17	3928	1.77	.23	.18	584	.90	1.28	.45	647	1.01
Wants no more and using eff.(exp)	2.55	1.20	224	1.14	.00	.00	22	.00	10.61	4.98	32	.90
Never used contraception	89.55	.89	5440	2.14	92.66	2.30	809	2.50	70.80	3.75	911	2.49
Used contraception in past	7.05	.78	5440	2.26	3.25	1.05	809	1.68	21.43	2.80	911	2.06
Currently using contraception	3.39	.46	5440	1.89	4.09	1.61	809	2.31	7.77	1.45	911	1.64

Table XII.9a - Sampling errors by woman's level of education.(cont.)

Variable name	Primary completed				Secondary or higher			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	18.43	.27	687	1.77	20.05	.45	341	1.99
Age at first marriage (<20)	18.04	.24	344	1.40	19.54	.67	144	2.09
First marriage dissolved	10.30	3.01	687	2.60	5.32	1.25	341	1.03
Time spent in union	95.87	1.35	687	1.86	97.81	.68	341	1.00
Currently married	94.79	2.02	687	2.37	97.09	.90	341	.99
Births in first 5 years	2.02	.10	419	1.90	1.80	.12	175	1.66
Births in past 5 years	1.70	.09	390	1.56	1.31	.15	159	1.80
Currently pregnant	24.64	2.16	667	1.29	27.48	2.91	324	1.17
Children ever born	2.13	.11	1014	1.42	.66	.09	1088	2.01
Living children	1.90	.11	1014	1.44	.63	.08	1088	1.99
Additional children wanted	4.53	.19	369	1.22	4.13	.22	227	1.24
Breastfed last closed interval	98.44	.58	465	1.01	98.94	.66	201	.92
Months breastfed closed interval	12.48	.29	442	1.15	9.62	.45	197	1.32
Wants no more children	4.55	.92	657	1.13	5.60	1.32	321	1.03
Desired family size	7.67	.19	429	1.31	6.23	.19	253	1.41
Knows an effective method	42.72	3.48	752	1.93	62.13	6.06	535	2.89
Ever used contraceptives	25.16	2.30	752	1.45	41.60	4.37	535	2.05
Ever used any effective method	5.80	1.09	752	1.27	22.08	2.81	535	1.57
Currently using (exposed)	9.60	1.53	508	1.17	18.66	3.39	241	1.35
Using effective (exposed)	1.47	.34	508	.63	6.14	1.93	241	1.25
Wants no more and using eff.(exp)	2.14	2.22	27	.78	25.23	16.69	16	1.49
Never used contraception	76.35	2.41	687	1.48	58.63	4.69	341	1.76
Used contraception in past	16.88	2.16	687	1.51	28.69	3.80	341	1.55
Currently using contraception	6.76	1.14	687	1.19	12.68	2.43	341	1.34

Table XII.9b - Sampling errors for differences between woman's level of education subclasses

