# Trinidad and Tobago 

## Demographic and Health Survey 1987

Family Planning Association
of Trinidad and Tobago

## ODHS

Demographic and Health Surveys
Institute for Resource Development/Westinghouse

# Trinidad and Tobago Demographic and Health Survey 1987 

Kenneth Heath<br>Dona Da Costa-Martinez Amy R. Sheon

Family Planning Association of Trinidad and Tobago Port-of-Spain, Trinidad<br>and<br>Institute for Resource Development/Westinghouse Columbia, Maryland USA

This report presents the findings of the Trinidad and Tobago Demographic and Health Survey, implemented by the Family Planning Association of Trinidad and Tobago in 1987. The survey is part of the worldwide Demographic and Health Surveys (DHS) Program, which is designed to collect data on fertility, family planning, and maternal and child health. Additional information on this survey can be obtained from the Family Planning Association of Trinidad and Tobago, Corner of Charlotte and Oxford Streets, Port-of-Spain, Trinidad, W.I. (Telephone: 809-623-4764).

The Trinidad and Tobago Demographic and Health Survey was carried out with the assistance of the Institute for Resource Development (IRD), a subsidiary of Westinghouse Electric Corporation, with offices in Columbia, Maryland. Funding for the survey was provided under a contract with the U.S. Agency for International Development (Contract No. DPE-3023-C-00-4083-00). Additional information about the DHS program can be obtained by writing to: DHS Program, IRD/Westinghouse, 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045, USA (Telex: 87775, Fax: 301-290-2999, Telephone: 301-290-2800).

## TABLE OF CONTENTS

Page
TABLE OF CONTENTS ..... i
LIST OF TABLES ..... iii
LIST OF FIGURES ..... ix
PREFACE ..... xi
CHAPTER 1 BACKGROUND ..... 1
1.1 History, Geography, Economy ..... 1
1.2 Population ..... 1
1.3 Population and Family Planning Policies and Programmes ..... 3
1.4 Health Priorities and Programmes ..... 3
1.5 Objectives of the Survey ..... 4
1.6 Organisation of the Survey ..... 4
1.7 Background Characteristics of Survey Respondents ..... 5
CHAPTER 2 NUPTIALITY AND EXPOSURE TO RISK OF PREGNANCY ..... 9
2.1 Current Marital Status ..... 9
2.2 Median Age at First Union ..... 10
2.3 Breastfeeding and Postpartum Insusceptibility ..... 11
2.4 Mean Duration of Breastfeeding and Postpartum Insusceptibility ..... 13
CHAPTER 3 FERTILITY ..... 17
3.1 Current and Cumulative Fertility ..... 17
3.2 Fertility Trends ..... 19
3.3 Children Ever Born ..... 21
3.4 Children Ever Born and Age at First Union ..... 21
3.5 Age at First Birth ..... 22
3.6 Median Age at First Birth by Background Characteristics ..... 23
CHAPTER 4 FERTILITY REGULATION ..... 25
4.1 Knowledge of Methods ..... 25
4.2 Problems with Methods ..... 25
4.3 Knowledge of Source ..... 27
4.4 Ever Use of Contraception ..... 28
4.5 Current Use ..... 30
4.6 Parity at First Use ..... 33
4.7 Age at Sterilization ..... 36
4.8 Knowledge of the Reproductive Cycle ..... 36
4.9 Knowledge and Use of Pap Smears ..... 37
4.10 Source of Contraceptive Methods and Satisfaction with Services ..... 38
4.11 Discontinuation of Contraceptive Use ..... 38
4.12 Attitude Toward Becoming Pregnant and Reasons for Nonuse of Contraception ..... 40
4.13 Intention to Use Contraception ..... 41
4.14 Exposure to Mass Media and Family Planning Messages ..... 43
4.15 Discussion of Family Planning with Partner ..... 43
Page
CHAPTER 5 FERTILITY PREFERENCES ..... 47
5.1 Fertility Preferences ..... 47
5.2 Need for Family Planning ..... 51
5.3 Ideal Family Size ..... 51
5.4 Fertility Planning Status ..... 53
CHAPTER 6 INFANT AND CHILD MORTALITY, AND HEALTH ..... 57
6.1 Infant and Childhood Mortality ..... 57
6.2 Infant and Childhood Mortality by Socioeconomic Characteristics ..... 57
6.3 Infant and Childhood Mortality by Demographic Characteristics ..... 59
6.4 Children Ever Born and Surviving ..... 59
6.5 Antenatal Care ..... 60
6.6 Assistance at Delivery ..... 61
6.7 Immunization ..... 62
6.8 Diarrhoea Prevalence ..... 64
6.9 Diarrhoea Treatment ..... 67
6.10 Knowledge of ORT ..... 67
6.11 Nutritional Status of Children ..... 67
6.12 Nutritional Status of Children According to Height-for-Age ..... 72
6.13 Nutritional Status of Children According to Weight-for-Height ..... 73
6.14 Nutritional Status of Children According to Weight-for-Age ..... 75
6.15 Summary of the Nutritional Status of Children Aged 3-36 Months ..... 75
REFERENCES ..... 79
APPENDIX A SURVEY DESIGN ..... 81
A. 1 Sample Design and Implementation ..... 83
A. 2 Questionnaire Design and Training ..... 84
A. 3 Fieldwork ..... 85
A. 4 Data Processing ..... 85
APPENDIX B SAMPLING ERRORS ..... 87
APPENDIX C QUESTIONNAIRE ..... 97

## LIST OF TABLES

Page
Table $1.1 \quad$ Population of Trinidad and Tobago at Census Years ..... 2
Table 1.2 Distribution of Women 15-49 by Age, Residence, Education, and Ethnicity ..... 6
Table 1.3 Percent Distribution of Women by Education, According to Selected Background Characteristics ..... 7
Table 2.1 Percent Distribution of Women by Current Union Status, According to Background Characteristics, TTDHS 1987 ..... 9
Table $2.2 \quad$ Percent Distribution of Women by Age at First Union and Median Age at First Union, According to Background Characteristics, TTDHS 1987 ..... 11
Table $2.3 \quad$ Median Age at First Union Among Women Age 20-49 Years. by Current Age and Selected Background Characteristics, TTDHS 1987 ..... 12
Table $2.4 \quad$ Percentage of All Births in the Last 5 Years Who Have Ever Been Breastfed, According to Selected Background Characteristics of the Mother, TTDHS 1987 ..... 13
Table $2.5 \quad$ Percentage of Births Whose Mothers are Still Breastfeeding, Postpartum Amenorthoeic, Abstaining, and Insusceptible, by Number of Months Since Birth, TTDHS 1987 ..... 14
Table 2.6 Mean Number of Months of Breastfeeding, Postpartum Amenorrhoea, Postpartum Abstinence, and Postpartum Insusceptibility by Selected Background Characteristics, TTDHS 1987 ..... 15
Table 3.1 Total Fertility Rates (TFR) for Calendar Year Periods and for Five Years Preceding the Survey, and Mean Number of Children Ever Born (CEB) to Women 40-49 Years of Age, by Selected Background Characteristics, TTDHS 1987 ..... 17
Table $3.2 \quad$ Percent of All Women Who are Currently Pregnant by Age. TTDHS 1987 ..... 19
Table 3.3 Age-Period Fertility Rates (per 1,000 Women) by Age of Woman at Birth of Child, TTDHS 1987 ..... 20
Table $3.4 \quad$ Percent Distribution of All Women and Women in Union by Number of Children Ever Born, According to Age, TTDHS, 1987 ..... 21
Table 3.5 Mean Number of Children Ever Born to Women Ever in Union by Age at First Union and Years Since First Union, TTDHS, 1987 ..... 22
Table $3.6 \quad$ Percent Distribution of Women by Age at First Birth According to Current Age, TTDHS, 1987 ..... 22
Table 3.7 Median Age at First Birth Among Women Aged 25-49
Years, by Current Age and Selected Background Characteristics, TTDHS 1987 ..... 23
Table $4.1 \quad$ Percentage of All Women and of Women in a Union Knowing Any Method, Any Modern Method, and Specific Contraceptive Methods, by Age, TTDHS, 1987 ..... 26
Table $4.2 \quad$ The Percentage of Women in Union Who Know at Least One Modem Method, by Number of Living Children and Selected Background Characteristics, TTDHS 1987 ..... 27
Table $4.3 \quad$ Percent Distribution of Women Who Have Ever Heard of a Contraceptive Method by Main Problem Perceived in Using the Method, TTDHS 1987 ..... 27
Table 4.4 Percent Distribution of Women Who Have Ever Heard of a Contraceptive Method by Supply Source Named, According to Specific Method, TTDHS 1987 ..... 28
Table $4.5 \quad$ Percentage of All Women and Women in Union Who Have Ever Used Any and Specific Contraceptive Method, by Specific Method and Age, TTDHS 1987 ..... 29
Table $4.6 \quad$ Percent Distribution of All Women and Women in Union by Contraceptive Method Currently Used According to Age, TTDHS 1987 ..... 31
Table $4.7 \quad$ Percent Distribution of Women in Union by Contraceptive Method Currently Used, According to Selected Background Characteristics, TTDHS 1987 ..... 34
Table 4.8 Percent Distribution of Women Ever in Union by Number of Living Children at Time of First Use of Contraception, According to Current Age, TTDHS, 1987 ..... 35
Table $4.9 \quad$ Percent Distribution of Sterilized Women by Age at Time of Sterilization, According to the Number of Years Since the Operation, TTDHS 1987 ..... 36
Table $4.10 \quad$ Percent Distribution of All Women and Women Who Have Ever Used the Safe Period by Knowledge of the Fertile Period During the Ovulatory Cycle, TTDHS 1987 ..... 36
Table $4.11 \quad$ Percentage of Women Ever in Union Who Know About the Pap Smear, Have Ever Had a Pap Smear, and Have Had a Pap Smear in the Last Year, According to Selected Background Characteristics, TTDHS 1987 ..... 37
Table $4.12 \quad$ Percent Distribution of Current Users by Most Recent Source of Supply, According to Specific Method, TTDHS 1987 ..... 38
Page
Table 4.13Table $4.14 \quad$ Percent Distribution of Women Who Have Discontinued aContraceptive Method in the Last Five Years by MainReason for Last Discontinuation, According to SpecificMethod, TTDHS 198740
Table $4.15 \quad$ Percent Distribution of Nonpregnant Women Who Have Ever Had Sexual Intercourse and Who Are Not Using Contraception by Attitude Toward Becoming Pregnant in the Next Few Weeks, According to Number of Living Children, TTDHS 1987 ..... 41
Table 4.16 Percent Distribution of Nonpregnant Women Who Are Sexually Active and Who Are Not Using Contraception, and Who Would be Unhappy if they Became Pregnant by Main Reason for Nonuse, According to Age, TTDHS 1987 ..... 41
Table 4.17 Percent Distribution of Women in Union Who Are Not Currently Using Any Contraceptive Method, by Intention to Use in the Future, According to Number of Living Children, TTDHS 1987 ..... 42
Table 4.18 Percent Distribution of Women in Union Who Are Not Using a Contraceptive Method but Who Intend to Use in the Future by Preferred Method, According to Whether They Intend to Use in the Next 12 Months or Later, TTDHS 1987 ..... 42
Table 4.19 Percentage of Women Whose Households Have Selected Mass Media, Who Are Exposed to Media Regularly, and Who Were Recently Exposed to Family Planning on the Mass Media, by Selected Background Characteristics, TTDHS 1987 ..... 44
Table $4.20 \quad$ Percentage of All Women Who Believe That it is Acceptable to Have Messages About Family Planning on the Radio or TV, by Age and Selected Background Characteristics, TTDHS 1987 ..... 45
Table $4.21 \quad$ Percentage of Women in a Union and Who Know Any Method of Contraception Who Have Discussed Family Planning With a Partner at Least Once in the Past Year, by Age and Selected Background Characteristics, TTDHS 1987 ..... 45
Table 5.1 Percent Distribution of Women in Union by Desire for More Children, Timing of Next Birth, and Sterilization Regret According to Number of Living Children, TTDHS 1987 ..... 48
Table $5.2 \quad$ Percent Distribution of Women in Union by Desire for More Children, According to Age, TTDHS 1987 ..... 49
Table $5.3 \quad$ Percentage of Women in Union Who Want No More Children by Number of Living Children and Selected Background Characteristics, TTDHS, 1987 ..... 50
Table $5.4 \quad$ Percentage of Women in Union Who Are in Need of Family Planning and the Percentage Who Are in Need and Who Intend to Use Family Planning in the Future by Selected Background Characteristics, TTDHS 1987 ..... 51
Table 5.5 Percent Distribution of All Women by Ideal Number of Children; Mean Ideal Number of Children for All Women and for Women in Union, Percentage of All Women Whose Current Number of Children Exceeds Ideal Number, According to Number of Living Children, TTDHS 1987 ..... 52
Table $5.6 \quad$ Mean Ideal Number of Children for All Women by Age and Selected Background Characteristics, TTDHS 1987 ..... 53
Table $5.7 \quad$ Percent Distribution of All Births in the Last Five Years by Contraceptive Practice and Fertility Planning Status, According to Birth Order, TTDHS 1987 ..... 54
Table $5.8 \quad$ Percent Distribution of Births in the Year Before the Survey by Fertility Planning Status, According to Birth Order, TTDHS 1987 ..... 55
Table $5.9 \quad$ Total Wanted Fertility Rate, Total Fertility Rate for the Five Years Preceding the Survey, and Percentage of the Total Fertility Rate Identified as Unwanted Births by Selected Background Characteristics, TTDHS 1987 ..... 55
Table 6.1 Infant and Childhood Mortality for Five-Year Calendar Periods, TTDHS 1987 ..... 57
Table 6.2 Infant and Childhood Mortality 1977-1987 by Selected Background Characteristics of Mother, TTDHS 1987 ..... 58
Table 6.3 Infant and Childhood Mortality 1977-1987 by Selected Background Characteristics, TTDHS 1987 ..... 60
Table 6.4 Mean Number of Children Ever Born, Surviving, and Dead, and Proportion of Children Dead Among Children Ever Bom, by Age of Mother, TTDHS 1987 ..... 60
Table 6.5 Percent Distribution of Births in the last 5 Years by Type of Prenatal Care for the Mother and Percentage of Births Whose Mother Received a Tetanus Toxoid Injection, According to Selected Background Characteristics of Mother, TTDHS 1987 ..... 61
Table $6.6 \quad$ Percent Distribution of Births in the Last 5 Years by Type of Assistance During Delivery, According to Selected Background Characteristics of Mother, TTDHS 1987 ..... 62
Table 6.7 Percent Distribution of Births in the Last 5 Years by Place of Delivery, According to Selected Background Characteristics of Mother, TTDHS 1987 ..... 63
Table 6.8 Among All Children Under 5 Years of Age, the Percentage With Health Cards, the Percentage Who Are Recorded as Immunized on Health Card; Among Children with Health Cards, the Percentage of Whom Yellow Fever, DPT, Polio and Measles Immunizations are Recorded on the Health Card, According to Selected Background Characteristics, TTDHS 198765
Table $6.9 \quad$ Among All Children Under 5 Years of Age Without Health Cards, the Percentage Who Are Reported by the Mother as Having Been Immunized Against Yellow Fever, DPT, Polio, and Measles, According to Selected Background Characteristics, TTDHS, 1987 ..... 66
Table $6.10 \quad$ Among Children Under 5 Years of Age, the Percentage Reported by the Mother to Have Had Diarrhoea in the Past 24 Hours and the Past Two Weeks, According to Selected Background Characteristics, TTDHS 1987 ..... 68
Table $6.11 \quad$ Among Children Under 5 Years of Age Who Had Diarrhoea in the Past Two Weeks, the Percentage Consulting a Medical Facility, and the Percentage Receiving Different Treatments as Reported by the Mother, According to Selected Background Characteristics, TTDHS 1987 ..... 69
Table 6.12 Among Mothers of Children Under 5 Years of Age, the Percentage Who Know About ORT by Education, According to Selected Background Characteristics, TTDHS 1987 ..... 70
Table 6.13A Percent Distribution of Children Aged 3-36 Months by Standard Deviation Category of Height-For-Age Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987 ..... 72
Table 6.13B Percent Distribution of Children Aged 3-36 Months by Percent of Median Height-For-Age Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987 ..... 73
Table 6.14A Percent Distribution of Children Aged 3-36 Months by Standard Deviation Category of Weight-For-Height Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987 ..... 74
Table 6.14B Percent Distribution of Children Aged 3-36 Months by Percent of Median Weight-For-Height Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987 ..... 75
Table 6.15A Percent Distribution of Children Aged 3-36 Months by Standard Deviation Category of Weight-For-Age Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987 ..... 76
Table 6.15B Percent Distribution of Children Aged 3-36 Months by Percent of Median Weight-For-Age Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987 ..... 77
Table 6.16A Percent Distribution of Children Aged 3-36 Months, the Percent in Each Height-for-Age Standard Deviation Category by Each Weight-for-Height Standard Deviation Category (Waterlow Classification) Using the NCHS/CDC/WHO International Reference Population, TTDHS 1987 ..... 78
Table 6.16B Percent Distribution of Children Aged 3-36 Months, the Percent in Each Height-for-Age Percent of Median Category by Each Weight-for-Height Percent of Median Category (Waterlow Classification) Using the NCHS/CDC/WHO International Reference Population, TTDHS 1987 ..... 78
APPENDIX A
Table A. 1 Summary of Results of Household and Individual Interviews, by Residence, TTDHS 1987 ..... 86
APPENDIX B
Table B. 1 List of Selected Variables with Sampling Errors, TTDHS 1987 ..... 90
Table B. 2 Sampling Errors: Total TTDHS 1987 ..... 91
Sampling Errors: Women Aged 15-24, TTDHS 1987 ..... 92
Sampling Errors: Women Aged 25-34, TTDHS 1987 ..... 93
Sampling Errors: Women Aged 35-49, TTDHS 1987 ..... 94
Sampling Errors: Urban, TTDHS 1987 ..... 95
Sampling Errors: Rural, TTDHS 1987 ..... 96

## LIST OF FIGURES

Page
Figure 1.1 Crude Birth and Death Rates 1901-1984 ..... 2
Figure $1.2 \quad$ Percent Distribution of Women in the Survey by Current Age ..... 8
Figure 2.1 Union Status by Current Age ..... 10
Figure 2.2 Duration of Breastfeeding, Amenorthoea and Postpartum Abstinence ..... 15
Figure 3.1 Total Fertility Rate, Various Years and Data Sources ..... 18
Figure $3.2 \quad$ Total Fertility Rate 0-4 Years Before the Survey, and Children Ever Born to Women 40-49 Years ..... 19
Figure 3.3 Age-Specific Fertility Rates, WFS and TTDHS ..... 20
Figure 4.1 Current Use of Family Planning by Method, Women in Union 15-49 ..... 30
Figure 4.2 Family Planning Knowledge and Use, Women in Union 15- 49 ..... 32
Figure 4.3 Current Use by Age, TTDHS and WFS Women in Union 15-49 ..... 33
Figure 4.4 Current Use of Family Planning by Education and Number of Living Children, Women in Union 15-49 ..... 35
Figure 4.5 Source of Family Planning Supply Current Users ..... 39
Figure 5.1 Fertility Preferences, Women in Union 15-49 ..... 48
Figure 5.2 Fertility Preferences by Parity, Women in Union 15-49 ..... 50
Figure 6.1 Infant Mortality Rates, TTDHS, WFS, Vital Statistics ..... 58
Figure $6.2 \quad$ Trends in Infant and Child Mortality ..... 59
Figure 6.3 Immunization Coverage, Children 1-5 ..... 67
Figure $6.4 \quad$ Age Distribution of Weighed and Measured Children, and All Children ..... 70
Figure 6.5 Nutritional Status of Children Aged 3-36 Months ..... 71

## PREFACE

The Trinidad and Tobago Demographic and Health Survey (TTDHS) was conducted as part of the worldwide Demographic and Health Survey Program (DHS) in which more than thirty countries participated. Trinidad and Tobago was the thirteenth country, and the only participant from the Caribbean Region. The demographic and health characteristics of women in their reproductive years, and those of their young children were studied in order to obtain a better understanding of factors related to population growth and the health of children.

The Association feels extremely proud for having had the privilege of undertaking a survey of such importance and magnitude in Trinidad and Tobago for two main reasons. Firstly, because it gave us an opportunity to update the health data base of the country for the first time since the 1977 World Fertility Survey. Secondly, this project has enhanced the capability of the Association to undertake demographic and health surveys through the transfer of skills in the areas of project management, research methodology and computer literacy.

The survey findings will be useful in providing baseline and evaluative information for policy makers and administrators of health and family planning programmes in the country. Any project as complex as this one takes a number of dedicated and professional people to ensure that it is successfully implemented and completed. Many organizations and individuals were involved in the design and execution of this survey, to whom we would like to express our sincerest appreciation.

Firstly, we are extremely grateful to the staff of the Institute for Resource Development for their technical assistance. We wish to pay special tribute to Ms. Amy Sheon, Country Monitor for the TTDHS. She was endlessly resourceful and her advice was always practical and wise. We also wish to recognize the invaluable contributions made by Ms. Anne Cross for her overall consultancy, Mr. Alfredo Aliaga for his professionalism in designing the sample, Mrs. Jeanne Cushing, Mr. John Heinrich, Mr. J. Guillermo Rojas and Mr. Brian Taaffe for providing training and coordinating the data processing activities, Mr. Roger Pearson for providing the anthropometric training and to Ms. Kaye Mitchell and Mr. Robert Wolf for report production support.

We extend our thanks to USADD who made it possible to conduct this survey by providing the necessary funding.

The Association feels indebted to its Survey Director, Mr. Kenneth Heath, who successfully managed the technical aspects of the survey. The Association was also privileged to have its own Research, Evaluation and Training Officer, Mrs. Dona Da Costa-Martinez, to efficiently coordinate the administrative activities of this project, from its inception to the writing of the final report.

We also wish to extend sincerest thanks to the following agencies/institutions which participated very actively in planning the survey and reviewing the questionnaire:

The Central Statistical Office (CSO)<br>The Ministry of Health<br>The Govemment's Population Programme<br>The Institute for Social and Economic Research (ISER)<br>Pan American Health Organization/WHO<br>The United Nations Economic Commission for Latin America and<br>the Caribbean (UNECLAC)<br>UNICEF<br>Caribbean Food \& Nutrition Institute (CFND)

We most profoundly appreciate the very constructive reviews done by Mr. Jack Harewood, Demographer, and Dr. Sunney Alexis of the Food Nutrition Laboratory, on chapters 4, 5 and 6 of the Final Report. Their help in improving the quality of the Final Report cannot go unnoticed.

We especially wish to acknowledge the significant contributions of the temporary staff of TTDHS. Without their support the process would have been more rocky and indeed less challenging.

We owe a significant debt of gratitude to the Fieldwork Coordinator, the Supervisors, Interviewers and the respondents. It goes without saying that without them there would have been no survey. But even more, many of the potential users of the findings provided encouragement and suggestions.

We feel no less gratitude to all the other individuals and organisations whose in-kind contributions added to the success of the project. To the pretest and fieldwork training resource personnel we say a special thank you.

We thank also the Ministry of Energy, Labour, Employment and Manpower Resources for providing us with accommodation to present the Preliminary Findings; the Child Welfare League for making their facilities and children available for anthropometric training; The Joint Services Staff College and All Saints Parish Hall for providing us with the accommodation from which to conduct training.

Finally, we extend sincere thanks to all the District Health Visitors of the various counties and to all those who contributed one way or another to the success of the Trinidad and Tobago Demographic and Health Survey.

Emile P. Elias
President, FPATT

## REPUBLIC OF TRINIDAD AND TOBAGO



Scale in Miles
$5 \quad 0 \quad 5 \quad 10$

## CHAPTER 1

## BACKGROUND

### 1.1 History, Geography, Economy

The Republic of Trinidad and Tobago consists of twin islands in the southern part of the Caribbean Sea. With an area of 4,828 square km . ( 1,864 square miles), Trinidad lies seven miles north of the Venezuelan coast and is separated from it by the Gulf of Paria. Tobago, with an area of 300 square km . ( 116 square miles) is situated 19 miles northeast of Trinidad. The islands' climate is pleasant throughout the year, varying between 20 degrees and 33 degrees Celsius.

Trinidad was discovered by Christopher Columbus in 1498, and occupied by Spain for 300 years. Tobago was acquired by Britain in 1763 by the Treaty of Paris following more than 260 years of Dutch and French control. In 1797 Britain seized Trinidad from Spain and the two islands were unified for administrative convenience in 1889, and became a joint colony in 1899.

Because of its history as a plantation economy, Trinidad and Tobago has attracted waves of migrants who came as colonists and slaves. Today, the Islands are inhabited by persons of Portuguese, Chinese, Syrian, Lebanese, African, and East Indian descent. Africans and East Indians predominate, each comprising about 41 percent of the total population.

The importance placed on education over the past thirty years has resulted in a population almost universally literate. Census data show that the proportion of the population 15 years of age and over who reported no education declined from 11 percent in 1960 to 5 percent in 1980. The proportion attaining secondary level rose from 14 percent in 1960 to 32 percent in 1980, while the proportion attaining university education increased from less than 1 percent to 2 percent (Central Statistical Office 1987c).

One-third of the country's population is Roman Catholic. One-fourth is Hindu and 15 percent are Anglican. The remainder includes Muslims and other Christian denominations.

The economy is dominated by petroleum which constitutes nearly one-fourth of the GDP, 28 percent of government revenue, and 71 percent of exports. The collapse of oil prices this decade has caused the economy to deteriorate.

### 1.2 Population

The population of Trinidad and Tobago was estimated by the Central Statistical Office to be 1.2 million in mid-1986, and is projected to reach approximately 1.6 million by the end of the century. The intercensal growth rate has moved in cycles, climbing from 1.8 percent per annum in 1851 to 3.0 percent in 1881 before dropping to 0.9 percent in 1921 (see Table 1.1). During the so-called baby boom years, the growth rate rose again, to 2.8 percent in 1960 before falling to 1.2 percent in 1970. The rate of growth between the two most recent censuses, 1970 and 1980, was 1.5 percent, suggesting an upturn once again.

Fluctuations in the growth rate are due to changes in three components-the crude birth rate, the crude death rate (see Figure 1.1) and net migration. The birth rate fell five points, from 35 births per 1,000 at the turn of the century to 30 in 1931. During the baby boom years, the birth rate increased 12 points to reach 42 per thousand in 1954, and then dropped 15 points in the next two decades. The stagnation in the birth rate since the mid 1970s is due to the countervailing influences of a large number of women (born during the baby boom years) entering their peak reproductive years, and a decline in the fertility rates of women at all ages.


Figure 1.1
Crude Birth and Death Rates 1901-1984


The crude death rate-deaths per 1,000 population--has declined markedly, paralleling a trend in other developing countries. Between 1901 and 1931, the rate fluctuated between 20 and 25 deaths per 1,000 , and then fell to 8 in 1961. In 1984, the crude death rate stood at 7 per 1,000.

Migration contributed significantly to the growth of the islands' population until the turn of the century. Since 1970, however, high net out-migration has reduced by one-half the impact of the excess of births over deaths (Central Statistical Office 1987c).

### 1.3 Population and Family Planning Policies and Programmes

The provision of family planning services in Trinidad dates back to 1956 when a group of concerned citizens opened a family planning clinic in Point Fortin. A second clinic was opened in Port of Spain in 1959, heralding the genesis of the Family Planning Association of Trinidad and Tobago (FPATT). The Association became the thirty-second member of the International Planned Parenthood Federation (IPPF) in 1961, and started a clinic in the second major town in Trinidad, San Femando, one year later. In 1967, the govemment began providing matemal and child health services in health centres throughout the country.

Currently, the government offers family planning at 95 health centres, the FPATT operates two facilities, and the Archdiocesan Family Life Commission (AFLC), established in 1968, provides instructions on natural family planning at 10 facilities. Contraceptive information and supplies are thus easily available on both islands of the Republic.

In 1967, the govemment convened a population council to coordinate family planning activities throughout the country. The council included representatives of the government's family planning programme, the FPATT, and the Catholic Marriage Advisory Council (since renamed the AFLC). A main objective of the council was to reduce fertility to less than 19 births per 1,000 population by 1983.

Has the availability of family planning made a difference? Fertility studies conducted in 1970 and 1977 suggest that the use of contraceptives by women in union increased from 44 percent to 52 percent during this interval (Harewood 1978; Sathar and Chidambaram 1984). On the other hand, the crude birth rate, measured by vital statistics data, did not decline during this period, due in part to the increased number of women entering the peak fertile years. (See Chapter 3 for a more extensive discussion of the effect of contraception on fertility in Trinidad and Tobago).

The continued high growth rate, coupled with deteriorating economic conditions, prompted the FPATT to carry out a survey of the factors affecting population growth. In 1987, with assistance from the Institute for Resource Development/Westinghouse (IRD), FPATT collected population and health data that will be useful for making informed policy choices.

### 1.4 Health Priorities and Programmes

The goal of the Ministry of Health ( MOH ) is to protect, promote, and maintain the mental, social, physical health and well-being of the people of Trinidad and Tobago, and thereby improve the quality of life of the citizens. Primary health care is the main strategy pursued to achieve the goal of health for all. Basic health services are provided through 102 health centres, two general hospitals, three county hospitals, six district hospitals, and extended care units which provide outpatient care as well. Within the framework of primary health care, health personnel rely on interdisciplinary, intersectoral collaboration to achieve an integrated health care delivery service.

The MOH utilizes epidemiological surveillance, health education, and environmental monitoring as tools to implement specific preventative health programmes. Maternal and child health care services have been a major focus of activities. One objective of this programme is the promotion and protection of the health of mothers and pre-school aged children, which is achieved through prenatal clinics, postnatal clinics, and child health clinics. At the prenatal clinics, routine
checks are conducted, and health education about topics such as family life and family planning is provided. Most postnatal clinics offer family planning services and vaccinations against rubella for unprotected mothers. Child health clinics emphasize the promotion and maintenance of health, prevention of communicable diseases, and early detection of abnormalities.

In Trinidad and Tobago, programmes to prevent communicable diseases through immunization have been implemented since the middle of this century. In 1973, the programme was first introduced nationwide, and has continued to be a priority within the Matemal and Child Health Services Division of the MOH. The nation is committed to the World Health Organization's Expanded Programme on Immunization (EPI). The EPI programme strives to ensure that the target population of children under age one, pregnant mothers, and puberty-aged girls are appropriately immunized.

Diseases included in the international EPI are diphtheria, tetanus, whooping cough, poliomyelitis, measles, and tuberculosis. In Trinidad and Tobago, yellow fever and rubella are included in the immunization schedule, while the BCG injection against tuberculosis is not routinely given. Gains made in recent years reflect the MOH effort in the area of immunization. There have been no reported cases of poliomyelitis since the 1971-72 epidemic, and the incidence of diphtheria and neonatal tetanus has declined. However, the number of reported cases of measles remains high ( 2,660 in 1986), and vaccination coverage is low (Central Statistical Office 1987a). In addition, risk of a polio epidemic exists, since immunization coverage is not universal. TTDHS findings regarding health appear in Chapter 6 of this Report.

Other priority areas of the MOH include school health and adolescent development, drug abuse, chronic diseases, and Acquired Immune Deficiency Syndrome; these topics were not covered in the survey.

### 1.5 Objectives of the Survey

The short term objective of the Trinidad and Tobago Demographic and Health Survey (TTDHS) is to collect and analyse data on the demographic characteristics of women in the reproductive years, and the health status of their young children. Policymakers and programme managers in public and private agencies will be able to utilize the data in designing and administering programmes.

The long term objective of the project is to enhance the ability of organisations involved in the TTDHS to undertake surveys of excellent technical quality.

### 1.6 Organisation of the Survey

The Trinidad and Tobago DHS survey--a national-level self-weighting random sample survey--was funded by the United States Agency for International Development (USAID) and executed by the Family Planning Association of Trinidad and Tobago (FPATT). Technical assistance was provided by the Demographic and Health Surveys Program at the Institute for Resource Development (IRD), a subsidiary of Westinghouse located in Columbia, Maryland.

The timetable for survey activities is as follows:

| November | 1986 | Contract Signed |
| :--- | :--- | :--- |
| February | 1987 | Pretest |
| April-May | 1987 | Training |
| May-September | 1987 | Fieldwork |
| January | 1988 | Preliminary Report |
| November | 1988 | Final Report |
| December | 1988 | National Seminar |

The sampling frame for the TTDHS was the Continuous Sample Survey of Population (CSSP), an ongoing survey conducted by the Central Statistical Office based on the 1980 Population and Housing Census. (For details on sample design, see Appendix A.)

The TTDHS used a household schedule to collect information on residents of selected households, and to identify women eligible for the individual questionnaire. The individual questionnaire was based on DHS's Model "A" Questionnaire for High Contraceptive Prevalence Countries, which was modified for use in Trinidad and Tobago. It covered four main areas: (1) background information on the respondent, her partner and marital status, (2) fertility and fertility preferences, (3) contraception, and (4) the health of children.

