# MARRIAGE & FAMILY FORMATION IN PENINSULAR MALAYSIA

Analytic report on the 1984/85 Malaysian Population and Family Survey

Hamid Arshat
Tan Boon Ann
Tey Nai Peng
M. Subbiah

NATIONAL POPULATION AND FAMILY DEVELOPMENT BOARD
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# PREFACE

The Malaysian Population and Family Survey is a research project funded by the United Nations Fund for Population Activities (UNFPA). The main survey was carried out in 1984/85 by the National Population and Family Development Board (NPFDB) with technical guidance from the steering committee comprising representatives from the University of Malaya, University Kebangsaan Malaysia, University Pertanian Malaysia, Economic Planning Unit, Department of Statistics, Socio-Economic Research Unit, Ministry of Education, Ministry of Health, Ministry of Social Welfare, Federation of Family Planning Associations, FELDA and other relevant agencies.

The main objective of the survey was to study nuptiality, fertility and family formation and the factors which affect them. The preliminary findings of the survey were presented at a seminar entitled "Findings from Population Surveys and Their Policy Implications" held in Penang in 1987. The papers and the proceedings of the Seminar have been edited and published.

I like to place on record our gratitude to Prof. Yuzuru Takeshita, Prof. James Palmore, Prof. Charles Hirshman, Prof. Gavin Jones and Dr. Iqbal Alam for their assistance and comments in the questionnaire design. The assistance of Mr. Khoo Teik Huat, the Chief Statistician of the Department of Statistics and his staff in the sample selection is gratefully acknowledged. Thanks are also due to the local UNFPA country directors and staff, particularly Mr. Ugur Tuncer, Mr. Yoshio Koike and Ms. Phoebe Chu.

The untiring effort of the research team from the Research, Evaluation and Management Information System division of the Board in successfully completing the survey is commendable. Mention must also be made of the support given by the Director of Administration, Supply and Finance, Mr. Hadi Abdullah and his staff in facilitating the smooth implementation of the project. The cooperation of survey respondents in providing information is gratefully acknowledged.

A working group, comprising Prof. Dr. Hamid Arshat, Dr. Tan Poon Ann, Mr. Tey Nai Peng and Dr. M. Subbiah, was set up to write this book. The working group was assisted by Ms. Looi Kim Foon, Ms. Asma Hussein, Ms. Lim Pik Wah, Mr. Ng Tuck Seng, Ms. Jamaliah Hashim, Ms. Nazileh Ramli and Mr. Zainal Abdul Hamid. Dr. Tan Poo Chang of the University of Malaya and her research assistants helped to review the final draft for printing. I congratulate them for their fine efforts.

I would like especially to express our sincere appreciation to Mr. Richard Leete, Demographic Advisor to Economic Planning Unit of the Prime Minister's Department, whose services are supported by the Overseas Development Administration of the Government of the United Kingdom, for his outstanding technical support, encouragement and commitment in guiding the Working Group involved in the preparation of this book.

We hope that this publication will be the first of a series of studies utilizing the voluminous and quality data from the survey. The data from this survey should be used to enhance our knowledge and understanding of the family formation process in Malaysia and this will be a valuable input in the implementation of the country's population policy and development planning.

Siti Zaharah Sulaiman.

Y.B. Dato' Dr. Siti Zaharah bt. Sulaiman
Deputy Minister in the Prime Minister's Department

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Conventions used

: not applicable

- no case

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# I. INTRODUCTION

## Reasons for conducting the Malaysian Population and Family Survey

This publication describes the main findings of a survey, the Malaysian Population and Family Survey (MPFS) conducted between November 1984 and February 1985, on the family formation process of a representative sample of some 4100 ever-married women living in Peninsular Malaysia. Routine information about discrete demographic events such as births, marriages and family planning acceptors, collected through vital registration, the decennial population census and family planning clinics provide some insights into family formation in Malaysia. But data from these sources are limited. Conversely, interview surveys provide richer data with the potential to enhance further our understanding of family formation and demographic trends.

In 1974 the Malaysian Fertility and Family Survey (MFFS) was conducted as part of the research programme of the World Fertility Survey. That survey covered a sample of some 6321 ever-married women aged between 15 and 49 in Peninsular Malaysia. The survey aimed at improving the understanding of human fertility and reproductive behaviour as well as providing input for national planning of population programmes. It provided a wide range of information on nuptiality and fertility trends, knowledge and use of contraception and family building intentions all of which were cross-classified by socio-economic variables.

In September of 1982 the government announced a New Population Policy, and was subsequently stated in the Mid-term Review of the Fourth Malaysian Plan (1981-85). The information from the 1974 MFFS had become outdated and demographic trends had continued to change markedly since 1974. Amongst the most important changes shown by vital registration and population census data were the continuing rise in the age at which women entered first marriage and a marked downtrend in fertility levels. These changes had led some

commentators to conclude that fertility in Malaysia was heading towards replacement level and below by the first decade of the next century. Against that background there was a pressing need for a new assessment to be made of recent trends in marriage and family formation. The 1984/85 Malaysian Population and Family Survey (MPFS) was conceived to meet that need. Other important reasons for carrying out the 1984/85 MPFS were that it would provide reliable data for first use in formulating an integrated population policy to achieve greater national development and improve the welfare of individual families, and secondly for monitoring the national population and development programmes.

Data from the 1984/85 MPFS are intended to provide both a more detailed perspective on past and recent demographic trends as well as give a more robust basis for an understanding of the future. For the latter purpose the survey data could, for example, be used to improve the forecasting of births for population projections in two ways. First, by supplementing vital registration data on birth trends, in particular by throwing more light on the childbearing patterns of sub-populations and on their family building intentions. Secondly, by using the survey data alone in conjunction with an economic model to determine future levels of births.

The main objectives of the 1984/85 MPFS were therefore to provide the National Population and Family Development Board and those agencies and institutions interested in the family formation process and demographic trends with a fuller understanding of the factors affecting the trends as well as an assessment of how those factors have changed overtime. Subsidiary objectives were to throw light on the maternal and child health services and practices and on respondents' views of the 1982 New Population Policy.

## The population chosen for study

The population chosen for study in the 1984/85 MPFS was a representative sample of ever-married women who were aged between 15

and 49 living in Peninsular Malaysia. They were selected by means of standard sampling procedures from a list of households in sample areas (Appendix 1). The MPFS collected information from ever-married women about their background; marriage and pregnancy histories; family planning knowledge and use; fecundity status and fertility preferences; maternal and child health; work history; knowledge and attitudes towards government policy; cost-benefit and aspirations for children and their current husband's background.

In addition to collecting information from ever-married women the 1984/85 MPFS also collected particulars about single women who were living in the selected households. However, it was considered contextually inappropriate to ask single women about their premarital sexual behaviour, if any. Instead, only very basic details such as age and ethnicity were collected from them.

While it is traditional to focus on married women in fertility surveys the views and behaviour of their spouses are obviously important in the timing of marriage and in the timing and number of children they have. For that reason the 1984/85 MPFS collected a limited amount of information from a subsample of husbands who were present in the selected households containing currently married women. The information includes such topics as desired family size and aspirations for children, knowledge and attitude towards government policy and work history and employment opportunities.

The 1984/85 MPFS, like the 1974 MFFS did not sample the population of Sabah and Sarawak. The primary considerations for not doing so were the additional financial and human resources required. Further, the questionnaire used in the 1984/85 MPFS may not have been entirely appropriate in the context of Sabah and Sarawak where literacy and educational levels are lower than in Peninsular Malaysia. The National Population and Family Development Board hopes to conduct a demographic survey in those two regions in 1988/89.

## Scope of this report

This report aims to describe the key findings from the survey with respect to nuptiality, fertility, family size preferences, knowledge and use of contraception, regional variations in these phenomena, and maternal and child health. It also discusses the findings in relation to the 1982 New Population Policy and draws some comparisons with the results of the 1974 MFFS. In general the approach taken has been to analyse the data using standard demographic methods taking into account relevant social and economic cross-classifications.

In the context of Malaysia the major cross-classificatory variable is ethnicity. In 1984, of the 12.7 million persons living in Peninsular Malaysia some 56 per cent were Malays, 33 per cent were Chinese and 10 per cent were Indians. The patterns of demographic behaviour of these different communities have been shown to differ markedly. As such many of the analyses in the chapters below have been made separately for the different ethnic groups. Of course, other cross classificatory variables in addition to ethnicity have been used.

One of the aims of this report is to bring up issues and ideas that merit more detailed topic analysis. It was considered beyond the scope of this general report to make in depth studies of several interesting hypotheses that have been raised but not conclusively answered. These will be taken up in studies making secondary analysis of the survey data and the findings will be reported in due course in subsequent publications of the National Population and Family Development Board.

## Characteristics of the MPFS respondents

The 1984/85 MPFS consisted of a household survey, and an individual survey. The household survey collected some basic demographic information about each household member within the living

quarters falling in the sample. The information was limited to a few variables pertaining to residence status, age, sex, relationship to the head of household and marital status. The MPFS adopted both the de jure and de facto methods of enumeration to include usual residents as well as visitors who slept in the selected living quarters the night before the interview.

All women aged 15-49 years in the selected households who had ever married were included for the detailed interview. Some 6,332 LQs were selected for the 1984/85 survey. Of these, a total of 5,403 households (85 per cent) were located, identified and screened for eligible sample members. Some 26,267 persons (both de jure and de facto) were listed as being in these households. Using the de jure concept, the mean household size was about 5.0, a figure that compares closely with the 1980 population census where the corresponding value was 5.2.

In terms of age distribution, 39 per cent of the sample population was below age 15 and 15 per cent above 45 years; the corresponding figures in the 1980 Census were 40 per cent and 15 per cent respectively (Table 1.1). The marital composition of the population in the 1984/85 MPFS also closely resembled that of the 1980 Census (Table 1.1). The close resemblance of the two age and marital distributions provides some confidence that the sample is representative of the larger population from which it has been drawn.

Turning next to the consideration of the characteristics of women aged 15-49 included in the 1984/85 sample, it is found that the age and marital composition is much the same as that found in the 1980 Census (Table 1.2).

Table 1.1: Age and marital distributions of household members in the 1984/85 MPFS and in the 1980 Census

| Characteristic | 1984/85 MPFS | 1980 Census |
|---|---|---|
| **Age group** | | |
| All | 100 | 100 |
| < 15 | 39 | 40 |
| 15-24 | 20 | 21 |
| 25-44 | 26 | 25 |
| 45+ | 15 | 15 |
| **Marital status** | | |
| Single | 60 | 61 |
| Married | 36 | 35 |
| Widowed | 4 | 4 |
| Divorced or separated | 1 | 1 |

Finally, an examination of the characteristics of the 1984/85 sample of ever-married women in terms of age and ethnic composition showed it to be similar to those for the corresponding groups enumerated in the 1980 Census (Table 1.3). The age composition of the survey population was slightly older than at the time of the Census. However, that pattern reflects a slight ageing trend since 1980.

Table 1.2: Age and marital distribution of females aged 15-49 in the 1984/85 MPFS and in the 1980 Census

| Age group | Single | Married | Divorced/ Separated | Widowed | Total |
|---|---|---|---|---|---|
| 15-24 | | | | | |
| 1984/85 MPFS | 74.4 | 25.1 | 0.5 | 0.1 | 100.0 |
| 1980 Census | 74.1 | 25.3 | 0.4 | 0.2 | 100.0 |
| 25-34 | | | | | |
| 1984/85 MPFS | 17.2 | 80.2 | 1.6 | 1.1 | 100.0 |
| 1980 Census | 16.5 | 80.9 | 1.3 | 1.3 | 100.0 |
| 35-44 | | | | | |
| 1984/85 MPFS | 5.2 | 87.2 | 3.5 | 4.1 | 100.0 |
| 1980 Census | 4.4 | 88.4 | 2.2 | 5.0 | 100.0 |
| 45-49 | | | | | |
| 1984/85 MPFS | 2.8 | 72.4 | 6.4 | 13.4 | 100.0 |
| 1980 Census | 2.8 | 82.5 | 3.0 | 11.8 | 100.0 |

Questionnaire

The major areas of questions asked about each category of respondents are summarized below. As well as basic factual information on respondents' background, the topics included attitudes and opinions as well as expectations about the future so as to help get greater insight into marriage and the family formation process.

Of ever-married women (sample of 4141):

(i) respondent's background
(ii) marriage history
(iii) pregnancy history

Table 1.3: Age and ethnic distributions of ever-married women aged 15-49 in the 1984/85 MPFS and the 1980 Census

| Characteristic | 1984/85 MPFS | 1980 Census |
|---|---|---|
| **Age group** | | |
| 15-24 | 16 | 18 |
| 25-34 | 41 | 40 |
| 35-44 | 31 | 30 |
| 45-49 | 12 | 11 |
| 15-49 | 100 | 100 |
| **Ethnic group** | | |
| Malays | 55 | 57 |
| Chinese | 34 | 32 |
| Indians | 11 | 10 |
| All ethnic groups* | 100 | 100 |

* A small number of women of other ethnic origin were included in the sample. In this and subsequent tables in this report these women have been included in the 'all ethnic groups' category but are not shown separately.

Of currently married women (sub-sample of 3888):

(i) family planning knowledge and use
(ii) fecundity status and fertility preferences
(iii) maternal and child health (applies to those who had at least one pregnancy after October 1 1980, (sub-sample of some 2300))
(iv) work history and opportunity
(v) knowledge and attitude towards government policy
(vi) cost-benefit and aspirations for children
(vii) respondent's current husband's background

Of single girls (sub-sample of 220):

(i) respondent's background

(ii) perception on jobs and family formation

(iii) work history and opportunity

Of husbands (sub-sample of 589):

(i) respondent's background

(ii) desired family size and aspirations for children

(iii) knowledge and attitude towards government policy

(iv) work history and opportunity

# II. MARRIAGE

## Introduction and background

In Malaysia, marriage generally marks the beginning of family formation. It follows that changes in the proportion of women marrying at different ages can have an important influence on the level and pattern of childbearing within (and outside) marriage. Later age at first marriage can also result in a drop in the birth rate and hence a slow down in population growth, even if completed family size is not changed. That will happen when later marriage leads to a delay of births to an older age causing a lengthening between generations. One of the aims of the survey was to find out whether the significant changes in marriage behaviour noted by the 1974 Malaysian Fertility and Family Survey (MFFS) and the 1980 Census were continuing. If so, to what extent is this a factor in the observed change in fertility as evidenced from vital registration statistics.

A historical perspective on changes in age at first marriage was given by the 1980 Census. The Census figures showed that the median age at first marriage of women born in 1946-1950 at 20.6 years was some one and a half years later than women born 10 years earlier and almost two and a half years later than those born in the early 1920s. The 1980 Census also found significant variations in marriage age among Malaysia's different ethnic groups, with Malay women marrying a little earlier than Indians and both of these communities significantly earlier than the Chinese.

Detailed trends of changes over time in marriage behaviour in Peninsular Malaysia as recorded in various censuses and surveys are shown in Table 2.1 and Figure 2.1. They depict a fundamental long term change in marriage trends. The most striking feature is the massive drop in the proportion of women married at ages under 30 and particularly at under age 20. Thus the 1947 Census showed that 42 per cent of women aged 15-19 had married· this figure is shown to have

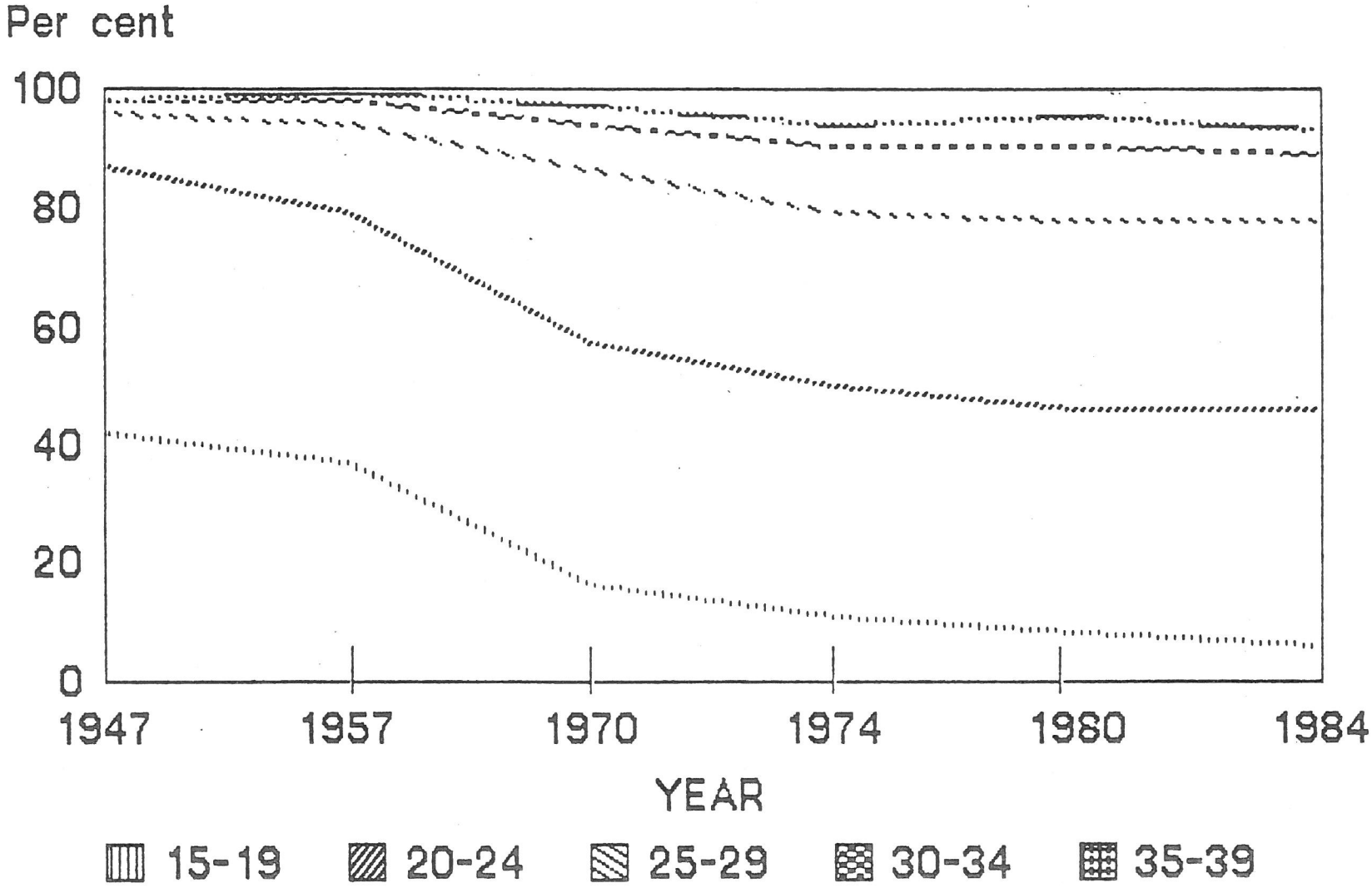
declined markedly such that by the time of the 1984/85 Ma Population and Family Survey (MPFS) just 6 per cent of women o ages had married. The 1984/85 MPFS confirms that there has been a further reduction in marriage at these ages since 1980. Young marriages are thus becoming less and less common. Similar, albeit less marked, reductions are shown to have occurred at ages 20-29, although the trend has levelled since 1980. Thus there is clear evidence of a long term trend to rising age at the start of marriage, although the trend appears to be levelling. Nevertheless, it remains the case that slightly more than 3 out of every 4 women will have been married by ages 25-29.

Table 2.1: Per cent of women ever-married by age as reported in various studies since 1947, Peninsular Malaysia

| Age of women | 1947 Census | 1957 Census | 1970 Census | 1974 MFFS | 1980 Census | 1984/85 MPFS |
|---|---|---|---|---|---|---|
| 15-19 | 42 | 37 | 16 | 11 | 8 | 6 |
| 20-24 | 87 | 79 | 57 | 50 | 46 | 46 |
| 25-29 | 96 | 94 | 86 | 79 | 78 | 78 |
| 30-34 | 98 | 98 | 94 | 90 | 90 | 89 |
| 35-39 | 98 | 99 | 97 | 94 | 95 | 93 |
| 40-44 | 98 | 99 | 98 | 98 | 97 | 98 |
| 45-49 | 98 | 99 | 98 | 99 | 98 | 97 |

The long term drop in the proportion of women married at the younger ages has not been matched by a corresponding flight from marriage at the older ages. There has been some increase in the proportion of women aged 35-39 who have never married, from 2 per cent in 1947 to 7 per cent in 1984/85. However, the figures suggest that the big drop in the proportion of women marrying at younger ages is largely a result of later marriage and not the desire to remain permanently unmarried. The evidence from each of the data sources

Fig. 2.1: Per cent of women ever-married by age group as reported in various studies since 1947, P. Malaysia



shown in Table 2.1 suggests that more than 90 per cent of women in Malaysia will have married by the time they reach age 50.

The 1984/85 MPFS collected information on the marital history of respondents, such as the date of the start of each union, the current status of the union, the date and reason for dissolution of unions, the number of time respondents had been married and the 'ideal' age to marry. The findings from this survey are presented below.

Marriage, as defined in the survey, includes legal marriages and consensual unions. Legal marriages are those which comply with the legal requirements of civil registration or through a religious denomination. Consensual unions are those in which a man and woman mutually agree to live together as husband and wife but whose union has not been registered by legal authorities.

## Birth cohort analysis of marriage trends

A key variable used for the study of first marriage is the birth cohort, that is a group of women born in the same year or period of time. However, a survey of ever-married women by definition excludes single, that is, never-married women. In this survey however, information was collected about single women in sample households where there was an eligible respondent. That information, which included details of the dates of birth of single women was combined with similar information on ever-married women in the same birth cohorts so as to provide a sharper focus to the study of marriage behaviour in Peninsular Malaysia. In other words, the 1984/85 MPFS generated data for the study of marriage trends of birth cohorts. From these data it is possible to examine the effects of varying trends in marriage rates on cohorts of women born in given periods through measures of the proportions married at particular ages and the average ages at first marriage.

Before the analysis of marriage behaviour of birth cohorts was made, an assessment was made of the representativeness of the sample

of single women included in the 1984/85 MPFS. This was done by comparing the marital status distribution of women in the survey with the marital status distribution of women in the 1980 Census. Table 2.2 compares the distributions from the two data sources. The table shows that there is a close correspondence in the two distributions. The largest apparent discrepancy is at ages 15-19 where the survey shows a higher proportion of single women than the 1980 Census. The discrepancy is, however, probably more apparent than real, reflecting the continuing postponement of marriage at these ages.

Table 2.2: Proportion of women (per 1000) in given age groups single and ever-married, 1980 Census and 1984/85 MPFS, Peninsular Malaysia

| Age group of women | 1980 Census | | 1984/85 MPFS | |
|---|---|---|---|---|
| | Single | Ever-married | Single | Ever-married |
| 15 - 19 | 915 | 85 | 942 | 58 |
| 20 - 24 | 538 | 462 | 543 | 457 |
| 25 - 29 | 217 | 783 | 221 | 779 |
| 30 - 34 | 101 | 899 | 114 | 886 |
| 35 - 39 | 53 | 947 | 69 | 931 |
| 40 - 44 | 35 | 965 | 25 | 975 |
| 45 - 49 | 28 | 972 | 28 | 972 |

Table 2.3 shows the proportions of quinquennial birth cohorts of women who had married by given ages. The figures are most readily understood by looking down the columns and comparing the proportions who had married at given equivalent ages among different cohorts. The magnitude of the striking long-term trend towards later age at first marriage is apparent. In general, the younger the cohort of women the lower the proportions ever-married, at any given age. For example, at exact age 24 just 63 per cent of women born in 1955-59 had

Table 2.3: Proportion of women (per 1000) born in selected periods ever-married at given ages by ethnic group

| Period of birth | Age at first marriage (Exact age) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 18 | 20 | 22 | 24 | 26 | 30 | 35 | 40 |
| **All ethnic groups** | | | | | | | | |
| 1935-39 | 416 | 586 | 697 | 770 | 846 | 926 | 953 | 957 |
| 1940-44 | 376 | 536 | 700 | 792 | 867 | 932 | 959 | 972 |
| 1945-49 | 260 | 411 | 553 | 676 | 799 | 888 | 924 | |
| 1950-54 | 210 | 361 | 508 | 651 | 765 | 862 | | |
| 1955-59 | 151 | 289 | 466 | 631 | 727 | | | |
| 1960-64 | 127 | 257 | | | | | | |
| **Malays** | | | | | | | | |
| 1935-39 | 575 | 773 | 854 | 891 | 915 | 935 | 951 | 951 |
| 1940-44 | 554 | 739 | 870 | 920 | 942 | 967 | 982 | 989 |
| 1945-49 | 353 | 519 | 657 | 761 | 856 | 909 | 935 | |
| 1950-54 | 291 | 455 | 605 | 711 | 814 | 894 | | |
| 1955-59 | 205 | 348 | 528 | 686 | 776 | | | |
| 1960-64 | 144 | 290 | | | | | | |
| **Chinese** | | | | | | | | |
| 1935-39 | 165 | 303 | 457 | 585 | 739 | 904 | 947 | 957 |
| 1940-44 | 160 | 274 | 479 | 621 | 767 | 886 | 932 | 945 |
| 1945-49 | 120 | 249 | 392 | 547 | 715 | 851 | 906 | |
| 1950-54 | 85 | 205 | 358 | 563 | 704 | 821 | | |
| 1955-59 | 59 | 176 | 337 | 524 | 647 | | | |
| 1960-64 | 75 | 186 | | | | | | |
| **Indians** | | | | | | | | |
| 1935-39 | 566 | 717 | 811 | 887 | 925 | 981 | 1000 | 1000 |
| 1940-44 | 372 | 581 | 767 | 837 | 884 | 930 | 953 | 977 |
| 1945-49 | 356 | 507 | 685 | 781 | 863 | 945 | 959 | |
| 1950-54 | 218 | 391 | 509 | 618 | 718 | 836 | | |
| 1955-59 | 126 | 303 | 513 | 655 | 697 | | | |
| 1960-64 | 172 | 255 | | | | | | |

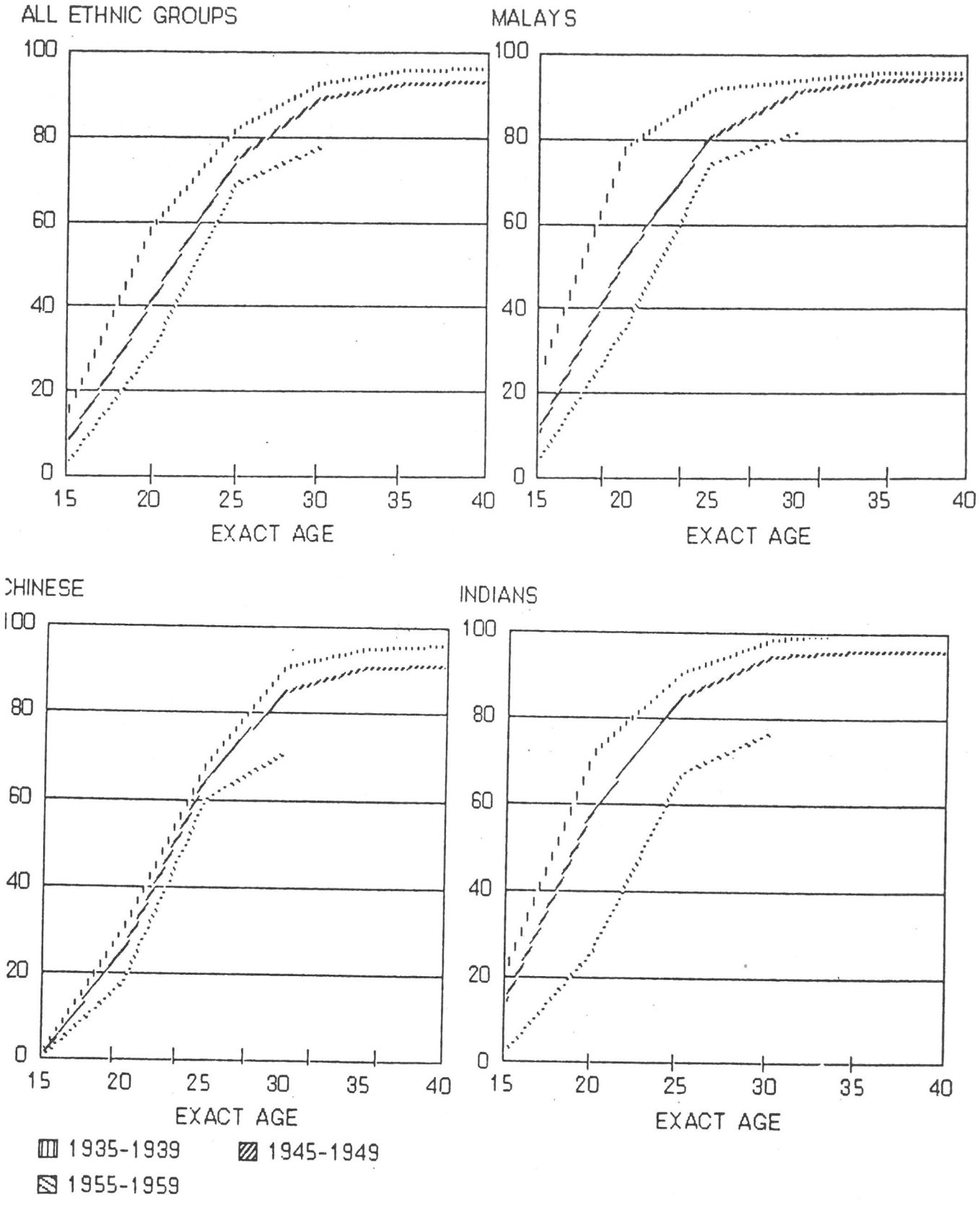
married, compared with 68 per cent among those born 10 years earlier and 77 per cent among those born 20 years earlier. The big reductions in the proportions of women married at younger ages are far less prominent at ages above 30, indicating that much of the decline in marriage rates at the younger ages has been due to the trend towards later marriage rather than rising proportions remaining permanently unmarried.

Table 2.3 and Figure 2.2 also show how the cohort marriage trends differ for the different ethnic groups in Peninsular Malaysia. The general trend of declining proportions of women married at the younger ages has been remarkably similar for each of the ethnic groups. Further, even though there are striking ethnic differences in the levels of the proportions of the birth cohorts married at the younger ages these are much reduced at the older marriageable ages. For example, among women who were born in 1950-54, some 46 per cent of Malay women had married by age 21, compared with corresponding figures of 21 per cent for Chinese and 39 per cent for Indians. However, by age 31 the respective figures for the same cohorts were 89 per cent, 82 per cent and 84 per cent - reduced differentials which are likely to narrow further as the Chinese and Indians cohorts catch up as they continue to first marry as they progress through their 30s.

### Age at first marriage of birth cohorts

Table 2.4 summarizes the information in Table 2.3 by giving the lower quartile and median ages at first marriage of the same cohorts of women. The lower quartile and median figures show the age by which respectively 25 per cent and 50 per cent of the birth cohorts of women had entered marriage. The data show just how marked the movement to later age at first marriage has been. Women born in 1955-59 on average married about 3 years later than women born twenty years earlier - at age 21.4 compared with age 18.0 years. The trend towards later age at first marriage is found among each of the ethnic groups. However, there is nevertheless a significant differential, although that has narrowed over time. Thus, for women born in 1955-

Fig. 2.2: Cumulative per cent of women ever-married by exact ages and selected birth cohorts



59, the median age at first marriage of Malays at 20.7 years was just over two years younger than that of the Chinese. For the cohort of women born in 1945-49 that differential was 3.7 years and 5.1 years among those born in 1935-39.

Table 2.4: Lower quartile and median ages at first marriages of cohorts of women born in selected periods by ethnic group

| Period of birth | All ethnic group | Malays | Chinese | Indians |
|---|---|---|---|---|
| **Lower quartile age** | | | | |
| 1935-39 | 15.3 | 14.1 | 18.4 | 14.4 |
| 1940-44 | 15.8 | 14.6 | 18.7 | 15.7 |
| 1945-49 | 16.9 | 15.7 | 19.0 | 16.0 |
| 1950-54 | 17.6 | 16.5 | 19.5 | 17.3 |
| 1955-59 | 18.5 | 17.7 | 20.0 | 18.4 |
| 1960-64 | 18.9 | 18.5 | 20.3 | 18.9 |
| **Median age** | | | | |
| 1935-39 | 18.0 | 16.4 | 21.5 | 16.6 |
| 1940-44 | 18.8 | 16.5 | 21.3 | 18.1 |
| 1945-49 | 20.2 | 18.7 | 22.4 | 18.9 |
| 1950-54 | 20.9 | 19.7 | 22.4 | 20.8 |
| 1955-59 | 21.4 | 20.7 | 22.7 | 20.9 |

**Age at first marriage among cohorts of ever-married women**

The amount of information collected in the 1984/85 MPFS about single women was very limited so it is not possible to analyse the marriage behaviour of birth cohorts according to different socio-economic variables. It is, however, possible to examine differential

marriage trends among cohorts of ever-married women, that is if the censoring effect' of the sample is taken into account (Appendix 2). Censoring in a survey of women aged 15 to 49 occurs when the sample is sub-divided into birth cohorts. For the oldest cohort the information is relatively complete. However, the information becomes progressively more incomplete the younger the cohort of women. Thus, for example, women born in 1965-69 were only aged 15-19 at the time of the survey. The married women included in the 1984/85 MPFS from that cohort will only be representative of those who married at the very young ages. Hence, they will not be a representative sample of all women who will eventually marry from that cohort.

One way to take into account the censoring effect when studying marriage behaviour of ever-married women is to restrict the analysis to sub-samples which are homogeneous in their exposure to the risk of marriage. The sub-sample taken here comprises women aged 25 years or more who married before age 25. The resulting sub-sample consists of almost 3,000 women or some 70 per cent of the respondents. It follows, of course, that this sub-sample excludes women who married at ages 25 and over, that is generally women with the highest educational level.

Table 2.5 shows that distribution of the sub-sample of ever-married women by birth cohort and age at first marriage. Overall the median age at first marriage among this sub-sample of women is 19.6 years. This figure splices together the marriage experience of ever-married women born between 1935 and 1959. It can thus be taken as a kind of average indicator of marriage over the period 1950-1984. This indicator is used in the analysis of differentials in Tables 2.6 to 2.8 because of the small numbers of cases involved when examining five year birth cohorts according to different socio-economic variables. It must be remembered, however, that the median ages shown will be significantly younger than among the younger birth cohorts of women. The figures for the different five year cohorts of ever-married women do, of course, confirm the general picture given by the birth cohort analysis of marriage behaviour made above. That is, the younger the cohort, or age of women at the time of the survey, the

Table 2.5: Per cent distribution of cohorts of ever-married women who first married before age 25 and who were aged 25 to 49 at the time of the survey, by age at first marriage

| Cohort of ever-married women | Age at time of survey | Age at first marriage <16 | 16-17 | 18-19 | 20-21 | 22-23 | Mean | Median | N |
|---|---|---|---|---|---|---|---|---|---|
| 1935-39 | 45-49 | 28.9 | 23.6 | 19.8 | 13.3 | 14.5 | 18.1 | 17.8 | (415) |
| 1940-44 | 40-44 | 21.5 | 23.9 | 19.7 | 19.7 | 15.3 | 18.6 | 18.5 | (452) |
| 1945-49 | 35-39 | 16.2 | 18.5 | 20.2 | 19.2 | 25.9 | 19.5 | 19.4 | (588) |
| 1950-54 | 30-34 | 9.3 | 20.1 | 21.0 | 20.3 | 29.3 | 19.9 | 20.0 | (686) |
| 1955-59 | 25-29 | 7.7 | 14.0 | 19.9 | 26.1 | 32.3 | 20.4 | 20.6 | (767) |
| 1935-59 | 25-49 | 15.0 | 19.3 | 20.2 | 20.5 | 25.1 | 19.5 | 19.6 | (2908) |

older is the median age at first marriage. Of course the median ages shown are lower than the true values for the actual cohorts due to the inclusion of women who married before ages 25 only.

The timing of age at first marriage is the result of the various socio-economic and cultural factors. These are wide ranging and include in particular the terminal age at education of women as well as employment opportunities, the relative availability of unmarried men and women with the desired characteristics and other opportunity costs that may be viewed as temporary incentives or disincentives to marriage or alternatives to marriage.

Table 2.6 gives figures on the unadjusted mean age at first marriage together with the age-standardized means for women classified by differing background variables. There exists about a two year difference in the mean age at first marriage between Chinese women and

Table 2.6: Mean age at first marriage of women who first married before age 25 and who were aged 25 to 49 at the time of the survey, by socio-economic characteristics

| Socio-economic characteristic | All | Age-standardized | N |
|---|---|---|---|
| **Place of residence** | | | |
| Urban | 20.4 | 20.3 | (1119) |
| Rural | 18.9 | 19.0 | (1789) |
| **Ethnic group** | | | |
| Malays | 18.8 | 18.8 | (1650) |
| Chinese | 20.9 | 21.0 | (927) |
| Indians | 19.0 | 19.0 | (303) |
| **Educational level** | | | |
| No schooling | 18.2 | 18.5 | (641) |
| 1 - 6 years | 19.2 | 19.2 | (1521) |
| 7 - 12 years | 21.0 | 20.7 | (652) |
| > 12 years | 23.3 | 23.1 | (94) |
| **Work pattern** | | | |
| Before & after marriage | 20.2 | 20.2 | (1264) |
| Before marriage only | 20.7 | 20.5 | (424) |
| After marriage only | 17.9 | 18.1 | (446) |
| Never worked | 18.6 | 18.6 | (552) |

Malay and Indian women. Those living in urban areas tend to marry later than their rural counterparts, the difference being about 1.5 years. However, since Malays constitute the bulk of the rural population it is likely that differences in ethnic composition between urban and rural areas play a large part in the explanation of this

phenomenon. There are significant differentials in marriage patterns according to the educational level and work pattern of women. As expected the least educated marry youngest and the most educated latest, a difference of some five years.

Table 2.7 attempts to study the influence of the variables place of residence, educational level and work pattern on the mean age at first marriage after controlling for ethnicity. It is shown that for women in each ethnic group each of these variables exerts its own independent effect on age at first marriage. Thus, for example, urban/rural differentials persist and within each ethnic group the pattern of the least educated marrying earliest also holds.

However, Table 2.8 shows that there is a relatively little variation in the mean age at first marriage across urban/rural strata after controlling for educational level and that the differentials by work pattern are much reduced. In general, women who work before and after marriage tend to marry later than those who never work or do so after marriage only, the gap being about 2 years. The general conclusion from the above analysis is that a woman's level of education exerts the most powerful influence on age at first marriage but that other variables such as place of residence, ethnicity and work pattern exert their own independent effects.

## Current marital status

In Malaysia, where almost all childbearing occurs within marriage, the current marital status of women is an important indicator of exposure to the risk of conception. Table 2.9 gives a profile of the 1984/85 sample of ever-married women according to their current marital status and years since first marriage. About 94 per cent of respondents were currently married at the time of the interview. As expected the proportion of currently married decreases with increasing numbers of years since first marriage. Conversely, the proportion of women widowed, separated or divorced increases with increasing duration of marriage.