Variable name	(None) - (Koranic)				(None) - (Primary incomplete)				(Koranic) - (Primary incomplete)			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	1.89	.24	1408	2.11	-.89	.20	1560	1.43	-2.78	.28	856	1.72
Age at first marriage (<20)	1.82	.25	891	1.92	-.99	.23	952	1.45	-2.81	.32	520	1.65
First marriage dissolved	.92	2.25	1408	1.65	2.92	1.95	1560	1.58	2.00	2.83	856	1.67
Time spent in union	-1.19	.80	1408	1.29	-.63	.68	1560	1.08	.56	1.02	856	1.25
Currently married	-3.66	.78	1408	1.46	-.86	1.01	1560	1.36	2.81	1.06	856	1.31
Births in first 5 years	.13	.08	1175	1.71	-.49	.07	1228	1.46	-.63	.09	688	1.47
Births in past 5 years	-.09	.06	1096	1.27	-.42	.05	1105	1.13	-.34	.07	631	1.16
Currently pregnant	-1.11	2.06	1379	1.55	-4.43	2.20	1484	1.59	-3.32	2.87	829	1.60
Children ever born	.60	.14	1467	1.53	.73	.15	1921	1.68	.12	.17	976	1.46
Living children	.57	.12	1467	1.67	.48	.13	1921	1.64	-.09	.16	976	1.65
Additional children wanted	-.99	.38	691	1.74	.21	.31	775	1.67	1.19	.47	427	1.74
Breastfed last closed interval	-1.48	.39	958	.92	-.96	.56	1194	1.19	.51	.56	611	1.03
Months breastfed closed interval	-3.09	.48	869	1.77	3.68	.36	1096	1.47	6.76	.58	557	1.76
Wants no more children	1.58	1.42	1228	1.80	.88	1.07	1417	1.37	-.70	2.01	766	1.99
Desired family size	-.37	.33	883	1.73	-.08	.35	963	2.01	.29	.46	535	1.95
Knows an effective method	6.16	1.91	1415	1.87	-30.39	2.08	1626	1.25	-36.55	2.77	878	1.50
Ever used contraceptives	3.07	2.52	1415	2.51	-19.13	3.24	1626	2.11	-22.20	4.08	878	2.35
Ever used any effective method	.44	.20	1415	1.02	-3.73	.99	1626	1.48	-4.17	.96	878	1.40
Currently using (exposed)	-.74	2.29	1016	2.30	-5.72	1.93	1111	1.54	-4.99	2.84	613	1.86
Using effective (exposed)	.11	.24	1016	1.08	-.94	.47	1111	1.05	-1.05	.48	613	.99
Wants no more and using eff.(exp)	2.55	1.20	40	1.14	-8.06	4.29	56	.76	-10.61	4.98	26	.90
Never used contraception	-3.11	2.53	1408	2.51	18.75	3.54	1560	2.26	21.86	4.33	856	2.45
Used contraception in past	3.80	1.34	1408	1.88	-14.38	2.56	1560	1.82	-18.18	2.93	856	1.96
Currently using contraception	-.69	1.72	1408	2.33	-4.38	1.44	1560	1.57	-3.68	2.16	856	1.92

Table XII.9b - Sampling errors for differences between woman's level of education subclasses (cont.)

Variable name	(Primary incomplete) - (Primary completed)				(Primary completed) - (Secondary or higher)			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	-1.14	.32	783	1.61	-1.62	.56	455	2.04
Age at first marriage (<20)	-.68	.31	420	1.38	-1.50	.64	203	1.76
First marriage dissolved	2.99	3.71	783	2.29	4.99	3.35	455	1.99
Time spent in union	.19	1.51	783	1.62	-1.94	1.56	455	1.56
Currently married	.78	2.24	783	2.06	-2.30	2.25	455	1.81
Births in first 5 years	-.12	.08	525	1.24	.22	.19	246	2.04
Births in past 5 years	-.13	.08	483	1.14	.38	.19	225	1.94
Currently pregnant	-6.85	3.47	753	1.64	-2.85	3.19	436	1.07
Children ever born	.85	.19	1081	1.61	1.47	.12	1049	1.25
Living children	.63	.18	1081	1.77	1.27	.11	1049	1.28
Additional children wanted	.49	.39	408	1.67	.40	.28	281	1.19
Breastfed last closed interval	.37	.76	558	1.07	-.50	.85	280	.92
Months breastfed closed interval	.88	.44	523	1.34	2.85	.53	272	1.27
Wants no more children	-.10	.96	735	.89	-1.05	1.47	431	.97
Desired family size	.88	.41	487	1.93	1.45	.27	318	1.37
Knows an effective method	1.10	3.65	841	1.51	-19.41	5.61	625	2.03
Ever used contraceptives	4.41	4.45	841	2.05	-16.43	3.85	625	1.45
Ever used any effective method	-1.42	1.60	841	1.48	-16.28	2.75	625	1.38
Currently using (exposed)	.81	2.17	569	1.22	-9.06	3.34	326	1.18
Using effective (exposed)	-.19	.56	569	.81	-4.67	1.96	326	1.20
Wants no more and using eff.(exp)	8.47	5.48	29	.88	-23.09	16.88	20	1.46
Never used contraception	-5.56	4.65	783	2.10	17.72	4.37	455	1.40
Used contraception in past	4.55	3.55	783	1.80	-11.81	3.86	455	1.36
Currently using contraception	1.01	1.77	783	1.35	-5.91	2.34	455	1.15