A steering committee was established to provide guidance throughout project development and implementation. While the FPATT was responsible for overall coordination, staff recruitment and training, accountability of funds, and publicity, other committee members provided valuable assistance. During all phases of the survey, the Central Statistical Office shared experience gained during the 1977 Trinidad and Tobago World Fertility Survey. In addition to providing the Survey Director, CSO assisted with survey planning and development; offered consultation on survey methodology, operations, and data processing; prepared the sampling information; assisted with training and supervision of staff; and provided office space and printing services.

The Ministry of Health ( MOH ) assisted in questionnaire design, provided transportation for field workers, and assisted in collection of data on the availability of health services. The Institute of Social and Economic Research (ISER) offered general guidance on survey methodology, training, and field operations, and is conducting further analysis of the TTDHS data. Representatives of the Ministry of Finance and the Economy; the Ministry of Community Development, Welfare and the Status of Women; and the United Nations Economic Commission for Latin America and the Caribbean (UN/ECLAC) provided general assistance on survey methodology. The Caribbean Food and Nutrition Institute helped design questions regarding breastfeeding and nutrition.

Office staff for the project included the Survey Director, who was responsible for technical aspects of the survey, the Survey Co-ordinator (FPATT Research and Training Officer) who was responsible for administrative and financial aspects of the survey, three Data Entry Clerks, the Chief Editor, the Control Clerk/typist, and the Messenger. Thirty-three field personnel were employed, including the Fieldwork Co-ordinator, five Supervisors, four Field Editors and twentythree Interviewers. (For details of survey implementation activities, see Appendix A.)

### 1.7 Background Characteristics of Survey Respondents

The TTDHS consisted of a sample of 4,799 households, 4,122 of which were successfully interviewed. These households included 4,196 women eligible to be interviewed, from which 3,806 completed questionnaires were obtained. The response rate was 94 percent at the household level, and 92 percent at the individual level, giving an overall response rate of 87 percent. (Details for response rate calculations appear in Appendix A.)

The distribution of the sample population by age, residence, education, and ethnicity is shown in Table 1.2, along with corresponding figures from the 1980 Census. The $15-19$ age group comprises 18 percent of the sample, compared with 20 percent for each of the next two age groups. The proportion of the sample in the older age groups declines steadily, from 14 percent for the $30-34$ group to 7 percent for the $45-49$ age group. In the youngest age group, the survey population contains fewer women than the Census population. The drop in the size of the 15-19 cohort in the seven years between the Census and the Survey reflects the sharp decline in the birth rate which occurred between 1960 and 1970.

| Table 1.2 Distribution of Women 15-49 by Age, Residence, Education, and Ethnicity, 1980 Census and TTDHS 1987 |  |  |
| :---: | :---: | :---: |
| Background Characteristic | $\begin{aligned} & 1980 \\ & \text { Census } \end{aligned}$ | $\begin{aligned} & 1987 \\ & \text { TTDHS } \end{aligned}$ |
| Age |  |  |
| 15-19 | 24.2 | 17.9 |
| 20-24 | 20.3 | 19.6 |
| 25-29 | 16.1 | 19.6 |
| 30-34 | 12.9 | 14.3 |
| 35-39 | 10.3 | 11.6 |
| 40-44 | 8.7 | 9.7 |
| 45-49 | 7.4 | 7.3 |
| Residence |  |  |
| Urban | 48.7 | 44.4 |
| Rural | 51.3 | 55.6 |
| Education |  |  |
| <Complete primary | 15.6 | 8.2 |
| Completed primary | 40.7 | 38.0 |
| Secondary+ | 43.7 | 53.9 |
| Ethnicity |  |  |
| African | 39.6 | 35.3 |
| Indian | 42.9 | 47.0 |
| Mixed | 15.4 | 17.1 |
| Other | 2.1 | 0.7 |
| Total | 100.0 | 100.0 |
| Central Statistical Office, Population and Housing Census 1980, Vol. 2, 1983 |  |  |

Forty-four percent of women live in urban areas ${ }^{1}$ and 56 percent in rural areas; this distribution is slightly less urbanized than the 1980 Census population. The sample population is better educated than the comparable population from the Census, reflecting ongoing gains in education. Fifty-four percent of women in the sample have some secondary schooling, a 10 -point advance since the Census.

The ethnic composition of the sample, as reported by respondents, differs from Census figures. Africans make up a smaller part of the sample than the Census population, 35 versus 40 percent, respectively. East Indians comprise 47 percent of the survey compared to 43 percent in the Census. Seventeen percent of survey respondents are of mixed race; fewer than 1 percent belong to other ethnic groups. The reasons for the difference in the ethnic composition of the sample have not been ascertained, but could be due to unintended oversampling in areas where the East Indian population is heavily concentrated, a higher response rate among this group, or a larger household size.

Table 1.3 gives an overview of the sample population according to level of education. Overall 92 percent have completed at least five years of primary education, while 54 percent have at least some secondary education. ${ }^{2}$
${ }^{1}$ Urban includes Port of Spain, St. George county, and the boroughs of San Fernando, Arima and Pt. Fortin.

2 In this report, respondents with some secondary education were classified into two groups. "Secondary I" includes women with some or full secondary education, but fewer than five "O" Level exams passed. "Secondary II" includes women with some or full secondary education, with five "O" level exams passed, at least one "A" level, or some University education. It was assumed that exam results were a better indicator of academic achievement than years of education, the more customary measure.

| Table 1.3 Percent Distribution of Women by Education, According to Selected Background Characteristics, TTDHS 1987 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education |  |  |  |  |  |  |
| Background Characacteristic | <Complete Primary | Completed Primary | $\underset{I^{\AA}}{\text { Secondary }}$ | $\underset{I I^{2}}{\text { Secondary }}$ | Total | Number |
| Age |  |  |  |  |  |  |
| 15-19 | 0.6 | 12.7 | 76.0 | 10.7 | 100 | 683 |
| 20-24 | 4.0 | 26.2 | 55.6 | 14.2 | 100 | 745 |
| 25-29 | 5.2 | 40.9 | 40.7 | 13.2 | 100 | 745 |
| 30-34 | 5.3 | 55.8 | 26.3 | 12.5 | 100 | 543 |
| 35-39 | 11.8 | 51.5 | 27.0 | 9.8 | 100 | 441 |
| 40-44 | 19.5 | 51.6 | 20.3 | 8.6 | 100 | 370 |
| 45-49 | 30.8 | 49.1 | 12.9 | 7.2 | 100 | 279 |
| Residence |  |  |  |  |  |  |
| Urban | 5.7 | 32.0 | 47.0 | 15.3 | 100 | 1,690 |
| Rural | 10.2 | 42.8 | 38.5 | 8.6 | 100 | 2,116 |
| Ethnicity |  |  |  |  |  |  |
| African | 3.8 | 39.1 | 45.8 | 11.3 | 100 | 1,342 |
| Indian | 12.4 | 40.2 | 37.5 | 9.8 | 100 | 1,787 |
| Mixed | 6.0 | 31.0 | 48.7 | 14.3 | 100 | 649 |
| Other | 0.0 | 0.0 | 25.9 | 74.1 | 100 | 28 |
| Total | 8.2 | 38.0 | 42.3 | 11.6 | 100 | 3,806 |
| ${ }^{1}$ Some or full secondary education, but fewer than five "o" level exams passed. <br> * Some or full secondary education, with five "o" level exams paseed, at least one "A" level, or some university education. |  |  |  |  |  |  |

Educational differences in the age groups in Table 1.3 reflect improvements in recent years. Among women 45-49 who attended school three decades ago, 31 percent did not complete primary school, and only 20 percent received secondary education. By contrast, fewer than 1 percent of women 15-19 failed to complete primary school while 87 percent attained secondary education.

Urban respondents are better educated than rural dwellers; 62 percent of the former have at least some secondary schooling, versus 47 percent of those in rural areas. The table also shows the differences in education among the various ethnic groups. East Indian women are the least educated. Twelve percent did not complete primary education, compared with 4 percent of Africans and 6 percent of those of mixed race. The "other" ethnic category (mostly White and Chinese) is the best educated. All have at least some secondary school, and 74 percent have full certification. (This figure should be regarded with caution since the category comprises only 28 women).

Since respondents who comprise the "other" ethnic category are so few in number, this category is not shown in subsequent tables where ethnicity is a background characteristic.

One important aspect of data quality is the single-year age distribution of the sample, shown in Figure 1.2. The year-to-year fluctuations may be due to the high out-migration in recent years. There is little evidence of heaping on ages ending in digit " 5 " or " 0 ", suggesting that the data are free of gross age estimation bias. (Further analysis of age data exceeds the scope of this report, but is required to make a more definitive assessment of the quality of age data.)

Figure 1.2
Percent Distribution of Women in the Survey by Current Age


Trinidad \& Tobago DHS 1987

## CHAPTER 2

## NUPTIALITY AND EXPOSURE TO RISK OF PREGNANCY

In Trinidad and Tobago, as in most Caribbean and Latin American countries, sexual unions occur not only in the context of legal marriage, but also in common-law and visiting unions as well. In this report, formal marriage refers to those persons legally married and living together in the same household; common-law refers to those not legally married but living together; and visiting refers to those in a regular sexual relationship but not living together. Unless otherwise specified, "women in union" includes those in all three types of arrangements.

| Background Characteristic | Union Status |  |  |  |  | Total | Number |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Never } \\ & \text { In } \\ & \text { Union } \end{aligned}$ | $\begin{aligned} & \text { Mar- } \\ & \text { ried } \end{aligned}$ | $\begin{aligned} & \text { Common- } \\ & \text { Law } \end{aligned}$ | $\begin{aligned} & \text { Visi- } \\ & \text { ting } \end{aligned}$ | Widowed/ <br> Divorced/ <br> Separated |  |  |
| Age |  |  |  |  |  |  |  |
| 15-19 | 75.4 | 5.4 | 3.2 | 11.7 | 4.2 | 100 | 683 |
| 20-24 | 31.8 | 29.0 | 12.1 | 19.3 | 7.8 | 100 | 745 |
| 25-29 | 9.9 | 49.3 | 18.3 | 16.2 | 6.3 | 100 | 745 |
| 30-34 | 4.4 | 54.0 | 18.0 | 14.4 | 9.2 | 100 | 543 |
| 35-39 | 3.4 | 59.9 | 15.6 | 12.7 | 8.4 | 100 | 441 |
| 40-44 | 3.0 | 57.6 | 15.4 | 11.4 | 12.7 | 100 | 370 |
| 45-49 | 1.4 | 59.9 | 15.1 | 9.0 | 14.7 | 100 | 279 |
| Residence |  |  |  |  |  |  |  |
| Urban | 20.2 | 35.7 | 15.1 | 18.5 | 10.4 | 100 | 1,690 |
| Rural | 25.4 | 45.1 | 12.2 | 11.0 | 6.3 | 100 | 2,116 |
| Education |  |  |  |  |  |  |  |
| primary | 7.4 | 49.4 | 25.3 | 6.1 | 11.9 | 100 | 312 |
| Completed primary | 10.2 | 50.6 | 17.6 | 12.9 | 8.7 | 100 | 1,445 |
| Secondary ${ }^{1}$ | 34.7 | 31.4 | 10.0 | 16.8 | 7.0 | 100 | 1,609 |
| SecondaryI ${ }^{2}$ | 34.3 | 37.7 | 4.5 | 15.9 | 7.5 | 100 | 1, 440 |
| Ethnicity ${ }^{\text {a }}$ |  |  |  |  |  |  |  |
| African | 18.6 | 27.2 | 17.4 | 25.6 | 11.2 | 100 | 1,342 |
| Indian | 26.5 | 53.9 | 8.8 | 5.0 | 5.8 | 100 | 1,787 |
| Mixed | 23.0 | 33.3 | 18.8 | 16.6 | 8.3 | 100 | 649 |
| Total | 23.1 | 40.9 | 13.5 | 14.3 | 8.1 | 100 | 3,806 |

1 Some or full secondary education, but fewer than five "O" level exams passed.
2 Some or full secondary education, with five "O" level exams passed,
at least one "A" level, or some unlversity education.
"Excludes 27 women of "other" ethnicity, and one respondent with missing information.

### 2.1 Current Marital Status

Table 2.1 and Figure 2.1 present the distribution of women in the sample according to their current union status. Overall, 23 percent of the respondents have never been in union, while 41 percent are formally married, 28 percent are living together or visiting, and 8 percent are either separated, widowed or divorced. Nearly all women in Trinidad and Tobago enter some type of union during their reproductive years, since the percentage reporting themselves as "never in a union" drops from 75 percent of women 15-19 to only 1 percent of women 45-49. While the
proportion currently in some type of union is quite high for women aged 25-49 (ranging from 84 to 88 percent), younger women are more likely to report being in the less stable visiting unions, while older women tend to be in formal marriages.

The relationship between education and union status is striking. More than 34 percent of women with secondary education have never been in unions, compared to 10 percent of women who have completed primary school. (Recall that the better educated women are younger than average.)

Table 2.1 also indicates that union status differs considerably by ethnic origin. While the proportion currently in union is nearly alike among the three ethnic groups, East Indian women tend to be formally married ( 54 percent) rather than living together or visiting ( 14 percent), while the reverse is true among African women ( 27 percent in formal unions and 43 percent in less formal arrangements).

Figure 2.1
Union Status by Current Age


Trinidad \& Tobago DHS 1987

### 2.2 Median Age at First Union

Table 2.2 shows that the median age at first union is just about 20 , and has not changed in the last two decades. Only for women 45-49 is the median age lower, by one full year. Entry into a union before age 15 is relatively uncommon and has been so for more than two decades. Eleven percent of women in their forties entered a union before age 15; about one-half as many women $15-39$ did so. Thirty percent or more of each cohort of women 20-49 were in a union before age 18.

Table 2.2 Percent Distribution of Nomen by Age at First Union and Median Age at Firat Union, According to Background Characteristics, TTDHS 1987

| Background Characteristic | Never <br> in <br> Union | Age at First Union |  |  |  |  |  | Total | Number | Median ${ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $<15$ | 15-17 | 18-19 | 20-21 | 22-24 | 25 + |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 75.4 | 6.6 | 14.3 | 3.7 | -- | -- | -- | 100 | 683 | --7 |
| 20-24 | 31.8 | 6.0 | 28.3 | 19.1 | 11.8 | 3.0 | -- | 100 | 745 | 19.7 |
| 25-29 | 9.9 | 5.1 | 24.6 | 23.2 | 16.9 | 14.5 | 5.8 | 100 | 745 | 19.8 |
| 30-34 | 4.4 | 5.5 | 26.2 | 21.0 | 16.4 | 15.7 | 10.9 | 100 | 543 | 19.7 |
| 35-39 | 3.4 | 5.2 | 28.1 | 20.6 | 16.8 | 13.6 | 12.2 | 100 | 441 | 19.7 |
| 40-44 | 3.0 | 10.5 | 21.1 | 20.5 | 15.9 | 13.8 | 15.1 | 100 | 370 | 19.8 |
| 45-49 | 1.4 | 11.1 | 30.5 | 20.8 | 14.7 | 11.5 | 10.0 | 100 | 279 | 18.8 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 20.2 | 7.0 | 22.9 | 18.9 | 13.7 | 10.4 | 6.9 | 100 | 1,690 | 20.1 |
| Rural | 25.4 | 6.3 | 25.2 | 17.0 | 11.6 | 8.6 | 5.8 | 100 | 2,116 | 20.2 |
| Education |  |  |  |  |  |  |  |  |  |  |
| primary | 7.4 | 16.0 | 35.9 | 19.9 | 9.6 | 5.4 | 5.8 | 100 | 312 | 17.9 |
| Completed primary | 10.2 | 8.4 | 31.0 | 21.0 | 12.7 | 10.1 | 6.5 | 100 | 1,445 | 19.0 |
| Secondary $\mathrm{I}^{2}$ | 34.7 | 4.6 | 20.2 | 15.5 | 12.4 | 7.7 | 5.0 | 100 | 1,609 | 21.6 |
| SecondaryII ${ }^{3}$ | 34.3 | 1.1 | 8.2 | 14.8 | 14.5 | 16.1 | 10.9 | 100 | 1. 440 | 24.1 |
| Ethnicity ${ }^{4}$ |  |  |  |  |  |  |  |  |  |  |
| African | 18.6 | 9.2 | 26.2 | 18.7 | 12.2 | 8.9 | 6.1 | 100 | 1,342 | 19.6 |
| Indian | 26.5 | 4.8 | 22.1 | 17.2 | 13.2 | 9.7 | 6.4 | 100 | 1,787 | 20.8 |
| Mixad | 23.0 | 6.3 | 26.3 | 17.3 | 11.2 | 9.6 | 6.3 | 100 | 649 | 20.0 |
| Total | 23.1 | 6.6 | 24.2 | 17.8 | 12.5 | 9.4 | 6.3 | 100 | 3,806 | -- |

-- Omitted due to censoring.
1 Defined as the age by which one-half of women have ever married.
', Some or full secondary education, but fewer than five "O" level exams passed.
' Some or full secondary education, with five "O" level exams passed, at least one "A" level, or some university education.
' Excludes 27 women of "other" ethnicity, and one respondent with missing information.

As expected, better educated women marry later, on average, than less educated women. The median age at marriage for those with full secondary education is 24 years, versus 18 years for women with less than completed primary education. On average, African women entered their first union at age 20, one year younger than East Indian women.

Table 2.3 compares the median age at first union for women 20-49 according to various background characteristics. The median age at first union for women aged 20-49 is 19.6. Women with less than secondary education and African women enter unions slightly earlier than women with more education or mixed and Indian women. While the median age for women with less than a complete primary education is only 17.9 years, this figure rises to 22.8 for those with at least five "O" level passes. (The median ages at first union for various ethnic groups are different in Tables 2.2 and 2.3 because the former refers to all women while the latter is restricted to women aged 20-49.)

### 2.3 Breastfeeding and Postpartum Insusceptibility

Aside from the age at which women enter into unions, several other factors which affect fertility and birth intervals are measured in the TTDHS and presented in Tables 2.4, 2.5 and 2.6. Susceptibility to pregnancy after a birth can be delayed by breastfeeding, which inhibits the resumption of ovulation and menstruation, and by practicing postpartum sexual abstinence.

| Table 2.3 Median Age at First Union among Women Age 20-49 Years, by Current Age and Selected Background Characteristics, TTDHS 1987 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current Age |  |  |  |  |  |  |  |
| Background Characteristic | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | $\begin{aligned} & \text { Ages } \\ & 20-49 \end{aligned}$ |
| Residence |  |  |  |  |  |  |  |
| Urban | 19.2 | 19.8 | 19.7 | 20.3 | 20.3 | 19.0 | 19.7 |
| Rural | 20.1 | 19.7 | 19.7 | 19.3 | 19.2 | 18.5 | 19.6 |
| Education |  |  |  |  |  |  |  |
| primary | 19.0 | 18.9 | 17.1 | 17.6 | 17.7 | 17.7 | 17.9 |
| Completed primary | 18.2 | 19.1 | 18.9 | 19.2 | 19.3 | 18.7 | 19.0 |
| Secondary ${ }^{1}$ | 19.7 | 20.3 | 20.4 | 20.8 | 21.2 | 21.0 | 20.2 |
| SecondaryII ${ }^{\text {a }}$ | * | 22.2 | 22.5 | 21.4 | 24.8 | 23.0 | 22.8 |
| Ethnicity ${ }^{2}$ |  |  |  |  |  |  |  |
| African | 18.5 | 19.5 | 19.2 | 19.4 | 20.1 | 19.1 | 19.2 |
| Indian | 21.4 | 20.2 | 20.3 | 19.7 | 19.3 | 18.4 | 20.1 |
| M1xed | 18.7 | 19.4 | 19.8 | 20.1 | 20.5 | 18.4 | 19.5 |
| Total | 19.7 | 19.8 | 19.7 | 19.7 | 19.8 | 18.8 | 19.6 |
| * Fewer than 25 cases. <br> ${ }^{2}$ Some or full secondary education, but fewer than five "o" level exams passed. <br> 2 Some or full secondary education, with five "o" level exams passed, at least one "A" level, or some university education. <br> 2 Excludes 25 women of "other" ethnicity or with missing information. |  |  |  |  |  |  |  |

Respondents who gave birth in the five years preceding the survey interview were asked if they breastfed, and the duration of breastfeeding. Table 2.4 shows that breastfeeding is common, though not universal. Overall, 89 percent of births in the five years prior to the survey were breastfed. The practice was slightly more common for babies bom to women in rural areas, to African women, and to women with the highest level of education, although differences in each case are slight.

In addition, women were asked how many months they were amenorrhoeic after each delivery, and how long they abstained from intercourse. Also, women were asked if they were currently breastfeeding, amenorrhoeic, and/or practicing abstinence. Since it may be difficult for respondents to recall the timing of these events, and since it may be difficult to precisely define when weaning takes place, data in Tables 2.5 and 2.6 are current status estimates which refer to whether or not the woman was breastfeeding and/or amenorrhoeic at the time of the survey interview, rather than her reported durations for these events. In Table 2.5, all births three years before the survey are considered, although twins are counted as a single birth.

Durations of breastfeeding are quite short. Table 2.5 shows that while 84 percent of women with births 2-3 months ago were still breastfeeding, fewer than one-half of those who delivered 6-7 months ago continued the practice. In other words, most women who breasffeed at all continue the practice for at least three months, but many stop shortly thereafter. Menstruation returned very shortly after birth for most women. Only 46 percent of women 2-3 months postpartum were amenorthoeic; this figure dropped to 19 percent for women $4-5$ months postpartum.

Sexual abstinence, too, is practiced for only a short time following delivery. More than three-fourths of women resumed having intercourse 2 to 3 months after delivery, and only 3 percent continued to abstain after 7 months. The fourth column in Table 2.5 shows the proportion of women protected from pregnancy due to either amenorrhoea or abstinence. While 98 percent of women who delivered less than 2 months ago are insusceptible to pregnancy, only one-third are
still protected 4 to 5 months after a birth. Thus, most women who want to space a birth will need to take steps to prevent pregnancy shortly after delivery.


Note that Table 2.5 uses cross-sectional data, representing all women at a single point in time, rather than showing the experience of an actual cohort over time. For this reason, the proportions breastfeeding and amenorrhoeic at increasing durations since birth do not decline in a steady fashion. For example, more mothers $14-15$ months postpartum were breastfeeding at the time of the survey than were mothers of 12-13 month old children. To minimize such fluctuations, the births are grouped in 2-month intervals.

### 2.4 Mean Duration of Breastfeeding and Postpartum Insusceptibility

Table 2.6 and Figure 2.2 present the mean number of months of breastfeeding, postpartum amenorrhoea, postpartum abstinence, and postpartum insusceptibility by background characteristics of the mother. These mean durations were calculated by dividing the total number of women breastfeeding, amenorrhoeic or abstaining by the average number of births per month in the past 36 months. This technique is based on an epidemiological method of estimating the mean duration of a disease, calculated by dividing its prevalence by its incidence.

| Table 2.5 Percentage of Births Whose Mothers are Still Breastfeeding, Postpartum Amenorrhoeic, Abstaining, and Insusceptible, by Number of Months Since Birth, TTDHS 1987 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage still |  |  |  |  |
| Months <br> S1nce B1rth | Breast- <br> feeding | Amenorrhoelc | ```Abstain- Ing``` | $\begin{aligned} & \text { Insus- } \\ & \text { ceptible* } \end{aligned}$ | Number <br> of B1rths |
| Less than 2 | 81.4 | 88.4 | 86.0 | 97.7 | 43 |
| 2-3 | 83.6 | 46.3 | 22.4 | 56.7 | 67 |
| 4-5 | 55.6 | 19.4 | 13.9 | 33.3 | 36 |
| 6-7 | 49.4 | 16.1 | 13.8 | 26.4 | 87 |
| 8-9 | 36.1 | 8.2 | 3.3 | 11.5 | 61 |
| 10-11 | 29.7 | 12.5 | 3.1 | 15.6 | 64 |
| 12-13 | 26.9 | 3.0 | 3.0 | 6.0 | 67 |
| 14-15 | 32.8 | 6.9 | 3.4 | 10.3 | 58 |
| 16-17 | 16.7 | 0.0 | 1.9 | 1.9 | 54 |
| 18-19 | 17.1 | 2.9 | 4.3 | 7.1 | 70 |
| 20-21 | 17.1 | 0.0 | 1.3 | 1.3 | 76 |
| 22-23 | 12.7 | 0.0 | 0.0 | 0.0 | 63 |
| 24-25 | 18.3 | 0.0 | 0.0 | 0.0 | 60 |
| 26-27 | 5.9 | 2.0 | 0.0 | 2.0 | 51 |
| 28-29 | 6.1 | 0.0 | 0.0 | 0.0 | 66 |
| 30-31 | 7.0 | 0.0 | 1.4 | 1.4 | 71 |
| 32-33 | 7.5 | 0.0 | 0.0 | 0.0 | 80 |
| 34-35 | 4.7 | 1.6 | 1.6 | 3.1 | 64 |
| Total | 26.9 | 9.9 | 7.4 | 13.4 | 1,138 |
| Median | 6.3 | 2.3 | 1.7 | 3.1 |  |
| Note: Includes births $0-35$ months before the survey. <br> * Either amenorrhoeic or abstaining at the time of the survey. |  |  |  |  |  |

On average, women breastfeed their children for 10 months. (Note that the means in Table 2.6 appear elongated relative to the medians in Table 2.5. The small proportions of women who continue to breastfeed for 24 months or longer after delivery lengthen the mean but not the median. In addition, the time periods covered by Tables 2.5 and 2.6 are slightly different. Recall, too, that because the tables are calculated with quite different procedures, the means and medians are not strictly comparable.) The information is useful, however, for comparing breastfeeding practices among different groups of women.

Younger and more educated women, who tend to be the forerunners of behavioral change, breastfeed for shorter durations than older and less educated women. This suggests that the practice may be declining. A decline in the already short period of breastfeeding has serious implications for the nutritional status of infants. One possible reason for the decline is a 31 percent increase in labour force participation by women 25-34, which occurred between 1970 and 1980 (Central Statistical Office 1987c).

On average, menstruation resumed 3.5 months after the most recent birth, which is more than 6 months prior to the cessation of breastfeeding. This suggests that the intensity with which women breastfeed their children may be diminished due to the introduction of supplemental foods long before breastfeeding ceases. The relationship between duration of breastfeeding and menstruation is not consistent among different subgroups of the population. For example, the least educated women breastfeed longer than women in all other education groups, but experience the shortest durations of amenormoea. The small number of births to uneducated women may be responsible for the unexpected results.

| Table 2.6 Mean Number of Months of Breastfeeding, Postpartum Amenorrhoea, Postpartum Abstinence, and Postpartum Insusceptibility by Selected Background Characteristics, TTDHS 1987 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Background Characteristic | Breastfeeding | Post- <br> partum <br> Amenor- <br> rhoed | Postpartum Abst1nence | Postpartum Insusceptibility ${ }^{1}$ | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { Births } \end{aligned}$ |
| Age |  |  |  |  |  |
| <30 | 9.6 | 3.5 | 2.6 | 4.6 | 801 |
| $30+$ | 11.2 | 3.5 | 2.8 | 5.1 | 362 |
| Residence |  |  |  |  |  |
| Urban | 9.9 | 3.0 | 2.8 | 4.8 | 500 |
| Rural | 10.3 | 3.9 | 2.5 | 4.7 | 663 |
| Education |  |  |  |  |  |
| <Complete primary | 12.0 | 1.0 | 2.1 | 2.6 | 69 |
| Completed primary | 10.8 | 4.3 | 3.1 | 5.8 | 494 |
| Secondary I ${ }^{2}$, | 9.8 | 3.2 | 2.5 | 4.3 | 501 |
| Secondary II ${ }^{\text {a }}$ | 6.9 | 2.5 | 1.5 | 3.3 | 99 |
| Ethnicity ${ }^{4}$ |  |  |  |  |  |
| African | 10.0 | 3.6 | 3.2 | 5.3 | 452 |
| Indian | 10.6 | 3.2 | 1.7 | 3.8 | 498 |
| Mixed | 9.5 | 4.2 | 3.9 | 6.1 | 205 |
| Total | 10.1 | 3.5 | 2.6 | 4.8 | 1,163 |

Note: Includes births $1-36$ months before the survey.
Either amenorrhoeic or abstaining at the time of the survey.
Some or full secondary education, but fewer than five "O" level
exams passed.
' Same or full secondary education, with five "o" level exams
passed, at least one "A" level, or some university education.
4 Excludes 8 children of "other" ethnicity or with missing information.

Figure 2.2
Duration of Breastfeeding, Amenorrhoea and Post-Partum Abstinence


## CHAPTER 3

## FERTILITY

### 3.1 Current and Cumulative Fertility

Information about the past and present fertility of women is among the most important information collected in the TTDHS. A full birth history was collected from each woman, including the name, sex, and month and year of each live birth; the age at death for births that died; and whether or not living children reside with their mother.

Table 3.1 presents the total fertility rates (TFR) for recent periods prior to the survey, and the mean number of children ever born (CEB) to women $40-49$. The former figure is a measure of current fertility--the number of children that a woman would bear during her lifetime if she were to experience the age-specific fertility rates prevailing during a given period. Children ever bom, on the other hand, represents cumulative fertility, and is a measure of past reproductive behaviour.


In the five years prior to the survey, the TFR was about 3.1. In the more recent period, 1984-1987, ${ }^{1}$ the TFR is slightly lower than in the 1981-1983 period--3.1 versus 3.3 children. The TTDHS figures are generally consistent with vital statistics data, which measured the TFR as 3.4 in 1981 and 3.0 in 1984 (see Figure 3.1).

Figure 3.1
Total Fertility Rate, Various Years and Data Sources


- Vital Statistics

Trinidad \& Tobago DHS 1987

As shown in Table 3.1, fertility rates differ markedly among subgroups of the population. In all periods for which TFRs were calculated, fertility is shightly higher in rural than urban areas. The largest fertility differentials are seen when educational background is considered. Whereas women with less than completed primary education have 4 children on average, those with completed secondary certification or university education are having only 2.3 children each. In the five years before the survey, the TFR for African women was 3.5 , compared with 2.8 and 3.4 for East Indian and mixed women, respectively.

Comparing the last two columns of Table 3.1 also indicates that fertility has declined in recent years. This information appears graphically in Figure 3.2. Women aged 40-49 had 4.3 children during their reproductive years, on average, which is more than one child greater than the level of current fertility. One trend worth noting is that while past levels of fertility were slightly higher among East Indian than African women ( 4.4 children ever born versus 4.3 ), currently, fertility is lower among East Indian than African women ( 2.8 versus 3.5 ).

Another indicator of current fertility is the percentage of women who are pregnant. Of all women in the sample, 5 percent reported being pregnant. Of these 47 percent were under 25 years (see Table 3.2).

[^0]Figure 3.2

## Total Fertility Rate 0-4 Years Before the Survey, and Children Ever Born to Women 40-49 Years




| Table 3.2 | Percent of All Women <br> Who are Currently <br> Pregnant by Age, |
| :--- | :--- | :--- |
|  | TTDHS 1987 |

### 3.2 Fertility Trends

The age-period fertility rates presented in Table 3.3 show that, in the $0-4$ years before the survey, teen fertility is rather low, 84 births per 1,000 women, more than doubles for women in their twenties, and then falls sharply for women age 35 and above.

This table also confirms the fertility decline experienced in recent years. One can construct total fertility rates from TTDHS data for women 15-34 for up to 20 years in the past, and see a decline from 3.4 children bom to women in this age group 15-19 years before the survey, compared to 2.7 children born to women of the same ages in the 5 years prior to the survey. The TFR, which summarizes the age-specific fertility rates for women 15-49, has declined from 3.4 in 1972-1976 (Hunte 1983) to 3.1 a decade later (see Figure 3.1).


Figure 3.3 permits a comparison between WFS and TTDHS data, and confirms the modest decline in fertility in recent years. The period 10-14 years prior to the TTDHS corresponds with the 1972-1976 time period. Fertility, as measured by the TTDHS for that period was slightly higher for women 15-29, and lower for women 30-39 than that measured by the WFS (Hunte, 1983). Fertility in the 5 years preceding the TTDHS, however, is lower than that measured by either the TTDHS or the WFS a decade earlier.

Figure 3.3
Age-Specific Fertility Rates, WFS and TTDHS

-WFS, 1972-1976.
$\rightarrow$ 0-4 Yrs. Prior DHs

- Source: Hunte, 1983

Trinidad \& Tobago DHS 1987

### 3.3 Children Ever Born

Table 3.4 shows the distribution of all women, and those women currently in a union, by age and the number of children ever born (CEB) according to age. Childbearing begins relatively late in Trinidad and Tobago. Only 11 percent of all women under 20 have had a child, as have 46 percent of women aged $20-24$ years. Not surprisingly, fertility is higher among women in union than among all women in each age group. On average, respondents have had 2.1 births, while women in union have had 2.7. However, twenty percent of the women 15-19 years are currently in a union, and of these 47 percent had at least one child. Also, 60 percent of women 20-24 years are currently in a union, and of those, 70 percent had at least one child. Only about 4 percent of women $45-49$ never have a birth, and this figure is reduced to 2 percent among currently married women. On average, women in union age 20-24 have had 1.4 children, those 30-34 have had 2.9, and those nearing the end of their reproductive lives have had 5 children.


