Myanmar Fertility and Reproductive Health Survey

2001

Detailed Analysis Report

Yangon, May 2004

Department of
Population

UNION OF MYANMAR

MINISTRY OF IMMIGRATION AND POPULATION

DEPARTMNET OF POPULATION

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Preface

As recommended in the ICPD/Programme of Action, the integration of population information or issues into the formulation, implementation, monitoring and evaluation of all policies and programmes relating to sustainable development at international, regional and national level is not only highly desirable it is a must. Hence basic population data is needed to formulate and implement various development programmes of a country or a region. Generally, in most developing countries, there is not adequate population and related information and in some, there are gaps in population related data. So as to address this kind of issue, the Department of Population conducted Population Censuses in 1973 and 1983, and demographic and reproductive health related surveys in 1991, 1997 and 2001. The surveys are concerned with basic population indicators and reproductive health related data. Census publications were prepared and published for each census. For each survey, a preliminary report and country report were prepared and published. Since the 1997 Fertility and Reproductive Health Survey, detailed analyses on selected topics were undertaken based on the information from the present and past surveys and censuses. The topics chosen included those that were of interest to the country and that had not received full consideration in the preliminary reports and country reports of 1991, 1997 and 2001 surveys.

The first detailed analysis was done based on 1997 FRHS and this volume undertakes detailed/indepth analysis based on 2001 FRHS and past surveys and censuses. The topics selected are those for which there was little information from other sources and those that would provide important information for programme and policy development of the country. This report supplements the first two publications, preliminary and country, for the 2001 FRHS. It is hoped that the information included in the present volume would be of interest to policy makers, decision makers, programme managers and implementers, academicians and researchers and that it would help in formulating, implementing, monitoring and evaluating of various programmes in their relative fields.

Taking this opportunity, I would like to express gratitude to the Government as well as the Ministry of Immigration and Population for allowing us to undertake this task. Thanks are also due to the United Nations Population Fund and Resident Representative for Myanmar, Mr. Najib Assifi, for their assistance and support. I would like to thank the Population Council, especially Dr. Philip Guest and international consultants Dr. Gavin Jones, Dr. Sarma, and Dr. Tan Boon Ann, and the PACKARD Foundation for providing us with technical support for this important undertaking.

Last and not the least, I would like to thank the report preparation team and all concerned parties for their tireless efforts, hard work and dedication to get this report completed and published.

(Colonel Tin Yee)
Director General
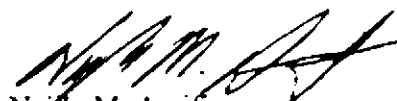Department of Population

Date: May, 2004.

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Since the adoption of the Programme of Action of the 1994 International Conference on Population and Development, increasing emphasis has been placed on the use of quantitative and qualitative indicators for measuring progress in the implementation of population and reproductive health programmes with gender and Information, Education and Communication as crosscutting themes. This heightened emphasis on indicators has risen because of the concern to show the extent to which national development efforts and international cooperation are really making an impact on the living conditions of people in the developing world. In Myanmar, UNFPA and its partner agencies have an important role to play in assisting the country in developing relevant indicators as measurement tools.

UNFPA, in collaboration with Department of Population has been active in the development of sets of indicators related to population and reproductive health programmes. These sets of indicators is collected to point out that without accurate and up-to-date information, the speed and direction of progress in programme implementation would be difficult to track.

Towards achieving the required indicators at the national level, UNFPA funded a national representative sample survey on fertility and reproductive health in 2001. This survey was conducted for the second time four years after the first survey in 1997. The survey provided a wealth of information on the prevailing demographic and reproductive health situation in Myanmar.

As there was a need for more detailed information from the survey results, in addition to the detailed report of the survey an in-depth analysis was undertaken on four selected topics with further support from UNFPA and with technical assistance from the Population Council. The topics include: (i) age at marriage and situation analysis of never married women; (ii) child health and mortality; (iii) contraceptive use dynamics; and (iv) labour force. This report presents the results of the in-depth study of these important indicators. The in-depth analysis was undertaken entirely by the national staff of the Department of Population, Ministry of Immigration and Population, with the technical assistance from the International Consultants.

I would like to extend my sincere appreciation to all of those who have assisted in preparation of the report. I would also like to congratulate the Department of Population, Ministry of Immigration and Population for this successful undertaking and thank the Population Council for their technical inputs. UNFPA looks forward to further collaborate in the field of developing population/reproductive indicators as well as indicators for measuring progress towards achieving millennium development goals.

Najib M. Assifi
UNFPA Representative
Yangon, Myanmar

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Introduction

This report presents findings from an in-depth analysis of data from the 2001 Fertility and Reproductive Health Survey (FRHS), conducted by the Department of Population of the Ministry of Immigration and Population. Four topics were selected for further analysis: age at marriage and situation analysis of never married women in Myanmar; child health and mortality; contraceptive use dynamics; and labor force.

Age at Marriage and Situation Analysis of Never Married Women in Myanmar

Compared to other countries in the region, marriage in Myanmar occurs at a late age. In large part this is a result of the relatively high proportions, especially among women, who remain unmarried into their thirties and forties. Among those women who had ever-married, the mean age at marriage as measured by the 2001 FHRS was only 20.4 and for every age group from 15-19 to 45-49, mean age at marriage was 21 or less. A significant proportion of women marry before age 20.

However, an alternative measure of age at marriage that takes into account the proportions not married at the time of the survey indicates a mean age of marriage for women in 2001 at 25.8. In 2001, at ages 45-49, almost 12 percent of women had never married. For women aged 30-34, the percentage is 25.9. These proportions are considerably higher than found in other countries in Southeast and East Asia, even those considered to have late age at marriage.

The age at marriage has been increasing, mainly as a result of increased proportions not marrying. Most of this increase occurred between 1991 and 1997, with relative stability in age at marriage between 1997 and 2001. Although, as with most other countries, the proportions never-married increase with increasing education and are higher in urban than in rural areas, even among women with low levels of education and among rural women, a considerable proportion of women remain unmarried through their reproductive ages.

Women who never marry, compared to women who are ever married, tend to have high levels of education, be in the labour force, work as an unpaid family worker or work as a private employee, and work in the services and manufacturing sectors. They are also more likely to live in smaller households. Most never married women who are household heads are middle aged, and most ever married women who are household heads are elderly.

While a large proportion of never-married women in their thirties and forties appear to be residing with and caring for elderly parents, by their fifties most never-married women are either living with other relatives or are heads of their own household. This transition presumably occurs upon the death of their parents.

More research is required on the economic situation of never-married women. Although the characteristics of never-married women suggest that substantial proportions are well educated, the majority of the never married have low levels of schooling and live in rural areas. As these women do not have children to care for them when they are elderly, there is a need to determine how these women are supported.

Another implication of rising age at marriage for women is that the great majority of adolescents are single, and will not be reached by reproductive health programmes

oriented to married couples. Further research is needed to ascertain the health and sexual practices of young unmarried people, in order to guide the development of appropriate adolescent reproductive health programmes.

Child Health and Mortality

Generally, there has been an improvement in levels of care provided to pregnant women and their infant children by the health system between 1991 and 2001. Most of the improvement occured in the first half of the 1990s. Antenatal visits occurred for over 80 percent of infants born in the five years before the 2001 survey and 38 percent received the recommended four or more visits. Trained personnel attended 57 percent of all births in the five years before 2001, a nine percentage point increase over the level of ten years earlier. Still, however, over 80 percent of births took place at home. Among the births delivered at home, 66 percent of births in urban areas and 46 percent of births in rural areas are assisted by medical professionals.

In 2001, only 16 percent of women who had been pregnant in the five years before the survey had not received any doses of tetanus toxoid vaccination, this was a large decline from the 37 percent in 1991 but a much smaller decline from the 19 percent observed in 1997. There were very rapid increases in levels of immunization for childhood disease during the 1990s. In 1991, 51 percent of surviving children under five had been immunized against four childhood diseases at the time of the survey. This increased to 74.4 percent in 1997 and remained relatively stable at 73.6 percent in 2001. Rates of immunization had increased in rural areas but declined slightly in urban areas.

There were substantial improvements in child health as measured by the prevalence of diarrhea, between 1991 and 1997 and these improvements continued through the period up to 2001. Improvements were observed for children from all backgrounds. A major factor in these increases appears to be improvement in household sanitation facilities. Of those children who experienced diarrhoea, there was a rapid increase in the proportion treated with ORS therapy, with most of the increase occurring between 1997 and 2001.

Although the majority of infants under the age of four months are exclusively breastfed, a substantial minority (37 percent) receives supplementary food at these ages. The proportion receiving supplementary food is higher in urban areas than in rural areas. The analysis indicated a relationship between breastfeeding status and the prevalence of diarrhoea. The results suggest a need to more aggressively promote exclusive breastfeeding, especially in urban areas.

The data from the FRHS and previous surveys suggest that there has been some improvement in infant and child mortality rates over the last 10 years. The analysis of the determinants of infant and child mortality presented in Chapter III show strong associations between reproductive patterns and the likelihood of an infant surviving. The probabilities of an infant surviving to 12 months are much higher after a previous birth interval of 18 months or more, when they are parity 2 or 3 compared to parity 4 and above, and when mothers are aged 20 to 34, compared to 19 and below or 35 and above.

To expedite reduction in infant and under-five mortality, and improvement in child health in Myanmar, greater efforts and resources should be given to strengthen the integrated maternal and child programme to include reproductive health/family planning, at both national and local levels.

Contraceptive Use Dynamics

Contraceptive use in Myanmar is increasing. In 2001, 37 percent of currently married women were using contraception, a more than doubling of the level of contraceptive use since 1991. Initiation of contraceptive use is also commencing at earlier ages. Although the median duration to first contraceptive use for women in the 2001 FRHS was over 10 years, for women in their twenties the median duration after marriage before commencement of use was less than three years. In 1991, the mean number of living children at the time of first contraceptive use was 2.2; this had decreased to 1.7 by 2001. Almost one-quarter of women had first used contraception before the birth of their first child and over one-half had used contraception before the birth of their second child. The results clearly indicate the demand for contraceptives for spacing purposes immediately after marriage and at early stages of family formation.

Women initiating contraception were most likely to use the injectable. The other popular method of first use was the daily oral pill. This latter method was the most popular method for women who started contraceptive use before their first child was born. Thereafter, the injectable was by far the most popular method of first use. Over time the proportions using the injectable as their first method has increased. For women starting contraceptive use between 1997 and 2001, 54 percent used the injectable. Relatively small proportions commenced contraceptive use with traditional methods, suggesting that women generally had good knowledge of contraceptive options before they commenced use.

Although the data are not well suited for examining contraceptive switching, the available data indicate that contraceptive use in Myanmar has largely evolved into a two-method mix consisting of the daily pill and the injectable. Over three quarters of women using the injectable at the time of the survey had also used this as their first method of contraception. Where switching did occur, most of it occurred between these two methods. Furthermore, over 75 percent of current non-users who expressed an intention to use in the future stated that they would use the injectable or daily pill. Although only a small proportion of women were using traditional methods of contraception, over one-half of these women had previous experience of contraception, with the majority of these women having used either the injectable or pill. Some women do not wish to use the injectable or pill, and as their choices of other modern methods are limited, many choose traditional methods of contraception.

Almost one quarter of contraceptive users in 2001 stated that they were using contraception for spacing purposes. This represented an almost 8 percentage point increase over 1991. Over the ten-year period 1991 to 2001, there was a marked reduction in the contraceptive method mix of spacers. In 1991, 28 percent of spacers were using traditional methods. This had decreased to only 10 percent in 2001. In contrast about 11 percent of limiters were using traditional methods, only a three percentage point decline from 1991. The injectable and the pill were the most popular methods for both spacers and limiters. Use of traditional methods, for both spacing and limiting purposes increased with education.

Although the level of contraceptive use more than doubled between 1991 and 2001, the level of unmet need for contraception decreased by only a small amount. In 1991, 20.6 percent of women had an unmet need for contraception. By 2001 this had declined to 17.8 percent. These results suggest that while the supply of contraceptive services has increased over the last 10 years the demand has also increased. The levels of unmet need recorded in Myanmar are slightly higher than those recorded for other Asian

countries, with levels of unmet need for spacing being much lower, and for limiting much higher, than recorded in other Asian countries.

There is greater variation among socio-economic groups in unmet need for limiting than for spacing. The highest level of unmet need for spacing is found for women with a university level of education, while these women have among the lowest levels of unmet need for limiting. Unmet need for limiting is concentrated among women with three or more living children living in rural areas.

The reasons why women with unmet need were not using contraception at the time of the survey vary. However, the main reason, especially for limiters, is health related. Twenty eight percent of women with an unmet need for limiting gave this as their reason for not using. Another 12 percent said that they were opposed to contraceptive use. Relatively small proportions of women cited lack of knowledge, cost, or access to methods as the reasons for not using.

Labour Force

There is very little national level data available on labour force structure and economic activities in Myanmar. Data are available from the 1973 and 1983 national censuses, although differences in the timing of these censuses compared to the timing of the 2001 FRHS mean that comparisons between these three sources of data must be made with care. Over the last thirty years there have been increases in the crude labour force participation rates from 36.4 percent in 1973 to 48.2 percent in 2001. A large part of this increase can be attributed to the declining proportion of children in the population. The refined labour force participation rates increased from 60 to 67.2 between 1973 and 2001. The refined activity rates for Myanmar in 2001 are similar to those observed for other countries in Southeast and East Asia.

The changing age structure of the population also resulted in a decline in the economic dependency ratio. By 2001, compared to 1973, there was a substantially greater proportion of the population in the labour force. This situation provides the potential for a higher level of economic growth. Another reason for increases in the activity rates were increased rates of economic activity by women. For 1973 to 2001 there were very little change in the refined activity rates of males, while the rates of increase for females was from 36.3 to 52.3. These increases occurred in both urban and rural areas. The labour force participation rates of women increased at all ages. The increases were greatest, however, for women in their reproductive ages. Therefore, one factor that may have contributed to higher levels of female labour force participation could be reduced fertility.

The vast majority of the labour force, particularly in rural areas, was engaged in agriculture. Overall, 64 percent of the labour force worked in agriculture. In urban areas the industrial sector that employed the highest proportion of the labour force was trade (32 percent) followed by services (28 percent). Overall, less than 5 percent of the labour force worked in manufacturing, with this proportion being highest (8.8 percent) in urban areas. A greater proportion of females than males were employed in manufacturing. Consistent with this industrial structure, almost one-half of workers were self-employed, with the proportion slightly higher in rural than in urban areas. About one-quarter of workers in rural areas were unpaid family workers, with the majority of these being female. In urban areas slightly over one-quarter of workers were private employees, with another 15 percent working as government employees.

The three main reasons for not being engaged in the labour force were: housework; student; dependent. Women were much more likely than men to report being engaged in

housework, although the proportion reporting being engaged in housework has declined over time. Similar proportions of males and females reported not working because they were dependents. Reported unemployment rates were low, being only 1.9 percent in rural areas and 3.6 percent in urban areas.

Migrants have slightly higher economic participation rates than non-migrants. The occupational distribution of migrants differs considerably from that of non-migrants with migrants much more likely than non-migrants to be found in service occupations and as craft workers. It appears that migrant workers have provided much of the labour force for the expansion of the tertiary sector of the labour force.

CHAPTER I

INTRODUCTION

1.1   Backgronnd

The analysis in this report is based on data from the Fertility and Reproductive Health Survey (FRHS) undertaken in 2001. The 2001 FRHS was a nationally representative survey that focused on issues related to reproductive health. Where appropriate, the report compares results from the 2001 FRHS with the results from two prior nationally representative sample surveys – the Population Changes and Fertility Survey (PCFS) conducted in 1991 and the Fertility and Reproductive Health Survey (FRHS) undertaken in 1997. All three surveys were conducted by the Department of Population of the Ministry of Immigration and Population, with technical and financial assistance provided by UNFPA.

The surveys utilized similar questionnaires, and included a household questionnaire and an individual questionnaire. The individual questionnaire was administered to all ever-married women aged 15-49 years identified through the household questionnaire.

Findings from the 2001 FRHS were published first in a preliminary report in 2003 and a larger main report was published in 2004. This volume includes in-depth analysis of selected topics. A similar analysis was undertaken with the 1997 FRHS and published in 2001.

1.2   Sample design

Details of the sampling procedure of both the household and individual sample are given in the main report of the 2001 FRHS. The survey was designed to produce national and urban and rural level estimates. Because of the difficulty and expense of surveying large numbers of households in the thinly populated and inaccessible parts of the country, the surveys were designed to provide estimates for nine sub-national areas (domains). Six of these are single divisions or states, while three represent a group of states or divisions. The composition of the nine domains was the same as in the 1991 PCFS and 1997 FRHS:

Domain 1 :   Kachin / Kayah / Shan

Domain 2 :   Kayin / Mon / Tanintharyi

Domain 3 :   Chin / Sagaing

Domain 4 :   Bago Division

Domain 5 :   Magway Division

Domain 6 :   Mandalay Division

Domain 7 :   Rakhine State

Domain 8 :   Yangon Division

Domain 9 :   Ayeyarwady Division

The sample was selected in accordance with strict probability procedures at each stage.

1.3   Selection of topics

The selection of topics for further analysis in the present report was guided by a number of considerations. First, topics that had not received full consideration in the preliminary report and country report were included. For example, while both contraceptive use and child health had been described in earlier reports, more detailed examination of relationships had not been undertaken. The second consideration was to include topics for which there was little information from other sources. In-depth analysis of the 1997 FRHS has indicated the large number of women who delayed marriage, or did not marry at all. Therefore it was decided to use the 2001 FRHS to undertake a detailed situation analysis of never-married women. The lack of national level data on the labour force was an important factor in choosing the labour force as one of the topics. The third consideration was that the topics selected should provide important information for programme and policy development.

These considerations led to the selection of the following topics that have policy and programmatic implications individually as well as collectively.

- Age at marriage and situation analysis of never married women in Myanmar;
- Child health and mortality;
- Contraceptive use dynamics; and
- Labour Force.

1.4   The report

Chapters two to five of this report present the findings related to the four topics mentioned above. The final chapter of the report summarizes these findings, presents a brief discussion of the relevance and implications of the findings, and proposes a number of recommendations directly related to the findings from this in-depth analysis.

CHAPTER II

AGE AT MARRIAGE AND SITUATION ANALYSIS OF NEVER MARRIED WOMEN IN MYANMAR

AGE AT MARRIAGE AND SITUATION ANALYSIS OF NEVER MARRIED WOMEN IN MYANMAR

2.1. Introduction

This chapter examines the ages at which men and women marry and the situation of never married women in Myanmar. One reason why the study of nuptiality is important is the well recognized relationship between marriage and fertility. More generally, marital patterns, including proportions never married, age at marriage and dissolution of marriage have social and economic implications. The position of never married women in the community and household, in particular the relationship to head of household, household size and economic activity also have important consequences for their status.

Patterns of nuptiality are presented in the 1997 Detailed Analysis on Fertility and Reproductive Health Survey (1997 FRHS). These data show that the age at first marriage is increasing, as is the proportion of never married women at adult ages. The social and economic participation of never married women in the family and society has not been previously analysed. Hence, in this chapter an attempt is made to study the demographic characteristics of never married women, their share in the general population and their participation in education and the labour force. Particular attention is paid to never married women who are heads of households. Throughout the analysis comparison is made between ever-married and never-married women. The objective of this comparison is to illustrate the similarities and differences in the demographic, social and economic characteristics of these two groups of women.

Information on marital status is available from the 1991 PCFS and the FRHS of 1997 and 2001. In 2001, data on economic activity are also available. Data presented in this chapter were obtained from the household questionnaire of the three studies. In addition, data for ever married women from the individual questionnaire are used where relevant.

This chapter begins with a presentation of the proportion of women who are never married, in various social and demographic groups. Marriage patterns are then presented, based on calculations of singulate mean age at marriage and cohort analysis of the age by which various proportions of women have married. The chapter goes on to compare the economic activity of never married and ever married women before presenting the data regarding never married women in the household.

Definitions of marital status vary in different cultures. In the 1991 PCFS and 1997 and 2001 FRHS, marital status was classified as never married, currently married, divorced or separated, widowed, and renounced. In this chapter, data are presented for never married women and an aggregate category of ever married women. Marital status was obtained from the respondent's statement in the household questionnaire provided in the 1991 PCFS, 1997 FRHS and 2001 FRHS.

2.1.1. Customs and traditions in Myanmar concerning matrimony and women's rights

Customary law governs marriage in Myanmar. The minimum age of marriage is 20 years for a woman, though she may marry younger with parental consent. For men, there is no specified minimum age, only that he must be physically mature. The couple wishing to marry must give their free and mutual consent. Women enjoy a high degree of gender

equity regarding education and labour force participation. Women also have equal rights as men in matters of inheritance to property. The father is the acknowledged head of the family, but when he is absent the mother takes over. When the parents are absent, the eldest son or daughter takes over the family responsibility.

When examining marriage, it is necessary to look briefly at the general gender situation in Myanmar. The situation of women and girls in Myanmar is generally equitable with men and boys, in keeping with their neighbours in South East Asia. Access to education and employment, at least at entry level, is similar for boys and girls. However, as with other countries in the region, there are very few women in senior positions. In the public sector, for which data is available, 19.4 percent of senior management positions are held by women (Ministry of Labour, 2002).

Table 2.1	Percent of never married women at ages 15 years and over by age, region, education and religion by urban-rural residence, 2001 FRHS		
Background characteristics	Union	Urban	Rural
Age			
15-19	91.6	92.6	91.3
20-24	64.9	70.9	62.8
25-29	40.8	49.5	37.3
30-34	25.9	32.9	23.0
35-39	18.6	25.4	15.8
40-44	14.8	19.5	12.9
45-49	11.8	16.7	9.9
50-54	9.9	11.5	9.3
55-59	7.7	9.9	6.8
60+	5.9	7.3	5.3
Region			
Domain 1	31.8	39.2	29.1
Domain 2	36.2	38.9	35.2
Domain 3	37.5	40.3	36.9
Domain 4	35.1	39.0	34.1
Domain 5	37.2	39.4	36.8
Domain 6	39.9	41.7	39.2
Domain 7	27.5	31.5	26.7
Domain 8	36.4	37.8	32.3
Domain 9	32.2	34.7	31.7
Education			
Less than Std. one	14.9	14.3	15.1
Primary	32.7	25.9	34.3
Middle school	46.5	37.0	52.9
High school	64.6	57.9	73.1
University	64.9	61.9	72.0
Others	14.4	11.0	14.8
Religion			
Buddhist	35.4	38.3	34.3
Christian	33.9	41.4	31.2
Islam	33.4	38.3	29.3
Animist	29.2	16.7	30.0
Hindu	40.4	47.4	34.6
Other or none	30.0	-	33.3
Total (%)	35.3	38.5	34.0
Total (N)	24840	7543	17297

Note:	Domain 1	Kachin/Kayah/Shan	Domain 4	Bago	Domain 7	Rakhine
	Domain 2	Kayin/Mon/Tanintharyi	Domain 5	Magway	Domain 8	Yangon
	Domain 3	Chin/Sagaing	Domain 6	Mandalay	Domain 9	Ayeyarwady

2.2   Demographic analysis of female marriage patterns in Myanmar

2.2.1.   Proportion of never married women

Table 2.1 shows the proportion of women never married by age, region, education and religion by urban-rural residence from the 2001 FRHS. At the Union level, more than one-third (41 percent) among females in age group 25-29 are never married. This proportion declines as age increases and in the age group 45-49, 12 percent of women are never married. In the context of urban-rural differentials, it can be observed that there is a larger proportion of never married women in every age group in urban than in rural areas. There are regional variations; Mandalay Division has the highest proportion of never married women (40 percent) and Rakhine State has the lowest (27 percent).

At the Union level, the proportion of women never married increases with the advance in educational level: 33 percent for those with primary education increasing to 65 percent for those with university education. Interestingly, the proportion never married is higher in rural areas than in urban areas at all educational levels. In other words, the lower overall percentage never married in rural areas results entirely from the greater concentration of the rural population in the lower educational groups, where percentages never married tend to be lower.

In both urban and rural areas, percentages never married are particularly high among women with a high school or university education, and this continues to be the case when controlled for the generally younger ages of these better educated women. This fact may be due to the lack of eligible men, those who are of equal or higher educational or socio-economic status. As shown in Table 2.2, those educated men who marry are more likely than those educated women who marry, to marry a spouse with a lower education than they have themselves. This is most evident among those with a high school education. Among those with this level of education who married, well over one third of males married a spouse with no education or only primary school education; only 16 per cent of females did so. By contrast, only one third of high school educated males married a spouse with high school or university education, but well over half of high school educated females did so. In other words, educated males tend to marry spouses across a wider educational range, and this raises the possibility that well educated females face a shortage of males with the characteristics they give priority to; especially having at least as high an education as themselves.

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Husband's Education	Education of wife							
	No schooling	Primary	Middle school	High school	University	Others	All levels	No of EMW
Education								
No Schooling	58.7	36.0	3.6	0.8	0.0	0.8	100	1439
Primary	18.1	67.5	10.5	2.3	0.8	0.8	100	3299
Middle school	10.4	54.0	24.9	7.7	2.5	0.4	100	2053
High school	3.4	34.6	28.4	25.3	8.0	0.4	100	842
University	0.6	11.0	17.6	26.3	44.5	0.0	100	353
Others	30.5	45.0	4.3	2.0	0.7	17.5	100	302
Total	21.5	52.1	14.8	6.7	3.7	1.3	100	8288
No Schooling	47.5	12.0	4.3	2.2	0.0	11.4	17.4	
Primary	33.6	51.6	28.2	13.4	8.9	26.7	39.8	
Middle school	12.0	25.7	41.9	28.5	16.8	8.6	24.8	
High school	1.6	6.7	19.5	38.2	22.0	2.9	10.2	
University	0.1	0.9	5.1	16.7	51.6	0.0	4.3	
Others	5.2	3.1	1.1	1.1	0.7	50.5	3.6	
Total	100	100	100	100	100	100	100	
Total (N)	1779	4319	1223	558	304	105		8288

In studying this issue it is important to keep in mind that the data in Table 2.2 only show the spouses' characteristics of those who married. A high proportion of the well educated have not married at all. Only 59 percent of university-educated women aged 35-44 have married (data not shown). Of these, 56 percent married a university-educated husband. Therefore, of all university-educated women aged 35-44, only 33 percent are married to a university-educated husband. Given the strong preference by educated women to marry only a well-educated spouse, these statistics suggest either a lack of interest by these women in marrying at all, or difficulty in finding a well educated husband to marry, or more likely a complex set of factors among which these two are very important.

Comparison of the proportion of never married women among the countries of South East and East Asia is presented in Table 2.3. Comparison is made for four age groups 30-34, 35-39, 40-44 and 45-49. In age group 30-34, Japan has the highest proportion of never married women (26.6 percent) whilst Myanmar has the second highest proportion with 25.9 percent of women never married. In all other age groups Myanmar has the highest proportion of never married women. It can be summarized that the proportion of never married women in Myanmar in the mid reproductive ages is the highest in the region.

Table 2.3. Trends in never-married among females aged 30-34 to 45-49, countries of South-East and East Asia (%)

Age group	1960	1970	1980	1990	2000
Philippines					
30-34	11.6	8.9	11.9	13.4	14.8
35-39	8.1	6.3	8.0	8.7	9.5
40-44	7.6	6.0	7.0	7.1	7.1
45-49	7.1	5.6	6.7	6.1	6.2
Thailand					
30-34	6.7	8.1	11.8	14.1	16.1
35-39	4.2	5.2	7.3	9.6	11.6
40-44	3.1	3.9	5.3	7.0	9.3
45-49	2.6	3.0	4.1	5.2	8.0
Peninsular Malaysia-Chinese					
30-34	3.8	9.5	13.3	15.8	18.2
35-39	2.7	5.7	7.6	9.1	10.5
40-44	2.6	3.4	5.8	6.4	8.4
45-49	2.5	2.4	4.6	5.7	7.2
Peninsular Malaysia-Malays					
30-34	1.1	3.3	7.9	10.2	9.7
35-39	0.8	1.9	3.8	5.8	6.0
40-44	0.6	1.1	2.2	4.1	4.4
45-49	0.6	0.7	1.7	2.3	3.2
Indonesia					
30-34	n.a.	2.2	3.4	4.5	6.9
35-39	n.a.	1.4	1.9	2.7	3.5
40-44	n.a.	1.2	1.4	2.0	2.4
45-49	n.a.	1.0	1.2	1.5	2.0
Taiwan					
30-34	2.1	6.6	11.4	11.1	
35-39	1.5	7.4	3.9	6.0	9.2*
40-44	1.3	4.6	2.2	3.6	
45-49	1.0	n.a.	n.a.	1.9	4.2*
Japan					
30-34	9.6	7.2	9.1	13.9	26.6
35-39	5.6	5.8	5.5	7.5	13.8
40-44	3.1	5.3	4.4	5.8	8.6
45-49	1.9	4.0	4.4	4.6	6.3
Republic of Korea					
30-34	0.5	1.4	2.7	5.3	10.7
35-39	0.2	0.4	1.0	2.4	4.3
40-44	0.1	0.2	0.5	1.1	2.6
45-49	0.1	0.1	0.3	0.6	1.7
Vietnam					
30-34	n.a	n.a	n.a	11.2	10.9
35-39	n.a	n.a	n.a	8.9	8.7
40-44	n.a	n.a	n.a	6.0	8.3
45-49	n.a	n.a	n.a	3.5	9.9
Myanmar					
30-34	n.a	9.3	12.8	19.1	25.9
35-39	n.a	7.0	8.9	13.4	18.6
40-44	n.a	6.2	6.7	10.3	14.8
45-49	n.a	5.9	5.9	8.9	11.8
Cambodia					
30-34	4.2	n.a	n.a	n.a	9.0
35-39	2.9	n.a	n.a	n.a	6.4
40-44	2.2	n.a	n.a	n.a	5.4
45-49	n.a	n.a	n.a	n.a	5.0

n.a = not available

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2.2.2. Trend in proportion of never married women

Table 2.4 shows the trend of proportion of women never married by age, urban-rural residence, region and education from 1991 to 2001. The proportion of never married women at each age group (except age group 60 and over) is higher in 2001 than in 1991. The proportion of never married women has increased more in rural areas than in urban areas. In rural areas, it rose from 30 percent in 1991 to 34 percent in 2001 while, in urban areas, there was barely any change (38.2 percent in 1991, increasing slightly to 38.5 percent in 2001). Over the same 10-year period, the proportion of never married women has increased in almost all regions except Kachin/Kayah/Shan and Yangon Division. As for education, at the lower levels of education (up to middle school level) the proportions of women who were never married have decreased, whereas the proportion of women with a high school and university level education who were never married have increased over the same period. Thus, differentials in non-marriage between lesser and better educated group have widened.