Table XII.10a - Sampling errors by woman's pattern of work

Variable name	Before and after marriage				After marriage only				Before marriage only			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	17.47	.13	3116	1.78	16.33	.15	2967	2.22	16.06	.27	397	1.54
Age at first marriage (<20)	17.19	.12	2251	1.77	16.26	.16	2144	2.31	16.10	.39	169	1.51
First marriage dissolved	16.40	1.20	3116	1.81	16.19	.96	2967	1.43	9.91	2.01	397	1.34
Time spent in union	95.40	.48	3116	1.59	95.43	.43	2967	1.39	96.37	1.10	397	1.24
Currently married	95.46	.67	3116	1.80	93.43	.97	2967	2.14	98.37	.74	397	1.17
Births in first 5 years	1.62	.05	2637	1.96	1.49	.04	2549	1.55	1.41	.12	243	1.58
Births in past 5 years	1.20	.04	2386	1.86	1.26	.05	2294	1.98	1.27	.08	224	1.19
Currently pregnant	15.76	1.02	2972	1.53	14.79	.90	2792	1.34	22.52	3.25	391	1.53
Children ever born	3.91	.10	3116	2.08	3.94	.14	2967	2.73	2.66	.19	397	1.49
Living children	3.22	.08	3116	1.90	3.23	.13	2967	2.96	2.19	.16	397	1.56
Additional children wanted	4.69	.19	1414	1.88	4.97	.17	1407	1.67	5.91	.29	209	1.05
Breastfed last closed interval	98.34	.52	2433	2.01	97.79	.39	2299	1.28	97.22	1.42	204	1.23
Months breastfed closed interval	16.57	.33	2242	2.12	15.67	.38	2114	2.49	16.50	.81	197	1.54
Wants no more children	5.81	.79	2715	1.77	5.45	1.02	2551	2.28	2.29	.76	375	.98
Desired family size	7.96	.16	1818	1.81	8.51	.17	1791	1.87	8.53	.39	241	1.62
Knows an effective method	24.40	1.56	3116	2.02	21.55	1.69	2967	2.24	17.58	2.69	397	1.41
Ever used contraceptives	16.49	1.41	3116	2.12	16.29	1.25	2967	1.84	11.93	2.12	397	1.30
Ever used any effective method	2.39	.42	3116	1.52	2.19	.29	2967	1.09	1.58	.80	397	1.27
Currently using (exposed)	6.97	.88	2212	1.62	7.60	1.10	2124	1.91	4.75	1.49	290	1.19
Using effective (exposed)	.74	.21	2212	1.17	1.00	.32	2124	1.49	.12	.12	290	.60
Wants no more and using eff.(exp)	3.26	1.78	150	1.22	3.18	1.46	115	.89	4.13	4.21	8	.56
Never used contraception	83.51	1.41	3116	2.12	83.71	1.25	2967	1.84	88.07	2.12	397	1.30
Used contraception in past	11.50	1.22	3116	2.14	10.85	1.05	2967	1.84	8.48	1.90	397	1.36
Currently using contraception	4.99	.64	3116	1.64	5.45	.79	2967	1.90	3.45	1.08	397	1.18

Table XII.10a - Sampling errors by woman's pattern of work (cont.)