### 3.4 Children Ever Born and Age At First Union

Women who enter a union at a young age can be expected to have more children than those entering at an older age, since they are likely to have a longer time period of exposure to the risk of pregnancy. As seen in Table 3.5, fertility generally declines as age at first union increases. For example, among women married for 10-14 years, those who married before age 22 had between 2.8 and 3.2 children each, compared with 2.1 children bom to women marrying at age 25 or above. However, for women in union less than 10 years, there seems to be little relationship between age at first union and fertility.

| Table 3.5 Mean Number of Children Ever Born to Women Ever in Union by Age at First Union and Years Since First Union, TTDHS, 1987 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Years <br> Since <br> First <br> Union | Age at First Union |  |  |  |  |  | All <br> Ages |
|  | <15 | 15-17 | 18-19 | 20-21 | 22-24 | $25+$ |  |
| 0-4 | * | 0.8 | 0.6 | 0.6 | 0.8 | 0.6 | 0.7 |
| 5-9 | 2.0 | 2.2 | 1.9 | 2.0 | 1.8 | 1.6 | 2.0 |
| 10-14 | 2.9 | 3.2 | 2.9 | 2.8 | 2.4 | 2.1 | 2.8 |
| 15-19 | 4.1 | 3.7 | 3.6 | 2.9 | 2.8 | 2.7 | 3.4 |
| 20-24 | 4.3 | 4.5 | 4.0 | 3.4 | 4.0 | 3.7 | 4.1 |
| 25-29 | 6.0 | 5.5 | 5.2 | 4.0 | 4.2 | -- | 5.2 |
| $30+$ | 6.0 | 6.2 | 5.0 | -- | -- | -- | 5.9 |
| Total | 3.7 | 3.1 | 2.7 | 2.3 | 2.1 | 1.6 | 2.7 |
| * Fewer than 25 cases. <br> -- Not applicable. |  |  |  |  |  |  |  |

### 3.5 Age at First Birth

Table 3.6 presents data on the age at first birth by the woman's current age. While only 1 percent of the women had a birth before age 15,30 percent had at least one child while still in the teen years. One can compare this table with Table 2.2 and assess the gap between age at first union and first birth. While the median age at first union for women aged 25-29 was 19.8, the median age at first birth for these women was 22.2.

While the median age at union has not changed in recent years, the age at first birth has risen steadily from 20.5 for the oldest women, to 22.2 years for women 25-29. This gap--nearly two years--raises questions about the delay in onset of fertility after entry into union. Use of contraception at this point is addressed in Chapter 4.

```
Table 3.6 Percent Distribution of Women by Age at First Birth According to Current
    Age, TTDHS, 1987
```

| $\begin{aligned} & \text { Current } \\ & \text { Age } \end{aligned}$ | $\begin{aligned} & \text { No } \\ & \text { Birth } \end{aligned}$ | Age at First Birth |  |  |  |  |  | Total Percent | Number | Median <br> Age |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | <15 | 15-17 | 18-19 | 20-21 | 22-24 | $25+$ |  |  |  |
| 15-19 | 89.0 | 0.3 | 7.3 | 3.4 | 0.0 | 0.0 | 0.0 | 100 | 683 | -- |
| 20-24 | 53.6 | 0.5 | 12.2 | 17.0 | 12.1 | 4.6 | 0.0 | 100 | 745 | -- |
| 25-29 | 25.4 | 1.2 | 13.6 | 16.4 | 17.3 | 18.7 | 7.5 | 100 | 745 | 22.2 |
| 30-34 | 14.0 | 1.3 | 14.4 | 19.2 | 16.0 | 17.1 | 18.0 | 100 | 543 | 21.9 |
| 35-39 | 11.1 | 0.9 | 14.1 | 20.6 | 18.1 | 16.6 | 18.6 | 100 | 441 | 21.6 |
| 40-44 | 9.2 | 3.0 | 15.7 | 21.4 | 16.5 | 14.6 | 19.7 | 100 | 370 | 21.1 |
| 45-49 | 3.9 | 3.6 | 19.7 | 22.2 | 17.6 | 16.8 | 16.1 | 100 | 279 | 20.5 |
| Total | 35.9 | 1.2 | 13.0 | 16.0 | 13.0 | 11.6 | 9.3 | 100 | 3,006 | -- |

-- Omitted due to censoring.

### 3.6 Median Age at First Birth by Background Characteristics

Table 3.7 shows the median age at first birth according to selected background characteristics of the respondent. Women residing in urban areas delay the first birth by almost one year compared to their rural-dwelling counterparts. Variations by education are more dramatic. Whereas women with less than primary education have their first child before age twenty, those with some secondary education delay the first birth by an additional 3.4 years; those with full secondary certification delay by a further 2.5 years. Differences by ethnicity are slight.

Particularly interesting is the increase in the age at first birth for all ethnic groups in recent years. The sharpest increase occurred among East Indian women, from 19.9 for women 45-49 to 22.0 for those $25-29$. This rise in the age at first birth could be partly responsible for the lower fertility now experienced by East Indian women (see Table 3.1), and could also be a result of contraceptive practice, a subject to be addressed in the following chapter.

| Table 3.7 Median Age at First Birth Among Women Aged 25-49 Years, by Current Age and Selected Background Characteristics, TTDHS 1987 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current Age |  |  |  |  |  |  |
| Background Characteristic | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | $\begin{aligned} & \text { Ages } \\ & 25-49 \end{aligned}$ |
| Residence |  |  |  |  |  |  |
| Urban | 23.1 | 21.9 | 22.4 | 22.0 | 21.1 | 22.1 |
| Rural | 21.8 | 21.9 | 21.0 | 20.6 | 19.9 | 21.3 |
| Education |  |  |  |  |  |  |
| <Complete primary | 20.4 | 19.7 | 19.4 | 19.4 | 19.1 | 19.5 |
| Completed primary | 21.1 | 20.7 | 20.7 | 20.4 | 20.3 | 20.7 |
| Secondary [ ${ }^{1}$ | 22.9 | 22.9 | 23.2 | 22.8 | 23.0 | 22.9 |
| Secondary II ${ }^{\text {a }}$ | 25.9 | 25.4 | 25.0 | 25.5 | 24.0 | 25.4 |
| Ethnicity ${ }^{\text {a }}$ |  |  |  |  |  |  |
| African | 22.5 | 21.3 | 21.3 | 21.1 | 20.7 | 21.6 |
| Indian | 22.0 | 22.2 | 21.5 | 20.9 | 19.9 | 21.5 |
| Mixed | 22.2 | 22.0 | 22.3 | 22.6 | 21.4 | 22.2 |
| Total | 22.2 | 21.9 | 21.6 | 21.1 | 20.5 | 21.7 |
| ${ }^{1}$ Some or full secondary education, but fewer than five "O" level exams passod. <br> 2 Some or full secondary education, with five "O" level exams <br> ; passed, at least one "A" level, or some university education. <br> 2 Excludes 21 women of "other" ethnicity or with missing information. |  |  |  |  |  |  |

## CHAPTER 4

## FERTILITY REGULATION

In the past 30 years, the use of contraception has played a key role in fertility decline. However, a sign that the decline was leveling off was an important reason for implementing the TTDHS. Levels and trends of contraceptive knowledge and use were particular areas of investigation in the survey.

### 4.1 Knowledge of Methods

Respondents were asked to name all methods of family planning they had ever heard of. Interviewers then probed to see if respondents had heard of any methods not named spontaneously. Then, for each method known, women were asked if they had ever used it, if they knew of a place to obtain it, and if there were any problems they had heard about with using it. Following that, a detailed contraceptive history was recorded, including the use of methods since the last birth, and between births in the last 5 years.

Overall, knowledge of contraceptive methods is quite high--97 percent of all respondents, and 99 percent of those currently in union know at least one modern method of contraception (Table 4.1). The pill, condom, female sterilization, and IUD are the most widely known methods, and were familiar to more than 90 percent of women in union. Injection and vaginal methods are known by about 80 percent, while withdrawal, male sterilization, and the safe period are less well known. Knowledge of specific methods is only slightly lower for all women, suggesting that women who are not in union are quite likely to be knowledgeable about contraception.

The level of knowledge of methods according to the age of respondents follows the usual pattern where knowledge is higher among women in the intermediate age groups, and lower among the youngest and oldest women. While knowledge of at least one modern method is only slightly lower for women 15-19 than for older women, larger disparities emerge when looking at knowledge of specific methods. This pattern is particularly pronounced in the table showing "all women," indicating lack of knowledge among young women not in unions. For example, vaginal methods are known by only 55 percent of women 15-19, compared to 80 percent of women 25-29. While several methods are relatively unknown among the youngest women, educational efforts directed at them might focus on temporary methods, such as the pill, condom, and vaginal methods.

Table 4.2 shows the percentage of women in union who know at least one modem method according to the number of living children the woman has and certain background characteristics. Knowledge is nearly universal--more than 92 percent of all subgroups of women know of a modern method.

### 4.2 Problems with Methods

As Table 4.3 shows, respondents who know of methods cite few problems that they have heard of, with the exception of the pill, for which more than 60 percent of respondents named problems. Health concems are the leading problems mentioned for the pill ( 57 percent), the IUD ( 34 percent), injection ( 27 percent), and female sterilization ( 17 percent). Ineffectiveness is most often mentioned for the condom ( 23 percent), the safe period ( 27 percent), withdrawal ( 24 percent), and vaginal methods ( 9 percent). Very few women mentioned problems obtaining methods, that religious beliefs rendered certain methods unacceptable, or that partners disapproved of methods. It is somewhat surprising that disapproval by partners was not mentioned more often as a problem with specific methods, particularly with the condom, withdrawal, safe period and male sterilization. One possible reason for this is that respondents may be reluctant to give the impression that their partners influence their thinking about contraception.
Table 4.1 Percentage of All Women and of women in a Union Knowing Any Method, Any Modern Method, and Specific


Includes pill, IOD, injection, vaginal methods, condom, female sterilization, and male sterilization. Includes dlaphragm, foam, jelly, and foaming tablots.


| Percent Prablem |  | of Nomen Who Hav Using the Method |  | ve Ever Heard <br> d, TTDHS 1987 |  | a Cont | aceptiv | Metho | by Main |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Main Problem | P111 | IUD | Vag $\rightarrow$ <br> inal <br> Injec- <br> tion | $\begin{aligned} & \text { Meth- } \\ & \text { ods } \end{aligned}$ | Condom | ```Female Steri- l1za- tion``` | Male <br> Steri- <br> 11za- <br> tion | Safe Period | N1thdrawal |
| No problem | 39.0 | 52.7 | 68.4 | 78.5 | 65.5 | 67.9 | 84.5 | 72.4 | 68.1 |
| Partner disapproves | 0.0 | 0.1 | 0.0 | 0.4 | 4.4 | 0.1 | 0.4 | 0.0 | 1.9 |
| Health concerns | 57.0 | 34.1 | 26.7 | $6.8{ }^{\text {b }}$ | $1.1{ }^{\text {b }}$ | 16.5 | 1.1 | $0.2{ }^{\text {b }}$ | $0.9{ }^{\text {b }}$ |
| Not effective | 3.6 | 11.7 | 4.0 | 8.8 | 23.3 | 4.2 | 1.7 | 26.5 | 23.9 |
| Method permanent | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 10.8 | 10.2 | 0.0 | 0.0 |
| Inconvenient to use | 0.2 | 0.9 | 0.1 | 4.1 | 2.5 | 0.0 | 0.0 | 1.2 | 3.4 |
| Other | 0.0 | 0.1 | 0.0 | 0.8 | $2.5{ }^{2}$ | 0.1 | 0.2 | 0.1 | 0.1 |
| Don't know/Not stated | 0.2 | 0.5 | 0.4 | 0.6 | 0.6 | 0.5 | 1.7 | 0.6 | 1.6 |
| Total Percent Number | $\begin{aligned} & 100.0 \\ & 3,532 \end{aligned}$ | $\begin{aligned} & 100.0 \\ & 3,090 \end{aligned}$ | $\begin{aligned} & 100.0 \\ & 2,678 \end{aligned}$ | $\begin{aligned} & 100.0 \\ & 2,813 \end{aligned}$ | $\begin{aligned} & 100.0 \\ & 3,523 \end{aligned}$ | $\begin{aligned} & 100.0 \\ & 3,396 \end{aligned}$ | $\begin{aligned} & 100.0 \\ & 2,225 \end{aligned}$ | $\begin{aligned} & 100.0 \\ & 1,760 \end{aligned}$ | $\begin{aligned} & 100.0 \\ & 2,652 \end{aligned}$ |

### 4.3 Knowledge of Source

Survey respondents who have heard of a method were asked if they knew of any place where it could be obtained. As Table 4.4 shows, nearly all women could name at least one source where methods could be obtained, reflecting the widespread availability of contraceptives discussed in Chapter 1. The four types of sources most commonly identified are the government's health centres, FPATT clinics, private outlets (doctors, hospitals and nursing homes) and pharmacies.

One should interpret information on individual supply sources with caution. While interviewers were trained to elicit specific information, it seems that respondents could not always distinguish govemment outlets from FPATT clinics. Government outlets were the most often mentioned source of the pill, IUD, vaginal methods, and male and female sterilizations. Injection was associated with private sources by most respondents, while condoms were most commonly identified with pharmacies. The FPATT was the second most commonly cited source for the pill, IUD, vaginal methods, and instructions for using the safe period.

|  | METHOD |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Source | P111 | IUD | Injection | VagInal Methods ${ }^{1}$ | Condom | Female <br> Ster1- <br> liza- <br> tion | Male <br> ster1- <br> liza- <br> tion | Safe <br> Period |
| Govermment |  |  |  |  |  |  |  |  |
| Health Centre | 38.2 | 39.9 | 26.1 | 37.3 | 27.4 | 61.1 | 49.0 | 26.0 |
| FPATT | 23.4 | 26.5 | 19.9 | 25.1 | 15.3 | 14.7 | 15.8 | 26.9 |
| Private Sources ${ }^{\text {a }}$ | 16.5 | 24.7 | 47.1 | 14.6 | 3.2 | 20.6 | 25.0 | 27.0 |
| Pharmacy | 19.2 | 1.4 | 0.2 | 17.6 | 50.6 | 0.1 | 0.0 | 0.3 |
| Archdiocesan Family |  |  |  |  |  |  |  |  |
| Other | 0.4 | 0.5 | 0.4 | 0.2 | 0.5 | 0.4 | 0.6 | 6.8 |
| Don't Know | 2.3 | 7.1 | 6.3 | 5.0 | 3.0 | 3.0 | 9.5 | 6.3 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 3,532 | 3,090 | 2,678 | 2,813 | 3,523 | 3,396 | 2,225 | 1,760 |

Includes diaphragm, foam, jelly, and foaming tablets.
Includes private doctors, private hospitals, and private nursing homes.

### 4.4 Ever Use of Contraception

As Table 4.5 shows, 63 percent of all women have used a method of contraception at some time, and 60 percent have used a modem method. As expected, ever use of contraception is higher among women who are currently in union than among the entire sample population. That 79 percent of women in union have used a modern method at some time demonstrates widespread acceptance of family planning.

Among women in union, the pill has been most widely used ( 56 percent), followed by the condom ( 49 percent), withdrawal ( 30 percent) and vaginal methods ( 23 percent). Among all women, those in their thirties are the most likely to report ever use of a method ( 81 percent), while the oldest and youngest women are the least likely.

Table 4.5 Percentage of All Women and Women in Union Who Have Ever Used Any and Specific Contraceptive Method, by Specific Method and Age, TTDHS 1987


[^1]2 Includes diaphragm, foam, jelly, and foaming tablets.

Some interesting patterns of method use by age appear in Table 4.5. The youngest users are more likely to have tried less effective and temporary methods such as withdrawal and the condom, while older women are more likely to have tried the pill. ${ }^{1}$ These data point to a pattern of women trying several methods over the course of their reproductive lives, but with limited use of the more effective and permanent methods such as sterilization and the IUD.

Figure 4.1
Current Use of Family Planning by Method Women in Union 15-49


Trinidad 8 Tobago DHS 1987

### 4.5 Current Use

Table 4.6 presents data on current use of contraception among all women and among those in union. The distribution of methods used by women in union is shown in Figure 4.1. The subsequent discussion is limited to data on women in union, the population of greatest interest to service providers.

Fifty-three percent of women in union report using a method at the time of the survey. The pill and the condom are the most widely used methods, reported by 14 and 12 percent of respondents respectively, followed by female sterilization ( 8 percent), and withdrawal and vaginal methods ( 5 percent each). In view of the relatively high level of acceptance of male temporary methods, the almost complete absence of male sterilization is worth noting.

[^2]Table 4.6 Percent Distribution of All Women and Women in Union by Contraceptive Merhod Current ly Used According to Age, TTDHS 1987

| Age | Any Method | Any <br> Modern <br> Het hod ${ }^{1}$ | METHOD |  |  |  |  |  |  |  |  |  | Not Osing | Total Percent | Number of Women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Pill | IUD | Injection | Vag- <br> inal <br> Meth- <br> ods ${ }^{2}$ | Condom | Female Steri- <br> 11za- <br> tion | Male <br> Steri- <br> liza- <br> tion | Safe Period | Withdrawal | Other |  |  |  |
| All Women |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 9.7 | 6.7 | 3.8 | 0.4 | 0.0 | 0.6 | 1.8 | 0.1 | 0.0 | 0.3 | 2.6 | 0.0 | 90.3 | 100.0 | 683 |
| 20-24 | 34.5 | 28.1 | 14.2 | 2.4 | 1.3 | 2.8 | 7.1 | 0.1 | 0.0 | 1.2 | 5.1 | 0.1 | 65.5 | 100.0 | 745 |
| 25-29 | 46.0 | 41.2 | 16.9 | 3.9 | 0.4 | 5.1 | 12.2 | 2.6 | 0.1 | 1.5 | 2.8 | 0.5 | 54.0 | 100.0 | 745 |
| 30-34 | 50.6 | 42.2 | 12.2 | 5.9 | 0.7 | 4.1 | 11.0 | 8.1 | 0.2 | 2.6 | 5.5 | 0.4 | 49.4 | 100.0 | 543 |
| 35-39 | 50.1 | 43.5 | 9.3 | 3.6 | 0.9 | 5.9 | 9.8 | 13.6 | 0.5 | 2.7 | 3.4 | 0.4 | 49.9 | 100.0 | 441 |
| 40-44 | 45.9 | 37.6 | 2.4 | 4.6 | 0.0 | 4.1 | 11.1 | 15.1 | 0.3 | 3.0 | 4.9 | 0.5 | 54.1 | 100.0 | 370 |
| 45-49 | 32.3 | 27.2 | 0.7 | 2.2 | 0.0 | 2.5 | 5.0 | 16.8 | 0.0 | 3.6 | 1.1 | 0.4 | 67.7 | 100.0 | 279 |
| total | 37.4 | 31.5 | 9.9 | 3.2 | 0.6 | 3.5 | 8.3 | 6.0 | 0.1 | 1.8 | 3.8 | 0.3 | 62.6 | 100.0 | 3,806 |
| Women Currently In Union |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 42.4 | 30.2 | 18.0 | 1.4 | 0.0 | 2.9 | 7.9 | 0.0 | 0.0 | 1.4 | 10.8 | 0.0 | 57.6 | 100.0 | 139 |
| 20-24 | 55.3 | 45.1 | 22.9 | 3.8 | 2.2 | 4.4 | 11.6 | 0.2 | 0.0 | 2.0 | 8.0 | 0.2 | 44.7 | 100.0 | 450 |
| 25-29 | 53.8 | 48.4 | 19.7 | 4.5 | 0.5 | 6.1 | 14.6 | 2.9 | 0.2 | 1.6 | 3.4 | 0.5 | 46.2 | 100.0 | 624 |
| 30-34 | 57.1 | 47.5 | 13.6 | 6.6 | 0.9 | 4.7 | 12.6 | 9.0 | 0.2 | 2.8 | 6.4 | 0.4 | 42.9 | 100.0 | 469 |
| 35-39 | 55.8 | 48.3 | 10.3 | 4.1 | 1.0 | 6.4 | 11.1 | 14.9 | 0.5 | 3.1 | 3.9 | 0.6 | 44.2 | 100.0 | 389 |
| 40-44 | 52.9 | 42.9 | 2.9 | 5.1 | 0.0 | 4.5 | 12.8 | 17.3 | 0.3 | 3.5 | 5.8 | 0.6 | 47.1 | 100.0 | 312 |
| 45-49 | 36.3 | 30.3 | 0.9 | 2.6 | 0.0 | 3.0 | 6.0 | 17.9 | 0.0 | 4.3 | 1.3 | 0.4 | 63.7 | 100.0 | 234 |
| TOTAL | 52.7 | 44.4 | 14.0 | 4.4 | 0.8 | 5.0 | 11.8 | 8.2 | 0.2 | 2.6 | 5.3 | 0.3 | 47.3 | 100.0 | 2,617 |

2 Includes pill, IUD, injection, vaginal methods, condom, female sterilization, and male sterilization.
Includes diaphragm, foam, jelly, and foaming tablets.

The youngest and oldest women are less likely to use methods than women in the intermediate years. Forty-two percent of women in the youngest age group use contraception, compared to 57 percent of those $30-34$, and 36 percent among the oldest women. This pattern may reflect the desire for children on the part of the younger women, and a combination of traditional values and infecundity on the part of older women. While the pill is the most common method among women under 35, and female sterilization among women 35 and over, it should be noted that the next most popular methods generally are temporary and less effective-the condom and withdrawal.

The thirty point difference between ever use and current use, together with the heavy reliance on temporary methods suggests a quite high drop-out rate (see Figure 4.2). Temporary methods require a continuing effort on the part of the family planning programme and supply network to make methods available, and to maintain users' motivation. In view of the limited use of permanent methods, particular attention should be paid to subsequent discussions of reasons given for discontinuation and non-use of contraception.

Figure 4.2
Family Planning Knowledge and Use Women in Union 15-49


Trinidad and Tobago DHS 1987

Figure 4.3 shows current use of any method by age for women in the TTDHS and the WFS (Sathar and Chidambaram 1984). Overall, there has been virtually no change in current use in the decade between the two surveys. Fifty-two percent of women in union were using methods in 1977, versus 53 percent in 1987. Currently, women 25-34 are slightly less likely, and women 40-49 more likely to be using methods than was the case a decade ago.

Table 4.7 permits the comparison of contraceptive use and the method mix among subgroups of the population. Women in urban areas are slightly more likely to report current use of methods than women in rural areas. Use of contraception varies dramatically with education, as seen in Figure 4.4; while only 41 percent of women with less than primary education are current users, nearly 68 percent of those with full secondary certification are currently using a method. Female sterilization is preferred among women with less than full primary education (reflecting their older age distribution), while the pill is preferred among women in all other education categories. The second most popular method at all levels of education is the condom.

Figure 4.3
Current Use by Age, TTDHS and WFS Women in Union 15-49


Trinidad \& Tobago DHS 1987

East Indian women are slightly more likely to be current users than are African women (56 versus 49 percent), with the "mixed" category falling in between. Higher prevalence in the East Indian population is consistent with their lower current fertility as discussed in Chapter 2. Also, higher contraceptive prevalence among East Indian women represents a reversal from the situation a decade ago when the 1977 WFS reported that East Indian women had higher fertility and lower contraceptive prevalence than African women. (Note: women of mixed ethnicity are included with non-Indian women in the WFS data. However, since they represent a small proportion of the population, their inclusion does not substantially affect the comparison.) East Indian women are twice as likely to use condoms as Roman Catholic women, and are more likely to use withdrawal, as well.

As expected, contraceptive use is least common among women with no living children (32 percent), rises steadily to 61 percent of women with three children, and declines slightly among women with 4 or more children. The table also shows that higher parity women prefer female sterilization while women with fewer children are more likely to choose the pill or condom.

Hindu women are most likely to be current users. Women who report their religion as Roman Catholic are slightly more likely than all women to be current users of contraception. Differences by method are slight.

### 4.6 Parity at First Use

The timing of introduction of contraception has implications for the choice of method. First use of contraception early in the family-building process implies a postponement of the first birth and the need for temporary methods of contraception; first use at later stages implies the need for more permanent methods to limit births. As shown in Table 4.8, 28 percent of women who have ever been in a union had no living children when they first used a method of contraception, while 25 percent had one child, 12 percent had two children, and 16 percent had three or more.

## Table 4.7 Percent Distribution of Women in Union by Contraceptive Method Currently Used, According to Selected Background Characteristics, TTDHS 1987

METHOD

| Background Characteristic | Any <br> Method | Any <br> Modern <br> Method ${ }^{1}$ | P111 | IUD | Injection | Vag- <br> inal <br> Meth- <br> ods $^{2}$ | Condom | Female <br> Steri- <br> 112a- <br> tion | Male <br> Ster1- <br> 112a- <br> tion | Safe Period | Withdrawal | Other | Not Using | Total <br> Percent |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 53.9 | 45.7 | 15.9 | 5.3 | 0.6 | 5.5 | 10.3 | 7.8 | 0.3 | 3.7 | 4.1 | 0.5 | 46.1 | 100 |
| Rural | 51.7 | 43.4 | 12.5 | 3.7 | 1.0 | 4.5 | 13.1 | 8.6 | 0.1 | 1.7 | 6.2 | 0.4 | 48.3 | 100 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <Complete primary | 40.9 | 36.9 | 5.2 | 2.8 | 0.0 | 3.2 | 11.9 | 13.9 | 0.0 | 0.0 | 4.0 | 0.0 | 59.1 | 100 |
| Completed primary | 50.6 | 43.0 | 12.6 | 4.0 | 0.9 | 4.7 | 10.9 | 9.7 | 0.2 | 1.3 | 5.7 | 0.5 | 49.4 | 100 |
| Secondary I ${ }^{3}$ | 54.5 | 45.3 | 16.6 | 5.2 | 1.0 | 5.1 | 12.2 | 5.0 | 0.2 | 3.0 | 5.7 | 0.5 | 45.5 | 100 |
| Secondary II ${ }^{4}$ | 67.6 | 55.1 | 19.1 | 5.1 | 0.8 | 7.4 | 14.8 | 7.4 | 0.4 | 9.4 | 3.1 | 0.0 | 32.4 | 100 |
| Ethnicity ${ }^{\text {S }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| African | 49.0 | 41.4 | 13.7 | 5.3 | 0.5 | 6.1 | 7.9 | 7.9 | 0.1 | 3.0 | 3.9 | 0.7 | 51.0 | 100 |
| Indian | 55.6 | 47.2 | 13.4 | 3.8 | 0.9 | 4.1 | 16.5 | 8.3 | 0.2 | 1.4 | 6.7 | 0.4 | 44.4 | 100 |
| Mixed | 52.6 | 43.0 | 16.1 | 4.3 | 1.1 | 4.9 | 7.6 | 8.5 | 0.4 | 4.5 | 4.5 | 0.0 | 48.0 | 100 |
| Number of Living Children |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 31.8 | 22.7 | 13.5 | 0.5 | 0.0 | 2.5 | 5.9 | 0.0 | 0.2 | 4.2 | 4.7 | 0.2 | 68.2 | 100 |
| 1 | 49.6 | 41.3 | 17.6 | 2.6 | 0.9 | 6.1 | 13.5 | 0.7 | 0.0 | 2.6 | 5.4 | 0.2 | 50.4 | 100 |
| 2 | 59.4 | 49.8 | 18.6 | 5.9 | 1.0 | 4.1 | 15.3 | 4.8 | 0.2 | 3.1 | 6.4 | 0.2 | 40.6 | 100 |
| 3 | 61.3 | 55.0 | 14.2 | 9.3 | 0.9 | 6.5 | 13.2 | 10.7 | 0.2 | 1.9 | 3.7 | 0.6 | 38.7 | 100 |
| $4+$ | 55.7 | 48.0 | 7.9 | 3.7 | 1.0 | 5.5 | 10.4 | 19.3 | 0.3 | 1.5 | 5.5 | 0.7 | 44.3 | 100 |
| Religion |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Roman Catholic | 54.2 | 45.6 | 17.0 | 5.2 | 0.8 | 6.3 | 8.9 | 7.1 | 0.3 | 4.1 | 4.1 | 0.4 | 45.8 | 100 |
| Eindu | 56.7 | 48.8 | 13.2 | 4.5 | 0.7 | 4.8 | 15.7 | 9.5 | 0.3 | 1.4 | 6.2 | 0.2 | 43.3 | 100 |
| Other | 49.3 | 41.1 | 12.6 | 3.9 | 0.8 | 4.2 | 11.3 | 8.1 | 0.1 | 2.3 | 5.4 | 0.6 | 50.7 | 100 |
| TOTAL | 52.7 | 44.4 | 14.0 | 4.4 | 0.8 | 5.0 | 11.8 | 8.2 | 0.2 | 2.6 | 5.3 | 0.3 | 47.3 | 100 |

${ }^{2}$ Includes pill, IUD, injection, vaginal methods, condom, female sterilization, and male sterilization.
Includes diaphragm, foam, Jelly, and foaming tablets
? Some or full secondary education, but fewer than five or level exams passed.

- Some or full secondary education, with five "o" level exams passed, at least one "a" level, or some university education.
s Excludes 19 women of wother" ethnicity or with missing information.

Figure 4.4
Current Use of Family Planning by Education and Number of Living Children Women in Union 15-49


Trinidad \& Tobago DHS 1987

Table 4.8 shows that there has been an increase in the proportion of women who first used contraception before having any children. Over 40 percent of women $15-24$ used a method of contraception before they had any children, compared to 25 percent of women 30-34, and 10 percent of women aged 45 and above.

| Table 4.8 | Percent Distribution of Women Ever in Union by Number of Living Children at Time of First Use of Contraception, According to Current Age, TTDHS, 1987 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of Living Children At Time of First Use |  |  |  |  |  |  |  |
| Current Age | Never <br> Used | 0 | 1 | 2 | 3 | 4+ | Total Percent | Number |
| 15-19 | 34.1 | 46.1 | 18.6 | 1.2 | 0.0 | 0.0 | 100 | 167 |
| 20-24 | 18.5 | 41.9 | 27.2 | 8.3 | 3.0 | 1.2 | 100 | 508 |
| 25-29 | 14.3 | 34.6 | 30.7 | 12.1 | 5.1 | 3.3 | 100 | 671 |
| 30-34 | 15.0 | 25.4 | 29.5 | 10.1 | 6.6 | 5.4 | 100 | 519 |
| 35-39 | 16.4 | 21.4 | 24.9 | 15.5 | 9.6 | 12.2 | 100 | 426 |
| 40-44 | 20.3 | 16.7 | 16.7 | 12.8 | 11.1 | 22.3 | 100 | 359 |
| 45-49 | 27.3 | 9.8 | 9.5 | 11.6 | 12.0 | 29.8 | 100 | 275 |
| Total | 18.6 | 28.4 | 24.6 | 12.4 | 6.7 | 9.2 | 100 | 2,925 |

### 4.7 Age at Sterilization

On average, respondents who were sterilized or whose husbands were sterilized were 32 years old at the time of the operation (see Table 4.9). In many countries, the age at sterilization drops as women complete their families at lower parity levels, but this is not the case in Trinidad and Tobago, where there has been no consistent trend in recent years.

| Table 4.9 Porcent Distribution of Sterilized Women by Age at Time of Sterilization, According to the Number of Years since the Operation, TTDHS 1987 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age at Time of Operation |  |  |  |  |  |  |  |
| Years Since Operation | $<25$ | 25-29 | 30-34 | 35-39 | Total <br> Percent | Median Age | Number |
| $<2.0$ | 7.7 | 25.0 | 32.7 | 34.6 | 100 | 32.2 | 52 |
| 2.0-3.9 | 7.9 | 28.9 | 31.6 | 31.6 | 100 | 31.0 | 30 |
| 4.0-9.9 | 5.3 | 22.8 | 35.1 | 36.8 | 100 | 33.1 | 57 |
| $10+$ | 8.3 | 33.3 | 36.7 | 21.7 | 100 | 31.4 | 60 |
| All Women | 7.2 | 27.5 | 34.3 | 30.9 | 100 | 32.2 | 207 |

### 4.8 Knowledge of the Reproductive Cycle

Knowledge of the female reproductive cycle provides a useful background for successful practice of coital-related methods, and is essential for preventing pregnancy while using the safe period. Respondents were asked when during the monthly cycle they thought a woman was the most likely to become pregnant. As Table 4.10 shows, 50 percent had no idea, and only 18 percent correctly responded that the middle of the cycle is the fertile period.

| Table 4.10 Percent Distribu Who Have Ever Us of the Fertile P TTDHS 1987 | All Wone Safe Peri buring the | d Women Knowledge atory Cycle |
| :---: | :---: | :---: |
| Fertile Period | All Women | Ever Users of the Safe Period |
| During menstrual period | 1.8 | 0.9 |
| Just after period has ended* | 19.6 | 23.0 |
| In the middle of the cycle | 17.9 | 47.2 |
| Just before period beging* | 10.8 | 11.3 |
| At any time | 49.6 | 17.6 |
| Other/Not stated | 0.3 | 0.0 |
| Total percent | 100.0 | 100.0 |
| Number | 3,806 | 335 |
| * Includes numerous respondents who said wjust before and just after the period." |  |  |

While women who have ever used the safe period are more than twice as likely to know when the fertile period occurs ( 47 percent), more than one-half of this group did not know the correct answer, either. In view of the popularity of coital-related methods among couples in Trinidad and Tobago, these data imply a need for better education about the reproductive system.