Most of these changes actually occurred over the 1991-97 period. Between 1997 and 2001 the percentage of never married women did not increase further, and it actually declined slightly at ages 15-24 and for women with primary and middle school education, and indeed for those with a university education.

Table 2.4   Percent of never married women by age, urban-rural residence, region and education, 1991 PCFS, 1997 FRHS and 2001 FRHS

Background characteristic	1991 PCFS	1997 FRHS	2001 FRHS
Age group			
15-19	88.5	93.4	91.6
20-24	54.9	65.2	64.9
25-29	31.5	40.6	40.8
30-34	19.1	24.8	25.9
35-39	13.4	17.0	18.6
40-44	10.3	14.7	14.8
45-49	8.9	12.1	11.8
50-54	6.3	7.8	9.9
55-59	6.1	6.6	7.7
60+	6.3	6.7	5.9
Residence			
Urban	38.2	40.4	38.5
Rural	30.0	33.4	34.0
Region			
Domain 1	32.9	32.5	31.8
Domain 2	34.0	36.2	36.2
Domain 3	36.2	36.8	37.5
Domain 4	31.3	34.5	35.1
Domain 5	33.5	39.4	37.2
Domain 6	35.8	38.6	39.9
Domain 7	20.9	25.9	27.5
Domain 8	36.6	38.6	36.4
Domain 9	30.3	31.7	32.2

Table 2.4 .... Continued

Background characteristic	1991 PCFS	1997 FRHS	2001 FRHS
Education			
Less than Std. one	15.3	14.9	14.9
Primary	35.2	35.6	32.7
Middle school	52.7	48.9	46.5
High school	58.2	60.2	64.6
University	60.7	69.9	64.9
Others	-	-	14.4
Total (%)	32.5	35.4	35.3
Total (N)	21263	13767	24840

Note: Domain 1 Kachin/Kayah/Shan   Domain 4 Bago   Domain 7 Rakhine
        Domain 2 Kayin/Mon/Tanintharyi   Domain 5 Magway   Domain 8 Yangon
        Domain 3 Chin/Sagaing   Domain 6 Mandalay   Domain 9 Ayeyarwady

2.2.3. Singulate mean age at marriage

The singulate mean age at marriage (SMAM) provides a measure that combines the age specific proportions never married into a single measure. As can be seen from Table 2.5, there has been a relatively small increase in SMAM for both men and women within the ten-year period. For men, the SMAM has increased from 26.4 years in 1991 to 27.6 years in 2001 whereas the increase in the case of women was from 24.5 years to 25.8 years for the same period. As expected, SMAM is higher in urban than in rural areas for both men and women (about two years higher, for both males and females, in 2001). There is also an urban-rural difference in the rate of SMAM increase. Between 1991 and 2001, the SMAM increased faster in rural than urban areas, particularly for women. Although SMAM varies somewhat by region, the trends for men and women are similar across the Union.

Table 2.5. Singulate mean age at marriage by sex, urban-rural residence and region, 1991 PCFS, 1997 FRHS and 2001 FRHS

Region	Union		Urban		Rural	
	Male	Female	Male	Female	Male	Female
1991 PCFS						
Domain 1	26.9	25.0	29.0	27.3	25.3	23.0
Domain 2	26.5	25.0	27.5	25.3	25.9	24.7
Domain 3	26.6	25.7	29.0	27.8	26.0	25.2
Domain 4	25.8	23.2	26.9	24.6	25.5	22.8
Domain 5	25.4	24.5	27.5	26.3	24.9	24.1
Domain 6	26.3	25.2	27.6	27.2	25.8	24.3
Domain 7	24.5	21.5	27.3	25.9	24.0	20.6
Domain 8	27.7	25.4	28.3	26.2	26.2	23.3
Domain 9	26.3	23.8	28.1	25.1	25.9	23.6
Total	**26.4**	**24.5**	**28.1**	**26.3**	**25.6**	**23.7**

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Table 2.5.... Continued

Region	Union		Urban		Rural	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
			1997 FRHS			
Domain 1	28.0	25.3	30.2	26.2	27.4	25.1
Domain 2	27.6	26.3	29.2	28.1	27.1	25.8
Domain 3	27.7	26.3	31.3	29.7	26.9	25.6
Domain 4	27.0	24.5	29.5	26.9	26.3	23.8
Domain 5	28.1	27.7	31.1	30.7	27.6	27.2
Domain 6	27.1	26.7	29.2	28.8	26.2	25.7
Domain 7	25.4	23.1	26.4	22.7	25.2	23.2
Domain 8	29.7	28.1	30.2	28.8	28.6	26.3
Domain 9	26.4	24.5	28.0	24.3	26.2	24.6
Total	**27.6**	**26.0**	**29.7**	**28.0**	**26.8**	**25.3**
			2001 FRHS			
Domain 1	27.1	25.1	28.7	27.5	26.5	24.3
Domain 2	27.6	25.7	28.8	27.5	27.1	25.1
Domain 3	27.8	27.0	30.8	29.0	27.2	26.6
Domain 4	27.3	25.3	28.6	27.3	27.0	24.8
Domain 5	27.9	26.4	29.3	27.1	27.7	26.2
Domain 6	28.8	27.7	29.9	28.3	28.3	27.4
Domain 7	26.1	23.5	28.2	26.2	25.7	23.0
Domain 8	28.5	26.0	29.3	27.0	26.4	23.2
Domain 9	26.9	24.7	26.9	23.5	26.9	24.9
Total	**27.6**	**25.8**	**29.1**	**27.2**	**27.1**	**25.3**

Note:	Domain 1 Kachin/Kayah/Shan	Domain 4 Bago	Domain 7 Rakhine
	Domain 2 Kayin/Mon/Tanintharyi	Domain 5 Magway	Domain 8 Yangon
	Domain 3 Chin/Sagaing	Domain 6 Mandalay	Domain 9 Ayeyarwady

Comparison of the SMAM in 1991, 1997 and 2001 for both men and women and urban and rural areas by education levels are shown in Table 2.6. The data show that SMAM increases with the increase in the level of education for both men and women, in both urban and rural areas. The results also show that there is little difference in SMAM between rural and urban women within educational categories, with values of SMAM being slightly higher for rural women compared to urban women in all educational categories. This means that the higher SMAM overall in urban areas results from the higher concentration of urban women in those educational categories characterized by higher age at marriage.

| Table 2.6 | Singulate mean age at marriage for men and women by education and urban-rural residence, 1991 PCFS, 1997 FRHS and 2001 FRHS |

Education	Union		Urban		Rural	
	Male	Female	Male	Female	Male	Female
1991 PCFS						
Total	**26.4**	**24.5**	**28.1**	**26.3**	**25.6**	**23.7**
Primary or less	25.2	22.9	26.4	24.1	25.0	23.0
Middle school	27.0	24.9	28.0	24.9	26.1	25.5
High school	28.4	26.8	28.6	27.0	28.2	26.3
University	30.3	28.7	30.6	30.0	30.2	27.4
1997 FRHS						
Total	**27.6**	**26.0**	**29.7**	**28.0**	**26.8**	**25.3**
Primary or less	26.3	24.4	27.1	24.6	26.2	24.4
Middle school	27.5	26.4	28.9	26.6	26.8	26.3
High school	30.0	28.0	30.5	28.1	29.8	28.4
University	32.4	31.1	32.9	31.4	31.0	28.1
2001 FRHS						
Total	**27.6**	**25.8**	**29.1**	**27.2**	**27.0**	**25.3**
Primary or less	26.6	24.3	27.4	24.4	26.5	24.2
Middle school	27.6	25.8	28.4	25.5	27.1	25.9
High school	30.0	28.1	30.2	27.7	29.7	28.6
University	31.8	31.2	32.0	31.0	31.8	31.9

2.2.4. Cohort trends in age at marriage

Information on age at first marriage was obtained in the Individual Questionnaire from every ever-married woman. From this information, combined with information about the number of never married women in each cohort, obtained from the household questionnaire, it has been possible to calculate the age by which 25 per cent, 50 per cent and 75 per cent of women had married, in different birth cohorts. This information is presented in Table 2.7. The steady rise from older to younger women in the age by which 50 per cent of women had married in each cohort, though not directly comparable with information on the SMAM, is certainly consistent with the information already presented showing a rise in the SMAM over time.

Except for those aged 45-49, the urban-rural difference in the age by which 50 per cent of women had married is at least two years. For urban women, this age had climbed above 25 for the cohort aged 25-29 in 2001. In both urban and rural areas, however, a considerable proportion of women married in their teens in the earlier cohorts. This is evident from the panel in Table 2.7 showing the age by which 25 per cent of women had married. In rural areas, this age was 18 for women aged 45-49 and 40-44, though it gradually rose for younger cohorts and exceeded 20 for the cohort aged 20-24. Even in urban areas, in the older cohorts, more than a quarter of women had married by the time they reached age 19. Differences between urban and rural areas in the age by which a quarter of women had married, then, were not very wide, and both urban and rural areas shared in the rise in this age. Teenage marriage can be said to have become less common by the 1990s.

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The far panel of Table 2.7, showing the age by which 75 per cent of women had married, reveals a much wider urban-rural differential, and one which is widening in the younger cohorts, because although in rural areas this age rose by three years between older and younger cohorts, the rise was even sharper – by six years – in urban areas. For Myanmar as a whole, there was a rise of four years in the age by which 75 per cent of women had married between the cohorts aged 45-49 and 30-34.

In summary, the picture is one in which age at marriage is rising universally, but there remains a proportion of young women who marry in their teenage years, while the great majority of women marry at some point in their 20s, and an increasing proportion, especially in urban areas, delay marriage until well into their 30s, or do not marry at all.

Table 2.7   Various birth cohorts: age by which 25%, 50% and 75% of women had married, by urban-rural residence

Age group	Year of birth	Age by which								
		25% had married			50% had married			75% had married		
		Union	Urban	Rural	Union	Urban	Rural	Urban	Union	Rural
20-24	1977-81	20.3[+]	–	20.1[+]	–	–	–	–	–	–
25-29	1972-76	19.4	20.7	19.1	24.0	*	23.1	–	–	–
30-34	1967-71	18.9	19.5	18.7	22.0	24.2	21.6	–	29.9	28.3
35-39	1962-66	18.5	19.0	18.4	21.7	23.3	21.1	34.8	28.4	26.9
40-44	1957-61	18.3	19.1	18.1	20.9	22.9	20.6	31.7	27.4	25.7
45-49	1952-56	18.0	18.2	18.0	20.6	21.5	20.4	28.6	26.1	25.3

* More than 25; data truncated as by age 25 less than 50% had married.
'+ Possibly slightly higher; data truncated

2.2.5. Age at first marriage and differentials

Not only was information on age at first marriage obtained in the Individual Questionnaire from every ever-married woman, but her husband's age at the time of her first marriage was also obtained. Table 2.8 shows that on the average, women when they first married, were 20.4 years old and their husbands 23.5 years old. It should be noted that the mean age is held down by the truncation effect: married women in the 15-19 year age group must of necessity be very young on average, and the same factor to a lesser extent affects mean age at marriage for married women aged 20-24 and 25-29.

Table 2.8.	Mean age at first marriage and inter-spousal age difference for ever married women, 2001 FRHS

Background characteristics	Mean Age at Marriage		Difference of Mean Age	Percent wives			Number of EMW
	EMW	Husband		Older than husband	Same age as husband	Younger than husband	
Total	**20.4**	**23.5**	**3.1**	**17.2**	**10.8**	**72.0**	**8288**
Age							
15-19	16.6	21.6	5.0	0.5	6.2	93.3	194
20-24	18.5	22.5	4.0	8.5	11.1	80.3	819
25-29	20.1	23.4	3.3	15.7	11.4	72.9	1338
30-34	20.7	23.6	2.9	19.4	10.8	69.7	1666
35-39	21.0	23.6	2.6	19.7	11.4	68.9	1623
40-44	21.1	24.1	3.0	18.7	10.0	71.3	1474
45-49	20.7	23.8	3.1	19.2	10.6	70.2	1174
Residence							
Urban	21.1	24.5	3.3	18.2	9.3	72.5	2238
Rural	20.2	23.2	3.0	16.8	11.3	71.9	6050
Region							
Domain 1	20.2	23.8	3.5	16.1	8.0	75.9	951
Domain 2	20.4	23.3	2.9	15.4	9.3	75.3	700
Domain 3	20.5	23.2	2.7	20.1	12.8	67.2	962
Domain 4	20.5	23.9	3.4	15.6	10.9	73.5	975
Domain 5	21.1	23.3	2.2	23.2	12.1	64.7	780
Domain 6	20.6	23.0	2.4	20.7	12.9	66.4	1108
Domain 7	18.9	23.4	4.5	5.8	9.0	85.2	602
Domain 8	21.0	24.4	3.4	18.1	10.8	71.1	966
Domain 9	20.2	23.4	3.2	16.1	10.3	73.6	1244
Education							
No schooling	19.4	23.3	3.9	14.1	10.4	75.5	1697
Primary	20.1	23.1	3.0	16.9	10.7	72.4	4401
Middle school	20.8	23.8	3.0	17.3	9.6	73.2	1223
High school	22.4	24.6	2.2	22.2	13.3	64.5	558
University	25.6	27.1	1.5	30.5	14.6	55	302
Others	20.5	23.9	3.4	14.0	11.2	74.8	107
Religion							
Buddhist	20.5	23.5	3.0	17.6	11.1	71.3	7462
Christian	20.2	24.0	3.8	16.3	6.8	76.9	472
Islam	19.0	24.3	5.3	9.7	9.4	80.9	277
Animists	22.7	24.7	2.0	27.3	9.1	63.6	11
Hindu	19.5	24.2	4.7	7.7	4.6	87.7	65
Marital Status							
Married	20.4	23.5	3.0	17.5	10.8	71.6	7494
Divorce	20.0	24.3	4.4	12.1	8.5	79.4	437
Widowed	20.5	23.9	3.3	16.2	12.0	71.7	357

EMW - Ever Married Women

Note:	Domain 1 Kachin/Kayah/Shan	Domain 4 Bago	Domain 7 Rakhine
Domain 2 Kayin/Mon/Tanintharyi	Domain 5 Magway	Domain 8 Yangon
Domain 3 Chin/Sagaing	Domain 6 Mandalay	Domain 9 Ayeyarwady

The mean age at marriage is higher in urban than in rural areas for both men and women. The regional variations are not great except for Rakhine State, which exhibited a significantly lower average age at marriage for women -18.9 years- than others. The age at marriage increases with the increase in educational level both for women and for their husbands. Among the main religious groups, Buddhists and Christians do not seem to differ much with respect to woman's age at marriage as well as their husband's age at marriage. Comparatively, Hindu and Muslims exhibit a lower mean age at marriage for women and a higher mean age at marriage for husbands, i.e. a wider age gap.

Married women who at the time of the survey were aged 15-19 were on average 5 years younger than their husbands. As age increased, up to age 30-34, the age difference narrowed. Similarly, as education increased, the age difference between spouses also decreased, being only 1.5 years for women with a university level of education. As for regional differences, the widest is in Rakhine State (4.5 years), and the narrowest in Magway Division (2.2 years). The difference in age is greater (4 years) among divorced or separated women than among currently married women (3 years).

2.2.6. Literacy, school attendance and education of never and ever married women

As shown in Table 2.9, among all women currently attending school, over 96 percent are never married. The share of women attending school who are never married is higher in rural than in urban areas. In the context of educational attainment, the proportion never married increases with education at all age groups for both rural and urban women. There is a large difference between the proportion never married among women with no or only primary school education and those with high school or university education. Among women with no schooling or with primary school only, the proportions never married are 15 percent and 33 percent respectively. Among women who completed high school or university education the proportions never married are 65 percent for both groups. The proportion decreases with advancing age for all education levels, indicating lower proportions of never married women in the older generation for each educational level. However, even among women aged 60 and over at the time of the survey, 12.4 percent of women with a high school education and 26.4 percent of those with a university education had never married.

Table 2.9	Percent of women never married in different age groups according to literacy, school attendance and educational attainment, by urban-rural residence, 2001 FRHS						
	Age group						
	15-24	25-34	35-44	45-54	55-59	60+	Total
	Union						
Literacy							
literate	82.0	36.9	19.3	12.6	9.3	7.9	41.7
Illiterate	65.9	20.3	10.2	8.0	5.6	4.3	19.3
School attendance							
Attending	98.0	81.5	-	-	-	-	96.4
Not attending	73.0	31.9	16.8	11.0	7.7	5.9	30.3
Education							
No schooling	64.9	20.0	10.9	7.2*	4.8	4.3	14.9
Primary	73.4	27.6	14.1	10.2	8.9	7.8	32.7
Middle school	82.6	33.3	17.2	12.0	9.1*	8.6	46.5
High school	90.8	44.9	30.9	19.0	13.0*	12.4*	64.6
University	92.4	68.6	41.2	34.1	25.4*	26.4*	64.9
Others	76.6	21.7	12.6	10.5	8.0	6.3	14.4

Table 2.9   .... Continued

Particulars	Age group						
	15-24	25-34	35-44	45-54	55-59	60+	Total
	Urban						
Literacy							
Literate	84.1	42.7	24.1	16.0	10.4	9.3	42.3
Illiterate	63.3	26.6	12.9	7.4	8.0	4.0	18.3
School attendance							
Attending	97.2	79.3	-	-	-	-	95.1
Not attending	69.8	38.4	22.7	14.3	9.9	7.3	30.0
Education							
No schooling	66.3	29.2	13.9	5.0	6.4*	4.0	14.3
Primary	68.3	26.6	15.6	10.1	7.7*	9.5	25.9
Middle school	79.7	34.7	16.4	13.0	9.2*	8.9*	37.0
High school	90.4	40.6	30.6	19.1	13.9*	13.9*	57.9
University	92.4	67.1	41.5	34.8	25.9*	25.5*	61.9
Others	**	**	**	**	**	**	11.0
	Rural						
Literacy							
Literate	81.1	34.0	16.7	10.7	8.6	7.0	41.4
Illiterate	66.2	19.4	9.8	8.1	5.2	4.4	19.5
School attendance							
Attending	98.7	85.0	0.0	0.0	0.0	0.0	97.7
Not attending	73.8	29.3	14.4	9.6	6.8	5.3	30.5
Education							
No schooling	64.7	18.7	10.5	7.6	4.5	4.4	15.1
Primary	74.2	27.8	13.8	10.2	9.3	6.8	34.3
Middle school	83.7	32.3	18.1	10.8	**	**	52.9
High school	91.2	50.7	31.7	19.0	**	**	73.1
University	92.4	71.6	40.5	28.8*	**	**	72.0
Others	77.4	20.5	13.0	9.9	7.0	7.0	14.8
Total (%)	79.1	33.4	16.8	11.0	7.7	5.9	35.3
Total (N)	15469	5339	2214	1044	242	532	24840

Note: *   10 to 30 cases

            * * < 10 cases

2.3.   Economic status of never married women and ever married women

Myanmar women, married or not married, play an important role in social and economic sectors. They play an important role in their family and are generally seen as the caretakers of Myanmar culture and tradition. In addition to their role in the home, many women are economically active, constituting 44 percent of the workforce in Myanmar (Ministry of Labour, 2002). The principle of woman earning money to contribute towards the upkeep of house and family has always been present in Myanmar society.

Section 2.3.1 presents data regarding labour force participation, including gender differences. In this section, comparisons of ever married and never married women by occupation, industry, employment status and urban-rural residence are made. Table 2.10 shows data on labour force participation, Table 2.11 on reasons for not working whilst data regarding occupation, industry and employment status of working women are presented in Table 2.12.

2.3.1. Labour force participation of never and ever married women

The measurement of the labour force participation is difficult, particularly in assessing the participation of women. Variations in definitions and measurement of work bias the labour force statistics for women. However, there are also cultural influences that affect female labour force participation. In Myanmar, women are generally able to participate freely in economic activities. In this analysis, those categorized as being in the labour force are those who were engaged in income producing activities within the previous fourteen days of the survey or those who were seeking work.

Table 2.10 presents labour force participation rates for ever married women and never married women. At the Union level, as well as in both urban and rural areas, the labour force participation rate is well over twice as high for the never married women as for the ever married women. For both groups of women, labour force participation rates are higher in rural than in urban areas. For ever married women, the urban-rural differences are not great, but for never married women there is a 12 percentage point difference (62 percent in rural areas; 50 percent in urban areas).

The age patterns of participation rates differ slightly between ever married and never married women. Both show an inverted U-shaped pattern with the highest rates at ages 30-44 (ever married) and 30-49 (never married), except that for ever married women in rural areas, the participation rate is even higher at age 15-19. The reason for this difference is not clear.

It should be kept in mind that because of differences in the age structure of the never married and ever married women, there are marked differences between never and ever-married women in the distribution by age of those engaged in the labour force. The vast majority of never married women in the work force, especially in rural areas (74 percent) are found at ages below 30, even though their age specific participation rates are lower at these ages (data not shown). This stands in contrast to ever married women who are more evenly distributed across age groups.

Table 2.10	Never married and ever married women by age specific labour force participation rate, 2001 FRHS					
Age Group	Union		Urban		Rural	
	NMW	EMW	NMW	EMW	NMW	EMW
15-19	43.5	33.9	27.0	14.4	49.0	37.3
20-24	59.6	26.8	45.6	15.7	65.2	28.7
25-29	72.7	27.4	65.3	20.2	76.6	28.8
30-34	79.5	28.4	73.6	23.4	82.9	29.3
35-39	78.8	29.4	76.2	25.2	80.5	30.0
40-44	78.1	29.4	71.6	24.0	82.0	30.5
45-49	72.1	28.6	71.3	23.8	72.7	29.8
50-54	67.7	27.0	62.6	22.1	70.2	28.9
55-59	62.4	24.0	56.2	22.4	66.0	26.0
60+	29.9	11.7	24.6	18.8	32.7	13.0
All ages 15+	58.3	25.1	49.6	22.2	62.1	26.4

The pattern of reasons for not working differs greatly between never married and ever married women (Table 2.11). Consistent with their younger age structure, a high proportion of never married women (45 percent) give 'studying' as their reason for not working, whereas this answer is almost totally absent (0.3 percent) for ever married women. In urban areas, 57 percent of never married women not in the labour force are students, whilst in rural areas 37 percent are students.

The majority of the ever married women not in the labour force are engaged in housework (64 percent in urban and 65 percent in rural areas). Housework was a much less important reason for not working for never married women, of whom only 22 percent (urban) to 33 percent (rural) of those not in the labour force gave housework as the reason for not working. The one major category of reasons for not working that differs less between ever married and never married women is 'dependants'. Among ever married women who are not working, 31 percent are dependents compared to 24 percent of never married women. This difference is lesser in rural areas (32 percent and 27 percent respectively) than in urban areas (30 percent and 17 percent respectively). The reason why the share of dependants differs less between ever and never married women is that the distribution of dependants is bi-modal: approximately 46 percent of all women categorized as dependents are aged over 60 years (therefore important among the ever-married), and a further 20 per cent are aged 15-24 (therefore important among the never married). The proportion of dependants is fairly low at ages in between (data not shown).

Table 2.11	Never married and ever married non-working women by reasons for not working					
Reasons for not working	Union		Urban		Rural	
	NMW	EMW	NMW	EMW	NMW	EMW
Housework	28.9	64.4	22.2	63.6	32.7	64.7
Student	44.5	0.3	57.1	0.7	37.3	0.2
Disable person	0.6	0.2	0.6	0.3	0.6	0.2
Have income	0.7	1.6	1.3	3.1	0.4	0.9
Ill health	1.5	2.2	1.3	2.0	1.6	2.3
Dependent	23.5	31.1	17.0	30.0	27.2	31.5
Other	0.3	0.2	0.5	0.3	0.2	0.2
Total	100	100	100	100	100	100.0

2.3.2. Occupation

At the Union level, there is a greater proportion of never married women than ever married women in six major occupation groups as shown in Table 2.12. In the fields of services and agriculture, the percentages of ever married women are much more than those for never married women both for urban and rural areas. Ranking by major occupation group, most of the urban never married women are engaged in the field of services (32 percent) followed by craft and related (16 percent) and elementary occupations (14 percent). Almost 50 percent of ever married women in urban areas are engaged in services. In the rural areas, the highest percentage (57 percent) of never married women are employed in agriculture, followed by elementary occupations (18 percent) and craft and related occupations (10 percent). In comparison, 63 percent of ever married women are agricultural workers, 15 percent are in elementary occupations and 14 percent are service workers. At the Union level, about half are agricultural workers (51 percent for ever married women and 45 percent for never married women) and 22 percent in services for ever married women and 18 percent in elementary occupations for never married women.

2.3.3. Industry

Examining economic activity by industrial sector, at the Union level most of the women worked in Agriculture/ Forestry/ Fishing industry (62 percent of ever married women and 57 percent for never married women). This is unsurprising as Myanmar is a predominantly agriculture based economy. In rural areas more than seventy percent each of the ever married women (76 percent) and never married women (73 percent) are engaged in the Agriculture / Forest/ Fishing industry.

Among ever married women, 23 percent are engaged in the wholesale and retail trade sector followed by nine percent in services. The patterns are a little different for never married women, with 17 percent employed in services and 15 percent in wholesale and retail trade. Twice as many never married women as ever married women are engaged in the manufacturing sector (9.5 percent and 4.8 percent respectively). This sector is dominated by garment factories in industrial zones where many young unmarried women work. The majority of women employed in the manufacturing sector are less than 25 years old (data not shown).

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Table 2.12. Percent distribution of never married and ever married working women by occupation, industry, employment status and urban-rural residence

	Union		Urban		Rural	
	NMW	EMW	NMW	EMW	NMW	EMW
Occupation						
Administers	0.3	0.5	1.0	1.6	0.1	0.2
Professionals	4.6	2.5	10.8	7.1	2.6	1.1
Technicians	1.7	1.5	4.2	4.8	0.9	0.6
Clerks	2.8	1.3	9.5	5.2	0.7	0.2
Service workers	14.6	21.8	32.1	48.8	9.0	14.1
Agricultural workers	44.7	51.2	4.8	9.4	57.4	63.1
Craft and related workers	11.2	6.4	16.2	10.6	9.6	5.2
Plants machine operators	2.8	0.8	6.8	2.1	1.5	0.4
Elementary occupation	17.3	14.0	14.4	10.3	18.2	15.0
Not classifiable	0.1	0.0	0.1	0.1	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Industry						
Agri/Forest/Fishing	57.0	61.9	7.5	11.6	72.7	76.3
Mining and quarrying	0.3	0.5	0.3	0.8	0.3	0.4
Manufacturing	9.5	4.8	15.9	8.1	7.5	3.8
Chemical product	1.0	0.5	2.5	1.1	0.5	0.3
Construction	0.3	0.2	0.6	0.4	0.2	0.1
Electricity/gas	0.0	0.0	0.1	0.1	0.0	0.0
Wholesale & retail trade	15.1	23.2	33.1	52.0	9.4	15.0
Transport & communication	0.2	0.2	0.6	0.7	0.1	0.1
Services	16.5	8.8	39.4	25.1	9.2	4.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Employment						
Employer	0.9	1.6	1.1	2.7	0.8	1.3
Self-employed	32.5	53.1	31.6	58.3	32.8	51.6
Government employee	7.7	4.8	20.5	15.3	3.7	1.8
N.G.O employee	0.4	0.3	0.8	0.6	0.3	0.2
Private employee	24.0	14.5	31.7	12.0	21.6	15.2
Unpaid family worker	33.6	24.8	13.5	10.8	40.0	28.8
Other	0.9	0.9	0.8	0.3	0.9	1.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

2.3.4. Employment status

Table 2.12 also presents the percent distribution of ever married and never married women according to employment status. It can be seen that more than 50 percent of the ever married workers both in urban and rural areas were self-employed, whilst only 33 percent of never married women reported being self employed. In contrast, more never married women report being a private employee (24 percent) or government employee (eight percent) than ever married women (14.5 and 4.8 percent respectively). For both never married and ever married women, there are proportionally many more working as government employees in urban areas than in rural areas. This is because most of the government offices are in urban areas especially in big cities

A larger proportion of never married women are reported as being an unpaid family worker than ever married women. At the Union level, the proportions of unpaid family workers in the labour force are 33.6 percent for never married women and 24.8 percent for ever married women. This difference is more marked in rural areas, where 40 percent of never married women in the labour force are reported to be family workers. It is

worth noting that among men at the Union level 26 percent are reported to be unpaid family workers (data not shown).

2.4. Women in the household structure

Households in Myanmar are either nuclear or extended. As stated above, the father is usually the head of the household, although in an extended household it is commonly the most senior person who is head. For example, in a household constituting grandparents, children and grandchildren, when the grandfather dies, the grandmother becomes the head of the household. Thus, household headship is based on the Myanmar culture of respect and value of elders, not only on an economic basis. Women's role in the family is clearly crucial to the wellbeing of the family, but is also an important determinant of national social indicators such as headship rates, average age at marriage and fertility rates. Household structure is one of the demographic indicators to assess the role of women in development.

In 1991, 17.9 percent of households were headed by women. This rose slightly to 18.4 percent in 1997 and 19.3 percent in 2001. In 1991, among the household heads, two percent were never married women heads, 15 percent divorced and/or widowed and one percent currently married. The same pattern is seen in 2001, with two percent, 16 percent and one percent never married, divorced and/or widowed, and currently married respectively.