Table 2.7: Mean age at first marriage of women who first married before age 25 and who were aged 25 to 49 at the time of the survey, by ethnic group and socio-economic characteristics

| Socio-economic characteristic | Ethnic group | | |
|---|---|---|---|
| | Malays | Chinese | Indians |
| All women | 18.8 | 20.9 | 19.0 |
| Place of residence | | | |
| Urban | 19.6 | 21.3 | 19.3 |
| Rural | 18.5 | 20.4 | 18.7 |
| Educational level | | | |
| No schooling | 17.2 | 20.0 | 17.7 |
| 1- 6 years | 18.3 | 20.8 | 18.9 |
| 7-12 years | 20.6 | 21.9 | - |
| > 12 years | 23.1 | 23.6 | - |
| Work pattern | | | |
| Before & after marriage | 19.5 | 21.1 | - |
| Before marriage only | 20.2 | 21.3 | - |
| After marriage only | 17.5 | 19.5 | - |
| Never worked | 18.1 | 20.5 | - |

Table 2.8: Mean age at first marriage of women who first married before age 25 and who were aged 25 to 49 at the time of the survey by educational level and socio-economic characteristics

| Socio-economic characteristic | Wife's educational level | | | |
|---|---|---|---|---|
| | No sch. | 1-6 years | 7-12 years | >12 years |
| **Place of residence** | | | | |
| Urban | 19.0 | 19.9 | 21.3 | 23.3 |
| Rural | 17.9 | 18.8 | 20.6 | 23.3 |
| **Work pattern** | | | | |
| Before & after marriage | 18.6 | 19.7 | 21.9 | 23.4 |
| Before marriage only | 19.8 | 20.5 | 21.4 | - |
| After marriage only | 17.0 | 17.7 | 19.2 | - |
| Never worked | 17.2 | 18.5 | 19.6 | - |

Table 2.10 compares the current marital status of the 1984/85 sample of ever-married women aged 15 to 49 with that from the 1974 MFFS and that in the 1980 Census. The proportion of women currently married has tended to increase over time on account of the lower incidence of widowhood which can be explained by declining death rates at middle and older ages. Conversely the proportion widowed has declined. The proportion (3 per cent) of women in this age category who were either separated or divorced at the time of the 1984/85 MPFS was much the same as found in the 1974 MFFS. Of course, the figure of 3 per cent only reflects the current stock of divorcees among ever-married women aged 15 to 49. A significant fraction of those divorced will have remarried and will be classified as married. Table 2.10 does not differentiate married women according to their order of marriage.

Table 2.9: Per cent distribution of all ever-married women according to current marital status by years since first marriage

| Years since first marriage | Currently married | Widowed | Divorced | Separated | Total not currently married | N |
|---|---|---|---|---|---|---|
| <5 | 98.4 | 0.3 | 0.7 | 0.5 | 1.6 | (952) |
| 5-9 | 97.3 | 0.7 | 1.9 | 0.1 | 2.7 | (875) |
| 10-14 | 95.3 | 1.9 | 1.6 | 1.1 | 4.7 | (730) |
| 15-19 | 92.7 | 2.8 | 2.0 | 2.6 | 7.3 | (545) |
| 20-24 | 91.2 | 4.7 | 2.4 | 1.7 | 8.8 | (468) |
| 25-29 | 85.4 | 9.7 | 3.2 | 1.7 | 14.6 | (349) |
| 30+ | 78.4 | 14.0 | 5.9 | 1.8 | 21.6 | (222) |
| All women | 93.9 | 3.0 | 2.0 | 1.1 | 6.1 | |
| N | (3888) | (125) | (82) | (46) | (253) | (4141) |

Table 2.10: Per cent distribution of ever-married women aged 15 to 49 according to current marital status, 1974 MFFS, 1980 Census, and 1984/85 MPFS

| Current marital status | 1974 MFFS | 1980 Census | 1984/85 MPFS |
|---|---|---|---|
| Married | 91.9 | 94.3 | 93.9 |
| Widowed | 4.5 | 3.8 | 3.0 |
| Divorced/separated | 3.6 | 1.9 | 3.1 |

## Marital Stability

Marital union provides the social setting within which childbearing occurs in Malaysia. It follows that marital dissolution either through the death of one of the spouses, divorce or separation diminishes the likelihood of childbearing. Table 2.11 shows a distribution of ever-married women according to the status of their first marriage by years since first marriage. The first marriage of 88 per cent of respondents in the survey remained intact. Naturally, the likelihood of a first marriage ending grows with increasing duration of time since that marriage as seen by looking down the first column of that table. So the figure of 88 per cent can be misleading because it is heavily weighted by younger women with relatively short durations of marriage. Of women with 20 or more years since first marriage, more than one in five had experienced a marital breakup, the bulk of these occurring through divorce and separation.

Table 2.11: Per cent distribution of all ever-married women according to status of first marriage by years since first marriage

| Years since first marriage | First marriage intact | Death of husband | Divorce | Separation | All | N |
|---|---|---|---|---|---|---|
| <5 | 97.8 | 0.3 | 1.3 | 0.6 | 2.2 | (952) |
| 5-9 | 94.5 | 1.0 | 4.2 | 0.2 | 5.5 | (875) |
| 10-14 | 89.3 | 2.6 | 6.4 | 1.6 | 10.7 | (730) |
| 15-19 | 86.2 | 3.5 | 7.5 | 2.8 | 13.8 | (545) |
| 20-24 | 81.0 | 5.3 | 11.1 | 2.6 | 19.0 | (468) |
| 25-29 | 71.6 | 12.9 | 13.5 | 2.0 | 28.4 | (349) |
| 30+ | 62.6 | 13.5 | 22.1 | 1.8 | 37.4 | (222) |
| All women | 88.1 | 3.6 | 6.9 | 1.4 | 11.9 | |
| N | (3648) | (150) | (285) | (58) | (493) | (4141) |

Table 2.12 examines the status of first marriage according to ethnicity and stratum. The per cent of Malay and Indian first marriages that have ended is shown to be much higher than among the Chinese. About one in six Malay women in the survey had experienced a breakup of their first marriage compared with about one in twenty Chinese women. The rate of dissolution of first marriage in the rural areas is about twice that of the urban areas, but this

Table 2.12: Per cent of ever-married women whose first marriage had ended and per cent who had remarried by stratum and ethnic group

| Stratum and ethnic group | Per cent whose first marriage had ended | Numbers whose first marriage had ended remarried | Per cent who had |
|---|---|---|---|
| **Peninsular Malaysia** | | | |
| Malays | 16.3 | 370 | 70.5 |
| Chinese | 4.5 | 63 | 14.3 |
| Indians | 12.7 | 55 | 30.9 |
| All women | 11.9 | 493 | 59.2 |
| **Urban** | | | |
| Malays | 13.5 | 76 | 65.9 |
| Chinese | 4.9 | 43 | 18.6 |
| Indians | 9.8 | 20 | 25.0 |
| All women | 8.4 | 140 | 45.7 |
| **Rural** | | | |
| Malays | 17.2 | 294 | 71.4 |
| Chinese | 3.9 | 20 | 5.0 |
| Indians | 15.2 | 35 | 34.3 |
| All women | 14.2 | 353 | 64.6 |

differential is associated with differences in ethnic composition by geographic stratum. Interestingly, Malays and Indians living in rural areas experience a higher marital dissolution rate than their counterparts in urban areas. The reverse pattern holds for the Chinese. While Malays have the highest marital dissolution rates they also have the highest remarriage rates. It appears that divorce and remarriage are more socially acceptable to the Malay community than to the Chinese or Indians. Of the 16 per cent of Malay respondents who had experienced a marital breakup, some 70 per cent had remarried by the time of the survey.

An attempt was made to find out from the 1984/85 MPFS whether there has been increasing or decreasing marital stability over time. This was done by examining the per cent of ever-married women from four birth cohorts who had been married for at least 10 years and who had been separated or divorced within the first 10 years. The results are shown in Table 2.13. The figures do not suggest that any significant changes have occurred in marital stability for the three generations studied.

Table 2.13: Per cent of women in given age groups who have divorced or separated by 10 years after their first marriage by ethnic group

| Period of birth | Current age | Women with more than 10 years of marriage | Separated or divorced within first 10 yrs. of marriage |
|---|---|---|---|
| 1935-39 | 45-49 | 466 | 7.6 |
| 1940-44 | 40-44 | 516 | 5.3 |
| 1945-49 | 35-39 | 649 | 5.9 |

## Remarriage and order of marriage

Overall, some 7 per cent of ever-married women in the survey were in their second or subsequent marriage (Table 2.14). That figure was markedly higher among women with relatively longer lengths of time since their first marriage. Thus, for example, almost one in eight women with 20 or more years since her first marriage was in a second or subsequent marriage.

Table 2.14: Per cent distribution of all ever-married women according to number of times married by years since first marriage

| Years since first marriage | Number of times married | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4+ | N |
| <5 | 99.4 | 0.6 | - | - | (952) |
| 5-9 | 96.7 | 3.3 | - | - | (875) |
| 10-14 | 93.6 | 5.6 | 0.5 | 0.3 | (730) |
| 15-19 | 91.9 | 6.8 | 1.1 | 0.2 | (545) |
| 20-24 | 88.2 | 9.2 | 2.1 | 0.4 | (468) |
| 25-29 | 83.4 | 12.9 | 2.6 | 1.1 | (49) |
| 30+ | 76.6 | 14.4 | 6.8 | 2.3 | (222) |
| All women | 92.9 | 5.6 | 1.1 | 0.3 | |
| N | (3849) | (233) | (44) | (15) | (4141) |

## Proportion of time spent married

The proportion of time spent married is a composite variable obtained from data on the dates in the marriage history section of the survey questionnaire. It consists of the sum of the lengths of time spent in all marriages divided by the total amount of time since first

marriage. This proportion sums the net effect of marriage dissolution and remarriage and provides an indication of a woman's total duration of exposure to the risk of conception. However, it tends to overstate the true length of exposure since, for example, it does not take into account periods when couples are temporarily separated.

Of the ever-married women in the survey, some 90 per cent had been continuously married. However, the index of the average proportion of time spent married by all ever-married women was 97 per cent (Table 2.15). A separate analysis (not shown here) by different socio-economic variables showed that there was little variation around this figure, with the Chinese having a very slightly higher proportion than the Malays or Indians. The high proportion of time spent in the married state by ever-married women implies that the current effect of marital dissolution is not likely to play a major role in depressing the overall level of marital fertility.

Table 2.15: Index of the average proportion of time since first marriage which has been spent in the married state by all ever-married women by age at first marriage and current age

| | Age at first marriage | | | | | | |
|---|---|---|---|---|---|---|---|
| Current age | <16 | 16-17 | 18-19 | 20-21 | 22-24 | 25-29 | All |
| 15-19 | 98.5 | 97.1 | 100.0 | : | : | : | 98.3 |
| 20-24 | 93.4 | 97.0 | 99.6 | 99.4 | 100.0 | : | 98.6 |
| 25-29 | 92.5 | 96.5 | 99.0 | 97.9 | 98.8 | 99.5 | 98.0 |
| 30-34 | 93.0 | 97.1 | 97.6 | 98.3 | 99.1 | 99.6 | 98.0 |
| 35-39 | 95.3 | 93.7 | 97.2 | 96.6 | 96.6 | 96.9 | 96.3 |
| 40-44 | 94.4 | 94.3 | 95.6 | 97.3 | 95.9 | 93.0 | 95.2 |
| 45-49 | 91.8 | 92.3 | 91.3 | 89.9 | 91.7 | 99.2 | 92.2 |
| All women | 93.6 | 95.4 | 97.4 | 97.5 | 97.8 | 98.1 | 96.8 |

Ideal age to marry

The 1984/85 MPFS asked questions of ever-married women about the best age at which men and women should first marry. Overall the respondents felt that the best age for young people these days to marry was 27 years for males and 23 years for females (Table 2.16).

Table 2.16: Mean ideal age at first marriage as reported by women in given age group and ethnic group

| Current age | Ethnic group Malays | Chinese | Indians | Total |
|---|---|---|---|---|
| | Mean ideal age at first marriage for males | | | |
| <20 | 25.8 | 30.2 | 24.1 | 26.3 |
| 20-24 | 26.1 | 27.0 | 25.2 | 26.7 |
| 25-34 | 26.8 | 27.5 | 26.9 | 27.1 |
| 35-49 | 27.1 | 27.7 | 26.4 | 27.3 |
| All ages | 26.8 | 27.5 | 26.4 | 27.1 |
| | Mean ideal age at first marriage for females | | | |
| <20 | 20.2 | 21.5 | 19.8 | 20.3 |
| 20-24 | 21.7 | 23.3 | 21.4 | 22.6 |
| 25-34 | 22.5 | 24.1 | 22.4 | 23.1 |
| 35-49 | 22.7 | 24.5 | 22.2 | 23.5 |
| All ages | 22.4 | 24.2 | 22.1 | 23.1 |
| N | (2117) | (1331) | (390) | (3888) |

There were, however, significant differences between the different ethnic groups and within each ethnic group among women at

different stages of the family formation process. In general, Indian and Malay women felt around age 22 was the best age to marry, some two years younger than Chinese women. It is interesting to note how these differential attitudes are reflected in actual behaviour (see sections on age at first marriage above). Within each ethnic group, the older the women the later they felt it better to marry. Of course, these only represent the opinions of ever-married women at the given ages which will not always be representative of all women at those ages. Thus it would appear that as women grow older they increasingly favour a later age at first marriage - perhaps suggesting that for some of these older women they themselves married younger than they would do if they were starting out on the family formation process again (see above).

## Choice of marriage partner

All currently married women who had married only once in the survey were asked a question about who made the decision on the choice of their marriage partner. From that information it is possible to establish the extent to which respondents chose their own partner, whether the pattern of choice of spouse has changed over time and how it varies according to ethnic group.

Out of the 3,833 currently married women who had married only once, some 35 per cent chose their own spouse and a further 17 per cent did so with parental consent (Table 2.17). For slightly more than one woman in four her spouse was determined by her parents alone. Leaving aside women aged under 20, who comprise a very small number in the sample, it is evident that there is an increasing trend for women to find their own spouse either alone or with the consent of their parents. Thus, for example, some 60 per cent of women aged 20-24 married according to their choice alone or with the consent of their parents compared with 31 per cent for women aged 45-49. However, although arranged marriages appear to be less common, it was still the case that one in four women aged 20-24 had her spouse determined by her parents alone.

Table 2.17: Per cent distribution of currently married women who had married once only according to how their marriage partners were chosen by age group and ethnic group

| Current age | Decision maker : Parents alone | Parents with consent of respondent | Respondent alone | Respondent with consent of parents | Others | N |
|---|---|---|---|---|---|---|
| **All ethnic group** | | | | | | |
| 15-19 | 31 | 6 | 39 | 17 | 6 | (77) |
| 20-24 | 24 | 12 | 43 | 17 | 4 | (583) |
| 25-29 | 23 | 10 | 43 | 19 | 5 | (827) |
| 30-34 | 28 | 11 | 35 | 20 | 6 | (799) |
| 35-39 | 28 | 14 | 33 | 15 | 8 | (669) |
| 40-44 | 36 | 16 | 23 | 14 | 11 | (471) |
| 45-49 | 41 | 17 | 21 | 10 | 12 | (407) |
| All ages | 29 | 13 | 35 | 17 | 4 | |
| **Malays** | | | | | | |
| 15-19 | 43 | 6 | 31 | 12 | 8 | (51) |
| 20-24 | 31 | 12 | 39 | 14 | 4 | (355) |
| 25-29 | 32 | 10 | 39 | 14 | 4 | (469) |
| 30-34 | 42 | 12 | 29 | 12 | 6 | (408) |
| 35-39 | 48 | 16 | 19 | 9 | 8 | (316) |
| 40-44 | 61 | 18 | 7 | 4 | 9 | (223) |
| 45-49 | 67 | 15 | 6 | 2 | 11 | (177) |
| All ages | 43 | 13 | 27 | 11 | 6 | |
| **Chinese** | | | | | | |
| 15-19 | - | - | 46 | 5 | 8 | (13) |
| 20-24 | 3 | 7 | 61 | 29 | 1 | (147) |
| 25-29 | 2 | 6 | 56 | 33 | 3 | (263) |
| 30-34 | 4 | 6 | 50 | 37 | 3 | (293) |
| 35-39 | 7 | 9 | 54 | 26 | 4 | (276) |
| 40-44 | 9 | 13 | 40 | 29 | 9 | (205) |
| 45-49 | 13 | 18 | 39 | 20 | 10 | (180) |
| All ages | 6 | 9 | 50 | 30 | 5 | |
| **Indians** | | | | | | |
| 15-19 | 11 | 22 | 55 | 11 | 0 | (9) |
| 20-24 | 35 | 20 | 27 | 8 | 11 | (66) |
| 25-29 | 36 | 22 | 25 | 2 | 15 | (87) |
| 30-34 | 38 | 26 | 17 | 3 | 15 | (92) |
| 35-39 | 35 | 25 | 13 | 3 | 13 | (68) |
| 40-44 | 31 | 23 | 15 | 0 | 31 | (39) |
| 45-49 | 50 | 22 | 10 | 10 | 18 | (50) |
| All ages | 37 | 23 | 20 | 3 | 17 | |

There are very marked differences in the pattern of choice of marriage partners between the different ethnic groups. For Malay and Indian women in the survey, four out of every ten (Table 2.17 and Figure 2.3) had their marriage partner determined by parents, the corresponding figure for the Chinese was just 6 per cent. Conversely, 50 per cent of Chinese women married the spouse of their choice alone, compared with corresponding figures of 27 per cent for Malay women and 20 per cent for Indian women.

## Intermarriage

The 1984/85 MPFS collected information about the ethnic origin and educational background of all currently married women's spouses. From that information it is possible to determine the extent to which persons of a particular group marry persons of a similar background. The 1984/85 MPFS revealed that there is only very little intermarriage between persons of different ethnic origins. Less than 1 per cent of Malay or Chinese women in the survey married a person of a different ethnic origin.

Within each ethnic group an analysis was made to determine the extent to which persons of a given educational background married persons of a similar background (Table 2.18). The figures in that table are ratios (multiplied by 100) of the observed values to the values 'expected' where persons marry without any preference for spouses of a particular educational background. Thus a figure above 100 may be interpreted as indicating a greater than 'expected' tendency to marry persons of a particular educational background, and vice versa for a figure below 100. Therefore if couples married without any preference the figures would all be 100.

Table 2.18: First marriage by years of schooling of wives and husbands, and ethnic group, ratios of observed to expected values*

| Husband's educational background | Wife's educational background: No schooling | 1-6 years | 7-12 years | >12 years | N |
|---|---|---|---|---|---|
| **All ethnic groups** | | | | | |
| No schooling | 341 | 82 | + | + | (196) |
| 1-6 years | 146 | 131 | 43 | - | (1769) |
| 7-12 years | 34 | 82 | 166 | 83 | (1536) |
| >12 years | + | 17 | 158 | 853 | (291) |
| N | (630) | (1806) | (1165) | (191) | |
| **Malays** | | | | | |
| No schooling | 362 | 80 | + | + | (131) |
| 1-6 years | 138 | 138 | 41 | - | (1003) |
| 7-12 years | 27 | 71 | 180 | 90 | (802) |
| >12 years | + | + | 147 | 953 | (143) |
| N | (342) | (956) | (683) | (98) | |
| **Chinese** | | | | | |
| No schooling | 318 | 89 | + | + | (44) |
| 1-6 years | 160 | 123 | 43 | + | (590) |
| 7-12 years | 36 | 94 | 154 | 77 | (531) |
| >12 years | + | + | 173 | 742 | (113) |
| N | (201) | (657) | (347) | (75) | |
| **Indians** | | | | | |
| No schooling | + | + | + | + | (16) |
| 1-6 years | 150 | 124 | 49 | + | (158) |
| 7-12 years | 57 | 90 | 141 | + | (185) |
| >12 years | + | + | + | + | (26) |
| N | (73) | (173) | (124) | (15) | |

* Expected were couples to marry without preference

+ values not calculated because the number of observations was <20

Fig. 2.3: Per cent distribution of currently married women who had married once only according to how their marriage partners were chosen by ethnic group

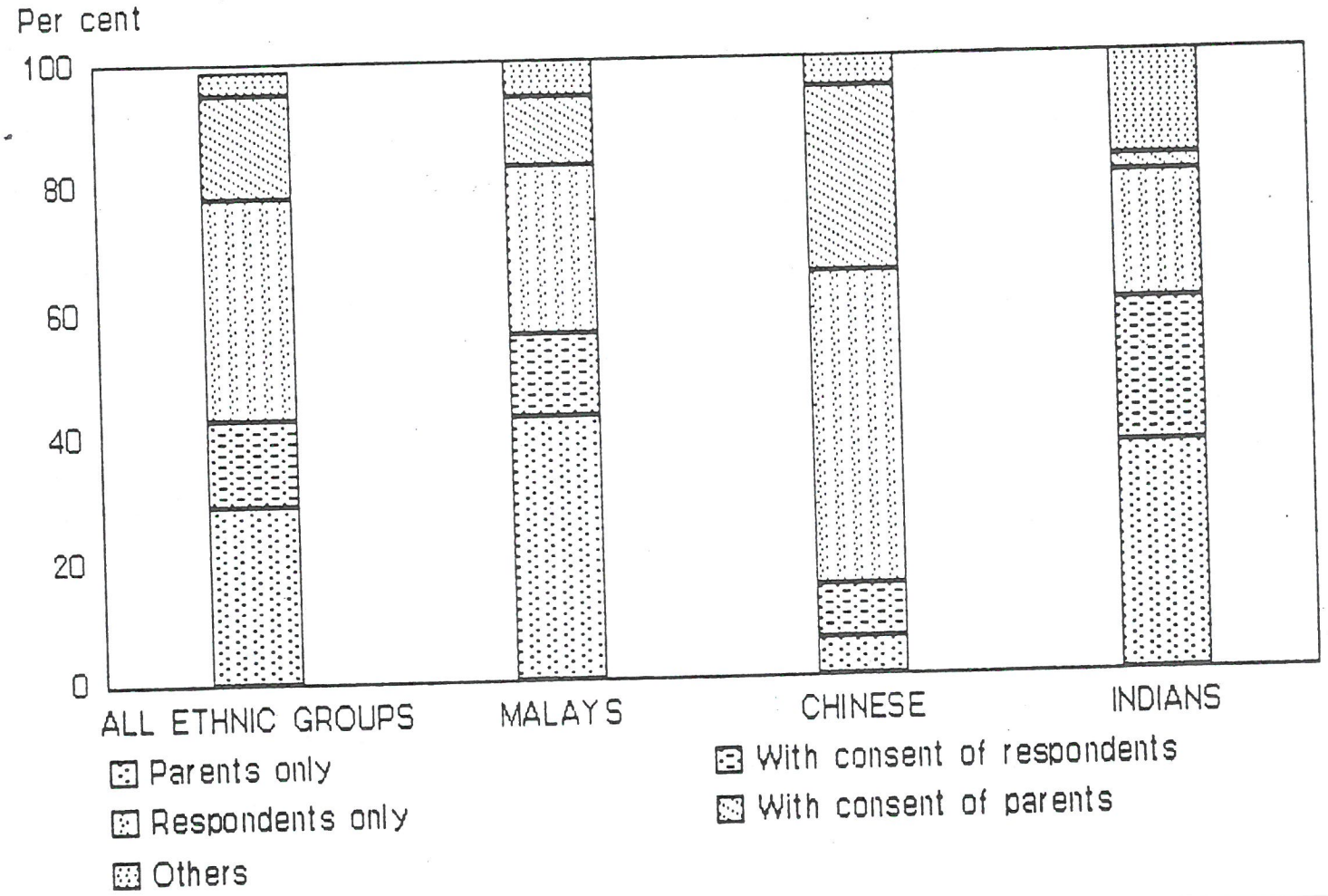


Table 2.18 shows that there is a very strong preference for persons of a given educational background to marry persons with the same background. That preference is highlighted by the figures in the diagonal which are all considerably in excess of 100. A similar pattern of preference is found among each of the ethnic groups. An interesting, though perhaps not surprising feature of Table 2.18, is that there is a greater than expected tendency for men to marry slightly lesser educated women, but no such tendency for better educated women to marry lesser educated men.

Of course, the strong preference to marry a person of a similar educational background is to be expected given that there is a high correlation between people's education and their occupation and that persons from similar educational and occupational groups are more likely to meet and mix socially than are persons from markedly different educational and occupational groups. Marriage should then be seen as not an entirely random process. Moreover, the use of educational background of wives as an explanatory variable in some of the other chapters in this report is in practice a composite variable reflecting a high correlation between the husband's educational background and occupational status.

## Age differences between spouses

It is common knowledge that women generally marry husbands older than themselves. From the information collected in the survey, it is possible to examine the extent of age differences between spouses and how the pattern varies for the different ethnic groups. Table 2.19 shows that of women married once only in the survey, 86 per cent married spouses who were older. In more than half of these marriages the husband was 5 or more years older. Conversely, very few women married husbands who were 5 or more years younger. A similar pattern was observed for each of the ethnic groups, with a tendency for Malay women to have a larger age gap between themselves and their spouses. Some 14 per cent of Malay women had spouses who were 10 or more years older than themselves.

Table 2.19: Age differences between husbands and wives for women married once only by ethnic group

| Ethnic group | Per cent of women who married men | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Older | | | | Of the same age | Younger | | |
| | All | >10 yrs. | 5-9 yrs | <5 yrs | | All | <5 yrs | >5 yrs |
| All | 86.0 | 12.4 | 34.6 | 39.0 | 7.5 | 6.5 | 6.0 | 0.5 |
| Malays | 87.2 | 13.5 | 35.9 | 37.7 | 6.3 | 6.6 | 6.1 | 0.5 |
| Chinese | 84.5 | 8.8 | 33.2 | 42.6 | 9.7 | 5.9 | 5.4 | 0.5 |
| Indians | 86.0 | 20.1 | 34.9 | 31.0 | 6.3 | 7.7 | 7.4 | 0.3 |

Summary

The 1984/85 MPFS confirmed the long term trend for women to marry at ever later ages but suggested the trend may be levelling. Marriage at ages 15-19 has become less and less common, such that in 1984 only 6 in every 100 girls in that age group had married. The big reductions seen in the proportions of women married at ages under 30 are far less prominent at ages above 30. This suggests that much of the decline in marriage rates at ages under 30 has been due to delayed marriage rather than a large scale trend towards remaining permanently unmarried.

The trend towards later age at first marriage was found among each of the ethnic groups. However, an ethnic differential continues, although less marked than in the past. Malay and Indian women marry on average about two years younger than their Chinese counterparts. An analysis of the factors influencing age at first marriage suggested the educational level of the person is the most important determinant. However, place of residence, ethnicity and a woman's work pattern were found to have independent effects.

Some 12 per cent of the sample of ever-married women had experienced marital dissolution. However, among those women with 20 or more years since their first marriage almost one in five had experienced a marital breakup, the bulk of the breakups arising from either separation and divorce. The survey showed that Malay and Indian first marriages were at much greater risk of marital breakup than those of the Chinese. However, remarriage for the Malays is more common than for the other two ethnic groups.

The survey showed that there is an increasing trend for women to find their own spouses. However, there were marked differences in the pattern of choice of marriage partners between the different ethnic groups. For the Malay and Indian women in the survey, four out of every ten had their marriage partner determined by their parents, compared with a corresponding figure of just 6 per cent for the Chinese.

The survey also showed that intermarriage of persons of different ethnic origins is uncommon. Similarly within each ethnic group there is a strong preference for persons with a given educational background to marry persons of a similar background.

# III. FERTILITY

## Introduction and background

The key objective of the 1984/85 Malaysian Population and Family Survey (MPFS) was to obtain greater insight into trends in childbearing among subgroups of the population than is possible from civil registration or the census data. The analysis here is based on information collected in the pregnancy history section of the 1984/85 survey cross-classified by various socio-economic characteristics. That information allows for detailed analysis of the fertility behaviour of all ever-married women who were aged 15-49 at the time of the survey. In addition, information about single women collected in the household member section was used so as to facilitate birth cohort analysis of childbearing patterns.

In general, retrospective birth history data of the type collected in the 1984/85 MPFS are subject to reporting errors such as omission of births (particularly those occurring in the early reproductive ages among older women) and misstatement of the dates of births. However, an evaluation of the quality of the birth data collected by the 1984/85 MPFS showed that there were no serious distortions.

Statistics from civil registration and the 1980 Census show that fertility rates in Peninsular Malaysia first began to decline in the late 1950s after the post-war baby boom. But there has not been a uniform transition, from high to low fertility, among the different subgroups of the population. The total fertility rates (TFR) for the Chinese and the Indians have maintained a long term decline up to the present time, whereas Malay fertility tended to level in the mid-1970s and has shown a slight increase since 1980 (Table 3.1 and Figure 3.1). Data from the civil registration of births permit only limited analysis of fertility behaviour of birth or marriage cohorts and tell little about birth spacing. What are the factors behind these divergent trends ?

Table 3.1: Total fertility rates (per woman) by ethnic group, Peninsular Malaysia, selected years 1965-86*

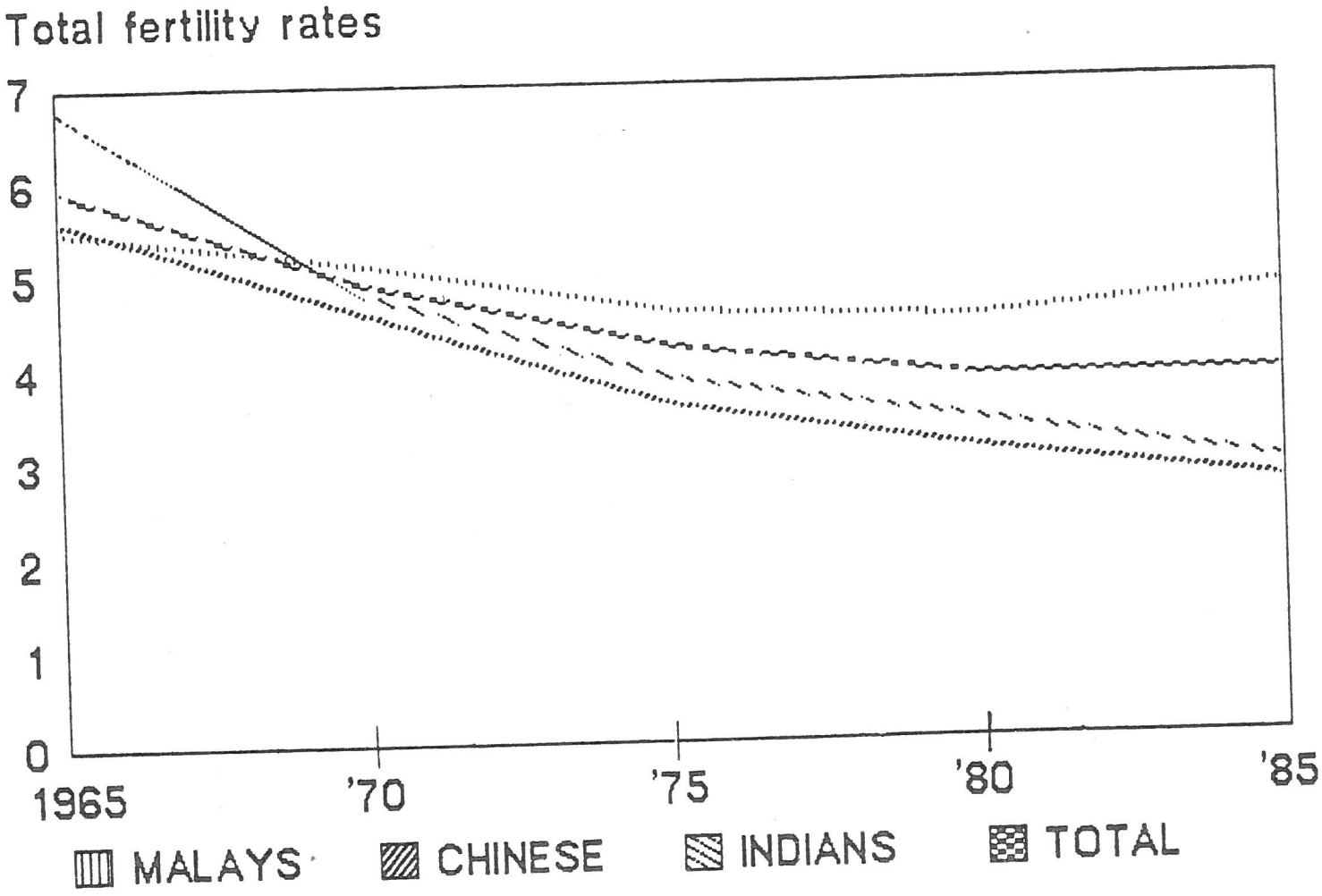
| Year | Malays | Chinese | Indians | Total |
|---|---|---|---|---|
| 1965 | 5.5 | 5.6 | 6.7 | 5.6 |
| 1970 | 5.1 | 4.6 | 4.8 | 4.9 |
| 1975 | 4.6 | 3.6 | 3.9 | 4.2 |
| 1980 | 4.5 | 3.1 | 3.4 | 3.9 |
| 1982 | 4.6 | 2.9 | 3.2 | 3.8 |
| 1984 | 4.7 | 2.7 | 3.0 | 3.8 |
| 1986 | 4.7 | 2.4 | 3.0 | 3.7 |

* Derived from vital registration statistics

Methodological perspective

The standard methodology used when analysing birth statistics from civil registration is through the period approach. In that approach the childbearing patterns of a cross-section of women born and married in different years are spliced together to form calendar year indicators, such as in Table 3.1 above. However, the 1984/85 MPFS facilitates cohort analysis whereby the childbearing patterns of women born, or married, in the same year(s) can be examined. While it is generally easier to understand annual period indicators of fertility they can give misleading impressions of underlying trends. For example, period indicators, such as the TFR, can be seriously distorted by changes in the timing of births. Thus, during a transition towards later marriage or childbearing, period indicators give an exaggerated picture of the likely ultimate family size of a cohort. This is because, for example, lower fertility rates at younger ages among given cohorts can be balanced by higher rates at older ages later among the same cohorts.

Fig. 3.1: Total fertility rates (per woman) by ethnic group, P. Malaysia, selected years 1965-85



An advantage of the 1984/85 MPFS is that the pregnancy history data can be analysed through either a marriage cohort or a birth cohort perspective. No question relating to age at first marriage is asked during the civil registration of births so data from that source cannot be analysed in the same way. Besides being more stable, cohort analysis is often more effective at detecting and explaining relationships between variables. This chapter first examines fertility behaviour of women first married in given years, that is, marriage cohorts. In the Malaysian context, where childbearing before marriage is negligible, marital duration is a good indicator of the years of exposure to the risk of childbearing. It then goes on to consider fertility of birth cohorts.

## Fertility of marriage cohorts

We begin by trying to establish whether the mean number of children born to women in relatively older marriage cohorts differs from that of more recently married cohorts at equivalent durations of marriage. In interpreting the marriage cohort tables, it is necessary to keep in mind the survey was confined to women aged 15-49 in the 1984/85 MPFS (see Appendix 2). As a consequence the marriage cohort tables are subject to a truncation and selection bias, whereby the marriage cohorts of the 1950s only include those who married at relatively young ages whose socio-economic characteristics may differ from those who married later. Thus figures presented for women who married in 1950-54 refer only to women who on average married before ages 17 and a half. Such women may not be representative of all women married in those years. Similarly those who married in 1955-59 refer only to women who on average married before age 22 and a half.

Table 3.2 shows fertility data for six marriage cohorts. The figures are most appropriately understood by looking down the columns and comparing the mean achieved family sizes of different cohorts at the same duration of marriage. Obviously the younger the cohort the less exposure to childbearing it will have had by the date of the survey. The mean family size at the early durations of marriage are shown to have been remarkably similar for each of the marriage

cohorts. By five years of marriage each of the marriage cohorts had approximately 2 children. However, at longer durations of marriage, the mean achieved family size gets progressively smaller the younger the marriage cohort. Thus, for example, women from the 1965-69 marriage cohort had a mean family size of 4.3 children by their fifteenth anniversary which is one and a half children less than achieved by the 1950-54 marriage cohort at the equivalent duration of marriage.

Table 3.2: Mean number of children born to women in given marriage cohorts at selected durations of marriage

| Marriage cohort | Exact duration of marriage (years) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2 | 5 | 8 | 10 | 12 | 15 | 20 | 25 |
| 1950-54 | 0.6 | 2.0 | 3.4 | 4.1 | 4.9 | 5.8 | 7.0 | 7.7 |
| 1955-59 | 0.8 | 2.2 | 3.4 | 4.0 | 4.6 | 5.3 | 6.1 | 6.5 |
| 1960-64 | 0.8 | 2.2 | 3.2 | 3.8 | 4.2 | 4.8 | 5.3 | |
| 1965-69 | 0.9 | 2.1 | 3.0 | 3.5 | 3.9 | 4.3 | | |
| 1970-74 | 0.9 | 2.0 | 2.8 | 3.3 | | | | |
| 1975-79 | 0.9 | 2.0 | | | | | | |

Thus, a general conclusion is that ever later age at first marriage has not been accompanied by the postponement of childbearing within the early years of marriage. However, couples from younger marriage cohorts are increasingly resorting to family planning at the later durations of marriage to control their ultimate family size. We can now consider to what extent this overall pattern holds for the different ethnic communities in Peninsular Malaysia.

Table 3.3 shows marriage cohort fertility trends of the three main ethnic groups. Among the younger marriage cohorts there is hardly any ethnic fertility differential in the early years of

Table 3.3: Mean number of children born to women in given marriage cohorts at selected durations of marriage by ethnic group

| Marriage cohort | Exact duration of marriage (years) 2 | 5 | 8 | 10 | 12 | 15 | 20 | 25 |
|---|---|---|---|---|---|---|---|---|
| **Malays** | | | | | | | | |
| 1950-54 | 0.5 | 1.9 | 3.2 | 4.0 | 4.7 | 5.7 | 7.3 | 8.3 |
| 1955-59 | 0.7 | 2.0 | 3.1 | 3.8 | 4.5 | 5.3 | 6.3 | 6.8 |
| 1960-64 | 0.8 | 2.1 | 3.1 | 3.6 | 4.1 | 4.8 | 5.7 | |
| 1965-69 | 0.8 | 1.9 | 2.8 | 3.3 | 3.8 | 4.5 | | |
| 1970-74 | 0.8 | 1.9 | 2.8 | 3.3 | | | | |
| 1975-79 | 0.9 | 2.0 | | | | | | |
| **Chinese** | | | | | | | | |
| 1950-54 | 0.8 | 2.5 | 3.9 | 4.6 | 5.3 | 6.2 | 6.8 | 7.0 |
| 1955-59 | 0.9 | 2.5 | 3.8 | 4.4 | 4.9 | 5.5 | 6.0 | 6.3 |
| 1960-64 | 0.9 | 2.4 | 3.4 | 4.0 | 4.3 | 4.6 | 4.8 | |
| 1965-69 | 1.0 | 2.3 | 3.3 | 3.7 | 3.9 | 4.2 | | |
| 1970-74 | 1.0 | 2.1 | 2.8 | 3.2 | | | | |
| 1975-79 | 1.0 | 2.0 | | | | | | |
| **Indians** | | | | | | | | |
| 1950-54 | 0.6 | 2.0 | 3.3 | 4.1 | 4.8 | 5.7 | 6.3 | 6.2 |
| 1955-59 | 1.0 | 2.3 | 3.4 | 4.0 | 4.5 | 5.0 | 5.3 | 5.2 |
| 1960-64 | 0.8 | 2.3 | 3.3 | 3.9 | 4.5 | 5.0 | 5.2 | |
| 1965-69 | 0.9 | 2.2 | 3.1 | 3.6 | 4.0 | 4.4 | | |
| 1970-74 | 0.8 | 1.9 | 2.9 | 3.3 | | | | |
| 1975-79 | 0.9 | 2.1 | | | | | | |

marriage. That was not the case among the cohorts who married in the 1950s and early 1960s. Among those, the Chinese had significantly higher fertility than the Malays and Indians during the first five

years of marriage, and even in the subsequent five years. Part of the explanation may well stem from the fact that even in the 1950s the Chinese were marrying at later ages than the Malays and Indians. It also suggests the Chinese had shorter birth intervals, perhaps on account of shorter periods of time spent breastfeeding.