### 4.9 Knowledge and Use of Pap Smears

Cancer of the cervix is the second leading cause of cancer deaths to women in Trinidad and Tobago (Central Statistical Office 1987b). Because the pap smear is an invaluable tool for the early detection of this disease if performed regularly, all respondents were asked if they had heard of the test, and had had one performed. Women were asked where they had the smear taken the last time, and if the test was done in the past year. As Table 4.11 shows, 57 percent of respondents have heard of the pap test, 31 percent have ever had a test, and only 11 percent have had a test in the last year.

Knowledge of the procedure increases from 31 percent of women 15-19 to 64 percent of women in their thirties. Despite the increased risk of cervical cancer with age, knowledge drops to 56 percent among women 45-49. Urban women are much more likely to know of the procedure than rural women. Education is even more strongly related--89 percent of women with full secondary certification know about the test, compared with only 32 percent of those lacking complete primary education. Similar pattems are seen for whether women have ever had a pap smear, and whether they have had one in the last year.

| Table 4.11 Percentage of Women Ever in Union Who Know About the Pap Smear, Have Ever Had a Pap Smear, and have Had a Pap Smear In the Last Year, According to Selected Background Characteristics, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
| Background Characteristic | Know About Smear | Ever Had Smear | Had Smear <br> In Last Year |
| Age |  |  |  |
| 15-19 | 31.0 | 6.5 | 3.6 |
| 20-24 | 48.0 | 15.2 | 7.1 |
| 25-29 | 58.7 | 24.9 | 10.9 |
| 30-34 | 63.6 | 38.5 | 13.3 |
| 35-39 | 63.6 | 42.5 | 15.0 |
| 40-44 | 60.2 | 39.8 | 11.4 |
| 45-49 | 56.4 | 41.8 | 9.8 |
| Residence |  |  |  |
| Urban | 67.4 | 40.9 | 14.7 |
| Rural | 47.8 | 21.7 | 7.5 |
| Education |  |  |  |
| < Complete primary | 31.5 | 22.8 | 4.8 |
| Completed primary | 49.7 | 27.4 | 8.4 |
| Secondary $\mathrm{I}^{2}$ | 63.8 | 29.1 | 11.5 |
| Secondary II ${ }^{2}$ | 88.6 | 57.4 | 24.9 |
| Number of Living Children |  |  |  |
| 0 | 58.5 | 26.5 | 12.3 |
| 1 | 56.1 | 24.3 | 10.7 |
| 2 | 62.2 | 34.1 | 13.3 |
| 3 | 58.4 | 35.1 | 12.1 |
| 4 | 55.7 | 34.6 | 10.2 |
| 5 | 50.3 | 33.1 | 7.2 |
| $6+$ | 45.9 | 26.4 | 3.8 |
| Total | 56.8 | 30.6 | 10.8 |
| ${ }^{1}$ Some or full secondary education, but fewer than five "O" level exams passed. <br> ${ }^{2}$ Some or full secondary education, with five "O" level exams passed, at least one "A" level, or some university education. |  |  |  |

### 4.10 Source of Contraceptive Methods and Satisfaction with Services

Respondents were asked where they obtained their current method of contraception. These responses are presented in Table 4.12 and grouped according to whether the method requires regular resupply or infrequent clinic visits.

The pharmacy is the leading source for current users of each of the supply methods, followed by Govemment health centres, and the FPATT. Overall, govemment health centres are the leading suppliers of clinical methods, providing 67 percent of female sterilizations and 44 percent of IUDs. The FPATT is the second leading provider of those two methods. Private clinical sources are the third leading supplier of methods requiring a visit to a medical facility. The supply sources for all methods appear in Figure 4.5.


Current users of any method who have visited a contraceptive supply source in the past 12 months were asked if there was anything they disliked about the services they received there. As shown in Table 4.13, 90 percent of these women reported no problems with the services. The leading problem given was that the wait was too long, but even that was cited by fewer than 3 percent of those visiting contraceptive supply outlets.

### 4.11 Discontinuation of Contraceptive Use

As mentioned earlier in this Chapter, the large gap between current and ever use of various contraceptive methods implies method switching and discontinuation. Respondents were asked if they had ever discontinued using a method in the five years before the survey, and were probed for reasons for the discontinuation. Table 4.14 presents reasons for the most recent discontinuation according to the method discontinued. (Note that the table does not indicate whether or not the woman began using again after the stoppage.)

## Figure 4.5

 Source of Family Planning Supply Current Users

Private Sources* 9\%

- Includes private doctors, hospitals
and nursing homes
Trinidad \& Tobago DHS 1987


Nearly one-third of women in the sample have discontinued using a method of contraception at least once in the five years preceding the survey. The three main reasons women stopped using methods were health concerns, the desire to become pregnant, and method failure. In fact, health concerns were cited as a reason for cessation by more than half of discontinuers of the IUD and injection, and 43 percent of former pill users.

A common reason given for discontinuing use of less effective methods of contraception was method failure, including 42 percent of those who stopped using withdrawal, 32 percent who discontinued using the safe period, 24 percent who stopped using vaginal methods, and 20 percent of those who stopped using the condom. In view of the small proportion of women who understand the ovulatory cycle, as presented in Table 4.10, the large number of women who had failures with coitus-related methods is not surprising.

It should be pointed out that the information collected in the TTDHS does not permit an assessment of whether method failure resulted in pregnancy or was merely a concem of the respondent. Also, it is not known whether method failures resulted from the improper or inconsistent use of methods, or from failures of the methods despite correct usage. However, particularly in view of the high drop-out rates among contraceptive users, the area of discontinuation of contraception warrants further investigation.

| Table 4.14 Percent Distribution of Women who Have Discontinued a Contraceptive method in the Last five Years by Main Reason for Last Discontinuation, According to Specific Method, TTDHS, 1987 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Method Discontinued |  |  |  |  |  |  |  |  |  |
| Reason for Discontinuation | P111 | IUD | Infection | Vag- <br> inal <br> Methods ${ }^{*}$ | Condom | Safe Period | Withdrawal | Other | All <br> Methods |
| To become pregnant | 21.9 | 21.7 | 10.0 | 22.2 | 27.1 | 29.8 | 20.3 | 23.1 | 23.1 |
| Method failed | 10.1 | 17.4 | 10.0 | 24.3 | 20.2 | 31.6 | 42.3 | 23.1 | 19.2 |
| Partnex disapproves | 0.7 | 0.0 | 2.0 | 2.1 | 11.6 | 3.5 | 3.3 | 0.0 | 4.2 |
| Health concerns | 43.2 | 50.7 | 56.0 | $13.2{ }^{\text {b }}$ | 7.5 | $3.5{ }^{\text {b }}$ | 0.8 | 3.8 | 24.2 |
| Access/availability/ expensive | 4.3 | 0.0 | 8.0 | 4.2 | 6.0 | 0.0 | 0.0 | 0.0 | 3.9 |
| Inconvenient to use | 1.1 | 1.4 | 2.0 | 13.2 | 6.5 | 12.3 | 7.3 | 19.2 | 5.5 |
| Infrequent sex | 6.7 | 1.4 | 2.0 | 4.9 | 5.7 | 7.0 | 10.6 | 7.7 | 6.2 |
| Change to permanent method | 0.4 | 1.4 | 6.0 | 0.0 | 2.7 | 1.8 | 3.3 | 3.8 | 1.7 |
| Other | 8.0 | 2.9 | 0.0 | 13.9 | 10.1 | 7.1 | 7.3 | 11.5 | 8.6 |
| Don't know | 2.2 | 2.9 | 2.0 | 2.1 | 1.8 | 1.8 | 3.3 | 3.8 | 2.2 |
| Not stated | 1.3 | 0.0 | 2.0 | 0.0 | 0.9 | 1.8 | 1.6 | 3.8 | 1.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 447 | 69 | 50 | 144 | 336 | 57 | 123 | 26 | 1,252 |
| - Includes diaphragm, foam, jelly, and foaming tablets. <br> " May include women who said that the method is "not safe" 1.e., not effective. |  |  |  |  |  |  |  |  |  |

### 4.12 Attitude Toward Becoming Pregnant and Reasons for Nonuse of Contraception

In order to investigate reasons for nonuse, all nonpregnant nonusers who had ever had intercourse were asked whether they would be happy or unhappy if they became pregnant in the next few weeks. According to Table 4.15, 52 percent said that they would be unhappy if they became pregnant in the next few weeks, yet they were not using contraception at the time. Thirtyone percent of women who were asked said they would be happy if they became pregnant, while 15 percent said it would not matter.

Not surprisingly, the more children women have, the more likely they are to express unhappiness about becoming pregnant. While 28 percent of childless women would be unhappy to become pregnant in the next few weeks, this figure escalates to 75 percent for women with four or more children.

Table 4.16 presents the reasons given for not using family planning among women who have ever had sex, are not using contraception, but who said they would be unhappy about becoming pregnant in the next few weeks. While only a small proportion of the sample fits into this category, these women are likely to have an unmet need for family planning, and are thus of great importance to family planning service providers.

| Table 4.15 | Percent Distribution of Nonpregnant Women Who Have Ever Had Sexual Intercourse and who Are Not Using Contraception by Attitude Toward Becoming Pregnant in the Next Few Weaks, According to Number of Living children, TTDHS 1987 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Attitude Toward Becoming Pregnant |  |  |  |  |  |
| Number of Living ch1ldren | Happy | Unhappy | Does not Matter | Not Stated | Total <br> Percent | Number |
| 0 | 55.2 | 28.2 | 15.2 | 1.5 | 100 | 330 |
| 1 | 44.2 | 40.7 | 13.0 | 2.2 | 100 | 231 |
| 2 | 23.9 | 56.1 | 18.3 | 1.7 | 100 | 230 |
| 3 | 22.6 | 63.2 | 11.0 | 3.2 | 100 | 155 |
| $4+$ | 7.4 | 75.2 | 16.2 | 1.2 | 100 | 339 |
| Total | 31.1 | 52.1 | 15.1 | 1.8 | 100 | 1,285 |

Note: Excludes women who have never had sexual intercourse and those women who have not resumed sexual relations since the last birth.

| Table 4.16 Percent Distribution of Nonpregnant Women Who Are Sexually Active and Who Are Not Using Contraception, and Who Would be Unhappy if they Became Pregnant by Main Reason for Nonuse, According to Age, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
| Reason for Nonuse | Age |  | All Ages |
|  | <30 | 30+ |  |
| Opposed to family planning | 7.7 | 7.6 | 7.6 |
| Partner disapproves | 3.2 | 3.3 | 3.3 |
| Others disapprove | 3.2 | 0.0 | 1.2 |
| Health concerns | 13.8 | 25.6 | 21.2 |
| No partner | 30.0 | 23.2 | 25.7 |
| Postpartum/breastfeeding | 6.5 | 3.8 | 4.8 |
| Menopausal/subfecund | 0.8 | 14.2 | 9.3 |
| Other | 23.9 | 16.6 | 19.3 |
| Don't know | 10.9 | 5.5 | 7.5 |
| Not stated | 0.0 | 0.2 | 0.1 |
| Total | 100.0 | 100.0 | 100.0 |
| Number | 247 | 422 | 669 |

Note: Excludes women who have never had sexual intercourse and those women who have not resumed sexual relations since the last birth.

Health concerns are the leading reasons given for nonuse of contraception by women age 30 and above, followed by lack of partner and menopause/subfecundity. The leading reason for nonuse given by younger women is that they do not have partners.

### 4.13 Intention to Use Contraception

As shown in Table 4.17, 42 percent of women currently in a union and not currently using any contraceptive intend to use a method in the future, including 28 percent who intend to use in the next year, while 11 percent are unsure, and 46 percent do not intend to use at all. Women with 1 to 3 children are slightly more likely to intend to use a method soon, but the differences are slight.

| Table 4.17 Percent Distribution of Women in Union Who Are Not Currently Using Any Contraceptive Method, by Intention to Use in the Future, According to Number of Living Children, TTDHS 1987 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Living Children* |  |  |  |  |  |  |
| Intention | 0 | 1 | 2 | 3 | 4+ | All Women |
| Intends to use: | 43.3 | 50.5 | 44.2 | 43.1 | 31.5 | 41.7 |
| In next 12 months | 18.8 | 34.9 | 32.4 | 35.3 | 23.5 | 27.9 |
| Later | 14.4 | 7.8 | 5.3 | 3.0 | 1.0 | 6.4 |
| Doesn't know when | 10.1 | 7.8 | 6.5 | 4.8 | 7.0 | 7.4 |
| Unsure about using | 15.5 | 12.1 | 13.0 | 10.8 | 6.7 | 11.5 |
| ```Does not intend to use``` | 41.2 | 37.5 | 42.5 | 44.9 | 61.6 | 46.4 |
| Not stated | 0.0 | 0.0 | 0.4 | 1.2 | 0.3 | 0.3 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 277 | 232 | 247 | 167 | 315 | 1,238 |
| * Current pregnancy is counted as a living child. |  |  |  |  |  |  |

Table 4.18 shows that among women in union who intend to use methods in the future, the pill is preferred by 35 percent, followed by female sterilization ( 13 percent) and the IUD ( 11 percent). Timing of contraceptive use does not appear to play a large part in choosing a method.

| Table 4.18 Percent Distribution of Women in Union Who Are Not Using a Contraceptive Method but Who Intend to Use in the Future by preferred Method, According to Whether They Intend to Use in the Next 12 Months or Later, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Timing |  |  |
| Preferred Method | Next 12 <br> Months | Use Later | All <br> Women |
| Pill | 35.0 | 32.9 | 34.6 |
| IUD | 9.0 | 17.7 | 10.6 |
| Injections | 9.8 | 8.9 | 9.6 |
| Vaginal methods | 5.5 | 1.3 | 4.7 |
| Condom | 6.9 | 6.3 | 6.8 |
| Female sterilization | 13.3 | 13.9 | 13.4 |
| Safe period | 1.2 | 1.3 | 1.2 |
| Withdrawal | 2.3 | 1.3 | 2.1 |
| Other | 0.6 | 0.0 | 0.5 |
| Doesn't know which method | 16.5 | 16.5 | 16.5 |
| Total Percent | 100.0 | 100.0 | 100.0 |
| Number | 346 | 79 | 425 |

### 4.14 Exposure to Mass Media and Family Planning Messages

The purpose of Table 4.19 is to assess the extent to which respondents are exposed to mass media in general, and to family planning messages in particular. Overall, 94 percent of the sample live in houses with a radio, while 90 percent have televisions, and 36 percent have videocassette players. Ninety-eight percent of respondents have at least one media source in their households. Nearly all women ( 97 percent) either read the newspaper at least one a week or watch tv or listen to the radio each day. Exposure to mass media is slightly higher in urban than rural areas, and much higher for more educated women.

Despite nearly universal exposure to the mass media, only 55 percent of the respondents were exposed to a family planning message on radio, television, in the newspaper, or on a poster in the month before the survey. Exposure to family planning messages follows the trends for exposure to media in general. Only 37 percent of women with less than complete primary education were exposed to a family planning message compared with 68 percent of women with the highest level of education.

Support for running family planning messages on the radio and television is nearly universal among women in Trinidad and Tobago as indicated by Table 4.20. Overall, 94 percent of women believe that the practice is acceptable. Not surprisingly, those least likely to approve of family planning messages on the radio or TV are women with less than primary education, and the oldest women. Even among these groups, however, at least 74 percent of respondents approve of the practice. Differences according to other background characteristics are slight.

### 4.15 Discussion of Family Planning with Partner

While discussion of contraception between couples is not necessary for adoption of certain methods, the absence of such conversations may be an impediment to increasing contraceptive prevalence. In addition, the effectiveness of coital-related methods, in particular, can no doubt be improved with increased communication between couples.

Overall, only 48 percent of women who know any method have discussed contraception with a partner in the past year (see Table 4.21). Given that knowledge of contraception is nearly universal, and that 83 percent of women in union have ever used methods, this finding is somewhat surprising.

Recent discussions about contraception were most common among women under 25 (about 62 percent). The older the woman is, the less likely she is to have discussed the subject with her partner. Less than 30 percent of women in their forties have discussed contraception with a partner in the last year. In general, the lack of discussion may reflect a general reluctance to talk about matters related to sex. While the oldest women might continue to regard family planning as a "taboo" subject not suitable for discussion, they might also have less need to discuss the subject, either because childbearing has ceased due to menopause or sterilization, or because contraceptive practice has become routine. More educated women are more likely to have discussed the subject recently. Differences according to ethnicity are minimal.

Table 4.19 Percentage of Women Whose Households Have Selected Mass Media, Who Are Exposed to Media Regularly, and Who Were Recently Exposed to Family Planning on the Mass Media, By Selected Background Characteristics, TTDHS 1987

| Background Characteristic | Possession |  |  |  | Exposure |  |  |  | Exposed to Family Planning Message in the Last Month |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Radio | TV | V1deo | Any | Radio ${ }^{1}$ | $T V^{2}$ | Newspaper ${ }^{3}$ | Any | Radio | TV | Newspaper | Poster | Any |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 95.7 | 92.9 | 43.0 | 98.3 | 72.2 | 67.0 | 89.5 | 97.3 | 29.0 | 28.8 | 28.4 | 21.2 | 59.4 |
| Rural | 92.1 | 87.3 | 30.6 | 96.7 | 68.9 | 65.9 | 86.9 | 95.8 | 26.9 | 28.1 | 22.0 | 16.9 | 50.9 |
| Education <Complete |  |  |  |  |  |  |  |  |  |  |  |  |  |
| primary | 85.9 | 82.4 | 25.3 | 93.3 | 60.6 | 54.2 | 56.1 | 84.0 | 25.0 | 21.5 | 11.2 | 9.9 | 37.2 |
| Completed primary | 91.9 | 87.5 | 28.7 | 96.9 | 68.2 | 67.1 | 85.9 | 96.1 | 26.5 | 27.7 | 20.2 | 14.6 | 50.3 |
| secondary ${ }^{\text {4 }}$ | 95.6 | 91.9 | 38.5 | 98.3 | 73.9 | 69.3 | 93.5 | 98.6 | 28.7 | 29.4 | 28.0 | 21.3 | 58.4 |
| Secondary II ${ }^{5}$ | 98.0 | 94.8 | 59.3 | 99.3 | 71.8 | 62.3 | 97.7 | 99.1 | 31.1 | 31.8 | 38.4 | 29.8 | 67.7 |
| Ethnicity ${ }^{\text {c }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| African | 94.2 | 89.9 | 31.9 | 97.8 | 72.4 | 66.1 | 88.7 | 97.0 | 30.6 | 30.0 | 24.1 | 21.8 | 59.3 |
| Indian | 92.5 | 89.1 | 37.7 | 96.9 | 69.3 | 68.0 | 87.9 | 96.6 | 25.7 | 27.3 | 25.2 | 16.7 | 51.2 |
| Other | 95.7 | 91.1 | 39.3 | 98.3 | 69.6 | 62.6 | 86.6 | 95.1 | 28.6 | 28.4 | 25.3 | 18.0 | 54.9 |
| TOTAL | 93.7 | 89.8 | 36.1 | 97.5 | 70.4 | 66.4 | 88.0 | 96.5 | 27.9 | 28.4 | 24.9 | 18.8 | 54.7 |

${ }^{1}$ Listens dally.
${ }^{2}$ Watches daily.
Reads weekly.
Some or full secondary education, but fewer than five "o" level exams passed.
${ }^{5}$ Some or full secondary education, with five "O" level exams passed, at least one "A" level, or some university education.
" Excludes 27 women of "other" ethnicity, and one respondent with missing information.

| Table 4.20 Percentage of All Women Who Belleve That it is Acceptable to Have Messages About Family Planning on the Radio or TV, by Age and Selected Background Characteristics, TTDHS 1987 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current Age |  |  |  |  |  |  |  |  |
| Characteristic | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | All Ages |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 92.9 | 95.2 | 94.2 | 95.7 | 93.8 | 98.1 | 91.2 | 94.5 |
| Rural | 92.8 | 94.7 | 97.5 | 94.4 | 93.9 | 90.4 | 83.8 | 93.6 |
| Education <Complete |  |  |  |  |  |  |  |  |
| primary | 75.0 | 90.0 | 87.2 | 93.1 | 88.5 | 94.4 | 74.4 | 86.2 |
| completed primary | 82.8 | 95.4 | 97.0 | 94.4 | 93.4 | 92.1 | 92.7 | 93.8 |
| secondary I ${ }^{1}$ | 93.8 | 95.9 | 96.0 | 95.8 | 95.8 | 96.0 | 97.2 | 95.2 |
| Secondary II ${ }^{2}$ | 98.6 | 91.5 | 95.9 | 97.1 | 100.0 | 96.9 | 90.0 | 95.7 |
| Ethnicity ${ }^{3}$ |  |  |  |  |  |  |  |  |
| African | 93.1 | 97.1 | 96.6 | 96.6 | 94.7 | 94.4 | 91.2 | 95.2 |
| Indian | 92.6 | 94.2 | 96.2 | 94.3 | 94.4 | 92.9 | 85.0 | 93.7 |
| Mixed | 92.8 | 93.4 | 94.6 | 93.1 | 90.3 | 94.7 | 84.7 | 92.4 |
| Total | 92.8 | 94.9 | 96.0 | 95.0 | 93.9 | 93.8 | 87.5 | 94.0 |

1 Some or full secondary education, but fewer than five "O" level exams passed.
2 Some or full secondary education, with five "O" level exams passed, at least one "A" level, or some university education.
3 Excludes 27 women of "other" ethnicity, and one respondent with missing information.

Table 4.21 Percentage of Women in a Union and Who Know Any Method of Contraception Who Have Discussed Family Planning With a Partner at Least Once in the Past Year, by Age and Selected Background Characteristics, TTDHS 1987

| Background Characteristic | Current Age |  |  |  |  |  |  | All <br> Ages |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |  |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 61.0 | 60.4 | 51.4 | 46.0 | 38.5 | 28.9 | 16.4 | 46.4 |
| Rural | 62.3 | 64.5 | 65.9 | 54.5 | 43.3 | 30.1 | 15.5 | 51.5 |
| Education <Complete |  |  |  |  |  |  |  |  |
| primary | * | * | 36.7 | * | 40.0 | 37.3 | 17.1 | 35,6 |
| Completed primary | 62.1 | 58.8 | 59.2 | 51.0 | 38.5 | 25.2 | 15.7 | 44,9 |
| Secondary I ${ }^{1}$ | 60.8 | 63.6 | 62.1 | 44.4 | 44.0 | 38.1 | 16.1 | 54.9 |
| Secondary I ${ }^{*}$ | * | 66.7 | 60.0 | 64.9 | 48.7 | 19.2 | * | 53,1 |
| Ethnicity ${ }^{\prime}$ |  |  |  |  |  |  |  |  |
| African | 62.3 | 65.3 | 58.0 | 46.2 | 45.5 | 26.9 | 13.6 | 48.4 |
| Indian | 63.3 | 62.1 | 59.3 | 55.3 | 40.4 | 32.1 | 16.7 | 49.4 |
| M1xed | 58.8 | 57.0 | 61.9 | 46.2 | 34.4 | 27.1 | 16.0 | 45.7 |
| Total | 61.8 | 62.7 | 59.4 | 50.6 | 41.1 | 29.6 | 15.9 | 48.4 |
| Number | 136 | 445 | 621 | 468 | 384 | 311 | 226 | 2,591 |

* Fewer than 25 cases.

1 Some or full secondary education, but fewer than five "O" level exams passed.
Some or full secondary education, with five "O" level exams passed, at least one "A" level, or some university education.
, Excludes 19 women of "other" ethnicity or with missing information.

## CHAPTER 5

## FERTILITY PREFERENCES

### 5.1 Fertility Preferences

One important rationale for the development of the National Family Planning Programme in Trinidad and Tobago was to enable couples to bear the number of children they desire, with the bitths spaced according to their preferences. The TTDHS collected information on three aspects of fertility preferences which are of importance to family planning policy makers trying to gauge the family planning programme to meet the needs of the population.

First, respondents were asked whether births in the five years preceding the survey were planned and timed according to their preferences at the time of the pregnancies. Second, women in unions were asked if they wanted to have another child, and if so, when. Finally, all women were asked to state how many children they would prefer to have if they could live their lives again.

Data on fertility preferences are generally subject to more measurement error than objective phenomena such as actual fertility or contraceptive use. For example, a woman may rationalize the bitth of a child which was unplanned, and be unwilling to state that a birth was not wanted. And, her ability to implement her preferences might be curtailed if her partner objects to her using contraception to achieve her fertility desires. Such phenomenon may not be captured in a standardized questionnaire.

DHS surveys included several innovations to try to overcome these measurement difficulties. For example, respondents were asked the certainty of their stated fertility preferences. While the validity of these follow up questions is unknown, they can serve to remind the analyst of the degree to which answers may or may not actually reflect the views of respondents.

Table 5.1 shows the desire for more children among women in union according to the number of living children they have. (Note that pregnant women were asked about their desire for another child after the one that they were expecting; in tabulations, the expected child has been counted as an additional child.) Overall, 47 percent of women in union want no more children, while 38 percent want to have another child, and 5 percent are undecided. In addition, 10 percent have had contraceptive sterilizations or are infecund. Fertility preferences for all women in union are shown in Figure 5.1.

Among the 38 percent of women in union who want another child, more than one-half wish to delay the birth for at least two years. Thus, 20 percent of women in union want to delay a birth for at least two years, and can be considered as potentially in need of temporary methods of contraception. The desire to space births is strongest among women wanting to postpone the first or second birth. Thirty percent of childless women want to postpone the first birth, while 46 percent of women with one child want to delay a second birth.

Sterilized women (and two women whose partners are sterilized) were asked if they regretted the operation, and if so, if they would like more children. As shown in Table 5.1, the level of regret is minimal; in subsequent tables in this chapter, sterilized women are counted along with women wanting no more children.

The highest proportion of women who want to have a child are those who have no children ( 90 percent) followed by those who have only one child ( 76 percent). The desire for additional children drops sharply for women with two or more children. Only 18 percent of women with three children want another child. Conversely, as parity increases, women are more likely to want no more children, or to have been sterilized. More than 54 percent of women with two or more children want to cease childbearing. These women are candidates for permanent methods of contraception such as sterilization.

Table 5.1 Percent Distribution of Women in Union by Desire for More Children, Timing of Next Birth, and Sterilization Regret According to Number of Living Children, TTDHS 1987

| Desire For More children | Number of Living Children ${ }^{1}$ |  |  |  |  |  |  | Women in Union |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | $6+$ |  |
| Wants no more | 4.8 | 17.8 | 54.7 | 65.9 | 69.1 | 70.2 | 63.7 | 47.0 |
| Have another: | 89.5 | 75.9 | 32.0 | 17.9 | 10.4 | 8.4 | 3.5 | 38.4 |
| Soon ${ }^{2}$ | 53.0 | 27.1 | 10.3 | 6.4 | 2.6 | 4.2 | 1.9 | 16.3 |
| Later ${ }^{\text {l }}$ | 30.3 | 46.2 | 20.1 | 10.2 | 7.5 | 4.2 | 1.2 | 20.1 |
| Undecided when | 6.2 | 2.6 | 1.6 | 1.3 | 0.3 | 0.0 | 0.4 | 2.0 |
| Undecided ${ }^{\text {d }}$ | 4.0 | 4.9 | 7.5 | 3.8 | 2.6 | 4.8 | 5.1 | 4.9 |
| Ster1l12ed: ${ }^{\text {a }}$ | 0.3 | 0.6 | 4.8 | 10.4 | 15.6 | 15.5 | 25.4 | 8.3 |
| Regret-have another Regret-no more, | 0.3 | 0.0 | 0.3 | 1.1 | 1.0 | 0.6 | 0.4 | 0.5 |
| undecided | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.4 | 0.1 |
| No regret | 0.0 | 0.0 | 3.9 | 8.9 | 13.3 | 13.7 | 23.0 | 7.1 |
| Infecund | 1.4 | 0.9 | 1.0 | 2.0 | 2.3 | 1.2 | 2.3 | 1.5 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 353 | 468 | 612 | 451 | 308 | 168 | 257 | 2,617 |

: Current pregnancy is counted as a live child.

- Wants next birth within 2 years.

Wants to delay next birth for $2+$ years.
Includes cases missing information on desire for more children.
Includes cases missing information on sterilization regret.

Figure 5.1
Fertility Preferences
Women in Union 15-49


Trinidad \& Tobago DHS 1987

Respondents appear fairly certain about their fertility preferences. Only 12 percent of women in union responded with uncertainty when asked if they were sure about their decision either to have another or have no more children (no table). Among women whose initial preference for children was uncertain, few expressed a preference in either direction when asked a follow-up question. In tables in this chapter, respondents whose first answer was either to have more or no more children are classified according to the fertility preference initially stated. On the other hand, those few women whose first response was "undecided" are reclassified if the second response indicated a preference for having more or no more children.

Table 5.2 shows that the pattern of fertility preferences by age of the woman closely follows that of the parity-specific pattern seen in Table 5.1. This is consistent with expectations, since age and parity are so closely linked. The proportion of women in union wanting no more children increases from 17 percent of women aged 15-19 to more than 82 percent of women age 40 and above. Also, the fact that no more than 20 percent of women in any age group want children soon indicates a clear need for reliable methods of contraception.

| Table 5.2 Percent Distribution of Women in Union by Desire for More Children, According to Age, TTDHS 1987 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AGE |  |  |  |  |  |  |  |  |
| Desire Ear More Children |  |  |  |  |  |  |  | Women in Union |
|  | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |  |
| Wants no more ${ }^{2}$ | 17.3 | 31.3 | 44.7 | 58.6 | 69.9 | 84.0 | 82.5 | 55.3 |
| Have another: | 78.3 | 64.8 | 49.0 | 35.8 | 21.1 | 10.6 | 5.6 | 38.4 |
| Soon ${ }^{2}$ | 12.9 | 19.1 | 20.7 | 19.4 | 16.5 | 8.7 | 4.7 | 16.3 |
| Later ${ }^{2}$ | 64.7 | 42.4 | 26.1 | 14.5 | 3.1 | 0.3 | 0.0 | 20.1 |
| Undecided | 0.7 | 3.3 | 2.2 | 1.9 | 1.5 | 1.6 | 0.9 | 2.0 |
| Undecided ${ }^{\text {d }}$ | 4.3 | 3.8 | 6.1 | 4.9 | 6.9 | 2.6 | 4.3 | 4.9 |
| Infecund | 0.0 | 0.0 | 0.2 | 0.6 | 2.1 | 2.9 | 7.7 | 1.5 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 139 | 450 | 624 | 469 | 389 | 312 | 234 | 2,617 |
| 2 Includes sterilized women. <br> 2 Wants next birth within 2 years. <br> ' Wants to delay next birth for $2+$ years. <br> - Includes cases missing information on desire for more children. |  |  |  |  |  |  |  |  |

In Table 5.3, the percentage of women in union who want no more children is shown for each parity by selected background characteristics. Overall, rural women are more likely to want to cease childbearing than urban women. However, since differences at each parity level are slight, the overall difference is due to the higher parity of women in rural areas. The same is true of race, where East Indian women are slightly more likely than African women to want no more children, but the differences at specific parity levels are slight. Fertility preferences by parity are summarized for women in union in Figure 5.2

With regard to education, it is not surprising that the least educated women are the most likely to want no more children, since they have more children than more educated women. However, at low parity levels, the differential in the desire to have no more children persists. Among women with one child, 44 percent of those with less than primary education want no more children, compared with fewer than 19 percent of women with more education.

Figure 5.2
Fertility Preferences by Parity
Women in Union 15-49


| Want No More • | $\square$ Want to Space .. |
| :--- | :--- |
| Want Soon | $\square$ Undecided |

- Includes sterlized \& Infecund women
-- Includes women who want a chlld, unsure when

| Background Characteristic | Number of Living Children ${ }^{1}$ |  |  |  |  | Women Union |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4+ |  |  |
| Residence |  |  |  |  |  |  |  |
| Urban | 5.8 | 19.7 | 58.7 | 75.0 | 84.1 | 51.4 |  |
| Rural | 4.3 | 17.1 | 60.2 | 77.4 | 87.8 | 58.4 |  |
| Education |  |  |  |  |  |  |  |
| <Complete primary | 10.0 | 43.8 | 65.7 | 80.5 | 88.0 | 77.8 |  |
| completed primary | 3.1 | 17.8 | 61.2 | 74.2 | 86.1 | 62.4 |  |
| Secondary $\mathrm{I}^{2}$, | 4.6 | 18.3 | 53.5 | 78.0 | 86.4 | 43.0 |  |
| Secondary II' | 8.6 | 12.2 | 71.4 | 79.4 | 84.6 | 45.3 |  |
| Ethnicity ${ }^{4}$ |  |  |  |  |  |  |  |
| African | 4.0 | 18.0 | 56.7 | 75.2 | 81.8 | 50.6 |  |
| Indian | 6.4 | 17.2 | 60.3 | 77.8 | 90.0 | 59.2 |  |
| Mixed | 4.1 | 22.5 | 61.2 | 72.5 | 85.7 | 53.6 |  |
| Total | 5.1 | 18.4 | 59.5 | 76.3 | 86.5 | 55.3 |  |

1 Current pregnancy counted as a living child.
' Some or full secondary education, but fewer than five "o" level exams passed.
3 Some or full secondary education, with five "o" level exams
passed, at least one "A" level, or some university education.