Table 2.13. Never married and ever married female headship rate of household by age group and education according to urban-rural residence, 2001 FRHS

Background Characteristics	Total			Urban			Rural		
	NMW	EMW	Total	NMW	EMW	Total	NMW	EMW	Total
Age group									
15-24	0.3	0.4	0.3	0.3	0.6	0.4	0.2	0.4	0.3
25-34	1.9	1.9	1.9	1.7	2.7	2.3	2.0	1.6	1.7
35-44	7.5	6.5	6.7	6.0	7.7	7.3	8.6	6.1	6.4
45-54	20.7	16.1	16.6	20.8	17.4	17.9	20.6	15.6	16.1
55-64	31.8	28.0	28.3	31.5	30.0	30.2	32.0	27.2	27.5
65+	33.8	37.7	37.5	31.7	41.8	41.1	35.0	36.2	36.1
Education									
Less than Std.one	6.8	22.7	20.3	6.6	28.2	25.1	6.9	21.6	19.4
Primary	3.4	10.2	8.0	5.2	17.0	14.0	3.1	8.4	6.6
Middle school	1.5	7.5	4.7	2.5	10.5	7.5	1.1	4.8	2.8
High school	1.5	8.8	4.0	2.1	10.2	5.5	0.8	5.8	2.1
University	3.6	6.2	4.5	4.0	6.8	5.0	2.9	4.3	3.3
Others	11.9	22.6	20.9	12.7	31.1	28.2	11.8	21.3	19.9
Total	**3.1**	**13.9**	**10.1**	**3.5**	**16.0**	**11.2**	**3.0**	**13.1**	**9.7**

2.4.1. Female household headship by marital status and age

Table 2.13 shows the female household headship rates by age and education, both for never married women and ever-married women. The rates increase by age; about one third of women aged above 55 are household heads, the proportion being much the same whether or not they are ever married, and whether or not they live in urban or rural areas. Most of the ever-married household heads at these ages are widows. As for the never married household heads at these ages, there is no evidence in the survey to show why they are more likely to become household heads as they grow older, but the reason may frequently be the death of a parent or parents with whom they have been living.

2.4.2. Female household headship by marital status and education

The lower half of Table 2.13 shows female headship rates by education. The highest headship rates are those whose educational status is classified as "others", but this is a very small group numerically. Household headship rates are also high for those with less than standard one education, which may reflect the lower education levels among older women who make up most of the household heads. At each level of education, there is a much lower headship rate for never married than for ever-married women.

2.4.3. Female headed households by household size

Overall, average household size in Myanmar barely changed between 1991 and 2001 (5.22 persons in 1991: 5.18 persons in 2001). Of all female household heads in Myanmar, 30.9 percent are in urban areas and 69.1 percent in rural areas.

Table 2.14. Percentage distribution of household size for male-headed, female-headed never married and ever-married heads according to urban-rural residence, 2001 FRHS

Household Size	Total				Urban				Rural			
	Men	NMW	EMW	Total	Men	NMW	EMW	Total	Men	NMW	EMW	Total
1	1.3	27.1	7.1	9.3	1.7	20.7	5.5	7.3	1.1	30.4	7.8	10.2
2	6.1	21.5	14.0	14.8	5.8	19.5	11.7	12.6	6.2	22.5	15.1	15.8
3	12.9	16.9	16.4	16.5	12.0	18.8	15.5	15.9	13.2	15.9	16.9	16.8
4	19.1	11.8	16.7	16.2	19.9	12.8	16.2	15.8	18.8	11.2	17.0	16.4
5	19.5	8.2	15.0	14.3	19.9	9.4*	14.4	13.8	19.4	7.6	15.3	14.5
6	16.2	4.2	12.1	11.3	15.9	6.0*	11.5	10.8	16.2	3.3*	12.4	11.5
7	11.1	4.5	7.4	7.1	10.0	4.1*	8.6	8.1	11.4	4.7*	6.8	6.6
8	7.2	3.1*	4.5	4.4	6.6	4.9*	6.0	5.9	7.3	2.1*	3.9	3.7
9	4.4	1.5*	2.6	2.5	4.4	1.5**	3.5	3.2	4.3	1.6**	2.2	2.1
10+	2.3	1.3*	4.0	3.7	3.5	2.3**	7.1	6.6	1.9	0.8**	2.6	2.4
All sizes	100	100	100	100	100	100	100	100	100	100	100	100
Total	29698	782	6318	7100	7025	266	1931	2197	22673	516	4387	4903
Mean household size	5.5	3.2	4.5	4.4	5.3	3.5	4.9	4.8	5.5	3.0	4.3	4.2

Table 2.14 shows the distribution of household size for male-headed households, and for two categories of female-headed households: those headed by never-married women and those headed by ever-married women. First, comparing male-headed households with all female-headed households, it is evident that male-headed households are, on average, much larger: 5.5 members compared with 4.4 members for female-headed households. The differences are most striking at the extreme household sizes. One and

two-person households constitute only 7.4 percent of households headed by males, but 24.1 percent of households headed by females. Households with 7 or more members constitute 25 percent of all households headed by men, but 18 percent of households headed by women.

The comparison in Table 2.14 between female never married and ever married heads of household by household size and by urban-rural residence is also important. At the Union level, 48.6 percent of households headed by never married women were one-person or two-person households, while only 21.1 percent of households headed by ever married women contained less than three persons. Mean household size is smaller in households with never married household heads than households with ever-married heads and the proportion of single person households is higher among never married women. The mean size of the households headed by ever married women for urban, rural and the Union is 4.9, 4.3 and 4.5 respectively, but it was 3.5, 3.0 and 3.2 respectively among those households headed by never married women.

Over 60 percent of ever married heads of households are in households of four or more members compared to 35 percent of never married women heads of household. A similar pattern is seen in both urban and rural areas. However, for households headed by never married women, there is one important urban-rural difference to note: 30.4 percent of these households are one person households in rural areas, but only 20.7 percent of them are one person households in urban areas. This may be explained by the living arrangements commonly practised in rural areas, where siblings and/or relatives lived in separate houses within one compound. Siblings and/or relatives keep their relatives company who live alone within the same compound and safeguard them from dangers and loneliness. This might explain the higher percentage of never married household heads in single person households in rural than in urban areas. Another potential demographic explanation is out-migration of family members from rural areas, leaving never married women behind.

2.4.4. Female heads of household by age

In section 2.4.1 above, the female household headship rate for women of different age and marital status was discussed. Another relevant way to utilize the same data is to examine the distribution of all female household heads according to age group, and this is done in Table 2.15, by urban and rural residence. Even though headship rates for young women, both ever married and never married, are quite low, because of the different age distribution of never married and ever married women, a much higher proportion of all never married heads are in the younger age groups (15-44) than is the case for ever married heads: 39.5 percent and 14.8 percent respectively. The opposite is the case for older women. Almost two thirds (63.6 percent) of ever married heads are aged 55 years and above, compared with only one third (33 percent) of never married heads. Most of these older ever married heads are probably widows. The age pattern of female head of households is similar for both urban and rural areas.

2.4.5. Female heads of household by education

The level of education of women heads of household is important for their status and for their ability to contribute towards the development of the country. As can be seen in the lower panel of Table 2.15, 79 percent of female household heads have primary education or less.

The never married female household heads are, on average, more educated than those who are ever married. For example, 64 percent of never married female heads have

only a primary education or less whilst this is 81 percent for ever married heads. By contrast, 27 percent of never married female heads have high school and above education, compared with only 13 percent of ever married female heads. The differences between the two groups are particularly striking in urban areas, where 48 percent of never married female household heads have high school education and above, compared with 18 percent of ever married female household heads.

There are wide urban-rural differences in education for both groups, with lower educational levels in rural areas. Taking the never married female household heads, in urban areas 38 percent have primary school education or less, compared with 77 percent in rural areas. At the higher end of educational attainment, the differences are also striking for these never married household heads: in urban areas, 19 percent have high school education and 29 percent have a university education, whereas in rural areas the equivalent percentages are only 3.5 percent and 13 percent.

Table 2.15. Never married and ever married female heads of household by age group and education according to urban-rural residence (percentage distribution).

Background Characteristics	Total			Urban			Rural		
	NMW	EMW	Total	NMW	EMW	Total	NMW	EMW	Total
Age group									
15-24	5.1	0.3	0.8	5.3	0.3	0.9	5.0	0.3	0.8
25-34	13.0	3.2	4.3	12.4	3.8	4.9	13.4	2.9	4.0
35-44	21.4	11.3	12.4	19.5	11.9	12.8	22.3	11.1	12.2
45-54	27.6	21.6	22.2	30.5	20.9	22.1	26.2	21.9	22.3
55-64	18.2	27.7	26.7	19.5	25.8	25.0	17.4	28.6	27.4
65+	14.7	35.9	33.6	12.8	37.3	34.4	15.7	35.3	33.2
All ages	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Education									
less than Std.one	20.2	47.1	44.2	8.6	30.4	27.8	26.2	54.5	51.5
Primary	43.7	33.5	34.6	29.7	38.1	37.1	51.0	31.5	33.6
Middle school	9.2	6.4	6.7	13.9	14.0	14.0	6.8	3.1	3.5
High school	8.8	3.6	4.2	19.2	9.2	10.4	3.5	1.1	1.4
University	18.0	9.4	10.3	28.6	8.4	10.8	12.6	9.8	10.1
All ages	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total	**782**	**6318**	**7100**	**266**	**1931**	**2197**	**516**	**4387**	**4903**

2.5. Household size and relationship to head of household

It can be seen from Table 2.16 that it is uncommon for never married women in Myanmar to live alone. The percentage of one-person households increases starting from zero in age-group 15-24 to over 10 percent in age groups 55-59 and over 60. The mean household size in which never married women live is around the national mean. That is, for all age groups, the highest proportion live in households with a mean size of five or six members.

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Three quarters of never married women aged less than 45 years are the daughter of the head of household, i.e. they live with one or both of their parents. Of those not living with their parents, as age increases there is an increase in the proportion living with another family member or as household head. Among women aged 34 years and under, fewer than 11 percent live with another relative. This shows a steady increase to over 50 percent in the over 60 age group. It is very uncommon for never married women to live in households where someone other than a family member or themselves is the household head - less than two percent in age groups up to 44 years.

It is not uncommon in Myanmar for one of the children, often the oldest son or daughter, to remain unmarried and to take care of their parents in their old age. Although parents may assist their offspring with finding a suitable marriage partner, arranged marriages are not the norm and there is generally little pressure to marry. The status of never married women in society is as high, and in some situations higher, than that of married women. Looking after one's parents is seen to be a virtue, showing respect to your elders and repaying them for the care they have provided. It appears that many never-married women through their young and middle adult years live with, and presumably care for, their parents. When the parents of these women die, the daughters either become the household head or live with other relatives who are household heads. This transition takes place mainly when the women are in their late forties or in their fifties (Table 2.16).

Table 2.16.	Percentage distribution of household size and relation to head of household of never married women, according to age group						
Particulars	**Age group**						**Total**
	15-24	25-34	35-44	45-54	55-59	60+	
Household Size							
1	0.1	0.4	1.9	6.1	10.3	10.3	0.9
2	1.3	3.5	6.5	11.5	12.8	13.2	3.0
3	5.3	8.6	13.3	15.6	14.0	11.8	7.4
4	11.2	12.6	14.0	14.3	13.6	14.1	12.0
5	16.4	15.7	15.9	13.7	13.2	12.6	16.0
6	18.7	16.8	13.7	11.5	8.3	10.7	17.3
7	15.6	13.5	11.7	10.3	10.7	11.1	14.5
8	12.6	10.8	7.9	6.9	6.6	7.1	11.4
9	8.7	7.1	5.8	4.3	4.5	3.0	7.7
10+	10.2	11.0	9.2	5.7	5.8	6.0	9.9
Mean	**6.5**	**6.2**	**5.6**	**4.9**	**4.8**	**4.8**	**6.2**
RTHH							
Head	0.3	1.9	7.5	20.7	31.8	33.8	89.4
Daughter	84.0	83.3	70.5	43.5	19.8	3.4	5.4
Grand Daughter	7.6	2.4	0.5	0.2	0.0	0.2	4.5
Orther relative	6.4	10.6	19.6	33.4	43.8	56.8	0.1
Non other relative	1.8	1.9	1.9	2.2	4.5	5.8	0.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
No. of Women	15469	5339	2214	1044	242	532	24840

2.6. Conclusion

The data presented in this chapter show increasing numbers of women never married and increasing age at marriage. The proportion of women coming to the end of their reproductive period (ages 45-49) without marrying has now reached 12 percent. This has important implications for fertility, because in Myanmar, exposure to pregnancy usually comes only with marriage. The 2001 Country Report presents data regarding the decreasing fertility rate in Myanmar. Although some of this may be due to increased use of birth spacing, it seems likely that a significant proportion is due to the higher age at marriage and the increasing proportion of women never marrying.

The situation of never married women by education and employment provides an indicator of the background of such women and how they fare in society. The data shows a rise, with educational level, in the proportion of women remaining unmarried. Women with university education are the most likely to remain unmarried. This is a common pattern across Southeast and East Asia (Jones, 2003). The reasons are not entirely clear. It may be that more educated women have less reason to marry because they are able to be financially independent or it may be that it is more difficult for them to find a suitable partner. In any case, as the educational levels of society increase the proportions of never-married can also be expected to increase. The proportions never married in Myanmar society are already high in comparison to other countries in the region and the demographic and social impacts can be expected to be even greater in the future. At the same time, it is important to keep in mind that in Myanmar, even though the probability of being never married increases with educational level, because of the educational distribution most never married women have primary school education or less.

The data show that never married women are more likely to be active in the labour force than ever married women. It is not possible from these data, however, to assess whether never married women are in the work force because they must support themselves and provide their share of the household income, or whether they chose not to marry as they have an independent source of income. It is apparent, however, that never married women occupy different occupational niches than do ever married women. Never married women, compared to ever married are more likely to be working as employees and as unpaid family workers. It appears that many of the new manufacturing and services jobs that are being created, especially in urban areas, are being filled by never married women. These women are earning cash incomes and are probably a main form of economic support for their families. Another large group of never married, mainly concentrated in rural areas, are working as unpaid family workers. A high proportion - 85 percent - of these women are living with their parent or parents, no doubt helping to care for them in cases where the parents are elderly or incapacitated.

The rise in the proportion of never married women in Myanmar has a number of implications for those women and their families. Women can stay in school longer and acquire skills and training necessary for higher income jobs, and can also earn income for themselves and their family before they marry. Marrying at a later age enables them to enter marriage with greater emotional and physical maturity to meet the challenges of family life. This should enable them to play more active roles in community and national development. At the same time, older age at marriage means having children at a later age. This has reduced the proportion of childbearing that occurs in the teenage years, where the risks to mother and baby are high. But at the same time, it is probably leading to more childbearing at much older ages, where again there are increased health risks. Health and community services therefore need to address the needs of older pregnant women.

Attention also needs to be paid to the needs of the substantial proportion of women who will never marry, and to the ways these women can best contribute to society.

Another implication of rising age at marriage for women is that the great majority of adolescents are single, and will not be reached by reproductive health programmes oriented to married couples. Further research is needed to ascertain the health and sexual practices of young unmarried people, in order to guide the development of appropriate adolescent reproductive health programmes.

Differences are seen between households headed by never married women and those headed by ever married women or by men. Never married women are most likely to become household heads when they go through the transition from caring for their elderly parents to experiencing the death of their parents. At this time, many never married women go to live with other relatives while a significant proportion begin to head their own households. This transition usually occurs when women are in their late forties or early fifties. Ever-married women, on the other hand, are most likely to become household heads when they are widowed on their husband's death.

More information is needed to guide policy with respect to the never married in Myanmar. For example, from the current survey we know that more well-educated women marry later or do not marry at all. But the causal relationship is not clear, and more information on the motivation behind decisions on when and whether to marry would be very useful. Similarly, this survey has shown that there is considerable variation in the economic situation of never-married women. It is apparent that considerable proportions of never-married women are highly educated and have high status occupations. However, the bulk of never-married women are of low education and many do not work, or work as unpaid family labour. In order to more fully understand the economic situation of never-married women, further examination of the household economic status of households in which never married women reside is required.

CHAPTER III

CHILD HEALTH AND MORTALITY

CHAPTER III

CHILD HEALTH AND MORTALITY

3.1. Introduction

The objectives of this chapter is to study the level of indicators of child health status, the health seeking behaviour of mothers, and assess how their health-seeking behaviour affects infant and child mortality in Myanmar. The effects of socio-economic and demographic factors on child health and mortality are examined, and attempts are made to identify the situation of child health and mortality in different sub-national regions and urban-rural residence. The findings can be used to help policy makers and programme managers in planning appropriate strategies and implementing realistic programmes to improve the health and well-being of this highly vulnerable population group, particularly infants and young children.

This chapter is divided into two sub-themes: child health and infant and child mortality. For most of the analysis, data from 2001 Fertility and Reproductive Health Survey are utilized. Most of the data are derived from the individual questionnaire of ever married women age 15-49 and selected data from the household questionnaire are also used to explain the child mortality differentials. Wherever possible, levels and trends of three surveys (1991 PCFS, 1997 and 2001 FRHS) are analysed and presented.

3.2   Child health

In this section, the seven related topics are analysed and presented under seven sub-headings namely Antenatal care, Tetanus toxoid injection, Assistance during delivery, Place of delivery, Immunisation, Childhood disease: diarrhoea prevalence and treatment, and Breastfeeding and food supplementation.

3.2.1   Antenatal care

Antenatal care has an important influence on child health and mortality. Supplemented with information on neonatal and infant mortality, the analysis of antenatal care can provide useful information for developing strategies and implementing reproductive health programmes to improve child and maternal health and reduce child mortality.

In this section, data from two surveys (1997 and 2001 FRHS) on live births from the last four pregnancies in the five years preceding the survey are used in the analysis. Table 3.1 shows the percent distribution of the live births from the last four pregnancies in the five years preceding the survey by source of antenatal care according to background characteristics for the 1997 FRHS and 2001 FRHS. Overall, more than three quarters (76 percent) of women whose pregnancy resulted in a live birth sought antenatal care from qualified medical professionals in 1997 and 2001.

A very high proportion of women whose pregnancy resulted in a live birth (91 percent in 1997 and 87 percent in 2001) in urban areas seek antenatal care from qualified medical professionals compared to 72 percent and 73 percent in rural areas, respectively.

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Table 3.1 Percent distribution of live births from last 4 pregnancies in the 5 years preceeding the survey by source of antenatal care according to background characteristics, 1997 and 2001 FRHS

Background characteristics	1997					2001				
	Source of ANC				No. of births	Source of ANC				No. of births
	Doctor	Nurse/ midwife	TBA	No one		Doctor	Nurse/ midwife	TBA	No one	
Residence										
Urban	38.7	52.3	2.4	6.1	2895	35.3	51.3	4.8	6.6	1234
Rural	4.7	67.2	8.5	19.2	11594	3.6	68.9	8.1	18.9	4277
Age of mother										
<30	10.8	45.4	39.0	1.5	5469	10.8	64.5	8.1	15.7	2330
30+	12.1	44.5	37.3	2.9	7059	10.6	65.3	6.8	16.4	3181
Mother's education										
No schooling	4.1	56.9	12.6	26.2	3595	4.6	57.7	9.3	27.9	1188
Primary	6.7	70.0	6.8	16.0	7589	5.9	68.8	8.2	16.1	3032
Middle school	22.2	64.4	3.7	9.1	2052	18.5	69.5	4.5	6.7	757
High school	36.1	53.9	1.8	4.5	811	36.2	58.7	1.0	3.7	298
University	60.2	37.5	0.3	2.0	440	57.3	39.5	0.5	1.1	185
Regions										
Domain 1	11.5	64.3	4.4	19.6	1943	13.0	61.1	3.3	21.7	640
Domain 2	10.9	72.1	8.7	8.1	1510	13.6	69.7	5.4	7.8	499
Domain 3	3.7	68.9	3.9	23.1	1859	4.0	77.8	2.7	14.3	729
Domain 4	8.1	70.6	6.6	14.4	1486	5.9	64.5	11.2	17.6	592
Domain 5	3.3	84.5	2.6	9.4	1109	3.5	71.7	8.1	16.8	459
Domain 6	10.8	66.5	7.3	15.0	1756	12.8	63.6	3.8	19.0	736
Domain 7	5.6	42.3	13.0	38.9	1175	2.3	72.0	3.8	21.5	521
Domain 8	43.3	40.0	8.8	7.7	1441	40.6	44.9	10.5	3.9	532
Domain 9	8.2	66.2	10.5	14.0	2210	4.ʌ	59.7	16.4	19.1	803
Total	11.5	64.3	7.3	16.5	14489	10.7	64.9	7.4	16.1	5511

Note: Domain 1 Kachin/Kayah/Shan   Domain 4 Bago   Domain 7 Rakhine
Domain 2 Kayin/Mon/Tanintharyi   Domain 5 Magway   Domain 8 Yangon
Domain 3 Chin/Sagaing   Domain 6 Mandalay   Domain 9 Ayeyarwady

It is interesting to note that there are substantial differentials by type of antenatal care received by both younger mothers (age < 30) and older mothers (age 30 and older) over the two survey periods. Among the younger mothers, the proportion seeking antenatal care from health professionals rises from 56 percent in 1997 to 75 percent in 2001, while the proportion seeking care from traditional birth attendants drops significantly from 39 percent to eight percent over the two survey periods. Surprisingly, the percentage of these younger women receiving antenatal care from "no one" rises from two percent to 16 percent over the same periods. A similar pattern is observed among the older women age 30 and older.

As mentioned in the 2001 FRHS Country Report, the level of mother's education has an important effect on the utilization of different types of antenatal care (ANC) services. The proportion of births receiving ANC from doctors rises sharply with increasing level of mother's education: from 4-5 percent of births to mothers with no education to 57-60 percent of births to mothers with university education for the survey periods (1997 and 2001). For the two survey periods, the percentage of births assisted by traditional birth attendants declines significantly from 9-13 percent among mothers with no schooling to less than one percent among mothers with university education. Similar patterns of decline in the proportion of births receiving ANC from "no one" are observed among mothers with no schooling and mothers with higher educational levels: from 26

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percent among mothers with no schooling to two percent among mothers with university education in 1997 and from 28 percent to one percent respectively in 2001.

Overall, for the two survey periods, the levels of ANC services by type of ANC are very similar: 12 percent versus 11 percent from "Doctor"; 64 percent versus 65 percent from "nurse/midwife"; seven percent each from "traditional birth attendant"; and 17 percent versus 16 percent from "no one". However, there are substantial differentials in the utilization of various types of ANC services among states and divisions or domains. While four domains improve utilization of ANC from medical professionals (Yangon from 83 percent to 86 percent; Kayin/ Mon/ Tanintharyi from 83 percent to 84 percent; Chin/Sagaing from 73 percent to 82 percent; and Rakhine from 48 percent to 74 percent), three domains register large declining use of ANC services (Magway from 88 percent to 75 percent; Ayeyarwady from 74 percent to 64 percent; and Bago from 79 percent to 70 percent), and two domains show small declines (Mandalay from 77 percent to 76 percent, and Kachin/ Kayah/ Shan from 76 percent to 74 percent). For the two survey periods, the proportion of births receiving ANC from "no one" declines in the three domains (Rakhine from 39 percent to 22 percent; Chin/ Sagaing from 23 percent to 14 percent; and Yangon from eight percent to four percent), while the remaining five domains show some or substantial increases.

Table 3.2   Percent distribution of live births in the five years preceding the survey by the number of antenatal care (ANC) visits, and by the stage of pregnancy at the time of the first visit, 1997 and 2001 FRHS

Number of visits and stage of pregnancy	Percent	
	1997	2001
Number of visits		
None	14.0	15.9
1	7.4	7.4
2-3	42.0	38.1
4+	36.6	38.3
Don't know/missing	0.0	0.3
Total	**100.0**	**100.0**
Mean no. of visits	**4.9**	**4.6**
Number of births	**12596**	**5511**
Number of months pregnant at time of first visit		
Under 6 months	n.a	70.1
6-7 months	n.a	22.9
8 months and above	n.a	5.6
Don't know/missing	n.a	0.1
Mean number of months at first visit	**n.a**	**5.0**
Number of births	**n.a**	**4632**
Note: **n.a - not available**		

Table 3.2 presents the percent distribution of live births in the five years preceding the survey by the number of antenatal care (ANC) visits, and by the stage of pregnancy at the time of the first visit in 1997 and 2001. The number of ANC visits follows a similar pattern for 1997 and 2001 FRHS. The mean number of ANC visits remains unchanged at

five for both surveys. It must be noted that an increasing proportion of mothers receive no antenatal care services: from 14 percent in 1997 to 16 percent in 2001. Only slightly less than 4 out of 10 children are born to mothers who had 4 or more antenatal care visits for both 1991 and 1997 surveys. Information on the number of months pregnant at time of the first antenatal visit is not available for 1997. The mean number of months pregnant at the first antenatal visit is five months in 2001. About 70 percent of pregnancies are to mothers who were less than six months pregnant when they sought their first antenatal care in 2001.

3.2.2. Tetanus toxoid injection

Table 3.3 presents the percent distribution of live births in the five years preceding the survey by number of tetanus toxoid injections (TTI), according to background characteristics for 1991, 1997 and 2001 surveys. Overall, the percentage of births whose mothers received no tetanus toxoid vaccination decreases 21 percentage point (from 37 percent to 16 percent), while the percentage of those who received at least one dose increases about 24 percentage point (from 60 percent to 84 percent) between 1991 and 2001. This is an encouraging trend, indicating the improvement or impact of TTI programme efforts. But most of the TTI coverage increases occurred between 1991 and 1997: about 26 percentage point increase between 1991 and 1997 compared to only about 3 percentage point increase between 1997 and 2001.

The coverage of tetanus toxoid vaccination has increased for all age groups of mothers but a more noticeable increase is found among women age 40-49, from 57 percent in 1991 to 82 percent in 2001. Similarly, the TTI coverage has improved for each birth order, particularly for the lower birth orders (1 to 3). Mothers of birth order 1-3 have a larger percentage receiving TTI than the higher parity mothers. The birth interval of less than one year has the largest increase in the coverage of tetanus toxoid vaccination between 1991 and 2001. Coverage of tetanus toxoid vaccination rises with increasing educational level of mothers in each survey period, with greater increase from births whose mothers had no schooling (about 70 percent increase between 1991 and 2001).

The gap between urban and rural coverage of tetanus toxoid injections (TTI) has narrowed substantially between 1991 and 2001 (from percentage difference of about 35 percent in 1991 to only seven percent in 2001). Among the regions, there has been substantial improvement in TTI coverage, with Yarigon having the highest coverage (rising from 88 percent in 1991 to 91 percent in 2001). Interestingly, Rakhine State manifests the greatest improvement with the highest percentage increase of the tetanus toxoid vaccination coverage between 1991 and 2001 (from 23 percent to 78 percent), followed by Chin/ Sagaing (from 45 percent to 87 percent) and Kachin/ Kayah/ Shan (from 51 percent to 83 percent).

Table 3.3   Percent distribution of live births in the five years preceding the survey by number of tetanus toxoid vacalnnations received during pregnancy, according to background characteristics, 1991 PCFS, 1997 and 2001 FRHS

Background characteristics	1991			1997			2001			No. of births		
	None	one or more doses	Don't know/ missing	None	one or more doses	Don't know/ missing	None	one or more doses	Don't know/ missing	1991	1997	2001
Mother's age at birth												
<20	28.2	71.2	0.6	23.4	76.3	0.2	20.6	79.4	0.0	1311	603	412
20-29	36.5	62.6	0.9	17.9	81.9	0.2	15.7	83.6	0.7	2297	6461	2698
30-39	37.6	61.6	0.7	18.6	81.2	0.2	15.1	84.4	0.5	1499	5057	2050
40-49	41.6	57.1	1.3	24.2	75.9	0.0	17.1	81.5	1.4	308	760	287
Birth order												
1	28.3	71.3	0.4	15.4	84.3	0.3	13.8	85.2	0.9	1291	2071	1423
2-3	29.4	67.5	0.7	15.4	84.4	0.2	15.6	84.0	0.4	1866	5489	2141
4-5	38.1	61.4	0.8	22.0	77.8	0.2	17.1	82.1	0.8	1186	3008	1132
6+	45.9	52.7	1.4	25.9	74.0	0.1	18.8	80.7	0.5	1068	2313	751
Birth Interval												
<=11 months	43.6	55.1	1.3	23.8	76.0	0.0	13.5	86.5	0.0	78	463	37
12-17	34.2	65.8	0.0	20.7	78.8	0.4	16.7	83.3	0.0	79	791	84
18-23	28.9	71.1	0.0	20.3	79.7	0.0	11.3	88.0	0.7	142	1242	150
24-29	25.8	73.0	1.1	19.3	80.6	0.1	8.6	91.4	0.0	178	1724	175
30-35	31.4	67.4	1.1	19.8	80.2	0.0	11.5	87.8	0.7	175	1542	148
36+	38.4	60.7	1.0	18.6	81.1	0.2	17.5	81.9	0.6	3472	5049	3430
Residence												
Urban	10.6	86.9	2.5	5.1	94.8	0.1	10.2	89.2	0.7	1208	2583	1228
Rural	44.0	52.2	3.9	22.3	77.5	0.2	17.6	81.8	0.6	4207	10299	4219
Mother's education												
No schooling	52.7	43.1	4.2	31.9	67.9	0.1	26.3	73.2	0.5	1696	3210	1167
Primary	34.1	62.3	3.5	18.1	81.7	0.2	15.3	84.1	0.6	2738	6735	2995
Middle School	15.5	82.0	2.5	8.6	91.3	0.1	8.8	90.3	0.9	594	1814	752
High School	7.1	89.8	3.1	3.2	96.5	0.3	5.7	93.6	0.7	261	721	297
University	0.8	99.2	0.0	0.8	99.0	0.0	7.6	92.4	0.0	125	388	236
Regions												
Domain 1	47.3	50.9	1.8	22.7	77.0	0.3	16.4	83.0	0.6	284	1728	628
Domain 2	26.4	70.9	2.7	14.6	85.4	0.0	11.7	87.3	1.0	370	1351	497
Domain 3	50.3	45.3	4.5	21.2	78.6	0.2	13.3	86.6	0.1	776	1679	724
Domain 4	29.5	69.0	1.5	14.5	85.5	0.1	17.6	81.7	0.7	726	1315	590
Domain 5	21.7	73.5	4.8	10.2	89.5	0.2	13.3	85.8	0.9	589	1013	452
Domain 6	24.6	70.9	4.5	18.0	81.8	0.2	18.2	81.0	0.8	801	1547	715
Domain 7	75.3	22.8	1.9	46.1	53.9	0.0	21.8	78.0	0.2	484	1048	514
Domain 8	8.1	88.4	3.5	8.5	91.0	0.4	8.1	91.1	0.8	571	1255	529
Domain 9	32.6	61.0	6.4	16.3	83.6	0.2	20.1	79.3	0.6	814	1946	798
Total	36.8	59.6	3.6	18.8	81.0	0.2	15.9	83.5	0.6	5415	12881	5447

Note:

Domain 1	Kachin/Kayah/Shan	Domain 4	Bago
Domain 2	Kayin/Mon/ Tanintharyi	Domain 5	Magway
Domain 3	Chin/Sagaing	Domain 6	Mandalay
Domain 7	Rakhine		
Domain 8	Yangon		
Domain 9	Ayeyarwady		

3.2.3. Assistance during delivery

An important element in reducing health risks for mothers and children is to increase the proportion of babies that are delivered under medical supervision in health facilities. Proper medical attention and hygienic conditions during delivery can reduce the risk of infections and facilitate management of complications that can cause death or serious illness for the mother and/or the newborn child. Therefore, assisted delivery by a qualified health professional is an important determinant of child health and survival.