At the longer durations of marriage there has been a fall in fertility levels among each ethnic group, although the Malays are shown to have higher marital fertility than the Chinese or Indians (Table 3.3). Thus, for example, the 1960-64 marriage cohort of Malays, which had the lowest level of fertility after five years of marriage, had 5.7 children by 20 years of marriage, almost one child more than the Chinese and half a child more than the Indians from the same cohorts at the same duration of marriage. Thus it appears that Chinese and Indian couples make greater use of family planning so as to have smaller family sizes.

One way to allow for the possible effects of truncation bias in marriage cohort fertility analysis is to control for age at first marriage. This is done in Table 3.4 which shows the cumulative fertility within the first five years of marriage of marriage cohorts. Overall there is little variation among the three age at marriage groups in the mean family size after five years of marriage. However, although this conclusion holds overall and for the Malays and Indians, a different pattern is found for the Chinese. For that community there is an inverse relationship between mean number of children and age at first marriage. Those who marry youngest have the most children in the early years of marriage, after controlling for duration of marriage.

## Birth intervals of marriage cohorts

An analysis of birth intervals between marriage and first birth and between subsequent inter-birth intervals provides a differing insight into the family formation process. In societies where contraception is widely used, births which occur in any given year

Table 3.4: Mean number of children born to women in given marriage cohorts within the first five years of marriage by age at first marriage and ethnic group

| Marriage cohort | Age at first marriage | | |
|---|---|---|---|
| | <20 | 20-24 | 25-29 |
| **All ethnic groups** | | | |
| 1950-54 | 2.0 | - | - |
| 1955-59 | 2.2 | 2.1 | - |
| 1960-64 | 2.1 | 2.3 | 1.6 |
| 1965-69 | 2.1 | 2.1 | 2.1 |
| 1970-74 | 2.0 | 2.0 | 1.8 |
| 1975-79 | 2.0 | 2.0 | 2.0 |
| **Malays** | | | |
| 1950-54 | 1.9 | - | - |
| 1955-59 | 2.0 | 1.8 | - |
| 1960-64 | 1.9 | 2.0 | - |
| 1965-69 | 1.9 | 2.0 | .. |
| 1970-74 | 1.9 | 2.0 | 1.8 |
| 1975-79 | 2.0 | 2.0 | 2.0 |
| **Chinese** | | | |
| 1950-54 | 2.6 | - | - |
| 1955-59 | 2.6 | 2.2 | - |
| 1960-64 | 2.5 | 2.5 | 1.5 |
| 1965-69 | 2.5 | 2.2 | 2.2 |
| 1970-74 | 2.3 | 2.1 | 1.9 |
| 1975-79 | 2.2 | 1.9 | 1.8 |
| **Indians** | | | |
| 1950-54 | 2.0 | - | - |
| 1955-59 | 2.4 | .. | - |
| 1960-64 | 2.4 | .. | .. |
| 1965-69 | 2.3 | .. | - |
| 1970-74 | 2.1 | 2.0 | .. |
| 1975-79 | 2.0 | 2.2 | .. |

largely result from the choice of couples as to the timing and quantum of children that they want. In other words, couples make conscious decisions about the planning of their families. It is interesting to pose the question as to whether the spread of education, employment opportunities and the availability of family planning have led couples to postpone marriage until they want to start a family. Let us try to answer this question through birth interval analysis.

Table 3.5 shows that Malaysian women are now having their first births at ever later ages and at ever shorter intervals after first marriage. The median age of mothers at first birth has risen progressively for each of the cohorts shown, from 17.2 years among members of the 1950-54 cohort to 21.8 years for those in the 1975-79 cohort. This is, of course, in line with expectations given the much later age pattern at first marriage. However, although women in Malaysia are marrying at later ages and having their first birth at later ages, the onset of childbearing within marriage tends to start earlier. Some 43 per cent of women who first married in 1975-79 had a birth within the first 12 months of marriage, whereas the corresponding figure among those who first married in 1950-54 was 18 per cent.

This trend towards a later age at first birth and earlier childbearing within marriage is found among each of the ethnic groups (Table 3.5). The median age of Chinese mothers at first birth is more than two years older than Malay mothers, a pattern consistent with their later age at first marriage. An interesting feature is the relatively higher proportion (15 per cent for the 1975-79 cohort) of first births that occur to Chinese women within the first eight months of marriage. This is consistent with the fact that Chinese women tend to complete childbearing in a shorter duration as compared to other ethnic groups.

Table 3.5: Cumulative marital first birth rates (per cent) of women in given marriage cohorts according to interval between first marriage and first birth by ethnic group

| Marriage cohort | Length of time since first marriage (months) | | | | | | Median duration (months) | Median age at first birth+ |
|---|---|---|---|---|---|---|---|---|
| | 0-7 | 8-11 | 12-23 | 24-35 | 36-47 | 48-59 | | |
| **All ethnic groups** | | | | | | | | |
| 1950-54 | 1 | 18 | 65 | 81 | 94 | 95 | 20.1 | 17.2 |
| 1955-59 | 4 | 23 | 76 | 89 | 94 | 97 | 18.1 | 18.3 |
| 1960-64 | 5 | 28 | 77 | 91 | 96 | 98 | 17.4 | 19.4 |
| 1965-69 | 6 | 31 | 82 | 93 | 97 | 98 | 16.4 | 20.2 |
| 1970-74 | 8 | 35 | 79 | 90 | 94 | 97 | 16.1 | 21.3 |
| 1975-79 | 8 | 43 | 85 | 94 | 97 | 99 | 14.0 | 21.8 |
| **Malays** | | | | | | | | |
| 1950-54 | 1 | 18 | 57 | 77 | 94 | 96 | 21.8 | 16.9 |
| 1955-59 | 1 | 14 | 72 | 88 | 94 | 96 | 19.4 | 17.7 |
| 1960-64 | 2 | 22 | 76 | 91 | 97 | 99 | 18.2 | 18.4 |
| 1965-69 | 3 | 25 | 79 | 92 | 97 | 98 | 17.5 | 19.0 |
| 1970-74 | 3 | 30 | 79 | 91 | 95 | 97 | 16.9 | 20.4 |
| 1975-79 | 5 | 41 | 86 | 96 | 98 | 99 | 14.4 | 20.9 |
| **Chinese** | | | | | | | | |
| 1950-54 | - | 16 | 81 | 90 | 97 | 97 | 18.2 | 17.9 |
| 1955-59 | 10 | 30 | 79 | 91 | 97 | 98 | 16.9 | 19.1 |
| 1960-64 | 9 | 36 | 82 | 93 | 97 | 98 | 15.6 | 21.7 |
| 1965-69 | 10 | 37 | 84 | 94 | 98 | 99 | 15.4 | 21.9 |
| 1970-74 | 17 | 44 | 81 | 90 | 94 | 98 | 13.9 | 23.3 |
| 1975-79 | 15 | 48 | 83 | 93 | 96 | 98 | 12.7 | 23.2 |
| **Indians** | | | | | | | | |
| 1950-54 | 4 | 21 | 71 | 82 | 89 | 89 | 19.0 | 17.6 |
| 1955-59 | 3 | 50 | 88 | 91 | 91 | 97 | 12.0 | 19.5 |
| 1960-64 | - | 26 | 68 | 81 | 89 | 92 | 18.8 | 18.4 |
| 1965-69 | 5 | 32 | 80 | 91 | 96 | 96 | 16.6 | 19.3 |
| 1970-74 | - | 28 | 68 | 83 | 94 | 94 | 15.4 | 20.3 |
| 1975-79 | 6 | 42 | 85 | 90 | 95 | 98 | 14.3 | 21.5 |

+The age by which 50 per cent of women in the given marriage cohorts had a first birth.

The trend towards later marriage, which has brought with it later age at first birth, has not been accompanied by either a postponement of first births within marriage or a sharp increase in childlessness within marriage. The 1984/85 MPFS shows that for each ethnic group, in excess of four fifths of couples have a first birth within the first two years of marriage and almost all do so within the first five years (Table 3.5).

The interval between first and second birth is significantly longer than that between first marriage and first birth (Table 3.6). Some caution needs to be taken in interpreting the figures for the youngest marriage cohort because it would have had an average only seven and a half years of exposure to childbearing by the date of the survey. Almost half of all women have a second birth within two years of the first. This pattern is little changed over time. The Malays tend to have slightly longer intervals between first and second birth than the Chinese or Indians. This may be associated with differential breastfeeding patterns coupled with the possibility that Chinese and Indians may have a greater desire to compress their childbearing so as to return to the labour force. However, there has been some convergence over time among the different ethnic groups in the interval between first and second birth.

It is interesting to examine whether there are systematic differences in birth spacing among families of different sizes. Because of the small sample numbers our analysis is confined to three ten year marriage cohorts (Table 3.7). There is a strong tendency, particularly in the two later marriage cohorts, for the interval between marriage and first birth, and between subsequent births, to be significantly shorter the larger the achieved family size. As achieved family size increases there is a progressive shortening of interbirth intervals. For example, among members of the 1960-69 cohort those who had achieved a mean family size of three by the time of the survey had a median duration of 14.9 months between marriage and first birth and 25.3 months between first and second births. The corresponding figures for those whose mean family size was seven or more were 14.1 months and 17.6 months. One factor in this may be

Table 3.6: Cumulative marital second birth rates (per cent) of women in given marriage cohorts according to interval between first marriage and second birth by ethnic group

| Marriage cohort | Length of time since first birth (months) | | | | | | Median duration (months) | Median age at second birth+ |
|---|---|---|---|---|---|---|---|---|
| | 0-7 | 8-11 | 12-23 | 24-35 | 36-47 | 48-59 | | |
| **All ethnic groups** | | | | | | | | |
| 1950-54 | - | 3 | 41 | 65 | 74 | 79 | 23.9 | 19.1 |
| 1955-59 | - | 7 | 45 | 69 | 78 | 82 | 23.5 | 20.2 |
| 1960-64 | .. | 4 | 53 | 73 | 79 | 83 | 22.0 | 21.5 |
| 1965-69 | - | 4 | 47 | 69 | 78 | 86 | 23.9 | 22.5 |
| 1970-74 | - | 5 | 47 | 67 | 80 | 86 | 24.3 | 23.4 |
| 1975-79 | .. | 3 | 45 | 68 | 79 | 84 | 25.1 | 23.5 |
| **Malays** | | | | | | | | |
| 1950-54 | - | 3 | 35 | 66 | 77 | 82 | 23.9 | 18.8 |
| 1955-59 | - | 4 | 39 | 61 | 75 | 79 | 24.1 | 19.6 |
| 1960-64 | - | 2 | 47 | 71 | 80 | 84 | 23.5 | 20.5 |
| 1965-69 | - | 1 | 38 | 64 | 75 | 83 | 26.9 | 21.5 |
| 1970-74 | - | 5 | 44 | 66 | 80 | 86 | 25.6 | 22.5 |
| 1975-79 | .. | 3 | 43 | 65 | 79 | 85 | 25.9 | 22.8 |
| **Chinese** | | | | | | | | |
| 1950-54 | - | 3 | 55 | 74 | 81 | 81 | 20.8 | 19.7 |
| 1955-59 | - | 11 | 57 | 81 | 85 | 87 | 19.8 | 20.9 |
| 1960-64 | - | 6 | 64 | 77 | 81 | 84 | 18.6 | 23.3 |
| 1965-69 | - | 7 | 53 | 76 | 83 | 90 | 22.1 | 24.0 |
| 1970-74 | - | 4 | 50 | 69 | 81 | 85 | 23.0 | 24.9 |
| 1975-79 | .. | 3 | 46 | 70 | 79 | 83 | 24.8 | 24.7 |
| **Indians** | | | | | | | | |
| 1950-54 | - | 4 | 43 | 54 | 57 | 64 | 25.0 | 19.4 |
| 1955-59 | - | 9 | 47 | 78 | 78 | 81 | 23.5 | 20.8 |
| 1960-64 | - | 6 | 38 | 66 | 70 | 72 | 24.2 | 20.8 |
| 1965-69 | - | 7 | 61 | 68 | 73 | 80 | 20.3 | 21.3 |
| 1970-74 | - | 6 | 49 | 66 | 80 | 86 | 24.3 | 22.6 |
| 1975-79 | - | 5 | 49 | 71 | 77 | 82 | 23.3 | 22.8 |

+The age by which 50 per cent of women in the given marriage cohorts had a first birth.

Table 3.7: Median values (in months) of interbirth intervals of women in given marriage cohorts for various achieved family sizes

| Intervals | Achieved family size | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 or more |
| **First married 1950-59** | | | | | | | |
| Marriage & first birth | .. | .. | 15.3 | 13.0 | 15.0 | 15.8 | 14.9 |
| First & second birth | : | .. | 26.8 | 28.5 | 24.5 | 22.1 | 20.5 |
| Second & third birth | : | : | 42.0 | 32.0 | 24.4 | 23.0 | 23.6 |
| Third & fourth birth | : | : | : | 41.5 | 36.3 | 27.0 | 23.7 |
| Fourth & fifth birth | : | : | : | : | 48.0 | 31.9 | 24.2 |
| Fifth & sixth birth | : | : | : | : | : | 29.5 | 24.8 |
| Sixth & seventh birth | : | : | : | : | : | : | 26.6 |
| **First married 1960-69** | | | | | | | |
| Marriage & first birth | 28.0 | 21.3 | 14.9 | 13.4 | 13.5 | 14.1 | 14.1 |
| First & second birth | : | 49.0 | 25.3 | 23.3 | 20.3 | 19.4 | 17.6 |
| Second & third birth | : | : | 47.0 | 33.8 | 24.1 | 23.5 | 21.3 |
| Third & fourth birth | : | : | : | 42.2 | 27.5 | 27.5 | 24.4 |
| Fourth & fifth birth | : | : | : | : | 40.0 | 31.8 | 24.3 |
| Fifth & sixth birth | : | : | : | : | : | 33.3 | 25.1 |
| Sixth & seventh birth | : | : | : | : | : | : | 25.6 |
| **First married 1970-79** | | | | | | | |
| Marriage & first birth | 26.5 | 14.6 | 12.8 | 11.9 | 11.5 | 12.3 | 11.6 |
| First & second birth | : | 32.1 | 21.3 | 20.0 | 18.1 | 16.0 | 18.0 |
| Second & third birth | : | : | 34.3 | 25.6 | 22.1 | 22.3 | 20.0 |
| Third & fourth birth | : | : | : | 28.5 | 25.2 | 21.6 | 22.5 |
| Fourth & fifth birth | : | : | : | : | 27.4 | 23.1 | 22.0 |
| Fifth & sixth birth | : | : | : | : | : | 24.5 | 21.3 |
| Sixth & seventh birth | : | : | : | : | : | : | 21.3 |

that those women with smaller family sizes are more likely to experience difficulties in conceiving or giving birth to a child.

## Parity progression ratios

Changes over time in fertility of different marriage cohorts and different ethnic groups can be spotlighted through parity progression ratios (Table 3.8). A parity progression ratio, conventionally denoted as $a_i$, is defined as the proportion of women with i children who have at least one more child. Thus $a_0$ is the proportion of (childless) women who have a first child; similarly $a_1$ is the proportion of women who have had at least one child who have a second child. Some caution is necessary in interpreting the figures because of the small number of events involved in given progressions, particularly those of the Indians.

The figures in Table 3.8 exhibit a regular pattern whereby the proportion of women moving on to any given order, $a_{i+1}$, are generally less than those at the previous order $a_i$. Over time there has been some reduction in parity progressions from orders two and above, that is, values of $a_2$ to $a_5$, a phenomenon which is unlikely to be entirely the result of exposure biases.

Reductions in parity progressions ratios have been significantly less marked for the Malays than for the Chinese or Indians. The effect is that levels of values $a_2$ and above are consistently higher among Malay cohorts married since 1960 than among the corresponding cohorts of Chinese and Indians. This is a clear indication of the desire for larger families among the Malays.

## Fertility of birth cohorts

So far the fertility of women has been analyzed in terms of marriage cohorts, that is by grouping together women of different ages according to the calendar years in which they were first married. In

Malaysia, where fertility almost entirely occurs after marriage and where family planning is widely used, the length of time for which a woman has been married is generally a more important determinant of her fertility than her chronological age.

**Table 3.8: Parity progression ratios (per 1000) of women in given marriage cohorts by ethnic group**

| Marriage cohort | Parity progression * | | | | | | |
|---|---|---|---|---|---|---|---|
| | $a_0$ | $a_1$ | $a_2$ | $a_3$ | $a_4$ | $a_5$ | N |
| **All ethnic groups** | | | | | | | |
| 1950-54 | 995 | 989 | 973 | 928 | 934 | 885 | (189) |
| 1955-59 | 994 | 974 | 950 | 932 | 860 | 853 | (350) |
| 1960-64 | 983 | 980 | 953 | 867 | 790 | 677 | (467) |
| 1965-69 | 985 | 965 | 906 | 803 | 667 | 579 | (547) |
| 1970-74 | 985 | 947 | 845 | 641 | 536 | 421 | (722) |
| **Malays** | | | | | | | |
| 1950-54 | 992 | 984 | 984 | 927 | 939 | 897 | (128) |
| 1955-59 | 996 | 968 | 958 | 942 | 871 | 864 | (223) |
| 1960-64 | 992 | 979 | 979 | 875 | 828 | 690 | (244) |
| 1965-69 | 982 | 966 | 930 | 842 | 698 | 645 | (272) |
| 1970-74 | 982 | 952 | 875 | 666 | 565 | 458 | (384) |
| **Chinese** | | | | | | | |
| 1950-54 | 1000 | 1000 | 968 | 967 | 931 | 852 | (31) |
| 1955-59 | 1000 | 989 | 946 | 931 | 864 | 857 | (93) |
| 1960-64 | 970 | 982 | 919 | 872 | 752 | 608 | (169) |
| 1965-69 | 991 | 981 | 866 | 770 | 611 | 477 | (218) |
| 1970-74 | 988 | 926 | 828 | 584 | 470 | 389 | (260) |
| **Indians** | | | | | | | |
| 1950-54 | 1000 | 1000 | 933 | 893 | 920 | 869 | (30) |
| 1955-59 | 971 | 970 | 906 | 862 | 760 | 737 | (34) |
| 1960-64 | 1000 | 980 | 938 | 800 | 694 | 800 | (49) |
| 1965-69 | 980 | 938 | 889 | 725 | 724 | 571 | (49) |
| 1970-74 | 985 | 970 | 800 | 673 | 600 | 286 | (68) |

* see text for definition.

Nevertheless it is also useful to analyze fertility in terms of birth cohorts, that is by grouping together women who were born in particular calendar years and examining their fertility. In this type of analysis the fertility of women born in different years can be compared at the time they reached the same ages. The 1984/85 MPFS facilitates the analysis of birth cohort fertility either in terms of ever-married women (that is those who are currently married, divorced and separated) or all women (that is ever-married women and single women). Both approaches have advantages and disadvantages. In the former the universe is restricted to women who are or have been 'at risk' of childbearing, whereas the latter gives a clearer picture of the extent to which generations are replacing themselves.

However, the birth cohort approach takes no account of the fact that in different cohorts the proportion of women who will have married at the same chronological age can differ markedly. Moreover, the younger cohorts in the survey, that is those born after 1955 will not have reached age 30 by the time of the survey. That is, the fertility of such cohorts is incomplete. These points should be remembered when interpreting the cohort analysis below.

Cumulative fertility of cohorts of ever married women

The number of children born to ever married women at the time of the survey is a stock measure of their cumulative fertility. It is interesting to compare the achieved family size of ever married women at given ages at the time of the 1984/85 MPFS with that of such women of the same ages in the 1974 Malaysian Fertility and Family Survey (MFFS) and in the two most recent population censuses (Table 3.9). In interpreting these figures it should be remembered that changes over time will be affected by both changes in the timing of first marriage and changes in the timing of fertility.

Leaving aside the youngest and oldest women, the level of childbearing for any given cohort of ever married women is lower with

the passage of time. For example, married women aged between 25 and 39 in 1984 had at least one child less than those of corresponding ages in 1970. The series of figures for married women aged 40 and above may not reflect the true trend because of errors in the reports of children ever born to these women. The figures in the final row represent a summary cross-section index of mean children ever born. Some caution is needed in using this index to assess changes because, for example, it is affected by both changes in the pattern of marriage and fertility and also by differences in the quality of the source data.

Table 3.9: Mean number of children born to ever-married women by age group, 1970 to 1984

| Age group | 1970 Census | 1974 MFFS | 1980 Census | 1984/85 MPFS |
|---|---|---|---|---|
| 15-19 | 0.9 | 0.8 | 0.8 | 0.9 |
| 20-24 | 1.9 | 1.7 | 1.5 | 1.5 |
| 25-29 | 3.3 | 2.8 | 2.4 | 2.3 |
| 30-34 | 4.6 | 4.2 | 3.6 | 3.5 |
| 35-39 | 5.7 | 5.5 | 4.7 | 4.2 |
| 40-44 | 6.0 | 6.1 | 5.5 | 5.4 |
| 45-49 | 5.9 | 6.2 | 5.9 | 6.1 |
| All women | (4.1) | (4.2) | (3.6) | (3.6) |

Table 3.10 disaggregates the data on mean number of children born to ever-married women in the 1984/85 MPFS according to parity and compares the figures with the corresponding distribution in the 1974 MFFS. The figures should, of course, be examined within age groups rather than between because of different lengths of exposure to childbearing. Among the older women the proportion of women with relatively small family sizes, three or fewer children was much the

same in both surveys. However, there has been a lessening in popularity of very large families, that is those with seven or more children. For example, among women aged 40-44 some 30 per cent had seven or more live births by 1984/85 MPFS compared with 46 per cent for women of the same age at the time of the 1974 MFFS.

Table 3.10: Per cent distribution of ever-married women by parity in 1974 MFFS and 1984/85 MPFS according to age group

| Age group | | Number of children ever born | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7+ | Mean |
| 15-19 | 1974 | 41 | 41 | 15 | 3 | 0 | - | 0 | - | 0.8 |
| | 1984/85 | 36 | 41 | 21 | 1 | - | - | - | - | 0.9 |
| 20-24 | 1974 | 18 | 31 | 27 | 16 | 6 | 1 | 1 | 0 | 1.7 |
| | 1984/85 | 20 | 34 | 29 | 14 | 3 | 1 | 0 | - | 1.5 |
| 25-29 | 1974 | 8 | 15 | 22 | 22 | 17 | 10 | 5 | 2 | 2.8 |
| | 1984/85 | 10 | 21 | 28 | 23 | 12 | 5 | 2 | 1 | 2.3 |
| 30-34 | 1974 | 3 | 7 | 12 | 17 | 16 | 17 | 12 | 15 | 4.2 |
| | 1984/85 | 4 | 9 | 18 | 26 | 20 | 11 | 7 | 6 | 3.5 |
| 35-39 | 1974 | 2 | 5 | 8 | 11 | 12 | 14 | 13 | 36 | 5.5 |
| | 1984/85 | 2 | 5 | 11 | 21 | 20 | 18 | 10 | 13 | 4.2 |
| 40-44 | 1974 | 3 | 5 | 6 | 10 | 10 | 11 | 10 | 46 | 6.1 |
| | 1984/85 | 2 | 4 | 8 | 11 | 14 | 18 | 14 | 30 | 5.4 |
| 45-49 | 1974 | 3 | 5 | 7 | 8 | 10 | 10 | 11 | 46 | 6.2 |
| | 1984/85 | 3 | 4 | 5 | 10 | 12 | 10 | 14 | 42 | 6.1 |

## Socio-economic differentials in cumulative fertility

This section examines the extent to which differences in fertility exist between subgroups of the survey population. Marriage and contraception are generally considered as direct or proximate determinants of fertility in contrast to socio-economic variables which are indirect determinants of fertility. The effects of these indirect determinants on fertility works through the intermediate variables.

Table 3.11 shows the mean number of children born to ever married women in given age groups in 1984/85, according to a range of socio-economic characteristics. The figures should be compared down the columns and not along the rows. Some care is needed in interpreting the figures in the first two columns because of differing ages at first marriage within the age groups among the different subgroups of the population. This potential bias is, however, minimized by focusing on ever-married women only.

The figures show that women living in the urban areas have fewer children at any given age than their counterparts living in the rural areas (Table 3.11). Similar differentials are found among the different ethnic groups and these are even sharper among women of different educational levels. Similarly, sharp and expected differential are also found in the fertility of women who worked before and after marriage in contrast to those who have never worked. Income level is also shown to be inversely related to mean achieved family size, particularly at age 30 and above. However, it must, of course, be remembered that these variables are highly inter-correlated. For example, it is known that Malays comprise the bulk of the rural population, are lesser educated and have lower income on average than the Chinese. Hence, it is necessary to use multivariate techniques to determine the net effects of each of the socio-economic variables on fertility. Such techniques will be applied and reported in a follow-up to this first report.

Table 3.11: Mean number of children born to ever-married women by age group and socio-economic characteristics

| Socio-economic characteristic | Age group of women | | | |
|---|---|---|---|---|
| | 15-19 | 20-29 | 30-39 | 40-49 |
| **Place of residence** | | | | |
| Urban | 0.5 | 1.8 | 3.2 | 4.9 |
| Rural | 1.0 | 2.1 | 4.3 | 6.3 |
| **Ethnic group** | | | | |
| Malays | 0.8 | 2.1 | 4.1 | 6.4 |
| Chinese | .. | 1.7 | 3.4 | 4.8 |
| Indians | .. | 2.0 | 3.9 | 5.4 |
| **Wife's educational level** | | | | |
| No schooling | .. | 2.5 | 4.4 | 6.1 |
| 1 - 6 years | 1.2 | 2.3 | 4.3 | 5.8 |
| 7 - 12 years | 0.7 | 1.6 | 2.9 | 3.9 |
| >12 years | - | 1.2 | 2.5 | 2.9 |
| **Work pattern** | | | | |
| Before & after marriage | .. | 1.8 | 3.5 | 5.3 |
| Before marriage only | 1.1 | 1.9 | 3.4 | 5.4 |
| After marriage only | .. | 2.4 | 4.7 | 6.4 |
| Never worked | 0.9 | 2.4 | 4.4 | 6.6 |
| **Husband's income** | | | | |
| <$400 | 0.9 | 2.2 | 4.3 | 6.4 |
| $400-$699 | 1.0 | 2.0 | 4.2 | 6.1 |
| $700-$999 | .. | 1.9 | 4.0 | 6.0 |
| $1000-$1499 | .. | 2.0 | 3.4 | 5.4 |
| $1500+ | .. | 1.6 | 3.0 | 4.5 |

However, we can examine the effects of the various socio-economic variables on fertility after controlling for particular variables. This is done in Tables 3.12 and 3.13. The fertility index shown is the cross-sectional mean number of children born to ever-married women. The focus should be on the pattern of the figures rather than interpreting them as 'true' levels. In Table 3.11, it was shown that

Table 3.12: Mean number of children born to ever-married women according to socio-economic characteristics and ethnic group

| Socio-economic characteristic | Ethnic group | | |
|---|---|---|---|
| | Malays | Chinese | Indians |
| **Place of residence** | | | |
| Urban | 3.3 | 2.9 | 3.3 |
| Rural | 4.0 | 3.9 | 3.7 |
| **Wife's educational level** | | | |
| No schooling | 5.4 | 5.0 | 4.3 |
| 1 - 6 years | 4.4 | 3.4 | 4.0 |
| 7 - 12 years | 2.3 | 2.2 | 2.2 |
| >12 years | 1.9 | 2.0 | .. |
| **Work Pattern** | | | |
| Before & after marriage | 3.5 | 3.1 | 3.4 |
| Before marriage only | 2.8 | 2.9 | 2.2 |
| After marriage only | 4.9 | 4.4 | 5.0 |
| Never worked | 4.2 | 4.1 | 3.0 |
| **Husband's income** | | | |
| <$400 | 4.0 | 3.6 | 3.6 |
| $400-$699 | 3.6 | 3.5 | 3.6 |
| $700-$999 | 3.9 | 3.2 | 2.8 |
| $1000-$1499 | 3.6 | 3.2 | 3.0 |
| $1500+ | 3.1 | 2.9 | 2.7 |

the Malays have the highest fertility, followed by the Indians and the Chinese. However, after controlling for other factors it is seen that the ethnic differentials are less marked (Table 3.12). For example, there is still an urban and rural ethnic fertility differential but the disparity is not large. The same conclusion holds with respect to educational level, work pattern and income (Table 3.12).

Of women who worked either before and after marriage or after marriage only, Chinese women tended to have a smaller mean family size than Malays and Indians. This may be explained by the fact that a larger proportion of the Chinese women are working in the modern sector where work is relatively less compatible with child-care. Whereas many Malays are engaged in rural agricultural activities which are compatible with larger families.

A strong inverse association between the level of education of women and their cumulative fertility was shown in Table 3.11. Fertility levels are lower as educational level increases. The educational impact on fertility levels exists for each of the ethnic groups but is particularly strong among the Malays, as evidenced by the wider range of mean family sizes (Table 3.12).

Table 3.13 shows the powerful influence of educational level on fertility. We can recall that education also exerts a strong influence on age at first marriage. Both husband's education level and wife's educational level have an independent effect on fertility. Thus, for example, within each level of wife's education, fertility decreases with husband's education. However, the figures suggest that wife's education has a stronger effect on fertility level as compared to that of the husband as evidenced by the wider range of means across the rows rather than down the columns.

Over the past 15 years there has been an increase in labour force participation of Malaysian women. Many studies have been conducted to examine the direction and strength of the relationship between women's work and fertility. The general conclusion is that women who

Table 3.13: Mean number of children born to ever-married women according socio-economic characteristics and wife's educational level

| Socio-economic characteristic | Wife's educational level | | | |
|---|---|---|---|---|
| | No sch. | 1-6 yrs. | 7-12 yrs. | >12 yrs. |
| **Place of residence** | | | | |
| Urban | 4.6 | 3.7 | 2.2 | 2.1 |
| Rural | 5.2 | 4.1 | 2.3 | 1.6 |
| **Work pattern** | | | | |
| Before & after marriage | 5.0 | 3.8 | 1.9 | 1.9 |
| Before marriage only | 4.3 | 3.0 | 2.0 | .. |
| After marriage only | 5.7 | 5.1 | 3.2 | .. |
| Never worked | 5.6 | 4.4 | 2.8 | .. |
| **Husband's educational level** | | | | |
| No schooling | 6.0 | 4.8 | .. | - |
| 1 - 6 years | 5.2 | 4.3 | 2.6 | .. |
| 7 - 12 years | 3.9 | 3.2 | 2.1 | 2.0 |
| >12 years | .. | 3.7 | 2.2 | 1.9 |
| **Husband's income** | | | | |
| <$400 | 4.9 | 4.0 | 1.7 | - |
| $400-$699 | 5.2 | 4.0 | 2.1 | .. |
| $700-$999 | 5.4 | 3.9 | 2.2 | 2.0 |
| $1000-$1499 | 5.4 | 3.9 | 2.5 | 1.7 |
| $1500+ | 4.7 | 3.9 | 2.4 | 2.2 |

work in the modern economic sector tend to have lower fertility than women who either work in the traditional agricultural sector or women who do not work. As already noted the 1984/85 MPFS found wide variations in fertility for women with different work patterns (Tables

3.11-3.13). Women who worked after marriage only had the highest fertility, followed closely by those who had never worked, while those who had worked before marriage only had the lowest fertility. A tabulation to explore the relationship between work pattern and fertility according to stratum found that irrespective of work pattern, women living in rural areas tended to have somewhat higher fertility than those in the urban areas (Table 3.14). But this differential is compounded both by the nature of industry in urban and rural areas as well as the effects of ethnicity.

Table 3.14: Mean number of children born to currently married women by work pattern and place of residence

| Work pattern | Urban | Rural |
|---|---|---|
| Never worked | 3.9 | 4.1 |
| Ever-worked | 2.8 | 3.8 |
| i) worked before & after marriage | 2.6 | 3.9 |
| ii) worked before marriage only | 2.8 | 2.8 |
| iii) worked after marriage only | 4.2 | 5.0 |
| All women | 3.0 | 3.9 |

As expected women working in the traditional agricultural sector have significantly higher fertility than women employed in the modern sector (Table 3.15). Within the non-agricultural sector, women in the sales, service and production industries have higher fertility levels than those in professional and clerical industries. This finding is in line with expectations given that the educational level of women working in these industries is higher and that they offer more potential for longer term careers.

Table 3.15: Mean number of children born to currently married women by occupation of women

| Occupation of women | Unstandardized | Age-standardized |
|---|---|---|
| Agricultural | 4.9 | 4.6 |
| Non-agricultural | 3.0 | 3.2 |
| professional | 2.2 | 2.4 |
| clerical | 1.8 | 2.5 |
| sales | 3.8 | 3.7 |
| service | 3.5 | 3.4 |
| production | 3.2 | 3.5 |

**Premarital conceived births**

No direct questions were asked in the 1984/85 MPFS on premarital sexual behaviour because it was feared it might lower the response rate in the survey. Moreover, it is likely that some respondents would not have divulged information relating to behaviour which some people consider to be socially unacceptable.

Estimate of the levels of premaritally conceived births have been computed based on the intervals between date of first marriage and the date of first birth. However, their reliability is affected by significant gaps in reporting of dates of events. About 12 per cent of women did not report month of marriage and/or month of first birth. Further, about 13 per cent of the dates given by the respondents were not verified with documents. Premaritally conceived live births have been taken here as those occurring less than 7 months after the date of first marriage.

The 1984/85 MPFS suggests that the overall level of premaritally conceived births among births occurring to women in the sample was of the order of 6 per cent (Table 3.16). According to these figures, the incidence of premaritally conceived births among the Chinese is more than five times higher than for the other ethnic groups. Part of these differences, however, may be due to erroneous reporting of month of marriage and/or birth.

Table 3.16: Per cent of first births that were premaritally conceived by socio-economic characteristics

| Socio-economic characteristic | Premaritally conceived births |
|---|---|
| **All women** | 6.2 |
| **Place of residence** | |
| Urban | 8.0 |
| Rural | 5.1 |
| **Ethnic group** | |
| Malays | 1.6 |
| Chinese | 14.6 |
| Indians | 3.2 |
| **Age at first marriage** | |
| < 20 | 7.4 |
| 20-24 | 6.0 |
| 25-29 | 6.4 |

## Perceived fecundity status

Fecundity refers to the physiological capacity of a woman to bear children. In the 1984/85 MPFS each respondent's perception of her own fecundity status was obtained but not by reference to medical certification. The following question was asked of all currently married women who were not pregnant at the time of the survey :

"As far as you know, would it be physically possible for you and your husband to have a child if you wanted one?"

Respondents who reported sub-fecundity were then asked if she or her husband had undergone an operation that resulted in sterility. Some 77 per cent of respondents reported they were fecund; some 9 per cent reported they were infecund due to sterilization of either the husband or the wife and 6 per cent due to other reasons, while the remaining 8 per cent were uncertain of their fecundity status (Table 3.17). As might be expected, perceived fecundity decreases beyond age 25-29. None of the respondents below 25 years of age perceived

Table 3.17: Percentage distribution of all currently married non-pregnant women, by current age and perceived fecundity status

| Current age | Fecund | Not fecund | | No knowledge |
|---|---|---|---|---|
| | | Sterilization | Other | |
| 15-19 | 98 | - | - | 2 |
| 20-24 | 98 | - | - | 2 |
| 25-29 | 95 | 2 | 1 | 3 |
| 30-34 | 88 | 6 | 1 | 5 |
| 35-39 | 75 | 16 | 2 | 8 |
| 40-44 | 55 | 17 | 10 | 19 |
| 45-49 | 24 | 16 | 37 | 23 |
| All women | 77 | 9 | 6 | 8 |

themselves to be sub-fecund. The percentage sterilized increases rapidly from 2 per cent among those aged 25 to 29 years, to 16 per cent for those aged 45 and over. This indicates that slightly more than one third of women aged 40-49 years perceived themselves to have already reached the menopausal stage.

## Fertility of birth cohorts of all women

The mean achieved family size of different birth cohorts at given ages is shown in Table 3.18 and Figure 3.2. The figures relate to all women and not just those who are ever-married. Once again they are best understood by looking down the columns and comparing the mean achieved family sizes of different birth cohorts at the same ages. A striking feature, associated with later marriage, is that the younger the cohort the smaller the achieved family size at any given age. The same pattern is found for each ethnic group. However, the fertility levels of the Malay and Indian cohorts are significantly higher than for the Chinese. Thus, for example, in the cohort born in 1950-54 which would have been passing through the peak childbearing ages in the later half of the 1970s and the first half of the 1980s, the Malays have achieved 2.7 children, the Indians 2.9 and the Chinese just 2.2. That differential can be expected to widen as the cohort ages since the Chinese and Indians have much lower levels of fertility at the older childbearing ages than do the Malays.