Variable name	Never worked (married)				Has worked (never married)				Never worked (never married)			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	15.68	.17	1708	1.95	.00	.00	0	.00	.00	.00	0	.00
Age at first marriage (<20)	15.56	.21	948	2.05	.00	.00	0	.00	.00	.00	0	.00
First marriage dissolved	11.66	1.14	1708	1.47	.00	.00	0	.00	.00	.00	0	.00
Time spent in union	96.52	.68	1708	1.62	.00	.00	0	.00	.00	.00	0	.00
Currently married	97.29	.71	1708	1.81	.00	.00	0	.00	.00	.00	0	.00
Births in first 5 years	1.25	.06	1274	1.78	.00	.00	0	.00	.00	.00	0	.00
Births in past 5 years	1.23	.04	1171	1.31	.00	.00	0	.00	.00	.00	0	.00
Currently pregnant	14.26	1.46	1654	1.69	.00	.00	0	.00	.00	.00	0	.00
Children ever born	3.04	.18	1708	2.73	.13	.04	480	1.33	.03	.01	1059	2.05
Living children	2.52	.16	1708	2.90	.10	.03	480	1.30	.03	.01	1059	2.05
Additional children wanted	6.03	.27	960	2.20	.00	.00	0	.00	.00	.00	0	.00
Breastfed last closed interval	98.72	.40	1018	1.13	98.58	1.42	21	.54	100.00	.00	4	.00
Months breastfed closed interval	17.09	.59	928	2.72	14.77	1.89	17	1.25	9.91	1.07	4	.67
Wants no more children	3.66	.68	1527	1.42	.00	.00	0	.00	.00	.00	0	.00
Desired family size	8.68	.23	1213	1.89	.00	.00	0	.00	.00	.00	0	.00
Knows an effective method	10.91	1.12	1708	1.48	60.97	5.52	142	1.34	43.62	9.59	205	2.76
Ever used contraceptives	7.88	1.32	1708	2.03	52.11	6.41	142	1.52	27.39	5.92	205	1.90
Ever used any effective method	1.09	.26	1708	1.05	24.35	5.03	142	1.39	15.77	3.75	205	1.47
Currently using (exposed)	3.37	.79	1282	1.57	.00	.00	0	.00	.00	.00	0	.00
Using effective (exposed)	.38	.20	1282	1.15	.00	.00	0	.00	.00	.00	0	.00
Wants no more and using eff.(exp)	7.24	4.36	48	1.15	.00	.00	0	.00	.00	.00	0	.00
Never used contraception	92.12	1.32	1708	2.03	.00	.00	0	.00	.00	.00	0	.00
Used contraception in past	5.32	1.29	1708	2.38	.00	.00	0	.00	.00	.00	0	.00
Currently using contraception	2.56	.61	1708	1.60	.00	.00	0	.00	.00	.00	0	.00

Table XII.11a - Sampling errors by husband's occupation

Variable name	Prof., tech. & clerical				Sales workers				Agricultural			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	17.53	.23	1117	1.78	16.60	.23	1033	1.89	16.31	.12	4174	2.18
Age at first marriage (<20)	17.32	.27	658	1.81	16.55	.28	682	2.18	16.29	.13	3076	2.26
First marriage dissolved	10.79	1.50	1117	1.62	16.65	1.73	1033	1.49	15.00	1.03	4174	1.86
Time spent in union	96.73	.63	1117	1.32	94.22	.93	1033	1.38	95.90	.35	4174	1.45
Currently married	96.60	.87	1117	1.60	94.26	1.52	1033	2.11	95.56	.55	4174	1.72
Births in first 5 years	1.67	.06	820	1.40	1.47	.07	835	1.76	1.40	.04	3633	1.94
Births in past 5 years	1.37	.06	753	1.46	1.28	.07	750	1.82	1.12	.03	3324	1.69
Currently pregnant	18.29	1.50	1084	1.27	15.86	1.68	992	1.44	13.77	.71	3978	1.30
Children ever born	3.28	.12	1117	1.52	3.61	.12	1033	1.46	3.81	.12	4174	2.72
Living children	2.83	.10	1117	1.51	3.05	.12	1033	1.64	3.07	.09	4174	2.60
Additional children wanted	4.80	.29	635	1.99	4.87	.22	477	1.35	5.32	.23	2002	2.59
Breastfed last closed interval	98.32	.51	771	1.10	98.94	.40	746	1.07	98.14	.43	3150	1.77
Months breastfed closed interval	14.07	.42	729	1.75	15.70	.47	688	1.83	17.47	.29	2881	2.13
Wants no more children	6.06	.93	1037	1.26	4.60	.84	925	1.22	5.25	.97	3554	2.59
Desired family size	7.78	.26	747	2.02	8.05	.21	613	1.38	8.57	.16	2604	2.02
Knows an effective method	35.93	2.40	1117	1.67	22.02	2.55	1033	1.98	12.56	1.04	4174	2.04
Ever used contraceptives	21.21	2.12	1117	1.74	12.79	1.76	1033	1.70	10.98	1.12	4174	2.31
Ever used any effective method	6.18	.89	1117	1.24	2.13	.54	1033	1.20	.71	.18	4174	1.40
Currently using (exposed)	9.86	1.41	826	1.35	5.21	1.14	753	1.41	5.25	.69	2994	1.70
Using effective (exposed)	1.64	.45	826	1.01	.68	.26	753	.86	.39	.21	2994	1.87
Wants no more and using eff.(exp)	10.79	4.72	57	1.14	4.33	2.37	38	.71	1.04	.68	166	.86
Never used contraception	78.79	2.12	1117	1.74	87.21	1.76	1033	1.70	89.02	1.12	4174	2.31
Used contraception in past	13.78	1.86	1117	1.80	9.00	1.51	1033	1.70	7.19	.94	4174	2.34
Currently using contraception	7.43	1.05	1117	1.34	3.79	.82	1033	1.39	3.79	.51	4174	1.72