Table 3.4 shows the percent distribution of last two live births in the five years preceding the survey by type of assistance during delivery according to selected background characteristics for 1991, 1997 and 2001 surveys. Overall, the percentage of births that were delivered by medical professionals (doctors and nurses/midwives) increases from 48 percent in 1991 to 57 percent in 2001. The percentage of births that were delivered by traditional birth attendants decreases slightly from 44 percent in 1991 to 39 percent in 2001. The percentage of births that received no assistance during delivery remains the same, at about one percent in both 1991 and 2001.

Between the two survey periods 1991 to 2001, it is noted that the percentage of births with adolescent mothers (age 15-19) who sought the assistance of medical professionals during delivery increases from 41 percent to 53 percent, while the percentage of those births delivered by traditional birth attendants decreases from 51 percent to 41 percent. Interestingly, among the small numbers of births of mothers age 45-49 at the time of delivery the percent assisted by medical professionals increases from 37 percent in 1991 to 62 percent in 2001. The percentage of births of these mothers (45-49) who were attended by traditional birth attendants declines substantially from 48 percent in 1991 to 38 percent in 2001.

Deliveries assisted by medical professionals for the first birth order increases considerably from 57 percent in 1991 to 69 percent in 2001 and for the second and third births increased from 51 percent in 1991 to 59 percent in 2001. For the higher birth orders the increase is smaller, from 40 percent to 46 percent between 1991 and 2001. This indicates that lower parity mothers tend to seek more assistance during delivery from medical professionals. It is also noted that the proportion of deliveries assisted by traditional birth attendants for the first birth order declines noticeably, from 37 percent in 1991 to 29 percent in 2001, while at higher birth order (4+), the percentage decreases slightly from 49 percent to 48 percent.

Deliveries assisted by medical professionals in urban areas remains the same at about 80 percent between 1991 and 2001. But a marked increase is observed in rural areas from 39 percent in 1991 to 50 percent in 2001. The proportion assisted by medical professionals is substantially lower for rural areas than urban areas in the 1991, 1997 and 2001 surveys. Conversely, the proportion assisted by traditional birth attendants is about three times higher in rural areas than urban areas in each of the three surveys (1991, 1997 and 2001).

The proportion of births assisted by medical professionals increases with increasing level of mother's education in 1991, 1997 and 2001. An increase of deliveries assisted by medical professionals is found in women with no schooling, rising from 28 percent in 1991 to 36 percent in 2001. There are still sizeable proportions of deliveries to mothers with no schooling and primary education assisted by traditional birth attendants, and these proportions have not declined significantly (Table 3.4). For example, a very high proportion of mothers (almost 60 percent in 1991, 1997 and 2001) with no schooling sought assistance from traditional birth attendants for deliveries. Similarly, there are still quite a sizeable

Table 3.4   Percentage distribution of last two live births in the five years preceding the survey by type of assistance during delivery, according to background characteristics. 1991 PCFS, 1997 and 2001 FRHS

Background characteristics	Doctor			Nurse/midwife			Traditional Birth Attendant			Relatives/others			No one			No. of births		
	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001
Age of mother																		
15-19	6.8	10.3	11.5	34.2	34.8	41.4	51.3	49.0	41.4	4.3	4.9	5.8	0.9	1.0	0.0	117	230	87
20-24	8.0	9.7	12.4	39.6	44.7	41.9	46.9	41.2	42.3	2.3	3.4	2.7	0.4	0.9	0.6	989	1809	806
25-29	8.1	11.5	13.8	39.9	46.3	47.0	44.6	37.5	35.8	3.3	2.9	2.3	1.1	1.7	1.0	1477	3429	1364
30-34	10.3	13.2	12.7	40.6	44.9	44.4	39.9	36.5	38.1	3.9	2.9	2.8	1.6	2.5	2.0	1473	3335	1460
35-39	8.9	13.1	13.0	37.4	43.5	42.4	42.7	37.2	40.7	3.7	3.5	2.6	1.4	2.8	1.1	951	2307	1015
40-44	8.3	8.5	12.3	38.2	45.3	42.3	43.4	40.5	40.8	3.3	2.5	3.4	1.2	3.2	0.6	516	1169	537
45-49	8.8	7.3	17.4	28.1	39.5	44.0	48.3	40.8	37.6	6.1	5.1	0.0	0.9	7.3	0.9	114	249	109
Birth order																		
1	15.0	18.7	23.0	41.9	46.7	46.1	36.9	31.5	28.9	2.3	2.3	1.8	0.5	0.7	0.2	1336	3034	1396
2-3	9.4	12.9	12.8	41.6	45.4	46.1	41.4	37.2	37.3	3.5	3.1	2.3	0.9	1.5	1.2	1927	4869	2116
4+	4.8	5.6	5.8	35.5	42.8	40.1	49.1	43.8	48.3	4.0	3.7	3.7	1.7	4.1	1.8	2374	4625	1866
Residence																		
Urban	30.4	38.4	35.5	50.2	48.5	44.5	15.4	12.5	17.5	0.9	0.3	2.0	0.2	0.2	0.3	1244	2532	1226
Rural	2.7	4.7	6.4	35.9	44.0	43.9	51.5	44.5	45.3	4.2	3.9	2.8	1.4	2.8	1.4	4393	9997	4152
Education																		
No schooling	2.3	3.5	6.0	25.7	33.2	30.2	59.2	53.4	57.2	5.3	4.7	4.1	2.6	5.2	2.2	1783	3080	1142
Primary	5.5	6.4	7.8	42.6	47.2	47.3	44.3	41.5	41.3	3.1	3.3	2.4	0.6	1.6	1.0	2851	6572	2962
Middle school	20.5	22.4	21.7	55.8	55.6	54.3	20.8	19.6	20.1	0.5	1.6	2.8	0.3	0.8	0.8	606	1790	742
High school	36.8	40.6	40.2	52.6	49.9	45.6	3.7	8.5	13.2	2.9	0.8	1.0	0.0	0.2	0.0	272	702	296
University	59.2	61.2	69.4	40.0	37.1	34.4	0.8	1.5	1.1	0.0	0.3	0.0	0.0	0.0	0.6	125	385	183
Total	**8.8**	**11.6**	**13.0**	**39.1**	**44.7**	**44.0**	**43.6**	**38.3**	**38.9**	**3.4**	**3.1**	**2.7**	**1.2**	**2.2**	**1.2**	**5637**	**12528**	**5378**

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proportion of women (about 40 percent) with primary education who sought deliveries from traditional birth attendants in 2001.

Table 3.5 shows the percent distribution of last two births in the five years preceding the survey by type of assistance during delivery according to region of residence for 1991, 1997 and 2001 surveys. The proportion assisted by medical professionals increases in all regions except for regions Kayin/ Mon/ Tanintharyi where there is a considerable decline between 1991 and 2001, from 81 percent in 1991 to 66 percent in 2001. Among the regions, region Magway Division is found to have the greatest increase in the proportion of deliveries assisted by medical professionals, from 38 percent in 1991 to 61 percent in 2001. Most of the region register some decline in the proportion of deliveries assisted by traditional birth attendants between 1991 and 2001. Magway Division indicates the greatest decline in the proportion of births assisted by traditional birth attendants, from 52 percent in 1991 to 38 percent in 2001. Conversely, Kayin/Mon/Taninharyi doubles the proportion of deliveries assisted by traditional birth attendants, from 16 percent in 1991 to 33 percent in 2001.

The proportion of births assisted by medical professionals is higher in urban areas than rural areas in every region in both 1991 and 2001. Among the regions, surprisingly, given the decline in ANC attendance, the greatest increase of the percentage of deliveries assisted by medical professionals is found in urban areas of Magway Division, from 59 percent in 1991 to 98 percent in 2001. The highest decline of the percentage of deliveries assisted by medical professionals is found in urban areas of Rakhine State, from 71 percent in 1991 to 47 percent in 2001. But in rural areas of Rakhine State, deliveries assisted by medical professionals increase substantially from 12 percent in 1991 to 29 percent in 2001. It is interesting to note that with the exception of Kayin/ Mon/ tanintharyi, a larger increase in the percentage of deliveries assisted by medical professionals is found in rural areas than urban areas in each region between 1991 and 2001. This is probably due to the government's maternal and child programme efforts to narrow the gap on availability of services between urban and rural areas.

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Table 3.5 Percentage distribution of last two live births in the five years preceding the survey by type of assistance during delivery, region and urban-rural residence, 1991 PCFS, 1997 and 2001 FRHS

Region	Doctor			Nurse/midwife			TBA			Relatives/others			No one			No. of births		
	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001
Total																		
Domain 1	14.9	10.9	19.5	38.5	49.2	48.8	33.0	22.8	19.4	11.8	9.7	5.9	0.0	7.5	6.4	288	1656	625
Domain 2	9.0	11.9	15.8	72.2	57.5	49.9	16.1	28.9	33.3	0.5	1.4	0.8	0.0	0.4	0.0	378	1316	481
Domain 3	4.1	4.3	5.7	40.0	49.3	47.3	40.0	34.1	39.1	6.1	6.3	6.5	5.9	6.1	1.3	808	1615	706
Domain 4	3.2	9.5	8.3	37.3	45.3	44.8	55.6	44.2	44.6	2.0	0.5	2.2	0.0	0.5	0.2	741	1286	581
Domain 5	3.9	4.9	6.9	34.6	54.1	54.1	52.3	37.2	38.1	3.9	1.8	0.2	0.2	1.9	0.5	622	992	449
Domain 6	9.0	11.6	14.2	47.2	46.6	47.0	36.9	40.7	37.0	1.7	0.6	1.0	0.8	0.6	0.7	837	1520	724
Domain 7	3.6	4.2	4.4	15.3	26.3	27.5	69.8	64.8	62.3	7.4	3.4	4.8	1.2	1.1	0.6	497	997	499
Domain 8	34.6	41.0	42.1	33.1	32.8	33.4	27.1	24.9	23.9	1.2	0.6	0.2	0.0	0.6	0.0	595	1239	527
Domain 9	4.4	7.4	4.6	38.8	40.1	42.4	48.6	49.8	51.2	1.4	2.4	1.3	0.3	0.3	0.3	871	1907	786
Urban																		
Domain 1	32.6	35.5	49.5	60.7	58.4	36.2	6.7	5.7	9.5	0.0	0.3	3.8	0.0	0.0	1.0	89	296	105
Domain 2	18.9	33.3	23.2	66.7	53.4	54.3	12.6	12.9	21.7	0.0	0.4	0.7	0.0	0.0	0.0	111	264	138
Domain 3	22.5	19.1	15.6	61.8	75.4	64.2	11.2	4.4	4.6	4.5	0.0	15.6	1.1	1.1	0.0	89	183	109
Domain 4	7.5	26.9	17.0	49.7	52.4	45.0	39.9	18.8	38.0	0.6	1.0	0.0	0.0	1.0	0.0	173	208	100
Domain 5	14.8	16.2	20.7	44.3	71.7	77.6	34.4	10.1	1.7	1.6	1.0	0.0	0.0	1.0	0.0	61	99	58
Domain 6	25.0	36.6	36.3	62.3	55.2	50.0	8.3	8.3	13.2	2.0	0.0	0.5	0.0	0.0	0.0	204	339	204
Domain 7	28.6	11.1	4.0	42.9	59.0	42.7	25.0	29.9	46.7	0.0	0.0	1.3	1.8	0.0	4.0	56	117	75
Domain 8	55.0	60.8	60.6	33.1	27.5	28.3	7.5	11.3	10.8	0.3	0.3	0.3	0.0	0.0	0.0	362	785	353
Domain 9	20.6	24.9	16.7	59.8	51.9	46.4	14.4	23.2	36.9	0.0	0.0	0.0	0.3	0.0	0.0	97	237	84
Rural																		
Domain 1	7.0	5.6	13.5	28.6	47.2	51.3	44.7	26.5	21.3	17.1	11.6	6.3	0.0	9.1	7.5	199	1361	520
Domain 2	4.9	6.5	12.8	74.5	58.6	48.1	17.6	32.9	37.9	0.7	1.6	0.9	0.0	0.5	0.0	267	1053	343
Domain 3	1.8	2.3	3.9	37.3	46.0	44.2	43.6	37.9	45.4	6.3	7.1	4.9	6.5	6.7	1.5	718	1430	597
Domain 4	1.9	6.1	6.4	33.5	43.9	44.7	60.4	49.1	45.9	2.5	0.4	2.7	0.0	0.5	0.2	568	1078	481
Domain 5	2.7	3.7	4.9	33.5	52.2	50.6	54.2	40.2	43.5	4.1	1.9	0.3	0.2	2.0	0.5	561	893	391
Domain 6	3.8	4.4	5.6	42.3	44.1	45.8	46.1	50.0	46.3	1.6	0.8	1.2	1.1	0.8	1.0	633	1180	520
Domain 7	0.5	3.3	4.5	11.8	22.0	24.8	75.7	69.3	65.1	8.4	3.9	5.4	1.1	1.3	0.0	440	880	424
Domain 8	3.0	6.4	4.6	33.0	42.2	43.7	57.5	48.9	50.6	2.6	0.9	0.0	0.0	1.6	0.0	233	450	174
Domain 9	2.3	5.0	3.1	36.2	38.4	41.9	52.8	53.6	52.8	1.6	2.8	1.4	0.4	0.4	0.3	774	1671	702
Total	8.8	11.5	13.0	39.1	44.9	44.0	43.6	38.1	38.9	3.4	3.2	2.7	1.2	2.3	1.2	5637	12528	5378

Note:
Domain 1 Kachin/Kayah/Shan	Domain 4 Bago	Domain 7 Rakhine
Domain 2 Kayin/Mon/Tanintharyi	Domain 5 Magway	Domain 8 Yangon
Domain 3 Chin/Sagaing	Domain 6 Mandalay	Domain 9 Ayeyarwady

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3.2.4. Place of delivery

Data from the 2001 FRHS indicate that the majority (83 percent) of the last two live births, in the five years preceding the survey, are delivered at home, and 14 percent are delivered in government's facilities (13 percent in hospitals and one percent in health clinics) and only two percent are delivered in private hospitals and clinics (Country Report, 2001 FRHS). In this section, an in-depth analysis of births by place of delivery, particularly for those delivered at home, is undertaken using available data in the 2001 FRHS.

Among births delivered at home, almost half (49 percent) are assisted by medical professionals: 48 percent by nurses/midwives and one percent by doctors. For births delivered in government hospitals, 4 out of 5 births are assisted by a doctor, and about 1 of 5 births are assisted by a nurse/ midwife. In private hospitals, about 94 percent of births are assisted by doctors, while in private clinics, 3 out of 5 births are assisted by a nurse/midwife and 2 out of 5 births are assisted by a doctor. (Table 3.6)

Among the births delivered at home, a higher proportion of births in urban areas (66 percent) are assisted by medical professionals than in rural areas (46 percent). Contrastingly, a lower proportion of births are assisted by traditional birth attendants in urban areas (31 percent) than in rural areas (50 percent), among births delivered at home.

Table 3.6. Percent distribution of last two live births in the 5 years preceding the survey by place of delivery and assistance at delivery, 2001 FRHS

Assistance at delivery	Place of Delivery					
	Home	Government Hospital	Private Hospital	Clinic	Others	Total number of births
Total						
Total	100.0	100.0	100.0	100.0	100.0	5378
Doctor	0.8	82.6	94.4	38.5	3.4	700
Nurse/midwife	48.3	17.4	5.6	61.5	44.8	2382
TBA	46.6	0.0	0.0	0.0	6.9	2089
Relative/ others	2.9	0.0	0.0	0.0	44.8	145
Self	1.4	0.0	0.0	0.0	0.0	62
Urban						
Total	100.0	100.0	100.0	100.0	100.0	1226
Doctor	1.6	85.4	95.0	48.6	0.0	435
Nurse/midwife	64.0	14.6	5.0	51.4	70.0	549
TBA	30.7	0.0	0.0	0.0	0.0	213
Relative/ others	3.2	0.0	0.0	0.0	30.0	25
Self	0.6	0.0	0.0	0.0	0.0	4
Rural						
Total	100.0	100.0	100.0	100.0	100.0	4152
Doctor	0.6	78.4	92.9	27.7	5.3	265
Nurse/midwife	45.5	21.6	7.1	72.3	31.6	1833
TBA	49.5	0.0	0.0	0.0	10.5	1876
Relative/ others	2.9	0.0	0.0	0.0	52.6	120
Self	1.5	0.0	0.0	0.0	0.0	58
Total number of births	**4480**	**680**	**54**	**135**	**29**	**5378**

Among births delivered at home, almost half (49 percent) are assisted by medical professionals: 48 percent by nurses/midwives and one percent by doctors. For births delivered in government hospitals, four out of five births are assisted by a doctor, and about one of five births are assisted by a nurse/ midwife. In private hospitals, about 94 percent of births are assisted by doctors, while in private clinics, three out of five births are assisted by a nurse/midwife and two out of five births are assisted by a doctor. (Table 3.6)

Among the births delivered at home, a higher proportion of births in urban areas (66 percent) are assisted by medical professionals than in rural areas (46 percent). Contrastingly, a lower proportion of births are assisted by traditional birth attendants in urban areas (31 percent) than in rural areas (50 percent) among births delivered at home.

Table 3.7 presents the percent distribution of the last two births in the five years preceding the survey by place of delivery and type of assistance during delivery, according to region. Among the regions, the percentage of births delivered at home and assisted by a medical professional is highest in Kayin/ Mon/ Tanintharyi (58 percent), followed closely by Magway (57 percent) and Kachin/Kayah/Shan (57 percent), while the lowest is found in Rakhine State (29 percent). In contrast, the percentage of births delivered at home and assisted by a traditional birth attendant is highest in Rakhine State (66 percent), followed by Ayeyarwady Division (55 percent) and Bago Division (49 percent), while it is the lowest in Kachin/ Kayah/ Shan (26 percent).

Table 3.7	Percent distribution of last 2 births in the 5 years preceding the survey by place of delivery and type of assistant during delivery, 2001 FRHS					
	Place of delivery					
Assistance at delivery	Home	Government Hospital	Private Hospital	Clinic	Others	Total number of births
	Kachin/ Kayah/ Shan					
Total	100.0	100.0	100.0	100.0	100.0	625
Doctor	0.9	82.2	100.0	8.3	14.3	122
Nurse/ Midwife	56.1	17.8	0.0	91.7	71.4	305
TBA	26.3	0.0	0.0	0.0	0.0	121
Relative/ Others	7.9	0.0	0.0	0.0	14.3	37
Self	8.8	0.0	0.0	0.0	0.0	40
	Kayin/ Mon/ Tanintharyi					
Total	100.0	100.0	100.0	100.0	100.0	481
Doctor	1.0	85.5	100.0	40.0	0.0	76
Nurse/ Midwife	57.4	13.0	0.0	60.0	40.0	240
TBA	41.3	0.0	0.0	0.0	0.0	160
Relative/ Others	0.3	1.4	0.0	0.0	60.0	5
	Chin/ Sagaing					
Total	100.0	100.0	100.0	100.0	100.0	706
Doctor	0.5	70.8	100.0	50.0	0.0	40
Nurse/ Midwife	48.8	29.2	0.0	50.0	25.0	334
TBA	42.4	0.0	0.0	0.0	25.0	276
Relative/ Others	6.9	0.0	0.0	0.0	50.0	47
Self	1.4	0.0	0.0	0.0	0.0	9
	Bago					
Total	100.0	100.0	100.0	100.0	0.0	581
Doctor	0.8	70.0	80.0	62.5	0.0	48
Nurse/ Midwife	47.3	30.0	20.0	37.5	0.0	260
TBA	49.4	0.0	0.0	0.0	0.0	259
Relative/ Others	2.3	0.0	0.0	0.0	0.0	13
Self	0.2	0.0	0.0	0.0	0.0	1

Table 3.7...........Continued

Assistance at delivery	Home	Government Hospital	Private Hospital	Clinic	Others	Total number of births
Magway						
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**449**
Doctor	0.5	80.6	100.0	15.4	0.0	31
Nurse/ Midwife	56.5	19.4	0.0	84.6	0.0	243
TBA	42.3	0.0	0.0	0.0	100.0	171
Relative/ Others	0.2	0.0	0.0	0.0	0.0	2
Self	0.5	0.0	0.0	0.0	0.0	2
Mandalay						
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**724**
Doctor	1.3	86.1	90.9	50.0	0.0	103
Nurse/ Midwife	52.1	13.9	9.1	50.0	100.0	340
TBA	44.9	0.0	0.0	0.0	0.0	268
Relative/ Others	0.8	0.0	0.0	0.0	0.0	8
Self	0.8	0.0	0.0	0.0	0.0	5
Rakhine						
Total	**100.0**	**100.0**	**0.0**	**100.0**	**100.0**	**499**
Doctor	0.4	87.0	0.0	0.0	0.0	22
Nurse/ Midwife	28.2	13.0	0.0	100.0	0.0	137
TBA	65.9	0.0	0.0	0.0	0.0	311
Relative/ Others	4.9	0.0	0.0	0.0	100.0	26
Self	0.6	0.0	0.0	0.0	0.0	3
Yangon						
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**527**
Doctor	1.1	87.9	94.1	70.0	0.0	222
Nurse/ Midwife	52.0	12.1	5.9	30.0	50.0	176
TBA	46.5	0.0	0.0	0.0	0.0	126
Relative/ Others	0.4	0.0	0.0	0.0	50.0	3
Ayeyarwady						
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**786**
Doctor	0.5	72.2	100.0	26.7	0.0	36
Nurse/ Midwife	43.0	27.8	0.0	60.0	0.0	333
TBA	55.1	0.0	0.0	0.0	0.0	402
Relative/ Others	1.1	0.0	0.0	13.3	100.0	13
Self	0.3	0.0	0.0	0.0	0.0	2
Total number of births	**4480**	**680**	**54**	**135**	**29**	**5378**

The percent distribution of the last two births in the five years preceding the survey by place of delivery and type of antenatal care is presented in Table 3.8. Overall, among the births delivered in a hospital, 53 percent had obtained ANC from a doctor and 43 percent from a nurse/ midwife. Among the births delivered at home, three percent had obtained ANC from a doctor and 69 percent from a nurse/ midwife, and nine percent from traditional birth attendants. Urban-rural differentials in place of delivery by type of antenatal care are substantial. For example, the proportion of births delivered in hospitals with ANC from doctors is much higher in urban areas (68 percent) than in rural areas (28 percent). Similarly,

home deliveries with ANC from doctors are higher in urban areas (12 percent) than in rural areas (two percent). It is interesting to note that the majority of the home deliveries seek ANC from medical professionals (79 percent in urban areas and 71 percent in rural areas), while only a small proportion seek ANC from traditional birth attendants (eight percent in urban areas and nine percent in rural areas). It needs to be noted that there is a sizeable proportion of home deliveries that received ANC from "no one": twice as many in rural areas (20 percent) compared with urban areas (10 percent).

Table 3.8   Percent distribution of last two births in the five years preceding the survey by place of delivery and type of antenatal care, 2001 FRHS

Place of delivery	Type of Antenatal Care				
	Doctor	Nurse/ midwife	Traditional birth attendant	No one	No. of births
Total					
Hospital	52.6	43.2	0.5	3.3	734
Other Health Centre	36.9	57.7	2.3	3.1	130
At Home	3.4	69.0	8.7	18.0	4480
Urban					
Hospital	68.3	30.2	0.2	1.3	454
Other Health Centre	56.5	42.0	0.0	1.4	69
At Home	12.3	66.2	7.8	10.2	693
Rural					
Hospital	27.7	64.1	1.1	6.4	287
Other Health Centre	15.0	75.0	5.0	5.0	60
At Home	1.7	69.6	8.7	19.5	3781

3.2.5. Immunisation

Table 3.9 shows the proportion of children (last two surviving and under five years of age) who received specific immunisations by current age of child and background characteristics for 1991, 1997 and 2001 surveys. Overall, the percentage of children under age five who received all four types of immunisation increases from 51 percent in 1991 to 74 percent in 2001. Contrastingly, the proportion who received no immunisation declines substantially from 52 percent in 1991 to nine percent in 2001 (See top panel of Table 3.9). Among four types of immunisations, polio has the highest percent increase, from 54 percent in 1991 to 88 percent in 2001. The bottom panel of Table 3.9 presents immunisation coverage of children age 12-23 months by selected background characteristics. For all types of immunisations, although urban areas have a higher coverage than rural, as shown in Table 3.9, the percent increase is higher for rural areas than urban areas during 1991 and 2001.

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The percentage of children age 12-23 months fully immunised (all four types) has increased for all levels of mother's education since 1991. This is especially so among children whose mothers have no education: rising from 33 percent in 1991 to 75 percent in 2001. It is evident that government's immunisation programme efforts have reached the most vulnerable group of mothers, particularly at the grass root level. Similar trends and patterns are observed for each type of immunisation by mother's education.

The percentage of children fully immunised increases in all regions/domains between 1991 and 2001, except for Ayeyarwady Division where a slight decline is observed, from 81 percent in 1991 to 80 percent in 2001. The highest increase of children fully immunised is observed in Rakhine State (from 13 percent in 1991 to 68 percent in 2001), followed by Kachin/ Kayah/ Shan (from 34 percent to 85 percent), while other regions show varied but small increases. It is again another indication that the government's expanded programme of immunisation has improved the immunisation coverage among children in the remote and far-flung areas. Another finding is that coverage of polio vaccination is very high (more than 90 percent in every region in 2001 among children aged 12-23 months) and there are small variations in polio coverage by urban-rural residence, region and level of education of mothers. This may indicate the success of the polio immunisation campaign, which had been carried out throughout the country since 1996. As a high rate of coverage had already been achieved in 1997, the increase from 1997 to 2001 was not large.

Table 3.9 Proportion of children (last two surviving and under 5 years of age) who received specific immunisation, by current age of child and background characteristics, 1991 PCFS, 1997 and 2001 FRHS

Background characteristics	BCG			Polio			DPT			Measles			All four types			None			No. of children		
	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001	1991	1997	2001
Age of child																					
Under 6 months	28.1	44.6	42.8	25.1	45.9	48.8	24.4	39.3	38.3	20.6	32.0	29.4	20.6	33.3	26.9	0.8	51.0	46.4	941	1094	561
6-11 months	62.6	77.8	81.0	57.5	81.2	86.5	58.4	71.1	78.6	51.5	56.7	61.2	51.5	61.6	56.7	0.0	17.4	8.6	840	1190	490
12-23 months	61.5	86.6	86.8	64.5	89.3	93.8	65.0	83.9	85.3	62.1	81.1	83.9	62.1	80.6	79.8	48.5	10.1	4.0	1714	2139	1044
24-35 months	60.2	88.9	88.5	52.7	91.9	94.5	55.2	87.2	87.8	52.7	85.5	87.7	52.7	83.7	82.2	50.5	7.8	2.0	1969	2183	980
36-59 months	60.3	87.6	88.4	50.0	89.8	94.4	54.8	86.0	87.1	52.6	84.3	87.2	52.6	82.4	83.6	45.4	9.4	3.4	3723	5028	1959
Total (under 5)	58.8	82.6	82.3	54.0	85.1	88.4	51.4	80.0	80.4	51	76.2	77.7	51	74.4	73.6	51.6	14.0	8.6	9187	11633	5006
12-23 months																					
Residence																					
Urban	86.6	93.3	90.8	83.7	94.2	96.4	68.6	92.6	90.0	64.7	89.9	88.0	59.2	88.7	85.5	1.0	5.1	6.8	394	488	249
Rural	63.6	84.6	85.7	58.7	87.8	92.9	45.0	81.4	84.0	42.4	78.5	83.0	36.4	76.4	78.3	0.9	11.6	9.5	1320	1650	792
Education																					
No schooling	57.1	79.6	84.0	51.3	83.8	93.2	40.5	77.6	79.6	39.7	73.6	80.6	33.0	71.8	74.8	0.5	15.5	10.2	569	496	206
Primary	69.9	85.5	86.8	65.6	88.8	92.9	50.2	82.9	85.1	46.6	79.7	83.3	41.1	77.8	79.2	1.1	10.7	9.2	822	1107	576
Middle School	84.9	94.2	89.5	82.4	93.9	96.1	63.2	88.7	90.1	58.1	89.4	87.5	51.5	86.6	84.2	0.8	5.4	6.6	193	325	152
High School	89.2	98.3	88.3	86.8	99.2	98.3	70.6	98.3	90.0	67.3	95.7	90.0	62.5	94.9	88.3	1.1	0.8	8.3	74	131	60
University	91.1	95.8	97.4	91.1	95.8	97.4	81.6	95.8	97.4	77.6	90.2	97.4	76.0	90.2	97.4	0.8	2.8	2.6	56	79	39
Regions																					
Domain 1	39.5	85.6	89.3	31.6	88.4	94.3	39.5	84.7	87.9	34.2	80.6	86.4	34.2	79.2	85.0	78.9	10.6	10.7	66	262	140
Domain 2	66.1	89.2	89.3	66.1	92.0	95.7	64.5	85.8	87.1	62.9	84.6	87.1	62.9	84.1	83.9	51.6	7.4	6.5	134	214	93
Domain 3	63.1	89.2	91.7	54.6	91.8	90.1	57.7	84.6	90.1	52.3	83.5	87.6	52.3	29.6	80.2	38.5	7.5	4.1	231	309	121
Domain 4	82.8	88.9	87.3	77.9	93.6	93.6	78.7	84.8	88.2	78.7	80.1	83.6	78.7	78.4	82.7	34.4	6.4	10.0	224	201	110
Domain 5	82.9	88.7	96.0	81.9	90.6	98.7	77.1	85.6	94.6	80.0	88.7	93.2	80.8	84.4	91.9	32.4	8.7	2.7	225	177	74
Domain 6	82.1	86.9	77.9	77.6	86.5	92.6	76.1	84.5	79.9	63.4	81.6	81.2	63.4	80.4	72.5	25.4	12.2	14.8	204	267	149
Domain 7	15.7	67.3	80.0	10.0	68.6	95.7	12.9	64.7	73.9	12.9	63.5	74.8	12.9	62.2	67.8	85.7	31.4	9.6	237	173	115
Domain 8	89.5	91.5	89.3	84.8	92.5	95.7	87.6	92.0	88.2	81.9	88.5	87.1	81.9	88.5	83.9	62.9	7.0	7.5	186	217	93
Domain 9	85.2	87.5	87.7	82.6	93.7	91.1	81.9	84.4	84.3	81.2	77.4	81.5	81.2	75.3	79.5	48.3	5.9	8.9	207	318	146
Total (12-23 months)	68.8	86.6	86.9	65.0	89.3	93.8	64.5	83.9	85.4	62.1	81.1	84.2	62.1	79.2	80.0	48.5	10.1	8.8	1714	2139	1041

Note: Domain 1 Kachin/Kayah/Shan   Domain 4 Bago   Domain 7 Rakhine
       Domain 2 Kayin/Mon/Tanintharyi   Domain 5 Magway   Domain 8 Yangon
       Domain 3 Chin/Sagaing   Domain 6 Mandalay   Domain 9 Ayeyarwady

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3.2.6. Childhood diarrhoea prevalence and treatment

Various maternal and child health and diarrhoea control programmes have been instituted to reduce the prevalence of diarrhoea. The information on the prevalence of diarrhoea in 1991, 1997 and 2001 is presented in Table 3.10. Overall, the prevalence of diarrhoea in the two weeks preceding the survey has declined from 12 percent in 1991 to five percent in 2001. The prevalence of diarrhoea in the last 24 hours has also declined from six percent to two percent between 1991 and 2001. The prevalence of diarrhoea in the two weeks and 24 hours preceding the survey are highest among children age 6-11 months when compared with other age groups, for each of the three surveys. However, the prevalence of diarrhoea for this age group has declined substantially from 21 percent in 1991 to seven percent in 2001 for two-week cases, and from 11 percent to four percent for 24-hour cases. Although a sharper decline in the prevalence of diarrhoea is seen in rural areas (from 13 percent in 1991 to five percent in 2001), rural areas still have a higher prevalence rate than urban areas (5.2 percent versus 3.7 percent in 2001). In 2001, a weak positive relationship between birth order and 2-week diarrhoea prevalence can be seen. A negative association can be seen between mother's education and 2-week diarrhoea prevalence, though prevalence has been declining at all levels of mother's education. In 1991, diarrhoea prevalence among children whose mothers had no schooling was 14 percent, compared to seven percent among children whose mothers had university education. By 1997 prevalence had fallen to nine percent and five percent respectively and by 2001 fallen further to five percent and two percent respectively. Children with access to flush/water seal sanitation facilities have the lowest prevalence of diarrhoea (both 2-week and 24-hour types), with declining trends from 1991 to 2001.