## Childlessness

It is interesting to determine what proportion of women born in different birth cohorts remain permanently childless. Childlessness in terms of birth cohort analysis will occur both because some women do not marry and because some who do will either be unable or not want to conceive. For those born in 1935-39 it appears that almost 9 per cent of women remained permanently childless (Table 3.19 and Figure 3.3). For the next younger cohort just 7 per cent were still childless by the time they reached age 40. However, for subsequent

Table 3.18: Mean family size of women born in given years at selected ages by ethnic group

| Period of birth | Exact age 20 | 22 | 24 | 26 | 28 | 30 | 35 | 40 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| **All ethnic groups** | | | | | | | | | |
| 1935-39 | 0.68 | 1.23 | 1.84 | 2.49 | 3.15 | 3.76 | 4.91 | 5.54 | 5.75 |
| 1940-44 | 0.66 | 1.21 | 1.79 | 2.45 | 3.06 | 3.56 | 4.52 | 5.03 | |
| 1945-49 | 0.49 | 0.89 | 1.32 | 1.85 | 2.33 | 2.78 | 3.63 | | |
| 1950-54 | 0.36 | 0.72 | 1.14 | 1.64 | 2.14 | 2.58 | | | |
| 1955-59 | 0.26 | 0.56 | 1.00 | 1.43 | | | | | |
| 1960-64 | 0.24 | 0.47 | | | | | | | |
| **Malays** | | | | | | | | | |
| 1935-39 | 0.90 | 1.55 | 2.18 | 2.83 | 3.46 | 4.05 | 5.26 | 6.05 | 6.36 |
| 1940-44 | 0.95 | 1.62 | 2.24 | 2.94 | 3.56 | 4.08 | 5.15 | 5.80 | |
| 1945-49 | 0.61 | 1.05 | 1.53 | 2.06 | 2.53 | 2.98 | 3.93 | | |
| 1950-54 | 0.44 | 0.84 | 1.26 | 1.76 | 2.28 | 2.74 | | | |
| 1955-59 | 0.33 | 0.66 | 1.14 | 1.61 | | | | | |
| 1960-64 | 0.27 | 0.54 | | | | | | | |
| **Chinese** | | | | | | | | | |
| 1935-39 | 0.29 | 0.64 | 1.20 | 1.85 | 2.50 | 3.15 | 4.27 | 4.74 | 4.84 |
| 1940-44 | 0.32 | 0.71 | 1.22 | 1.83 | 2.48 | 3.02 | 3.90 | 4.24 | |
| 1945-49 | 0.25 | 0.57 | 0.94 | 1.45 | 1.97 | 2.42 | 3.17 | | |
| 1950-54 | 0.17 | 0.48 | 0.86 | 1.37 | 1.83 | 2.24 | | | |
| 1955-59 | 0.14 | 0.36 | 0.72 | 1.09 | | | | | |
| 1960-64 | 0.17 | 0.33 | | | | | | | |
| **Indians** | | | | | | | | | |
| 1935-39 | 1.08 | 1.81 | 2.55 | 3.19 | 4.00 | 4.57 | 5.57 | 5.91 | 5.98 |
| 1940-44 | 0.61 | 1.28 | 1.93 | 2.44 | 2.88 | 3.21 | 3.88 | 4.21 | |
| 1945-49 | 0.73 | 1.27 | 1.73 | 2.29 | 2.70 | 3.18 | 3.84 | | |
| 1950-54 | 0.51 | 0.88 | 1.38 | 1.83 | 2.37 | 2.85 | | | |
| 1955-59 | 0.36 | 0.68 | 1.17 | 1.63 | | | | | |
| 1960-64 | 0.20 | 0.41 | | | | | | | |

Fig. 3.2: Mean Family size of women born in given years at selected ages

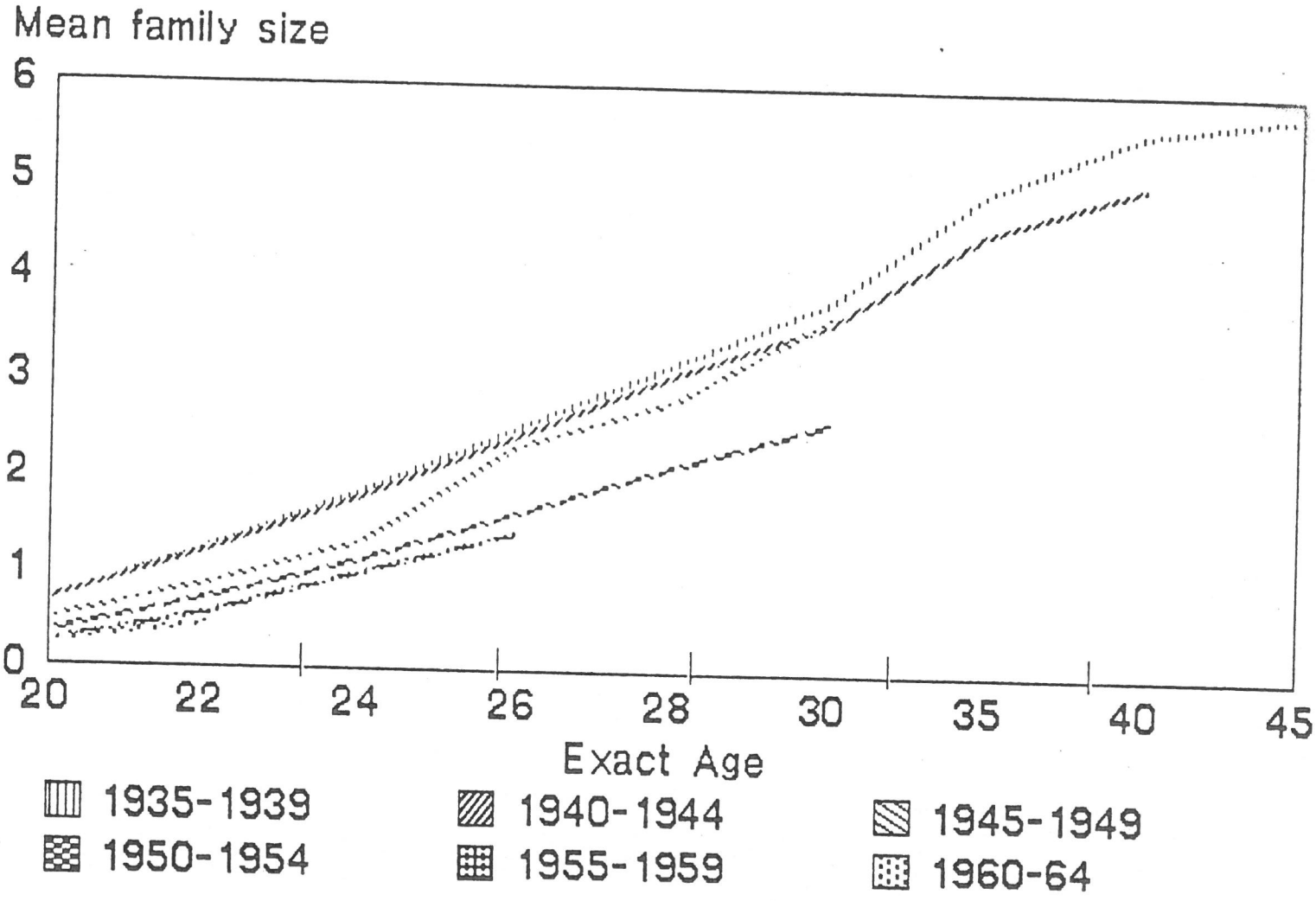
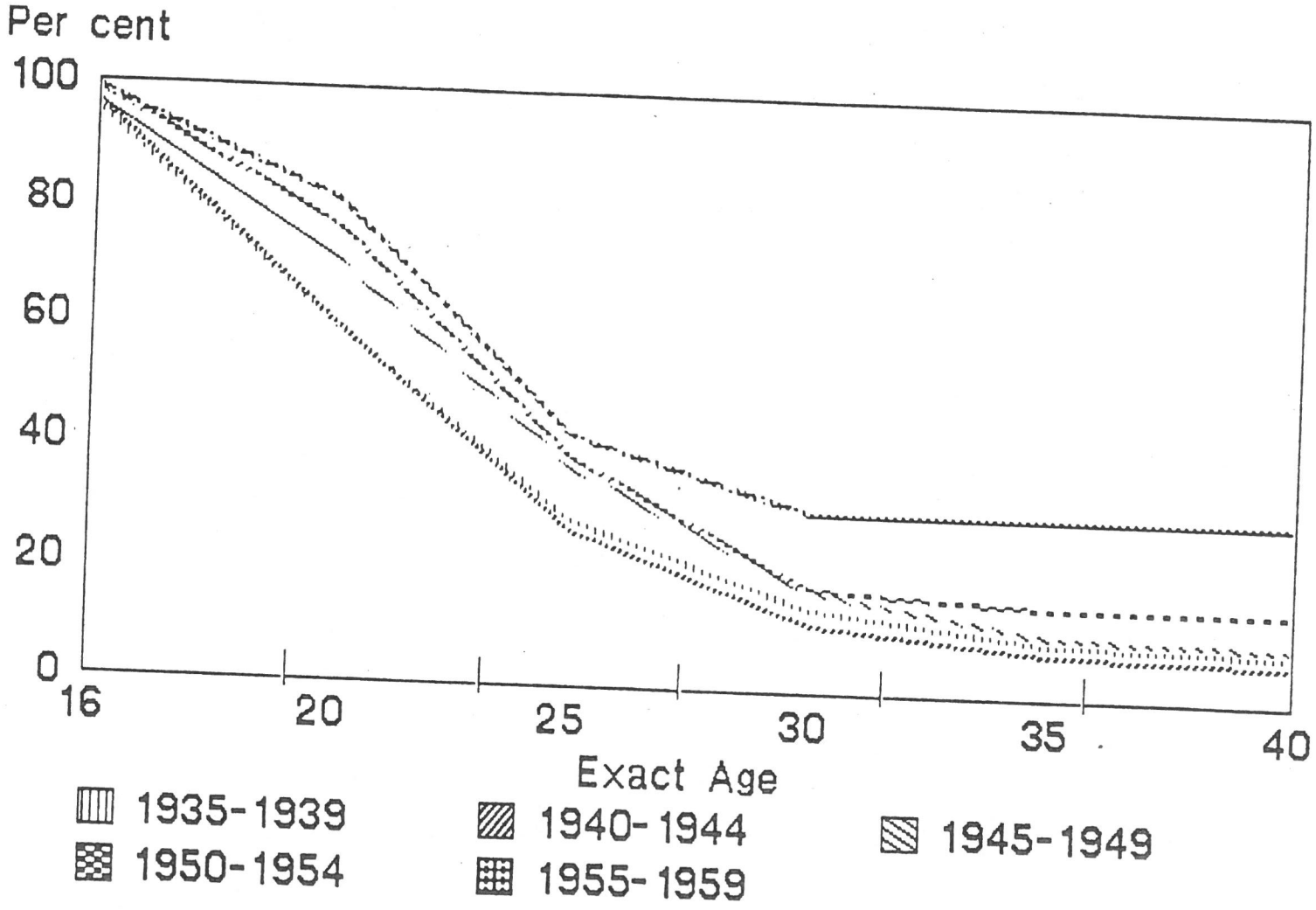


Table 3.19: Proportion (per 1000) of women born in given years who were childless at selected ages by ethnic group

| Period of birth | Exact age | | | | | | | | | Median age at first birth+ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 22 | 24 | 26 | 28 | 30 | 35 | 40 | 45 | |
| **All ethnic groups** | | | | | | | | | | |
| 1935-39 | 600 | 445 | 318 | 240 | 180 | 141 | 96 | 86 | 80 | 19.9 |
| 1940-44 | 604 | 442 | 320 | 214 | 145 | 114 | 77 | 66 | | 20.4 |
| 1945-49 | 704 | 562 | 438 | 308 | 213 | 173 | 105 | | | 21.8 |
| 1950-54 | 767 | 609 | 463 | 328 | 228 | 180 | | | | 22.5 |
| 1955-59 | 812 | 668 | 495 | 362 | | | | | | 22.9 |
| 1960-64 | 833 | 714 | | | | | | | | |
| **Malays** | | | | | | | | | | |
| 1935-39 | 470 | 304 | 202 | 154 | 134 | 126 | 101 | 93 | 93 | 18.7 |
| 1940-44 | 446 | 272 | 196 | 112 | 87 | 83 | 65 | 58 | | 18.5 |
| 1945-49 | 617 | 484 | 335 | 239 | 169 | 149 | 98 | | | 20.7 |
| 1950-54 | 695 | 529 | 393 | 279 | 190 | 144 | | | | 21.4 |
| 1955-59 | 767 | 610 | 441 | 311 | | | | | | 22.2 |
| 1960-64 | 808 | 673 | | | | | | | | |
| **Chinese** | | | | | | | | | | |
| 1935-39 | 803 | 670 | 495 | 367 | 261 | 176 | 96 | 80 | 74 | 22.9 |
| 1940-44 | 795 | 667 | 484 | 333 | 201 | 137 | 87 | 64 | | 22.8 |
| 1945-49 | 838 | 702 | 599 | 417 | 278 | 214 | 123 | | | 24.0 |
| 1950-54 | 880 | 730 | 566 | 387 | 264 | 217 | | | | 23.7 |
| 1955-59 | 888 | 775 | 599 | 447 | | | | | | 24.4 |
| 1960-64 | 878 | 788 | | | | | | | | |
| **Indians** | | | | | | | | | | |
| 1935-39 | 491 | 302 | 226 | 189 | 113 | 94 | 75 | 75 | 75 | 18.9 |
| 1940-44 | 628 | 372 | 256 | 233 | 209 | 186 | 93 | 70 | | 20.2 |
| 1945-49 | 630 | 411 | 329 | 233 | 178 | 123 | 68 | | | 20.2 |
| 1950-54 | 755 | 609 | 482 | 391 | 300 | 236 | | | | 22.7 |
| 1955-59 | 807 | 639 | 462 | 378 | | | | | | 22.5 |
| 1960-64 | 854 | 764 | | | | | | | | |

+The age by which 50 per cent of women in the given birth cohorts had had a first birth.

Fig. 3.3: Per cent of women born in given years who were childless at selected ages



cohorts the level of permanent childlessness may well increase again, since the proportions childless at ages 35 and below are greater than for the 1940-44 cohort. One factor contributing to such a trend will be a presumed rise in the level of lifetime singleness among these cohorts of women.

The pattern of childlessness by ethnicity shows differing trends. Among the cohorts of 1935-39 the Malays had higher levels of childlessness than Indians or Chinese (Table 3.19). But among the younger cohorts, Chinese and Indians have higher levels of childlessness. It is unlikely that these cohorts will entirely close the gap with the Malays as they pass through the later reproductive ages.

## Fertility of remarried women

Do currently married women who have been married once only have more or less children than those who have been married more than once? Table 3.20, which shows the average family size achieved at the time of the 1984/85 MPFS by women in different birth cohorts classified by marital condition, sets out to answer that question. The figures should be compared across the rows and not down the columns because of different lengths of exposure to childbearing - the younger the birth cohort the less its exposure will have been.

With the exception of the youngest birth cohort, women who were in an uninterrupted first marriage had significantly higher fertility than those in a second or subsequent marriage. The older the cohort the greater the difference. Thus, for example, among women born in 1935-39, who were aged between 45 and 49 in 1984/85, those married once only had 6.1 children compared with 5.3 for those born in the same period who were in a higher order marriage. This pattern is particularly marked among Malay women where the differential in the same birth cohort was almost two children. Although remarried women may want to have children by their second or later husband during the early period of their second marriage, thereby boosting their

Table 3.20: Mean family size of women in different birth cohorts by marital condition and ethnic group

| Birth Cohort | Age at time of survey | All women | Ever married women | Once married women | Remarried women |
|---|---|---|---|---|---|
| **All ethnic groups** | | | | | |
| 1935-39 | 45-49 | 5.8 | 6.0 | 6.1 | 5.3 |
| 1940-44 | 40-44 | 5.2 | 5.3 | 5.4 | 4.8 |
| 1945-49 | 35-39 | 3.9 | 4.2 | 4.3 | 4.0 |
| 1950-54 | 30-34 | 3.0 | 3.5 | 3.5 | 3.5 |
| 1955-59 | 25-29 | 1.8 | 2.3 | 2.3 | 2.6 |
| **Malays** | | | | | |
| 1935-39 | 45-49 | 6.4 | 6.8 | 7.2 | 5.3 |
| 1940-44 | 40-44 | 5.9 | 6.1 | 6.3 | 5.0 |
| 1945-49 | 35-39 | 4.3 | 4.7 | 4.8 | 4.0 |
| 1950-54 | 30-34 | 3.3 | 3.7 | 3.7 | 3.3 |
| 1955-59 | 25-29 | 2.0 | 2.5 | 2.5 | 2.8 |
| **Chinese** | | | | | |
| 1935-39 | 45-49 | 4.9 | 5.1 | 5.1 | .. |
| 1940-44 | 40-44 | 4.4 | 4.5 | 4.6 | .. |
| 1945-49 | 35-39 | 3.3 | 3.7 | 3.7 | .. |
| 1950-54 | 30-34 | 2.6 | 3.1 | 3.1 | .. |
| 1955-59 | 25-29 | 1.4 | 2.0 | 2.0 | .. |
| **Indians** | | | | | |
| 1935-39 | 45-49 | 6.4 | 6.1 | 6.2 | .. |
| 1940-44 | 40-44 | 4.3 | 4.6 | 4.7 | .. |
| 1945-49 | 35-39 | 4.1 | 4.0 | 4.0 | .. |
| 1950-54 | 30-34 | 3.3 | 3.8 | 3.7 | .. |
| 1955-59 | 25-29 | 1.8 | 2.4 | 2.4 | .. |

fertility, it is likely that remarried women will have spent some period of their reproductive lives between marriages where the risk of exposure to pregnancy is lower. Of course the mean family size of all women in any given cohort in Table 3.20 is lowest of all, because single women are included in the computation.

## Summary

The 1984/85 MPFS provides a fuller picture of the mechanisms of fertility change in Peninsular Malaysia than it is possible to obtain from other data sources. Using a marriage cohort perspective, it is shown that the level of childbearing within the first five years of marriage has been remarkably constant over time. The average women have achieved some two children after 5 years of marriage. Time trends in marriage cohort fertility at longer durations of marriage showed that the mean family size gets progressively smaller the younger the marriage cohort at any given duration of marriage. Couples from these cohorts are increasingly using family planning to limit their family sizes. A similar pattern is found for each of the ethnic groups, although the Malays are shown to have significantly higher marital fertility than the Chinese or Indians.

Later age at first marriage has led to later age at first birth. But following marriage, women are giving birth at ever shorter intervals after marriage. That is, the trend towards later marriage has not been accompanied by a postponement of first births within marriage. It is the Chinese who marry latest and it would appear that a significant fraction do so after the wife is already pregnant. There were found to be systematic differences in birth spacing among families of different sizes. The interval between marriage and first birth and between subsequent births tends to be shorter the larger the achieved family size.

Apart from ethnic fertility differentials, the 1984/85 MPFS found sharp differentials by stratum, educational level, work pattern and

income level. But the impact of any one of these factors on fertility is difficult to assess without the use of multi-variate techniques because they are highly inter-correlated. However, some conclusions emerged. Thus, among each ethnic group a strong inverse association was found between the level of education of women and their cumulative fertility. Both husband's and wife's educational levels were found to have an independent effect on fertility, but the wife's educational level was the stronger. That may be due to the fact that higher educated women are more likely to pursue careers than their lower educated counterparts.

The 1984/85 MPFS confirmed previous studies that women who work in the modern economic sector tend to have lower fertility than those who either work in agriculture or who do not work at all. Women in the sales, services and production industries have higher fertility levels than those in professional and clerical industries. That finding is in line with expectation given that the educational level of women working in these industries is higher and that they have more potential for careers.

The 1984/85 MPFS found that levels of childlessness were high for those born around 1935-39, lower for the next younger cohort but subsequently the level appears to be rising. One factor is that among younger generations there is likely to be a rise in the proportion of women remaining permanently unmarried, particularly so in the case of the Chinese.

Finally, it was shown that women in uninterrupted first marriages had significantly higher fertility than those in second or subsequent marriages.

# IV. KNOWLEDGE AND USE OF CONTRACEPTION

## Introduction and background

The National Family Planning Programme was launched in the mid 1960s, following concern over rapid population growth. Economic considerations were the catalyst. The population was growing at some 3.2 per cent per annum while per capita income was falling. Income disparities among groups of the population were widening and there were problems of unemployment and underemployment. In the light of these development, the first Malaysian Plan (1966-70) called for less rapid population growth to be brought about by instituting a family planning programme. The National Family Planning Board was established to implement the programme.

Family planning was also recognized as being of importance to maternal health and child care. Indeed one of the functions of the Board as stipulated in the Family Planning Act 42 of 1966 (revised as the Population and Family Development Act of 1984) was to formulate policies and methods for promoting family planning on the grounds of health of mothers and children and the general welfare of the family. The programme activities of the Board were planned and implemented in relation to specific demographic and acceptor targets, along with other developmental projects. The National Family Planning Programme was implemented in phases, beginning in the large metropolitan centres (1967/68) and gradually extending to smaller towns and adjoining rural health centres (1969), followed by rural areas through the integration with maternal and child health services (1970-72), and remote rural areas through the use of mobile units and the involvement of traditional birth attendants (1973-75). Since 1976 family planning services in the rural areas have been functionally integrated with the maternal and child health services of the Ministry of Health.

Currently contraceptive service delivery is provided through a wide network of outlets. Family planning services in urban areas are

mainly provided by the clinics of the Board and the Family Planning Associations, augmented by private practitioners Services in rural areas are mainly covered by the Ministry of Health and these are supplemented by FELDA, the estates and traditional birth attendants.

This chapter describes knowledge and use of family planning among currently married women in the sample. It considers the methods of contraception used and the extent of use between marriage and first birth and subsequent birth intervals. Intentions about future use of contraception are also examined. Although the primary focus is on family planning behaviour of marriage cohort, considerable attention is also given to the family planning behaviour of other subgroups of women.

## Knowledge of family planning

To determine the level of awareness of family planning, all currently married respondents in the 1984/85 Malaysian Population and Family Survey (MPFS) sample were asked about their knowledge of contraception. Respondents were classified as knowing a method if they could name it, or if they said that they had heard of a method when it was named by the interviewer They were not required to describe how the method was used The aim was merely to determine the level of awareness of family planning

Knowledge of birth control has now permeated Peninsular Malaysia Virtually all women in the survey had heard of at least one method of birth control (Table 4 1). Most had heard about efficient methods of contraception such as the pill, IUD, injection condom, sterilization and the diaphragm. In fact, a higher proportion of the sample had heard about efficient methods than inefficient methods such as rhythm, withdrawal, abstinence and traditional contraceptives such as herbs. This suggests that knowledge about modern methods of family planning has now spread even to remote rural areas

Table 4.1: Per cent of currently married women who had ever heard of contraception by age group

| Method | Current age of women | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | All |
| All methods | 96 | 99 | 99 | 100 | 99 | 99 | 99 | 99 |
| Efficient | 95 | 97 | 99 | 99 | 96 | 96 | 96 | 98 |
| Inefficient | 84 | 92 | 96 | 95 | 93 | 87 | 86 | 92 |
| N | (76) | (594) | (838) | (819) | (694) | (474) | (392) | (3887) |

Ever use of family planning

Of course, universal knowledge about family planning does not mean all women have ever used birth control, still less are those who are currently doing so. The concept of ever use includes women who are current users and those who had used a method in the past but were not doing so at the time of the survey. Table 4.2 shows that some 77 per cent of currently married women had ever used family planning at some time in their married life. The corresponding figure at the time of the 1974 Malaysian Fertility and Family Survey (MFFS) was 53 per cent.

Ever use of birth control is lowest at the youngest ages. It then rises and subsequently falls again among women over age 40 (Table 4.2). The relatively low usage level among women under age 25 suggests that many younger women prefer to start (and continue) childbearing before using contraception. Among currently married women with no children just 25 per cent had ever used contraception (Table 4.2). For some younger women it is only at the time of first pregnancy that they come into contact with individuals who give them guidance about the use of family planning. The lower levels of ever use among those aged 40 and over suggest that some of these women want to continue childbearing throughout their reproductive ages, or perceive themselves as reaching menopause.

Table 4.2: Per cent of currently married women who had ever used contraception by age and number of living children

| Method | Current age of women | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | All |
| All methods | 42 | 65 | 77 | 82 | 85 | 79 | 74 | 77 |
| Efficient | 25 | 41 | 57 | 65 | 65 | 60 | 52 | 57 |
| Inefficient | 25 | 44 | 54 | 57 | 55 | 50 | 49 | 52 |
| N | (76) | (594) | (838) | (819) | (694) | (474) | (392) | (3887) |

| | Number of living children | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | > 5 |
| All methods | 25 | 71 | 82 | 85 | 85 | 82 | 81 |
| Efficient | 11 | 47 | 61 | 67 | 66 | 65 | 58 |
| Inefficient | 21 | 47 | 56 | 58 | 57 | 50 | 54 |
| N | (293) | (580) | (748) | (736) | (541) | (387) | (632) |

Although family planning has spread widely within Malaysia, there are still considerable differences in ever use according to the socio-economic characteristics of women (Table 4.3). Ever use of contraception, whether in terms of all methods or efficient methods, is greatest in urban areas, among the Chinese and the most educated. Ever use of contraception is least in the rural areas, among the Malays and least educated. Of course, these three variables are all highly correlated and a sharper perspective is given through multi-level tabulations. While the sample size limits the detailed tabulations, some multidimensional analysis is made later in this chapter in the section on current use.

Table 4.3: Per cent of currently married women who had ever used contraception by socio-economic characteristics

| Socio-economic characteristic | All methods | Efficient methods | N |
|---|---|---|---|
| **Place of residence** | | | |
| Urban | 82 | 66 | (1575) |
| Rural | 73 | 51 | (2313) |
| **Ethnic group** | | | |
| Malays | 69 | 42 | (2117) |
| Chinese | 88 | 78 | (1331) |
| Indians | 82 | 65 | (390) |
| All ethnic groups | 77 | 57 | |
| **Years of schooling** | | | |
| No schooling | 67 | 48 | (659) |
| 1-6 years | 79 | 60 | (1864) |
| 7-12 years | 78 | 56 | (1174) |
| > 12 years | 84 | 63 | (191) |

Table 4.4 shows the variation in ever use of contraception among marriage cohorts of currently married women cross-classified by ethnic group. Leaving aside the youngest marriage cohort where women will have had shorter periods of exposure to childbearing, it is seen that almost four out of every five women have ever used contraception. Within any given marriage cohort Chinese and Indian women have much higher levels of ever use than Malay women. For example, in the 1955-59 cohort slightly more than 80 per cent of Chinese and Indian women had ever used contraception compared with around 70 per cent for the Malays. The gap in ever use is even greater among the younger cohorts. Among those recently married, that is the 1980-84 cohort,

some 77 per cent of Chinese had ever used contraception compared with 57 per cent of Malays. This large differential reflects differences in the timing of initiation of family planning after marriage, with the Chinese being the quickest to resort to birth control.

Table 4.4: Per cent of currently married women who had ever used contraception by marriage cohort and ethnic group

| Marriage cohort | Malays | Chinese | Indians | All ethnic groups |
|---|---|---|---|---|
| **All methods** | | | | |
| 1950-54 | 64 (104) | 88 (25) | 85 (20) | 71 (149) |
| 1955-59 | 68 (187) | 84 (82) | 83 (29) | 74 (298) |
| 1960-64 | 74 (226) | 88 (153) | 95 (41) | 81 (423) |
| 1965-69 | 72 (250) | 93 (207) | 95 (41) | 82 (506) |
| 1970-74 | 76 (367) | 92 (252) | 87 (63) | 82 (692) |
| 1975-79 | 76 (437) | 93 (303) | 87 (99) | 83 (852) |
| 1980-84 | 57 (523) | 77 (306) | 62 (94) | 64 (938) |
| All | 70 (2094) | 88 (1327) | 82 (387) | 77 (3859) |
| **Efficient methods** | | | | |
| 1950-54 | 27 (104) | 76 (25) | 70 (20) | 41 (149) |
| 1955-59 | 42 (187) | 74 (82) | 66 (29) | 53 (298) |
| 1960-64 | 43 (226) | 83 (153) | 71 (41) | 60 (424) |
| 1965-69 | 50 (250) | 86 (207) | 76 (41) | 66 (506) |
| 1970-74 | 51 (369) | 84 (252) | 81 (63) | 66 (692) |
| 1975-79 | 49 (437) | 84 (303) | 72 (99) | 64 (851) |
| 1980-84 | 31 (523) | 62 (306) | 37 (94) | 42 (938) |
| All | 43 (2094) | 78 (1328) | 65 (389) | 57 (3859) |

Apart from ethnic differences in the level of ever use of contraception and in the timing of initiation, there are also big differences in the methods of birth control that are used. Within any given cohort generally less than half of Malay women have ever used efficient methods of birth control compared with around 80 per cent for the Chinese (Table 4.4).

## Current use of contraception

Following questions on knowledge and ever use of contraception, women were asked whether they or their husbands were currently using any method of birth control to prevent pregnancy and, if so, to specify the method being used. Most tables in this section are confined to 'exposed' women, that is some 3100 currently married women who believed themselves able to bear more children and who were not pregnant. Women who had been sterilized are considered as currently using a method and are also included. Those women who were pregnant or who had become sterile for reasons other than for contraceptive purposes are excluded.

Slightly more than half of all currently married women in the 1984/85 MPFS reported that they were contracepting at the time of the interview, compared with a corresponding figure of just over one third in the 1974 MFFS.

However, among 'exposed' women the proportion currently contracepting was 62 per cent (Table 4.5). Of such 'exposed' women the lowest level of current use of contraception was, as expected, among those without children or just one child. Nevertheless about half of the women with one child were contracepting, indicating significant use of family planning for birth spacing. Peak rates of contraceptive use are among women in their 30s who already have two or more children. The figures in Table 4.5 show that both age and parity have independent effects on the use of contraception.

Table 4.5: Per cent of currently married 'exposed' women currently using contraception, by age and number of living children

| Current age | Number of living children 0 | 1 | 2 | 3 | 4 | 5 | 6 | All | N |
|---|---|---|---|---|---|---|---|---|---|
| 15-19 | 13 | 44 | 31 | - | - | - | - | 31 | (55) |
| 20-24 | 34 | 56 | 57 | 60 | 45 | 60 | - | 53 | (438) |
| 25-29 | 12 | 57 | 71 | 69 | 58 | 58 | 53 | 60 | (677) |
| 30-34 | 4 | 47 | 73 | 74 | 76 | 66 | 50 | 66 | (706) |
| 35-39 | .. | 32 | 68 | 66 | 73 | 66 | 67 | 65 | (614) |
| 40-44 | .. | .. | 59 | 76 | 64 | 68 | 65 | 64 | (405) |
| 45-49 | .. | .. | .. | 63 | 59 | 64 | 62 | 59 | (227) |
| All women | 18 | 51 | 66 | 69 | 68 | 65 | 62 | 62 | (3122) |

The pattern of current use of contraception among 'exposed' currently married women cross-classified by socio-economic characteristics is shown in Table 4.6 and Figure 4.1. As with ever use of contraception, current use is highest in the urban areas, among the Chinese and the highest educated. Among current users of contraception the proportion using efficient methods is markedly less than the proportion using any method. The proportion of Malays (20 per cent) using efficient contraception is particularly low.

Ethnicity is clearly an important determinant of contraceptive use. Table 4.7 examines the effects of family size, place of residence and years of schooling on each of the ethnic groups. For the Chinese and Indians the level of use of contraception increases with increasing family size. For Malays a different pattern is observed. Contraceptive use among Malay women with large families is lower than that among those with smaller families. Within any given family size the proportion of Malays using contraception is much lower than the corresponding figure for the Chinese or Indians. For

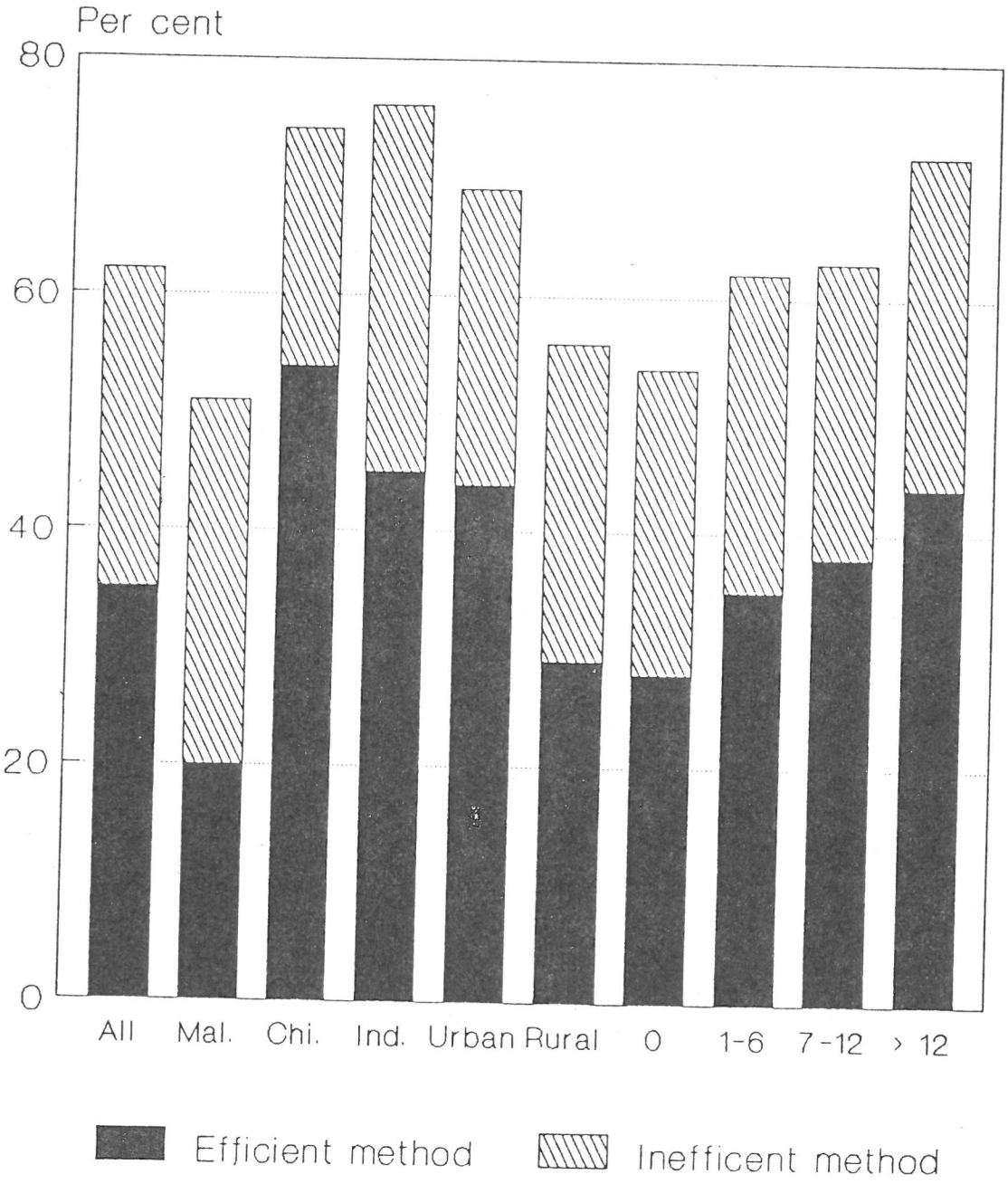
Table 4.6: Per cent of currently married 'exposed' women currently using contraception by socio-economic characteristics

| Socio-economic characteristic | All methods | Efficient methods | N |
|---|---|---|---|
| **Place of residence** | | | |
| Urban | 69 | 44 | (1306) |
| Rural | 56 | 29 | (1816) |
| **Ethnic group** | | | |
| Malays | 51 | 20 | (1636) |
| Chinese | 74 | 54 | (1114) |
| Indians | 76 | 45 | (325) |
| All ethnic groups | 62 | 35 | (3122) |
| **Years of schooling** | | | |
| No schooling | 54 | 28 | (478) |
| 1-6 years | 62 | 35 | (1551) |
| 7-12 years | 63 | 38 | (934) |
| >12 years | 72 | 44 | (159) |

Chinese and Indian women there is hardly any difference in the level of contraceptive use between those living in urban and those living in rural areas. This is not so for the Malays (Table 4.7). Urban Malays have significantly higher levels of contraceptive use (26 per cent) than do rural Malays (18 per cent). While slightly more than one quarter of urban Malays were contracepting, about half of Chinese and Indian women were doing so.

The variance in contraceptive use according to the educational level of women is relatively small for the Chinese and Indians, except among the highly educated Chinese where current use at 69 per cent was

Fig. 4.1: Per cent of currently married 'exposed' women currently using contraception by socioeconomic characteristics



highest of any subgroup (Table 4.7). For the Malays, the within group variance is somewhat greater with those having no schooling having the lowest current use level (10 per cent) and those with 7-12 years of schooling the highest (26 per cent). Interestingly the highest educated Malay women are not contracepting to the same extent as those with 7-12 years of schooling. A general conclusion that can be drawn from the figures in Table 4.7 is that ethnicity is a powerful determinant of contraceptive use level.

Table 4.7: Per cent of currently married 'exposed' women currently using efficient contraception by ethnic group and socio-economic characteristics

| Socio-economic characteristic | Malays | Chinese | Indians | All ethnic groups |
|---|---|---|---|---|
| Number of living children | | | | |
| 0 | 1 | 15 | 7 | 8 |
| 1-2 | 26 | 50 | 37 | 36 |
| 3-4 | 24 | 59 | 53 | 41 |
| 5 or more | 13 | 65 | 57 | 32 |
| Place of residence | | | | |
| Urban | 26 | 55 | 45 | 44 |
| Rural | 18 | 54 | 45 | 29 |
| Years of schooling | | | | |
| No schooling | 10 | 51 | 40 | 28 |
| 1-6 years | 19 | 55 | 46 | 35 |
| 7-12 years | 26 | 53 | 45 | 38 |
| >12 years | 22 | 69 | 50 | 44 |
| N | (1636) | (1114) | (325) | (3122) |

Table 4.8 examines the pattern of current use of contraception among the different ethnic communities according to marriage cohort. Leaving aside the two youngest marriage cohorts, there are clear time trends in the proportions currently using contraception among the Chinese and Indians. However, similar trends are not seen for the Malay cohorts. In general, variations in contraceptive use tend to

Table 4.8: Per cent of currently married 'exposed' women currently using contraception by marriage cohort and ethnic group

| Marriage cohort | Malays | Chinese | Indians | All ethnic groups |
|---|---|---|---|---|
| **All methods** | | | | |
| 1950-54 | 35 (54) | 71 (17) | 80 (10) | 48 (81) |
| 1955-59 | 45 (148) | 82 (50) | 86 (22) | 57 (220) |
| 1960-64 | 51 (193) | 77 (122) | 92 (37) | 64 (356) |
| 1965-69 | 52 (216) | 82 (185) | 88 (40) | 67 (449) |
| 1970-74 | 52 (302) | 82 (229) | 83 (58) | 66 (598) |
| 1975-79 | 58 (349) | 71 (262) | 74 (82) | 64 (704) |
| 1980-84 | 47 (371) | 63 (246) | 52 (73) | 53 (705) |
| All | 51 (1633) | 74 (1111) | 75 (322) | 62 (3113) |
| **Efficient methods** | | | | |
| 1950-54 | 7 (54) | 71 (17) | 50 (10) | 26 (81) |
| 1955-59 | 9 (148) | 56 (50) | 55 (22) | 24 (220) |
| 1960-64 | 15 (193) | 59 (122) | 57 (37) | 35 (356) |
| 1965-69 | 16 (216) | 57 (185) | 50 (40) | 36 (449) |
| 1970-74 | 22 (302) | 62 (229) | 59 (58) | 41 (598) |
| 1975-79 | 25 (349) | 53 (262) | 40 (82) | 37 (704) |
| 1980-84 | 25 (371) | 44 (246) | 26 (73) | 32 (705) |
| All | 20 (1633) | 55 (1111) | 45 (322) | 35 (3113) |

be more pronounced within marriage cohorts than between them over time. Within the different marriage cohorts, variations tend to be least marked in the youngest marriage cohort and most among those married at least 10 years before the survey. The patterns are much the same regardless of whether the classification is in terms of all methods or only efficient methods. However, the levels are quite different. The striking feature is the very low level of current use of efficient contraception by the Malays, irrespective of marriage cohort.