- Excludes 19 women of "other" ethnicity or with missing information.


### 5.2 Need for Family Planning

Table 5.4 permits the examination of women's need for family planning in order to space or limit future births according to their intention to use contraception. These data can enable the family planning programme to identify population subgroups which have an unmet need for contraception in order to achieve their fertility desires. Also, the right hand side of the table further restricts the numerator to those women who intend to use contraception to achieve their preferences for further children. The differences between the first and second panels for any subgroup of women represents women who will need to be motivated to use family planning to achieve their preferences.

> Table 5.4 Percentage of Women in Union Who Are in Need of Family Planning and the Percentage who Are in Need and Who Intend to Use Family Planning in the Future by Selected Background Characteristics, TTDHS 1987

| Background Characteristic | Not Contracepting |  |  | Not Contracepting and Intends to use Contraception |  |  | Women In Union |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Want } \\ & \text { No } \\ & \text { More } \end{aligned}$ | Want to Postpone/ Undecided ${ }^{2}$ | Total | Want No More | Want to Postpone/ Undecided ${ }^{1}$ | Total |  |
| Residence |  |  |  |  |  |  |  |
| Urban | 19.5 | 10.4 | 29.9 | 7.3 | 4.5 | 11.8 | 1,172 |
| Rural | 23.2 | 11.5 | 34.7 | 8.7 | 5.7 | 14.3 | 1,445 |
| Education <Complete |  |  |  |  |  |  |  |
| primary | 42.5 | 8.7 | 51.2 | 7.5 | 2.0 | 9.5 | 252 |
| Completed primary | 24.1 | 9.4 | 33.5 | 8.5 | 3.5 | 12.0 | 1,171 |
| Secondary $I^{2}$, | 16.4 | 14.4 | 30.8 | 8.7 | 8.0 | 16.7 | 938 |
| Secondary II' | 7.8 | 8.2 | 16.0 | 3.9 | 5.5 | 9.4 | 256 |
| Ethnicity ${ }^{4}$ |  |  |  |  |  |  |  |
| African | 20.7 | 13.1 | 33.8 | 8.8 | 6.4 | 15.2 | 942 |
| Indian | 22.3 | 9.3 | 31.7 | 6.9 | 3.8 | 10.7 | 1,210 |
| Mixed | 20.9 | 11.4 | 32.3 | 9.2 | 6.3 | 15.5 | 446 |
| Total | 21.5 | 11.0 | 32.5 | 8.0 | 5.2 | 13.2 | 2,617 |

1 Includes women who are undecided about whether to have another birth or about the timing for the next birth.
: Some or full secondary education, but fewer than five "o" level exams passed.
? Some or full secondary education, with five "o" level exams passed, at least one "A" level, or some university education.

- Excludes 19 women of "other" ethnicity or with missing information.

From Table 5.1, recall that 47 percent of women in union want no more children. Nearly one-half of these women, or 22 percent of women in union are not using contraception. Similarly, among the 22 percent of women in union who want to postpone the next birth or are uncertain about having another child, one-half are not using methods, suggesting that 11 percent of women in union are at risk of having a mistimed pregnancy. Again, only about one-half of these women intend to use a method in the future.

In sum, Table 5.4 shows that 33 percent of women in union have an unmet need for contraception. Fewer than one-half of these women intend to use a method in the future.

### 5.3 Ideal Family Size

Respondents were asked to consider an abstract situation independent of their current family size and state the number of children they would choose to have if they could start their reproductive years again. Table 5.5 shows that many respondents ( 42 percent) would prefer to have 2 children. The mean ideal number of children is higher, 2.9 , reflecting the fact that the
second most popular number of children is 4 . Preferred fertility is slightly lower than actual fertility, 3.1, indicating that on average, women are having more children than they want.

| Table 5.5 Percent Distribution of All Women by Ideal Number of Children; Mean Ideal Number of Children for All Women and for Women in Union, Percentage of All Women Whose Current Number of Children Exceeds Ideal Number, According to Number of Living Children, TTDHS 1987 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Living Children* |  |  |  |  |  |  |  |  |
| Ideal <br> Number of Children |  |  |  |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | $6+$ | All Women |
| 0 | 3.4 | 1.5 | 0.9 | 1.3 | 2.1 | 1.1 | 2.1 | 2.1 |
| 1 | 7.1 | 7.0 | 3.6 | 4.4 | 3.3 | 3.3 | 3.1 | 5.3 |
| 2 | 52.2 | 50.6 | 43.2 | 27.8 | 29.8 | 27.1 | 21.6 | 41.9 |
| 3 | 19.2 | 18.7 | 21.6 | 26.6 | 6.9 | 13.8 | 10.6 | 18.5 |
| 4 | 13.1 | 18.0 | 25.2 | 30.5 | 39.8 | 26.0 | 30.8 | 22.4 |
| 5 | 1.7 | 1.1 | 2.4 | 4.0 | 6.3 | 18.2 | 2.4 | 3.3 |
| $6+$ | 1.7 | 2.4 | 2.1 | 4.4 | 8.7 | 9.9 | 24.0 | 4.9 |
| Non-numeric responses | 1.4 | 0.7 | 0.9 | 1.0 | 3.0 | 0.6 | 5.5 | 1.6 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 1,321 | 540 | 662 | 478 | 332 | 181 | 292 | 3,806 |
| Mean Ideal Number All Women | 2.5 | 2.6 | 2.9 | 3.1 | 3.5 | 3.7 | 4.1 | 2.9 |
| Women in Union | 2.6 | 2.7 | 2.9 | 3.2 | 3.4 | 3.6 | 4.0 | 3.1 |
| Percentage Whose Current Children Excee Ideal Number <br> (All Women) | - | 1.5 | 4.5 | 33.5 | 42.1 | 71.3 | 70.6 | 17.7 |
| * Current pregnancy counted as a living child. |  |  |  |  |  |  |  |  |

Among all women in the survey, the mean ideal family size increases from 2.5 children for childless women to 4.1 children desired by women with 6 or more children. The last row of Table 5.5 shows the percentage of all women who have more children than they consider ideal. As expected, this figure increases from 2 percent of women with one child to 34 percent of women with 3 children, and to more than 70 percent of women with more than 4 children. Of the total sample, 18 percent have exceeded their ideal family size. The fertility preferences of women in union are similar.

There are several possible reasons why women with larger families express a higher ideal family size. First, women with large families may genuinely desire more children than women with smaller families. Secondly, women with more children are likely to be older than women with fewer children. Their ideal family sizes may therefore reflect more traditional views. (This explanation is supported by the ideal family size of 3.8 expressed by women in union in the TTWFS a decade ago). Finally, women may tend to rationalize the births that they had, and thus express a preference for a larger family size than they otherwise might indicate. It is difficult to distinguish among such factors; however, it is clear that women with four or more children have exceeded their ideal family sizes.

As indicated earlier, ideal family size for high parity women may be influenced by a number of factors. Table 5.6 confirms that older women do indeed prefer larger families than younger women. Ideal number of children increases from 2.5 for women 15-19 to 4.0 for women 45-49.

| Table 5.6 Mean Ideal Number of Children For All Women by Age and Selected Background Characteristics, TTDHS 1987 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Current Age |  |  |  |  |  |  |  |
| Background Characteristic | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | All <br> Ages |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 2.6 | 2.7 | 2.8 | 2.8 | 3.0 | 3.3 | 3.8 | 2.9 |
| Rural | 2.4 | 2.6 | 2.8 | 2.9 | 3.3 | 3.6 | 4.1 | 2.9 |
| Education |  |  |  |  |  |  |  |  |
| <Complete primary | * | 2.9 | 2.9 | 3.2 | 3.8 | 4.0 | 4.0 | 3.6 |
| Completed primary | 2.4 | 2.9 | 2.8 | 2.9 | 3.2 | 3.5 | 4.1 | 3.1 |
| Secondary I ${ }^{1}$ | 2.5 | 2.6 | 2.8 | 2.8 | 2.8 | 3.3 | 3.8 | 2.7 |
| Secondary II ${ }^{2}$ | 2.5 | 2.6 | 2.6 | 2.7 | 3.4 | 2.6 | 3.5 | 2.7 |
| Ethnicity ${ }^{\text { }}$ |  |  |  |  |  |  |  |  |
| African | 2.6 | 2.8 | 2.8 | 2.9 | 3.0 | 3.7 | 4.0 | 3.0 |
| Indian | 2.3 | 2.5 | 2.8 | 2.9 | 3.3 | 3.5 | 3.9 | 2.9 |
| Mixed | 2.6 | 2.7 | 2.8 | 2.7 | 3.0 | 3.0 | 4.1 | 2.9 |
| Total | 2.5 | 2.7 | 2.8 | 2.9 | 3.2 | 3.5 | 4.0 | 2.9 |
| * Fewer than 25 cases. <br> 1 Some or full secondary education, but fewer than five "O" level exams passed. <br> 2 Some or full secondary education, with five "O" level exams passed, at least one "A" level, or some university education. <br> " Excludes 27 women of "other" ethnicity, and one respondent with missing information. |  |  |  |  |  |  |  |  |

Table 5.6 also shows differentials in ideal family size according to certain background characteristics. There is little difference according to residence or ethnicity, but educational background is quite important. Ideal family size falls from 3.6 among women with less than complete primary education to 2.7 for women who have attended secondary school.

Some of the differences in ideal family size by education level are due to the fact that women with low levels of education tend to be older and of higher parity, At any level of education ideal family size increases with age.

### 5.4 Fertility Planning Status

Table 5.7 presents information on whether births in the last five years were planned, wanted later, or not wanted at all. While women may have a tendency to rationalize unplanned births, results from previous fertility surveys demonstrate that women are indeed willing to admit unwanted births. Mistimed or unplanned pregnancies, however, should still be considered approximations.

Altogether, 63 percent of births in the past five years were wanted then, while 20 percent were wanted later, and 16 percent were unwanted. The distribution by birth status is similar among women who did and did not use contraception. While one might expect women who used contraception in a given interval to have had only planned births, Table 5.7 shows that this was not the case. About one-third of births to nonusers were unplanned, compared with 39 percent of births to contraceptive users.

Table 5.8 presents a summary of the information in Table 5.7, restricted to births in the past 12 months. Overall, 42 percent of recent births were either mistimed or unwanted. First and second order births were much more likely to have been planned ( 70 percent) than third order or higher ( 41 percent). Conversely, only 3 percent of lower order births were unwanted, compared with 40 percent of higher order births.

| Table 5.7 Percent Distribution of All Births in the Last Five Years by Contraceptive Practice and Fertility Planning Status, According to Birth Order, TTDHS 1987 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ```Contraceptive Practice and planning Status``` |  | Birt | Order* |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  | All |
|  | 1 | 2 | 3 | 4+ | Births |
| Non-Contraceptive |  |  |  |  |  |
| Interval | 59.7 | 35.8 | 38.5 | 46.0 | 46.1 |
| Wanted then | 47.9 | 25.8 | 23.2 | 23.4 | 31.1 |
| Wanted later | 10.8 | 8.0 | 10.9 | 7.6 | 9.2 |
| Not wanted | 1.0 | 2.0 | 4.4 | 15.0 | 5.8 |
| Contraceptive 39.262 .0 63.4 53.3 |  |  |  |  |  |
|  |  |  |  |  |  |
| Wanted then | 30.1 | 43.6 | 34.9 | 21.9 | 32.0 |
| Wanted later | 7.8 | 14.1 | 14.2 | 8.3 | 10.6 |
| Not wanted | 1.3 | 4.3 | 12.3 | 23.1 | 10.1 |
| Not stated | 1.1 | 2.2 | 0.3 | 0.7 | 1.1 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of Blrths | 618 | 539 | 367 | 606 | 2,130 |
| Note: Includes births in the period 0-59 months prior to the |  |  |  |  |  |
| * Current pregnancy counted as a living child. |  |  |  |  |  |

The information collected on whether or not births in the last five years were wanted permits calculation of a total wanted fertility rate. The calculation is identical to that used for calculating the TFR for the five years before the survey (see Chapter 2), except that births which were unwanted are excluded from the calculation. Table 5.9 shows that if all unwanted births were prevented, the TFR would decline from 3.1 to 2.6 . In other words, if current trends continue, each 100 women will have 50 unwanted births during their lives. Differentials in wanted fertility according to the woman's background characteristics are similar to those seen for the TFR as a whole.

The third column of Table 5.9 shows the percentage of the TFR comprised of unwanted births. It is interesting to note that this figure drops from 24 percent of women with less than full primary education to 10 percent of women with full secondary certification.

| Table 5.8 Percent Distribution of Births in the Year Before the Survey by Fertility Planning Status, According to Birth Order, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
| B1rth Order* |  |  |  |
| Planning Status | 1-2 | 3+ | All <br> Births |
| Wanted child then | 70.0 | 41.2 | 57.6 |
| Wanted child later | 26.5 | 19.0 | 23.3 |
| Wanted no more children | 2.9 | 39.9 | 18.8 |
| Not classified | 0.5 | 0.0 | 0.3 |
| Total Percent | 100.0 | 100.0 | 100.0 |
| Number | 407 | 306 | 713 |

Note: The number of women with a birth in the past 12 months is roughly equivalent to the number of births in the past 12 months. Thus, the per centage who want no more children is equivalent to the percentage of unwanted births.

* Current pregnancy counted as a living child.

| Table 5.9 Total Wanted Fertility Rate, Total Fertillty Rate for the Five Years Preceding the Survey, and Percentage of the Total Fertility Rate Identified as Unwanted Births by Selected Background Characteristics, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
| Background Characteristic | ```Total Wanted Fertility Rate``` | ```Total``` | Percentage of Tota <br> Fertility Rate Identified as Unwanted Births |
| Residence |  |  |  |
| Urban | 2.5 | 3.0 | 15.9 |
| Rural | 2.6 | 3.2 | 20.0 |
| Education |  |  |  |
| <Complete primary | 3.0 | 4.0 | 23.7 |
| Completed primary | 2.9 | 3.6 | 20.1 |
| Secondary $\mathrm{I}^{1}$, | 2.6 | 3.1 | 16.3 |
| Secondary II ${ }^{2}$ | 2.1 | 2.3 | 9.9 |
| Ethnicity ${ }^{1}$ |  |  |  |
| African | 2.8 | 3.5 | 19.8 |
| Indian | 2.3 | 2.8 | 15.8 |
| Mixed | 2.7 | 3.4 | 21.6 |
| Total | 2.6 | 3.1 | 18.5 |
| 1 Some or full secondary education, but fewer than five "o" level exams passed. <br> : Some or full secondary education, with five "ou level exams passed, at least one "A" level, or some university education. <br> "Excludes 27 women of "other" ethnicity, and one respondent with missing information. |  |  |  |
|  |  |  |  |
|  |  |  |  |

## CHAPTER 6

## INFANT AND CHILD MORTALITY, AND HEALTH

The incidence of mortality during the first year of life reflects the socioeconomic status of the population, and is particularly sensitive to changes in environmental and social conditions. This chapter discusses infant and childhood mortality, and other indicators of child health, including prenatal care, immunization coverage, diarthoea, and nutritional status. This section summarizes the main health findings in the survey. Further analysis may elucidate some of the unexpected findings presented below.

### 6.1 Infant and Childhood Mortality

Table 6.1 presents infant and childhood mortality rates for three recent time periods, 1972-1976, 1977-1981 and 1982-1987. The most recent figure includes exposure for the few months in 1987 prior to the month of interview. In the last five years, 26 out of every 1,000 babies died before reaching the first birthday, while 3 per 1,000 died between the first and fifth birthdays. This represents a very low level of mortality, approaching that of developed countries. By comparison, the infant mortality rate (IMR) in the Dominican Republic and Colombia were 68 and 33 respectively for

| Table 6.1 Infant and Childhood Mortality for Five-Year calendar Periods, |  |  |  |
| :---: | :---: | :---: | :---: |
| Period | $\underset{(1 q 0)}{\text { Infant }}$ | $\underset{(4 q 1)}{\text { ch1ldhood }}$ | $\begin{aligned} & \text { Both } \\ & (5 \mathrm{qO}) \end{aligned}$ |
| 1982-1987* | 26.2 | 3.4 | 29.5 |
| 1977-1981 | 37.3 | 3.5 | 40.6 |
| 1972-1976 | 46.7 | 7.1 | 53.4 | the period 1981-1986 (CONAPOFA and IRD/Westinghouse 1987; CCRP et. al. 1987).

The decline of the IMR from 47 to 26 deaths per 1,000 births between the early 1970 s and the mid-1980s represents a 44 percent drop. An even greater decline of 52 percent is seen for childhood mortality, which decreased from 7.1 to 3.4.

Mortality figures calculated from TTDHS data exceed those published from vital statistics data, as shown in Figure 6.1. Vital statistics data show a decline in the IMR in the 1970s from 28 to 19 deaths per 1,000 births, and a further decline of 5 points by 1984 (Central Statistical Office 1987c, 1987a). Babies dying in the first few days of life may not be registered with vital statistics, but are likely to have been picked up by TTDHS interviewers who were trained to probe for such events. The IMR computed from WFS data for the 1970-1974 period was 45 per 1,000 births (Ebanks 1985). This is quite comparable to the DHS figure for a similar period.

### 6.2 Infant and Childhood Mortality by Socioeconomic Characteristics

Infant and childhood mortality rates for the 10 -year period prior to the survey are presented in Table 6.2 and Figure 6.2. Ten-year rates are used to permit comparisons by background characteristics and to reduce sampling errors. Nevertheless, because the number of children dying is low, caution is advised when viewing the figures. The data show that both infant and child mortality are lower in rural than urban areas. This somewhat unexpected finding may reflect the homogeneity of the society, and the difficulty in distinguishing urban from rural areas. Surprisingly, infant mortality appears highest among the best educated women; note, however, that rates for the highest and lowest education groups are based on a small number of births. As expected, mortality for children aged 1-4 drops as the mother's education increases.

Figure 6.1
Infant Mortality Rates, TTDHS, WFS, Vital Statistics

Rate per 1,000 births


Trinidad \& Tobago DHS 1987

| Table 6.2 Infant and Ch1ldhood Mortality 1977-1987 by Selected Background Characteristics of Mother, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | 1977-1987 |  |  |
| Background Characteristic | Infant (1q0) | Ch1ldhood | $\begin{aligned} & \text { Both } \\ & (5 q 0) \end{aligned}$ |
| Residence |  |  |  |
| Urban | 36.3 | 4.9 | 40.9 |
| Rural | 27.5 | 2.4 | 29.9 |
| Education |  |  |  |
| <Complete primary | (27.5) | (5.3) | (32.6) |
| Completed primary | 24.7 | 4.3 | 28.9 |
| Secondary $\mathrm{I}^{1}$ | 34.8 | 2.0 | 36.8 |
| Secondary I ${ }^{2}$ | (61.0) | (0.0) | (61.0) |
| Total | 31.1 | 3.4 | 34.4 |
| Note: Numbers in parentheses indicate a rate based on fewer than 500 exposed persons. |  |  |  |
| ${ }^{1}$ Some or full secondary education, but fewer than five "O" level exams passed. |  |  |  |
|  |  |  |  |
| Some or full secondary education, with five "O" level exams passed, at least one "A" level, or |  |  |  |



### 6.3 Infant and Childhood Mortality by Demographic Characteristics

Contrary to expectations, survey data show that male infant mortality is slightly lower than female infant mortality (see Table 6.3). However, the usual pattern is seen when the mother's age is considered. Babies born to women under 20 years of age and over 34 years of age are more likely to die before they attain their first birthday than those born to women between the ages of 20 and 34.

Birth order also affects the chances of survival of the infant. A typical J-shaped pattern is seen whereby a first birth is slightly more likely to die in childhood or infancy than is a second or third order birth, but mortality increases for higher order births. For seventh and higher order babies, the IMR is almost three times as high as for the second and third order baby. Short birth intervals are strongly linked with increased mortality. Of 1,000 babies born within 2 years of the previous birth, 41 died, as opposed to 15 deaths per thousand births with 2-3 year birth intervals. These findings suggest that further child survival gains could be made if women delayed the first birth until age 20 or above, spaced births for at least 2 years, and ceased childbearing at lower parity levels.

### 6.4 Children Ever Born and Surviving

A further indication of the generally low level of infant and child mortality is seen in Table 6.4 The difference between the mean number of children ever born (2.06), and those surviving at the time of the interview (1.96) is 0.10 child per woman, which represents 5 percent of all children born to respondents. The probability of having a dead child increases ten-fold, from 3 per 100 for women aged $20-24$ to 32 per 100 for women aged 45-49. This reflects several factors. Older women have more children to begin with, and bore children during periods of higher mortality. In addition, their children are older, and have had more exposure to the risk of death during the course of their lives. Keeping the number of births constant, about twice as many children whose mothers were 35 and over have died, as whose mothers were under 35.

| Table 6.3 Infant and Ch1ldhood Mortality 1977-1987 by Selected Background Characteristics, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | 1977-1987 |  |  |
| Background Characteristic | $\begin{aligned} & \text { Infant } \\ & \left(1 q^{0}\right) \end{aligned}$ | $\begin{aligned} & \text { Ch1ldhood } \\ & (4 \mathrm{q} 1) \end{aligned}$ | $\begin{aligned} & \text { Both } \\ & \left(5 q^{0}\right) \end{aligned}$ |
| Sex |  |  |  |
| Male | 28.8 | 3.4 | 32.1 |
| Female | 33.5 | 3.4 | 36.8 |
| Age of Mother |  |  |  |
| <20 | 42.9 | 6.0 | 48.7 |
| 20-29 | 28.4 | 2.3 | 30.6 |
| 30-34 | (24.4) | (2.1) | (26.5) |
| $35+$ | (37.3) | (8.2) | (45.3) |
| B1rth order |  |  |  |
| 1 | 28.9 | 3.7 | 32.5 |
| 2-3 | 25.6 | 2.1 | 27.6 |
| 4-6 | 33.0 | 4.0 | 36.9 |
| 7+ | (72.6) | (8.7) | (80.7) |
| Previous Birth |  |  |  |
| Interval |  |  |  |
| <2 years | 41.4 | 3.0 |  |
| 2-3 years | 14.6 | 3.6 | 18.2 |
| 4 years or more | 25.9 | (1.7) | (27.6) |

Note: Numbers in parentheses indicate a rate based on fewer than 500 exposed persons.

| Table 6.4 | Mean Number of Children Ever Born, Surviving, and Dead, and Proportion of Children Dead Among Children Ever Born, by Age of Mother, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Mean Number of Children |  |  | Proportion Dead Among Children Ever Born |
| Age | Ever Born | Surviving | Dead |  |
| 15-19 | 0.14 | 0.13 | 0.00 | 0.03 |
| 20-24 | 0.89 | 0.85 | 0.03 | 0.04 |
| 25-29 | 1.86 | 1.80 | 0.06 | 0.03 |
| 30-34 | 2.69 | 2.60 | 0.08 | 0.03 |
| 35-39 | 3.24 | 3.05 | 0.18 | 0.06 |
| 40-44 | 3.87 | 3.64 | 0.23 | 0.06 |
| 45-49 | 4.95 | 4.63 | 0.32 | 0.06 |
| Total | 2.06 | 1.96 | 0.10 | 0.05 |

### 6.5 Antenatal Care

The importance of receiving prenatal care during pregnancy is well known, and has been emphasized by the govemment's health programme in an effort to reduce infant mortality. The timing of this care is also important, but is not dealt with in the survey. Table 6.5 shows that only 1.4 percent of births in the five years before the survey did not receive antenatal care. In most cases, care was given by doctors ( 84 percent), while trained nurses or midwives provided care in the remainder of cases. Differences by background characteristics of the mother are slight, except
that older women, and those with some secondary education are more likely to receive care from doctors, while younger women, and those with less education are more likely to see trained nurses. It is probable that education is correlated with income, which is likely to determine the type of health care provider the woman sees.

A completed series of tetanus injections offers protection against neonatal tetanus for many years. In keeping with intemational methods for assessing compliance with child survival goals, and to provide comparability with other DHS surveys, women were asked whether they received at least one tetanus injection while pregnant. Table 6.5 shows that, overall, 31 percent of births in the last 5 years were immunized with at least one dose of tetanus toxoid during pregnancy. Children of the least educated women showed the highest tetanus toxoid coverage rate ( 43 percent).

| Table 6.5 Per | Dist <br> Car <br> ace1 <br> Bac | ution for the a Tet round Ch | f Births Mother and nus Toxol aracteri | the Perc Inje cs | st 5 <br> age o <br> on, A <br> other | ars by B1rths cording TTDHS | Type of Whose to 987 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Type of Prenatal Care |  |  |  |  | Percent |  |
|  | No One | Doctor | Trained Nurse/ Midwife | $\begin{aligned} & \text { Mis- } \\ & \text { sing } \end{aligned}$ | Total Pexcent | Toxold <br> Injec- <br> tion | Number of Births |
| Age |  |  |  |  |  |  |  |
| 15-49 | 4.4 | 78.0 | 17.6 | 0.0 | 100 | 34.1 | 91 |
| 20-24 | 1.6 | 80.4 | 17.1 | 1.0 | 100 | 26.4 | 516 |
| 25-29 | 1.1 | 85.0 | 13.3 | 0.6 | 100 | 35.5 | 660 |
| 30-34 | 0.8 | 86.3 | 11.6 | 1.3 | 100 | 28.6 | 388 |
| 35-39 | 1.5 | 85.2 | 11.7 | 1.5 | 100 | 32.1 | 196 |
| 40-44 | 1.5 | 92.4 | 3.0 | 3.0 | 100 | 25.8 | 66 |
| 45-49 | * | * | $\pm$ | * | , | * | 12 |
| Residence |  |  |  |  |  |  |  |
| Urban | 2.3 | 85.5 | 11.1 | 1.1 | 100 | 28.9 | 826 |
| Rural | 0.7 | 82.9 | 15.5 | 0.9 | 100 | 32.3 | 1,103 |
| Education |  |  |  |  |  |  |  |
| primary | 0.0 | 80.6 | 17.9 | 1.5 | 100 | 42.5 | 134 |
| Completed primary | 1.6 | 80.8 | 17.0 | 0.6 | 100 | 30.8 | 855 |
| Secondary I ${ }^{1}$ | 1.5 | 85.7 | 11.4 | 1.4 | 100 | 30.4 | 782 |
| Secondary II ${ }^{\text {a }}$ | 0.6 | 95.6 | 3.2 | 0.6 | 100 | 23.4 | 158 |
| Ethnicity ${ }^{2}$ |  |  |  |  |  |  |  |
| African | 1.9 | 84.2 | 12.7 | 1.2 | 100 | 30.5 | 748 |
| Indian | 0.8 | 82.9 | 15.5 | 0.7 | 100 | 28.4 | 831 |
| Mixed | 1.8 | 85.5 | 11.5 | 1.2 | 100 | 38.5 | 338 |
| Total | 1.4 | 84.0 | 13.6 | 1.0 | 100 | 30.8 | 1,929 |

Note: Includes births in the period 1-59 months prior to the survey.

* Fewer than 25 births in the age group.

1 Some or full secondary education, but fewer than five "o" level exams
passed.
Some or full secondary education, with tive "O" level exams passed. at
least one "A" level, or some university education.
" Excludes 12 children of "other" ethnicity or with missing information.

### 6.6 Assistance at Delivery

Assistance at delivery by either a doctor or trained nurse is almost universal- 30 percent of births in the 5 years preceding the survey were delivered by doctors, while 68 percent were delivered by trained nurses (see Table 6.6). Women in urban areas, and those with full secondary certification were more likely than others to use doctors.

| Table 6.6 Percent Distribution of Births in the Last 5 Years by Type of Assistance During Delivery, According to Selected Background Characteristics of Mother, TTDHS 1987 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type of Assistance at Delivery |  |  |  |  |  |  |  |
| Background Characteriatic | No One | Doctor | Trained Nurae/ Midwife | Other | Missing | Total <br> Percent | Number of Births |
| Age 0 - 0.0 - 100 |  |  |  |  |  |  |  |
| 15-19 | 0.0 | 25.3 | 73.6 | 1.1 | 0.0 | 100 | 91 |
| 20-24 | 0.0 | 23.8 | 74.2 | 1.0 | 1.0 | 100 | 516 |
| 25-29 | 0.2 | 29.7 | 68.0 | 1.4 | 0.8 | 100 | 660 |
| 30-34 | 0.3 | 33.5 | 63.4 | 1.6 | 1.3 | 100 | 388 |
| 35-39 | 0.5 | 38.8 | 58.7 | 0.5 | 1.5 | 100 | 196 |
| 40-44 | 0.0 | 24.2 | 72.7 | 1.5 | 1.5 | 100 | 66 |
| 45-49 | * | * | * | * | * | 100 | 12 |
| Residence |  |  |  |  |  |  |  |
| Urban | 0.0 | 35.7 | 62.6 | 0.6 | 1.1 | 100 | ${ }^{826}$ |
| Rural | 0.3 | 25.0 | 72.2 | 1.6 | 0.9 | 200 | 1,203 |
| Education |  |  |  |  |  |  |  |
| <Complete primary | 0.0 | 27.6 | 67.9 | 2.9 | 1.5 | 100 | 134 |
| Completed primary | 0.2 | 25.8 | 71.7 | 1.6 | 0.6 | 100 | 855 |
| Secondary $\mathrm{I}^{1}{ }^{2}$ | 0.1 | 28.1 | 69.7 | 0.7 | 1.4 | 100 | 782 |
| Secondary I ${ }^{2}$ | 0.0 | 58.9 | 40.5 | 0.0 | 0.6 | 100 | 158 |
| Ethnicity' 27.100 |  |  |  |  |  |  |  |
| African | 0.4 | 27.1 | 70.2 | 1.2 | 1.1 | 100 | 748 |
| Indian | 0.0 | 29.0 | 68.7 | 1.6 | 0.7 | 100 | 831 |
| M1xed | 0.0 | 34.9 | 63.3 | 0.3 | 1.5 | 100 | 338 |
| Total | 0.2 | 29.6 | 68.1 | 1.3 | 1.0 | 100 | 1,929 |
| Note: Includes births in the period 1-59 montha prior to the survey. <br> * Fewer than 25 births in the age group. <br> 2 Some or full secondary education, but fewer than five "o" level exams passed. <br> " Some or full secondary education, with five "O" level exams passed, at least one "A" level, or some university education. <br> * Excludes 12 children of "other" ethnicity or with missing information. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

As Table 6.7 shows, nearly 90 percent of births in the last 5 years occurred in government hospitals, while 7 percent took place in private hospitals or nursing homes. Older women, urban dwellers, and those most highly educated were more likely than average to have delivered in private facilities.

### 6.7 Immunization

Immunization of young children is essential for maintaining health and improving their chances of survival. One goal of the Ministry of Health is that by 1990, 85 percent of children one year of age will be completely immunized against diphtheria, pertussis, tetanus (DPT), and polio, and 80 percent of children 1-2 years will be immunized against measles/rubella. ${ }^{1}$ Women with children born within five years of the survey interview were asked whether they had health records showing immunizations given to their children. If the woman could show the card, interviewers recorded the dates when polio, measles, yellow fever, and the combined DPT shots were given.

[^3] countries, is not routinely administered.

| Table 6.7 Percent Distribution of Births in the Last 5 Years by place of Delivery, According to Selected Background Characteristics of Mother, TTDHS 1987 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Place of Delivery |  |  |  |  |  |
| Background Characteristic | Government Hospital | Private <br> Hospital/ <br> Nursing <br> Home | Other | Total | Number |
| Age |  |  |  |  |  |
| 15-19 | 96.7 | 2.2 | 1.1 | 100 | 91 |
| 20-24 | 94.0 | 2.7 | 3.4 | 100 | 516 |
| 25-29 | 87.7 | 8.0 | 4.3 | 100 | 660 |
| 30-34 | 86.3 | 8.0 | 5.7 | 100 | 388 |
| 35-39 | 83.7 | 12.2 | 4.0 | 100 | 196 |
| 40-44 | 84.8 | 10.6 | 4.5 | 100 | 66 |
| 45-49 | * | * | * | $10 n$ | 12 |
| Residence |  |  |  |  |  |
| Urban | 86.9 | 9.3 | 3.8 | 100 | 826 |
| Rural | 90.4 | 5.3 | 4.4 | 100 | 1,103 |
| Education |  |  |  |  |  |
| <Complete primary | 94.8 | 0.7 | 4.5 | 100 | 134 |
| Completed primary | 92.0 | 4.0 | 4.0 | 100 | 855 |
| Secondary $\mathrm{I}^{1}$ | 89.0 | 7.3 | 3.7 | 100 | 782 |
| Secondary II' | 66.5 | 27.2 | 6.3 | 100 | 158 |
| Ethnicity ${ }^{3}$ |  |  |  |  |  |
| African | 92.5 | 3.7 | 3.8 | 100 | 748 |
| Indian | 87.1 | 8.4 | 4.4 | 100 | 831 |
| Mlxed | 87.3 | 8.6 | 4.2 | 100 | 338 |
| Total | 88.9 | 7.0 | 4.0 | 100 | 1,929 |
| Note: Includes births in the period 1-59 months prior to the survey. |  |  |  |  |  |
| * Fewer than 25 births in the age group. |  |  |  |  |  |
| ${ }^{2}$ Some or full secondary education, but fewer than five "o" level exams passed. <br> 2 Some or full secondary education, with five "O" level exams passed, at least one "A" level, or some university education. <br> " Excludes 12 children of "other" exhnicity or with missing information. |  |  |  |  |  |

If the woman could not produce the card or did not have one, the interviewer asked the respondent whether the child received each of the vaccinations. The survey findings on immunization are presented in Tables 6.8 and 6.9. Note that the top section of both tables includes all children born less than 60 months before the survey. Since some injections are not scheduled to be given until late in the first year of life, subsequent panels in Tables 6.8 and 6.9 refer to children 12-59 months of age only.