From 1991 to 2001, declining trends of diarrhoea prevalence are observed in every region, except in Chin/ Sagaing where the prevalence rates remain about the same. The greatest declining rate of 2-week prevalence is found in Rakhine State (from 20 percent in 1991 to five percent 2001) followed by Magway Division (from 14 percent to two percent). Similar patterns of declines between 1991 and 2001 are observed for the 24-hour prevalence of diarrhoea.

Table 3.10 Percentage of children under 5 years of age reported by the mother to have had diarrhoea in the past 2 weeks and 24 hours by background characteristics, 1991 PCFS, 1997 and 2001 FRHS

Background characteristics	Diarrhoea within 2 weeks			Diarrhoea within 24 hours			Number of children		
	1991	1997	2001	1991	1997	2001	1991	1997	2001
Age of child									
Under 6 months	12.9	6.8	4.8	6.7	2.9	2.5	941	1094	550
6-11 months	20.7	14.3	6.9	11.3	6.2	3.7	840	1190	476
12-23 months	16.4	13.6	7.0	9.2	6.1	3.2	1714	2139	1006
24-35 months	10.0	9.2	4.7	5.9	4.1	2.0	1969	2183	931
36-59 months	7.7	6.8	4.0	3.8	3.5	1.3	3723	5027	2043
Sex									
Male	12.6	9.6	5.6	6.2	4.4	2.4	4640	5837	2533
Female	12.0	7.4	4.1	5.5	3.3	1.8	4547	5795	2473
Residence									
Urban	10.3	6.9	3.7	3.9	3.0	1.6	2030	2420	1152
Rural	12.9	8.9	5.2	6.4	4.1	2.3	7157	9213	3854

Table 3.10	....Continued								
Background characteristics	Diarrhoea within 2 weeks			Diarrhoea within 24 hours			Number of children		
	1991	1997	2001	1991	1997	2001	1991	1997	2001
Birth order									
1	10.9	8.8	4.5	4.9	3.9	1.9	1336	2843	1289
2-3	9.7	8.1	4.5	4.5	3.8	2.1	1927	4536	2004
4-5	8.7	8.3	4.9	4.2	3.3	2.3	1251	2470	1033
6+	11.1	9.4	6.6	5.0	4.7	2.1	1123	1784	680
Regions									
Domain 1	12.4	9.8	6.3	7.2	4.6	3.6	431	1544	576
Domain 2	10.2	6.8	2.2	4.7	3.0	1.1	697	1247	453
Domain 3	10.8	12.7	10.9	4.0	6.0	4.0	1201	1513	667
Domain 4	8.3	7.5	5.5	3.0	1.9	1.7	1173	1208	527
Domain 5	14.2	9.5	2.4	5.2	4.5	1.0	1161	912	419
Domain 6	10.4	6.1	2.5	4.5	3.7	0.7	1118	1399	674
Domain 7	20.1	11.9	5.3	12.5	4.5	3.0	1463	913	471
Domain 8	10.8	4.6	3.1	4.8	2.6	1.2	919	1165	486
Domain 9	10.3	7.9	4.0	5.3	3.4	1.9	1024	1733	733
Mother's education									
No schooling	13.5	9.3	5.0	7.5	4.3	2.1	3247	2828	1055
Primary	12.5	8.5	5.5	5.2	3.9	2.3	4279	6093	2735
Middle School	10.4	8.4	3.8	5.4	3.8	2.0	1008	1686	710
High School	8.8	7.1	2.9	2.3	1.7	1.1	436	666	278
University	6.8	5.3	2.2	3.7	3.8	0.6	217	360	182
Sanitation facilites									
Flush/Water seal	8.0	7.4	4.2	3.8	3.5	1.4	3396	5008	3054
Pit/bucket	10.5	9.1	5.7	5.1	4.2	3.0	3158	3556	1215
None	10.3	10.3	6.3	3.9	4.0	3.6	1389	2164	703
Others	12.1	8.5	5.9	6.1	4.3	0.0	994	904	34
Drinking water									
Piped water	8.4	9.5	2.9	4.2	4.7	1.3	333	755	314
Tube well	7.0	6.4	3.6	2.5	2.7	1.0	443	250	1171
Well (Prote/Unprote)	9.2	8.4	5.5	3.9	3.9	2.4	2626	10588	1832
Others	11.9	9.9	5.5	6.0	4.3	2.7	2235	40	1689
Total	**12.3**	**8.5**	**4.9**	**5.9**	**3.8**	**2.1**	**9187**	**11633**	**5006**

Note:	Domain 1	Kachin/Kayah/Shan	Domain 4	Bago	Domain 7	Rakhine
	Domain 2	Kayin/Mon/Tanintharyi	Domain 5	Magway	Domain 8	Yangon
	Domain 3	Chin/Sagaing	Domain 6	Mandalay	Domain 9	Ayeyarwady

Table 3.11 presents the percentage of children under 5 years who had diarrhoea in the two weeks preceding the survey, and who received Oral Rehydration Therapy (solution prepared from oral rehydration salt packets), and the percentage who received no treatment, by background characteristics in 1991, 1997 and 2001. Overall, the percentage of children who received ORS packet treatment increases from 24 percent in 1991 to 37 percent in 2001 while the percentage who received no treatment decreases from 35 percent to 18 percent. Infants under six months with diarrhoea are less likely than the older children to be given ORS. Noticeable increase of ORS packet treatment between 1991 and 2001 is observed in urban areas (from 34 percent to 54 percent) while the proportion with no treatment declines substantially (from 37 percent to 17 percent) in rural areas. There is a positive relationship between mother's education and ORS treatment. For example, the proportion of children with diarrhoea treated with ORS rises from 30 percent among

mothers with no schooling to 75 percent among mothers with university education in 2001: and from 30 percent to 75 percent in 2001. Over time, except amongst children of mothers with no education, the levels of ORS treatment have remained static or declined: 21 percent among children of mothers with no education and 80 percent among children whose mothers attended university in 1991 to 24 percent and 77 percent respectively in 1997.

Between 1991 and 2001, among the regions, Magway Division and Rakhine State are the most improved regions where the proportion of children who received ORS packets treatment rises substantially (from 13 percent to 40 percent in Magway and from 21 percent to 40 percent in Rakhine). Consequently, there is a noticeable decline in the proportion of children with diarrhoea receiving no treatment in these two regions (from 33 percent to 10 percent in Magway and from 43 percent to 20 percent in Rakhine).

Table 3.11   Among children under 5 years who had diarrhoea in the preceding 2 weeks, the percentage who received Oral Rehydration Therapy (solution prepared from ORS packets) and the percentage who received no treatment, by background characteristics, 1991 PCFS, 1997 and 2001 FRHS

Background Characteristics	1991			1997			2001		
	ORS	No treatment	Children with diarrhoea	ORS	No treatment	Children with diarrhoea	ORS	No treatment	Children with diarrhoea
Age of child									
Under 6 months	7.2	52.6	121	10.8	58	66	7.4	40.7	27
6-11 months	20.1	36.5	174	35.5	26.5	170	26.5	26.5	34
12-23 months	45.7	68.3	327	33.7	24.1	290	45.2	9.6	73
24-35 months	25.8	33.2	245	36.8	22.7	200	37.2	18.6	43
36-59 months	26.3	29.1	265	29.6	28.9	265	46.2	14.9	67
Residence									
Urban	33.6	26.0	208	56.8	12.0	167	53.5	23.3	43
Rural	21.5	37.0	924	27.0	31.0	824	33.8	17.4	201
Education									
No schooling	21.4	41.3	439	23.5	32.4	263	30.2	17.0	53
Primary	22.6	32.9	535	29.6	29.7	521	34.0	21.3	150
Middle School	26.4	29.4	105	39.8	23.4	142	66.7	7.4	27
High School	35.8	21.0	38	64.5	2.5	48	37.5	12.5	8
University	80.2	0.0	75	77.2	5.6	19	75.0	0.0	4
Regions									
Domain 1	22.6	38.7	53	29.3	24.6	152	47.2	16.7	36
Domain 2	39.4	21.2	72	42.9	22.8	85	50.0	10.0	10
Domain 3	23.3	37.0	130	28.2	24.7	193	34.3	17.8	73
Domain 4	30.2	30.2	97	29.9	20.8	91	27.6	20.7	29
Domain 5	13.0	32.5	165	20.5	33.3	86	40.0	10.0	10
Domain 6	17.1	30.3	116	27.8	35.4	86	41.2	23.5	17
Domain 7	20.7	42.5	295	33.7	41.8	109	40.0	20.0	25
Domain 8	30.4	46.4	99	67.3	16.3	53	46.7	20.0	15
Domain 9	34.2	23.7	105	29.8	28.2	137	27.6	20.7	29
Total	23.7	35.0	1132	31.0	27.8	992	37.3	18.4	244

Note: Domain 1 Kachin/Kayah/Shan   Domain 4 Bago   Domain 7 Rakhine
        Domain 2 Kayin/Mon/Tanintharyi Domain 5 Magway   Domain 8 Yangon
        Domain 3 Chin/Sagaing   Domain 6 Mandalay   Domain 9 Ayeyarwady.

3.2.7. Breastfeeding and food supplementation

The greatest advantage of breast milk over substitutes is that breast milk contains antibodies against bacterial and viral agents that cause diarrhoea and other infections in the infants. Breastfeeding is deemed to have an important positive contribution to health and survival of infants and children. Table 3.12 shows the percent distribution of living children under age three by breastfeeding status according to child's age in months and urban-rural residence for 2001. About 78 percent of children age 0-1 month is exclusively breastfed, 21 percent are breastfed with food supplements and less than one percent is not breastfed. Exclusive breastfeeding declines rapidly with increasing child's age: from 78 percent at age 0-1 month to two percent at age 12-13 months. Conversely, the percentage of children who were not breastfed increases slowly with increasing child's age. At age 12-13 months, seven percent of the children are not breastfed and 91 percent of them receive breast-milk and supplementary food. At age 34-35 months, 32 percent of the children are breastfed and given food supplements and 68 percent of them are not being breastfed.

According to the World Health Organization (WHO) recommendations, for the first six months of life a baby should be exclusively breastfed, and by 7-9 months of life all children should be breastfed and given food supplementation. In Myanmar, by age 4-5 months, over half of children (58 percent) are breastfed and given food supplements. Thus, food supplementation begins quite early in Myanmar. Looking at the summary data (bottom panel of Table 3.12), 36 percent of children age below four months are exclusively breastfed, while 62 percent of them are breastfed and given supplements. At age 7-9 months, only 12 percent of children are exclusively breastfed and 82 percent breastfed and given food supplements.

There are urban-rural differentials in prevalence of exclusive breastfeeding. The prevalence of exclusive breastfeeding declines from 85 percent among children age under two months to 26 percent among children age 4-5 months in urban areas. The corresponding prevalence rates of exclusive breastfeeding for rural areas are 75 percent and 43 percent respectively. It is interesting to note that the prevalence of exclusive breastfeeding for infants under four months is higher in urban areas (69 percent) than in rural areas (60 percent), most probably due to breastfeeding campaigns. About 41 percent of children age 22-23 months in urban areas is not breastfed, compared with about 29 percent of their counterparts in rural areas.

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Table 3.12 Percent distribution of living children under age three by breastfeeding status, according to child's age in months, 2001 FRHS

Percentage of children who are:

Age in months	Total				Urban				Rural			
	Not breastfed	Exclusively breastfed	Breastfed with supplements	Number of living children	Not breastfed	Exclusively breastfed	Breastfed with supplements	Number of living children	Not breastfed	Exclusively breastfed	Breastfed with supplements	Number of living children
<2	0.7	78.0	21.3	150	0.0	85.4	14.6	100	0.9	75.2	23.9	100
2-3	1.0	50.0	49.0	202	0.0	54.3	45.7	46	1.3	48.7	50.0	156
4-5	2.8	39.8	57.5	181	5.3	26.3	68.4	38	2.1	43.4	54.5	143
6-7	2.1	19.2	78.8	146	2.9	5.7	91.4	35	1.8	23.4	74.8	111
8-9	6.4	10.2	83.4	187	9.5	4.8	85.7	42	5.5	11.7	82.8	145
10-11	4.4	8.0	87.6	137	0.0	6.3	93.8	32	5.7	8.6	85.7	105
12-13	7.1	1.9	91.0	156	10.9	0.0	89.1	46	5.5	2.7	91.8	110
14-15	10.3	3.8	85.9	156	18.2	3.0	78.8	33	8.1	4.1	87.8	123
16-17	10.7	0.7	88.6	149	17.6	2.9	79.4	34	8.7	0.0	91.3	115
18-19	11.6	1.2	87.2	172	18.2	0.0	81.8	44	9.4	1.6	89.1	128
20-21	19.1	2.2	78.7	178	22.0	0.0	78.0	41	18.2	2.9	78.8	137
22-23	31.3	2.0	66.7	147	41.4	0.0	58.6	29	28.8	2.5	68.6	118
24-25	37.1	0.9	62.1	116	44.4	0.0	55.6	27	34.8	1.1	64.0	89
26-27	43.6	0.6	55.8	172	58.8	0.0	41.2	34	39.9	0.0	60.1	138
28-29	48.1	0.0	51.9	135	70.0	0.0	30.0	30	41.9	0.0	58.1	105
30-31	50.8	0.0	49.2	124	75.0	0.0	25.0	28	43.8	0.0	56.3	96
32-33	58.5	0.9	40.6	106	76.7	0.0	23.3	30	51.3	0.0	48.7	76
34-35	68.0	0.0	32.0	150	90.6	0.0	9.4	32	61.9	0.0	38.1	118
Total	21.1	13.4	65.6	2764	27.9	12.3	59.8	701	19.0	13.7	67.3	2113
Age in months (under 10 months)												
0-3	0.9	61.9	37.2	352	0.0	69.0	31.0	87	0.4	60.4	39.2	265
4-6	2.1	35.7	62.2	241	3.8	22.6	73.6	53	1.6	39.4	59.0	188
7-9	5.5	12.1	82.4	273	8.1	3.2	88.7	62	4.7	14.7	80.6	211

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Data from developing countries indicate an increased risk of diarrhoea among children at the introduction of weaning or replacing breast milk with supplementary foods when compared with those who are breast-fed. Table 3.13 shows the relationship of breastfeeding and the prevalence of diarrhoea. The data from the 2001 FRHS indicate that among children age two years or younger, the prevalence in the 24-hour and the 2-week periods is higher among children not being breastfed than children exclusively breastfed: four percent versus two percent for diarrhoea in last 24 hours, and nine percent versus seven percent for diarrhoea in preceding two weeks.

Table 3.13 Percentage of children aged two years or younger experencing diarrhoea in 24 hours and two weeks prior to survey, by breastfeeding status and residence, 1997 and 2001 FRHS

Breastfeeding status	% with diarrhoea in prior 24 hours			% with diarrhoea in prior two weeks		
	Total	Urban	Rural	Total	Urban	Rural
2001						
Total	2.9	2.7	3.0	6.0	5.2	6.3
Not being breastfed	4.1	6.0	3.3	9.1	10.4	8.6
Still being breastfed	2.8	2.2	3.0	5.7	4.4	6.1
Exclusively breastfed	1.6	0.9	1.8	6.9	5.2	7.5
Number of children	66	14	52	136	27	109
1997						
Total	4.8	3.8	5.1	10.9	9.1	11.4
Not being breastfed	6.1	4.1	7.1	4.7	3.7	4.9
Still being breastfed	4.7	3.7	4.9	9.4	7.1	10.0
Exclusively breastfed	na	na	na	na	na	na
Number of children	223	36	187	502	86	416

Though there is little difference in the prevalence of diarrhoea in the last 24 hours by urban-rural residence (three percent for both urban areas and rural areas), there are pronounced differentials in the prevalence for urban areas among children not breastfed and children exclusively breastfed (six percent versus one percent), and smaller differences in rural areas (three percent versus two percent). Similar differentials in the 2-week prevalence are observed for urban and rural areas. The difference in the 2-week prevalence in urban areas among children not breastfed and children exclusively breastfed is large (10 percent versus five percent). The differential for the corresponding 2-week prevalence in rural areas, among children not breastfed and exclusively breastfed, is small (nine percent versus eight percent).

3.3   Infant and child mortality

There are many factors related to neonatal, infant and under-five mortality. In this section, attempts are made to assess how demographic characteristics, mother's health-seeking behaviour and household characteristics influence infant and child mortality in Myanmar. For this in-depth analysis, data from the 2001 FRHS are utilized. The neonatal,

infant and under-five mortality rates are estimated for the five-year period preceding the survey.

Figure 3.1 shows that over the three five-year reference periods, neonatal and infant mortality indicate a slight increasing trend while child and under-five child mortality display some declining trend (Country Report, 2001 FRHS).

Figure 3.1 Neonatal, post neonatal, infant, child and under-five mortality rates for five year periods preceding the survey, 2001 FRHS
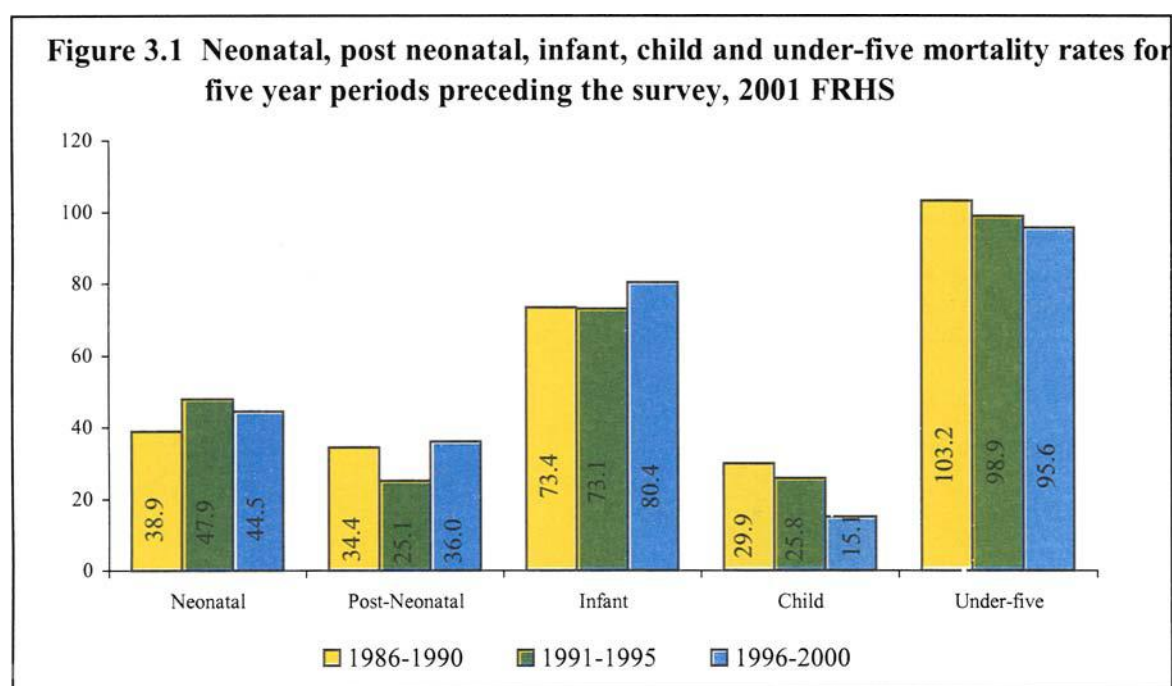
3.3.1 Socio-demographic characteristics

The estimates of neonatal, infant and under-five mortality rates by various socio-demographic characteristics (namely mother's education, mother's age at birth, birth interval, birth order, sex of child and residence) are shown in Table 3.14.

3.3.1.1 Mother's education

Caldwell (1979) observed that children of educated mothers experience lower mortality than children of uneducated mothers, after controlling for other variables. Mothers with limited education are likely to have lower income, poor nutrition, less access to health care facilities and services, and to live in less sanitary houses. These factors may contribute to higher morbidity and mortality of their children.

The information presented in Table 3.14 confirms that with increasing level of educational attainment of the mother, infant and child mortality rates decline. For example, the infant mortality rate declines from 85 per 1000 live births among children of uneducated mothers to 55 per 1000 among children born to mothers with middle or higher level of education, indicating the infant mortality rate of the former group is 53 percent higher than the latter group. Similarly, the under-five mortality rate is about 75 percent higher among the children of uneducated mothers than that of the children of mothers with middle school or higher level of education (108 per 1000 versus 62 per 1000).

3.3.1.2 Mother's age at birth

Mother's age at birth has been found by many studies to affect child health and survival. The relatively high risks of infant and child mortality associated with younger mother's age at birth (less than 20 years) or older mother's age at birth (35 years or older)

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are well documented. The infant and childhood mortality rates assume a classical U-shaped pattern following mother's age at birth. Neonatal, infant and under-five mortality are found to be lower among children born to mothers age 20-34 than those born to mothers age under 20 years and mothers age 35-49. For example, the infant mortality rate for children of mothers under 20 years at the time of their child's birth (96 per 1000 live births) is about 29 percent higher than the rate for children of mothers age 20-34 at child's birth (75 per 1000 live births). Again, the infant mortality rate of children born to mothers age 35 years or older at the child's birth is 27 percent higher than that of children born to mothers age 20-34 years at the child's birth (Table 3.14)

Table 3.14 Neonatal, infant, child and uner-five mortality rates for the five years period preceding the survey, (1996-2001) by socio-demographic characteristics, 2001 FRHS

Socio-demographic characteristics	Neonatal	Infant	Under five	Exposed births
Total	**44.4**	**80.4**	**95.5**	**5558**
Mother's education				
No Education	44.9	84.8	108.1	1203
Primary School	46.4	88.7	104.0	3074
Middle School and higher	39.0	55.2	61.7	1231
Mother's age at birth				
15-19	45.8	96.4	103.6	415
20-34	41.6	74.7	88.2	2728
35-49	54.1	94.9	118.8	2415
Birth interval				
<2 years	51.1	89.2	113.2	2544
2-3 years	32.3	64.5	75.3	1302
4+ years	36.0	68.3	68.3	278
Birth order				
1	45.3	81.6	87.9	1434
2-3	41.2	75.5	89.7	2184
4+	47.4	85.1	107.7	1940
Sex of child				
Male	55.0	93.4	107.5	2837
Female	33.4	66.9	83.1	2721
Residence				
Urban	28.1	65.8	77.0	1247
Rural	49.2	84.7	100.9	4311

3.3.1.3 Birth interval

As expected, infant/child mortality and birth interval since the previous birth are inversely associated. The present analysis indicates a striking finding in the relationship between infant/child mortality rates and the length of the interval between births. The finding indicates that childhood mortality rates decrease as the birth interval increases. Infant mortality rate for children born less than two years after a previous birth is 38 percent higher than that for children born after an interval of two to three years (infant mortality rate: 89 versus 65 per 1000 live births). The association is also evident in neonatal and under-five mortality rates. For example, their corresponding mortality rates for the two birth intervals (<2 and 2-3 years) are: 51 versus 32 for neonatal mortality rate and 113 versus 75 for under-five mortality rate. The differentials are more pronounced for neonatal and under-five mortality than infant mortality (Table 3.14). The findings support the strengthening of reproductive health and child survival programmes aimed at reducing infant/child mortality.

3.3.1.4 Birth order

Table 3.14 also indicates that birth order influences a child's chances of survival. The neonatal and under-five mortality rates follow a U-shaped pattern, according to birth order. As observed by Rutstein (1984), the levels and patterns of child mortality was found to be related to the age of mother at birth and birth order, due most probably to the fact that first order births of adolescents and young mothers who are physiologically immature are at higher risk of experiencing infant/child mortality. Conversely, children from higher order births that are more likely to be born to older mothers, are more likely to be malnourished because of competition for resources such as food and medical care. The findings from the 2001 FRHS also support this association. For example, second and third order births have lower neonatal and infant mortality rates than first order births. Similarly, for children of birth order four or above, infant and under-five mortality rates are much higher than those of second and third order births. However, under-five order rates for first order births are slightly lower than those for second and third order births (88 per1000 versus 90 per 1000) but the mortality rates of fourth or higher order births increase substantially (108 per 1000).

3.3.1.5 Sex of child

The relationship between infant/child mortality rates and sex of child is also presented in Table 3.14. It is clear from the table that, neonatal, infant and under-five mortality rates for male children are higher than for female children. For example, the infant mortality rate for male children is about 40 percent higher than that of female children (93 per 1000 live births versus 67 per 1000 live births), while neonatal mortality rate is 65 percent higher (55 per 1000 versus 33 per 1000) and under-five mortality rate is 29 percent higher (108 per 1000 versus 83 per 1000).

3.3.1.6 Urban-rural differential

Place of residence has been found to be an important determinant of chances of child survival. The 2001 FRHS data indicate that infant and under-five mortality rates in rural areas are each about 30 percent higher than those in urban areas (85 versus 66 for infant mortality rate, and 101 versus 77 for under-five mortality rate). However, the urban-rural differential in neonatal mortality rate is found to be largest: 73 percent higher in rural areas than in urban areas (49 per 1000 versus 28 per 1000). The lower infant/child mortality rates in urban areas may be due to mothers having better knowledge and access to better reproductive health facilities and services.

3.3.2 Health-seeking variables

In order to understand the level of health-seeking behaviour of mothers and its effects on infant and child mortality, three health-seeking variables (antenatal care, assistance during delivery and breastfeeding status) are included in the analysis. The estimates of neonatal, infant and under-five mortality by selected health-seeking variables are shown in Table 3.15.

3.3.2.1. Antenatal care

More and better antenatal care services during pregnancy are likely to increase the children's chances of survival as shown in Table 3.15. The analysis of 2001 FRHS data reveals that the infant mortality rate of children whose mothers received antenatal care from traditional birth attendants is 58 percent higher than that of children whose mothers sought antenatal care from medical professionals (97 per 1000 live births versus 61 per 1000 live births). Similarly, the under-five mortality rate of children whose mothers sought antenatal care from traditional birth attendants is about 65 percent higher than that of children whose mothers sought antenatal care from medical professionals (116 per 1000 versus 71 per 1000). There was little difference in the level of neo-natal mortality between those mothers who received ANC from medical professionals compared to those who received ANC from Traditional Births Attendants. However, for 15.5 percent of the pregnant women who did not receive any ANC, the neo-natal mortality was approximately 40 percent higher than the other two groups.

The infant and under-five mortality rates among children whose mothers had antenatal care from "no one" are not different from those who received antenatal care from traditional birth attendants (both has mortality rate of 116 per 1000).

3.3.2.2. Assistance during delivery

Assisted delivery is also an important determinant of a child's chances of survival. Table 3.15 indicates that children of mothers who received delivery assistance from medical professionals have lower infant and child mortality rates than those attended by traditional birth attendants (60 versus 80 for infant mortality rate; 70 versus 90 for under-five mortality rate; and 36 versus 46 for neonatal mortality rate).