Table 4.9 takes the analysis in Table 4.8 further by cross-classifying according to whether the cohorts of women were living in urban or rural areas. There are relatively small differences in the level of contraceptive use between urban and rural areas when all methods are considered. That pattern holds for each of the different

Table 4.9: Per cent of currently married 'exposed' women currently using contraception by marriage cohorts, ethnic group and stratum

| Marriage cohort | Malays | | Chinese | | Indians | | All ethnic groups | |
|---|---|---|---|---|---|---|---|---|
| | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural |
| **All methods** | | | | | | | | |
| 1955-64 | 56 | 46 | 78 | 79 | 82 | 95 | 70 | 56 |
| 1965-74 | 59 | 50 | 82 | 80 | 86 | 83 | 76 | 60 |
| 1975-84 | 55 | 51 | 70 | 61 | 58 | 70 | 63 | 54 |
| All | 56 | 50 | 76 | 72 | 71 | 80 | 69 | 57 |
| **Efficient methods** | | | | | | | | |
| 1955-64 | 18 | 11 | 57 | 59 | 55 | 57 | 43 | 24 |
| 1965-74 | 27 | 17 | 59 | 63 | 54 | 56 | 49 | 32 |
| 1975-84 | 27 | 24 | 51 | 44 | 33 | 34 | 41 | 29 |
| All | 26 | 19 | 55 | 54 | 43 | 46 | 44 | 29 |

ethnic groups. However, the level of use of efficient contraception in urban and rural areas differs for the Malay cohorts but not for the Chinese and Indian cohorts. Urban Malays, although having relatively low contraceptive use levels, have higher levels than do their rural counterparts among each of the marriage cohorts.

## Types of contraceptive methods used

Table 4.10 ranks given methods of contraception according to the knowledge currently married women had of them and also ranks these methods according to ever use and current use. A few traditional methods appear in the rankings, they are herbs, majun and jamu. The latter two are made from herbs and are taken orally with water. They are used mainly in rural areas.

The contraceptive pill ranks as the most commonly known method, is the method that has been most used and most popular for current use among the sample (Table 4.10). Some 12 per cent of currently married women were using the contraceptive pill. Of the other methods the rhythm, condom and withdrawal were most prominent among those that had or were being used. There is some association between knowledge and use of contraception. The pill, condom and rhythm are among those most mentioned and most used. However, although there is clearly widespread knowledge of efficient contraceptive methods many women in the sample have never used them preferring to rely on less efficient and traditional methods. A significant proportion of these women were still using traditional and less reliable methods.

The methods of contraception currently being used by women who were contracepting at the time of the survey are shown in Table 4.11 and Figure 4.2. Overall 23 per cent of current users were using the contraceptive pill. The next most popular methods are the condom and sterilization (15 per cent each). The rhythm method is the most popular (14 per cent) of the inefficient methods. The pattern of contraceptive use differs according to ethnicity. The majority of

Chinese and Indians were using efficient methods whereas the majority of Malays were using inefficient methods. Much higher proportions of Chinese and, particularly Indian women were sterilized.

Table 4.10: Per cent of currently married women who had ever heard, ever used or currently using specific contraceptive methods

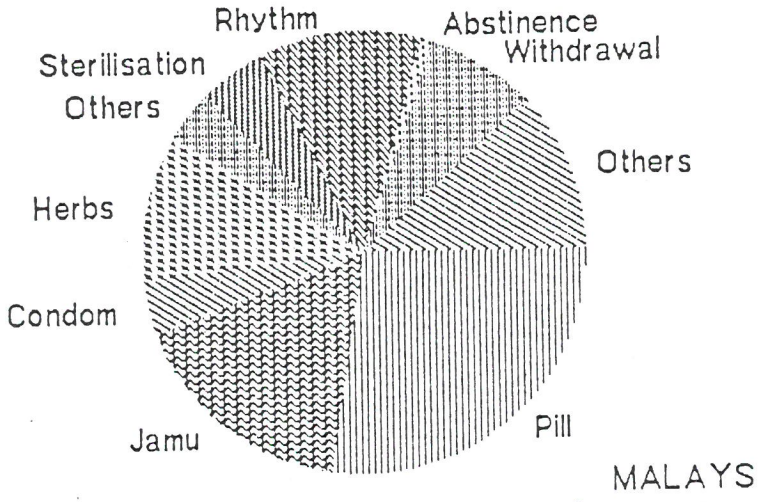
| Method | Ever heard | Ever used | Currently using |
|---|---|---|---|
| Pill | 97 | 45 | 12 |
| Tubaligation | 85 | 8 | 8 |
| Condom | 75 | 22 | 8 |
| IUD | 63 | 5 | 3 |
| Injection | 62 | | 1 |
| Rhythm | 58 | 22 | 7 |
| Herbs | 54 | 12 | 2 |
| Majun | 48 | 10 | 2 |
| Withdrawal | 47 | 17 | 4 |
| Jamu | 47 | 8 | 2 |
| Vasectomy | 47 | | |
| Abstinence | 37 | 6 | 2 |
| Exercise | | 10 | 2 |
| Indonesian Pill | | 3 | |
| Others | 76 | 6 | 1 |
| All women | 99 | 77 | 51 |
| N | (3888) | (3888) | (3888) |

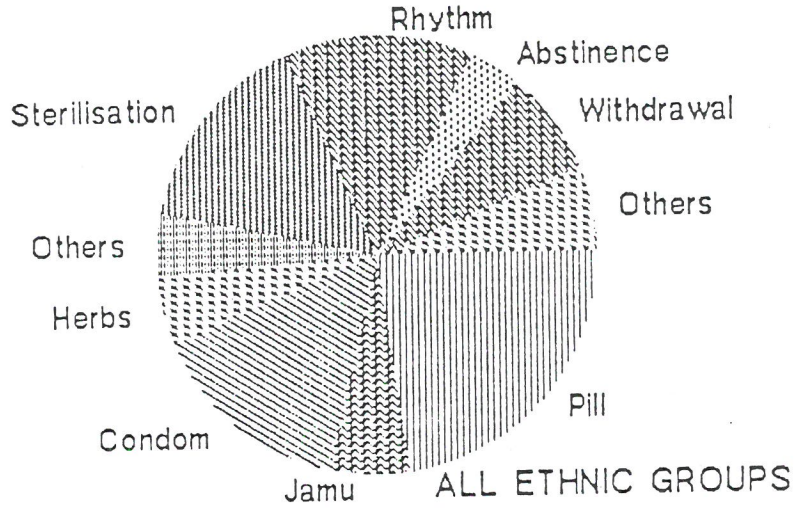
Table 4.11: Per cent distribution of current users of contraception by method currently used and ethnic group

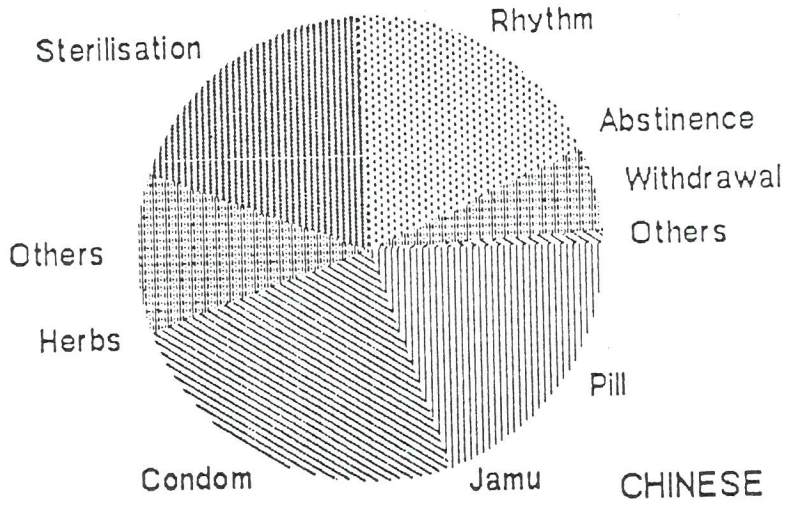
| Method | Malays | Chinese | Indians | All ethnic groups |
|---|---|---|---|---|
| **Efficient methods** | | | | 58 |
| Pill | 28 | 21 | 10 | 23 |
| IUD | 3 | 6 | 4 | 4 |
| Injection | 1 | 5 | 2 | 1 |
| Condom | 4 | 26 | 11 | 15 |
| Foam tablet | - | 1 | - | 0 |
| Sterilization | 5 | 20 | 33 | 15 |
| **Inefficient methods** | | | | 42 |
| Rhythm | 12 | 17 | 8 | 14 |
| Withdrawal | 8 | 6 | 15 | 8 |
| Abstinence | 1 | 3 | 15 | 4 |
| Herbs | 11 | - | 1 | 5 |
| Jamu/Majun/Indonesian Pill | 17 | - | 0 | 6 |
| Others | 12 | 1 | 2 | 6 |
| All methods | 100 | 100 | 100 | 100 |
| N | (864) | (856) | (259) | (1998) |

Table 4.12 compares distributions of current users by type of method being used by women in the 1984/85 MPFS with those in the 1974 MFFS. There has been a marked shift in pattern of usage over the period. Among current users, the dominance of the pill has declined. For the 1984/85 MPFS, about one quarter of current users were using the pill, compared with about half in the 1974 MFFS. Conversely, the popularity of condom usage has increased. There has also been a big jump in the use of inefficient methods, particularly traditional folk methods which were being used by 8 per cent of the current users (Table 4.12).

Fig. 4.2: Per cent distribution of current users of contraception by method currently used and ethnic group



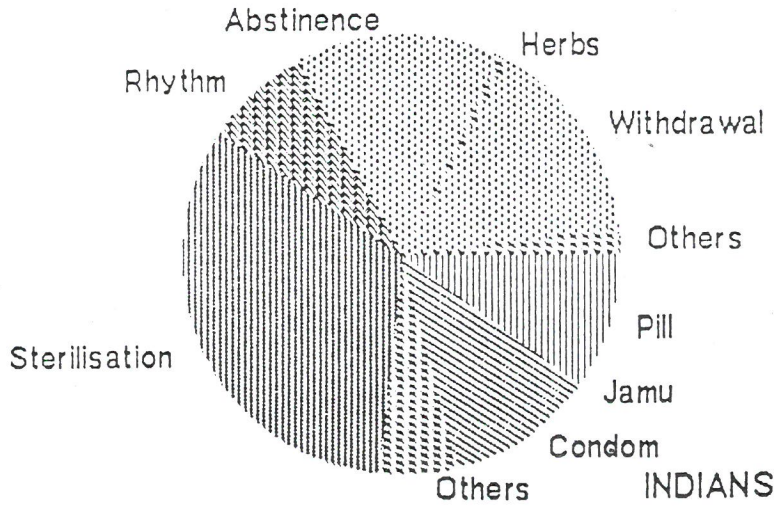



Table 4.12: Per cent distribution of current users of contraception by method currently used, 1974 and 1984/85

| Per cent currently married | 1974 MFFS | 1984/85 MPFS |
|---|---|---|
| Pill | 51 | 24 |
| IUD | 2 | 4 |
| Condom | 10 | 15 |
| Other female methods | 0 | 1 |
| Sterilization | 11 | 13 |
| Rhythm | 11 | 14 |
| Withdrawal | 6 | 8 |
| Abstinence | 4 | 3 |
| Traditional folk methods | 6 | 18 |
| N | (1,797) | (1,825) |

Use of contraception during birth intervals

Table 4.5 above shows that only a small proportion of currently married women with no children were using contraception. Of course, that is hardly surprising since many couples regard pregnancy as a natural consequence of marriage. In contrast, in many western countries there is widespread use of contraception before marriage and also immediately after marriage to lengthen the interval between marriage and first birth.

In the 1984/85 MPFS currently married women under age 35 were asked about the use of contraception during the interval between each birth. Women above that age were excluded because of the difficulties of accurately recalling such information from many years in the past. Table 4.13 shows the level of use of contraception during the interval between first marriage and first birth and the

first three inter-birth intervals for three five year marriage cohorts between 1965-1979. Of course, not all women in these three cohorts will have attained their ultimate family size so the data only reflect the behaviour of those who have reached the given interval. The beginning of the interval was taken as the event preceding that under consideration.

Table 4.13 shows that while there has been some increase in the use of birth control in the interval between marriage and first birth, it is still relatively uncommon. Thus, among currently married women who married between 1975-79, some 7 per cent used contraception at some stage during the interval between marriage and their first birth, compared with just 2 per cent among those who married 10 years earlier. There has also been a progressive increase in the use of contraception during the first three inter-birth intervals which implies that couples are increasingly planning the spacing of their children.

Table 4.13: Use of contraception during interval between first marriage and first birth and the first three inter-birth intervals by marriage cohort

| Marriage cohort | Marriage to first birth | First to second birth | Second to third birth | Third to fourth birth |
|---|---|---|---|---|
| 1965-69 | 2 | 33 | 57 | 42 |
| 1970-74 | 5 | 42 | 56 | 60 |
| 1975-79 | 7 | 55 | 60 | 52 |

The increasing resort to birth control during the period between marriage and first birth and in the first three inter-birth intervals has occurred among each of the ethnic groups (Table 4.14). However, within each of the intervals there are level differences between the

different ethnic groups. The Chinese tend to use contraception to lengthen their inter-birth intervals to a much greater extent than the other ethnic groups.

Table 4.14: Use of contraception during interval between first marriage and first birth and the first three inter-birth intervals by marriage cohort and ethnic group

| Marriage cohort | Marriage to first birth | First to second birth | Second to third birth | Third to fourth birth |
|---|---|---|---|---|
| Malays | | | | |
| 1965-69 | 3 | 32 | 40 | 39 |
| 1970-74 | 3 | 41 | 51 | 55 |
| 1975-79 | 5 | 52 | 56 | 49 |
| Chinese | | | | |
| 1965-69 | 0 | 38 | 59 | 47 |
| 1970-74 | 7 | 43 | 65 | 70 |
| 1975-79 | 13 | 63 | 72 | 59 |
| Indians | | | | |
| 1965-69 | 0 | 29 | 42 | 43 |
| 1970-74 | 5 | 45 | 63 | 70 |
| 1975-79 | 9 | 46 | 55 | 54 |

## Intentions for future use

The 1984/85 MPFS asked respondents who had never used contraception their intention about future use. As mentioned elsewhere in this report caution needs to be exercised in interpreting intentions data as they can (and often do) change with the passage of

time. In all there were almost 900 currently married women (23 per cent of all currently married women) in the sample who had never used contraception. When asked the question 'Do you or your husband intend to do something in the future, in order to delay or avoid your becoming pregnant?' some 32 per cent replied positively, 46 per cent replied no and the remaining 23 per cent were uncertain about their intentions (Table 4.15). Not surprisingly the percentage of women who intend to use contraception in the future is greatest among the youngest women. Conversely, among the older women relative small proportions intend using family planning.

Table 4.15: Per cent distribution of currently married women who had never used contraception by intended use and current age

| | Current age | | | | | | | All |
|---|---|---|---|---|---|---|---|---|
| Intentions | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | ages |
| Definitely | 18 | 27 | 21 | 6 | 2 | 1 | - | 13 |
| Probably | 27 | 31 | 25 | 20 | 16 | 2 | - | 19 |
| Uncertain | 32 | 29 | 27 | 30 | 22 | 9 | 3 | 23 |
| Probably not | 16 | 6 | 15 | 20 | 15 | 12 | 11 | 13 |
| Definitely not | 7 | 9 | 14 | 26 | 47 | 74 | 86 | 33 |
| N | (44) | (207) | (193) | (145) | (106) | (100) | (102) | (897) |

Table 4.16 shows the contraceptive intentions of never contracepting women according to ethnic group. The Indians were strongest in their stated intentions about future use. Almost half of Indian women stated that they would, or probably would, use family planning in the future; the corresponding figures for the Malays and Chinese were 28 per cent and 37 per cent respectively. Conversely, Malays were strongest in their replies about not using contraception in the future.

Table 4.16: Per cent distribution of currently married women who had never used contraception by intended use and socio-economic characteristics

| Ethnic group | Intended use | | | | | N |
|---|---|---|---|---|---|---|
| | Definitely | Probably | Uncertain | Probably not | Definitely not | |
| Malays | 9 | 19 | 26 | 30 | 16 | (648) |
| Chinese | 20 | 17 | 16 | 44 | 3 | (181) |
| Indians | 28 | 19 | 10 | 40 | 3 | (68) |
| All ethnic groups | 12 | 19 | 23 | 33 | 13 | (897) |

Summary

Knowledge of family planning has now permeated Peninsular Malaysia such that virtually all women in the 1984/85 MPFS had heard of at least one efficient method of birth control. Some 77 per cent of currently married women had ever used family planning at some time in their married life. The corresponding figure found in the 1974 MFFS was 53 per cent. Although overall ever use of family planning is quite widespread, there are considerable subgroup differences. Ever use is greatest among the Chinese, the urban and most educated women. Less than half of Malays had ever used efficient methods of contraception whereas 78 per cent of Chinese women had.

Slightly more than half of all currently married women were contracepting at the time of the survey. In the 1974 MFFS the corresponding figure was around one third. Ethnicity is a powerful determinant of contraceptive use. For Chinese and Indian women current contraceptive use increases with achieved family size. For

the Malays current use of contraception tends to decline among those with large families. There are no significant urban/rural differences in the current use of contraception among Chinese and Indians. However, urban Malays are more likely to be contracepting than rural Malays. Only one in five currently married Malay women living in rural areas was using efficient contraception, compared to around half of Chinese and Indian women.

The contraceptive pill ranks as the most commonly known method of family planning, is the method that has been most used and is the most popular among current users. Although there is widespread knowledge of efficient methods of contraception many women had never used them preferring instead to rely on less efficient methods.

Among current users of contraception, 24 per cent were using the pill, 15 per cent the condom and 14 per cent the rhythm method. The pattern of contraceptive use differs according to ethnicity. The majority of Chinese and Indians use efficient methods whereas the majority of the Malays use inefficient methods.

There has been a marked change in the pattern of contraceptive use. In 1974 about 50 per cent of current users of contraception were using the pill. That figure had halved by the time of the 1984/85 MPFS. There has been a big jump in the resort to inefficient methods, particularly the use of traditional folk methods by the Malays.

Among the more recently married cohorts there has been a progressive increase in the use of contraception during the first three inter-birth intervals which implies that couples are increasingly planning the spacing of their children.

# V. FAMILY SIZE AND SEX PREFERENCES

## Introduction

The 1984/85 Malaysian Population and Family Survey (MPFS) asked about the numbers of children that all currently married women expected to have in the future; about their ideal family size, as well as the sex preferences of their ideal family size. Information from such questions can be of value in providing a qualitative dimension to the interpretation of fertility trends; for orientating and monitoring family planning programmes and for assessing future fertility levels.

## Family size expectations of marriage cohorts

Younger marriage cohorts in the 1984/85 MPFS will complete a significant part of their childbearing during the remainder of this century. Thus information on birth expectations, combined with past trends in fertility, can be used in making fertility assumptions for population projections.

However, family size expectations can and do change as events take place that alter couples' (not just wives) attitudes to the timing and quantum of births they actually have. There is also the question of the extent to which intentions and ideals stated in a survey reflect considered rather than transient responses. In the course of the analysis made below, the stability of expectations data and their consistency are assessed by examining whether selected cohorts in the earlier 1974 Malaysian Fertility and Family Survey (MFFS) had sustained their preferences and realized their targets by the time of the 1984/85 MPFS.

In the 1984/85 MPFS, family size expectations were determined on the basis of questions about additional children wanted by currently married women. Specifically women were asked whether they wanted to have any (more) children and, if so, how many (more) children they

wanted. In 1984/85 the mean achieved family size among all currently married women in the sample was 3.5. Looking into the future these women expected on average an additional 1.5 children which would give them a mean family size of around 5 children (Table 5.1). This figure relates to women of different ages who married in different years and conceals substantial subgroup variations. It is better to concentrate on women married or born in particular years, as elsewhere in this report (Table 5.1). Comparisons should not be made of children already born to women in different marriage and birth cohorts, also shown in Table 5.1. This is because different cohorts will have had different lengths of exposure to childbearing. Data on children already born are shown merely to indicate how much additional childbearing women expect to have.

Table 5.1: Average number of children born and expected to currently married women by marriage cohort*

| Marriage cohort | Average number of children Born | Expected | N |
|---|---|---|---|
| 1955-59 | 6.4 | 6.6 | (298) |
| 1960-64 | 5.5 | 5.9 | (424) |
| 1965-69 | 4.5 | 5.2 | (506) |
| 1970-74 | 3.7 | 4.9 | (692) |
| 1975-79 | 2.7 | 4.4 | (853) |
| 1980-84 | 1.1 | 4.2 | (938) |
| All women+ | 3.5 | 5.0 | (3860) |

* The figures in this and subsequent tables are based on all women regardless of fecundity status. Almost 80 per cent of the sample considered that they were still fecund while a further 7 per cent thought they might be but were uncertain.

+ Includes women married before 1955

The younger the marriage cohort in the 1984/85 MPFS, the lower the completed family size is expected to be. However, although family size expectations tend to fall for the younger cohorts, the rate of decline diminishes. For example, women married in 1970-74 expected an average of 4.9 children, one child less than those married 10 years earlier. However, women in the youngest cohort of 1980-84 expected to have 4.2 children, less than one child fewer than the cohort who married 10 years earlier (Table 5.1). The figures for the younger cohorts suggest that there will be a marked slackening in the overall pace of fertility transition over the next 15 years as compared with the previous 15 years.

Table 5.2 shows that apart from time trends in fertility expectations there are also considerable ethnic variations between those married in the same years. For each ethnic group, family size expectations fall the younger the marriage cohort. However, fertility expectations among Malay women are consistently higher than among Chinese or Indians in all marriage cohorts. Thus for the 1970-74 marriage cohort, who by the time of the survey would have on average completed twelve and a half years of childbearing, the achieved family size did not vary much by ethnic group. However, Malay women expected to have an additional two children whereas Chinese and Indian women had virtually completed their childbearing. Similarly, among those who married between 1975-84, the small ethnic variation in achieved family size contrast markedly with big differences in family size expectations, with Malay women expecting to have around 5 children and Chinese and Indian women around 3 children. It is likely that in order to realize their expectations Malay women will forgo the use of family planning to a later age than Chinese or Indian women.

It should, of course, be remembered that Table 5.2 relates only to currently married women and since some women will remain unmarried and others will have experienced an interrupted marriage, the overall family size of all women will be somewhat lower. Nevertheless, there is clear evidence from the most recently married women to suggest that overall fertility is likely to remain well above

Table 5.2: Average number of children born and expected to currently married women by marriage cohort and ethnic group

| Marriage cohort | Average number of children: Born | | | Expected | | | N | | |
|---|---|---|---|---|---|---|---|---|---|
| | Malays | Chinese | Indians | Malays | Chinese | Indians | Malays | Chinese | Indians |
| 1955-59 | 6.6 | 6.2 | 5.5 | 6.9 | 6.2 | 5.7 | (187) | (82) | (29) |
| 1960-64 | 5.8 | 4.9 | 5.4 | 6.6 | 5.0 | 5.5 | (226) | (153) | (41) |
| 1965-69 | 4.9 | 4.2 | 4.6 | 6.1 | 4.4 | 4.9 | (250) | (207) | (41) |
| 1970-74 | 3.8 | 3.5 | 3.8 | 5.7 | 3.9 | 4.1 | (367) | (252) | (63) |
| 1975-79 | 2.7 | 2.6 | 2.8 | 5.1 | 3.5 | 3.7 | (438) | (303) | (99) |
| 1980-84 | 1.1 | 1.1 | 1.0 | 4.9 | 3.2 | 3.1 | (523) | (306) | (94) |
| All women* | 3.7 | 3.2 | 3.4 | 5.8 | 4.1 | 4.2 | (2095) | (1328) | (387) |

*Includes women married before 1955

replacement level for the rest of this century.

Questions about family size expectations were asked in the 1974 MFFS as well as in the current survey. It is thus possible to compare the family size expected by marriage cohorts who married in the same five year periods as stated in 1974, with replies from women interviewed in the same cohorts 10 years later (Table 5.3 and Figure 5.1). Looking first at the figures for women of all ethnic groups from the four five year marriage cohorts, it is seen that for each of the cohorts there has been a significant upward revision in family size expectations, particularly so for the cohort of 1970-74. For example, in the 1974 survey those women married in 1970-74 expected to have 3.7 children, whereas by 1984 members of the same cohort had revised their expectation upwards to 4.9 children. In fact the achieved fertility (3.7) of this cohort by 1984 had almost reached the family size expected by these women 10 years earlier. The upward revision in family size expectations is shown to have occurred for

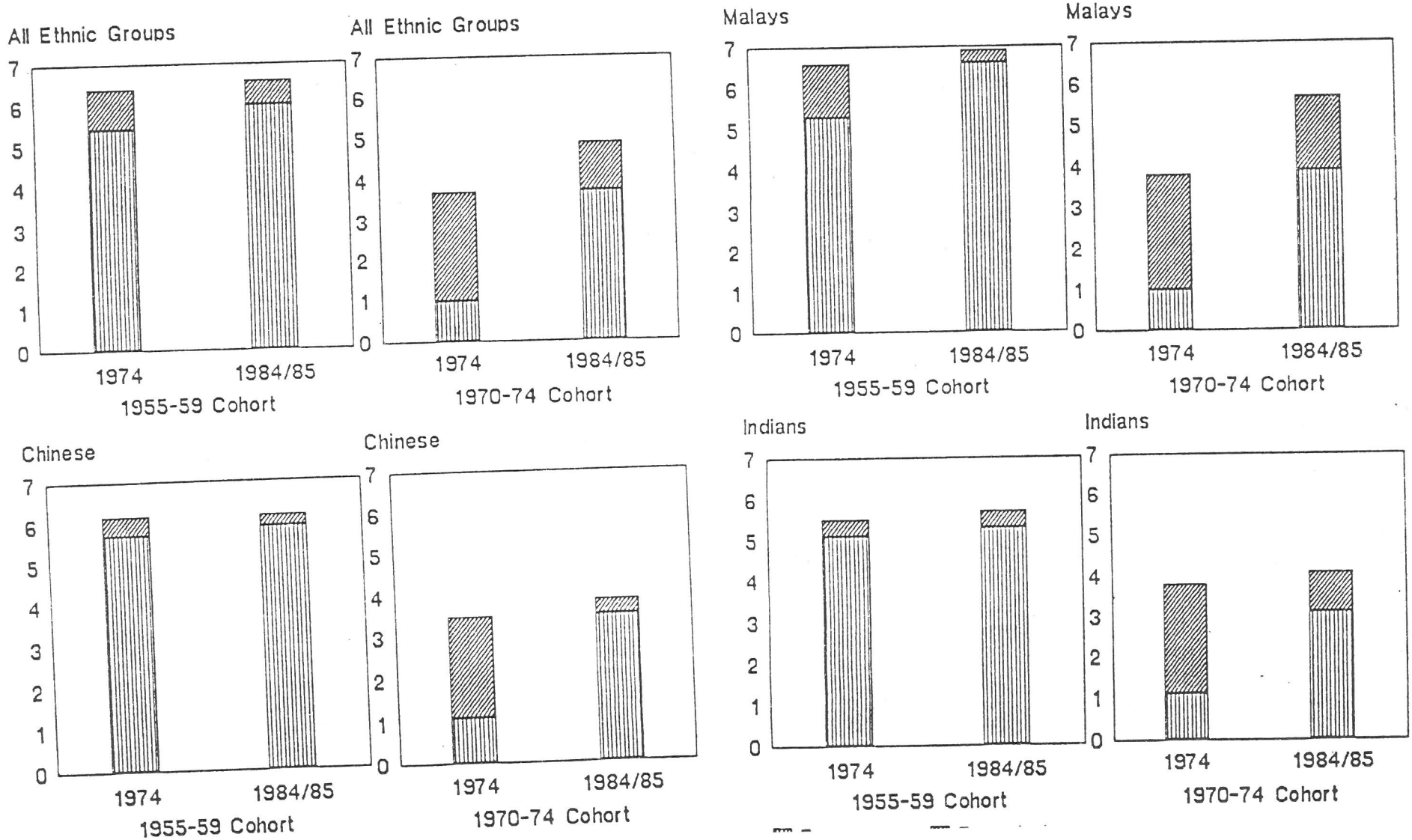
each of the ethnic groups but has been more pronounced for the Malays than the other ethnic communities.

The figures suggest family size expectations data lack stability over time, particularly among younger marriage cohorts. It is these women who have the bulk of their childbearing still to go. In many respects their replies are conditioned not merely by the number of children achieved at the survey but also by period forces. In 1974 Malaysia had an active family planning programme with the objective of reducing fertility. In the subsequent period, the orientation of the programme has changed in line with Malaysia's New Population Policy.

Table 5.3: Average number of children born and expected to currently married women in given marriage cohorts in 1974 MFFS and 1984/85 MPFS by ethnic group

| Marriage cohort | Average number of children: Malays | | Chinese | | Indians | | All ethnic groups | |
|---|---|---|---|---|---|---|---|---|
| | 1974 | 1984/85 | 1974 | 1984/85 | 1974 | 1984/85 | 1974 | 1984/85 |
| **Born** | | | | | | | | |
| 1955-59 | 5.3 | 6.6 | 5.7 | 6.2 | 5.1 | 5.5 | 5.4 | 6.4 |
| 1960-64 | 4.0 | 5.8 | 4.2 | 4.9 | 4.6 | 5.4 | 4.1 | 5.5 |
| 1965-69 | 2.6 | 4.9 | 3.0 | 4.2 | 3.0 | 4.6 | 2.8 | 4.5 |
| 1970-74 | 1.0 | 3.8 | 1.1 | 3.5 | 1.1 | 3.8 | 1.0 | 3.7 |
| **Expected** | | | | | | | | |
| 1955-59 | 6.2 | 6.9 | 5.9 | 6.2 | 5.3 | 5.7 | 6.0 | 6.6 |
| 1960-64 | 5.2 | 6.6 | 4.6 | 5.0 | 5.0 | 5.5 | 5.0 | 5.9 |
| 1965-69 | 4.5 | 6.1 | 4.0 | 4.4 | 3.9 | 4.9 | 4.2 | 5.2 |
| 1970-74 | 3.9 | 5.7 | 3.5 | 3.9 | 3.1 | 4.1 | 3.7 | 4.9 |

Fig. 5.1: Average number of children born and expected to currently married women in given marriage cohorts of 1955-59 and 1970-74 in 1974 and 1984/85 by ethnic group



Changes in birth expectations may be influenced partly by shift in emphasis of the Population Programme. Birth expectations should not be taken as representing targets that women consciously set out to attain. Couples' reproductive targets change in response to period factors affecting family size norms.

## Recent family size expectations of marriage cohorts

A sharper focus is given below to family size expectations of the most recently married women in the sample, that is, those who married between 1975 and 1984, according to the number of children born to them by the time of the survey (Table 5.4). Looking first at the figures for all women, it is shown that mean expected family size rises the higher the number of children already born. This may suggest that there is a tendency for women to want larger family sizes the more children they already have, although it may also be argued that some women are in fact trying to rationalize their achieved fertility. Of this cohort, about half expected to have four or five children with an overall mean of 4.3. Even among those women with no children at the time of the survey, they expected ultimately to have some 4 children.

The pattern of family size expectations among these recently married women differs sharply between the Malays and the Chinese and Indians. In each ethnic group, very few women expect to have no children or just one. But about half of the Chinese and Indian women expect to have just 2 or 3 children, whereas the corresponding figure for Malay women is about one quarter. Most Malays expect 4 or 5 children. Among members of this marriage cohort some 38 per cent of Malays expected 6 or more children, whereas hardly any Chinese or Indian women expected a family size of that number of children. The striking similarity among recently married Chinese and Indian in terms of family size expectations contrasts with the higher expectations of Malay women.

Table 5.4: Per cent distribution of currently married women who married between 1975-84 by number of children born and expected family size and ethnic group

| Children born | Children expected 0-1 | 2-3 | 4-5 | > 5 | Mean | N |
|---|---|---|---|---|---|---|
| **All ethnic groups** | | | | | | |
| 0 | 4 | 35 | 46 | 16 | 3.9 | (257) |
| 1 | 2 | 36 | 43 | 19 | 4.1 | (463) |
| 2 | .. | 31 | 52 | 17 | 4.2 | (506) |
| 3 | .. | 18 | 57 | 26 | 4.7 | (336) |
| 4 | .. | .. | 56 | 44 | 5.4 | (124) |
| All women* | 1 | 28 | 49 | 22 | 4.3 | (1723) |
| **Malays** | | | | | | |
| 0 | 2 | 12 | 56 | 30 | 4.7 | (131) |
| 1 | .. | 15 | 53 | 33 | 4.9 | (261) |
| 2 | .. | 9 | 61 | 30 | 4.9 | (266) |
| 3 | .. | 6 | 48 | 47 | 5.4 | (178) |
| 4 | .. | .. | 32 | 68 | 5.9 | (71) |
| All women* | 0 | 9 | 53 | 38 | 5.1 | (925) |
| **Chinese** | | | | | | |
| 0 | 5 | 55 | 39 | 1 | 3.0 | (85) |
| 1 | 5 | 55 | 31 | 0 | 3.0 | (153) |
| 2 | .. | 55 | 43 | 2 | 3.3 | (187) |
| 3 | .. | 30 | 67 | 3 | 3.9 | (113) |
| 4 | .. | .. | 89 | 11 | 4.6 | (37) |
| All women* | 2 | 49 | 47 | 3 | 3.4 | (584) |
| **Indians** | | | | | | |
| 0 | 5 | 63 | 32 | 0 | 2.9 | (38) |
| 1 | 2 | 57 | 30 | 0 | 2.9 | (43) |
| 2 | .. | 71 | 26 | 2 | 3.1 | (42) |
| 3 | .. | 36 | 64 | 0 | 3.7 | (42) |
| 4 | .. | .. | .. | .. | .. | ( )+ |
| All women* | 2 | 52 | 43 | 4 | 3.4 | 188 |

+ < 20 cases

* Includes women of higher parity

## Family size preferences of birth cohorts

In this section, the focus shifts to family size expectations of currently married women who were born in particular years. It has to be remembered that these birth cohorts exclude single women as well as those who were not currently married at the time of the survey. Table 5.5 shows the mean number of children achieved and expected by currently married women born in different years. An interesting feature of the trends is that although there is a marked difference in family size preferences between currently married women born before 1945 and those born after, the variation between those born since 1945 is very small, with expectations varying within a narrow range of between 4.5 and 5.0 children. In spite of low levels of achieved fertility, currently married women born between 1955-69 expect to have about four and a half children on average.

Table 5.5: Average number of children born and expected to currently married women by birth cohort

| Birth cohort* | Average number of children: Born | Expected | N |
|---|---|---|---|
| 1935-39 | 6.2 | 6.4 | (382) |
| 1940-44 | 5.4 | 5.8 | (473) |
| 1945-49 | 4.3 | 5.0 | (694) |
| 1950-54 | 3.5 | 4.8 | (821) |
| 1955-59 | 2.3 | 4.6 | (840) |
| 1960-64 | 1.5 | 4.5 | (590) |
| 1965-69 | 0.9 | 4.6 | (74) |
| All women | 3.5 | 5.0 | (3874) |

* Currently married members of the cohort

When analysed on a birth cohort basis, the ethnic differences, noted in the analysis of marriage cohorts, are similarly sharp (Table 5.6). That is, among the younger birth cohorts, Chinese and Indian women expect some 2 children less than their Malay counterparts. The cumulative evidence suggests while ethnic differences in achieved fertility among the younger marriage and birth cohorts are relatively small, there will ultimately be big differences in family size once these cohorts have completed their childbearing. In the short term it is highly unlikely that Malay fertility will fall to the lower levels that are currently prevailing among Chinese and Indian women.

Table 5.6: Average number of children born and expected to currently married women by birth cohort and ethnic group

| Birth cohort* | Average number of children: Born | | | Expected | | | N | | |
|---|---|---|---|---|---|---|---|---|---|
| | Malays | Chinese | Indians | Malays | Chinese | Indians | Malays | Chinese | Indians |
| 1935-39 | 7.0 | 5.1 | 6.3 | 7.3 | 5.2 | 6.4 | (184) | (159) | (39) |
| 1940-44 | 6.3 | 4.5 | 4.7 | 6.8 | 4.7 | 4.8 | (240) | (196) | (33) |
| 1945-49 | 4.7 | 3.7 | 4.3 | 6.0 | 4.0 | 4.4 | (352) | (272) | (61) |
| 1950-54 | 3.7 | 3.0 | 3.8 | 5.5 | 3.7 | 4.5 | (435) | (284) | (94) |
| 1955-59 | 2.5 | 2.0 | 2.4 | 5.3 | 3.6 | 3.6 | (486) | (260) | (86) |
| 1960-64 | 1.5 | 1.3 | 1.4 | 5.1 | 3.6 | 3.2 | (361) | (146) | (66) |
| 1965-69 | 0.8 | .. | .. | 5.2 | .. | .. | (48) | ( )+ | ( )+ |
| All women | 3.7 | 3.2 | 3.4 | 5.8 | 4.1 | 4.2 | (2106) | (1331) | (387) |

*Currently married members of the cohort

+ < 20 cases

## Family size expectations of once married and remarried women

Do currently married women who have been married once only expect more or less children than those in a second or subsequent marriage? Table 5.7 shows the children already born and expected by those who, at the time of the survey, were once married and those who had been married more than once. Although the sample numbers of remarried women are small, the figures can be interpreted as showing that remarried women born after 1950 expect somewhat higher family sizes than do once married women. This difference is also reflected in their slightly higher achieved family size. One explanation for the difference may be the desire among the remarrieds to have additional children with their new spouse. However, among the older cohorts of women there is a contrary finding: it is the once marrieds who expect and have achieved larger families.

Table 5.7: Average number of children born and expected to currently married women married once only and remarried by birth cohort and ethnic group

| Birth cohort* | Born | | Expected | | N | |
|---|---|---|---|---|---|---|
| | Once married | Remarried | Once married | Remarried | Once married | Remarried |
| 1935-39 | 6.3 | 5.0 | 6.4 | 5.5 | (341) | (41) |
| 1940-44 | 5.5 | 5.0 | 5.8 | 5.8 | (425) | (48) |
| 1945-49 | 4.3 | 4.1 | 5.0 | 5.1 | (638) | (56) |
| 1950-54 | 3.5 | 3.6 | 4.7 | 5.3 | (778) | (43) |
| 1955-59 | 2.3 | 2.6 | 4.5 | 5.4 | (808) | (32) |
| 1960-64 | 1.4 | .. | 4.5 | .. | (574) | ( )+ |

*Currently married members of the cohort

+ < 20 cases

## Ideal family size of marriage cohorts

The 1984/85 MPFS asked all currently married women about their ideal family size. Specifically, women were asked, if they were just married and could have just the number of children they wanted, how many would they have by the time they reached age 50. Such information is not necessarily related to actual or intended behaviour but may be regarded as reflecting their attitudes about family size preferences under circumstances where there were no particular worries about rearing children. For relatively older women, family size ideals reflect in part their contentment with the number of children they have born as well as their perceptions of the opportunity costs of rearing a given number of children.