Table XII.11a - Sampling errors by husband's occupation (cont.)

Variable name	Service workers				Skilled and unskilled			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	16.26	.38	308	1.74	16.88	.22	1252	1.94
Age at first marriage (<20)	16.32	.48	198	1.96	16.64	.19	721	1.52
First marriage dissolved	16.82	2.57	308	1.20	13.84	1.40	1252	1.44
Time spent in union	94.31	1.31	308	1.21	96.88	.55	1252	1.36
Currently married	95.97	1.45	308	1.29	96.01	.84	1252	1.52
Births in first 5 years	1.81	.13	260	1.68	1.62	.06	924	1.62
Births in past 5 years	1.31	.07	233	.87	1.52	.07	831	1.83
Currently pregnant	11.02	2.48	292	1.35	20.71	1.85	1205	1.58
Children ever born	4.18	.44	308	2.52	3.49	.18	1252	2.37
Living children	3.50	.40	308	2.74	2.93	.19	1252	2.85
Additional children wanted	5.03	.61	150	1.73	5.28	.18	590	1.23
Breastfed last closed interval	99.34	.50	242	.95	97.27	.85	872	1.53
Months breastfed closed interval	15.22	1.49	225	3.05	15.03	.58	802	2.38
Wants no more children	3.95	1.54	262	1.28	2.56	.55	1153	1.17
Desired family size	8.65	.45	194	1.65	8.40	.28	737	1.99
Knows an effective method	25.92	4.93	308	1.97	30.61	2.39	1252	1.84
Ever used contraceptives	19.96	3.66	308	1.61	19.39	1.85	1252	1.66
Ever used any effective method	2.47	.92	308	1.04	2.59	.56	1252	1.25
Currently using (exposed)	5.72	1.90	228	1.23	8.12	1.34	909	1.48
Using effective (exposed)	1.54	.96	228	1.18	1.09	.43	909	1.25
Wants no more and using eff.(exp)	21.42	15.66	14	1.38	5.69	4.02	30	.93
Never used contraception	80.04	3.66	308	1.61	80.61	1.85	1252	1.66
Used contraception in past	15.65	2.50	308	1.20	13.52	1.60	1252	1.66
Currently using contraception	4.30	1.49	308	1.28	5.86	.96	1252	1.45