Table 3.15 Neonatal, infant, child and uner-five mortality rates for the five years period preceding the survey. (1996-2001) by health-seeking variables. 2001 FRHS

Health-seeking variable	Neonatal	Infant	Under five	Exposed births
Total	**44.4**	**80.4**	**95.5**	**5558**
Antenatal care				
Doctor/ Nurse/Midwife	32.3	61.1	70.6	4124
Traditional Birth Attendant	29.7	96.5	116.3	404
No one	53.2	91.4	115.7	864
Assistance during delivery				
Doctor/ Nurse/Midwife	36.2	59.2	69.5	3092
Traditional Birth Attendant	46.2	80.4	91.0	2078
Breastfed				
Yes	22.3	53.0	63.6	5110
No	340.8	372.2	385.7	223

3.3.2.3. Breastfeeding

Breastfeeding has an important influence on the health and survival of infants, particularly at early infancy. Many studies have shown the beneficial effects of breastfeeding on the nutritional status, morbidity and mortality of infants (Hobcraft and others, 1984: Shah and Khanna, 1990 and Bebefo and Parnell, 1991). The analysis based on Table 3.15 indicates that children who were breastfed have much higher chances of survival than those who were not breastfed. For instance, the neonatal mortality rate for children who were not breastfed is 15 times that for children who were breastfed (341 per 1000 versus 22 per 1000); infant mortality rate of children not breastfed is seven times that of those breastfed (372 per 1000 versus 53 per 1000); and the difference in under-five mortality rate for these two groups is six times (386 per 1000 versus 64 per 1000).

3.3.3. Household characteristics

Household characteristics such as piped drinking water, electricity and television (TV) tend to reflect household wealth and community development characteristics, which can have an impact on infant/child mortality. The estimates of neonatal, infant and under-five mortality rates by these household characteristics are shown in Table 3.16.

3.3.3.1. Drinking water

The presence of piped water supply in a household is likely to indicate household wealth and community characteristics as well as influence on infant/child mortality. It is assumed that piped drinking water is safer and more hygienic than water from other sources, especially from ponds, canals and rivers.

Table 3.16   Neonatal, infant, child and under-five mortality rates for the five-year period preceding the survey, (1996-2001) by Household characteristics, 2001 FRHS

Household characteristics	Neonatal	Infant	Under five	Exposed births
Total	44.4	80.4	95.5	5558
Source of drinking water				
Pipe	18.2	45.5	57.6	330.0
Others	46.1	82.6	97.9	5228.0
Electricity				
Yes	28.2	53.3	63.5	1275.0
No	49.3	88.5	105.1	4283.0
TV				
Yes	29.9	49.4	55.8	770.0
No	46.8	85.4	101.9	4788.0

Access to safe piped drinking water in the household increases the child's chances of survival. Infant and child mortality rates are lower among children from households having piped drinking water than those using water from other sources for drinking. From Table 3.16, infant mortality rate is 82 percent lower for children from households using piped water than those using other sources of water (46 per 1000 versus 83 per 1000).

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Similarly, the under-five mortality rate is 70 percent lower for those using piped water than those using other sources of water (46 versus 83). The effect of piped drinking water on neonatal mortality is even more dramatic. The neonatal mortality rate of children from households using other sources of water is 2.5 times of those using piped water (46 per 1000 versus 18 per 1000).

3.3.3.2. Presence of electricity and television

We employ two proxy measures of household socio-economic status: electricity and presence of television. It has been shown in a variety of contexts that child survival is positively related to household socio-economic status. The presence of electricity and television in the households reflect household wealth, proximity to urban/city centres, mass media exposure, modernization and health lifestyle, among others. The access of electricity and television in the households are also found to have impact on infant and child mortality. Data from 2001 FRHS reveal that infant and under-five mortality rates of children from households with no electricity are each 66 percent higher than those from households with electricity (89 per 1000 versus 53 per 1000 for infant mortality rate, and 105 versus 64 for under-five mortality rate). Furthermore, the effect of electricity on neonatal mortality rate is even more pronounced (28 versus 49). Infant mortality rate of children from households having no television is 73 percent higher than those having television (85 versus 49). Similarly, under-five mortality rate for households with no television is 83 percent higher than those with television (102 versus 56).

3.4.   Conclusion

In conclusion, the results from this analysis are in the expected direction and consistent with the results of many other studies. Comprehensive reproductive health and child survival programmes should be undertaken to further improve child health and reduce infant and child mortality. These may be achieved through improving access to piped drinking water, electricity and mass media exposure (radio and television) in the households as well as upgrading health-seeking behaviour of mothers to have regular antenatal care by health professionals and births delivered by qualified health professionals, in hospitals/clinics wherever possible. More importantly, since breastfeeding has an important impact on lowering infant and child mortality, good and healthy breastfeeding practices should be further encouraged and promoted to expand its coverage and reach most vulnerable groups of mothers.

Furthermore, encouraging women to have longer birth intervals and fewer children, as well as encouraging them to have good health-seeking behaviour is important for improving child health and reducing infant and child mortality. To expedite reduction in infant and under-five mortality, and improvement in child health in Myanmar, greater efforts and resources should be given to strengthen the integrated maternal and child programme to include reproductive health/family planning, at both national and local levels.

The analysis presented in this chapter has concentrated on describing the relationship between individual factors and infant, child morbidity and mortality. Because of the interrelationship between these individual factors, more intensive analysis using appropriate multivariate techniques is required in order to quantify the net effect of each variable.

CHAPTER IV

CONTRACEPTIVE USE DYNAMICS

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4.1. Introduction

Patterns of contraceptive use vary across the life cycle (Harrison and Rosenfield, 1996). Initial use of contraception may occur before the birth of the first child, may be used to space births or only initiated when the desired family size is achieved and couples want no more children. Methods used at different stages of the life cycle typically vary, with temporary methods normally being used for spacing and more permanent methods for limiting family size. Couples may also switch between contraceptive methods within stages as they search for the method that best suits their needs.

Most research on contraceptive use focuses on use at one point in time. However, analysis of patterns of use over the life cycle has important policy implications (Ali and Cleland, 1999; Steele and Curtis, 2003). A fundamental aspect of a quality of care approach to family planning/birthspacing programs is the provision of a wide range of contraception (Bruce, 1990). Jain (1989) argues that improving the quality of care of contraceptive programs helps increase contraceptive continuation rates. Similarly, providing a choice of contraceptives allows individuals to choose the method that best fits their needs and these needs could change over their life cycle. Khan, Boon-Ann and Mehta (1998) note that in many Asian countries, there have been limited contraceptive options available to potential users. Limiting the effective mix of methods available to users can be a factor leading to high levels of unmet need for contraception and/or can lead to the use of ineffective methods.

In this chapter we examine, to the extent the data allows, temporal patterns of contraceptive use. Also examined are issues related to the use of contraception for spacing or limiting births and levels of unmet need for contraception. The chapter commences by examining the first use of contraception. This is followed by an analysis of contraceptive switching. The data allow for comparison between the first method of use and current method of use, current use and previous methods used, and past method use and intended method use for those persons not currently using contraception. The third section explores contraceptive use patterns separately for those persons using contraception for spacing purposes and those using for the purpose of limiting their births. The final section of the chapter investigates unmet need for contraception.

4.2. Initiation of contraception

It is unusual for Myanmar couples to initiate contraceptive use immediately after marriage. Table 4.1 presents life table estimates of the median number of months before initiation of first contraceptive use. For all ever-married women in the sample, the median duration between marriage and contraceptive use was 134 months. The duration increased with age, with one-half of those women currently aged 15-19 initiating use within 37 months, increasing to 212 months for those aged 40-44. The increases in median duration with age reflect, in part, a confounding of age and period effects. Older women, compared to younger women, were marrying in periods when fertility was higher and when contraceptive use was less common. However, the pattern over time clearly indicates a shift in initiation of contraception over time, with older women probably initiating use when they wished to stop childbearing while younger women are more likely to start using contraception to space births. The median duration of first use for women currently in their twenties was only 33 months, suggesting that it was common for women to first use

contraception after their first birth. This is supported by the data presented in Table 4.3 that shows that almost one-third of women first used contraception when they had one living child while only slightly over 20 percent first used when they had no living children.

Table 4.1   Life table estimates of median number of months after first marriage before initiation of contraceptive use by current age and selected background characteristics, 2001 FRHS

Background Characteristics	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total	EMW
Residence									
Urban	19.0	16.3	25.6	50.4	79.1	108.3	203.0	62.9	2238
Rural	47.4	40.1	76.6	125.3	172.2	303.1	**	170.5	6050
Education									
No schooling	**	82.5	165.1	184.9	281.2	**	**	425.0	1697
Primary	**	33.2	71.6	118.5	148.4	200.5	**	137.0	4401
Middle school	14.7	25.9	31.9	57.8	80.6	132.0	**	62.3	1223
High school	7.0	11.0	26.2	20.5	73.1	62.3	74.5	35.2	558
University	n.a	10.5	16.9	19.0	33.3	45.0	52.5	24.8	304
Other	**	23.0	30.0	136.5	**	**	**	411.0	105
Region									
Domain 1	**	61.1	63.6	95.6	156.2	202.9	**	134.6	951
Domain 2	**	30.4	52.1	90.1	126.6	157.9	**	114.5	700
Domain 3	**	31.7	56.5	104.4	172.6	**	**	158.8	962
Domain 4	12.2	20.0	37.6	55.8	114.9	148.5	**	94.4	975
Domain 5	na	40.6	67.7	153.8	157.1	327.0	**	208.3	780
Domain 6	34.1	34.0	74.1	107.2	156.9	246.6	**	151.3	1108
Domain 7	47.5	96.3	171.1	202.2	265.5	314.8	**	314.5	602
Domain 8	1.5	12.4	19.1	50.1	69.5	106.0	142.5	53.2	966
Domain 9	**	38.8	54.5	100.6	167.9	206.7	**	134.3	1244
Total	**37.1**	**32.5**	**56.1**	**100.8**	**147.5**	**212.3**	**	**133.5**	**8288**
Number of EMW	**194**	**819**	**1338**	**1666**	**1623**	**1474**	**1174**		**8288**

n.a : Less than 20 observations   ** Less than 50 percent initiated contraceptive use

Note: Domain 1   Kachin/ Kayah/ Shan   Domain 4   Bago   Domain 7   Rakhine
           Domain 2   Kayin/ Mon/ Tanintharyi   Domain 5   Magway   Domian 8   Yangon
           Domain 3   Chin/ Sagaing   Domain 6   Mandalay   Domain 9   Ayeyarwady

The duration from marriage to initiation of contraception is shortest for those living in urban areas compared to rural areas, for those with higher levels of education compared to those with lower levels of education, and for those living in the more developed regions compared to less developed regions. For example, the ratio in median duration between urban areas and rural areas is between two and three for all age groups. The median duration is lowest for women with a university level of education. Women aged 30-34 with a

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university level of education had a median duration between marriage and first use of only 19 months. This compares with a median duration to first use of about 10 years for women of the same age who had only a primary level of education.

The most popular method of first use for women who first used contraception before the age of 20 is the daily oral pill (see Table 4.2). After age 20, however, the method that was most frequently employed as the first contraceptive used was the injectable. There is very limited variation across categories of age at first use in the percentage of women choosing this as their first method, with 45 percent of women first using at ages 20-24 employing the injectable as their first method, compared to 47.6 percent for those aged 35 and above. As expected, female sterilization was more frequently chosen as the first method used as age at first use increased. Traditional methods were employed as the first method by similar proportions of women across all age groups.

Table 4.2   Percentage distribution of first method used by age at first use, 2001 FRHS

Method of first use	Age at first use					
	<20	20-24	25-29	30-34	35+	Total
Pill(daily)	42.3	34.2	28.5	21.5	18.5	29.7
IUD	0.4	3.3	4.3	6.2	5.5	4.0
Injection	40.6	45.0	45.7	46.4	47.6	45.2
Condom	0.2	0.4	0.8	1.1	1.0	0.7
Female sterilization	0.2	1.5	4.7	8.7	9.3	4.3
Male sterilization	0.2	0.9	2.2	2.3	2.4	1.6
Other modern	6.3	5.6	4.9	4.5	4.0	5.1
Safe period	5.1	3.7	4.0	5.1	6.0	4.4
Withdrawal	1.5	1.6	1.5	1.3	2.6	1.6
Other traditional	3.2	3.8	3.4	2.9	3.1	3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
No: of EMW	527	1455	1367	851	420	4620

Initiation of contraception is occurring at earlier stages of family formation. In both 1991 and 1997 the mean number of living children at time of initiation of first use of contraception was 2.2. By 2001, this had reduced to 1.7 (see Figure 4.1). As shown later in this chapter, an increasing proportion of women are using contraception for spacing purposes and this use is occurring at earlier parities.

At 41 percent, the use of the oral pill is high for those women who first used contraception when they had no living children. These women, who would be mostly attempting to delay their first birth, opt for temporary methods such as the pill. A further 45 percent use the injectable as their first method. The remaining 14 percent is mainly taken up by traditional methods, especially the safe period. At higher numbers of living children, the adoption of the pill as the first method used decreases substantially, while the proportion

adopting injection as their first method is maintained at over 40 percent except for those who have four or more children when they first use contraception. Even among this latter group, female sterilization is only employed by 14.1 percent of those women who are using contraception for the first time.

Figure 4.1. Mean number of living children at the first use of contraception, 1991 PCFS, 1997 FRHS, 2001 FRHS
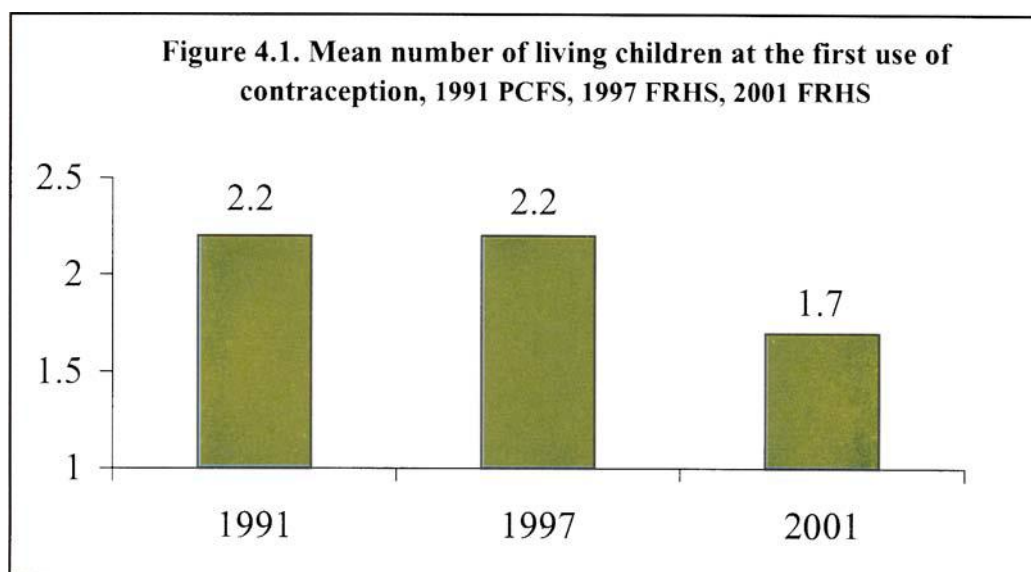
Table 4.3 Percentage distribution of EMW of method first used by number of living children, 2001 FRHS.

Method of first use	Number of living children at first use					Total
	0	1	2	3	4+	
Pill (daily)	41.2	28.8	28.3	23.5	21.2	1371
IUD	0.6	3.5	6.4	5.0	6.3	184
Injection	45.3	49.6	44.7	43.9	37.6	2089
Condom	0.6	1.0	0.6	0.3	0.6	31
Female sterilization	0.0	0.4	3.9	10.8	14.1	200
Male sterilization	0.1	0.5	1.8	3.0	4.9	74
Other modern	4.2	4.7	6.0	6.3	5.3	237
Safe period	5.3	4.6	4.1	3.4	3.8	204
Withdrawal	1.0	2.1	1.4	0.8	2.4	74
Other traditional	1.7	4.8	2.8	3.0	3.8	156
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	
Number	**1032**	**1455**	**850**	**604**	**679**	**4620**

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It is difficult to compare trends in initiation of use over time using the last three fertility and reproductive health surveys as the timing of first use is not available in the 1991 PCFS and 1997 FRHS. However, data from the 2001 FRHS can be used to compare the method of first use at selected intervals before the survey. One problem with this comparison is that the age composition of the sample who are 'at risk' of adopting a contraception varies across time. For example, for the sample of women aged 15-49 in 2001, only those aged 15-39 in the period 1987-1991 were at risk of initiating contraception. However, because most first contraceptive use is initiated before the age of 39 the sample truncation problems should not have a major impact on the comparisons. The results shown in Table 4.4 clearly show that the use of the injectable as a first method has increased substantially during the 1990s. In the period 1987-1991, only 38 percent of women using contraception for the first time chose the injectable. For the period 1997-2001, the corresponding percentage was 54 percent. The increased use of the injectable over time was offset by decreases in the use of the pill, sterilization and traditional methods as the first choice of methods.

The injectable has become the most popular method of contraception in Myanmar. This is the most well known method, with almost 90 percent of ever-married women having heard of injectables and 32.5 percent having ever used injectables (Ministry of Immigration and Population, 2003). Injectables are convenient to use, generally only requiring an injection every three months and are very effective (Hatcher et al. 1997). In Myanmar they are easily available and relatively inexpensive (Ministry of Health, 1997). They have few side effects, although changes of menstrual bleeding are a concern in many societies including Myanmar (Ministry of Health, 1997), and can be used by most women (Hatcher et al, 1997).

Table 4.4 Percentage distribution of contraceptive method of first use of women initiating use in periods, 1987-91, 1992-1996, 1997-2001

Method of first use	Period of first use		
	1987-91	1992-96	1997-2001
Pill (daily)	31.7	27.2	26.2
IUD	3.9	3.6	3.1
Injection	38.0	50.3	54.2
Condom	0.2	0.5	1.2
Female sterilization	5.7	4.3	2.6
Male sterilization	2.1	1.7	0.6
Other modern	6.6	4.8	4.6
Safe period	5.9	3.3	3.9
Withdrawal	1.5	1.3	1.5
Other traditional	4.4	3.2	2.1
Total	100.0	100.0	100.0
No of EMW	820	1200	1814

4.3.   Method switching

Contraceptive switching is the main determinant of contraceptive continuation (Grady, Billy and Klepinger, 2002). With increases in contraceptive prevalence, the need to facilitate contraceptive continuation increases. Contraceptive continuation can occur through switching to another method immediately after discontinuing the use of a method. Therefore contraceptive switching between contraceptive methods is not always a sign of poor contraceptive services (FHI, 1997). No one method suits every woman. In addition, choice of method changes over the life course. Where there are a variety of methods available, women are able to try different methods until they find the one that best fits their needs. There are also differences in probability of switching among different groups of women (Hamill, Tsui and Thapa, 1990). Steele and Diamond (1999) suggest that low levels of switching among modern methods may reflect restricted method choice. In Myanmar there is relatively little switching among methods. The mean number of methods used by ever-married users of contraceptive is only 1.6 (see table 4.5). Less than one percent of ever-married women have used more than four methods.

There is little variation in the mean number of methods used by current age of women. This might suggest that younger women have more choice in contraception than older women given that older women have had longer periods when they could have used contraception. As might be expected, the mean number of methods used generally increases with number of living children, indicating some movement from spacing to limiting methods, although the variation by age is not large. Method switching is more common in urban than in rural areas and among those with higher levels of education compared to those with lower levels of education. Among regions, the mean number of methods used is highest in Yangon and lowest in Rakhine. While the difference among categories in mean number of methods used is not large, the results are consistent with a situation where there is increased switching where more choice in methods are available.

The data available to fully explore switching patterns in the FRHS are limited. The method first used and the current method are available. In the majority of cases the method currently used is also the method that was first used, although there may have been periods of discontinuation between first use and current use.[1] The method that appears to be associated with the least amount of switching is the injectable, the method most frequently employed. Of those women currently using the injectable, 77.5 percent used the injectable as their first contraceptive method (see Table 4.6). Almost three-quarters of women who were using the pill as their current method also used the pill as their first method.

There is also limited switching for some of the traditional methods. For example, 70.8 percent of women currently using the safe period method also used this as their first method. Of perhaps more concern, because of the relatively low effectiveness of withdrawal as a contraceptive method, is that slightly more than 50 percent of the small number of women using withdrawal as their current method also used withdrawal as their first method of use.

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[1] No information is available from the 2001 FHRS about duration of use of the first or subsequent methods. There was also no information collected about the reasons for discontinuation of methods. It is therefore not possible to calculate the method-specific rates of duration of use, continuation rates or failure rates.

| Table 4.5 | Percent distribution of number of methods used by EMW by background characteristics, 2001 FRHS |

Background Characteristics	Number of methods ever used							Total	EMW	Mean number of methods ever used
	0	1	2	3	4	5	6+			
Age										
15-19	59.8	28.9	7.7	3.1	0.5	0.0	0.0	100.0	194	1.4
20-24	40.7	38.2	14.0	5.1	1.5	0.5	0.0	100.0	819	1.5
25-29	37.1	38.6	15.2	6.8	1.6	0.7	0.0	100.0	1338	1.6
30-34	36.9	39.2	15.2	5.9	1.9	0.8	0.1	100.0	1666	1.6
35-39	39.1	35.8	15.5	6.6	2.4	0.4	0.2	100.0	1623	1.6
40-44	46.2	32.5	13.7	4.6	2.0	0.5	0.5	100.0	1474	1.6
45-49	67.4	21.8	5.9	3.1	1.6	0.2	0.0	100.0	1174	1.5
Residence										
Urban	28.6	38.1	20.7	8.7	2.7	0.9	0.3	100.0	2238	1.7
Rural	50.0	33.1	10.7	4.2	1.5	0.4	0.1	100.0	6050	1.5
Education										
No schooling	66.2	24.5	6.8	1.8	0.3	0.3	0.1	100.0	1697	1.4
Primary	44.2	36.5	12.6	4.7	1.6	0.3	0.1	100.0	4401	1.5
Middle school	27.5	39.0	19.1	9.6	3.8	0.9	0.1	100.0	1223	1.7
High school	23.6	36.4	23.1	11.1	4.1	1.3	0.4	100.0	558	1.8
University	21.0	41.8	22.4	10.2	2.3	1.6	0.7	100.0	304	1.8
Others	62.8	25.7	8.6	2.9	0.0	0.0	0.0	100.0	105	1.4
Number of living children										
0	58.4	29.7	9.1	2.1	0.5	0.2	0.0	100.0	767	1.4
1	42.1	37.9	13.1	5.3	1.3	0.3	0.0	100.0	1754	1.5
2	34.6	39.1	16.1	6.7	2.7	0.7	0.1	100.0	1830	1.6
3	38.9	34.3	16.1	7.4	2.3	0.9	0.1	100.0	1509	1.7
4	43.4	34.1	14.1	5.9	1.9	0.3	0.3	100.0	1080	1.6
5	53.2	29.5	10.1	4.2	2.0	0.6	0.4	100.0	662	1.6
6+	64.1	24.2	7.9	2.0	1.5	0.3	0.0	100.0	686	1.5
Region										
Domain 1	44.3	33.3	12.2	7.2	1.9	0.7	0.4	100.0	951	1.7
Domain 2	40.2	37.7	15.0	4.7	1.6	0.4	0.4	100.0	700	1.6
Domain 3	49.0	33.4	10.4	4.6	1.9	0.6	0.1	100.0	962	1.6
Domain 4	36.1	36.6	17.8	6.2	3.0	0.2	0.1	100.0	975	1.6
Domain 5	55.5	29.6	9.5	3.5	1.3	0.5	0.1	100.0	780	1.5
Domain 6	48.1	35.6	10.4	4.6	0.9	0.4	0.0	100.0	1108	1.5
Domain 7	63.8	24.1	9.1	2.5	0.3	0.2	0.0	100.0	602	1.4
Domain 8	25.8	38.4	23.1	8.9	3.0	0.7	0.1	100.0	966	1.7
Domain 9	43.6	36.5	11.9	5.2	2.1	0.7	0.0	100.0	1244	1.6
Total	**44.3**	**34.4**	**13.4**	**5.4**	**1.9**	**0.5**	**0.1**	**100.0**	**8288**	**1.6**
No of EMW	3668	2854	1110	449	153	43	11		8288	

Note: Domain 1 Kachin/ Kayah/ Shan   Domain 4 Bago   Domain 7 Rakhine

Domain 2 Kayin/ Mon/ Tanintharyi   Domain 5 Magway   Domian 8 Yangon

Domain 3 Chin/ Sagaing   Domain 6 Mandalay   Domain 9 Ayeyarwady

Table 4.6   Percent of currently married women currently using contraception by current method used and method first used, 2001 FRHS

Method first used	Method Currently Used										
	Pill (daily)	IUD	Injection	Cond om	Female sterilization	Male steriliz ation	Other modern	Safe period	Withdr awal	Other traditi onal	Total
Pill(daily)	73.6	11.0	17.1	14.3	16.8	19.8	13.5	8.0	19.4	14.0	29.3
IUD	0.4	57.7	1.5	4.8	4.0	0.9	1.1	2.2	1.4	0.9	4.4
Injection	22.8	24.8	77.5	19.0	20.8	19.8	23.6	13.1	18.0	14.0	43.6
Condom	0.2	0 7	0.4	57.1	0.3	0.0	0.0	0.0	2.8	0.0	0.7
Female sterilization	0.0	0.0	0.0	0.0	54.0	0.0	0.0	0.0	0.0	0.0	6.8
Male sterilization	0.0	0.7	0.2	0.0	0.6	52.3	0.0	0.0	0.0	0.0	2.3
Other Modern	1.9	4.4	1.3	0.0	1.2	2.7	61.8	0.7	1.4	0.8	3.6
Safe period	0.8	0.7	0.7	0.0	1.4	1.8	0.0	70.8	4.2	4.6	4.5
Withdrawal	0.0	0.0	0.3	0.0	0.3	1.8	0.0	1.5	52.8	0.9	1.7
Other traditional	0.3	0.0	1.0	4.8	0.6	0.9	0.0	3.7	0.0	64.8	3.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	640	137	1107	21	346	111	89	137	72	98	2758

Note: 12 cases have missing value

Current users of the pill who had used a different method as their first method were likely to have used the injectable, while current users of the injectable who had initiated contraceptive use with a different method were most likely to have used the pill. Of current users of the pill, 73.6 percent had initiated contraceptive use with the pill and 22.8 percent with the injectable. That is 96.4 percent of first use of current pill users was either the pill or injectable. Similarly, 94.6 percent of first use of current injectable users was either the injectable or pill. As these two methods constitute approximately 64 percent of method use in 2001 (Ministry of Immigration and Population, 2003), this suggests that most switching that does occur is between these two methods. A previous study concluded that there was a high level of alternation between the pill and the injectable, with both financial and side effect considerations driving the switching. When financial resources were not available, women tended to use the pill, but side effects of the pill would often drive them to use the injectable. Some women would also switch from the pill to the injectable if they experienced amenorrhea (Ministry of Health, 1997).

When current method used is viewed in relation to method of first use (Figure 4.2) it is apparent that considerable proportions of women whose first method of use was injectable or daily pill were not using this method at the time of survey. Almost 20 percent of women whose first method was the injectable and approximately 25 percent whose first

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method was the daily pill were using other methods at the time of survey. And approximately 40 percent of women who first used the pill or injectables were not using any method at all. As shown later in this chapter, many of these women who first used the pill or injectables but who were not using a method at the time of the survey had an unmet need for contraceptive and the reason for not using was mostly method related. Differences among methods in terms of the proportions that shifted from their first method to another method were generally not large, with smallest proportion of shifters, apart from those who had initiated use with sterilization, found for those women who initiated use with traditional methods.

Figure 4.2. Percent of CMW initiating contraceptive use by current method use, 2001 FRHS
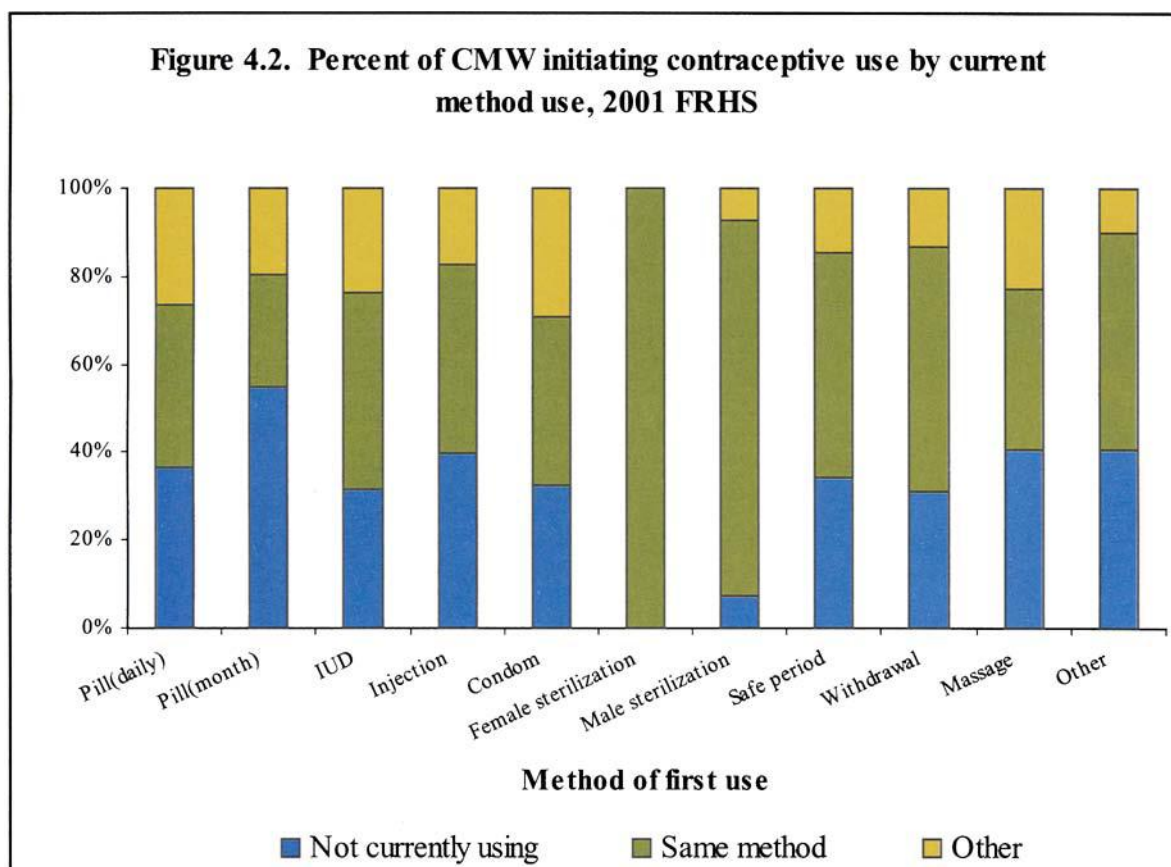
The mean number of methods used by current users of contraception is shown by methods of current use in Figure 4.3. These results confirm the findings reported above. Women who are currently using the indictables are the least likely to have used other methods. Women who are using the pill have the second lowest mean number of methods used. The small number of women (21) who report that they are currently using the condom for contraceptive purposes have the highest mean number of methods used. Women who are currently using withdrawal and the monthly pill also have used a higher mean number of methods than women currently using other methods. This suggests that women using methods that are problematic either because of low effectiveness (condom) or concerns about health impacts (monthly pill) have moved to these methods as a result of difficulties of use of other methods.