Table 5.8 shows the percentage distribution of currently married women in successive marriage cohorts according to their ideal family size. The marriage cohorts of 1950-59 have significantly higher ideal family sizes than do the younger cohorts. Among women married over the past 20 years there is a striking similarity in their ideal family sizes; their ideal being around four and a half to five children. Very few women consider less than two children ideal. Four was found to be the favourite ideal for all marriage cohorts. An ideal family size of six or more children has become progressively less favourable among younger marriage cohorts. However it was still the ideal family size for slightly more than one fifth of the youngest marriage cohort.

Questions about ideal family size were asked in the 1974 MFFS as well as in the current survey. It is thus possible to compare the mean ideal family size of cohorts of currently married women married in the same five year periods and sampled in both surveys in the same way as Table 5.3 did for comparative information on expected family size. Table 5.9 shows that, as was the case with expectations, there has been a significant upward movement among women in their family size ideals, particularly the Malays.

Table 5.8: Per cent distribution of currently married women by ideal family size and marriage cohort

| Marriage cohort | Ideal family size 0-1 | 2-3 | 4-5 | > 5 | Don't know | Mean | N |
|---|---|---|---|---|---|---|---|
| 1950-54 | 1 | 9 | 41 | 45 | 4 | 6.1 | (149) |
| 1955-59 | 0 | 6 | 49 | 42 | 3 | 5.6 | (298) |
| 1960-64 | 0 | 10 | 51 | 37 | 2 | 5.2 | (424) |
| 1965-69 | 0 | 14 | 53 | 31 | 1 | 4.9 | (506) |
| 1970-74 | 0 | 15 | 53 | 30 | 1 | 4.8 | (692) |
| 1975-79 | 0 | 21 | 52 | 25 | 1 | 4.5 | (852) |
| 1980-84 | 1 | 25 | 52 | 22 | 0 | 4.4 | (938) |
| All women | 0 | 18 | 52 | 29 | 1 | 4.8 | (3859) |

Table 5.9: Average number of children considered ideal by currently married women in given marriage cohorts in 1974 MFFS and 1984/85 MPFS

| Marriage cohorts | Malays 1974 | Malays 1984/85 | Chinese 1974 | Chinese 1984/85 | Indians 1974 | Indians 1984/85 | All ethnic groups 1974 | All ethnic groups 1984/85 |
|---|---|---|---|---|---|---|---|---|
| 1955-59 | 5.0 | 6.4 | 4.4 | 4.5 | 3.5 | 4.3 | 4.6 | 5.6 |
| 1960-64 | 4.8 | 6.0 | 4.1 | 4.3 | 3.7 | 4.5 | 4.4 | 5.2 |
| 1965-69 | 4.4 | 5.9 | 4.0 | 4.0 | 3.5 | 4.0 | 4.1 | 4.9 |
| 1970-74 | 4.0 | 5.7 | 3.6 | 3.9 | 3.1 | 3.7 | 3.7 | 4.8 |

Table 5.10 shows ideals among the more recently married cohorts according to ethnic group. For each of the ethnic groups there is some downward trend in ideal family size. However, ideal family size of the Malays is consistently almost two children more than that for the Chinese or Indians. For each ethnic group an ideal family size of 4 was the most popular. But whereas only a small proportion of Chinese or Indian women had higher ideals, a significant proportion of Malay women stated five or more children as their ideal family size.

**Table 5.10: Per cent distribution of currently married women by ideal family size, marriage cohort and ethnic group**

| Marriage cohort | Ideal family size 0-1 | 2-3 | 4-5 | > 5 | Don't know | Mean |
|---|---|---|---|---|---|---|
| **Malays** | | | | | | |
| 1965-69 | 0 | 4 | 38 | 56 | 2 | 5.9 |
| 1970-74 | 0 | 4 | 44 | 50 | 2 | 5.7 |
| 1975-79 | 0 | 7 | 48 | 44 | 1 | 5.3 |
| 1980-84 | 1 | 9 | 54 | 36 | 1 | 5.1 |
| **Chinese** | | | | | | |
| 1965-69 | 1 | 21 | 72 | 66 | 1 | 4.0 |
| 1970-74 | 0 | 24 | 68 | 70 | 0 | 3.9 |
| 1975-79 | 1 | 36 | 60 | 3 | 0 | 3.6 |
| 1980-84 | 0 | 43 | 54 | 3 | 0 | 3.5 |
| **Indians** | | | | | | |
| 1965-69 | 0 | 37 | 49 | 15 | 0 | 4.0 |
| 1970-74 | 0 | 43 | 52 | 5 | 0 | 3.7 |
| 1975-79 | 1 | 45 | 50 | 5 | 0 | 3.6 |
| 1980-84 | 1 | 57 | 39 | 2 | 0 | 3.3 |

## Reasons for ideals

Women in the sample whose ideal family size was three or less children and those whose ideals was five or more, were asked the main reason for wanting the stated family size. The main reason given by women for wanting three or less children was economic considerations, that is, the feeling that they had the ability to support that number of children only (Table 5.11). Another key reason given was that it was easier to look after three or less children than more. A significant proportion considered that providing for a good education was of most importance. There was very little variation in this pattern by ethnic group.

Table 5.11: Per cent distribution of currently married women by main reasons for wanting 3 or less and 5 or more children and ethnic group

| Reason | Malays | Chinese | Indians | All women* |
|---|---|---|---|---|
| **Reasons for wanting 3 or less children** | | | | |
| Economic considerations | 32 | 37 | 40 | 37 |
| Ability to manage | 33 | 26 | 29 | 28 |
| Provide for good education | 10 | 12 | 12 | 12 |
| Others | 25 | 25 | 19 | 23 |
| N | (127) | (382) | (164) | (686) |
| **Reasons for wanting 5 or more children** | | | | |
| Care and support during old age | 40 | 8 | 23 | 36 |
| Happier with many children | 19 | 26 | 33 | 20 |
| Ideal family size | 17 | 40 | 14 | 20 |
| Others | 34 | 36 | 40 | 34 |
| N | (1449) | (199) | (81) | (1752) |

* Includes a small number of women of other ethnic origin

However, there was a considerable ethnic difference in the principal reasons among women whose ideal family size was for five or more children (Table 5.12). Among Malays the main consideration was the idea that by having a relatively large number of children they would be supported during their old age. For the Chinese, the main reason given was that number was consistent with their ideals, while for Indian women the main reason given was that the more children that they had the happier they would be.

Table 5.12 brings together and summarizes the information on mean children already born, expected and considered ideal by currently married women. In all cohorts, expectations exceed number of children already born. The difference between the two sets of figures indicates the mean additional children still expected which, of course, will be greater the younger the marriage cohort. But not all women will realize their expectations. Some women who said they did not expect any more may have considered themselves sub-fecund and may in fact be wrong. Further, some women will have accidental pregnancies that have not been planned. Conversely, some women who expect (more) children may find that they are unable to have them.

The comparison of ideal family sizes with those expected shows that for the two oldest cohorts expectations are greater than ideals, whereas for the two youngest cohorts ideals exceed expectations. In both cases the differences are not great. This suggests that among older cohorts some women had more children than they ideally wanted, possibly reflecting in part some recognition that they would have been better off materially with slightly smaller families and in part reflecting that they had some pregnancies that were unplanned. Among the younger cohorts the reasons why expectations are less than their ideals may have something to do with their perceptions of the difficulties of raising larger families.

Table 5.12: Children born, expected and considered ideal by currently married women in given marriage cohorts in 1974 MFFS and 1984/85 MPFS

| Marriage cohort | Average children: Born | Expected | Ideal |
|---|---|---|---|
| **All** | | | |
| 1960-64 | 5.5 | 5.9 | 5.2 |
| 1965-69 | 4.5 | 5.2 | 4.9 |
| 1970-74 | 3.7 | 4.9 | 4.8 |
| 1975-79 | 2.7 | 4.4 | 4.5 |
| 1980-84 | 1.1 | 4.2 | 4.4 |
| **Malays** | | | |
| 1960-64 | 5.8 | 6.6 | 6.0 |
| 1965-69 | 4.9 | 6.1 | 5.9 |
| 1970-74 | 3.8 | 5.7 | 5.7 |
| 1975-79 | 2.7 | 5.1 | 5.3 |
| 1980-84 | 1.1 | 4.9 | 5.1 |
| **Chinese** | | | |
| 1960-64 | 4.9 | 5.0 | 4.3 |
| 1965-69 | 4.2 | 4.4 | 4.0 |
| 1970-74 | 3.5 | 3.9 | 3.9 |
| 1975-79 | 2.6 | 3.5 | 3.6 |
| 1980-84 | 1.1 | 3.2 | 3.5 |
| **Indians** | | | |
| 1960-64 | 5.4 | 5.5 | 4.5 |
| 1965-69 | 4.6 | 4.9 | 4.0 |
| 1970-74 | 3.8 | 4.1 | 3.7 |
| 1975-79 | 2.8 | 3.7 | 3.6 |
| 1980-84 | 1.0 | 3.1 | 3.3 |

## Sex preference

In some societies, sex preference plays an important role in influencing fertility behaviour and hence completed family size. Couples who have strong preference for having one or more children of a given sex may go beyond their desired family size if they do not achieve the preferred sex composition. Preferences can depend on many factors, particularly cultural and religious practices, level of economic development and the degree of urbanization.

After women were asked about their ideal family size, they were asked to state their preferences for how many children of each sex they wanted. Table 5.13 summarizes the replies on sex distribution of children within respondents' ideal family size. Overall, 7 out of every 10 women wanted an even number for their ideal family and wanted an equal number of boys and girls. Of the rest, the majority wanted more boys than girls although a minority wanted more girls. There was some difference in this pattern by ethnic group (Table 5.13 and Figure 5.2). The preference for more boys was most in the Indians, while the preference to have more girls was least among Chinese women.

Table 5.13: Per cent distribution of currently married women by sex preferences of their ideal family size and ethnic group

| Ethnic group | Want more boys than girls | Want more girls than boys | Want equal number of sexes | N |
|---|---|---|---|---|
| Malays | 21 | 13 | 66 | (2269) |
| Chinese | 18 | 4 | 78 | (1387) |
| Indians | 29 | 7 | 64 | (434) |
| All ethnic groups | 21 | 9 | 70 | (3887) |

Fig. 5.2: Per cent distribution of currently married women by sex preferences of their ideal family size and ethnic group

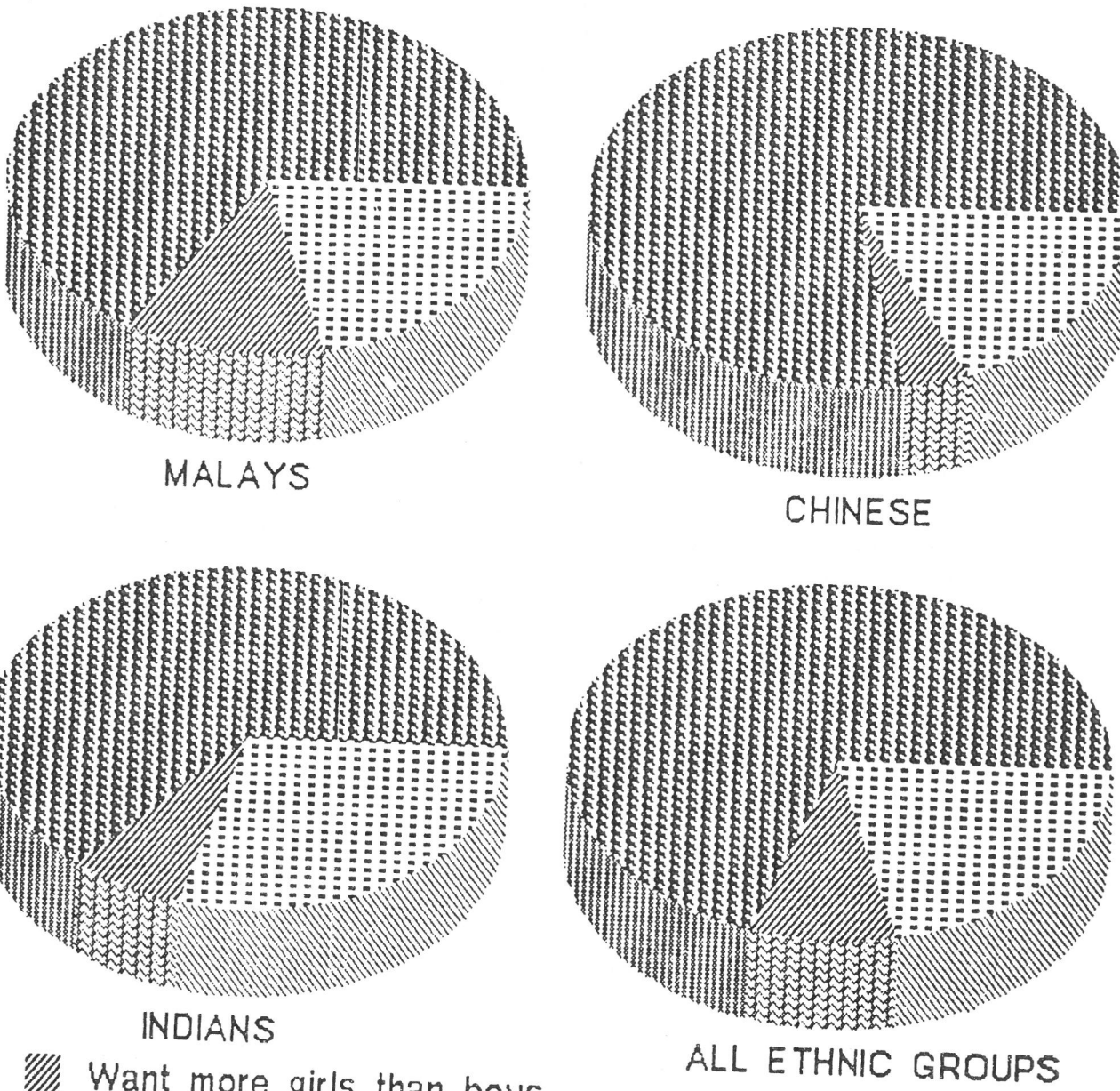


Table 5.14 shows the proportions of women with different ideal family size preferences by number of sons wanted and ethnic group. The sex preferences for those who wanted two or more children are shown since very few women in the sample wanted less. For women whose ideal family size is an even number there is strong desire for an even number of boys or girls. Where 2 children were considered ideal, 89 per cent of the sample wanted a boy and a girl and where four was ideal the corresponding figure was 94 per cent. For those where the ideal family size is for an odd number of children there was a tendency to want a greater number of boys than girls, although this tendency was significantly lower where 5 children was the ideal family size. This overall pattern was similar for the different ethnic groups except that the Indians have a stronger preference for boys, and for the Malays, the preference for boys is less marked than for the other two communities. Thus, for example, of those whose ideal family size was 3, some 48 per cent of Malays wanted 2 boys, whereas the corresponding figures for the Chinese and Indians were 74 per cent and 80 per cent respectively.

## Desire to cease childbearing and sex preference

The desire to cease childbearing is not affected by number of children only, but also by the sex composition of the current family size. Table 5.15 shows the proportions of women who want to cease childbearing according to the differing combinations of living sons and daughters and current family size. For those with less than two children, the per cent not wanting additional children does not vary by sex composition of current family size. Whereas among women with three children those with two sons and one daughter were more likely to want to stop than those whose family had other sex compositions. However, the figure show that in general it is women with children all of a single sex who are least likely to cease childbearing, while those with more balanced sex ratio are most likely to do so.

Table 5.14: Per cent distribution of currently married women by number of sons wanted, ideal family size and ethnic group

| No. of boys wanted | Ideal family size 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|
| **All women** | | | | | |
| 0 | 0 | 0 | - | - | 0 |
| 1 | 89 | 20 | 0 | 0 | 9 |
| 2 | 3 | 69 | 94 | 28 | 47 |
| 3 | - | 0 | 2 | 56 | 25 |
| 4 | - | - | 0 | 3 | 7 |
| 5 | - | - | - | 0 | 3 |
| 6+ | - | - | - | - | 1 |
| Do not mind | 8 | 10 | 4 | 12 | 8 |
| N | (273) | (389) | (1389) | (598) | (3833) |
| **Malays** | | | | | |
| 0 | 3 | 1 | - | - | 1 |
| 1 | 88 | 34 | 1 | 1 | 3 |
| 2 | 3 | 48 | 88 | 31 | 32 |
| 3 | - | 1 | 3 | 50 | 36 |
| 4 | - | - | 0 | 3 | 12 |
| 5 | - | - | - | 1 | 5 |
| 6+ | - | - | - | - | 1 |
| Do not mind | 6 | 15 | 8 | 14 | 10 |
| N | (34) | (91) | (502) | (443) | (2072) |
| **Chinese** | | | | | |
| 0 | - | - | - | - | - |
| 1 | 90 | 15 | 0 | - | 14 |
| 2 | 2 | 74 | 97 | 19 | 68 |
| 3 | - | - | 1 | 73 | 11 |
| 4 | - | - | - | 1 | 1 |
| 5 | - | - | - | - | 0 |
| 6+ | - | - | - | - | 0 |
| Do not mind | 8 | 10 | 2 | 8 | 5 |
| N | (174) | (202) | (742) | (106) | (1323) |
| **Indians** | | | | | |
| 0 | 3 | 1 | - | - | 0 |
| 1 | 88 | 16 | - | - | 19 |
| 2 | 3 | 80 | 95 | 20 | 58 |
| 3 | - | - | 3 | 67 | 14 |
| 4 | - | - | 1 | 8 | 2 |
| 5 | - | - | - | 16 | 1 |
| 6+ | - | - | - | - | 1 |
| Do not mind | 9 | 4 | 4 | 4 | 5 |
| N | (65) | (96) | (145) | (49) | (389) |

Table 5.15: Per cent of currently married fecund women who want no more children by the number of their living children, sons and daughters

| Number of living children | Number of boys | Number of girls | Per cent who do not want any more children | N |
|---|---|---|---|---|
| One | 0 | 1 | 5 | (244) |
| | 1 | 0 | 6 | (290) |
| Two | 0 | 2 | 12 | (134) |
| | 1 | 1 | 20 | (375) |
| | 2 | 0 | 19 | (193) |
| Three | 0 | 3 | 19 | (70) |
| | 1 | 2 | 27 | (239) |
| | 2 | 1 | 39 | (295) |
| | 3 | 0 | 31 | (95) |
| Four | 0 | 4 | 38 | ( 21) |
| | 1 | 3 | 42 | (108) |
| | 2 | 2 | 53 | (177) |
| | 3 | 1 | 46 | (116) |
| | 4 | 0 | 21 | (24) |
| Five | 0 | .. | .. | ( )* |
| | 1 | 4 | 56 | (50) |
| | 2 | 3 | 56 | (100) |
| | 3 | 2 | 49 | (84) |
| | 4 | 1 | 62 | (40) |
| | 5 | .. | .. | ( )* |

* < 15 cases

## Summary

Women in the 1984/85 MPFS expected to have an average of 5 children. That figure conceals substantial subgroup variations among those born or married in different years. The younger the marriage cohort in the survey, the lower the completed family size expected. Women who married in 1980-84 expected to have 4.2 children, slightly over half a child less those who married ten years earlier and more than two children fewer than those who married twenty-five years earlier.

Apart from time trends in fertility expectations, there are also considerable ethnic variations between those married in the same years. For each ethnic group, family size expectations fall the younger the marriage cohort. However, family size expectations are consistently higher among Malay than among either Chinese or Indian women.

Comparison of expectations data among the same marriage cohorts as reported in the 1984/85 MPFS with those reported in the survey 10 years earlier showed that there has been a significant upward revision in family size expectations. The upward revision in family size expectations has occurred for each of the ethnic groups but has been most pronounced among the Malays. Among those married in 1975-84, very few women expect to have no children or just one. Half of Chinese and Indian women expect just 2 or 3 children, whereas most Malays expect 4 or 5 children. However, birth expectations data tend to lack stability over time so it is not unlikely that the relatively recently married couples may once again revise their expectations (either upwards or, more likely, downwards) over the course of the next 10 years.

Currently married women aged under 30 at the time of the 1984/85 MPFS who were still in their first marriage expected to have a slightly smaller family than those in a second or subsequent marriage. However, among the over 30s the reverse pattern held.

The marriage cohorts of 1950-59 have significantly higher ideal family sizes than do those married subsequently. Among women married between 1965-84 there is a striking similarity in ideal family size - the ideal being around four and a half to five children. Most women consider four children an ideal. As with family size expectations, ideal family size for the Malays is about two children more than that for the Chinese or Indians. The main reason given by women with an ideal family size of three or less was economic considerations, whereas that for women with an ideal of five or more children was the belief that the children would provide some security for when the parents grew old.

Some 70 per cent of currently married women in the 1984/85 MPFS wanted an equal number of boys and girls. Of the rest, the majority wanted more boys than girls, although a minority of women stated that they wanted more girls. A preference for more sons was least among the Malays.

# VI. REGIONAL VARIATIONS

## Introduction and background

The 1984/85 Malaysian Population and Family Survey (MPFS) was not specifically designed to give sub-national estimates. In particular, the sample size is too small to give useful comparisons for Peninsular Malaysia's 11 states and the Federal Territory of Kuala Lumpur. However, it is possible to analyse some of the results of the survey at the regional level.

This chapter examines regional trends and differentials in marriage and family formation. It also highlights fertility differentials in demographic behaviour within and between the four regions. For planning purposes, Peninsular Malaysia is often divided into four regions, this is North, South, East and Central. The North comprises the states of Kedah, Perlis, Penang and Perak; the South is the state of Johore; the East is Kelantan, Terengganu and Pahang while the Central region is made up of Negeri Sembilan, Malacca, Selangor and the Federal Territory of Kuala Lumpur.

The four-fold regional grouping of the different states is not ideal for all purposes. For example, two of the four states in the Northern region, Perlis and Kedah, are significantly less developed than Penang or Perak and in many respects are closer to those of the Eastern region. Second, the four regions differ considerably in population size. The Southern region consists only of Johore and so in a survey designed to give national estimates the sampling errors will be greater for that region simply because the estimates will be based on smaller numbers. Nevertheless, the standard geographical regional grouping has been used here so as to maintain comparability with data from other sources.

A profile of the four regions according to selected indicators for the year 1980 is shown in Table 6.1. In terms of population size, the North is the largest region, being about two and a half times

larger than the South, which is the smallest region. Malays constitute more than half the population in each of the regions, except in the Central region. In terms of economic welfare, as measured by GDP per capita, the Central region is considerably more prosperous than elsewhere. Per capita income is lowest in the Eastern region, but not markedly behind the Northern or Southern regions.

Table 6.1: Population estimates and selected indicators by region, 1980

| Indicator | North | Central | East | South |
|---|---|---|---|---|
| Population (000s)* | 4,039.9 | 3,545.1 | 2,243 | 1,644.9 |
| % Malay | 50.7 | 42.6 | 83.8 | 54.8 |
| % Chinese | 37.0 | 41.4 | 12.7 | 38.4 |
| % Indian | 11.3 | 15.4 | 2.9 | 6.6 |
| Per capita GDP $ | 2,811 | 4,602 | 2,631 | 2,916 |
| Ratio to Malaysian average | 0.87 | 1.43 | 0.82 | 0.91 |
| Infant mortality rate+ | 25 | 21 | 30 | 25 |

* Includes persons of other ethnic origin

+ per 1000 live births

Age at first marriage

Although age at first marriage has risen in each of the four regions there are still wide variations between the regions. In each region, the median age at first marriage of women born in 1955-59 was at least two and a half years later than their counterparts who were born 20 years earlier (Table 6.2). The rise in age at first marriage has been most marked in the Eastern region. However, that is to be expected given that among women in the 1935-39 birth cohort, those

living in the Eastern region were on average marrying some four years younger than those in the Central region. Regional variations in marriage age among members of the 1955-59 birth cohort are less wide. Nevertheless, women in the Eastern region are still marrying at almost 3 years younger than their counterparts elsewhere.

Table 6.2: Lower quartile and median ages at first marriage of cohorts of women born in selected periods by region

| Period of birth | Region | | | |
|---|---|---|---|---|
| | North | Central | East | South |
| **Lower quartile** | | | | |
| 1935-39 | 15.4 | 16.4 | 13.2 | 15.8 |
| 1940-44 | 15.8 | 16.8 | 14.2 | 15.6 |
| 1945-49 | 17.0 | 17.8 | 14.9 | 17.0 |
| 1950-54 | 18.0 | 18.4 | 15.7 | 18.6 |
| 1955-59 | 18.5 | 19.4 | 16.4 | 19.1 |
| **Median** | | | | |
| 1935-39 | 18.0 | 19.4 | 14.9 | 18.4 |
| 1940-44 | 18.7 | 19.6 | 16.2 | 19.3 |
| 1945-49 | 20.1 | 21.6 | 17.8 | 19.7 |
| 1950-54 | 21.3 | 21.7 | 17.8 | 21.5 |
| 1955-59 | 21.4 | 22.3 | 19.6 | 21.9 |

In Chapter 2, it was shown that Malay women marry significantly younger than Chinese or Indian women. Given these ethnic differentials, it may be conjectured that regional variations merely reflect differences in the ethnic composition of the four regions. Table 6.3, which gives figures on age at first marriage in the four regions by ethnic group, shows there is still a regional impact on age at first marriage even after taking ethnicity into account. That is,

marriage age is lowest in the East and highest in the Central region.

However, the regional differential is far more marked for the Malays than for the Chinese or Indians. Thus, the difference in the lower quartile age at first marriage among Malay women in the 1955-64 birth cohort living in the East and Central region is 2.7 years, whereas the corresponding figure for the Chinese is less than one year (Table 6.3). Thus, there is greater regional homogeneity in the marriage behaviour of Chinese women than among Malay women. However, if the Eastern region is left out of the picture, the marriage age of the Malay women in the other three regions is remarkably similar. Thus, what is perhaps most interesting is the earlier pattern of marriage of the Malays in the Eastern region. It is difficult to know whether that stems from either the lower level of socio-economic development or a distinctive cultural and religious context.

## Fertility levels

In Chapter 3 it was shown that there had been little change over time in the level of fertility of different marriage cohorts at the early durations of marriage but that at the longer durations of marriage mean family size has become progressively smaller for the younger marriage cohorts. To what extent does this national pattern hold at the regional level?

Table 6.4 and Figure 6.1 show that there are no significant regional variations in the level of childbearing during the early years of marriage. Thus, later age at first marriage in the different regions, which has led to later age at the start of childbearing, has not brought with it a delay in childbearing within marriage. Marriage remains universally equated with the start of childbearing in Malaysia.

Table 6.3: Lower quartile and median ages (years) at first marriage of cohorts of women born in selected years by region and ethnic group

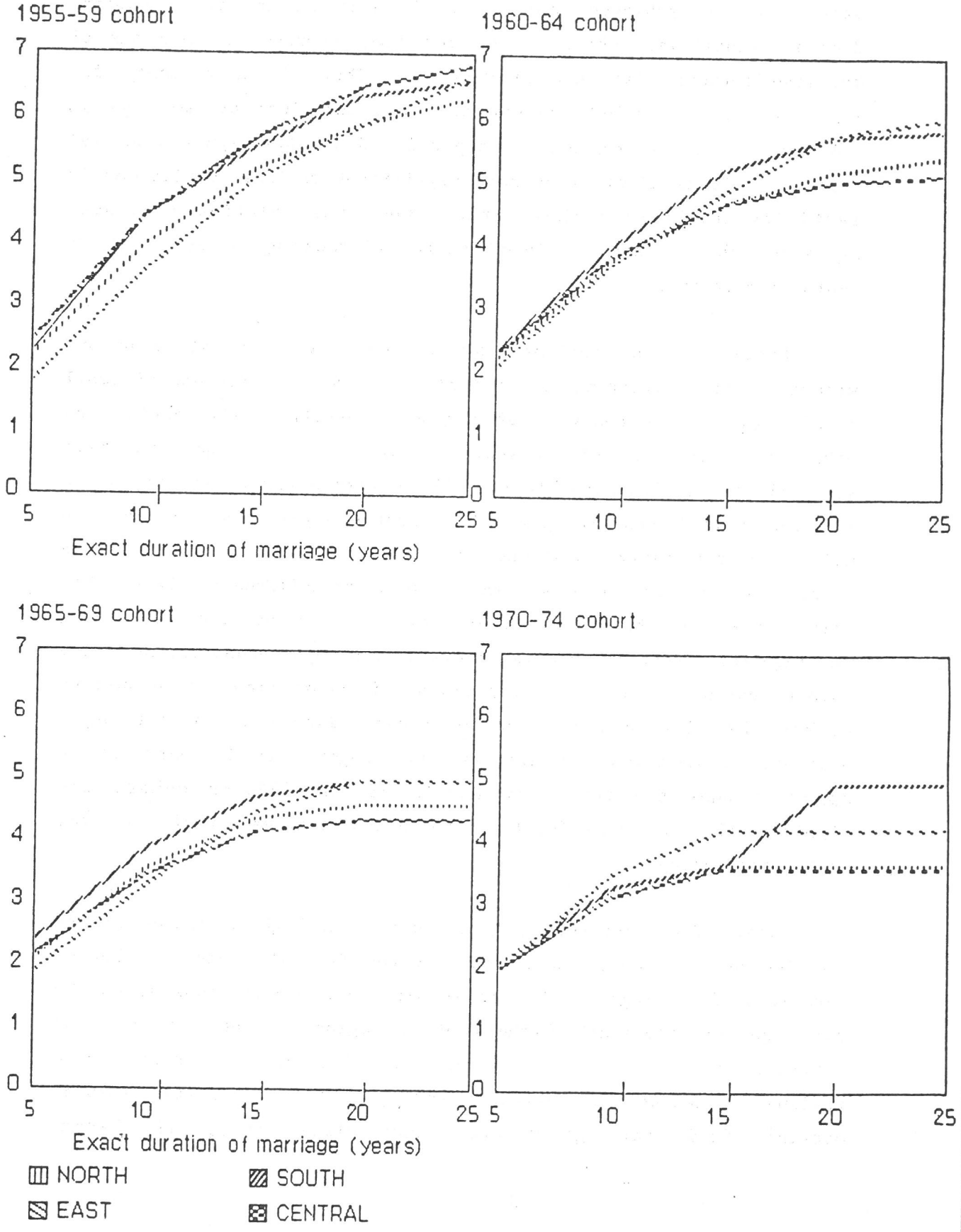
| Period of birth | Region | | | |
|---|---|---|---|---|
| | South | North | Central | East |
| **Lower quartile** | | | | |
| **Malays** | | | | |
| 1935-44 | 14.7 | 14.8 | 15.4 | 13.2 |
| 1945-54 | 18.0 | 16.8 | 16.6 | 15.1 |
| 1955-64 | 18.5 | 18.6 | 19.2 | 16.5 |
| **Chinese** | | | | |
| 1935-44 | 18.3 | 18.3 | 18.9 | 16.9 |
| 1945-54 | 18.9 | 18.8 | 19.9 | 18.9 |
| 1955-64 | 19.6 | 20.1 | 20.5 | 19.6 |
| **Indians** | | | | |
| 1935-44 | .. | 15.6 | 14.4 | .. |
| 1945-54 | .. | 16.6 | 17.6 | .. |
| 1955-64 | .. | 19.0 | 18.4 | .. |
| **Median** | | | | |
| **Malays** | | | | |
| 1935-44 | 17.1 | 16.5 | 17.3 | 14.9 |
| 1945-54 | 20.0 | 20.2 | 20.0 | 17.2 |
| **Chinese** | | | | |
| 1935-44 | 22.0 | 20.8 | 22.2 | 18.9 |
| 1945-54 | 21.5 | 22.2 | 23.0 | 21.5 |
| **Indians** | | | | |
| 1935-44 | .. | 18.5 | 16.9 | .. |
| 1945-54 | .. | 19.5 | 20.8 | .. |

Table 6.4: Mean number of children born to women in given marriage cohorts at selected durations of marriage by region*

| Marriage cohort | Exact duration of marriage (years) 2 | 5 | 8 | 10 | 12 | 15 | 20 | 25 | Median age at first birth |
|---|---|---|---|---|---|---|---|---|---|
| **North** | | | | | | | | | |
| 1955-59 | 0.8 | 2.2 | 3.3 | 4.0 | 4.5 | 5.2 | 5.9 | 6.2 | 17.9 |
| 1960-64 | 0.8 | 2.2 | 3.2 | 4.0 | 4.2 | 4.6 | 5.2 | | 19.8 |
| 1965-69 | 0.8 | 2.1 | 3.0 | 3.5 | 3.9 | 4.3 | | | 19.7 |
| 1970-74 | 0.9 | 2.0 | 2.9 | 3.2 | | | | | 21.3 |
| 1975-79 | 0.9 | 2.0 | | | | | | | 21.8 |
| **Central** | | | | | | | | | |
| 1955-59 | 0.9 | 2.4 | 3.7 | 4.4 | 5.0 | 5.7 | 6.5 | 6.8 | 17.3 |
| 1960-64 | 0.8 | 2.3 | 3.3 | 3.8 | 4.2 | 4.6 | 5.0 | | 19.8 |
| 1965-69 | 0.9 | 2.1 | 3.0 | 3.4 | 3.8 | 4.1 | | | 21.2 |
| 1970-74 | 0.9 | 2.0 | 2.7 | 3.2 | | | | | 22.2 |
| 1975-79 | 0.9 | 2.0 | | | | | | | 22.6 |
| **East** | | | | | | | | | |
| 1955-59 | 0.8 | 1.8 | 2.8 | 3.5 | 4.1 | 5.0 | 5.9 | 6.7 | 18.4 |
| 1960-64 | 0.8 | 2.1 | 3.1 | 3.9 | 4.2 | 4.8 | 5.8 | | 18.1 |
| 1965-69 | 0.8 | 1.9 | 2.7 | 3.2 | 3.8 | 4.4 | | | 18.6 |
| 1970-74 | 0.8 | 2.0 | 2.9 | 3.5 | | | | | 18.7 |
| 1975-79 | 1.0 | 2.1 | | | | | | | 20.3 |
| **South** | | | | | | | | | |
| 1955-59 | 0.8 | 2.3 | 3.5 | 4.1 | 4.8 | 5.5 | 6.3 | 6.6 | 17.5 |
| 1960-64 | 0.9 | 2.3 | 3.1 | 4.0 | 4.6 | 5.2 | 5.8 | | 20.8 |
| 1965-69 | 1.0 | 2.4 | 3.3 | 3.8 | 4.1 | 4.7 | | | 20.6 |
| 1970-74 | 0.9 | 2.0 | 2.8 | 3.3 | | | | | 21.1 |
| 1975-79 | 1.0 | 2.0 | | | | | | | 21.5 |

* The 1950-54 marriage cohort has been excluded from this and subsequent tables in this chapter because of the small sample size

Fig. 6.1: Mean number of children born to women in given marriage cohorts by duration of marriage and region



At durations of marriage of 20 years and over, representing the stage at which childbearing is virtually complete, there have been steep falls in achieved family size in each of the four regions. Similar, albeit less steep, reductions have occurred at durations of marriage between five and 20 years. There is a tendency for fertility to be slightly higher at these durations of marriage in Eastern and Southern regions as compared with the Northern and Central regions. It is likely that more significant regional variations in fertility levels will show through when the relatively younger marriage cohorts have completed their childbearing after about 25 years of marriage.

Chapter 3 also confirmed the existence of long standing and widening ethnic differentials in fertility levels. Because of small sample numbers the analysis of regional fertility differentials by ethnicity is in terms of ten year marriage cohorts, rather than five year cohorts as elsewhere (Table 6.5). Within any given region, it is shown that Chinese fertility is slightly higher than that of the Malays at the early durations of marriage. This reflects the tendency of Chinese women, who marry and start childbearing later than Malay women, to have a quicker start to childbearing following marriage and a shorter interval between first and second birth. The data do not permit detailed comparisons of cohort trends by ethnicity within the different regions by longer durations of marriage. However, at durations of marriage of longer than 5 years it is apparent that the fertility levels of the 1960-69 cohort are significantly lower than for the 1950-59 cohort in each region and for each ethnic group.

Malay and Chinese fertility is shown to be highest in the Eastern and Southern regions, and lowest in the Central region at longer durations of marriage. This is in line with expectations given the more rapid development of the Central region. The data are not sufficiently detailed to highlight the existence of current ethnic regional variations as reflected through period fertility measures obtained from vital registration. These differentials will become

Table 6.5: Mean number of children born to women in given marriage cohort at selected durations of marriage by ethnic group and region

| Marriage cohort | Region | Exact duration of marriage (years) 2 | 5 | 8 | 10 | 15 | 20 | Median age at first birth |
|---|---|---|---|---|---|---|---|---|
| **Malays** | | | | | | | | |
| 1950-59 | North | 0.6 | 1.9 | 3.1 | 3.7 | 5.1 | 6.3 | 17.2 |
| 1960-69 | | 0.8 | 1.9 | 2.8 | 3.4 | 4.5 | | 18.7 |
| 1970-79 | | 0.9 | 1.9 | | | | | 20.0 |
| 1950-59 | Central | 0.6 | 2.2 | 3.5 | 4.3 | 6.0 | 7.1 | 17.3 |
| 1960-69 | | 0.8 | 2.1 | 3.1 | 3.6 | 4.7 | | 18.9 |
| 1970-79 | | 0.9 | 2.0 | | | | | 21.6 |
| 1950-59 | East | 0.6 | 1.7 | 2.8 | 4.0 | 5.2 | 6.6 | 16.9 |
| 1960-69 | | 0.7 | 1.8 | 2.7 | 3.5 | 4.6 | | 18.1 |
| 1970-79 | | 0.9 | 2.0 | | | | | 19.0 |
| 1950-59 | South | 0.7 | 2.1 | 3.4 | 4.0 | 5.9 | 7.1 | 16.7 |
| 1960-69 | | 0.9 | 2.3 | 3.2 | 3.7 | 5.1 | | 19.6 |
| 1970-79 | | 0.9 | 1.9 | | | | | 21.0 |
| **Chinese** | | | | | | | | |
| 1950-59 | North | 0.8 | 2.4 | 3.7 | 4.4 | 5.6 | 6.2 | 17.8 |
| 1960-69 | | 0.9 | 2.3 | 3.3 | 3.7 | 4.4 | | 22.8 |
| 1970-79 | | 0.9 | 2.1 | | | | | 21.8 |
| 1950-59 | Central | 0.9 | 2.6 | 3.8 | 4.5 | 5.5 | 6.1 | 19.1 |
| 1960-69 | | 0.9 | 2.2 | 3.2 | 3.7 | 4.1 | | 22.4 |
| 1970-79 | | 0.9 | 1.9 | | | | | 23.3 |
| 1950-59 | East | 1.0 | 2.5 | 3.9 | 4.5 | 5.9 | 6.3 | 18.7 |
| 1960-69 | | 1.1 | 2.4 | 3.5 | 4.0 | 4.6 | | 21.1 |
| 1970-79 | | 1.0 | 2.0 | | | | | 22.6 |
| 1950-59 | South | 0.9 | 2.5 | 3.9 | 4.4 | 5.6 | 6.2 | 18.5 |
| 1960-69 | | 0.9 | 2.4 | 3.5 | 4.0 | 4.7 | | 21.3 |
| 1970-79 | | 1.0 | 2.0 | | | | | 23.1 |
| **Indians** | | | | | | | | |
| 1950-59 | North | 0.8 | 2.4 | 3.6 | 4.2 | 5.4 | 5.9 | 17.8 |
| 1960-69 | | 0.8 | 2.2 | 3.3 | 3.9 | 4.6 | | 18.3 |
| 1970-79 | | 0.9 | 2.1 | | | | | 20.7 |
| 1950-59 | Central | 0.7 | 2.0 | 3.2 | 4.0 | 5.2 | 5.9 | 18.5 |
| 1960-69 | | 0.8 | 2.2 | 3.2 | 3.6 | 4.5 | | 19.0 |
| 1970-79 | | 0.7 | 2.0 | | | | | 20.8 |

* The number of Indians in the Eastern and Southern regions in the sample is too small for analysis here.

most evident after about 10 years of marriage. There will almost certainly be a tendency for women in the Eastern region where marriage is earliest, to continue childbearing at longer durations of marriage simply because they will be younger than their counterparts in the same marriage cohorts in the other regions.