Overall, health cards were seen by the interviewer for 75 percent of the children. Of the remainder, more than two-thirds had health cards but the interviewers were not able to see them (no table). (It should be noted that women who take their children to private doctors may not have been given health cards to take home.) While cards were seen for only 28 percent of children under 6 months, children 6-11 months were the most likely to have cards--81 percent. The proportion with cards is 69 percent for the oldest children. The variation may be due to recent efforts by the MOH to promote immunizations, or to the greater likelihood that cards of older children have become lost.

The chance of a child having a card increases with the mother's education, from 69 percent for children aged $12-59$ months with less than primary education to 78 percent for women with less than full secondary certification. The proportion of children with cards then declines for women with full secondary certification, possibly because these women visit private physicians.

African women, and women in rural areas were slightly more likely to have produced cards for their children.

Three doses of diphtheria-tetanus and polio vaccines are required for children entering public school. Pertussis is not required, but is commonly given as part of a combined DPT shot. Until recently, a yellow fever immunization was required for travel to many countries, and was recorded on health cards, if given. Table 6.8 shows the proportion of children with health cards who received various vaccines.

Nearly all children 12-59 months with cards received the first dose of DPT and polio. Coverage decreases for subsequent doses in the series, such that only 87 percent of children received the third dose of DPT or polio. Older children, and those whose mothers were better educated, were more likely to have been immunized.

Coverage for other diseases is lower. Seventy-two percent of children 12-59 months were immunized for yellow fever, and 44 percent for measles. Only 36 percent of children in this age group were fully immunized against yellow fever, DPT, polio, and measles.

Table 6.9 shows the proportion of children without health cards whose mothers reported that they received specific immunizations. Levels of immunization coverage are lower for children without cards than for children with cards, but differences by injection and background characteristic are in the expected directions. For example, while more than 80 percent of children 12-59 months received each of the first two DPT and polio vaccines, only 69 percent received the third DPT dose, and 68 percent the third polio dose. Fifty-four percent received yellow fever, while 44 percent had a measles vaccine. Only 29 percent received all of these shots, according to the mother's report.

While the reliability of information reported by the mother is not known, it is interesting how closely the mothers' reports correspond with information on the cards for the population as a whole. Figure 6.3 shows coverage of selected immunizations according to either the card or the mother's report.

### 6.8 Diarrhoea Prevalence

Diarrhoea is a leading cause of infant and child morbidity and mortality. It is particularly likely to occur during the rainy season, between May and July, most of which coincided with fieldwork. Diarrhoea is also commonly seen in children of weaning age. Mothers were asked whether their children under age 5 had diarrhoea, defined as three or more loose or runny stools per day, in the 24 hours and 2 weeks prior to the survey. Table 6.10 shows that diarrhoea prevalence is quite low, which is consistent with the generally favorable infant mortality situation in Trinidad and Tobago. Only 6 percent of the children had an episode of diarrhoea during the 2 weeks prior to interview, and 2 percent had an episode 24 hours prior to interview. Diarthoea was most common among children 6-23 months, which is the time weaning occurs, as discussed in Chapter 2. It is interesting to note that mothers whose educational level is highest had a higher proportion of their children with diarnoea than mothers whose educational level was lower, which is consistent with the breastfeeding durations discussed in Chapter 2.

| Background Characteristic | Among All Children Under 5, Percent with |  |  | Among All Children Under 5 with Health Cards, Percent Who Have Received |  |  |  |  |  |  |  | Number of Ch1ldren |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HealthImmuniza- <br> tion Record- <br> Card en Card |  | Yellow <br> Fever | DPT |  |  | Polio |  |  | Measles | All Im-munizations ${ }^{1}$ |  |
|  |  |  | 1 | 2 | 3 | 1 | 2 | 3 |  |  |  |
| Age in Months ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| <6 | 28.3 | 23.6 |  | 0.0 | 80.6 | 16.7 | 0.0 | 80.6 | 16.7 | 0.0 | 0.0 | 0.0 | 127 |
| 6-11 | 81.2 | 80.7 | 0.6 | 95.2 | 83.9 | 54.2 | 99.4 | 89.3 | 54.8 | 0.6 | 0.6 | 207 |
| 12-23 | 79.5 | 78.9 | 53.3 | 98.7 | 94.4 | 81.1 | 99.0 | 93.7 | 81.5 | 38.1 | 27.2 | 380 |
| 24-35 | 78.9 | 78.4 | 77.3 | 99.0 | 98.7 | 90.0 | 99.0 | 98.0 | 89.6 | 53.5 | 45.8 | 379 |
| 36-47 | 73.0 | 72.5 | 76.2 | 99.0 | 97.6 | 87.2 | 99.3 | 97.6 | 87.2 | 47.6 | 38.6 | 397 |
| 48-59 | 68.9 | 68.7 | 83.6 | 99.2 | 98.5 | 90.5 | 99.6 | 99.2 | 90.1 | 35.9 | 30.9 | 380 |
| ```Total (1-59 months)``` | 72.6 | 71.8 | 61.4 | 98.0 | 93.4 | 80.7 | 98.7 | 94.0 | 80.7 | 37.4 | 30.4 | 1,870 |
| Residence ${ }^{\text {3 }}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 73.4 | 72.4 | 66.9 | 97.9 | 95.2 | 85.4 | 98.5 | 95.4 | 85.6 | 51.9 | 40.0 | 651 |
| Rural | 76.3 | 76.3 | 75.9 | 99.7 | 98.7 | 88.3 | 99.7 | 98.2 | 88.0 | 38.4 | 32.7 | 885 |
| Education ${ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| primary | 68.7 | 68.7 | 69.6 | 100.0 | 100.0 | 84.8 | 100.0 | 97.5 | 84.8 | 43.0 | 34.2 | 115 |
| Completed primary | 74.9 | 74.4 | 73.8 | 98.9 | 96.8 | 86.5 | 99.2 | 96.4 | 85.8 | 42.1 | 34.7 | 704 |
| Secondary $\mathrm{I}^{4}$ | 78.0 | 77.5 | 73.1 59.1 | 98.9 | 97.2 | 87.3 | 99.1 | 97.6 | 87.7 | 45.5 | 37.3 | 595 |
| Secondary II ${ }^{\text {s }}$ | 68.0 | 67.2 | 59.0 | 98.8 | 97.6 | 91.6 | 98.8 | 97.6 | 92.8 | 48.2 | 34.9 | 122 |
| Ethnicity ${ }^{3.6}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| African | 77.0 | 76.2 | 74.8 | 98.5 | 96.0 | 87.0 | 98.9 | 96.2 | 87.4 | 45.9 | 37.7 | 588 |
| Indian | 75.3 | 75.2 | 72.9 | 99.6 | 99.0 | 87.9 | 99.4 | 98.2 | 87.3 | 42.9 | 34.8 33.3 | 660 278 |
| Mixed | 70.1 | 69.8 | 65.1 | 98.5 | 95.9 | 85.1 | 99.5 | 96.4 | 85.1 | 42.1 | 33.3 | 278 |
| ```Total (12-59 months)``` | 75.1 | 74.6 | 72.2 | 99.0 | 97.2 | 87.1 | 99.2 | 97.1 | 87.0 | 44.0 | 35.7 | 1,536 |

1 Includes children who are fully immunized (1.e. those receiving yellow fever, three doses of DPT and polio, and a measles vaccination).
Includes children 1-59 months.
3 Includes chldren 12-59 months.

- Some or full secondary education, but fewer than five "o* level exams passed.

5 Some or full secondary education, with five "o" level exams passed, at least one "A" level, or some university education.
" Excludes 10 children of "other" ethnicity or with missing information.

```
Table 6.9 Among All Children Onder 5 Years of Age Without Health Cards, the Percentage Who are Reported by the
    Mother as Having Been Immunized Against Yellow Fever, DPT, Polio, and Measles, According to Selected
```

    Background Characteristics, TTDHS, 1987
    | Background Characteristic | Percent of Children W1thout Cards | Among All Children Onder 5 Without Health Cards, Percent who Have Recelved |  |  |  |  |  |  |  |  | Number of Children W1thout Cards |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Yellow <br> Fever | DPT |  |  | Polio |  |  | Measles | All Im-munizations ${ }^{1}$ |  |
|  |  |  | 1 | 2 | 3 | 1 | 2 | 3 |  |  |  |
| Age in Months ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |
| <6 | 71.7 | 0.0 | 1.1 | 1.1 | 0.0 | 3.3 | 1.1 | 0.0 | 2.2 | 0.0 | 91 |
| 6-11 | 18.8 | 0.0 | 56.4 | 51.3 | 20.5 | 64.1 | 53.8 | 20.5 | 7.7 | 0.0 | 39 |
| 12-23 | 20.5 | 25.6 | 69.2 | 65.4 | 46.2 | 70.5 | 66.7 | 42.3 | 12.8 | 3.8 | 78 |
| 24-35 | 21.1 | 47.5 | 85.0 | 80.0 | 66.2 | 88.7 | 82.5 | 66.2 | 42.5 | 23.7 | 80 |
| 36-47 | 27.0 | 65.4 | 89.7 | 86.9 | 75.7 | 91.6 | 90.7 | 72.0 | 52.3 | 36.4 | 107 |
| 48-59 | 31.1 | 66.9 | B8. 1 | 88.1 | 80.5 | 89.8 | 90.7 | 81.4 | 57.6 | 42.4 | 118 |
| Total |  |  |  |  |  |  |  |  |  |  |  |
| Residence ${ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 26.6 | 52.6 | 84.4 | 80.3 | 67.1 | 86.1 | 84.4 | 67.6 | 45.1 | 28.3 | 173 |
| Rural | 23.7 | 55.2 | 83.8 | 82.4 | 71.0 | 86.2 | 83.8 | 67.6 | 42.9 | 29.5 | 210 |
| Education ${ }^{3}$ <Complete |  |  |  |  |  |  |  |  |  |  |  |
| pr1mary Completed | 31.3 | 47.2 | 63.9 | 58.3 | 50.0 | 69.4 | 61.1 | 52.8 | 25.0 | 25.0 | 36 |
| primary | 25.1 | 55.4 | 84.7 | 81.9 | 65.5 | 86.4 | 84.7 | 63.3 | 38.4 | 24.9 | 177 |
| Secondary $I^{\prime \prime}$ | 22.0 | 51.1 | 85.5 | 83.2 | 74.8 | 87.8 | 86.3 | 74.0 | 51.9 | 32.1 | 131 |
| Secondary IIs | 32.0 | 64.1 | 94.9 | 94.9 | 84.6 | 94.9 | 94.9 | 79.5 | 59.0 | 41.0 | 39 |
| Ethnicity ${ }^{\text {\% }}$ |  |  |  |  |  |  |  |  |  |  |  |
| African | 23.0 | 60.7 | 84.4 | 83.0 | 74.1 | 87.4 | 87.4 | 73.3 | 49.6 | 31.9 | 135 |
| Indian | 24.7 | 48.5 | 82.2 | 78.5 | 64.4 | 84.0 | 79.8 | 63.8 | 38.0 | 25.8 | 163 |
| Mixed | 29.9 | 53.0 | 86.7 | 84.3 | 69.9 | 88.0 | 86.7 | 65.1 | 45.8 | 31.3 | 83 |
| ```Total (12-59 months)``` | 24.9 | 54.0 | 84.1 | 81.5 | 69.2 | 86.2 | 84.1 | 67.6 | 43.9 | 29.0 | 383 |

1 Includes children who are fully immunized (1.e. those receiving yellow fever, three doses of DPT and polio, and a measles vaccination)
Includes children $1-59$ months
Includes children 12-59 months
5ome or full secondary education, but fewer than flve "O" level exams passed.
Some or full secondary education, with five " $O$ " level exams passed, at least one "A" level, or some university education.
Excludes 2 children of "other" ethnicity or with missing information.

Figure 6.3
Immunization Coverage Children 1-5


- 383 Children wlthout Health Cards, 24.9\% of sample
* 1153 Children with Health Cards, 75.1\% of sample


### 6.9 Diarrhoea Treatment

Oral rehydration therapy (ORT), the recommended treatment for diarthoea, is commonly used in Trinidad and Tobago. The solution can be made at home using sugar, salt, and water, or by mixing water with commercially prepared packets of oral rehydration salts (ORS). Table 6.11 shows how recent episodes of diarrhoea were treated. Since the number of children who contracted diarrhoea is small, little analysis by background characteristic is attempted; however, the overall picture is instructive. One-half of the children who contracted diarrhoea consulted a medical facility for treatment. Sixty-six percent of those who contracted diarrhoea were treated with ORT, including 53 percent who were given solution prepared from ORS packets, and 13 percent who were given a homemade solution. Forty-five percent received some other treatment such as tablets, syrups, or a change in feeding, while 20 percent had no treatment at all.

### 6.10 Knowledge of ORT

Knowledge and use of ORT may have had a major influence in the reduction of deaths due to gastroenteritis in recent years. It is simple and inexpensive to prepare and use. Knowledge of ORT among mothers of children 1-59 months of age is quite high, as shown in Table 6.12. Eighty-nine percent were aware of the method. Better educated women were somewhat more likely to know about the method than less educated women.

### 6.11 Nutritional Status of Children

Anthropometry is a widely-used tool for assessing the nutritional status of children. Because young children grow rapidly, inadequate nutrition can be detected in a short period of time. For the present survey, children $3-36$ months (born to women interviewed for the TTDHS survey) had their weight and length measured. The children were weighed on 25 kg hanging scales, and measured with portable measuring boards. Trained personnel accompanying each team of interviewers conducted the measuring.

| Table 6.10 Anong Children Under 5 Years of Age, the Percentage Reported by the Mother to Have Had Diarrhoea in the Past 24 Hours and the Past Two Weeks, According to Selected Background Characteristics, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
| Percentage of Children Under 5 Reported by the Mother as Having Diarrhoea in |  |  |  |
| Background Characteristic | Past 24 Hours | $\begin{aligned} & \text { Past } 2 \\ & \text { Neeks }{ }^{1} \end{aligned}$ | Number of Children |
| Age |  |  |  |
| Under 6 months | 1.6 | 5.5 | 127 |
| 6-11 months | 3.9 | 7.2 | 207 |
| 12-23 months | 3.2 | 11.3 | 380 |
| 24-35 months | 1.6 | 5.5 | 379 |
| 36-47 months | 1.0 | 4.5 | 397 |
| 48-59 months | 1.1 | 2.4 | 380 |
| Residence |  |  |  |
| Urban | 1.5 | 6.4 | 799 |
| Rural | 2.5 | 5.8 | 1,071 |
| Education |  |  |  |
| <Complete primary | 0.8 | 4.6 | 131 |
| completed primary | 1.8 | 6.1 | 830 |
| Secondary $\mathrm{I}^{2}$, | 1.7 | 5.4 | 757 |
| Secondary II' | 6.6 | 9.9 | 152 |
| Ethnicity ${ }^{4}$ |  |  |  |
| African | 1.7 | 6.0 | 719 |
| Indian | 2.2 | 6.0 | 806 |
| Mlxed | 2.4 | 6.3 | 333 |
| Total | 2.1 | 6.0 | 1,870 |
| Note: Includes ch1ldren aged 1-59 months. <br> 1 Includes 24 hour period. <br> *Some or full secondary education, but fewer than five "o" level exams passed. <br> ' Some or full secondary education, with five wo" level exams passed, at least one "A" level, or some university education. <br> " Excludes 12 children of "other" ethnicity or with missing information. |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Collection of accurate anthropometric data depends on several factors. Proper training of measurers is of primary importance. TTDHS measurers were taught to measure children to within the degree of accuracy recommended by the United Nations in the guide "How to Weigh and Measure Children" (United Nations 1986). Details of the training of measurers appears in the Appendix.

A second factor affecting the quality of data is the coverage. The 843 children measured represent only 79 percent of the eligible children, so some caution is warranted in interpretation of the anthropometric data. Children were missed because they were away from the household, ill, sleeping, or the mother refused. One case was excluded from the tabulations because the measurements were so far out of range for the child's age that they were most likely taken or recorded incorrectly. Thus, tabulations are presented for 842 children.

The small sample size limits the disaggregation of data to a few broad categories. Since previous nutrition surveys suggested that localized pockets of undemutrition exist, it is unfortunate that more detailed analysis cannot be carried out.


The validity of anthropometric data also depends on the accuracy of children's reported ages. If a child's true age is just a few months younger than the age reported by the mother, he or she could be reported erroneously as being severely malnourished. TTDHS interviewers were thoroughly instructed in the collection of accurate age data, and performed several checks in the field to verify age information. In fact, no children measured were missing information on the month or year of bith, suggesting that mothers have good recall of their childrens' ages. Figure 6.4 shows the distribution of all children, and of children measured, by age in months. If mothers were estimating ages, one would see heaping at months $12,18,24,30$, and 36 for the line corresponding to "all living children". The presence of only minimal heaping suggests that TTDHS anthropometric data are not biased by misreported ages. In addition, the figure shows that children younger than 12 months were slightly more likely to have been measured than were children 13-36 months.

In order to facilitate comparisons with DHS surveys done in other countries, and with other nutrition surveys done in Trinidad and Tobago, the nutritional status data in the TTDHS was analysed using the National Center for Health Statistics/Centers for Disease Control (NCHS/CDC) International Reference Population, as recommended by the World Health Organization (U.S. Department of Health, Education and Welfare 1976). Use of the reference data for comparative purposes is based on the finding that ethnic differences are far less important than environmental conditions in determining the growth of pre-school aged children (Martorell and Habicht 1986).

| Table 6.12 | Among Mothers of Children Under 5 Years of Age, the Percentage Who know About ORT by Education, According to Selected Background Characteristics, TTDHS 1987 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Background | <Complete Primary | Completed Primary | Secondary $\mathrm{I}^{1}$ | Secondary $\mathrm{II}^{2}$ | Total |
| Residence |  |  |  |  |  |
| Urban | 70.0 | 88.6 | 91.5 | 90.9 | 89.3 |
| Rural | 89.3 | 87.6 | 87.3 | 95.3 | 88.1 |
| Ethaicity ${ }^{\text {J }}$ |  |  |  |  |  |
| African | * | 89.1 | 91.0 | 97.8 | 90.7 |
| Indian | 82.1 | 87.5 | 85.9 | 92.7 | 86.7 |
| mixed | * | 86.8 | 93.3 | * | 89.1 |
| Total | 82.6 | B8.0 | 89.4 | 92.7 | 88.6 |

Note: Includes ch1ldren aged 1-59 months.

* Fewer than 25 cases.

1 Some or full secondary education, but fewer than five "O" level
, exams passed.

* Some or full secondary education, with five "o" level exams
passed, at least one "A" level, or some university education.
2 Excludes 8 women of "other" ethnicity or with missing information.


## Figure 6.4 <br> Age Distribution of Weighed and Measured Children, and All Children



Trinidad \& Tobago DHS 1987

Four standard indices are presented below to describe the measured children:
o Height-for-age
o Weight-for-height
o Weight-for-age
o Height-for-age by weight-for-height

Tables 6.13A-6.16A show the percentage of children falling into various standard deviation (or $z$-score) categories from the reference population medians on the above four indices. Since nutritional status is often expressed as percent of the median reference scores in Trinidad and Tobago, Tables $6.13 \mathrm{~B}-6.16 \mathrm{~B}$ present the four indices using this indicator.

The variation in height and weight among children at any given age approximates a normal distribution around the median. Thus, 68.2 percent of well-nourished children fall within one standard deviation (SD) above or below the median height or weight for their ages, while 27.2 percent fall between 1 and 2 SDs above or below the median, and 4.6 percent fall 2 or more SDs from the median. Thus, one would expect to find 2.3 percent of well-nourished children to be quite short or thin for their age. The degree of moderate to severe malnutrition in a population is the proportion above the 2.3 percent normally expected which falls below 2 SDs from the median height or weight of the reference population. The proportion over 2.3 percent which is more than 2 SDs above the population median indicates the true proportion of children which is ovemourished.

Figure 6.5 summarizes the height-for age, weight-for-height, and weight-for-age findings according to the age of children. At three months of age, children exceed the median measures of the reference population, indicating adequate nutritional status. However, slight stunting (as measured by height-for-age) appears in children age 4 months and above. Wasting, indicated by weight-for height measures falling below the reference population median, begins at 8 months of age. These findings are consistent with the timing of cessation of breastfeeding, which, for most women, occurs at 6 months. Tables 6.13 to 6.15 present each index according to selected background characteristics.

Figure 6.5
Nutritional Status of Children Aged 3-36 Months


Trinidad \& Tobago DHS 1987

### 6.12 Nutritional Status of Children According to Height-For-Age

Children's height, in reference to age in months shows the degree to which the population suffers from chronic malnutrition. Inadequate nourishment over a long period of time (found typically in impoverished areas) results in stunted growth. Table 6.13A shows the proportion of children aged 3-36 months who fall into various standard deviation categories from the reference population median in terms of height-for-age. Four percent of the children are moderately stunted, and less than 1 percent severely stunted, which slightly exceeds the levels expected in the reference population of well-fed children. Twenty-one percent fall between - 2 and -1 SDs, 9 percent more children than expected. There is little difference in stunting according to the sex, age, and residence of children. Consistent with expectations, moderate stunting is more common among children age 6 months and above, and to those born less than two years after another birth. In addition, children of East Indian women are more likely to be stunted, possibly reflecting the educational (and economic) disadvantages of their mothers, as discussed previously.


Table 6.13B shows the height-for-age as a percent of the reference population median scores, with stunting categories as they are customarily presented in nutrition surveys in Trinidad and Tobago. One percent of children fall below 90 percent of the reference population median, suggesting near absence of stunted growth.


### 6.13 Nutritional Status of Children According to Weight-for-Height

In Table 6.14A, children who are between -2 and -3 SDs below the median of the reference population are considered thin for their height or moderately wasted, while those below -3 SDs are severely wasted. In contrast to stunting, wasting is the result of inadequate nourishment in the months immediately preceding the survey, and can develop quite rapidly. Infection, diarmoeal diseases, and seasonal reduction in the food supply can result in wasting. Since the child's age is not included in this measure, weight-for-height is free of bias introduced by age misreporting.

Overall, 3 percent of children are moderately wasted, which is just slightly above the level found in the reference population. Severe wasting, although rare in the survey, exceeds the level found in the reference population, as well. Nearly 9 percent of children $3-5$ months of age are moderately or severely wasted; note, however, that very few children fall into this age category. Wasting is most common among children of East Indian women ( 7 percent), and is nearly absent in the other ethnic groups. Differences according to other background characteristics are slight.

| Table 6.14A Percent Distribution of Children Aged 3-36 Months by Standard Deviation Category of Weight-For-Helght Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Standard Deviation from the Median of the NCHS/CDC/WHO Reference Population |  |  |  |  |  |  |  |  |
| Background Characteristic | $\begin{gathered} -3.00 \\ \text { or } \\ \text { more } \end{gathered}$ | $\begin{gathered} -2.00 \\ \text { to } \\ -2.99 \end{gathered}$ | $\begin{array}{r} -1.00 \\ t 0 \\ -1.99 \end{array}$ | $\begin{array}{r} -0.99 \\ 60 \\ +0.99 \end{array}$ | $\begin{array}{r} +1.00 \\ \text { to } \\ +1.99 \end{array}$ | $\begin{gathered} +2.00 \\ \text { or } \\ \text { More } \end{gathered}$ | Total | Number of Children |
| EXPECTED IN REFERENCE POPULATION | 0.1 | 2.2 | 13.6 | 68.2 | 13.6 | 2.3 | 100 | -- |
| Sex |  |  |  |  |  |  |  |  |
| Male | 1.0 | 2.7 | 19.2 | 62.4 | 11.5 | 3.2 | 100 | 407 |
| Female | 0.5 | 3.4 | 21.4 | 65.5 | 5.7 | 3.4 | 100 | 435 |
|  |  |  |  |  |  |  |  |  |
| 3-5 Months 6-11 Months | 4.3 0.6 | 4.3 2.3 | 8.5 15.5 | 55.3 63.8 | 17.0 12.1 | 10.6 5.7 | 100 100 | 47 174 |
| 12-23 Months | 0.3 | 4.3 | 23.9 | 61.5 | 7.3 | 2.7 | 100 | 301 |
| 24-36 Months | 0.6 | 2.2 | 21.2 | 67.8 | 6.6 | 1.6 | 100 | 320 |
| Previous Birth Interval |  |  |  |  |  |  |  |  |
| First Birth | 0.4 | 3.1 | 18.0 | 63.6 | 8.8 | 6.1 | 100 | 228 |
| <24 Months | 0.0 | 3.2 | 22.2 | 63.8 | 8.6 | 2.3 | 100 | 221 |
| 24-47 Months | 1.9 | 2.8 | 21.1 | 64.8 | 7.0 | 2.3 | 100 | 213 |
| 48 + Months | 0.6 | 3.3 | 20.0 | 63.9 | 10.0 | 2.2 | 100 | 180 |
| Residence 0.30 .450 .0 |  |  |  |  |  |  |  |  |
| Urban | 0.3 | 2.4 | 15.0 | 67.6 | 10.3 | 4.4 | 100 | 339 |
| Rural | 1.0 | 3.6 | 23.9 | 61.6 | 7.4 | 2.6 | 100 | 503 |
| Mother's Education |  |  |  |  |  |  |  |  |
| <Complete primary | 0.0 | 3.9 | 31.4 | 58.8 | 5.9 | 0.0 | 100 | 51 |
| Completed primary | 0.8 | 3.3 | 20.9 | 63.9 | 8.2 | 3.0 | 100 | 368 |
| Secondary I ${ }^{2}$, | 0.6 | 2.8 | 20.2 | 63.5 | 9.3 | 3.7 | 100 | 356 |
| Secondary I ${ }^{2}$ | 1.5 | 3.0 | 9.0 | 71.6 | 9.0 | 6.0 | 100 | 67 |
| Ethnicity ${ }^{\text {3 }}$ |  |  |  |  |  |  |  |  |
| African | 0.0 | 1.6 | 12.1 | 70.9 | 10.5 | 4.8 | 100 | 313 |
| Indian | 1.6 | 5.3 | 29.1 | 56.8 | 5.1 | 2.1 | 100 | 375 |
| Mixed | 0.0 | 0.0 | 15.5 | 67.6 | 13.5 | 3.4 | 100 | 148 |
| Total | 0.7 | 3.1 | 20.3 | 64.0 | 8.6 | 3.3 | 100 | 842 |
| 1 Some or full secondary education, but fewer than five "O" level exams passed. <br> 2 Some or full secondary education, with five "O" level exams passed, at least one "A level, or some university education. <br> " Excludes 6 children of "other" ethnicity or with missing information. |  |  |  |  |  |  |  |  |

Table 6.14B shows weight-for-height as a percent of the reference population median according to the categories used in other local nutrition surveys. Two percent of children are wasted, while nearly 3 percent are overnourished. Wasting is most common among children 3-5 months of age, and among children of the most highly educated mothers. (Note that few children fall into either category, however, so caution is necessary in interpreting the results.)

| Table 6.14B Percent Distribution of Children Aged 3-36 Months by Percent of Median Weight-For-Height Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Percent of Median of the NCHS/CDC/WHO Reference Population |  |  |  |  |  |
| Background Characteristic | $<80$ | 80-120 | >120 | Total | Number of Children |
| Sex |  |  |  |  |  |
| Male | 1.7 | 95.6 | 2.7 | 100 | 407 |
| Female | 2.3 | 95.2 | 2.5 | 100 | 435 |
| Age |  |  |  |  |  |
| 3-5 Months 6-11 Months | 8.5 1.7 | 83.0 93.1 | 8.5 5.2 | 100 100 | 47 174 |
| 12-23 Months | 1.7 | 97.0 | 1.3 | 100 | 301 |
| 24-36 Months | 1.6 | 96.9 | 1.6 | 100 | 320 |
| Previous Birth Interval |  |  |  |  |  |
| First Blrth | 1.8 | 93.4 | 4.8 | 100 | 228 |
| <24 Months | 2.3 | 95.9 | 1.8 | 100 | 221 |
| 24-47 Months | 2.8 | 95.3 | 1.9 | 100 | 213 |
| 48+ Months | 1.1 | 97.2 | 1.7 | 100 | 180 |
| Residence |  |  |  |  |  |
| Urban | 2.1 | 94.4 | 3.5 | 100 | 339 |
| Rural | 2.0 | 96.0 | 2.0 | 100 | 503 |
| Mother's Education |  |  |  |  |  |
| <Complete primary | 2.0 | 98.0 | 0.0 | 100 | 51 |
| Completed primary | 1.9 | 96.2 | 1.9 | 100 | 368 |
| Secondary $\mathrm{I}^{1}{ }^{\text {2 }}$ | 1.7 | 95.2 | 3.1 | 100 | 356 |
| Secondary II ${ }^{2}$ | 4.5 | 89.6 | 6.0 | 100 | 67 |
| Ethnicity ${ }^{3}$ ( 0505100 |  |  |  |  |  |
| African | 0.6 | 95.5 | 3.8 | 100 | 313 |
| indian Mixed | 3.7 0.0 | 94.4 98.0 | 1.9 2.0 | 100 | 375 148 |
| Total | 2.0 | 95.4 | 2.6 | 100 | 842 |
| 1 Some or full secondary education, but fewer than five "on level exams passed. <br> : Some or full secondary education, with five "o" level exams passed, at least one "A" level, or some university education. <br> " Excludes 6 children of "other" ethnicity or with missing information. |  |  |  |  |  |

### 6.14 Nutritional Status of Children According to Weight-for-Age

Tables 6.15 A and 6.15 B present weight-for-age data for comparison with other surveys which might contain information on the weight of children but not their height. In Table 6.15A, nearly 7 percent of the children weigh less than -2 SDs below the reference population median weight at given ages. Children whose mothers did not complete primary school, or are East Indian, are most likely to be moderately or severely undernourished. The results measured in terms of percent of the reference population median, as shown in Table 6.15B are similar.

### 6.15 Summary of the Nutritional Status of Children Aged 3-36 Months

Tables 6.16 A and 6.16 B cross-tabulate the weight-for-height and height-for-age indices, showing the relationship between stunting and wasting. Table 6.16A shows the SD categories for comparison with other DHS surveys. While nearly 5 percent of children are stunted and nearly 4 percent wasted, less than 1 percent are both stunted and wasted. Table 6.16B shows the same cross-tabulation in terms of percent of median. Only 1 percent of children are stunted, only 2 percent are wasted, and less than one percent are both stunted and wasted.