Figure 4.3. Mean numer of methods ever used by method of current use, 2001 FRHS
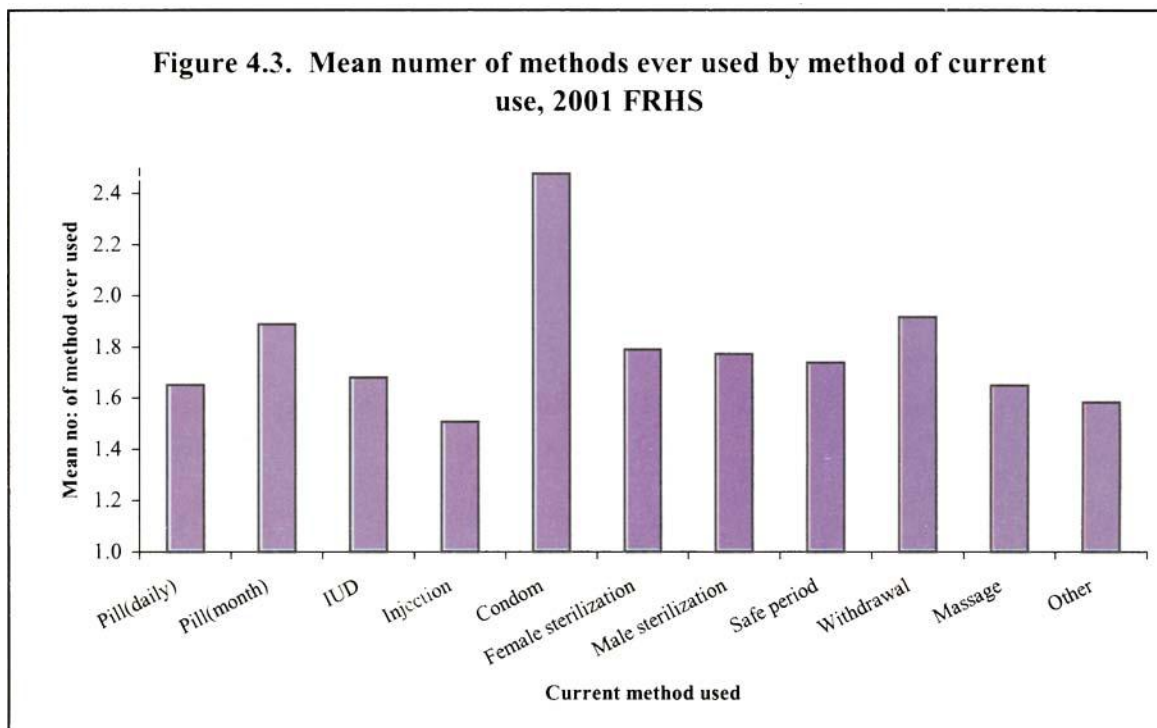
The number of contraceptive methods ever used in three surveys is shown in Figure 4.4. In 1991, about 71 percent of ever married women had used only one method while in 2001, 62 percent reported ever use of only one method. Conversely 6.5 percent of ever married women have used 3 methods in 1991, and this had increased to 9.7 percent in 2001. The same trend was found for four and more methods (2.3 percent in 1991 to 4.4 percent in 2001). This suggests that over time there has been an increasing number of contraceptive methods available to women and this has resulted in more women switching between methods when they are dissatisfied with a method.

Figure 4.4 Number of methods ever used in 1991 PCFS, 1997 FRHS, 2001 FRHS

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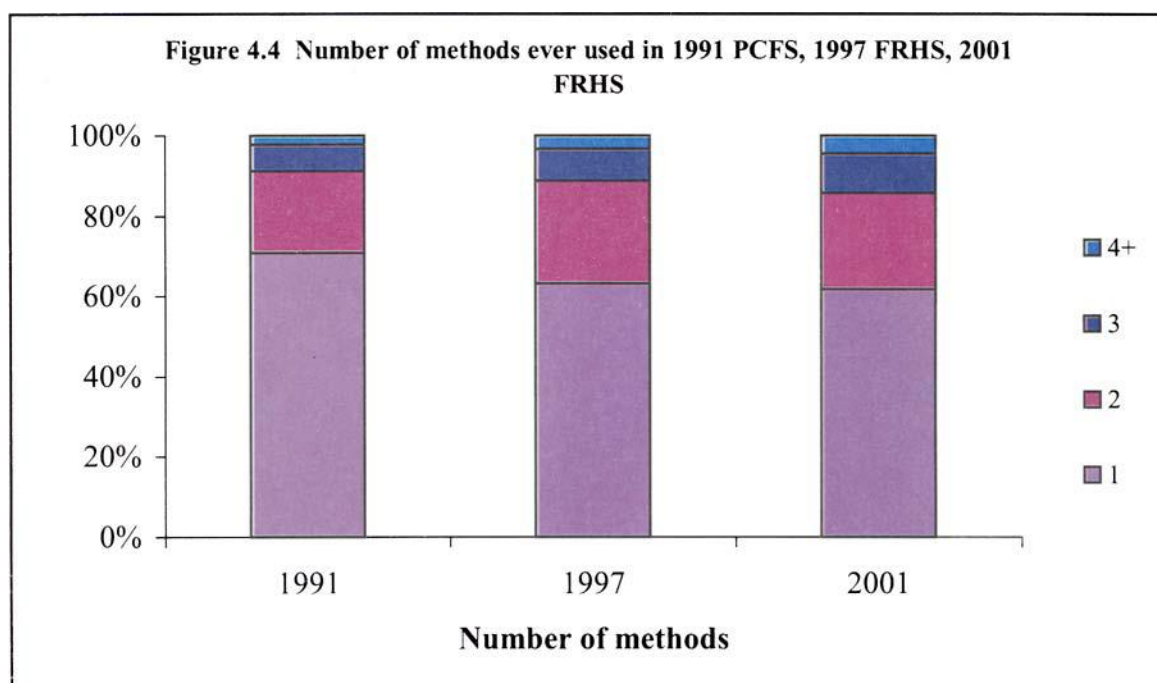
From Table 4.7 it can be seen that of the women who were using withdrawal at the time of the survey, 32.9 percent had previously used modern methods only while a further 13.7 percent had previously used both a combination of other modern and traditional methods. Therefore almost one-half of current users of withdrawal have had experience with modern methods. Almost one-third of the women employing the 'safe period' at the time of the survey had prior experience of modern methods and another one third of the women had experience with other traditional methods. For women who were using other modern methods, of which the monthly oral pill is the main method, over 40 percent had experience of use of other modern methods. Hence it is not lack of acquaintance with a variety of modern methods that results in women using methods of low effectiveness; instead it is much more likely to result from dissatisfaction with previous methods used.

Almost two-thirds of women who were current users of the injectables had only ever used this method, while another 23 percent of injectable users had used other modern methods. A similar situation is observed for pill users, with 55 percent only having used the pill and another 30 percent having only used other modern methods. Previous use of traditional methods is greatest for those currently using traditional methods, those women using condoms for family planning and users whose contraceptive needs have been met through male sterilization.

Table 4.7   Percent distribution of CMW currently using contraceptive methods who have previously used a contraceptive method by current method used, 2001 FRHS

Method currently used	Methods Previously used					
	Same method only	Other modern methods only	Other traditional methods only	Other modern and traditional methods	Total	CMW
Pill (daily)	55.1	29.8	6.7	8.4	100.0	641
IUD	53.3	38.7	2.2	5 8	100.0	137
Injection	62.9	23.0	8.6	5.5	100.0	1111
Condom	42.9	14.3	19.0	23.8	100.0	21
Female sterilization	52.0	35.8	4.1	8.1	100.0	346
Male sterilization	49.1	30.7	8.8	11.4	100.0	114
Other modern	40.4	42.7	4.5	12.4	100.0	89
Safe period	48.6	18.8	21.7	10.9	100.0	138
Withdrawal	39.7	32.9	13.7	13.7	100.0	73
Other traditional	50.8	27.5	15.0	6.7	100.0	100
Total	56.0	28.0	8.3	7.7	100.0	2770

Currently married women who at the time of the survey were not using a contraceptive method but who stated an intention to use a method in the future may be thought of as either potential first users or potential switchers (see table 4.8). Overall, 1,265 women not using contraception at the time of the survey indicated that they planned to use contraception in the future. Of these women, 41 percent had not previously used a contraceptive method, another 54 percent had previously used modern methods and only five percent had only used traditional methods.

Fifty five percent intended to use the injectable as their next method and 21 percent intended to use the pill. Only eight percent intended to employ female sterilization and very small percentages stated that they would use other methods. There was a relatively high level of consistency of use. Of those who intended to use the injectable, and who had previously used a method, the injectable was the only method previously used by the majority of women. The same result was obtained for the pill. Of the relatively small number of women who said they would use the IUD very few had previously used this method.

Table 4.8   Percent distribution of CMW currently not using contraceptive method by method of intended use: 2001 FRHS

| Intention to use | Status of past method use | | | | | | |
	No previous use	Same method only	Other modern methods only	Other traditional methods only	Other modern and traditional methods	Total	CMW
Pill (daily)	43.5	30.4	19.2	1.9	5.0	100.0	260
IUD	43.5	4.3	47.8	2.2	2.2	100.0	46
Injection	40.6	31.1	18.0	6.0	4.3	100.0	699
Condom	42.9	14.3	28.5	14.3	0.0	100.0	7
Female sterilization	34.6	0.0	44.6	7.9	12.9	100.0	101
Male sterilization	57.1	0.0	42.9	0.0	0.0	100.0	7
Other modern	30.3	33.3	24.3	9.1	3.0	100.0	33
Safe period	31.8	22.7	22.7	13.7	9.1	100.0	22
Withdrawal	57.1	21.4	14.3	0.0	7.2	100.0	14
Other traditional	39.4	6.1	45.4	0.0	9.1	100.0	33
Don't know	53.5	0.0	30.2	7.0	9.3	100.0	43
Total	41.1	25.3	23.0	5.2	5.4	100.0	1265

4.4. Contraceptive use for spacing and limiting

Reasons for using contraceptive vary. For some women who contracept immediately after marriage the objective of contraceptive use is to delay their first birth, for others contraception is used to prolong the spacing between births, while other women use contraception in order not to have any more children. In this chapter we define contraceptive use for spacing as use where the woman says that she does not want any more children for two years after her last birth or, if she has no child, for two years from the date of the survey. Contraceptive use for limiting is defined as contraceptive use when the woman reports that she does not want any more children at all. Contraceptive use for the purpose of delaying the first birth is included as spacing in the analysis.

There has been a substantial increase in the proportion of contraceptive users who are contracepting for the purpose of spacing. In 1991, 17.4 percent of users were spacing. This increased to 18.9 percent in 1997 and jumped to 23.2 percent in 2001 (see Table 4.9). In 2001, almost 90 percent of spacers were using modern methods, with a slightly lower proportion of limiters using modern methods. For spacers, injectables were the method most commonly used, with 51.2 percent of spacers using this method. A further 29.4 percent were using the daily pill. For limiters, the injectable (34.7) and daily pill (20.7) were the most popular methods, although there were a significant proportion (18.5) who had chosen female sterilization. Only 5.6 percent of limiters were using the IUD.

Table 4.9	Contraceptive method mix for spacers and limiters, 1991 PCFS, 1997 FRHS, 2001 FRHS.					
	Spacers			Limiters		
	1991	1997	2001	1991	1997	2001
Any method	100.0	100.0	100.0	100.0	100.0	100.0
Any modern method	71.9	85.2	89.7	85.9	88	88.6
Pill (daily)	34.9	29.3	29.4	19.9	19.7	20.7
IUD	5.2	4.2	3.7	4.7	4.1	5.6
Injection	31.8	51.2	51.1	14.3	30.4	34.7
Condom	0.0	0.0	0.9	0.9	0.5	0.5
Female sterilization	0.0	0.0	0.0	31.2	23.4	18.5
Male sterilization	0.0	0.0	0.0	14.9	9.4	5.7
Other modern	0.0	0.5	4.6	0.0	0.5	2.9
Any traditional methods	28.1	14.8	10.3	14.1	12.0	11.4
Safe Period	19.7	7.7	5.7	9.9	6.3	4.7
Withdrawal	4.8	2.7	2.1	1.7	2.5	2.6
Other traditional	3.6	4.4	2.5	2.5	3.2	4.1
No: of CMW	148	852	565	705	3656	1875

The major changes in the method mix of spacers and limiters between 1991 and 2001 have occurred for spacers. In 1991, 28 percent of spacers were using traditional methods, with 19.7 percent using the safe period. By 1997, 14.8 percent of spacers were using traditional methods and by 2001 this had further declined to 10.3. Reductions in the use of traditional methods were compensated for by increased use of the injectables. For limiters the declines in traditional use started from a lower base and have been modest. In 2001, 11.4 percent of limiters were using traditional methods, a decline of only 2.7 percentage points since 1991. Yet among the limiters there have been more dramatic increases in the use of the injectables than the increases observed for spacers, with 14.3 percent of limiters in 1991 using the injectables compared to 34.7 percent in 2001. Meanwhile, the proportion of limiters utilizing the pill remained constant at around 20 percent.

For limiters, the increase in the proportion using injectables have occurred through rapid declines in the proportion of limiters who used female or male sterilization as their method of contraception. In 1991, 31.1 and 14.9 percent of limiters used female and male sterilization respectively. By 2001, these percentages were 18.5 and 5.7 respectively. As injectables have become increasingly available, especially through the private sector, they have supplanted sterilization, which needs to be undertaken in clinics, as the method of choice for limiting family size. The majority of women and men who reported in 2001 that sterilization was their method of contraception were aged over 40 at the time of the survey and it is likely that many would have undergone the procedure in the early 1990s, or even earlier. Therefore it appears that there are now very few sterilizations being undertaken in Myanmar. Very few women use condoms for contraception.

In Table 4.10 the contraceptive prevalence for spacers is shown by background characteristics. For currently married women aged 15 to 19 at the time of the survey, 18.4 percent were using contraception for spacing purposes, for age group 20-24 the percentage is 20.3 and 15.8 percent for ages 25-29. Thereafter contraceptive use for spacing purposes rapidly declines. As age increases the ratio of the use of the injectables to the pill for spacing purposes increases. At age 20-24, the percentages using the injectables and daily pill for spacing purposes are 10.3 and 7.4 percent respectively; at ages 25-29 the respective percentages are 8.0 and 4.2.

Contraceptive prevalence for spacing is greater in urban (9.1) than in rural areas (7.0) and increases with level of education. The highest level of contraceptive use for spacing purposes is found in Yangon Division (10.4). The use of the injectables as the main spacing method is seen for women from all backgrounds. There is also very little variation in the proportion of women utilizing the injectables for spacing among categories of the background characteristics. The method is widely accessible to all women, irrespective of their location or personal characteristics. Traditional methods, while used by only slightly more than 10 percent of women for spacing purposes, are more widely used by those with a university education than those women with lower levels of education. This would suggest that more educated women may worry about using modern methods of contraception because of potential side effects.

The use of contraception for spacing is most prevalent after women have one child. Slightly over 19.1 percent of women with one child were using contraceptives to space their second child. This compares to 8.0 percent of women with two children and 3.2 percent of women with three children who were using contraception for spacing purposes. Almost 13 percent of women with no children were using contraception to delay the birth of their first child. The proportion using the injectables for spacing generally increases with increasing

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with increasing numbers of living children and the proportion using the pill generally decreases with increasing number of living children.

Contraceptive prevalence for limiting is greatest for ages 35-39 (35.7) and 40-44 (34.8). Even by ages 25-29 almost one in five of currently married women were using contraception to limit family size (Table 4.11). Female sterilization is most common at ages over 35, with almost 40 percent of the contraceptive prevalence of women at this age, a result of the use of female sterilization. At older ages there is also a relatively high level of use of traditional methods of contraception, with 14 percent of contraceptive prevalence at ages 40-44 and 21 percent of contraceptive prevalence at ages 45-49, a result of the use of traditional methods. At ages younger than 35, the injectables and the daily pill account for well over two-thirds of contraceptive prevalence for limiting.

Contraceptive prevalence for limiting varies from 29.5 percent for women with five living children and 29.8 percent for women with two living children, to 36.8 and 35.2 percent for women with three and four living children respectively. Female sterilization as a method of limiting births is most common for women who have three or more living children, while the substantial proportion of women with two living children who are limiting their births have high levels of use of hormonal contraceptives, especially the injectables. The absolute and relative share of prevalence for limiting that is attributed to traditional methods is highest among women who have four or more living children.

4.5.   Unmet need for contraception

In this section, the unmet need of contraception and the demand for contraception and its fulfillment are analyzed by examining the profile of the non-users. The analysis is supplemented by an examination of the reasons for not using contraception and the intention of future use of contraception by currently married women who have unmet need.

From past experience, it is known that substantial proportions of women who want to prevent or postpone the next birth are not practising contraception. Such women are assumed to have an unmet need for contraception. In this analysis, unmet need is defined as including all fecund women who are married, and thus presumed to be sexually active, and who either do not want any more children or who wish to space the birth of their next child for at least two years but are not using any contraceptive methods. In this analysis, the two-year waiting period starts from the last birth for the women who are not currently pregnant and it starts after giving birth for currently pregnant women. For women with no previous birth the reference point is the time of interview. There may be some women who wanted a gap of at least two years after their last birth but are not currently using contraception because this two-year period is already completed and now they are eager to conceive the next birth.

Table 4.10	Percent of currently married women using contraceptive for spacing by background characteristics, 2001 FRHS					

Background Characteristics	Pill (daily)	Injection	Other modern	Traditional methods	Total	CMW
Age of Mother						
15-19	8.4	7.8	2.2	0.0	18.4	179
20-24	7.4	10.3	1.2	1.4	20.3	769
25-29	4.2	8.0	1.8	1.8	15.8	1255
30-34	2.0	4.6	0.8	0.5	7.9	1535
35-39	0.7	1.3	0.2	0.7	2.9	1472
40-44	0.0	0.4	0.2	0.3	0.9	1304
45-49	0.0	0.0	0.1	0.1	0.2	980
Residence						
Urban	2.9	4.6	0.7	0.9	9.1	1988
Rural	2.0	3.6	0.7	0.7	7.0	5506
Education						
No schooling	0.9	1.4	0.4	0.3	3.0	1514
Primary	2.2	3.5	0.6	0.5	6.8	3972
Middle school	2.9	5.6	0.8	1.3	10.6	1117
High school	4.5	7.8	1.9	1.6	15.8	512
University	3.5	9.1	1.7	2.1	16.4	286
Others	0.0	1.1	0.0	0.0	1.1	93
No. of living children						
0	5.4	5.9	0.6	0.6	12.5	706
1	5.3	10.4	1.5	1.9	19.1	1516
2	1.9	4.1	1.0	1.0	8.0	1664
3	0.9	1.2	0.6	0.5	3.2	1390
4	0.2	0.4	0.1	0.2	0.9	979
5	0.0	0.0	0.0	0.0	0.0	594
6+	0.2	0.0	0.0	0.0	0.2	645
Region						
Domain 1	1.1	1.9	1.4	1.4	5.8	852
Domain 2	1.8	4.1	0.4	0.2	6.5	611
Domain 3	1.8	6.0	1.1	1.3	10.2	872
Domain 4	3.9	4.9	0.6	0.2	9.6	900
Domain 5	1.6	2.4	0.4	0.6	5.0	719
Domain 6	2.1	2.7	0.5	0.8	6.1	1011
Domain 7	3.2	2.7	0.6	1.0	7.5	521
Domain 8	2.9	6.3	0.6	0.6	10.4	848
Domain 9	1.7	3.5	0.5	0.9	6.6	1160
CPR for spacers	**2.2**	**3.8**	**0.7**	**0.8**	**7.5**	
No of spacers	**166**	**289**	**52**	**58**	**565**	**7494**

Note: Women spacers include only the women who are currently using contraception and want a child after 2 years.

Note: Domain 1 Kachin/ Kayah/ Shan   Domain 4 Bago   Domain 7 Rakhine

        Domain 2 Kayin/ Mon/ Tanintharyi   Domain 5 Magway   Domian 8 Yangon

        Domain 3 Chin/ Sagaing   Domain 6 Mandalay   Domain 9 Ayeyarwady

Table 4.11 Percent of currently married women using contraceptive for limiting by background characteristics, 2001 FRHS.

Background Characteristics	Pill (daily)	Inject ion	Female sterization	Male sterization	Other Modern	Traditional methods	Total	CMW
Age of Mother								
15-19	1.7	3.3	0.0	0.0	1.1	0.6	6.7	179
20-24	3.3	5.9	0.3	0.3	0.5	0.8	10.9	769
25-29	4.7	7.2	1.6	0.6	1.6	1.8	17.5	1255
30-34	6.8	12.2	2.9	0.9	2.5	2.1	27.6	1535
35-39	7.4	12.2	6.7	2.2	3.5	3.7	35.7	1472
40-44	5.6	9.6	9.0	2.3	3.4	5.0	34.8	1304
45-49	1.5	1.7	6.4	2.1	0.9	3.4	16.1	980
Residence								
Urban	7.0	9.9	9.6	2.6	2.5	3.4	35.0	1988
Rural	4.5	8.2	2.8	1.0	2.2	2.7	21.4	5506
Education								
No education	3.6	5.2	3.0	0.5	1.4	2.2	15.9	1514
Primary	5.8	9.2	3.8	1.4	2.3	2.7	25.2	3972
Middle school	5.4	12.3	6.6	2.5	2.6	3.8	33.2	1117
High school	5.1	9.2	10.0	2.1	3.5	3.3	33.2	512
University	4.9	6.6	8.0	1.4	2.5	4.6	28.0	286
Others	4.3	4.3	1.1	1.1	2.2	1.1	14.0	93
No. of living children								
0	1.4	1.4	0.0	0.0	0.1	0.8	3.8	706
1	4.6	4.9	0.9	0.5	0.7	1.2	12.7	1516
2	6.4	11.5	4.5	1.5	2.8	3.1	29.8	1664
3	7.3	12.8	7.8	2.1	3.7	3.0	36.8	1390
4	5.7	9.8	8.9	2.9	2.9	5.1	35.2	979
5	5.2	8.9	6.1	1.9	3.0	4.4	29.5	594
6+	2.2	7.3	4.0	0.9	2.2	3.3	19.8	645
Region								
Domain 1	4.0	8.6	12.1	1.5	3.5	4.3	34.0	852
Domain 2	4.8	9.5	6.2	2.6	1.6	2.1	26.8	611
Domain 3	3.5	8.4	3.2	1.8	2.2	2.5	21.6	872
Domain 4	6.8	10.3	2.4	1.7	2.3	2.6	26.1	900
Domain 5	3.2	5.5	2.4	0.7	2.4	4.0	18.2	719
Domain 6	5.5	7.2	4.3	1.2	2.1	2.5	22.8	1011
Domain 7	4.8	7.8	1.0	0.0	0.8	1.3	15.7	521
Domain 8	7.5	11.2	8.0	2.1	1.4	2.5	32.7	848
Domain 9	5.9	9.0	1.8	0.9	3.1	3.2	23.9	1160
CPR for limiters	5.2	8.7	4.6	1.4	2.3	2.8	25.0	
No: of limiters	389	650	346	106	170	214	1875	7494

Note: Domain 1 Kachin/ Kayah/ Shan   Domain 4 Bago   Domain 7 Rakhine
          Domain 2 Kayin/ Mon/ Tanintharyi   Domain 5 Magway   Domian 8 Yangon
          Domain 3 Chin/ Sagaing   Domain 6 Mandalay   Domain 9 Ayeyarwady

In DHS surveys, estimates of unmet need of women include pregnant and amenorrhic women whose pregnancy was unintended. In Myanmar, the 1991 PCFS and 1997 FRHS questionnaire did not include such questions for currently pregnant and amenorrheic women. In the 2001 FRHS, the questions on the intention of current pregnancy are asked and unmet need can be supplemented for those women who are currently pregnant unintentionally. But, for comparison purposes, the unmet need is calculated for the 2001 FRHS the same way as for the 1991 PCFS and 1997 FRHS. However the additional unmet need for currently pregnant women is calculated separately and presented in a footnote[2].
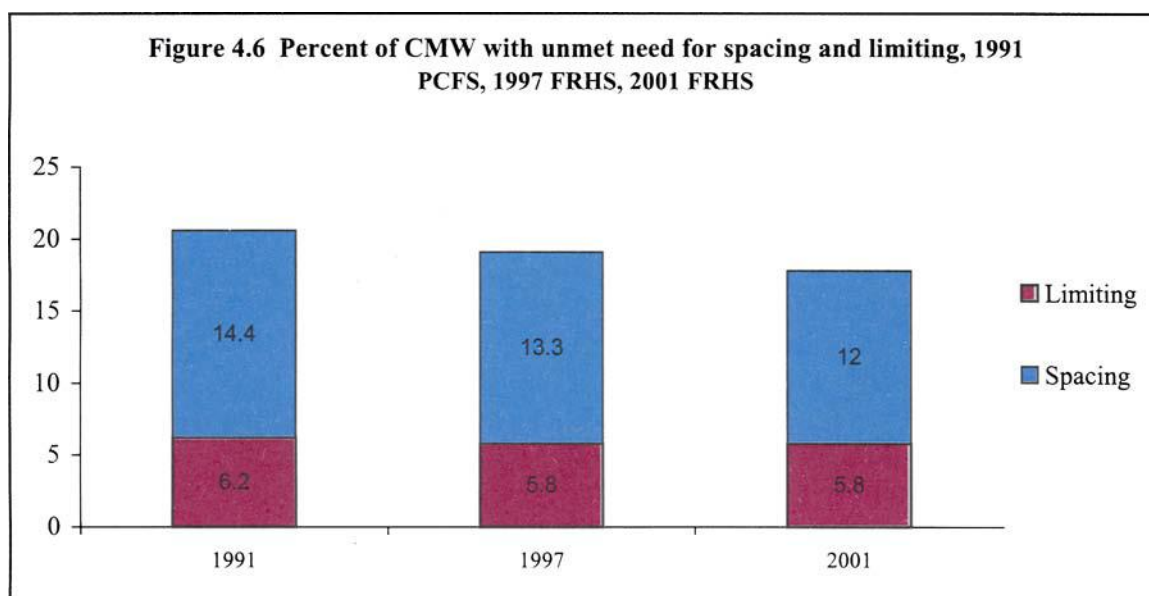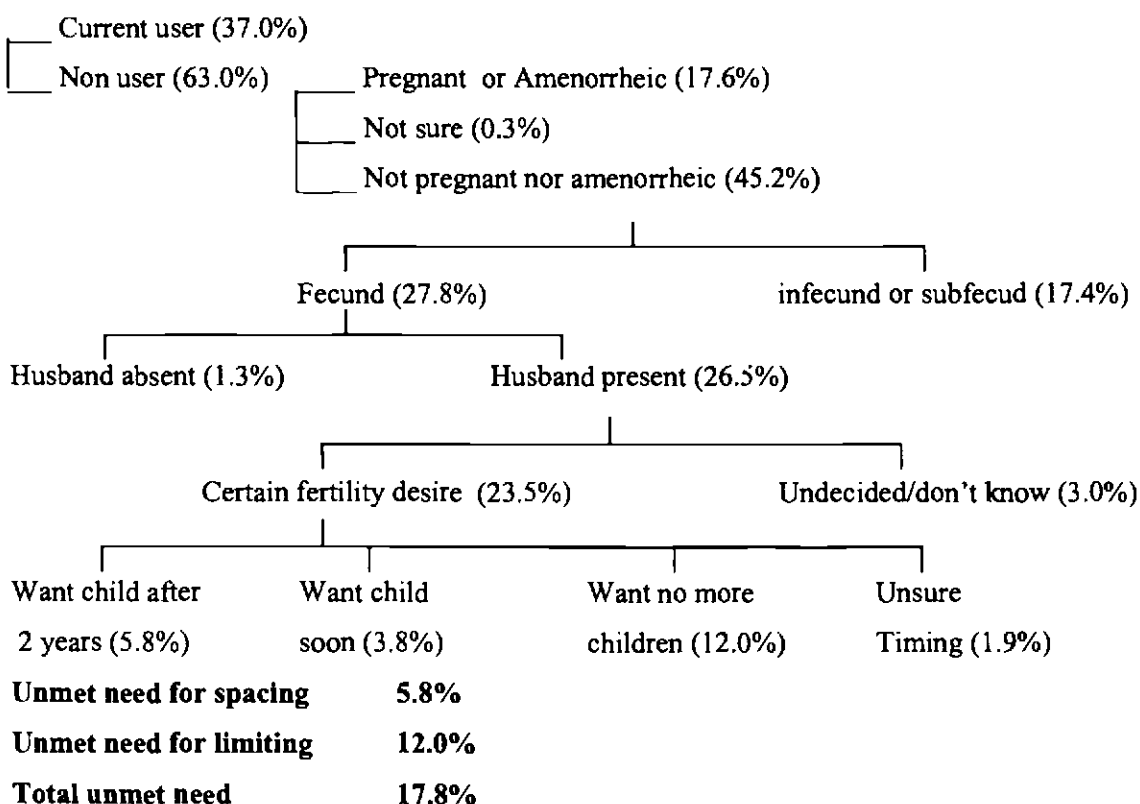
In this analysis, only currently married women who are not currently using contraception are included for estimating unmet need and women who are currently using contraception are assumed to have already met their need even if they are using traditional methods. It is assumed that never-married and formerly married women of reproductive age are not sexually active and therefore have no unmet need. Among non users, those who are currently pregnant, currently in a state of postpartum amenorrhea, infecund, or whose husband is absent are not in current need of contraception. Women who want more children and those who wish to have a child soon (within two years) are considered not in need of contraception. Also women who are not certain about the timing of their next birth are not likely to use contraception. Non-pregnant women who have been married for at least five years who have not used contraception and who have not been fertile, non-pregnant women who have not menstruated in the past twelve weeks, or who have not had their period since before the last birth are classified as in-fecund and sub-fecund. Thus these groups of women are excluded from the unmet need category and fecund women who are not currently using contraception can be classified in terms of their reproductive intentions as follow: -

(1) **Potential spacers:** non users who want more children but wish to wait more than two years before giving birth

(2) **Potential limiters:** non users who want no more children

Figure 4.5 shows the estimate of unmet need from the 2001 FRHS. The result indicates that 5.8 percent of currently married women aged 15-49 have an unmet need for spacing and 12 percent for limiting. Like the previous surveys in 1991 and 1997, the unmet need for limiting is more than double the unmet need for spacing. There have been only small reductions in levels of unmet need between 1991 and 2001. Unmet need in 1991 was 20.6 percent and in 2001 was 17.8 percent (see Figure 4.6).