## Family size expectations

Chapter 5 described family size expectations at the national level and cautioned about the limitations of using such data. It follows that these limitations should be kept in mind in the analysis here of expectations at the sub-national level.

In each region, family size expectations are lower for younger marriage cohorts, as compared with those who married in progressively earlier years (Table 6.6). This pattern is not surprising given differentials in the levels of achieved fertility by each cohort (upper half of Table 6.6). The differences in achieved fertility are, of course, largely the result of differences in duration of exposure to childbearing since marriage. The differential in birth expectations for those married in 1980-84, as compared with those who married 30 years earlier and who by the time of the survey had almost completed their childbearing, was 2.9 children in the Central region, 2.4 in the Southern and Northern regions but only 1.6 in the Eastern region. In other words, differentials in birth expectations are greatest in the Central region and least in the Eastern regions.

As well as differences in family size expectations between younger and older marriage cohorts in each of the regions, there are also significant regional variations for any given cohort, particularly among the younger cohorts (Table 6.6). Thus, among members of the 1980-84 marriage cohort, for whom family size expectations are lowest, women in the Eastern region expected to have almost 5 children, that is, about half a child more than those in the Southern region, and one child more than those in the Central region.

Table 6.6: Average number of children born and expected for currently married women by marriage cohort and region

| Marriage cohort | Region | | | |
|---|---|---|---|---|
| | North | Central | East | South |
| **Children born** | | | | |
| 1955-59 | 6.3 | 6.6 | 6.1 | 6.5 |
| 1960-64 | 5.4 | 5.2 | 5.6 | 5.9 |
| 1965-69 | 4.5 | 4.3 | 4.8 | 4.9 |
| 1970-74 | 3.6 | 3.6 | 4.1 | 3.6 |
| 1975-79 | 2.7 | 2.6 | 2.7 | 2.7 |
| 1980-84 | 1.1 | 1.1 | 1.2 | 1.2 |
| All women | 3.6 | 3.2 | 3.8 | 3.8 |
| **Children expected** | | | | |
| 1955-59 | 6.4 | 6.8 | 6.5 | 6.9 |
| 1960-64 | 5.7 | 5.6 | 6.6 | 6.2 |
| 1965-69 | 5.1 | 4.9 | 6.1 | 5.4 |
| 1970-74 | 4.8 | 4.4 | 5.9 | 4.8 |
| 1975-79 | 4.3 | 4.0 | 5.2 | 4.4 |
| 1980-84 | 4.0 | 3.9 | 4.9 | 4.5 |
| All women | 4.9 | 4.6 | 5.8 | 5.2 |
| **Sample numbers** | | | | |
| 1955-59 | (118) | (76) | (56) | (48) |
| 1960-64 | (146) | (123) | (93) | (62) |
| 1965-69 | (197) | (153) | (94) | (61) |
| 1970-74 | (233) | (236) | (128) | (95) |
| 1975-79 | (310) | (274) | (154) | (112) |
| 1980-84 | (300) | (367) | (153) | (113) |
| All women | (1368) | (1262) | (714) | (507) |

Do regional variations in family size expectations merely reflect differences in the ethnic composition in the four regions? Table 6.7 attempts to answer this question by taking ethnicity into account. The figures show that not surprisingly, given actual fertility differentials, there are substantial ethnic differentials in birth expectations within any given region, but that for any given ethnic group the differentials, although existing, are far less marked across the four regions.

Thus, in the Central region, family size expectations among those in the 1970-79 marriage cohort ranged from 5.1 children for the Malays, to 3.9 for the Indians and 3.6 for the Chinese (Table 6.7). Similar differentials are shown for the other region. Looking at the same marriage cohort across the four regions, it is shown that while birth expectations for the Malays in the Central, Northern and Southern regions are similar, at just over 5 children, birth expectations in the Eastern region are for almost one child more. Similar differentials can be observed for the Chinese. Thus, there is both an ethnic effect and an East coast effect on family size expectations, the former being somewhat greater than the latter.

## Family planning

Given differentials in age at first marriage, levels of fertility and birth expectations, regional differentials in the use of family planning are to be expected. Table 6.8 and Figure 6.2 show the proportions of currently married women in different marriage cohorts in each region who were using family planning methods at the time of the survey. Overall, the figures show that more than half of currently married women in the Southern, Central and Northern regions were using birth control, compared with about one third in the Eastern region. On a marriage cohort basis, the proportion using contraception tends to be lowest among members of the oldest and youngest marriage cohorts. This may be explained by lesser need for contraception by these groups. Among the older cohort, many women will already have ceased childbearing and not be fecund, whereas among

Table 6.7: Average number of children born and expected for currently married women by marriage cohort, region and ethnic group

| Marriage cohort | Region | | | |
|---|---|---|---|---|
| | North | Central | East | South |
| **Children born** | | | | |
| **Malays** | | | | |
| 1950-59 | 6.8 | 7.4 | 6.9 | 7.9 |
| 1960-69 | 5.2 | 5.3 | 5.3 | 5.9 |
| 1970-79 | 3.1 | 3.2 | 3.4 | 3.2 |
| **Chinese** | | | | |
| 1950-59 | 6.5 | 6.2 | .. | .. |
| 1960-69 | 4.5 | 4.3 | 4.8 | 4.8 |
| 1970-79 | 3.0 | 3.0 | 3.1 | 3.0 |
| **Indians** | | | | |
| 1950-59 | 6.2 | 6.0 | .. | .. |
| 1960-69 | 4.9 | 5.0 | .. | .. |
| 1970-79 | 3.9 | 3.2 | .. | .. |
| **Children expected** | | | | |
| **Malays** | | | | |
| 1950-59 | 7.0 | 7.6 | 7.5 | 8.3 |
| 1960-69 | 6.0 | 6.3 | 6.6 | 6.6 |
| 1970-79 | 5.2 | 5.1 | 5.9 | 5.2 |
| **Chinese** | | | | |
| 1950-59 | 6.6 | 6.2 | .. | .. |
| 1960-69 | 4.6 | 4.4 | 5.0 | 4.9 |
| 1970-79 | 3.7 | 3.6 | 4.0 | 3.6 |
| **Indians** | | | | |
| 1950-59 | 6.2 | 6.1 | .. | .. |
| 1960-69 | 4.9 | 5.2 | .. | .. |
| 1970-79 | 3.7 | 3.9 | .. | .. |
| **Sample numbers** | | | | |
| **Malays** | | | | |
| 1950-59 | (111) | (53) | (83) | (44) |
| 1960-69 | (167) | (101) | (150) | (57) |
| 1970-79 | (284) | (188) | (221) | (111) |
| **Chinese** | | | | |
| 1950-59 | (51) | (33) | .. | .. |
| 1960-69 | (134) | (137) | (33) | (56) |
| 1970-79 | (186) | (240) | (47) | (81) |
| **Indians** | | | | |
| 1950-59 | (20) | (23) | .. | .. |
| 1960-69 | (36) | (34) | .. | .. |
| 1970-79 | (62) | (73) | .. | .. |

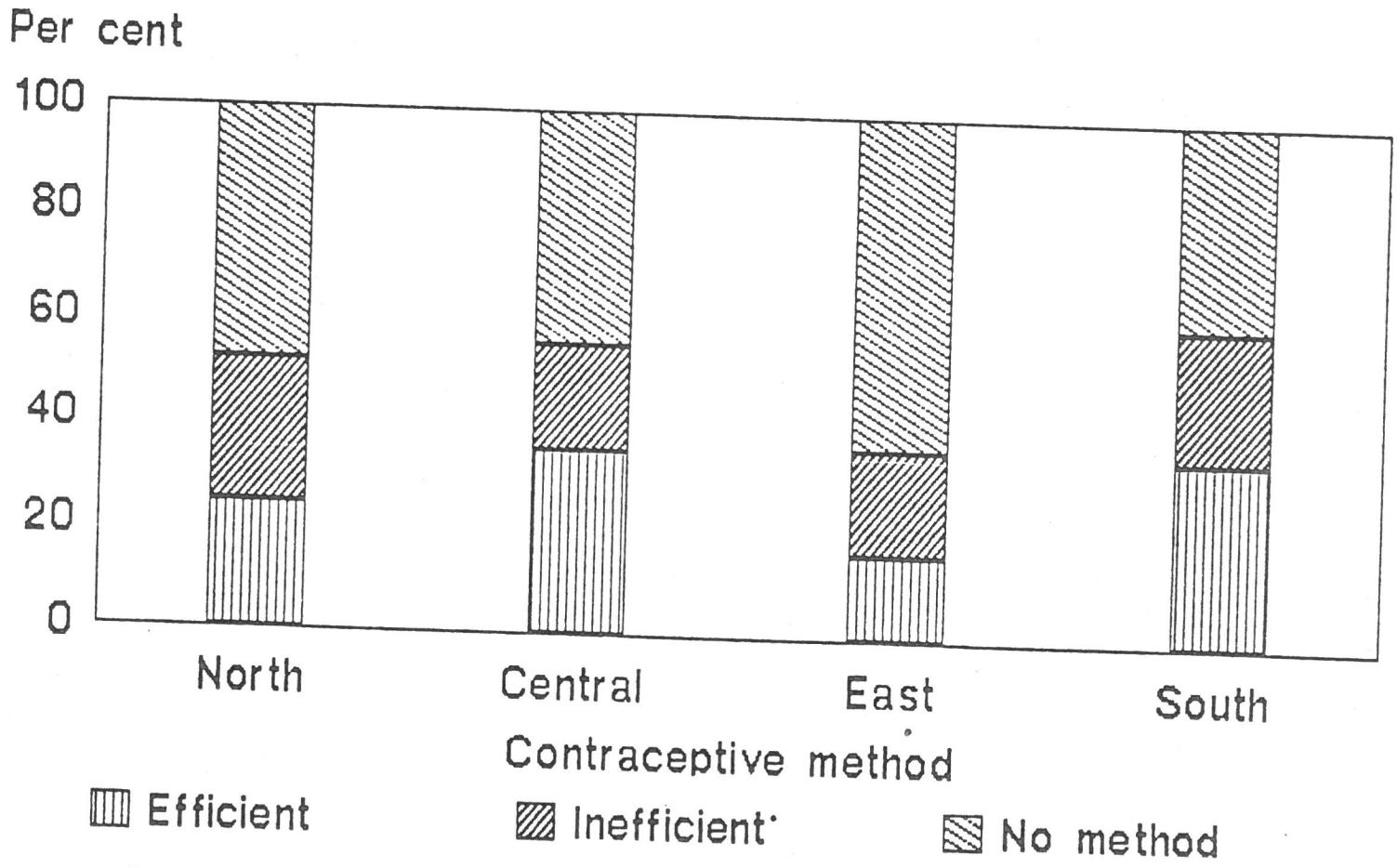
the younger cohort many will be in the early stages of family building and hence will not resort to birth control until having achieved a given number of children.

Table 6.8: Per cent of currently married women currently using contraception by marriage cohort and region

| Marriage cohort | Region | | | |
|---|---|---|---|---|
| | North | Central | East | South |
| All methods | | | | |
| 1955-59 | 46 | 59 | 38 | 46 |
| 1960-64 | 58 | 67 | 39 | 74 |
| 1965-69 | 63 | 75 | 33 | 69 |
| 1970-74 | 61 | 63 | 43 | 62 |
| 1975-79 | 52 | 57 | 42 | 65 |
| All women | 52 | 56 | 36 | 61 |
| Efficient methods | | | | |
| 1955-59 | 19(118) | 30(76) | 14(56) | 19(48) |
| 1960-64 | 31(146) | 44(123) | 17(93) | 39(62) |
| 1965-69 | 39(197) | 42(153) | 13(94) | 36(61) |
| 1970-74 | 37(233) | 42(236) | 20(128) | 43(95) |
| 1975-79 | 34(310) | 35(274) | 15(154) | 38(112) |
| All women | 24(1368) | 35(1262) | 16(714) | 35(507) |

Apart from regional variations in the level of practice of family planning, there are also big differentials in the use of efficient methods. Only one in every six currently married women in the Eastern region was using efficient contraception at the time of the survey. The proportion in other regions ranges from one quarter in the North to slightly more than one third in the Central and Southern regions.

Fig. 6.2: Per cent of currently married women using contraception by region



Not surprisingly, given fertility differentials, there are pronounced ethnic variations in the use of contraception within any given region. Table 6.9 shows that the level of use of family planning by Malays is considerably lower than for the Chinese. The ethnic differential is even more marked in the use of efficient contraception. Among the Malays only small proportions of currently married women are using efficient contraception.

Interestingly, but perhaps also not surprisingly given regional variations in birth expectations, there are sharp regional differences in the use of contraception by the Malays. Overall levels tend to be highest in the Central region. Only a very small proportion (9 per cent) of Malay women in the Eastern region were using efficient methods of contraception at the time of the survey; in the other three regions the proportion was of the order of 20 per cent.

## Summary

The analysis made here shows that there are marked variations in demographic behaviour across different parts of the country and for the different ethnic groups living there. Although age at first marriage has risen in each of the four regions in Peninsular Malaysia, wide variations across the four regions still persist. Women in the Central region enter first marriage on average some 2.8 years later than their counterparts in the Eastern region. Part of the explanation is differences in the ethnic composition in the four regions. However, even after controlling for ethnicity there is still a regional effect on age at first marriage.

Later age at first marriage has not brought with it a delay in childbearing within marriage in any of the regions, or for the different ethnic communities within these regions. However, at the later durations of marriage there have been steep falls in achieved family size in each of the four regions. Among cohorts married since 1960 there is a tendency for fertility to be slightly higher at the

Table 6.9: Per cent of currently married women currently using contraception by marriage cohort, region and ethnic group

| Marriage cohort | Ethnic group | Region | | | |
|---|---|---|---|---|---|
| | | North | Central | East | South |
| **All methods** | | | | | |
| | **Malays** | | | | |
| 1950-59 | | 36 | 45 | 20 | 43 |
| 1960-69 | | 46 | 62 | 30 | 63 |
| 1970-79 | | 48 | 57 | 34 | 51 |
| All women | | 42 | 46 | 29 | 51 |
| | **Chinese** | | | | |
| 1950-59 | | 47 | 58 | .. | .. |
| 1960-69 | | 73 | 77 | 58 | 77 |
| 1970-79 | | 67 | 64 | 72 | 78 |
| All women | | 63 | 63 | 63 | 73 |
| | **Indians** | | | | |
| 1950-59 | | 65 | 74 | .. | .. |
| 1960-69 | | 89 | 85 | .. | .. |
| 1970-79 | | 63 | 68 | .. | .. |
| All women | | 64 | 65 | 79 | 77 |
| **Efficient methods** | | | | | |
| | **Malays** | | | | |
| 1950-59 | | 10 | 17 | 5 | 9 |
| 1960-69 | | 17 | 21 | 10 | 16 |
| 1970-79 | | 25 | 23 | 8 | 22 |
| All women | | 19 | 20 | 9 | 20 |
| | **Chinese** | | | | |
| 1950-59 | | 33 | 39 | .. | .. |
| 1960-69 | | 56 | 55 | 33 | 59 |
| 1970-79 | | 50 | 47 | 55 | 65 |
| All women | | 47 | 45 | 47 | 58 |
| | **Indians** | | | | |
| 1950-59 | | 40 | 43 | .. | .. |
| 1960-69 | | 50 | 62 | .. | .. |
| 1970-79 | | 37 | 47 | .. | .. |
| All women | | 36 | 44 | 32 | 43 |
| **Sample numbers** | | | | | |
| | **Malays** | | | | |
| 1950-59 | | (111) | (53) | (83) | (44) |
| 1960-69 | | (167) | (101) | (150) | (57) |
| 1970-79 | | (284) | (188) | (221) | (111) |
| All women | | (725) | (512) | (586) | (288) |
| | **Chinese** | | | | |
| 1950-59 | | (51) | (33) | .. | .. |
| 1960-69 | | (134) | (137) | (33) | (56) |
| 1970-79 | | (186) | (240) | (47) | (81) |
| All women | | (468) | (566) | (112) | (183) |
| | **Indians** | | | | |
| 1950-59 | | (20) | (23) | .. | .. |
| 1960-69 | | (36) | (34) | .. | .. |
| 1970-79 | | (62) | (73) | .. | .. |
| All women | | (160) | (175) | (19) | (35) |

longer durations of marriage in the Eastern and Southern regions as compared with the Central and Northern regions. Within any given region, Malay fertility is significantly higher than Chinese fertility. There are also variations by ethnic group across the four regions, with fertility being lowest in the Central region and highest in the Eastern region.

In each region, family size expectations are lower for the younger marriage cohorts, as compared with those who married in progressively earlier years. There are also regional variations. Women in the Eastern region expect to have an average of 5 children, about one child more than in the Central region. As expected, within any given region there are ethnic differences. These are less marked across the country but there is a clear tendency for the Malays in the Eastern region to want larger families than their counterparts living elsewhere.

Levels of family planning differs across the four regions and between the ethnic groups in those regions. Levels of contraceptive use are highest in the Central region and lowest in the Eastern region. Malays in each of the regions are more likely to be using inefficient methods of birth control or none at all. Only a very small proportion of women living in the East coast states are using efficient contraception.

# VII. MATERNAL AND CHILD HEALTH

## Introduction

This chapter examines maternal health practices, breastfeeding patterns, infant mortality and pregnancy wastage. The emphasis is on describing some of the socio-economic differentials. The topics have not been explored in detail. It was considered inappropriate to do so in this report. Further, the quality of the data, particularly those on mortality and pregnancy wastage, requires more careful evaluation than could be made here.

## Antenatal checks

Antenatal checks refer to medical examinations carried out on expectant mothers to determine her well being and that of her unborn child. Of the 2,344 currently married women whose most recent pregnancy occurred after September 1980, some 92 per cent had antenatal checks during their most recent pregnancy. In other words, virtually all women now make use of antenatal services.

Among those women who went for antenatal checks, 7 per cent started their antenatal visit during the first twelve weeks of pregnancy and some 6 out of 10 within the first six months (Table 7.1). In general, the highest educated attended antenatal checks earlier than other groups. It would appear that such women are quicker to perceive the advantages of early antenatal visits. Further, these women tend to live in urban areas where access to antenatal services is easier.

Table 7.1: Per cent distribution of currently married women by length of time to first antenatal visits (in weeks) by socio-economic characteristics

| Socio-economic characteristic | Weeks to first antenatal check 0-12 | 13-24 | > 24 | N |
|---|---|---|---|---|
| **Ethnic group** | | | | |
| Malays | 4 | 58 | 38 | (1361) |
| Chinese | 14 | 47 | 40 | (594) |
| Indians | 7 | 53 | 41 | (182) |
| All ethnic groups | 7 | 55 | 38 | (2165) |
| **Place of residence** | | | | |
| Urban | 13 | 53 | 35 | (795) |
| Rural | 5 | 56 | 39 | (1367) |
| **Educational level** | | | | |
| No schooling | 4 | 54 | 42 | (248) |
| 1 - 6 years | 4 | 51 | 45 | (1044) |
| 7 - 12 years | 9 | 60 | 31 | (759) |
| > 12 years | 28 | 58 | 14 | (114) |

Some 94 per cent of mothers visited government hospitals or clinics for their antenatal care while only 17 per cent had their antenatal checks in private hospitals or clinics (Table 7.2). Malay and Indian women are more inclined to attend antenatal checks at government hospitals and clinics than is the case for Chinese women. Conversely, a substantial proportion (44 per cent) of Chinese women visited a private hospital or clinic at least once for antenatal care, whereas only a few (6 per cent) of Malay women did so. The higher costs involved in private sector antenatal checks may explain this differential.

Table 7.2: Per cent distribution of women who had antenatal checks by place of check-up and ethnic group*

| Ethnic group | Government hospital/ clinic | Private hospital/ clinic | Traditional birth attendant | N |
|---|---|---|---|---|
| Malays | 92 | 6 | 2 | (1361) |
| Chinese | 74 | 44 | 2 | (594) |
| Indians | 99 | 15 | 2 | (182) |
| All ethnic groups | 94 | 17 | 2 | (2165) |

* Respondents might have visited more than one place for antenatal checks

## Pregnancy complications

Since September 1980, of the currently married women in the 1984/85 Malaysian Population and Family Survey (MPFS) who had been pregnant, some 10 per cent reported pregnancy complications, for which half were hospitalized (Table 7.3). The proportion having complications is similar among the three ethnic groups, although Indian women were more likely to require hospitalization. A high proportion of the women who had earlier antenatal checks had pregnancy complications, but a lower proportion of this category were subsequently hospitalized as a result of pregnancy complications. It is more likely that women experiencing complications during the early stage of pregnancy had sought antenatal checks. It also appears that it is safer to give birth at younger rather than older ages since the risk of pregnancy complications is associated with age at time of pregnancy. A higher proportion of older women experienced pregnancy complications and were hospitalized.

Table 7.3: Per cent of respondents who experienced complications during pregnancy and who were hospitalized by ethnic group

| Variable | Per cent with complications | Per cent hospitalized* | N |
|---|---|---|---|
| **Ethnic group** | | | |
| Malays | 11 | 50 | (1413) |
| Chinese | 10 | 53 | (695) |
| Indians | 11 | 64 | (203) |
| All ethnic groups | 10 | 52 | (2344) |
| **Wks. went for (N=2165) first antenatal** | | | |
| 0 - 12 | 25 | 16 | (155) |
| 13- 24 | 10 | 50 | (1180) |
| > 24 | 10 | 34 | (830) |
| **Age group** | | | |
| < 20 | 0 | - | (51) |
| 20-29 | 9 | 49 | (1160) |
| 30-39 | 11 | 54 | (975) |
| 40-49 | 15 | 63 | (159) |

**Place of delivery**

Almost four out of every 10 babies were delivered at home; one quarter at government hospitals, 18 per cent at district hospitals and 9 per cent at private hospitals (Table 7.4). There are marked ethnic differentials to this pattern. Most Malay births are delivered at home, whereas only small proportions of Chinese and Indian babies are so delivered. One factor in this pattern is that in rural areas, where the bulk of the population are Malays, home deliveries are

generally attended by a government sponsored village midwi making hospital attendance less necessary. There ai differences in the pattern of place of birth delivery outs home. Chinese women are much more inclined to give birth in private hospitals/clinics than either Malay or Indian women.

**Table 7.4: Place of delivery of births by ethnic group**

| Ethnic group | Govt./Univ. hospital | District hospital | Private hospital/clinic | At home | Others | N |
|---|---|---|---|---|---|---|
| Malays | 21 | 15 | 3 | 59 | 2 | (1382) |
| Chinese | 34 | 22 | 42 | 2 | 1 | (64) |
| Indians | 44 | 29 | 12 | 15 | 1 | (191) |
| All ethnic groups | 26 | 18 | 15 | 39 | 1 | (2247) |

Breastfeeding

Breastfeeding of babies has been widely encouraged through government policy because of its nutritional value. Breastfeeding is seen as an important factor in a child's health status. It also has a contraceptive effect which is conducive to longer birth intervals. During breastfeeding, the change in the hormonal system of the mother postpones ovulation and thereby lowers the risk of conception.

Some 8 out of every 10 respondents breastfed their youngest child (Table 7.5). There are, however, ethnic differentials. For the Malays, breastfeeding is almost universal (95 per cent) and it is popular among Indian women too (71 per cent). But less than half (43 per cent) of Chinese mothers breastfed their babies. The far higher incidence among Malay women may be due to the strong encouragement

Table 7.5: Per cent of currently married women who breastfed their youngest child by socio-economic characteristics

| Socio-economic characteristic | Age group of women <25 | 25-34 | 35+ | All ages |
|---|---|---|---|---|
| **Place of residence** | | | | |
| Urban | 69 | 68 | 55 | 65 |
| Rural | 86 | 84 | 84 | 84 |
| **Ethnic group** | | | | |
| Malays | 97 | 95 | 94 | 95 |
| Chinese | 44 | 46 | 33 | 43 |
| Indians | 69 | 75 | (60) | 71 |
| All ethnic groups | 81 | 77 | 73 | 77 |
| **Education level** | | | | |
| No schooling | (75) | 74 | 75 | 75 |
| 1-6 years | 78 | 74 | 76 | 75 |
| 7-12 years | 84 | 80 | 58 | 79 |
| >12 years | (90) | 87 | (73) | 84 |
| **Pattern of work** | | | | |
| Ever worked | 78 | 75 | 70 | 75 |
| Never worked | 89 | 88 | 80 | 86 |
| **Malays** | | | | |
| **Place of residence** | | | | |
| Urban | (93) | 95 | 85 | 92 |
| Rural | 98 | 95 | 94 | 96 |
| **Education level** | | | | |
| No schooling | (92) | 98 | 76 | 96 |
| 1-6 years | 99 | 94 | 93 | 94 |
| 7-12 years | 96 | 95 | (85) | 95 |
| >12 years | (89) | 94 | (91) | 93 |
| **Pattern of work** | | | | |
| Ever worked | 97 | 95 | 92 | 95 |
| Never worked | 96 | 96 | (93) | 95 |
| **Non-Malays** | | | | |
| **Place of residence** | | | | |
| Urban | 48 | 50 | 34 | 46 |
| Rural | 58 | 58 | 43 | 56 |
| **Educational level** | | | | |
| No schooling | (57) | (37) | (41) | 43 |
| 1-6 years | 56 | 51 | 37 | 49 |
| 7-12 years | 49 | 57 | (27) | 51 |
| >12 years | (100) | (75) | (60) | (71) |
| **Pattern of work** | | | | |
| Ever worked | 53 | 53 | 40 | 50 |
| Never worked | (58) | 61 | (22) | 51 |

() less than 50 cases

given to breastfeeding by government midwives and health workers at the time of birth.

Conversely, modernization factors such as urbanization and paid employment outside the home contribute to the lower level of breastfeeding among the Chinese.

**Mean duration of breastfeeding**

In analyzing duration of breastfeeding, women who are currently breastfeeding and those who never breastfed are excluded. The overall mean duration of breastfeeding is almost 6 months (Table 7.6). In terms of ethnic groups, Malays breastfeed for considerably longer duration of time than either Indian or Chinese women. This ethnic differential increases with age of mother since the length of time spent breastfeeding by older Malay women increases substantially. However, among the Chinese the length of time spent breastfeeding does not vary by age of mother. Table 7.6 and Figure 7.1 also show that there are sharp differentials in length of time spent breastfeeding according to place of residence, education and pattern of work. However, these variables are all highly correlated. Nevertheless, for the Malays these variables all exert their own independent effect, whereas for the non-Malays there is hardly any independent effect.

**Infant and child mortality**

Infant mortality is a sensitive indicator of the general health and well being of a population. In Peninsular Malaysia, statistics from vital registration show that infant mortality rates have declined dramatically over the past 20 years from 50 per 1,000 live births in 1965 to just 17 in 1984/85 (Table 7.7). This remarkable decline, which means that infant mortality in Malaysia is close to that of many of the more industrialized countries, is the result of immense progress in socio-economic development in which health programmes have been an important component.

Table 7.6: Mean length of time (months) spent breastfeeding by currently married women and socio-economic characteristics

| Socio-economic characteristic | Ethnic group | | | Age group | | |
|---|---|---|---|---|---|---|
| | All | Malays | Non-Malays | <25 | 25-34 | 35+ |
| | Mean interval(months) | | | | | |
| **Place or residence** | | | | | | |
| Urban | 3.9 | 5.9 | 1.9 | 3.8 | 3.5 | 5.4 |
| Rural | 7.2 | 8.6 | 3.1 | 4.8 | 7.3 | 9.4 |
| **Ethnic group** | | | | | | |
| Malays | 7.8 | | | 5.7 | 7.7 | 9.8 |
| Chinese | 1.8 | | | 1.5 | 1.6 | .. |
| Indians | 3.6 | | | .. | 3.9 | .. |
| All ethnic groups | 5.9 | 7.8 | 2.5 | 4.5 | 5.7 | 8.1 |
| **Education (yrs)** | | | | | | |
| No schooling | 8.8 | 11.2 | 3.2 | .. | 8.1 | 10.1 |
| 1-6 years | 6.8 | 9.6 | 2.6 | 3.9 | 6.8 | 8.9 |
| 7-12 years | 4.8 | 5.8 | 2.2 | 4.6 | 4.9 | .. |
| >12 years | 2.9 | 3.8 | .. | .. | 2.4 | .. |
| **Pattern of work** | | | | | | |
| Ever worked | 5.5 | 7.5 | 2.3 | 3.9 | 3.2 | 8.0 |
| Never worked | 8.0 | 8.6 | .. | 6.5 | 8.5 | 8.5 |

Fig. 7.1: Mean length of time (months) spen
breastfeeding by currently married women
by socio-economic characteristics

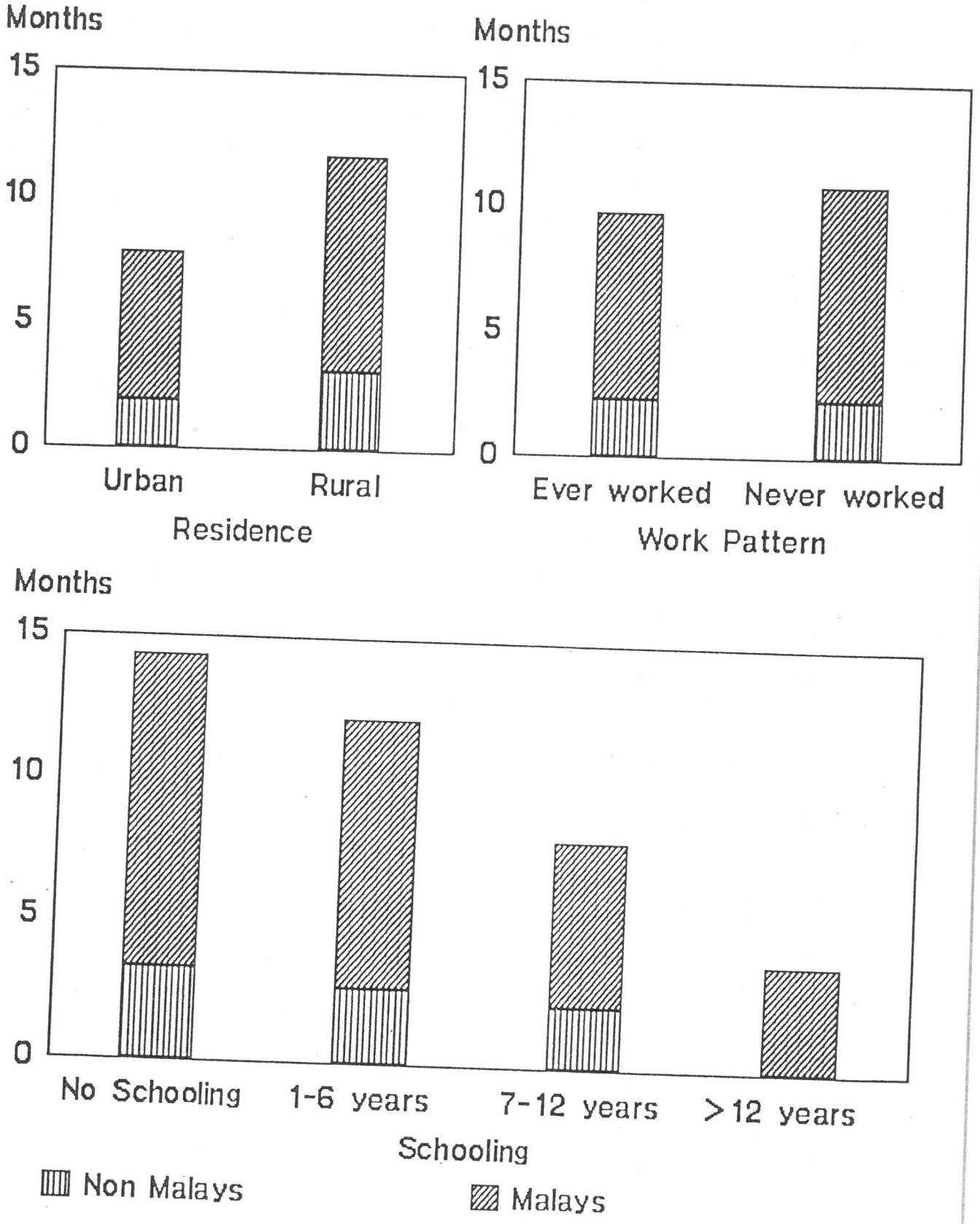


Table 7.7: Infant mortality rates and their components (per 1000 live births) by ethnic group and selected years Peninsular Malaysia

| Year | Malays | Chinese | Indians | Total |
|---|---|---|---|---|
| **Infant mortality** | | | | |
| 1965 | 61 | 32 | 53 | 50 |
| 1970 | 48 | 29 | 46 | 41 |
| 1975 | 37 | 24 | 38 | 33 |
| 1980 | 28 | 17 | 30 | 25 |
| 1984 | 20 | 11 | 17 | 17 |
| **Neonatal mortality** | | | | |
| 1965 | 30 | 20 | 31 | 27 |
| 1970 | 24 | 20 | 28 | 23 |
| 1975 | 22 | 17 | 23 | 21 |
| 1980 | 16 | 12 | 15 | 15 |
| 1984 | 13 | 8 | 11 | 12 |
| **Post-neonatal mortality** | | | | |
| 1965 | 31 | 12 | 22 | 23 |
| 1970 | 24 | 9 | 18 | 18 |
| 1975 | 15 | 7 | 15 | 13 |
| 1980 | 11 | 4 | 14 | 9 |
| 1984 | 7 | 3 | 6 | 6 |

* Obtained from vital registration statistics

Data on infant and child mortality during the early years of life were extracted from the birth history records of ever-married women collected in the 1984/85 MPFS. The birth histories gave the date and sex of each live birth, and the age (or date) at death if the child had died. Out of a total of 14,644 live births to ever-married women

in the sample, there were 784 child deaths. Of that number, 555 (71 per cent) occurred within the first year after birth.

The time reference for the infant mortality rates used here differs from that which is conventionally used. Infant mortality has been calculated as deaths below 1 year of age that occurred to ever-married women up to the date of interview divided by the total number of live births reported by the same group of women. Similarly, the child mortality rate as used here is computed as total children above age one who died, regardless of age at death, related to every 1,000 live births of ever-married women in the sample.

As is often the case in demographic surveys, there may have been some under-reporting of deaths in the 1984/85 MPFS, particularly early neonatal deaths among relatively older women. However, an evaluation of the infant mortality data collected in the survey, made by comparing survey rates with those obtained from vital registration data for comparable periods, showed that there were no serious discrepancies.

A decline in infant mortality is often reflected first by a rapid decline in post-neonatal mortality, that is, deaths which occur after the first month of life but before one year. That results because of improvements in the standard of living in a population, especially with respect to improvements in nutrition, personal hygiene and sanitation. Post-neonatal mortality is associated with the so-called exogenous causes of deaths and is therefore more sensitive to improvements in general living standards and health conditions. Improvements in neonatal mortality, that is, deaths which occur in the first month after birth, are often less rapid. Neonatal mortality is generally influenced by the so-called endogenous causes of death and declines as a result of improvements in obstetric and paediatric care and the provision of improved medical antenatal facilities and those offered during childbirth.

As mentioned above, the infant mortality rate for Peninsular Malaysia has declined dramatically over the past-20 years (Table 7.7).

This trend was also reflected for each ethnic group, with the Malays showing the biggest improvement. Nevertheless, the Chinese still have the lowest infant mortality rate with that of the Malays and Indians being at about twice the level. The data in Table 7.7 show that for each of the ethnic groups, post-neonatal mortality rates have declined faster than neonatal rates and that currently, neonatal mortality accounts for about two thirds of the infant mortality rate.

The potential advantage of the 1984/85 MPFS over other data sources in analysing infant mortality is that it is able to throw more light on the socio-economic factors associated with differentials in infant mortality. Table 7.8 shows infant mortality rates cross-classified by a range of socio-economic indicators. When analysed by age of mother at birth, infant mortality rates show a u-shaped curve. Infant mortality rates are highest for women aged less than 20; they decrease to a minimum at ages 25-29 and rise again at the higher ages. When infant deaths are subdivided into the neonatal and post-neonatal components, the u-shaped relationship is far stronger in the neonatal period than in the post-neonatal period. This can be explained by the stronger impact of biological factors on infant mortality of babies of younger and older women.

Infant mortality rates are higher in rural areas than in urban areas. This urban/rural differential is expected partly because of differentials in accessibility to health care and availability of medical facilities in urban and rural areas. Similarly, ethnic differentials in infant mortality are in line with expectations given that Malays, with the highest rates, are concentrated in the rural areas and Chinese, with the lowest rates, are concentrated in urban areas. Analysis of infant mortality rate by level of education and husband's income reveals an inverse relation between these two variables and infant mortality. That is, as education or the income of husbands increases infant mortality decreases. Of course, these variables are highly inter-correlated but it is outside the scope of this report to explore the key determinants through multi-variate analysis.