Table 6.15A Percent Distribution of Children Aged 3-36 Months by Standard Deviation Category of Weight-For-Age Using the NCHS/CDC/WHO International Reference Population, According to Selected Background Characteristics, TTDHS 1987

| Background Characteristic | Standard Deviation from the Median of the NCHS/CDC/wHO Reference Population |  |  |  |  |  |  | Number of Children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & -3.00 \\ & \text { or } \\ & \text { More } \end{aligned}$ | $\begin{aligned} & -2.00 \\ & \text { to } \\ & -2.99 \end{aligned}$ | $\begin{aligned} & -1.00 \\ & \text { to } \\ & -1.99 \end{aligned}$ | $\begin{gathered} -0.99 \\ \text { to } \\ +0.99 \end{gathered}$ | $\begin{gathered} +1.00 \\ \text { to } \\ +1.99 \end{gathered}$ | $\begin{aligned} & +2.00 \\ & \text { or } \\ & \text { More } \end{aligned}$ | Total |  |
| EXPECTED IN REFERENCE <br> $\begin{array}{lllllllll}\text { POPULATION } & 0.1 & 2.2 & 13.6 & 68.2 & 13.6 & 2.3 & 100\end{array}$ |  |  |  |  |  |  |  |  |
| Sex |  |  |  |  |  |  |  |  |
| Male | 0.5 | 5.7 | 27.0 | 55.3 | 7.6 | 3.9 | 100 | 407 |
| Female | 0.2 | 7.4 | 29.0 | 53.3 | 6.4 | 3.7 | 100 | 435 |
|  |  |  |  |  |  |  |  |  |
| 3-5 Months | 0.0 | 0.0 | 10.6 | 55.3 | 23.4 | 10.6 | 100 | 47 |
| 6-11 Months | 0.0 | 6.9 | 29.3 | 51.7 | 6.9 | 5.2 | 100 | 174 |
| 12-23 Months | 0.7 | 8.6 | 28.2 | 54.8 | 4.0 | 3.7 | 100 | 301 |
| 24-36 Months | 0.3 | 5.3 | 29.7 | 55.0 | 7.5 | 2.2 | 100 | 320 |
| Previous Birth Interval |  |  |  |  |  |  |  |  |
| First Birth | 0.0 | 5.7 | 25.9 | 54.8 | 8.8 | 4.8 | 100 | 228 |
| <24 Months | 0.5 | 7.2 | 29.9 | 55.7 | 2.7 | 4.1 | 100 | 221 |
| 24-47 Months | 0.5 | 7.5 | 29.1 | 52.1 | 8.0 | 2.8 | 100 | 213 |
| 48+ Months | 0.6 | 5.6 | 27.2 | 54.4 | 8.9 | 3.3 | 100 | 180 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 0.3 | 4.7 | 22.1 | 58.7 | 8.3 | 5.9 | 100 | 339 |
| Rural | 0.4 | 7.8 | 32.0 | 51.3 | 6.2 | 2.4 | 100 | 503 |
| Mother's Education |  |  |  |  |  |  |  |  |
| <Complete primary | 0.0 | 11.8 | 45.1 | 41.2 | 2.0 | 0.0 | 100 | 51 |
| Completed primary | 0.3 | 7.3 | 26.9 | 56.3 | 6.0 | 3.3 | 100 | 368 |
| Secondary $\mathrm{I}^{1}$ | 0.6 | 5.9 | 28.4 | 53.1 | 8.1 | 3.9 | 100 | 356 |
| Secondary II ${ }^{\text {z }}$ | 0.0 | 1.5 | 19.4 | 59.7 | 10.4 | 9.0 | 100 | 67 |
| Ethnicity ${ }^{3}$ |  |  |  |  |  |  |  |  |
| African | 0.0 | 2.2 | 21.1 | 61.0 | 8.9 | 6.7 | 100 | 313 |
| Indian | 0.5 | 11.2 | 36.3 | 46.1 | 4.0 | 1.9 | 100 | 375 |
| Mixed | 0.0 | 4.1 | 22.3 | 60.1 | 10.8 | 2.7 | 100 | 148 |
| Total | 0.4 | 6.5 | 28.0 | 54.3 | 7.0 | 3.8 | 100 | 842 |

1 Some or full secondary education, but fewer than five "o" level exams passed.
2 Some or full secondary education, with five "o" level exams passed, at least one "A" level, or some university education.

- Excludes 6 children of "other" ethnicity or with missing information.


```
Table 6.16A Percent Distribution of Children Aged 3-36 Months, the Percent in Each
    Helght-for-Age Standard Deviation Category by Each Weight-for-Helght
    Standard Deviation Category (Waterlow Classification) Using the
    NCHS/CDC/WHO International Reference Population, TTDHS 1987
```

| Helght-for-Age | Weight-for-Height Standard Deviation from NCHS/CDC/wHO Reference Population |  |  |  | Total <br> Percent | Number of Ch1ldren |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} -2.00 \\ \text { or } \\ \text { More } \end{gathered}$ |  |  |  |  |  |
| Standard Deviation |  | -1.00 | -0.99 | +1.00 |  |  |
| from NCHS/CDC/WHO |  | to | to | or |  |  |
| Reference Population |  | -1.99 | +0.99 | More |  |  |
| -2.00 or more | 0.3 | 1.0 | 2.7 | 1.0 | 5.0 | 42 |
| -1.00 to -1.99 | 0.7 | 6.3 | 13.2 | 1.2 | 21.4 | 180 |
| -0.99 to +0.99 | 2.1 | 11.9 | 40.1 | 7.0 | 61.2 | 515 |
| +1.00 or more | 0.6 | 1.2 | 8.0 | 2.7 | 12.5 | 105 |
| Total | 3.8 | 20.3 | 64.0 | 11.9 | 100 | -- |
| Number | 32 | 171 | 539 | 100 | -- | 842 |

Table 6.16B Percent Distribution of Children Aged 3-36 Months, the Percent in Each Height-for-Age Percent of Median Category by Each Weight-for-Helght Percent of Median Category (Waterlow Classification) Using the NCHS/CDC/WHO International Reforence Population, TTDHS 1987

| Helght-for-Age Percent of Median NCHS/CDC/WHO | Weight-for-Height Percent of Median NCHS/CDC/WHO |  |  | Total <br> Percent | Number of Ch1ldren |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  | $<80$ | 80-120 | >120 |  |  |
| <90 | 0.1 | 0.6 | 0.5 | 1.2 | 10 |
| 90-110 | 1.9 | 94.3 | 1.8 | 98.0 | 825 |
| $>110$ | 0.0 | 0.5 | 0.4 | 0.8 | 7 |
| Total | 2.0 | 95.4 | 2.6 | 100 | -- |
| Number | 17 | 803 | 22 | -- | 842 |

## REFERENCES

Central Statistics Office. 1987a. 1986 Annual Statistical Digest, no.3. Republic of Trinidad and Tobago.

Central Statistics Office. 1987b. 1984 Population and Vital Statistics Report. Republic of Trinidad and Tobago.

Central Statistics Office. 1987c. Social Indicators Report. Republic of Trinidad and Tobago.
Central Statistics Office. 1983. 1980 Population and Housing Census, vol. 2. Republic of Trinidad and Tobago.

Central Statistics Office. 1981. Trinidad and Tobago Fertility Survey 1977, 2 vols. Republic of Trinidad and Tobago.

Consejo Nacional de Población y Familia (CONAPOFA) and Institute for Resource Development/ Westinghouse. 1987. Republica Dominicana Encuesta Demograficá y de Salud. DHS-1986. Santo Domingo, Dominican Republic: CONAPOFA.

Corporación Centro Regional de Poblacion (CCRP) and Ministerio de Salud de Colombia and Institute for Resource Development/Westinghouse. 1988. Tercera Encuesta Nacional de Prevalencia del Uso de Anticonceptivos y Primera de Demografía y Salud, 1986. Bogota, Colombia: CCRP.

Ebanks, G.E. 1985. Infant and Child Mortality and Fertility: Trinidad and Tobago, Guyana, and Jamaica. Voorburg, Netherlands: International Statistical Institute. (WFS Scientific Reports no. 75).

Harewood, J. 1978. Female Fertility and Family Planning in Trinidad and Tobago. Kingston, Jamaica: University of the West Indies, Institute of Social and Economic Research.

Hunte, D. 1983. Eyaluation of the Trinidad and Tobago Fertility Survey 1977. Voorburg, Netherlands: Intemational Statistical Institute. (WFS Scientific Reports no. 44).

Martorell, R. and Habicht, J.-P. 1986. "Growth in Early Childhood in Developing Countries." In Human Growth; A Comprehensive Treatise, edited by F. Falkner and J.M. Tanner, vol. 3. New York and London: Plenum Press.

Sather, Z.A. and Chidambaram, V.C. 1984. Differentials in Contraceptive Use. Voorburg, Netherlands: Intemational Statistical Institute. (World Fertility Survey Comparative Studies Crossnational Summaries no. 36).

Trussell, J. and Kost, K. 1987. "Contraceptive Failure in the United States: A Critical Review of the Literature." Studies in Family Planning 18(5): 237-283.

United Nations. Department of Technical Co-operation for Development and Statistical Office. 1986. How to Weigh and Measure Children: Assessing the Nutritional Status of Young Children in Household Surveys. New York: United Nations. (National Household Survey Capability Programme).

United States. Department of Health, Education, and Welfare. National Center for Health Statistics. 1976. "NCHS Growth Charts, 1976." Monthly Yital Statistics Report 25 (June 22; Suppl.), no. 3.

## APPENDIX A

## SURVEY DESIGN

## APPENDIX A

## SURVEY DESIGN

## A. 1 Sample Design and Implementation

The sample for the TTDHS was based on the Continuous Sample Survey of Population (CSSP), used by the Central Statistical Office since 1968, and redesigned on the basis of the 1980 Population and Housing Census.

The country is divided into 14 domains of study, comprising a total of 1,638 enumeration districts (EDs). Results from the 1980 Census indicated that some EDs were too large (more than 300 households) and some too small (fewer than 30 households) to be appropriate primary sampling units (PSUs) for the TTDHS. Therefore, the largest units were further subdivided, and the smaller units combined with contiguous ones for the CSSP sample.

The CSSP sample is selected in two stages. In the first, PSUs are systematically selected, with probability proportional to size (size equals the number of households in the PSU). Following an operation to list all households in each selected PSU, individual households are selected, with probability of selection inversely proportional to the PSU's size.

The CSSP grand sample, which provides an overall sampling fraction of one household in forty ( $1 / 40$ ) has been divided into 9 sub-samples, each with an overall sampling fraction of one in three-hundred sixty $(1 / 360)$. Each CSSP survey round, conducted quarterly, uses three of the nine sub-samples, with an overall sampling fraction of one in one-hundred twenty $(1 / 120)$.

The DHS sample was taken from the CSSP sample selected for the January-March 1987 quarter. The main objectives of the DHS sample were:
o a self-weighting sample of households,
o a sample take in each selected PSU of about 25 women aged 15-49, and
o a total of 4,000 completed interviews with women aged 15-49.
To achieve this sample size, 5,000 households were selected. This figure assumes an average of one eligible woman per household, and 294,400 eligible women nationwide, giving an overall sampling fraction of one in sixty (1/60). It also allows for 10 percent non-response at both the household and the individual interview level, commensurate with CSO experience in similar recent surveys. In total, 178 PSUs were selected throughout Trinidad and Tobago. The CSO provided each team with maps of the areas in which they were working.

According to the CSSP sample design,

$$
\begin{aligned}
\mathrm{f}^{*} & =\mathrm{P}_{1}^{*} \mathrm{P}_{2}^{*} \\
& =\begin{array}{l}
\mathrm{m}^{*} \mathrm{M}_{1} \\
--\frac{M}{M}
\end{array}
\end{aligned}
$$

where $\mathrm{f}^{*}=$ overall selection probability (all stages) for households in the CSSP sample,
$\mathrm{P}_{1}{ }_{1}=$ overall selection probability for PSUs in the CSSP sample

$\mathrm{P}_{2}=$| selection probability for households within PSUs in the CSSP |
| :--- |
| sample |

$\mathrm{m}^{*}=$ number of PSUs selected for the CSSP
$\mathrm{M}_{1}=$ measure of size of the $i-\mathrm{th}$ PSU, and
$\mathrm{M}=\Sigma \mathrm{M}_{1}$ the sum over all PSUs in Trinidad and Tobago

To achieve the TTDHS sample, the following design was used. (Notation defined above but without an asterisk refers to the corresponding information in the TTDHS sample.)

where $I_{2}$ is the household selection interval in the selected PSU. Households in selected PSUs were selected with the corresponding sampling interval $I_{2}$. The sampling interval was applied in each PSU beginning with a household selected at random using a table of random numbers.

## A. 2 Questionnaire Design and Training

The DHS model "A" questionnaire was adapted for use in Trinidad and Tobago, and pretested during February 1987. Thirteen pretest interviewers were trained for two weeks by FPATT, CSO, and IRD staff, and carried out two days of interviews. The questionnaire was further modified based on pretest results and interviewer comments.

Female interviewers were trained for the main survey for four weeks during April and May, 1987. Training consisted of two weeks of classroom lectures, discussions, and practice interviews, followed by a written exam. Trainees then worked in teams conducting practice interviews.

To ensure proper supervision of interviewers, field personnel were divided into 5 teams, 4 for Trinidad and 1 for Tobago. Teams consisted of 1 supervisor, 1 field editor/anthropometric measurer, and 4 or 5 interviewers.

Supervisors and field editors received special training in their respective duties. The former were taught to read maps and to use the household listings provided by the CSO for each PSU selected in the sample. The latter were trained to scrutinize questionnaires for accuracy, completeness, and consistency.

In addition, supervisors and field editors were trained by IRD's anthropometrist to weigh and measure young children. Trainees were taught to measure children to within 100 grams of their true weight, and 0.5 centimetres of their true length, with the true measure defined by the mean of two measurements performed by the trainer. The precision and accuracy of the measurements were assessed during standardization tests administered at the conclusion of the
anthropometric training and again midway through data collection. The former test was administered by IRD's anthropometrist, the latter by a nutritional biochemist from the Ministry of Health.

## A. 3 Fieldwork

Thirty-three field personnel, including 1 fieldwork coordinator, 5 supervisors, 4 field editors, and 23 interviewers commenced data collection on May 14. Fieldwork required nearly six weeks longer than scheduled. The two main problems were inaccurate maps and lack of adequate transport. Maps were in many cases outdated, and more time was spent locating the selected households than was anticipated. Secondly, lack of adequate transport made it difficult for interviewers to reach their assigned areas.

One result of the transport difficulties was that supervision of teams was at times compromised. Supervisors generally used their own vehicles to transport their team members, and subsequently had less time available for supervision. Since field editors were responsible for weighing and measuring children, the time available for editing was reduced. Field editors often reviewed questionnaires at home during the evenings, precluding sending interviewers back to households when errors were detected. Moreover, the need to make callback visits to weigh and measure children necessitated keeping team members together on weekends, which further slowed fieldwork.

Table A. 1 provides a summary of the outcome of the fieldwork. The table indicates that 4,122 households were successfully interviewed, out of the 4,799 selected for the sample. The household response rate was 94 percent. This represents households for which the interview was successfully completed out of 4,371 households for which an interview could have been conducted. This latter group includes households not interviewed due to the absence of a competent respondent, refusal, or the interviewer not finding the selected household. Among the 677 selected households which were not interviewed, 604 were missed because of contact difficulties: addresses not found, houses vacant, or those in which the occupants were not at home during repeated visits. Fewer than one percent of households refused to be interviewed.

The household questionnaires identified 4,196 women eligible for the individual questionnaire. This figure represents a yield of one eligible woman per household, which was the average expected. Questionnaires were completed for 3,806 women. The response rate at the individual level was 92 percent, which represents the proportion of interviews successfully completed out of the total number of women identified by the household schedule. The overall response rate, the product of response rates at the household and individual levels is 87 percent.

Contact was not made with 199 eligible women, either because the respondent was not at home during any of three visits by the interviewer, or was temporarily away from the household. Sixty-eight cases were missed due to "Other" reasons, and 83 women refused to be interviewed.

The response rates for the urban and rural areas were similar. In the urban areas, the overall response rate was 86 percent, compared with 88 percent for the rural areas.

## A. 4 Data Processing

The data processing staff consisted of a chief editor, 3 data entry clerks, and a control clerk who logged in questionnaires when they reached the office. All data entry staff completed the main interviewer training, in addition to data processing instruction by IRD staff. Data entry, editing, and tabulations were performed on microcomputers using the Integrated System for Survey Analysis (ISSA) programme, developed by IRD. The system performed range, skip, and consistency checks upon data entry, so that relatively little machine or manual editing was required. The chief editor was responsible for supervising data entry, and for resolving inconsistencies in the questionnaires detected during secondary machine editing.

| Table A. 1 Sumary of Results of Household and Individual Interviews, by Residence, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Residence |  |  |
| Results of |  |  |  |
| Response Rate | Urban | Rural | Total |
| Selected Households |  |  |  |
| Interviewed | 84.7 | 87.0 | 85.9 |
| Household present but no competent respondent at home | 1.8 | 1.8 | 1.8 |
| Interview postponed | 0.1 | 0.1 | 0.1 |
| Refused | 1.6 | 0.2 | 0.9 |
| Dwelling not found | 2.8 | 2.0 | 2.4 |
| Household absent night before interview ${ }^{1}$ | 3.7 | 4.2 | 4.0 |
| Dweiling vacant/address not a dwelling ${ }^{2}$ | 4.3 | 3.7 | 4.0 |
| not a dwelling destroyed ${ }^{\text {n }}$ | 0.5 | 0.4 | 4.0 |
| Otherl | 0.4 | 0.6 | 0.5 |
| Total Percent | 100 | 100 | 100 |
| Number | 2,310 | 2,489 | 4,799 |
| Household Reaponse Rate | 93.1 | 95.4 | 94.3 |
| Eligible Women |  |  |  |
| Interviewed | 90.4 | 91.0 | 90.7 |
| Not at home | 3.5 | 5.7 | 4.7 |
| Postponed | 0.5 | 0.2 | 0.3 |
| Refused | 3.2 | 1.0 | 2.0 |
| Partly completed | 0.6 | 0.6 | 0.6 |
| Other 1 | 1.8 | 1.5 | 1.6 |
| Total Percent | 100 | 100 | 100 |
| Number | 1,870 | 2,326 | 4,196 |
| Eligible Woman Response Rate | 92.0 | 92.3 | 92.2 |
| Overall Responee Rate' | 85.7 | 88.1 | 86.9 |
| No. of clusters assigned | 89 | 89 | 178 |
| Average number of eligible women per household | 0.96 | 1.07 | 1.02 |
| 1 Excluded from calculation of Household Response Rate. <br> ? The product of the Household Response Rate and the Eligible Woman Response Rate. |  |  |  |

## APPENDIX B

## SAMPLING ERRORS

## APPENDIX B

## SAMPLING ERRORS

The results from sample surveys are affected by two types of errors: nonsampling error and sampling error. The former is due to mistakes in implementing field activities, such as failing to locate and interview the correct household, errors in asking questions, data entry errors, etc. While numerous steps were taken to minimize this sort of error in the TTDHS, nonsampling errors are impossible to avoid entirely, and are difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of women selected in the TTDHS is only one of many samples of the same size that could have been drawn from the population using the same design. Each sample would have yielded slightly different results from the sample actually selected. The variability observed among all possible samples constitutes sampling error, which can be estimated from survey results (though not measured exactly).

Sampling error is usually measured in terms of the "standard error" (SE) of a particular statistic (mean, percentage, etc.), which is the square root of the variance of the statistic across all possible samples of equal size and design. The standard error can be used to calculate confidence intervals within which one can be reasonably sure the true value of the variable for the whole population falls. For example, for any given statistic calculated from a sample survey, the value of that same statistic as measured in 95 percent of all possible samples of identical size and design will fall within a range of plus or minus two times the standard error of that statistic.

If simple random sampling had been used to select women for the TTDHS, it would have been possible to use straightforward formulas for calculating sampling errors. However, the TTDHS sample design used two stages and clusters of households, and it was necessary to use more complex formulas. Therefore, the computer package CLUSTERS, developed for the World Fertility Survey, was used to compute sampling errors.

CLUSTERS treats any percentage or average as a ratio estimate, $r=y / x$, where both $x$ and $y$ are considered to be random variables. The variance of $r$ is computed using the formula given below with the standard error being the square root of the variance:

$$
\begin{aligned}
& \operatorname{var}(r)=\frac{1-f}{x^{2}} \underset{h=1}{H}\left[\frac{m_{\mathrm{b}}}{m_{\mathrm{h}}-1}\left(\sum_{i=1}^{\mathrm{m}_{\mathrm{h}}} \mathrm{z}_{\mathrm{h} 1}^{2}-\frac{\mathrm{z}_{\mathrm{h}}^{2}}{m_{\mathrm{h}}}\right)\right] \\
& \text { in which, } \mathrm{z}_{\mathrm{h} 1}=\mathrm{y}_{\mathrm{h} 1}-r \mathrm{x}_{\mathrm{h} 1}, \text { and } \mathrm{z}_{\mathrm{h}}=\mathrm{y}_{\mathrm{h}}-r \mathrm{x}_{\mathrm{h}},
\end{aligned}
$$

where $h \quad$ represents the stratum and varies from 1 to $H$,
$m_{h}$ is the total number of PSUs selected in the $h-t h$ stratum,
$Y_{h 1}$ is the sum of the values of variable $y$ in PSU i in the $h$-th stratum,
$\mathrm{x}_{\mathrm{h} 1}$ is the sum of the number of cases (women) in PSU i in the $\mathrm{h}-\mathrm{th}$ stratum, and
$f \quad$ is the overall sampling fraction, which is so small that CLUSTERS ignores it.
In addition to the standard errors, CLUSTERS computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design, and the standard error that would result if a simple random sample had been used. A DEFT value of 1 indicates that the sample design is as efficient as a simple random sample; a value greater than 1 indicates that the increase in the sampling error is due to the use of a more complex and less statistically efficient design.

Sampling errors are presented in Table B. 1 for 35 variables considered to be of primary interest. Results are presented for the whole country, for urban and rural areas, and for three age groups. For each variable, the type of statistic (mean, proportion) and the base population (e.g., all women, women in union) are given in Table B.1. Table B. 2 presents the value of the statistic, R; its standard error, SE; the actual number of cases, N ; the DEFT value; and the relative standard error, $\mathrm{SE} / \mathrm{R}$ for each variable. In addition to these indicators, the 95 percent confidence limits for the statistic, R-2SD and R+2SD, are presented.

In general, the sampling errors for the country as a whole are small, which means that the TTDHS results are reliable. For example, in the whole sample, the survey found that women average 2.059 children ever bom; the standard error of this estimate is .037 . Therefore, to obtain the 95 percent confidence limit, one adds and subtracts twice the standard error to the sample estimate, i.e., $2.05 \pm .074$. There is a 95 percent chance that the true average number of children ever bom to all women 15-49 in Trinidad and Tobago is between 1.985 and 2.134. This same calculation can be performed for all other variables listed.


Table B. 2 Sampling Errors: Total TTDHS 1987

| Variable | Value | Standard Error | No. of Cases | Design Effect | Rela- <br> tive <br> Error | Confidence Limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | R-2SE | R+2SE |
| RESI | . 444 | . 011 | 3806 | 1.400 | . 025 | . 421 | . 467 |
| EDUC | . 538 | . 009 | 3806 | 1.172 | . 018 | . 519 | . 557 |
| CUNION | . 688 | , 008 | 3806 | 1.020 | .011 | . 672 | . 703 |
| MBEF 22 | . 612 | . 009 | 3806 | 1.145 | . 015 | . 594 | . 630 |
| BREA | 10.122 | . 467 | 3806 | . 984 | . 046 | 9.188 | 11.057 |
| AMENO | 3.498 | . 285 | 3806 | . 920 | . 082 | 2.927 | 4.068 |
| ABSTI | 2,631 | . 261 | 3806 | . 948 | . 099 | 2.109 | 3.153 |
| NCEB | 4.333 | . 111 | 3806 | 1.031 | . 026 | 4.110 | 4.556 |
| PRG | . 051 | . 004 | 3806 | 1.123 | . 079 | . 043 | . 059 |
| CCEB | 2.059 | . 037 | 3806 | 1.003 | . 018 | 1.985 | 2.134 |
| KNW | . 990 | . 002 | 2617 | . 917 | . 002 | . 987 | . 994 |
| KWMD | . 989 | . 002 | 2617 | . 933 | . 002 | . 985 | . 992 |
| EVUS | . 831 | . 008 | 2617 | 1.085 | . 010 | . 815 | . 847 |
| cuus | . 527 | . 011 | 2617 | 1.141 | . 021 | . 505 | . 549 |
| USPL | . 140 | , 008 | 2617 | 1.165 | . 056 | . 124 | . 156 |
| USEIUD | . 044 | . 005 | 2617 | 1.226 | . 111 | . 034 | . 054 |
| USVAGI | . 050 | . 004 | 2617 | . 843 | . 072 | . 043 | . 057 |
| USECON | . 118 | . 006 | 2617 | . 944 | . 050 | . 107 | . 130 |
| USEST | . 082 | . 006 | 2617 | 1.079 | . 070 | . 071 | . 094 |
| USSP | . 026 | . 003 | 2617 | 1.047 | . 126 | . 019 | . 032 |
| USWITH | . 053 | . 004 | 2617 | 1.022 | . 085 | . 044 | . 062 |
| KCYCLE | . 179 | . 008 | 3804 | 1.367 | . 048 | .162 | . 196 |
| GVSRCE | . 385 | . 014 | 1196 | 1.013 | . 037 | . 356 | . 413 |
| FPSRCE | . 146 | . 010 | 1196 | 1.015 | . 071 | . 126 | . 167 |
| NOWANT | . 468 | . 010 | 2617 | 1.014 | . 021 | . 449 | . 488 |
| DELAY | . 201 | . 009 | 2617 | 1.110 | . 043 | .183 | . 218 |
| IDEAL | 2.918 | . 027 | 3745 | 1.024 | . 009 | 2.865 | 2.972 |
| CSUR | 1.961 | . 034 | 3806 | . 974 | . 017 | 1.892 | 2.029 |
| tetanu | . 308 | . 014 | 3806 | 1.137 | . 047 | . 280 | . 337 |
| ATTE | . 296 | . 015 | 3806 | 1.196 | . 050 | . 266 | . 326 |
| WCARD | . 795 | . 023 | 3806 | 1.102 | . 029 | . 749 | . 840 |
| FULLIM | . 272 | . 027 | 3806 | 1.067 | . 100 | . 217 | . 326 |
| DIAR | . 060 | . 006 | 3806 | . 927 | . 095 | . 049 | . 072 |
| MEDTRE | . 496 | . 058 | 3806 | 1.100 | . 117 | . 380 | . 611 |
| DIATRE | . 796 | . 042 | 3806 | 1.013 | . 053 | . 712 | . 881 |


| Table B. 2 | Sampling Errors (con't): |  |  | Women Aged 15-24, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Standard Error | No. of Cases | Design Effect | Relative Error | Confidence Limits |  |
|  | Value |  |  |  |  | R-2SE | R+2SE |
| RESI | . 415 | . 016 | 1428 | 1.227 | . 039 | . 383 | . 447 |
| EDUC | . 779 | . 012 | 1428 | 1.120 | . 016 | . 754 | . 803 |
| CUNION | . 412 | . 013 | 1428 | 1.036 | . 033 | . 385 | . 439 |
| MBEF22 | . 458 | . 015 | 1428 | 1.149 | . 033 | . 428 | . 488 |
| BREA | 9.628 | . 772 | 1428 | 1.012 | . 080 | 8.085 | 11.171 |
| AMENO | 3.516 | .456 | 1428 | .891 | .130 | 2.605 | 4.427 |
| ABSTI | 3.014 | . 442 | 1428 | .915 | . 147 | 2.130 | 3.898 |
| NCEB | . 000 | . 000 | 1428 | . 000 | . 000 | . 000 | . 000 |
| PRG | . 064 | . 007 | 1428 | 1.061 | . 107 | . 051 | . 078 |
| CCEB | . 529 | . 027 | 1428 | 1.042 | . 052 | . 474 | . 583 |
| KNW | . 986 | . 005 | 589 | 1.002 | . 005 | . 977 | . 996 |
| KhMD | . 986 | . 005 | 589 | 1.002 | . 005 | . 977 | . 996 |
| EVUS | . 789 | . 016 | 589 | . 973 | . 021 | . 757 | . 822 |
| cuds | . 523 | . 022 | 589 | 1.047 | . 041 | .480 | . 566 |
| USPL | .217 | . 017 | 589 | . 979 | . 077 | . 184 | . 251 |
| USEIUD | . 032 | . 007 | 589 | . 961 | . 217 | . 018 | . 046 |
| USVAGI | . 041 | . 007 | 589 | . 904 | . 181 | . 026 | . 055 |
| USECON | .107 | . 014 | 589 | 1.064 | .127 | . 080 | . 134 |
| USEST | . 002 | . 002 | 589 | . 998 | . 998 | -. 002 | . 005 |
| USSP | . 019 | . 005 | 589 | . 933 | . 279 | . 008 | . 029 |
| USWITH | . 087 | . 011 | 589 | . 983 | . 132 | . 064 | . 109 |
| KCYCLE | . 154 | . 011 | 1427 | 1.166 | . 072 | . 132 | . 176 |
| GVSRCE | . 376 | . 032 | 255 | 1.050 | .085 | . 313 | . 440 |
| FPSRCE | . 098 | . 019 | 255 | 1.037 | . 197 | . 059 | .137 |
| NOWANT | . 278 | . 020 | 589 | 1.066 | . 071 | . 239 | . 318 |
| DELAY | . 477 | . 023 | 589 | 1.116 | . 048 | . 431 | . 523 |
| IDEAL | 2.584 | . 038 | 1410 | 1.155 | . 015 | 2.509 | 2.660 |
| CSUR | . 510 | . 026 | 1428 | 1.055 | . 052 | . 457 | . 563 |
| tetanu | . 275 | . 021 | 1428 | . 989 | . 078 | . 232 | . 318 |
| ATTE | . 241 | . 021 | 1428 | 1.011 | . 086 | . 199 | . 282 |
| WCARD | . 821 | . 034 | 1428 | 1.038 | . 041 | . 754 | . 889 |
| FULLIM | . 339 | . 044 | 1428 | . 988 | . 129 | . 252 | .426 |
| DIAR | . 081 | . 012 | 1428 | . 983 | . 148 | . 057 | . 105 |
| MEDTRE | . 417 | . 080 | 1428 | 1.084 | . 192 | . 256 | . 577 |
| DIATRE | . 729 | . 070 | 1428 | . 973 | . 096 | . 588 | . 870 |


| Table B. 2 | Sampling Errors (con't): |  |  | Women Aged 25-34, TTDHS 1987 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Standard Error | No. of Cases | Design Effect | Relative Error | Confidence Limits |  |
|  | Value |  |  |  |  | R-2SE | R+2SE |
| RES I | . 468 | . 017 | 1288 | 1.239 | . 037 | . 434 | . 503 |
| EDUC | . 475 | .016 | 1288 | 1.178 | . 035 | . 442 | . 508 |
| CUNION | . 849 | . 010 | 1288 | . 973 | . 011 | . 829 | . 868 |
| MBEF22 | . 695 | . 015 | 1288 | 1.183 | . 022 | . 665 | . 725 |
| BREA | 9.990 | . 642 | 1288 | . 961 | . 064 | 8.707 | 11.273 |
| AMENO | 3.472 | . 399 | 1288 | . 922 | . 115 | 2.673 | 4.271 |
| ABSTI | 2.437 | . 364 | 1288 | . 971 | . 149 | 1.708 | 3.165 |
| NCEB | . 000 | . 000 | 1288 | . 000 | . 000 | . 000 | . 000 |
| PRG | . 066 | . 008 | 1288 | 1.087 | . 114 | . 051 | . 081 |
| CCEB | 2.207 | . 062 | 1288 | 1.245 | . 028 | 2.083 | 2.332 |
| KNW | . 996 | . 002 | 1093 | 1.002 | . 002 | . 993 | 1.000 |
| KWMD | . 995 | . 002 | 1093 | 1.000 | . 002 | . 991 | . 000 |
| EVUS | . 864 | . 011 | 1093 | 1.056 | . 013 | . 842 | . 886 |
| CUUS | . 553 | . 015 | 1093 | 1.026 | . 028 | . 522 | . 583 |
| USPL | . 171 | . 012 | 1093 | 1.091 | . 073 | . 146 | . 196 |
| USEIUD | . 054 | . 008 | 1093 | 1.164 | . 147 | . 038 | . 070 |
| USVAGI | . 055 | . 007 | 1093 | 1.001 | . 126 | . 041 | . 069 |
| USECON | .137 | . 010 | 1093 | . 932 | . 071 | . 118 | . 157 |
| USEST | . 055 | . 007 | 1093 | . 989 | . 124 | . 041 | . 069 |
| USSP | . 021 | . 005 | 1093 | 1.139 | . 235 | . 011 | . 031 |
| USWITH | . 047 | . 006 | 1093 | 1.017 | . 139 | . 034 | . 060 |
| KCYCLE | . 210 | . 014 | 1288 | 1.229 | . 067 | . 182 | . 238 |
| GVSRCE | . 390 | . 021 | 534 | 1.013 | . 055 | . 347 | . 432 |
| FPSRCE | . 124 | . 015 | 534 | 1.026 | . 118 | . 094 | . 153 |
| NOWANT | . 450 | . 016 | 1093 | 1.088 | . 036 | . 417 | . 483 |
| DELAY | . 211 | . 013 | 1093 | 1.022 | . 060 | . 186 | . 237 |
| IDEAL | 2.831 | . 040 | 1270 | . 938 | . 014 | 2.752 | 2.910 |
| CSUR | 2.135 | . 060 | 1288 | 1.246 | . 028 | 2.015 | 2.255 |
| TETANU | . 329 | . 018 | 1288 | 1.040 | . 056 | . 292 | . 366 |
| ATTE | . 311 | . 020 | 1288 | 1.177 | . 065 | . 270 | . 352 |
| WCARD | . 787 | . 034 | 1288 | 1.161 | . 043 | . 719 | . 855 |
| FULLIM | . 226 | . 033 | 1288 | . 982 | . 145 | . 160 | . 291 |
| DIAR | . 056 | . 008 | 1288 | . 954 | . 143 | . 040 | . 072 |
| MEDTRE | . 526 | . 079 | 1288 | 1.022 | . 151 | . 368 | . 685 |
| DIATRE | .842 | . 051 | 1288 | 1.020 | . 061 | . 740 | . 944 |