Table XII.12a - Sampling errors by woman's most recent occupation

Variable name	No work				Prof., tech. & clerical				Sales workers			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	15.74	.16	2105	1.97	19.93	.38	310	1.58	16.73	.14	2371	1.76
Age at first marriage (<20)	15.63	.20	1117	2.06	19.48	.33	161	1.20	16.57	.14	1738	1.79
First marriage dissolved	11.38	1.05	2105	1.52	5.00	1.57	310	1.27	16.56	1.27	2371	1.66
Time spent in union	96.50	.63	2105	1.64	98.48	.57	310	1.08	95.81	.49	2371	1.42
Currently married	97.46	.62	2105	1.82	97.06	1.18	310	1.23	95.15	1.06	2371	2.41
Births in first 5 years	1.27	.05	1517	1.67	2.01	.10	194	1.44	1.48	.03	2053	1.26
Births in past 5 years	1.24	.04	1395	1.38	1.34	.10	182	1.35	1.23	.04	1866	1.65
Currently pregnant	15.56	1.38	2045	1.72	31.19	3.44	298	1.28	15.23	1.04	2274	1.38
Children ever born	1.96	.15	3164	3.19	2.13	.14	409	1.23	3.68	.09	2451	1.65
Living children	1.62	.12	3164	3.12	1.90	.12	409	1.23	3.05	.07	2451	1.67
Additional children wanted	6.01	.23	1169	2.02	3.94	.20	186	1.06	4.61	.20	1093	1.71
Breastfed last closed interval	98.52	.37	1226	1.08	98.31	.86	217	.99	98.77	.29	1853	1.13
Months breastfed closed interval	16.97	.56	1129	2.78	10.69	.54	207	1.40	17.14	.38	1721	2.08
Wants no more children	3.44	.57	1902	1.35	5.82	1.67	290	1.21	6.55	.88	2109	1.63
Desired family size	8.66	.21	1454	1.98	6.50	.19	215	1.19	8.02	.18	1395	1.85
Knows an effective method	14.68	1.20	2310	1.63	65.53	3.05	367	1.23	22.75	1.81	2398	2.11
Ever used contraceptives	10.14	1.18	2310	1.88	43.93	3.45	367	1.33	13.83	1.45	2398	2.06
Ever used any effective method	2.43	.44	2310	1.37	22.62	2.54	367	1.16	1.90	.36	2398	1.29
Currently using (exposed)	3.58	.72	1572	1.53	17.98	3.51	207	1.31	5.95	1.06	1741	1.88
Using effective (exposed)	.34	.17	1572	1.15	5.20	1.75	207	1.13	.70	.19	1741	.97
Wants no more and using eff.(exp)	6.87	3.88	56	1.14	26.59	14.02	16	1.23	2.58	1.19	119	.81
Never used contraception	91.49	1.34	2105	2.20	61.28	4.18	310	1.51	86.35	1.44	2371	2.04
Used contraception in past	5.81	1.32	2105	2.58	27.03	3.75	310	1.49	9.28	1.12	2371	1.88
Currently using contraception	2.70	.55	2105	1.56	11.69	2.43	310	1.33	4.37	.79	2371	1.89

Table XII.12a - Sampling errors by woman's most recent occupation (cont.)

Variable name	Agricultural				Serv., skilled, unskilled			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	16.87	.15	2837	2.11	16.36	.32	535	1.97
Age at first marriage (<20)	16.73	.16	2164	2.28	16.31	.30	316	1.61
First marriage dissolved	16.87	1.20	2837	1.71	18.82	2.92	535	1.72
Time spent in union	95.01	.53	2837	1.69	94.87	.89	535	1.13
Currently married	93.55	.87	2837	1.90	94.94	1.56	535	1.65
Births in first 5 years	1.58	.05	2510	1.96	1.54	.11	407	1.85
Births in past 5 years	1.19	.05	2253	2.06	1.40	.09	360	1.37
Currently pregnant	13.54	.82	2656	1.23	17.32	2.02	508	1.20
Children ever born	3.97	.14	3079	2.73	3.05	.15	587	1.43
Living children	3.22	.13	3079	2.97	2.54	.13	587	1.40
Additional children wanted	5.02	.23	1283	2.09	5.39	.46	243	1.88
Breastfed last closed interval	97.35	.41	2295	1.21	99.14	.41	372	.85
Months breastfed closed interval	15.74	.42	2093	2.71	16.53	.54	338	1.61
Wants no more children	4.75	.92	2369	2.10	6.01	2.12	471	1.94
Desired family size	8.54	.20	1684	2.07	8.68	.37	297	1.64
Knows an effective method	19.60	1.67	2879	2.25	25.49	3.60	550	1.93
Ever used contraceptives	16.56	1.71	2879	2.46	17.19	2.65	550	1.64
Ever used any effective method	1.14	.30	2879	1.52	2.05	.76	550	1.25
Currently using (exposed)	7.18	1.32	1988	2.28	7.79	1.76	375	1.27
Using effective (exposed)	.50	.31	1988	1.98	.89	.47	375	.96
Wants no more and using eff.(exp)	.99	.98	108	1.03	5.84	5.81	19	1.05
Never used contraception	83.65	1.70	2837	2.45	83.40	2.62	535	1.63
Used contraception in past	11.28	1.50	2837	2.52	11.06	2.26	535	1.66
Currently using contraception	5.07	.96	2837	2.33	5.54	1.27	535	1.28