Table 7.8: Infant mortality rates (per 1000 live births) by socio-economic characteristics

| Socio-economic characteristic | Infant | Neo-natal | Post neo-natal | Live births |
|---|---|---|---|---|
| **Maternal Age** | | | | |
| <20 | 56 | 42 | 14 | 71 |
| 20-24 | 26 | 20 | 6 | 887 |
| 25-29 | 26 | 18 | 8 | 1977 |
| 30-34 | 32 | 19 | 12 | 2914 |
| 35-39 | 28 | 20 | 9 | 3064 |
| 40-44 | 48 | 27 | 20 | 2814 |
| 45-49 | 54 | 22 | 27 | 2923 |
| **Place of residence** | | | | |
| Urban | 28 | 17 | 11 | 6482 |
| Rural | 45 | 27 | 18 | 8168 |
| **Ethnic group** | | | | |
| Malays | 43 | 24 | 19 | 8496 |
| Chinese | 27 | 19 | 8 | 4520 |
| Indians | 40 | 25 | 15 | 1489 |
| All ethnic groups | 38 | 23 | 15 | 14644 |
| **Educational level** | | | | |
| No schooling | 53 | 30 | 23 | 3790 |
| 1-6 years | 37 | 23 | 15 | 7818 |
| 7-12 years | 21 | 14 | 7 | 2663 |
| >12 years | 8 | 5 | 3 | 379 |
| **Husband's income** | | | | |
| <$400 | 55 | 31 | 24 | 3142 |
| $400-$699 | 38 | 24 | 14 | 4510 |
| $700-$999 | 29 | 15 | 15 | 2344 |
| $1000-$1499 | 25 | 18 | 7 | 1751 |
| $1500+ | 22 | 14 | 8 | 1454 |

The average number of children ever born as reported by all women in the survey was 3.6, with 3.4 still living at the time of interview, representing 0.2 child deaths per woman. About 5 per cent of the children ever born were reported as deceased, representing an overall survival ratio of about 95 per cent. The proportion of children who have died increases with the parity of the mother (Table 7.9). That, of course, is to be expected given that in general women with high parity in the survey were probably of relatively older age and started childbearing when levels of infant and child mortality were considerably higher than prevailing in more recent years. The level of child mortality by some background variables, controlling for parity, is shown in Table 7.10. Not surprisingly, there are big ethnic and urban/rural differentials. For all parities except parity

Table 7.9: Per cent distribution of ever-married women by number of deceased children and parity

| No. of live births | Number of children deceased | | | | |
|---|---|---|---|---|---|
| | None | 1 | 2 | 3+ | N |
| 1 | 99 | 1 | - | - | (567) |
| 2 | 97 | 3 | 0 | - | (742) |
| 3 | 91 | 8 | 0 | - | (758) |
| 4 | 87 | 12 | 1 | 0 | (567) |
| 5 | 79 | 17 | 3 | 1 | (402) |
| 6 | 71 | 24 | 4 | 1 | (300) |
| 7 | 60 | 27 | 10 | 3 | (186) |
| 8 | 53 | 30 | 13 | 4 | (120) |
| 9+ | 41 | 31 | 19 | 9 | (194) |
| All | 85 | 11 | 3 | 1 | (4141) |

Table 7.10: Child death rates (per 1000 live births) by parity and socio-economic characteristics

| Socio-economic characteristic | Parity 1-2 | 3-4 | 5 or more |
|---|---|---|---|
| **Place of residence** | | | |
| Urban | 5 | 27 | 70 |
| Rural | 24 | 41 | 78 |
| **Ethnic group** | | | |
| Malays | 23 | 41 | 80 |
| Chinese | 3 | 22 | 59 |
| Indians | 15 | 5 | 90 |
| All ethnic groups | 15 | 35 | 76 |
| **Educational level** | | | |
| No schooling | 64 | 57 | 90 |
| <7 years | 18 | 35 | 69 |
| 7-12 years | 6 | 25 | 52 |
| >12 years | - | 15 | 65 |

1-2, the child death rate in rural areas was at least one and a half times higher than the rate in the urban areas. This urban-rural differential is due in part to the better health facilities in the urban areas coupled with easier access. Further, the socio-economic conditions of the urban population tend to be better than those of the rural population in terms of sanitation and water supply, housing, education and income.

## Pregnancy wastage

This section provides some basic information on the extent and correlates of pregnancy wastage based on reported pregnancies of ever married women in the 1984/85 MPFS who had at least one completed pregnancy. For each birth interval, respondents were asked if they ever had any other pregnancy, even for one or two months, and if so the date of occurrence and the duration of pregnancy. If the pregnancy lasted for less than 28 weeks, they were asked if they or a doctor or someone else did anything to end that pregnancy. That question was asked so as to try to distinguish induced abortions from those that occurred spontaneously. Respondents whose pregnancies ended after 28 weeks of gestation were asked if there was any sign of life in the baby after delivery so as to try to distinguish a stillbirth from a death of a live birth.

Foetal deaths are divided into spontaneous and induced abortions for pregnancies terminated prior to 28 weeks of gestation, and stillbirths for those after 28 weeks of gestation. The data on these various events have been taken here and described at face value, although it is recognized that the levels, particularly of spontaneous and induced abortions, are likely to be underestimates. This is because it is particularly difficult to get accurate information on these topics through inquiries such as 1984/85 MPFS. For example, induced abortion is illegal except under exceptional circumstances and it is likely that even if some women resorted to an induced abortion they may not be prepared to admit having done so in a survey.

Stillbirth rates as recorded in vital registration show a declining trend over the past 20 years (Table 7.11). A comparison of those rates with rates from the survey, based on births that occurred in the 5 years preceding the date of interview, shows that figures from the two sources are reasonably close, except for the level for the Indians which appears too low (Table 7.11).

Table 7.11: Stillbirth rates by ethnic group for select between 1970 and 1984, Peninsular Malaysia

| Ethnic group | 1965 | 1970 | 1975 | 1980 | 1982 | 1984 | MPFS 1984 (1980-1985) |
|---|---|---|---|---|---|---|---|
| Malays | 27 | 26 | 20 | 18 | 15 | 13 | 17 |
| Chinese | 12 | 12 | 9 | 9 | 7 | 5 | 9 |
| Indians | 36 | 35 | 25 | 22 | 19 | 14 | 14 |
| All ethnic groups | 23 | 22 | 17 | 16 | 14 | 11 | 15 |

Of the 3866 ever-married women who had one or more completed pregnancy, almost one in four had experienced a foetal death. Some 16 per cent experienced a spontaneous abortion, 6 per cent an induced abortion and 4 per cent at least one stillbirth. Spontaneous abortion is thus by far the most important component of pregnancy wastage. A higher proportion of urban women experienced a pregnancy wastage as compared to their rural counterparts (Table 7.12). This feature is almost entirely due to urban/rural differences in induced abortion rates. Very few women in rural areas reported having had an induced abortion. Of course, access to abortion services is much easier in urban areas. There appears to be a significant ethnic differential in resort to induced abortion. Chinese and, to a lesser extent, Indian women are much more likely to resort to induced abortion to prevent an unwanted conception from coming to term than are Malay women. This may be partly due to differences in availability of abortion facilities between urban and rural areas.

Table 7.12: Per cent of ever married women who experienced a pregnancy wastage by socio-economic characteristics*

| Socio-economic characteristic | Still-birth | Spontaneous abortion | Induced abortion | Any wastage | N |
|---|---|---|---|---|---|
| **Place of residence** | | | | | |
| Urban | 3 | 17 | 9 | 27 | (2055) |
| Rural | 5 | 16 | 3 | 22 | (2086) |
| **Ethnic group** | | | | | |
| Malays | 5 | 15 | 1 | 19 | (2268) |
| Chinese | 3 | 16 | 14 | 31 | (1388) |
| Indians | 6 | 22 | 6 | 32 | (433) |
| All ethnic groups | 4 | 16 | 6 | 25 | (4141) |
| **Education level** | | | | | |
| No schooling | 8 | 19 | 5 | 29 | (753) |
| < 7 years | 4 | 17 | 6 | 25 | (1987) |
| 7-12 years | 3 | 14 | 6 | 21 | (1205) |
| > 12 years | 2 | 14 | 4 | 19 | (196) |

* The sum of the percentages for the various components of pregnancy wastage does not add to the total wastage because some women experienced more than one kind of pregnancy wastage

**Summary**

Almost all respondents in the 1984/85 MPFS had antenatal checks during their most recent pregnancy. The majority began their first antenatal visits during the second trimester of pregnancy. Better educated women attended antenatal clinics earlier than their lesser educated counterparts. Most antenantal visits took place at government clinics/hospitals. However, a substantial proportion of Chinese women visited a private hospital or clinic.

Urbanization, improved education and income levels have led to increased utilization of institutional deliveries. However, many deliveries still take place at home. While most Chinese and Indian women have institutional deliveries, more than half of Malay births are delivered at home. However, most home deliveries are conducted by trained health personnel.

Overall, 8 out of every 10 women in the survey breastfed their youngest child. Among the Malays breastfeeding is universal. A significant fraction of Chinese women do not breastfeed their babies. The mean duration of breastfeeding is 5 months. On average Malay women breastfeed their babies for longer lengths of time than do Indian or Chinese mothers.

Some 14 per cent of the sample respondents reported a death of one of their children. Infant mortality was found to be higher for relatively younger and older mothers. Infant mortality is higher in rural areas and is inversely related to the educational level of the mother.

About one quarter of all ever-married women experienced at least one pregnancy wastage. The major component is spontaneous abortion. Pregnancy wastage is found to be higher in urban areas and among the Chinese and the Indians. The ethnic differential in pregnancy wastage can be attributed to differential rates of induced abortion. Stillbirth rates are least for those living in urban areas.

# VIII. NEW POPULATION POLICY - IMPLICATIONS FROM THE SURVEY

## Introduction and background

During the late 1970s and early 1980s manpower shortages emerged and there was concern that Malaysia was under-populated. Economic planners considered that a larger population than that envisaged on the basis of population growth trends over the period 1960-80 would provide a larger domestic market to support industrial growth and economies of scale in the provision of infrastructure and other amenities. A larger domestic base would also reduce Malaysia's dependence on export oriented industries. Against that background, the Prime Minister, in his address to United Malay National Organization's General Assembly in September 1982, stated that the country could support a population of 70 million.

Following that announcement, a New Population Policy (NPP) was incorporated into the Mid-Term Review of the Fourth Malaysia Plan 1981-85. It stated that:

> ".... Malaysia's population is relatively small and the nation has the capacity to generate the wealth that will support a much larger population. The domestic market is relatively small and this has also put constraints on the development of industries. Recognizing that a larger population constitutes an important human resource to create a larger consumer base with increasing purchasing power to generate and support industrial growth through productive exploitation of national resources, Malaysia could, therefore, plan for a larger population which could ultimately reach 70 million. The experience of some countries of similar size to Malaysia has shown that a larger population is not necessarily a liability if the population is provided with skills that can be effectively and productively utilized for national development."

An Ad Hoc Committee on Population Issues was formed to look into the demographic goal and its implications. The Committee produced several sets of population projections. The recommended scenario, accepted by the Cabinet, called for a reduction of about 0.1 in the total fertility rate every 5 years - a slower rate of decline than had been prevailing in the 1970s. That if achieved, would result in replacement level fertility being reached by 2070. Malaysia's population would then stabilize at around 70 million by 2100.

The 1984/85 Malaysian Population and Family Survey (MPFS) provided an opportunity to evaluate the public's response to the NPP by asking currently married women about their knowledge, attitudes and reaction towards it. The findings from the survey also provide a basis for a fresh assessment of the implications for the NPP of changes in family formation. This chapter first examines knowledge and attitudes of sample members towards the 70 million population policy. It then considers the impact of this policy on fertility intentions. Finally it summarizes the main findings which have policy implications.

## Knowledge and attitudes towards the New Population Policy

Some 60 per cent of respondents reported that they had heard of the NPP (Table 8.1). The proportion was higher among the Malays than the Chinese or Indians. With respect to what they had heard about the NPP, two most common responses were that the Government wants a larger population and that couples should have at least a given number of children. More Chinese and Indian women, as compared with Malay women, thought that the NPP meant that each family should have at least a given number of children. In fact, no official policy statement was made about that matter although there was considerable media debate about whether couples should aim to have five children.

Irrespective of knowledge of the NPP, all currently married women were asked whether they were in favour of the country aiming for a population target of 70 million by 2100. Respondents who gave

Table 8.1: Per cent of currently married women who had heard of the NPP and what they had heard about it, by age and ethnic group

| Knowledge | Age group | | | | Ethnic group | | | All |
|---|---|---|---|---|---|---|---|---|
| | 15-19 | 20-29 | 30-39 | 40-50 | Malays | Chinese | Indians | women |
| Heard about NPP | 55 | 66 | 63 | 46 | 69 | 51 | 46 | 60 |
| What they had heard about it: | | | | | | | | |
| Govt. wants a larger population | 60 | 66 | 60 | 65 | 66 | 59 | 59 | 63 |
| Encourage specific groups to have more children | 7 | 5 | 5 | 6 | 5 | 7 | 3 | 5 |
| Incentives by the government to have more children | 2 | 4 | 3 | 3 | 3 | 6 | 1 | 3 |
| Women should have at least a certain number of children | 7 | 11 | 15 | 8 | 7 | 19 | 24 | 12 |
| Others | 7 | 6 | 6 | 6 | 6 | 4 | 4 | 6 |

positive or negative reply were subsequently asked for the reasons for their reply. Some 59 per cent of currently married women were in favour of a target population of 70 million, 21 per cent were not in favour and the remaining 20 per cent were non-committal (Table 8.2). In terms of ethnicity, the proportion in favour of the policy was highest among the Malays (74 per cent) and lowest among the Chinese (33 per cent). One factor that may partly explain the differential is that Malays are much more likely than the Chinese to have larger numbers of children and hence there may well be an element of self-

justification of their behaviour in their replies. That would be particularly so if the NPP was equated as being associated with five children. Within each ethnic group the proportion of women in favour of the NPP decreases with increasing educational attainment. Similarly it is also slightly more favoured in rural areas than in urban areas.

Table 8.2: Opinion of currently married women on the NPP by ethnic group and socio-economic characteristics

| Socio-economic characteristic | In favour of 70 million population policy | | | |
|---|---|---|---|---|
| | Malays | Chinese | Indians | All ethnic groups |
| **Current age** | | | | |
| 15-19 | 71 | .. | .. | 68 |
| 20-29 | 77 | 37 | 59 | 63 |
| 30-39 | 74 | 31 | 64 | 57 |
| 40-49 | 69 | 33 | 79 | 55 |
| All ages | 74 | 33 | 66 | 59 |
| **Place of residence** | | | | |
| Urban | 70 | 27 | 57 | 45 |
| Rural | 76 | 44 | 74 | 69 |
| **Education level** | | | | |
| No schooling | 70 | 38 | 79 | 60 |
| 1 - 6 years | 77 | 37 | 74 | 62 |
| 7 - 12 years | 75 | 29 | 48 | 58 |
| > 12 years | 61 | 8 | .. | 38 |

## Impact on desired family size

In order to assess the possible impact of the NPP on desired family size, currently married women who were not infecund were asked: 'Would a call by the Government for a population of 70 million make any difference to you personally in thinking about how many children you would like to have?' If yes, respondents were then asked: How many children they wanted before the announcement of the NPP and how many after the announcement.

Overall, 12 per cent of respondents said that they changed their minds on their desired family size with the implementation of the NPP while 82 per cent said it had not affected their plans. Malay women were much more likely to have changed their desired family size than Chinese or Indian women (Table 8.3). However, less than one in five

Table 8.3: Per cent of currently married women who changed their desired family size after the NPP and average number of children desired before and after its announcement by age and ethnic group

| | Current age | | | | Ethnic group | | | All |
|---|---|---|---|---|---|---|---|---|
| | 15-19 | 20-29 | 30-39 | 40-50 | Malays | Chinese | Indians | |
| Changed desired family size | 24 | 15 | 10 | 4 | 17 | 5 | 4 | 12 |
| **Women who had changed their desired family size** | | | | | | | | |
| Average number of children wanted before NPP | 5.4 | 4.8 | 5.1 | 5.5 | 5.2 | 3.6 | .. | 5.0 |
| Average number of children wanted after NPP | 7.5 | 6.9 | 6.9 | 7.2 | 7.3 | 5.2 | .. | 7.0 |

Malay women had changed their plans. Of the minority group who changed their desired family size, they had made an upward revision of 2 additional children. That is they had raised their desired family size from five to seven children.

## Salient findings

Women born in 1955-59, passing through the peak marriageable ages in the mid-1970s to early 1980s, first married at age 21.5. That is at about three years later than women born 20 years earlier. It appears that the rise in marriage age is levelling. While young marriages have become less common there is unlikely to be any major change in the proportion of women remaining permanently unmarried. An exception may be among small subgroups, such as highly educated Chinese women. Although ethnic differentials in marriage age persist, with Malays marrying some two years younger than the Chinese, differentials have narrowed over time. Education exerts the most powerful influence on the timing of marriage but other factors such as ethnicity, place of residence and work pattern exert their own independent effect. Within the marriage market there is a strong preference for persons of a given ethnic and educational background to marry persons with the same or similar background. Marital breakup is high among the Malays and Indians but remarriage rates are also high.

Later age at first marriage has, of course, led to later age at the start of childbearing. But it has not been accompanied by postponement of childbearing within the early years of marriage. At the early durations of marriage, achieved fertility has been remarkably constant over time. However, at longer durations of marriage, mean achieved family size gets progressively smaller the younger the marriage cohort. Couples from younger marriage cohorts are increasingly resorting to family planning at the later durations of marriage to control their ultimate family size.

At the longer durations of marriage fertility levels have fallen

for each ethnic group, although the Malays have higher marital fertility. Increasingly, Chinese and Indian women have significantly lower fertility rates than the Malays at the longer durations of marriage - that is, at the later childbearing ages. After controlling for place of residence, educational level and work pattern, ethnic differentials in fertility persist but are less marked. For each ethnic group, fertility levels differ according to place of residence, educational level and work pattern. Fertility is lowest for educated Chinese women in urban areas, and highest among the least educated rural Malays.

Knowledge of efficient methods of birth control is universal. More than half of currently married women were using contraception in 1984/85 compared with just over one third in 1974. There are, however, considerable differences in the level of contraceptive use among subgroups of the population. Not surprisingly, use is highest among the subgroups with the lowest fertility and lowest among those with highest fertility. A sizeable proportion of current users use inefficient methods of birth control, particularly the rural Malays. In other words, although there is widespread knowledge of efficient contraceptive methods many couples do not use them and instead resort to less reliable methods.

The pill is the most commonly known method of birth control, is the method that has been most used and is the most popular among current users. However, less than one quarter of women using contraception in 1984/85 were using the pill compared with about half in 1974. During the period since 1974 there has been a big jump in the resort to inefficient method of family planning, particularly in traditional folk methods. The pattern of contraceptive use differs according to ethnicity, with Malays generally using the inefficient methods and Chinese and Indian couples using efficient methods.

Younger marriage cohorts expect to have smaller families. Among the most recently married, the marriage cohort of 1975-84 hardly any women expected to have no children or just one. But half of Chinese and Indian women expect two or three children whereas most Malays

expect four or five children. The evidence from the data on birth expectations does not suggest that Malay women will, in the short-term future, lower their fertility to that prevailing among Chinese or Indian women. A striking feature is that there has been an upward revision in family size expectations among women in the same marriage cohorts questioned in 1974 and again 10 years later.

There are considerable regional differences in marriage behaviour and family formation. These persist even after taking ethnicity into account. The Eastern region stands out. Women in the Eastern region marry about two years younger than women in other regions of Peninsular Malaysia. Fertility is highest in the Eastern region and lowest in the Central region. Women in the Eastern region expect a family size of up to one child more than elsewhere. Not surprisingly, there are big regional differentials in the level and pattern of use of family planning. The lowest level is in the Eastern region where just one in every six currently married women is using efficient methods of birth control. Within any given region there are pronounced ethnic variations in marriage, fertility and use of family planning.

Antenatal checks are universal but better educated women tend to attend earliest. Most births take place in institutions but more than half of Malay deliveries are at home. Breastfeeding has increased in popularity and is the norm among Malay mothers. Infant mortality, which has declined dramatically over the past two decades is highest among women giving birth at the youngest and oldest childbearing ages.

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## Appendix 1: Sample design

### Sampling Frame

The 1984/85 Malaysian Population and Family Survey (MPFS) used the National Household Sampling Frame (NHSF) maintained by the Department of Statistics, as the basis of selection of primary sampling units for the study. The frame comprises enumeration blocks (EBs) created for the 1980 Census of Population and Housing. For census purposes, the whole country was divided into separate EBs, each containing about 80-120 households or about 500 persons. EBs are geographically contiguous areas of land with identifiable boundaries. All EBs were formed within gazetted boundaries, that is, within villages or local authority areas. Eight to ten of these EBs were further grouped together to form a census circle. A group of eight to ten census circles formed a census district.

In the NHSF, gazetted areas are classified into four strata namely (i) Metropolitan areas defined as those with a population of 75,000 and over; (ii) large urban, made up of gazetted areas with population size of between 10,000 and 75,000; (iii) small urban, made up of gazetted areas with a population of between 1,000 and 10,000 and (iv) rural areas which comprised the rest of the country. The distribution of EBs in these four strata in each of the states within the Peninsular as given in the NHSF is shown in Table A.1.

The four strata classification of areas was used for sampling purposes. However, in most of the tables in this report, the dichotomous classification of urban and rural areas was used in analysing the data. Urban areas are made up of the population living in the metropolitan and large urban areas, while the rural areas are the population living in the other two strata.

Table A.1: Distribution of EBs in the National Household Sampling Frame - by stratum and state

| State | Metropolitan | Large | Small urban | Rural urban | Total |
|---|---|---|---|---|---|
| Johore | 626 | 599 | 346 | 1,908 | 3,379 |
| Kedah | - | 282 | 234 | 1,914 | 2,430 |
| Kelantan | 336 | 139 | 172 | 1,410 | 2,057 |
| Malacca | 183 | 37 | 64 | 729 | 1,013 |
| Negeri Sembilan | 307 | 103 | 110 | 784 | 1,304 |
| Pahang | 254 | 171 | 153 | 1,408 | 1,986 |
| Penang | 429 | 343 | 105 | 883 | 1,760 |
| Perak | 885 | 234 | 575 | 2,055 | 1,749 |
| Perlis | - | 28 | 26 | 312 | 366 |
| Selangor | 821 | 190 | 259 | 1,733 | 3,003 |
| Terengganu | 376 | 95 | 83 | 674 | 1,228 |
| Federal Territory of Kuala Lumpur | 1,901 | - | - | - | 1,901 |
| Total | 6,018 | 2,221 | 2,127 | 13,810 | 24,176 |

Sample Design

The 1984/85 MPFS was taken from a stratified multistage sample design (Table A.2). It utilized two types of strata. First, primary strata made up of the twelve states (including the Federal Territory) in Peninsular Malaysia. Second, secondary strata, made up of the four strata defined above and formed within the primary strata. The survey was confined to the peninsula like the 1974 Malaysian Fertility and Family Survey (MFFS).

From each of the secondary strata, samples were drawn within each census district. The first stage sampling units were the EBs while the second stage units were living quarters (LQs) within the EBs.

All ever-married women within the selected LQs were canvassed. As this was a household survey, residents of institutions were excluded from the sample.

A sub-sample of the selected LQs was also covered for the husband's interviews and another independent sub-sample of the selected LQs was also covered for the single women's interviews. All husbands and all single women meeting the eligibility criteria within the sub-sampled LQs were canvassed. At every stage of selection the units were selected systematically with equal probability.

The sample size required for the 1984/85 Malaysian Population and Family Survey (MPFS) was determined based on previous studies, for example, the 1974 Malaysian Fertility and Family Survey (MFFS). Factors of cost and availability of reliable field staff were also taken into consideration in determining the sample size.

Table A.2: Distribution of the sample of EBs and LQs by secondary strata for Peninsular Malaysia with the fraction of selection

| Strata | No. of EBs selected with sampling fraction 1/45 | No. of expected LQs with sampling fraction 1/10* |
|---|---|---|
| Urban | 185 | 1,850 |
| Metropolitan | 131 | 1,310 |
| Urban Large | 54 | 540 |
| Rural | 346 | 3,460 |
| Urban Small | 47 | 470 |
| Rural | 299 | 2,990 |
| Total | 531 | 5,310 |

* The expected number to be selected was based on the average size per EB, which was approximately 100 living quarters

Listings of all LQs within the selected EBs, prepared by the Department of Statistics, were used for the selection of the sample of LQs, and a total of 6,332 LQs were selected. One in five of these was subsequently selected for the husband's interviews and another one in five for the single woman's interviews.

Survey involves many operations and every one of them is subject to error. Therefore, apart from sampling errors, the accuracy of survey data can be affected by biases and nonsampling errors, such as nonresponse and incorrect recording of responses or observations. Special efforts were made in this survey to minimize these sources of errors. All supervisors and interviewers were given proper training, and thorough checking was done during interviews, office processing, coding, tabulating and computing. Multiple visits were made to find the not-at-homes, and this increased the overall response rate.

Table A.3 summarizes the field outcome of the selected sample. Out of the 6332 LQs selected, 4867 (76.9%) were screened. A relatively large proportion of the LQs selected were vacant mainly due to the inclusion of new housing estates where the residents had yet to live in. LQs that were not screened due to other reasons were mainly those that could not be located. A total of 5370 households were identified and screening was done in 5058 households (94.2%), and of these 91.1% had only one household; 4.8% had two households; 1.6% had three households; 0.9% had four households; and only 0.8% had five or more households. Of the 4315 eligible respondents identified, 96% (4141) had completed the interviews. About 85% of the respondents were from households with only one eligible respondent; 12.8% with two respondents; 1.7% with three respondents; and the remaining 0.6% had four or more respondents.

## Estimation procedures

The sample design of the 1984/85 Malaysian Population and Family Development Survey was self weighting and hence estimation of totals

Table A.3: Outcome of sample selected

| | N | Per cent |
|---|---|---|
| Total number of LQ selected | 6332 | 100.0 |
| Institutional LQs | 15 | 0.2 |
| Vacant LQs | 755 | 11.9 |
| Demolished LQs | 84 | 1.3 |
| Non-dwelling units | 75 | 1.2 |
| Refused to cooperate | 42 | 0.7 |
| Others | 494 | 7.8 |
| Number of LQs screening completed | 4867 | 100.0 |
| LQs with no ERs | 1133 | 23.3 |
| LQs with ERs | 3734 | 76.7 |
| Total number of households identified | 5370 | 100.0 |
| No one at home | 176 | 3.3 |
| Refused to cooperate | 40 | 0.7 |
| Others | 96 | 1.8 |
| Completed households with ERs | 3830 | 71.3 |
| Completed households with no ERs | 1228 | 22.9 |
| Total number of ERs identified | 4315 | 100.0 |
| Interview completed | 4141 | 96.0 |
| Interview partially completed | 8 | 0.2 |
| Refused to cooperate | 23 | 0.5 |
| ER not at home | 109 | 2.5 |
| Others | 34 | 0.8 |

and averages is simplified. Standard procedures for the calculation of variances of totals and ratios, applicable to cluster sampling, may be used as follows :

$$F_y = F \sum_{h=1}^{4} \sum_{i=1}^{n_h} y_{hi}$$

where (i) F = inverse of the overall sampling fraction = 450

(ii) h = subscript for strata

(iii) i = subscript for EB number

(iv) $n_h$ = number of EBs selected in strata h

$$\text{Var } (F_y) = F^2(1-f) \frac{n_h}{n_h - 1} \left( \sum_{i=1}^{n_h} y_{hi}^2 - \frac{y_h^2}{n_h} \right)$$

where (i) f = sampling fraction = $\frac{1}{450}$

(ii) $y_h = \sum_{i=1}^{n_h} y_{hi}$

For estimating totals, and their sampling variances the following formula may be used:-

For estimating ratios:

$$r = \frac{\sum_{h=1}^{4} y_h}{\sum_{h=1}^{4} x_h}$$

where (i) $x_h = \sum_{i=1}^{n_h} x_{hi}$

$$\text{Var } (r) = \frac{(1 - f)}{x^2} \left[ \sum_{h=1}^{4} d^2{}_h + r^2 \sum_{h=1}^{4} d^2 x_h - 2r \sum_{h=1}^{4} dy_h \, dx_n \right]$$

where (i) $$x = \sum_{h=1}^{4} x_h$$

(ii) $$d^2 y_h = \frac{1}{n_h - 1} \left[ n_h \sum_{i=1}^{n_h} y_{hi}^2 - y_h^2 \right]$$

(iii) $$d^2 x_h = \frac{1}{n_h - 1} \left[ n_h \sum_{i=1}^{n_h} x_{hi}^2 - x_h^2 \right]$$

(iv) $$dy_h dx_h = \frac{1}{n_h - 1} \left[ n_h \sum y_{hi} x_{hi} - y_h x_h \right]$$

The coefficient of variation is defined as :-

$$\% \text{ CV } (y) = \frac{100}{y} \sqrt{\text{Var } (y)}$$

## APPENDIX 2: TRUNCATION AND CENSORING

### Introduction

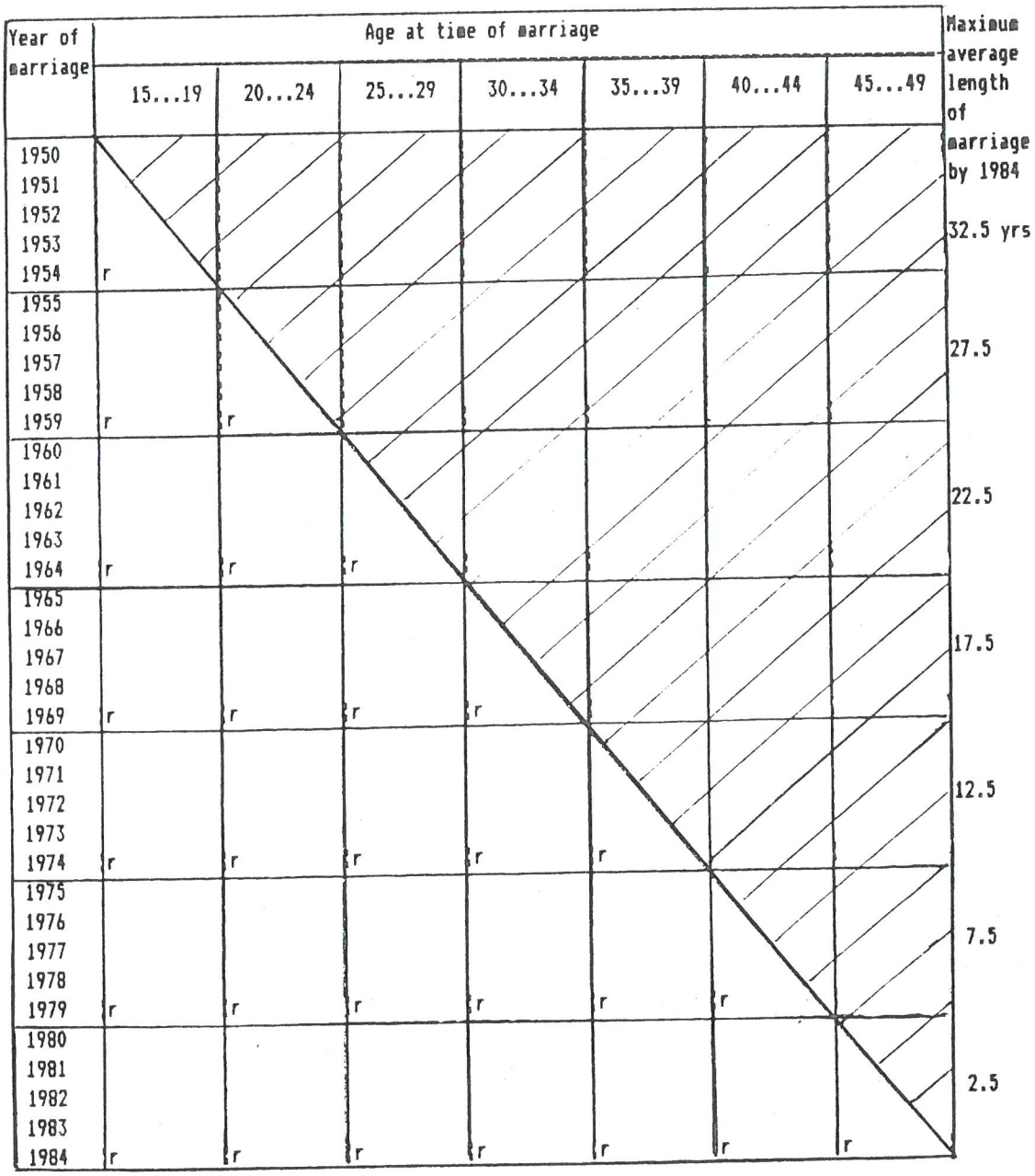
In many of the tables in this report, women interviewed in the 1984/85 Malaysian Population and Family Survey have been grouped according to their year of first marriage, that is, their marriage cohort or according to their year of birth, that is, their birth cohort. This has been done so as to analyse the data from the 1984/85 MPFS using marriage and birth cohort analysis. Marriage and birth cohort analysis can often provide a sharper focus on underlying demographic trends than is possible through regular period analysis. However, it is important to recognize the truncation and censoring biases that can arise when using cohort analysis in the context of a survey such as the 1984/85 MPFS.

### Truncation

The 1984/85 MPFS collected information from a representative sample of ever-married women aged between 15 and 49. For the marriage cohort analyses in this report, these women have been grouped in one of seven five year marriage cohorts, starting from 1950-54 to 1980-84, according to the year in which they first married. A very small number of women may have married before that date, if they were older than 45 at the time of the survey and had married below age 15. Similarly a few women in the sample may have married in 1985 and hence are not included. For all practical purposes, nothing is lost by excluding these women.

Figure A.1 gives a schematic representation of the marriage cohorts in the 1984/85 MPFS. As can be observed, the older the marriage cohort the less it includes a representative sample of all women who married in that period. Thus, for example, take two women who married in 1950 at ages 15 and 16. By 1984 these women will have been aged 49 and 50. Since the 1984/85 survey was restricted to women aged under 49 it follows that the women who married at age 16 in

Figure A.1: Schematic representation of marriage cohorts included in the 1984/85 MPFS by age at time of first marriage




r Unshaded triangles and squares indicate representative sample of women include.

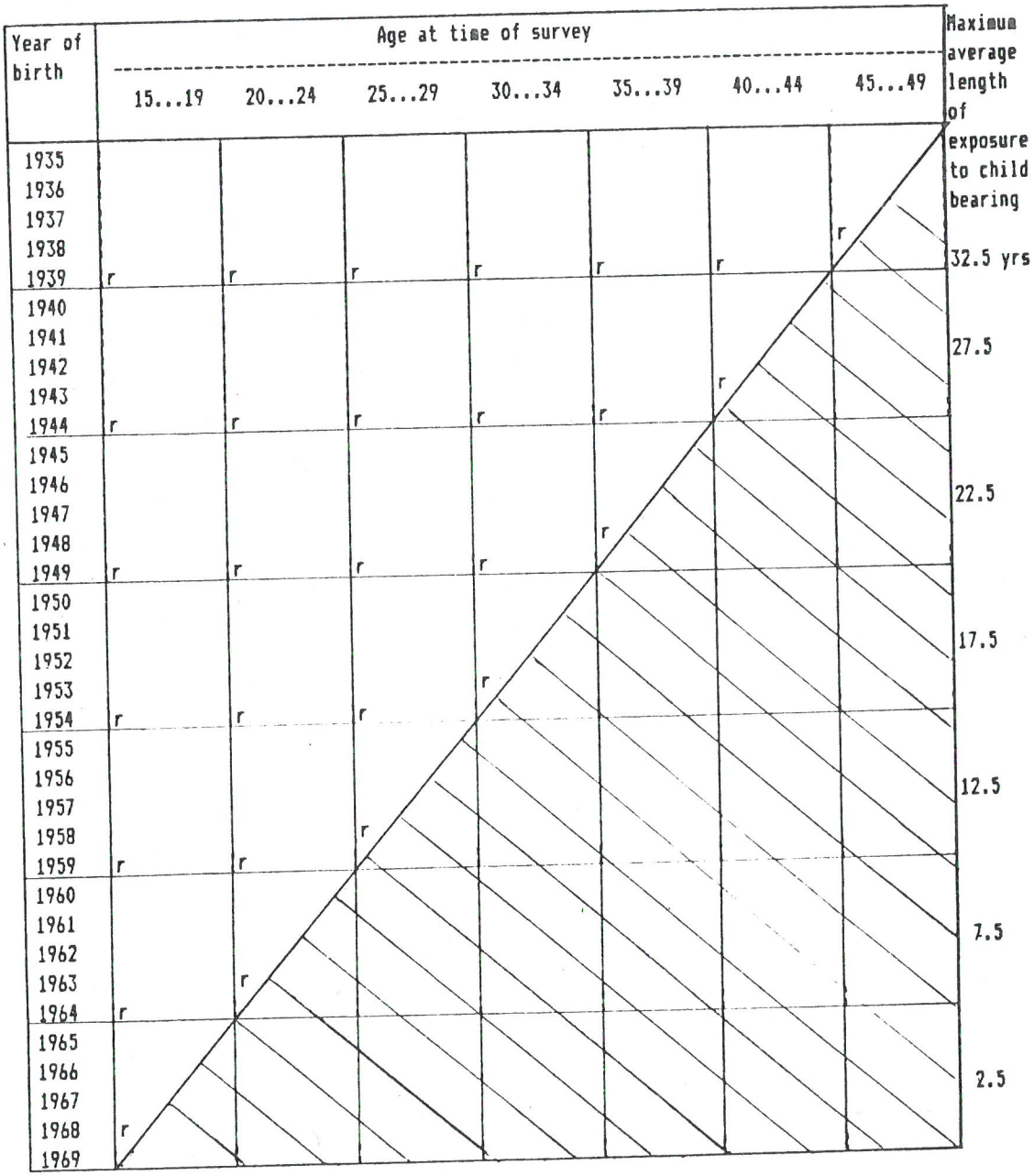
1950 would not be included in the survey. So it is with all other women married at ages above 16 in 1950. The younger the marriage cohort the more the cohort will be representative of all women who married in that year. Since most first marriages occurred before age 25, it means that the five marriage cohorts from 1960-64 to 1980-84 will be almost fully representative of women who married in those years.

However, there is a severe truncation bias in the 1950-54 marriage cohort and to a lesser extent in 1955-59 cohort. This is because the 1950-54 cohort will only include women who first married on average at age seventeen and a half. It may well be that the fertility and other characteristics of such women are unrepresentative and hence if this cohort is compared with later cohorts a bias may be creeping into the comparison. One way to allow for the possible effects of truncation bias in marriage cohort analysis is to control for age at first marriage. It may be reduced too if the cohorts are subdivided into subgroups.

Censoring

An illustration of how censoring occurs in survey analysis of birth cohorts is seen through examination of Figure A.2. That gives a schematic representation of the birth cohorts included in the 1984/85 MPFS - single women from the cohorts were obtained from the information on household members in households where there was an ever-married aged 15-49. In this report, the women were grouped into seven birth cohorts ranging from 1935-39 to 1965-69. Suppose the fertility behaviour of the oldest (1935-39) and youngest (1965-69) cohorts were being compared with one another. Unless the fertility data were being compared when the cohorts were at equivalent ages over the childbearing period, there would be a severe censoring bias being introduced. This is because women from the 1935-39 birth cohort will have had an average of 32.5 years of exposure to childbearing by the date of the survey whereas those from the 1965-69 cohort will only have had 2.5 years.

Figure A.2: Schematic representation of marriage cohorts included in the 1984/85 MPFS by age at time of the survey




r Unshaded triangles and squares indicate representative sample of women include.