Table B. 2 Sampling Errors (con't): Women Aged 35-49, TTDHS 1987

| Variable | Value | Stan- <br> dard <br> Error | No. of Cases | Design Effect | Relative Error | Confidence Limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | R-2SE | R+25E |
| RESI | . 453 | .016 | 1090 | 1.045 | . 035 | . 422 | . 485 |
| EDUC | . 298 | . 016 | 1090 | 1.158 | . 054 | . 266 | . 330 |
| CUNION | . 858 | . 012 | 1090 | 1.170 | . 014 | . 833 | . 883 |
| MBEF22 | . 715 | . 014 | 1090 | 1.028 | . 020 | . 687 | . 743 |
| BREA | 12.169 | 1.401 | 1090 | . 979 | . 115 | 9.367 | 14.971 |
| AMENO | 3.549 | . 974 | 1090 | 1.089 | . 274 | 1.601 | 5.497 |
| ABSTI | 2.282 | . 700 | 1090 | . 978 | . 307 | . 882 | 3.682 |
| NCEB | 4.333 | . 111 | 1090 | 1.031 | . 026 | 4.110 | 4.556 |
| PRG | . 016 | . 004 | 1090 | . 950 | . 229 | . 008 | . 023 |
| CCEB | 3.889 | . 091 | 1090 | 1.144 | . 023 | 3.708 | 4.070 |
| KNW | . 985 | . 004 | 935 | . 994 | . 004 | . 977 | . 993 |
| KWMD | . 982 | . 004 | 935 | . 994 | . 004 | . 973 | . 991 |
| evos | . 819 | . 014 | 935 | 1.092 | . 017 | . 792 | . 847 |
| CUUS | . 499 | . 015 | 935 | . 937 | . 031 | . 469 | . 530 |
| USPL | . 055 | .007 | 935 | . 908 | . 124 | . 041 | . 068 |
| USEIUD | . 041 | . 007 | 935 | 1.119 | . 178 | . 026 | . 055 |
| USVAGI | . 049 | . 007 | 935 | . 979 | . 141 | . 035 | . 063 |
| USECON | . 104 | . 009 | 935 | . 934 | . 090 | . 085 | . 122 |
| USEST | . 165 | . 013 | 935 | 1.085 | . 080 | . 138 | . 191 |
| USSP | . 035 | . 007 | 935 | 1.107 | . 189 | . 022 | . 049 |
| USWITH | . 039 | . 006 | 935 | 1.003 | . 164 | . 026 | . 051 |
| KCYCLE | . 174 | . 013 | 1089 | 1.095 | . 072 | . 149 | . 200 |
| GVSRCE | . 383 | . 024 | 407 | . 980 | . 062 | . 336 | . 431 |
| FPSRCE | . 206 | . 020 | 407 | . 989 | . 096 | . 167 | . 246 |
| NOWANT | . 610 | . 016 | 935 | 1.028 | . 027 | . 577 | . 642 |
| DELAY | . 014 | . 004 | 935 | 1.005 | . 277 | . 006 | . 022 |
| IDEAL | 3.465 | . 062 | 1065 | 1.050 | . 018 | 3.340 | 3.590 |
| CSUR | 3.655 | . 082 | 1090 | 1.099 | . 023 | 3.491 | 3.820 |
| tetanu | . 303 | . 033 | 1090 | 1.010 | . 109 | . 237 | . 369 |
| ATTE | . 361 | . 041 | 1090 | 1.201 | . 115 | . 278 | . 444 |
| WCARD | . 744 | . 076 | 1090 | 1.136 | . 102 | . 592 | . 897 |
| FULLIM | . 250 | . 070 | 1090 | . 903 | .280 | . 110 | . 390 |
| DIAR | .031 | . 012 | 1090 | 1.117 | . 390 | . 007 | . 055 |
| MEDTRE | . 750 | . 159 | 1090 | 1.040 | . 212 | . 431 | 1.069 |
| DIATRE | . 875 | . 119 | 1090 | 1.017 | . 136 | . 637 | 1.113 |

Table B. 2 Sampling Errors (con't): Urban, TTDHS 1987

| Variable | Value | Standard Error | No. of Cases | Design Effect | Rela- <br> tive <br> Error | Confidence Limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\mathrm{R}-2 \mathrm{SE}$ | R+2SE |
| RESI | 1.000 | . 000 | 1690 | . 000 | . 000 | 1.000 | 1.000 |
| EDUC | . 623 | . 014 | 1690 | 1.153 | . 022 | . 596 | . 650 |
| CUNION | . 693 | . 013 | 1690 | 1.129 | . 018 | . 668 | . 719 |
| MBEF 22 | . 625 | . 015 | 1690 | 1.283 | . 024 | . 595 | . 655 |
| BREA | 9.864 | . 720 | 1690 | 1.001 | . 073 | 8.423 | 11.305 |
| AMENO | 2.952 | . 413 | 1690 | . 944 | . 140 | 2.126 | 3.778 |
| ABSTI | 2.808 | .406 | 1690 | . 938 | . 145 | 1.995 | 3.621 |
| NCEB | 3.786 | . 129 | 1690 | . 880 | . 034 | 3.527 | 4.045 |
| PRG | . 047 | . 005 | 1690 | . 971 | . 106 | . 037 | . 057 |
| CCEB | 1.900 | . 053 | 1690 | 1.028 | . 028 | 1.795 | 2.005 |
| KNW | . 991 | . 002 | 1172 | . 788 | . 002 | . 986 | . 995 |
| KWMD | . 990 | . 002 | 1172 | . 813 | . 002 | . 985 | . 995 |
| EVUS | . 848 | . 011 | 1172 | 1.063 | . 013 | . 826 | . 870 |
| cuus | . 539 | . 015 | 1172 | 1.015 | . 027 | . 510 | . 569 |
| USPL | . 159 | . 011 | 1172 | 1.006 | . 068 | .137 | . 180 |
| USEIUD | . 053 | . 008 | 1172 | 1.242 | . 154 | . 037 | . 069 |
| USVAGI | . 055 | . 006 | 1172 | . 840 | . 101 | . 044 | . 067 |
| USECON | . 103 | . 009 | 1172 | 1.008 | . 087 | . 085 | . 121 |
| USEST | . 078 | . 008 | 1172 | 1.037 | . 104 | . 061 | . 094 |
| USSP | . 037 | . 006 | 1172 | 1.158 | . 173 | . 024 | . 049 |
| USWITH | . 041 | . 005 | 1172 | . 942 | . 133 | . 030 | . 052 |
| KCYCLE | . 207 | . 014 | 1690 | 1.386 | . 066 | . 179 | . 234 |
| GVSRCE | . 295 | . 021 | 560 | 1.088 | . 071 | . 253 | . 337 |
| FPSRCE | . 164 | . 017 | 560 | 1.067 | . 102 | . 131 | . 198 |
| NOWANT | . 433 | . 014 | 1172 | . 996 | . 033 | . 404 | . 461 |
| DELAY | . 210 | . 010 | 1172 | . 881 | . 050 | . 189 | . 231 |
| IDEAL | 2.903 | . 040 | 1662 | 1.001 | . 014 | 2.824 | 2.982 |
| CSUR | 1.798 | . 048 | 1690 | . 996 | . 026 | 1.703 | 1.893 |
| tetanu | . 289 | . 022 | 1690 | 1.155 | . 077 | . 245 | . 334 |
| ATTE | . 357 | . 023 | 1690 | 1.128 | . 064 | . 311 | . 403 |
| WCARD | . 771 | . 039 | 1690 | 1.209 | . 051 | . 693 | . 849 |
| FULLIM | . 260 | . 038 | 1690 | . 979 | . 144 | .185 | . 335 |
| DIAR | . 064 | . 009 | 1690 | . 918 | . 141 | . 046 | . 082 |
| MEDTRE | . 549 | . 074 | 1690 | . 968 | . 135 | . 401 | . 697 |
| DIATRE | . 804 | . 060 | 1690 | . 980 | . 075 | . 683 | . 925 |

Table B. 2 Sampling Errors (con't): Rural, TTDHS 1987


## APPENDIX C

## QUESTIONNAIRE

```
FAMILY PLANNING ASSOCIATION OF TRINIDAD AND TOBAGO
    DEMOGRAPHIC AND HEALTH SURVEY
                        HOUSEHOLD SCHEDULE
```




TICK HERE IF CONTINUATION SHEET USED [-]] total number of eligible women on THIS SHEET


NOTE: WOMAN IS ELIG1日LE IF COL, (3) $=1$, COL. (4) $=2$, AND COL, $(5)=15-49$,


Just to make sure that $I$ have this right:

1) Are there any other persons such as
small children or infants that we
have not listed?
2) In addition, are there any other people
whousually live here but are not members of
your family such as donestic servants
odgers or friends whom we have not listed?
3) Are there any guests or visitors who are temporarily staying with the family and who spent last night here that are not listed?








Interviener: first, record the hames df all births the mahan mentions by progressimg down colunn 212. SECDND, ASK QUESTIONS 213-218 AS APPROPRIATE FDR EACH BIRTH. record tuins on separate lines and connect mith a bracket.

211 How I mould lake to talk to you about all of your barths, whether stall alive or not. It 15 aportant that you begin wath your farst birth, and then report the rest of your births in the order that they occurred.
Nom, please tell ae the nane of your farst barth.

\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
212 \\
What is the nane of your IFIRST, SECOND, atc.) birth?
\end{tabular} \& \begin{tabular}{l}
213 \\
Is (NAME) a boy or a garl?
\end{tabular} \& \begin{tabular}{l}
214 \\
In what sonth and year mas (NAME) born?
\end{tabular} \& \begin{tabular}{l}
215 \\
Is (NAME) \\
still alive?
\end{tabular} \& \begin{tabular}{l}
216 IF DEAD: \\
Hom old was (RAME) when he/she died? RECORD IN DAYS IF UNDER I MONTH; MONTHS IF UNDER 2 YEARS; IN YEARS IF 2+ YEARS.
\end{tabular} \& 217 If ALJVE: Hon old was (MAME) at his/her last birthday? \& \& \begin{tabular}{l}
ALIVE: \\
E) \\
mith \\
?
\end{tabular} \\
\hline 01 \& BOY \(\begin{array}{cc}\text { 6IRL } \\ 1 \& 2\end{array}\) \&  \& \(\begin{array}{cc}\text { YES } \& \text { ND } \\ 1 \& 2\end{array}\) \& \begin{tabular}{l}
DAYS..... \\
MONTHS. . 2 \\
YEARS... 3 \\
(GO TO MEXT DIRTH)
\end{tabular} \& AGE.... \(\square\) \& YES
1 \& NO
2 \\
\hline \[
02
\] \& \(\begin{array}{cc}\text { BOY } \& \text { EIRL } \\ 1 \& 2\end{array}\) \& \(\begin{array}{llllll}\text { MONTH. . } \\ \text { YEAR.... } \& \square\end{array}\) \& \[
\begin{array}{cc}
\text { YES } \& \text { ND } \\
1 \& 2
\end{array}
\] \& \begin{tabular}{lll} 
DAYS..... \& - \\
MONTHS. 2 \& - \\
YEARS... \& - \\
(GO TD NEXT \& BIRTH)
\end{tabular} \& AGE.... \(\square\) \& YES \& N0 \\
\hline 03 \& BDY 6 GIRL \& MDNTH. . .
YEAR.... \(\square^{-\square}\) \& \(\begin{array}{cc}\text { YES } \& \text { ND } \\ 1 \& 2\end{array}\) \& \begin{tabular}{lll} 
DAYS....1 \& \(\square\) \\
HORTHS.. \& \(\square\) \\
YEARS... \& \(\square\) \& - \\
(GD TD NEXT \& 日IRTH)
\end{tabular} \& AGE.... \(\square \square\) \& YES \& \\
\hline \[
{ }^{04}
\] \& \(\begin{array}{cc}\text { BOY } \& \text { 6IRL } \\ 1 \& 2\end{array}\) \& \begin{tabular}{ll|l|l|} 
HONTH. . \\
YEAR.... \& \(\square\) \\
\hline
\end{tabular} \& \(\begin{array}{cc}\text { YES } \& \text { NO } \\ 1 \& 2\end{array}\) \& \begin{tabular}{l}
DAYS....I \\
MONTHS. . 2 \\
YEARS... 3 \\
(60 TO NEXT BIRTH)
\end{tabular} \& AGE... \(\square\) \& YES \& ND
2 \\
\hline \[
05
\] \& \(\begin{array}{cc}\text { BOY } \& \text { 6IRL } \\ 1 \& 2\end{array}\) \& \begin{tabular}{l|l|} 
MONTH... \\
YEAR.... \\
\(\square\)
\end{tabular} \& YES \(n\) Mo \& \begin{tabular}{l}
DAYS.... 1 \\
MONTHS. . 2 \\
YEARS... 3 \\
(SO TD NEXT BIRTH)
\end{tabular} \& AGE... [ \(\square \square\) \& YES \& N0 \\
\hline \[
06
\] \& \(\begin{array}{cc}\text { BOY } \& \text { 6IRL } \\ 1 \& 2\end{array}\) \&  \& \(\begin{array}{cc}\text { YES } \& \text { ND } \\ 1 \& 2\end{array}\) \& \begin{tabular}{l}
DAYS.... 1 \\
MONTHS. . 2 \\
YEARS... 3 \\
(GO TO WEXT BIRTK)
\end{tabular} \& A6E.... \(\square\) \& YES \& M0
2 \\
\hline \[
07
\] \& \(\begin{array}{cc}\text { BOY } \& \text { GIRL } \\ 1 \& 2\end{array}\) \& \(\begin{array}{llll}\text { MONTH. . } \\ \text { YEAR... } \& \square\end{array}\) \& YES \(\quad\) MO \&  \& AGE. ... \(\square\) \& YES \& M

2 <br>
\hline
\end{tabular}

| 212 <br> What 15 <br> the name of your (EIGHTH, NINTH, etc.) barth? | 213 <br> Is (NAME) a <br> boy or a girl? | 214 <br> In what sonth and year was (MAME) born? | 215 <br> Is (NAME) stall alive? | 216 IF DEAD: How old was (MAME) when he/she died? RECDRD IN DAYS IF UNDER 1 MONTH; MONTHS If Under 2 Years; in YEARS IF 2+ YEARS. | 217 If AlIVE: How old mas (MAME) at his/her last birthday? | 218 If ALIVE; <br> Is (MAME) living mith you now? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{08}$ | $\begin{array}{cc}\text { BOY } & \text { GIRL } \\ 1 & 2\end{array}$ | MONTH. . <br> YEAR... | $\begin{array}{cc}\text { YES } & \text { NO } \\ 1 & 2\end{array}$ |  | ABE.... |  |
| ${ }^{09}$ | $\begin{array}{cc}\text { BOY } & \text { GIRL } \\ 1 & 2\end{array}$ | MONTH... <br> YEAR.... | $\begin{array}{cc}\text { YES } & \text { MO } \\ 1 & 2\end{array}$ |  | AGE.... | YES ND <br> 1 $2$ |
| 10 | $\begin{array}{cc}\text { BOY } & \text { GIRL } \\ 1 & 2\end{array}$ | HONTH. . . <br> YEAR... <br> $\square$ | $\begin{array}{cc}\text { YES } & \text { NO } \\ 1 & 2\end{array}$ |  | AGE.... [ |  |
| $11$ | $\begin{array}{cc}\text { BOY } & \text { GIRL } \\ 1 & 2\end{array}$ | HINTH. .  <br> YEAR. ... $\square$ | YeS $\quad$ MO |  | AGE.... |  |
| 12 | BOY 6 GIRL | MONTH... Year.... | $\begin{array}{cc}\text { YeS } & \text { no } \\ 1 & 2\end{array}$ | DAYS....1 $\square$ <br> MONTHS..  <br> YEARS...  <br> ( 60 TO 219$)$  | AGE.... | $\begin{array}{cc} \text { YES } & \text { NO } \\ 1 & 2 \end{array}$ |
| 219 CHECK 20日: COMPARE NUMBER OF BIRTHS RECORDED |  |  |  |  |  |  |
| 220 | your last | child born by | capsarean | $\begin{aligned} & \text { YES.. } \\ & \text { NO. } \\ & \text { DK.. } \end{aligned}$ |  |  |
| $221 \|$In | the past 12 | months, have ended before | you had a 7 months? | YES.. | . . . . . . . . | ....... 1 |
| 222D | the pregna ult of acta k? | ney end spont | aneously or | r as a SPONT <br> else  | ANEOUSLY. T OF ACTION | ........ ${ }^{1}$ |


|  | QUESTIONS AND FILTERS |  |
| :---: | :---: | :---: |
| 223 | Did this require you to seek follow-up care from a hospital, nursing home or any other place? IF YES: Fron which type of place? | HOSPITAL. . . . . . . . . . . . . . . . <br> NURSING HOME.............. 2 <br> OTHER $\qquad$ <br> (specify) <br> NO TREATMENT REQUIRED... 4 |
| 224 | Are you pregnant now? |  |
| 225 | For how nany months have you been pregnant? | MONTHS. . . . . . . . . . [ ${ }^{--}$ |
| 226 | Since you have been pregnant, have you had an injection to prevent the baby from getting tetanus, that 15 convulsions, after birth? |  |
| 227 | Did you see anyone for a check on this pregnancy? |  |
| 22日 | Whom did you see? <br> PROBE FOR TYPE OF PERSON AND RECORD MOST QUALIFIED. | DOCTOR...................... 1 NURSE/TRAINED MIDMIFE... 2 MEDI/TRADITIONAL BIRTH ATtENDANT......... 3 OTHER $\qquad$ (specify) |
| 229 | How long ago did your last menstrual period start? |  |
| 230 | When during her monthly cycle do you think a wonan has the greatest chance of becoming pregnant? <br> PRDBE: What are the days during the month when a woan has to be careful to avoid becoming pregnant? <br> If RESPONDENT DOES NOT KNOW, CIRCLE '5'. | DURING HER PERIOD (1-5).1 RIGHT AFTER HER PERIDD has ENDED ( $6-9$ )....... 2 in the middle of the CYCLE (10-19).......... 3 just before her period日EGINS (20-28)........4 AT ANY TIME............... 5 OTHER $\qquad$ (specify) |
| 231 | Have you ever had a German measles (rubella) vaccine? |  |
| 232 | PRESENCE OF OTHERS AT THIS POIN: |  |

INTERVIEWER: a) READ 301 ALDUD AND CIRCLE CODE I IN 302 FOR EACH METHOD HENTIONED SPONTANEOUSLY.
b) then proceed doink the coljun, continuing question 302, readimg the name and deschiption of each method not mentioned spantaneously. Circle code 2 if hethod is recognized, and code 3 if nat recobnized.
c) THEN FOR EACH METHOD WITH CODE 1 DR 2 CIRCLED IN Q. 302, ASK 303-305 BEFORE PROCEEDING TO THE mext method.

301 Non I mould like to talk about a different topic. There are various mays that a couple can delay or avoid a pregnancy. Which of these nethods have you heard of?



|  | QUESTIONS AND FILTERS | CODING CATEGORIES <br>  |
| :---: | :---: | :---: |
| 307 | Have you ever used anything or tried in any way to delay or avoid getting pregnant? |  |
| 308 | What have you used or done? <br> CORRECT 302-303 AND OBTAIN INFORMATION <br> FOR 304 TO 306 AS NECESSARY. |  |
| 309 | CHECK 303: <br> EVER USED <br> NEVER USED <br> SAFE PERIOD <br> SAFE PERIOD <br> [--] |  |
| 310 | The last time you used the safe period, how did you determine on which days you had to abstain? | BASED ON CALENDAR........ 1 BASED ON BODY <br> temperature.............. 2 BASED ON CERVICAL MUCUS <br> (BILLINGS METHOD)...... 3 BASED ON BODY TEMPERATURE <br> AND MUCUS................ 4 OTHER $\qquad$ .5 <br> (specify) <br> DK............................. |
| 311 부ำ | When you first began using a method to avoid getting pregnant, how nany children, if any, did you already have? <br> IF NONE ENTER IEROS 〈00〉. | NUMBER <br> OF CHILDREN. $\qquad$ |
| 312 | CHECK 224: <br> NOT PREGNANT <br> PREGNANT <br> OR NOT SURE $\square$ $\qquad$ |  |
| 313 | Are you currently doing something or using any method to avoid getting pregnant? |  |
| 314 | Which nethod are you using? |  |


| NO. cece | QUESTIONS AND FILTERS | CODING CATEGORIES |
| :---: | :---: | :---: |
| 315 | Please show me the package of pills you are now using. (RECORD NAME OF BRAND.) | BRAND NAME: $\square$ <br> NOT ABLE TO SHOW........9日 |
| 316 | How nuch does one packet (cycle) of pills cost you? IF FREE, ENTER 00.00 . |  |
| 317 | Have you ever used another brand of pills than one you have just shown me? |  |
| 318 | Why dad you change brands? |  |
| 319 | In what month and year did you (he) have the operation? |  |
| 320 | Have you obtained a method to avoid pregnancy in the last twelve months? |  |
| 321 | Which method did you obtain? |  |
| 322 | Have you obtained instructions for using the safe period in the last twelve months? |  |
| 323 OR | Where did you obtain (METHDD) the last time? | GOVT HOSP/HEALTH CTR... 01 <br> FPA [LINIC............... 02 <br> fPA NURSE EDUCATOR..... 03 <br> PRIVATE DOCTDR.......... 04 <br> PRIVATE HOSPITAL/ <br> NURSING HOME.......... 05 |
| 323 A | Where did the sterilization take place? |  |






352 Mow I mould like to get sone aore inforation about (your pregnancy and) the children you had in the last five years.


| horai |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

COBES FOR 359
TD BECOME PREGNAMT........ OI
PARTMER DISAPPRDVED...... 03
HEALTH CDMCERKS. .......... 04
aCCESS/RVAILABILITY...... 05
COST TOO KUCH. ............ 06
IMCONVENIEMT TO USE...... 07
IMFREQUENT SEX............0日
FATALISIIC................. 10
DTHER (spetify atove).... 11


## SECTIOM 4: MEATH OF CHILDREM



402 FROM PP. 6-7, RECORD THE NAMES OF ALL BIRTHS AFTER JAN. 1982 IN THE FOLLONIMG TABLE. FOR EACH BIRTH, CHECK IF ALIVE OR DEAD, AND HARK THE APPRDPRIATE BOX.


| 408 <br> Why did you breastfeed the baby? |  |  |  |
| :---: | :---: | :---: | :---: |
| 409 <br> How did you learn that breastfeeding 15 good for the baby? | DOCTDR/NURSE .......... 01 <br> FRJEND/REL............. . 02 <br> RADID/TV................ 03 <br> READ ABOUT IT.......... 04 <br> OTHER $\qquad$ 05 <br> (specify) <br> DK. $\qquad$ .98 |  |  |
| 410 CHECK IF ALIVE: <br> IF DEAD, CIRCLE ' 2 '. <br> Are you still breastfeeding (NAME)? | YES. (SKIP TO 412 ) CHILD DEAD. $\qquad$ NO. $\qquad$ |  |  |
| 410A <br> For hom any conths did you breastfeed (MAME)? | nONTHS $\qquad$ $\square$ <br> UNTIL DEATH. $\qquad$ (SkIP TO 412) $\square$ | MDATHS $\qquad$ $\square$ <br> UNTIL DEATH. $\qquad$ (SKIP 10 412) | NONTHS $\qquad$ $\square$ <br> UWTIL DEATH. (SKIP T0 412) $\square$ $\square$ |
| 111 <br> Why not? | CHILD DIED RIGHT AMAY.OI <br> (SKIP TD 416) < $\qquad$ <br> SORE NIPPLE............. 02 <br> FLAT HIPPLE.,........... 03 <br> ENSDRGED BREAST........ 04 <br> NO MILK. ................ . 05 <br> BABY SICK............... 06 <br> TOO BUSY/WORKING. . . . . . 07 <br> OTHER $\qquad$ .08 <br> (specify) | CHILD DIED RIGHT AMAY.01, <br> (SKIP TO 416) $\qquad$ <br> SORE NIPPLE............ 02 <br> FLAT NIPPLE............. 03 <br> ENGORED RREAST........ 04 <br> NO HILK................... 05 <br> 8ABY SICK................ 06 <br> TOO BUSY/LORKING....... 07 <br> OTHER $\qquad$ .08 <br> (5perify) | CHILD DIED RIGHT AMAY. OI, <br> (SKIP TD 416) $\qquad$ <br> SDRE RIPPLE............. 02 <br> FLAT NIPPLE............. 03 <br> ENGORGED BREAST........ 04 <br> MO HILK................... 05 <br> BABY SICK............... 06 <br> TOO BUSY/MORKING. . . . . . 07 <br> DTHER $\qquad$ .08 <br> (specify) |
| 412 <br> How old was (HAME) when you began supplemental feeding on a dally basis? | $\begin{aligned} & \text { MONTHS............ }[\square] \\ & \text { NOT YET GIVEN......95- } \\ & \text { NEVER GAVE BEFDRE } \\ & \text { CHILD DIED......96-- } \\ & \text { (SKIP TD 416) } \end{aligned}$ | MONTHS $\qquad$ $\square$ <br> MEVER GAVE BEFDRE CHILD DIED. (SKIP T0 416) $\qquad$ | MONTHS $\qquad$ $\square$ <br> MEVER GAVE BEFORE CHILD DIED. (SKIP TO 4161 $\square$ |
| 413 <br> What was the first supplemental food given? | JUICE. ..................... 01 <br> IMFANT FORHULLA......... 02 <br> POUDERED MILK........... 03 <br> COH OR GOAT MILK...... 04 <br> BUSH TEA................ 05 <br> HOMEMADE PORRIDEE, .... 06 <br> COMMERCIAL CEREAL..... 07 <br> PREPARED AABY FODD.... 08 <br> DIHER $\qquad$ 07 <br> (specify) <br> DK........................ 98 | JUICE...................... 01 <br> IMFANT FDRHULA.......... 02 <br> PDMDERED HILK........... 03 <br> COH OR SDAT MILK....... 04 <br> BUSH TEA................. 05 <br> HOMEMADE PORRIOGE...... 06 <br> COMHERCIAL CEREAL...... 07 <br> PREPARED BABY FCOD.... 08 <br> OTHER $\qquad$ 09 <br> (specify) <br> DK......................... 98 | JUICE...................... 01 <br> INFAMT FORRULA......... 02 <br> POHDERED MILK.......... 03 <br> COH OR GOAT MILK...... 04 <br> BUSH TEA................. 05 <br> HOMEMADE PORRIDSE. .... 06 <br> COMHERCIAL CEREAL..... 07 <br> PREPARED BABY FO0D.... 08 <br> OTHER $\qquad$ 09 <br> (5pect fy) <br> DK......................... 98 |


| 114 <br> Why was this food chosen as the furst? | DOCTOR/MURSE ADVISED. . OI <br> fRIEND/REL ADVISED.... 02 <br> RADIO/TV ADUISED...... 03 <br> READ ABDUT IT......... 04 <br> OTHER $\qquad$ 05 <br> (specify) <br> DK........................ 98 | DOCTOR/MURSE ADVISED. . 01 <br> FRIEMD/REL ADUISED.... 02 <br> RADIO/TV ADVISED....... 03 <br> READ ABCUT IT.......... 04 <br> OTHER $\qquad$ 05 <br> (specify) <br> 0K........................ 98 | doctor/murse advised. . 01 <br> FRIEND/REL ADVISED.... 02 <br> RADIO/TV ADVISED...... 03 <br> READ ABCUT IT.......... 04 <br> OTHER $\qquad$ 05 <br> DK. (specify) <br> DK....................... 98 |
| :---: | :---: | :---: | :---: |
| 415 <br> Has this food giyen the farst tiap by bottle, cup and spaon, or another nay? (PROBE: How was it first given to the child?) | BOTTLE................... 1 CUP AMD SPOON. .......... 2 OTHER $\qquad$ (specify) | BOTHLE.................... 1 <br> CUP AND SPOOM........... 2 <br> OTHER $\qquad$ .3 <br> (specify) | Bottle................... 1 <br> CUP AKD SPOOM........... 2 <br> OTHER $\qquad$ .3 <br> (specify) |
| 416 <br> Hom anny months after the birth of (WAME) did your period return? | MDNTHS. $\square$ MOT RETURMED. $\qquad$ | RONTHS $\qquad$ $\square$ NEVER RETURMED. .96 | MDNTHS. $\qquad$ $\square$ NEVER RETURNED. ...... 96 |
| 417 <br> Have you resuned sexual relations since the birth of (MAME)? | YES (OR PREG)........... 1 <br> NO. . <br> (60 TD MEXT COL) $\qquad$ |  |  |
| 418 <br> How eany wonths after the birth of (mane) did you resume sexual relations? | months. $\qquad$ $\square$ (EO TO MEXY COL) | HONTHS. $\qquad$ $\square$ (60 TO MEXT COL) | MONTHS. $\qquad$ (60 T0 419) |



426 FROM P. 18, COPY THE MAHES OF ALL BIRTHS AFTER JAN. 1982 IN THE FOLLDNING TABLE. for each birth, check if alive dr dead, and mark the appropriate box.


| 431 <br> Has (NAME) had diarrhea in the last 24 hours? | YES.............1- (SKIP T0 433) <br> Mo................. 2 | $\begin{aligned} & \text { YES.............1] } \\ & \text { ISKIP T0 433X_, } \\ & \text { N0................. } \end{aligned}$ | YES............1] (SKIP TO 43J) MO................ |
| :---: | :---: | :---: | :---: |
| 432 <br> Has (MAFE) had darrhea in the last two meeks? |  |  |  |
| 433 <br> Did you take (MAME) to a private doctor, or to a hospital or health center to treat the diarrhea the last tiee7 IF YES: Where did you take his/her? | PRIVATE DOCTDR.... 1 HOSPITAL/ <br> HEALTH CENTER... 2 <br> NDT TAKEN.......... 3 | PRIVATE DOCTDR....! HOSPITAL/ <br> HEALTH CENTER... 2 <br> NOT TAKEN......... 3 | PRIVATE DOCTOR.... 1 HOSPITAL/ <br> HEALTH CENTER... 2 <br> NOT TAKEM. ........ 3 |
| 434 <br> Has (NAME) given any oral rehydration packet during the last episode of diarrhea? (PROBE: That 15, Pediolyte, Rehydrat, or Gesol?) | $\begin{aligned} & \text { YES................. } 1 \\ & \text { M0................. } 2 \\ & \text { DK................. } 8 \end{aligned}$ | $\begin{aligned} & \text { YES. . . . . . . . . . . . . } 1 \\ & \text { N0. . . . . . . . . . . . . . } \\ & \text { DK . . . . . . . . . . . } \end{aligned}$ | $\begin{aligned} & \text { Yes. ................ } 1 \\ & \text { Mo............... } \\ & \text { DK. . . . . . . . . . . . . . } \end{aligned}$ |
| 435 <br> Was there anything (else) you or somebody did to treat the diarrhea? If YES: What was done? | HDHE SUGAR/SALI/ <br> WATER SDLUTION... 1 <br> TABLETS/INJEC- <br> TIOMS, SYRUPG..... 1 <br> INCREASE FLUIDS... 1 <br> IMCREASE FDODS.... 1 | HOME SUGAR/SALT/ hater solutidn. .. 1 TABLETS/INJECTIONS,SYRUPS..... 1 INCREASE FLUIDS... 1 INCREASE FODDS.... 1 | HDHE SUGAR/SALT/ <br> MATER SOLUTIOA...I TABLETS/INJEC- <br> TIDHS, SYRUPG.....I IMCREASE FLUIDS... 1 INCREASE FOODS.... 1 |
| Circle code 1 for all mentioned. | DECREASE BRSTFD6.. 1 DECREASE FLUIDS... 1 DECREASE FDODS..... 1 DTHER $\qquad$ NOTHING............. 1 ALL 60 TO NEXT COL) | DECREASE BRSTFDG. . 1 DECREASE FLUIDS... 1 DECREASE FDODS....! OTHER $\qquad$ NOTHJNG, ........... 1 (ALL 60 TO NEXT COL) | DECREASE RRSTFDG.. 1 DECREASE FLUIDS... 1 DECREASE FOODS.... 1 DTHER $\qquad$ NOTHING. ............ 1 (ALL 60 TO 436 ) |


 SECTION 5: MARRIAGE.





##  <br> SECTION 6: FERTILITY PREFERENCES <br> 





```
SECTION 7: HUSBAND'S BACKGROUND AND WORK.
```






INTERVIEWER'S O8SERVATIONS.
(To be filled in after completing interview.)


Person Interviewed:

Specific Questions:

Other Aspects:

Nane of Interviewer: Date:

## SUPERVISOR'S DBSERVATIDNS. 

Name of Supervisor:


[^0]:    ${ }^{1}$ Includes exposure up to month prior to the month of interview in 1987.

[^1]:    ${ }_{2}$ Includes pill, IUD, injection, vaginal methods, condom, female sterilization, and male sterilization.

[^2]:    1 According to a comprehensive review of contraceptive failure rates in the United States, the percentage of typical couples who would experience an accidental pregnancy during the first year of use of various methods is: male sterilization 0.2 , female sterilization 0.4 , pill 3, IUD 6, condom 12, vaginal methods 18-28, withdrawal 18, safe period 21, chance 89 (Trussell and Kost 1987).

[^3]:    ${ }^{1}$ Tuberculosis is managed on a case by case basis, so the BCG vaccine, required in many