Table XII.12b - Sampling errors for differences between woman's most recent occupation subclasses

Variable name	(No work) - (sales workers)				(No work) - (agricultural)				(Sales workers) - (agricultural)			
	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT	Mean or per cent	SE	n	DEFT
Age at first marriage	-.99	.16	2230	1.41	-1.13	.19	2416	1.77	-.14	.18	2583	1.70
Age at first marriage (<20)	-.95	.20	1359	1.63	-1.11	.22	1473	1.83	-.16	.18	1927	1.74
First marriage dissolved	-5.17	1.47	2230	1.43	-5.49	1.56	2416	1.58	-.31	1.64	2583	1.58
Time spent in union	.69	.80	2230	1.56	1.49	.87	2416	1.76	.80	.69	2583	1.47
Currently married	2.31	1.29	2230	2.30	3.91	1.19	2416	2.06	1.60	1.19	2583	1.87
Births in first 5 years	-.21	.06	1744	1.47	-.30	.07	1891	1.73	-.09	.05	2258	1.53
Births in past 5 years	.01	.05	1596	1.32	.04	.06	1723	1.71	.04	.06	2041	1.73
Currently pregnant	.33	1.75	2153	1.59	2.02	1.67	2310	1.60	1.69	1.32	2450	1.31
Children ever born	-1.72	.18	2762	2.56	-2.01	.19	3120	2.70	-.29	.16	2729	2.18
Living children	-1.43	.16	2762	2.66	-1.60	.15	3120	2.62	-.17	.15	2729	2.35
Additional children wanted	1.40	.27	1129	1.69	.99	.25	1223	1.63	-.41	.28	1180	1.77
Breastfed last closed interval	-.25	.48	1475	1.13	1.18	.52	1598	1.07	1.42	.50	2050	1.18
Months breastfed closed interval	-.17	.59	1363	2.18	1.23	.49	1466	1.92	1.40	.57	1888	2.39
Wants no more children	-3.11	.96	2000	1.41	-1.31	1.10	2109	1.83	1.79	.90	2231	1.29
Desired family size	.64	.24	1423	1.68	.12	.27	1560	1.90	-.52	.26	1525	1.89
Knows an effective method	-8.07	1.77	2353	1.56	-4.92	1.78	2563	1.71	3.15	2.27	2616	2.00
Ever used contraceptives	-3.69	1.78	2353	1.89	-6.42	1.84	2563	1.96	-2.73	2.35	2616	2.37
Ever used any effective method	.52	.50	2353	1.17	1.28	.55	2563	1.47	.76	.48	2616	1.40
Currently using (exposed)	-2.37	1.30	1652	1.76	-3.60	1.43	1755	1.92	-1.22	1.81	1856	2.24
Using effective (exposed)	-.36	.25	1652	1.01	-.17	.36	1755	1.67	.20	.37	1856	1.44
Wants no more and using eff.(exp)	4.28	4.03	76	1.09	5.87	4.00	73	1.13	1.59	1.52	113	.87
Never used contraception	5.14	1.88	2230	2.02	7.84	1.97	2416	2.13	2.70	2.32	2583	2.35
Used contraception in past	-3.47	1.59	2230	2.02	-5.47	2.03	2416	2.59	-2.00	1.82	2583	2.16
Currently using contraception	-1.67	.97	2230	1.77	-2.38	1.08	2416	1.98	-.71	1.33	2583	2.27