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[2] If we include currently pregnant women who were unintentionally pregnant, the unmet need for spacing become 6.3 percent and the unmet need for limiting become 12.8 percent. The total unmet need would be 19.1 percent. Of the 557 women pregnant at the time of the survey, 6.5 percent would have preferred to wait to get pregnant and 10.6 percent did not want to become pregnant.

Figure 4.5 Estimation of Unmet need for contraception from 2001 FRHS

Current user (37.0%)

Non user (63.0%)

Pregnant or Amenorrheic (17.6%)

Not sure (0.3%)

Not pregnant nor amenorrheic (45.2%)

Fecund (27.8%)   infecund or subfecud (17.4%)

Husband absent (1.3%)   Husband present (26.5%)

Certain fertility desire (23.5%)   Undecided/don't know (3.0%)

Want child after	Want child	Want no more	Unsure
2 years (5.8%)	soon (3.8%)	children (12.0%)	Timing (1.9%)

Unmet need for spacing   **5.8%**

Unmet need for limiting   **12.0%**

Total unmet need   **17.8%**

Figure 4.6 Percent of CMW with unmet need for spacing and limiting, 1991 PCFS, 1997 FRHS, 2001 FRHS

It can be seen in Figure 4.7 that the overall levels of unmet need as measured from the 2001 FRHS are only slightly higher than the levels observed for all developing countries and about 1.4 percentage points higher than for all Asian countries (except China). The major difference with trends in other countries, however, is the much larger proportion of unmet need for limiting and the smaller proportion for spacing for Myanmar compared to other countries.

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Figure 4.7 Percentage of CMW with an unmet need for contraception
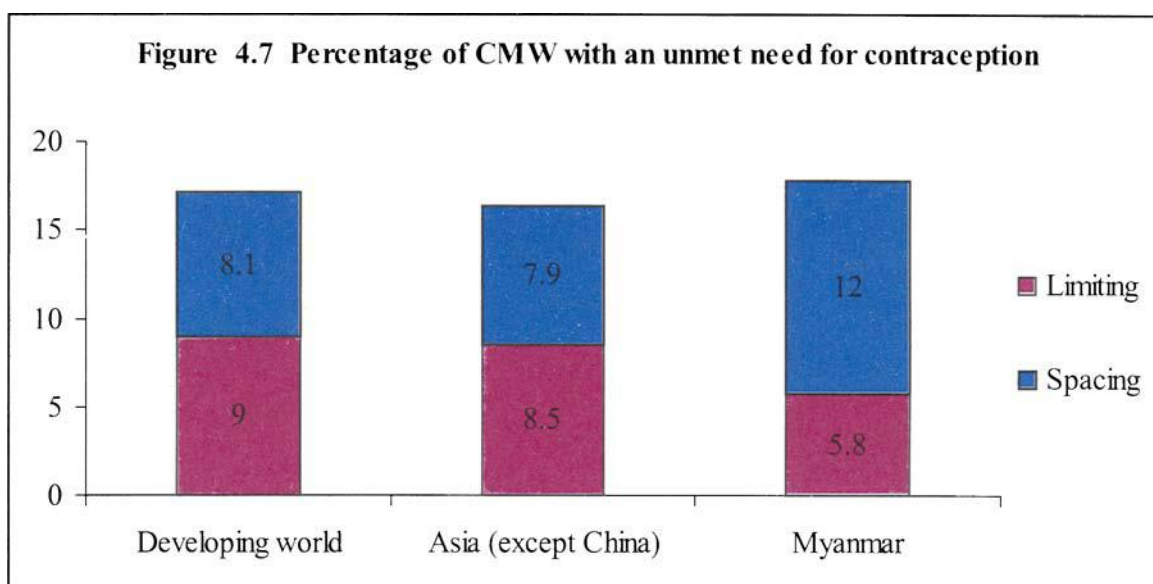
The magnitude of unmet need for contraception varies among socio demographic groups of the population. It is associated with age, number of living children, urban-rural residence and by the women's level of education. It also varies across the regions. Table 4.12 shows the percent of currently married women with unmet spacing and limiting need by selected background characteristics. The total unmet need varies with age, from 12 percent to 21 percent. The total unmet need is highest among women in the 40-44 age group (21.3 percent) and it is concentrated in the middle age groups 30-44. The unmet need for spacing and limiting shows different age patterns. Younger women are more likely to express a need for spacing births and the unmet need for spacing declines with advancing age while older women are more likely to want to limit their births. Unmet need for limiting is highest among women in the 40-44 age group (20 percent) and lowest among women in the 15-19 age group (3 percent).

The number of living children follows a similar pattern as age, women in the early stages of childbearing are more in need of contraception for spacing purposes than women with larger families. The unmet need for spacing is highest among women with only one child and decreases with increasing number of living children. The unmet need for limiting is focused more on women with two and above children. These results tend to offset each other, but still total unmet need increases with an increasing number of living children. It is interesting to see that 4.4 percent of childless women have an unmet need for contraception to postpone their fertility and almost three percent of women with no children have an unmet need for contraception to limit their births.

The total unmet need declines with increasing level of women's education. Women with no schooling and primary education have the higher unmet need and women with high school and university education have the lower levels of unmet need. There is little difference in unmet need for spacing among the women with different level of education. For limiting, unmet need is the highest among women with no schooling and primary education, and it is lowest among the women with university education.

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Table 4.12 Percent of CMW with unmet spacing and limiting need by selected background characteistics, 2001 FRHS

Background characteristics	Unmet Need			CMW
	Spacing	Limiting	Total	
Age group				
15-19	14.0	2.8	16.8	179
20-24	10.8	4.7	15.5	769
25-29	9.2	6.9	16.1	1255
30-34	8.1	11.8	19.9	1535
35-39	4.1	15.4	19.5	1472
40-44	1.5	19.8	21.3	1304
45-49	0.3	11.3	11.6	980
Residence				
Urban	4.2	9.0	13.2	1988
Rural	6.3	13.2	19.5	5506
Level of education				
No schooling	5.4	14.3	19.7	1514
Primary	6.4	13.2	19.6	3972
Middle school	5.0	8.6	13.6	1117
High school	3.5	7.0	10.5	512
University	6.6	4.9	11.5	286
Others	2.2	17.2	19.4	93
Number of living children				
0	4.4	2.8	7.2	706
1	11.0	4.2	15.2	1516
2	7.6	10.2	17.8	1664
3	4.6	14.0	18.6	1390
4	2.2	19.7	21.9	979
5	1.7	19.4	21.1	594
6+	1.6	22.9	24.5	645
Regions				
Domain 1	4.2	9.9	14.1	852
Domain 2	6.2	10.5	16.7	611
Domain 3	6.3	12.2	18.5	872
Domain 4	4.9	12.9	17.8	900
Domain 5	6.8	13.8	20.6	719
Domain 6	5.0	13.9	18.9	.011
Domain 7	10.4	9.8	20.2	521
Domain 8	3.8	8.3	12.1	848
Domain 9	6.2	14.8	21.0	1160
Total	**5.8**	**12.0**	**17.8**	**7494**

Note: Domain 1 Kachin/ Kayah/ Shan   Domain 4 Bago   Domain 7 Rakhine
       Domain 2 Kayin/ Mon/ Tanintharyi   Domain 5 Magway   Domian 8 Yangon
       Domain 3 Chin/ Sagaing   Domain 6 Mandalay   Domain 9 Ayeyarwady

Unmet need for contraception is greater in rural areas than urban areas for both spacing and limiting purposes. There are considerable regional variations in unmet need. Total unmet need is the highest (20 percent) in Magway Division and Rakhine State and lowest (12 percent) in Yangon Division. The same geographical pattern was found for both spacing and limiting of unmet need.

Table 4.13 shows the comparison of the percent of currently married women with spacing and limiting demand for contraceptive use and percentage of demand fulfilled for the 1991 PCFS, 1997 FRHS and 2001 FRHS. The demand for contraception is estimated as the sum of unmet need for contraception and the current prevalence of contraceptive use. Fulfillment of demand can be estimated by dividing the contraceptive use by total demand for contraception. In this analysis those persons who are using contraception even though they want to have a birth in the two years since the last birth are included in demand for spacing as their use of contraception indicates a demand for spacing.

The overall demand for contraception in 2001 is 55 percent with an increase in demand between 1991 and 2001 (37 percent for 1991 and 55 percent for 2001). There was only a relatively small increase in demand between 1997 and 2001. Demand for limiting is much higher than the demand for spacing in all three surveys. Despite the differing levels of demand for contraception, the fulfillment of demand is almost the same for both spacing and limiting. Fulfillment of demand increased from 45 percent in 1991 to 63 percent in 1997 and there was a further small increase to 67.4 percent in 2001. These results indicate that the major improvements in meeting contraceptive demand came in the first half of the 1990s, and that in the latter half of the 1990s, gains were much more limited. In 2001 over 30 percent of demand remained unfulfilled.

Table 4.13   Percent of CMW with spacing and limiting demand for contraceptive use and percentage of demand fulfilled, 1991 PCFS, 1997 FRHS, 2001 FRHS

Unmet need	1991 PCFS		1997 FRHS		2001 FRHS	
	Demand	Fulfillment	Demand	Fulfillment	Demand	Fulfillment
Spacing	11.1	44.3	15.1	61.5	17.8	67.5
Limiting	26.3	45.1	36.7	63.8	37.0	67.6
Total	37.4	44.9	51.8	63.1	54.8	67.4
No: of CMW	5944		15588		7494	

Demand: Sum of unmet need for contraception and the current prevalence of contraceptive use

Fulfillment: Contraceptive use divided by total demand for contraception

Note: If a current user wants no more children she is defined as using contraception for the purpose of limiting.

                If a current user wants more children she is defined as using contraception for hte purpose of spacing.
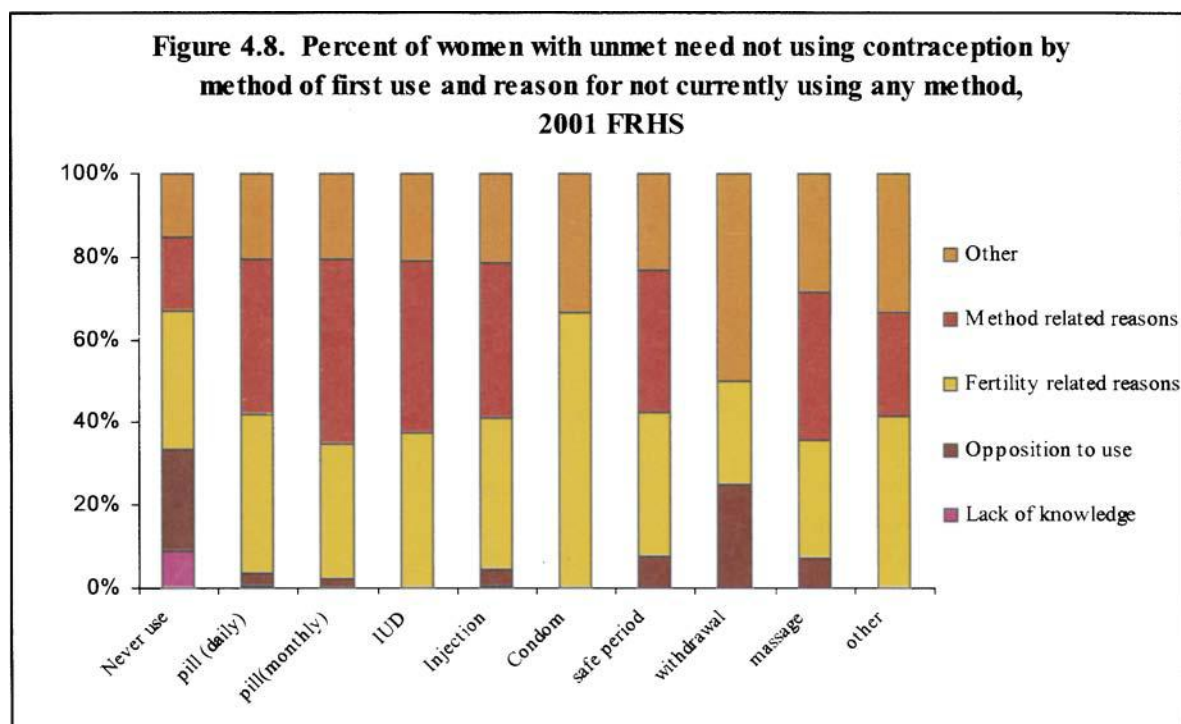
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4.6. Reasons for non use of contraception

In the questionnaire, women who were not currently using contraception were asked the reasons for not using. According to the 2001 FRHS, 63 percent of currently married women are not using any kind of contraception. Table 4.14 shows the percent distribution of currently married women with unmet need for potential spacers and limiters by reasons for not using contraception. Reasons for not using contraception differed substantially between the potential spacers and limiters. Health concern is the main reason (25 percent) for women with unmet need followed by desire to get pregnant (13 percent) and opposition to use contraception (12 percent).

Table 4.14 Percent distribution of CMW with unmet need by reason for not using contraception, 2001 FRHS

Background Characteristics	Unmet Need		
	Spacing	Limiting	Total
Lack of knowledge	3.7	6.6	5.7
Opposition to use			
Respondent opposes	11.6	12.2	12.0
Husband disapproves	3.5	2.6	2.8
Other people disapprove	0.7	0.1	0.3
Mother-in-law disapprove	0.2	0.1	0.1
Religion	2.8	0.3	1.1
Fertility related reasons			
Subfecund	2.1	8.5	6.6
Postpartum/breastfeeding	4.9	4.7	4.7
Infrequent sex	1.6	5.8	4.4
Desire to get pregnant	35.7	2.3	13.1
Method related reasons			
Health concerns	18.5	28.0	25.0
Availability	0.5	2.4	1.8
Costs too much	1.2	2.9	2.3
Inconvenient to use	0.5	2.4	1.8
Other	12.5	21.1	18.3
Total	100.0	100.0	100.0
CMW with unmet need (currently pregnant and menopause women are excluded)	431	903	1334

For the potential spacers, the most common reason for not using contraception is desire to get pregnant (36 percent). This may seem a contradiction, but can be explained by the fact that the question for the spacing period to the next birth started from the last birth for all of the currently married women who have given birth and many of these women had their last birth two or more years before the survey. They may already have the space desired and now they want to conceive the next child. Other reasons for not using contraception for spacing are health concerns (19 percent), others (13 percent) and opposition to use (12 percent).

For the potential limiters, 28 percent of potential limiters are not using contraception because they experienced side effects and health problems attributed to contraceptive and 21 percent are not using because of the other reasons. Respondent opposition is another important reason for unmet need (12 percent) while another nine percent did not use because of perceived sub-fecundity. For the 1991 and 1997 surveys, women who were menopausal were asked the reason for not using contraception, but in the 2001 FRHS all menopausal women are excluded from answering the questions on current use, reasons for not using and future intentions for use. Lack of knowledge is the reason given for non-use of contraception for seven percent of women with an unmet need for limiting. From previous studies, it appears that the contraceptive knowledge of women is superficial, with many women not knowing how the methods work and about their side effects. (Ministry of Health, 1997).

Slightly over 20 percent of women with an unmet need for contraception had been previous users of contraception. Over one-half of these women (51 percent) had the injectable as their first method (see Figure 4.8), another 28 percent had the daily pill as their first method. For both the daily pill and the injectable the main category of reasons for non-use was 'method related reasons'. Within this category by far the most common reason cited was health concerns. Therefore a significant proportion of unmet need can be traced to concerns over the health consequences of the use of hormonal contraceptive methods.

Figure 4.8. Percent of women with unmet need not using contraception by method of first use and reason for not currently using any method, 2001 FRHS

4.7. Intention to use in the future

The intention to use contraception in the future provides a forecast of potential demand for birth spacing services and represents a summary indicator of attitudes toward contraception among current non-users. The distinction between intention to use in the next 12 months and intention to use later is useful in assessing the extent of demand in the near future. About one third of the women with unmet need intend to use contraception in the future and about one fourth of the women with unmet need intend to use contraception in the next 12 months. A substantial proportion of women want to use injection (58 percent) while 20 percent say that they want to use the pill and another six percent want to use female sterilization. There is very little variation in the potential method choice between women who intend to use in the next 12 months and those who intend to use later.

Comparing the results of this survey and previous surveys, a larger proportion of women intend to use injection (32 percent in 1991, 53 percent in 1997, 58 percent in 2001) and smaller proportions intend to use the pill (32 percent in 1991, 25 percent in 1997 and 20 percent in 2001). Thus the increased popularity of injection over other methods is not confined to actual users but seems to extend to intending users as well.

Table 4.15 Percentage distribution of CMW who have unmet need and intend to use contraception in the future by preferred method, 1991 PCFS, 1997 FRHS and 2001 FRHS

Intended method of use	Intend to use in the future					
	1991 PCFS		1997 FRHS		2001 FRHS	
	in the future	in next 12 months	in the future	in next 12 months	in the future	in next 12 months
Pill(daily)	32.3	37.2	25.0	25.5	19.6	20.6
IUD	2.7	3.3	2.2	2.8	3.3	4.2
Injection	32.3	35.5	53.4	56.1	58.1	61.2
Condom	0.0	0.0	0.3	0.2	0.5	0.4
Female sterilization	18.0	12.4	8.8	5.6	6.4	2.5
Male sterilization	2.2	0.0	1.4	1.3	0.0	0.0
Other modern	0.0	0.0	0.0	0.0	3.0	2.8
Safe period	1.6	2.5	2.1	1.7	1.8	2.4
Withdrawal	0.5	0.8	0.6	0.9	1.5	1.8
Other traditional	7.1	6.6	2.9	3.3	4.0	4.1
Don't know	3.3	1.7	3.3	2.6	1.8	0.0
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number	**183**	**121**	**764**	**533**	**394**	**286**

4.8. Conclusion

Women in Myanmar are increasingly commencing contraceptive use after their first child. Approximately one-third of women commenced contraceptive use when they had one living child while almost one-quarter first used contraceptives before they had any living child. Not only are women initiating contraceptive use earlier in their reproductive career, they are increasingly likely to use the injectable as their first method of contraception. Almost 55 percent of women first using contraception in the period 1997 to 2001 had the injectable as their first method of contraception.

Not only is the injectable the most popular method of first choice among those first using contraception, it is also the method most commonly used among those women who initiated use with another contraceptive but then switched to another method. However, a significant proportion of women whose first method of use was the injectable were, at the time of the survey using another method. Approximately 20 percent of current users of modern methods other than the injectables, had used the injectable as their first method of use, while between 13 and 18 percent of current users of traditional methods had used the injectable as their method of first use. The majority of contraceptive users had only used one method, with current users of the injectables least likely to have used other methods, however a significant proportion of women who start contraceptive use with hormonal methods (oral contraception and injectables) switch to other methods. Although only a small proportion of contraceptive users are currently using traditional methods, approximately one-third of these users had prior experience with modern methods.

While the data available from the FRHS for analyzing contraceptive switching is limited, the results do point to some potential problems. Most switching that does take place appears to occur between the two methods of the daily oral pill and injectable. Other choices are limited. In particular there is little use of the IUD and female sterilization – two methods that are highly effective and in many other countries the method of first choice for those who wish to limit their fertility. A study undertaken in 1996 by the Ministry of Health indicates that there are both programme and preference factors limiting the use of these methods and states that effective choice is between the oral pill and injectable. They recommend greater attention be paid to the provision of the IUD and sterilization (Ministry of Health, 1997). However, little has changed since those recommendations. The overall contribution of the IUD and sterilization to the method mix has fallen considerably since 1997, while the contribution of hormonal methods has increased significantly (Ministry of Immigration and Population, 2003). If all women were satisfied with hormonal methods this would not be a problem. However, the analysis in this chapter indicates that a considerable proportion of women do switch from hormonal to other methods, including less effective traditional methods. Without effective and affordable alternatives, women who may feel that hormonal methods do not suit them often have to switch to less preferable methods or do not use methods at all. Ali and Cleland (1995) in a study of contraceptive discontinuation in six countries found that users of IUD were much less likely than users of hormonal methods to discontinue use and called on programmes to promote both the IUD and hormonal methods.

As noted earlier, a central aspect of the quality of care of contraceptive services is the effective provision of a choice of methods. Also important is the provision of high quality counseling (Bruce, 1989; Betrand et al. 1995; RamaRao et al. 2003). Dissatisfaction with methods may result from inadequate counseling about potential side effects. This is often the case for hormonal methods. An example in Myanmar relates to amenorrhea for some users of the injectables. This side-effect is a major reason for

discontinuing use of the injectable (Ministry of Health, 1997) and because women often do not obtain the product from trained providers they are often not aware of, and prepared for, the side effects. FHI (1999) in a review of the switching literature, find that the poor quality of care provided by family planning programmes is a major reason for contraceptive switching. Ross et al. (2002) argue that there is a need to overcome quality problems to provide women with effective contraceptive choices.

That contraceptive services not reaching all women who want to use them is evident from the data on unmet need provided in this chapter. A conservative estimate of unmet need is that in 2001, almost 18 percent of currently married women had an unmet need for contraception, with 12 percent have an unmet need for limiting and six percent an unmet need for spacing. In addition, a significant proportion of conceptions are unintentional, with approximately 17 percent of those women pregnant at the time of the survey stating that they did not want to become pregnant at that time, suggesting both unmet need and contraceptive failure. There has been limited decline in levels of unmet need between 1991 and 2001. The overall percentage of contraceptive demand fulfilled in 1991 was 45 percent, this increased rapidly to 63 percent in 1997 but improved only slightly to 67 percent in 2001. Unmet need remains concentrated in the following groups: those women living in rural areas, those women with low levels of education and those women with four or more children. A significant proportion of unmet need comes about because women worry about side effects of contraception while there remain significant levels of opposition to contraceptive use. It is apparent that much remains to be done in easing fears of side effects and in helping women find acceptable methods of spacing births and limiting family size.

CHAPTER V

LABOUR FORCE

CHAPTER V

LABOUR FORCE

5.1 Introduction

Information on the size and composition of the working population broadly reflect the prevailing socio-economic conditions of a country. Data from censuses and labour force surveys provide an inventory of human resources showing the number, characteristics, occupation status and distribution among various aspects of the economy.

Population and economy are closely linked through employment. The size, growth and composition of the population are among the basic determinants of the supply of labour whereas economic growth, structure and production relations structure labour demand. The typical age distribution of population in developing countries, with its large proportion of children and consequent heavy dependency load, acts to reduce the productive capacity of the population.

The age composition of the labour force may determine the specific productivity of labour. Age is associated with the productivity of workers as well as their capacity and willingness to adapt to various employment opportunities. It is generally assumed that the productivity of the worker decreases after a certain age because physical and mental capacities as well as skills and energy tend to decline with age. Also the individual's entrepreneurship and willingness to take risks weakens when one becomes older. Thus, a younger labour force may be more efficient than an older one. On the other hand, greater experience, judgement and dependability of the older worker may compensate for the weaknesses attributed to older ages.

Information on economic activity of men and women, and their economic characteristics are available in the 2001 FRHS. Similar information were also obtained in the censuses of 1973 and 1983 and also in the Population Change and Fertility Survey (PCFS) undertaken in 1991. The following sections deal with the analysis of labour force data from the 2001 FRHS and comparisons are made whenever appropriate with the situations in 1973, 1983 and 1991. Although a labour force survey was conducted in 1990 by the Department of Labour, the published data were not comparable due to its aggregate data.

In the 2001 FRHS, in the household questionnaire, information on employment during the 14 days prior to the survey was obtained. Those who worked during that time were treated as employed and those who did not work were treated as unemployed. For those employed, further information on the type of occupation, the activity of the establishment, and the employment status were obtained. For the unemployed, reasons for not working were elicited. The reasons were pre-coded and among the reasons included was "seeking job". In the following analysis the labour force, or the economically active population, included those who were working as well as those who were seeking work. Included in all the tabulations, except for crude rate, are economically active persons aged 15 and above.
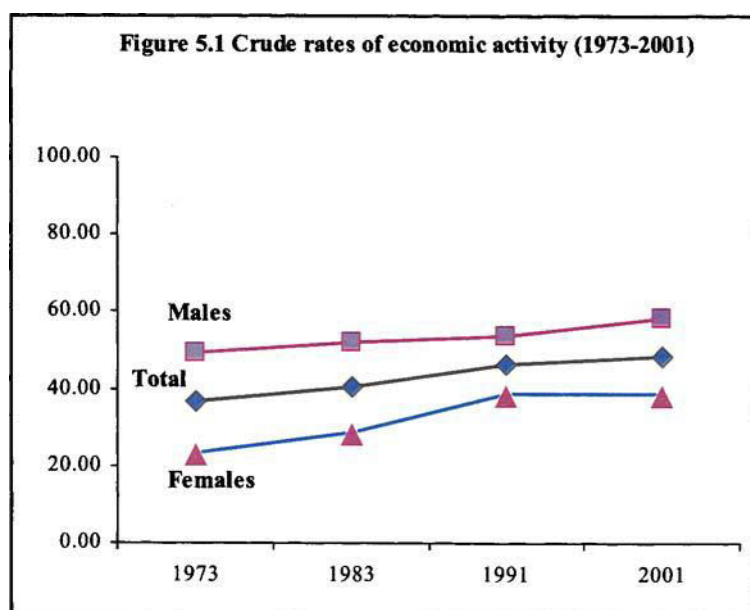
5.2 Economic activity

There does not exist a single definition of economic activity followed uniformly by all countries or in all censuses and surveys in a given country. Generally, the labour force includes persons who work for wages or salaries, own account workers and employers who work for profit. It also includes persons who assist without pay in income-producing

family enterprises. Unemployed persons seeking paid jobs are considered members of the labour force as well as those actually employed. On the other hand, the labour force does not include persons engaged in activities which do not produce income. Thus, women engaged only in domestic work in their own homes are not counted as members of labour force since the services and goods they produce are not considered as income, although the value of these services and goods represents an important part of the total product of a nation.

Often there is variation in the minimum age of a person to be considered for economic activity classification. Although the minimum age 10 was set for a person's economic activity in the censuses and surveys conducted by the Department of Population, most of the tabulations were produced for age 15 and above in this study since the proportion of those economically active persons aged 10-14 is found to be negligible.

5.2.1 Crude and refined activity rates

The size of the economically active population, expressed as a proportion of the total population is known as the Crude Activity Rate. Under given conditions of productivity and the extent of employment, a higher Crude Activity Rate is indicative of a higher level of income per head. Many workers are not considered economically active. As mentioned earlier, a great majority of housewives are not considered economically active because of what they produce, namely, domestic services and goods for home consumption are not considered income. For such reasons, the activity rates need to be computed for males and females separately.

Figure 5.1 Crude rates of economic activity (1973-2001)

Obviously, the population at all ages are not exposed to economic activity and as such, relating the economically active population to the total population, as done in the case of Crude Activity Rate, is not appropriate. When an age restriction is placed on the denominator population, the resulting rate is known as the Refined Activity Rate. Whether to use 10 or 15 as the minimum age, depends on how soon a significant level of economic activity starts in a given community.

The crude and refined activity rates for males and females are shown in Figure 5.1 and Table 5.1. The crude activity rate increased from 36.4 percent in 1973 to 48.2 percent in 2001. Increasing trends are found among both men and women in urban as well as rural areas.

The refined activity rate for women had shown a large increase from 36.3 to 50.6 percent between 1973 and 2001. The growth in women's activity rate is greater in rural than urban areas. Men's activity rate, however, increased slightly in rural as well as urban areas.

Table 5.1	Refined rates of economic activity, by sex and urban-rural residedence, 1973-2001.(population aged 15 & over)		
Year	Both Sexes	Males	Females
Total			
1973	60.0	85.0	36.3
1983	62.9	83.8	42.8
1991	68.6	82.7	55.7
2001	66.0	83.3	50.6
Urban			
1973	54.2	76.7	32.9
1983	53.7	73.4	34.6
1991	54.6	71.6	39.5
2001	58.0	75.4	43.0
Rural			
1973	61.8	87.6	37.4
1983	66.1	87.5	45.6
1991	74.9	87.6	63.1
2001	69.0	86.2	53.5

Sources: 1973 & 1983 Censuses 1991 PCFS, 2001 FRHS.

Figure 5.2 Economic dependency ratio
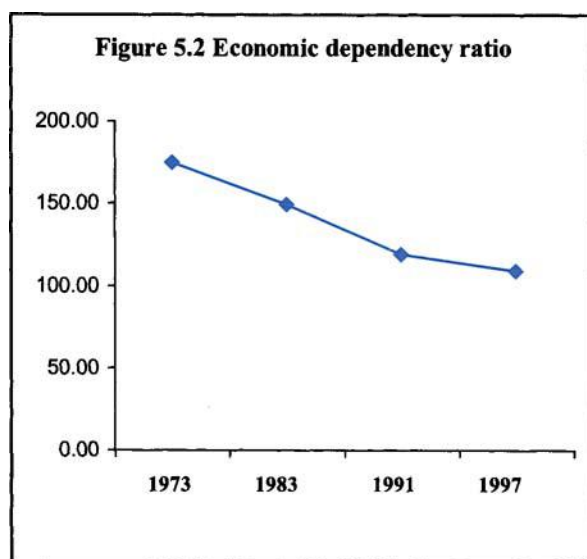
As a result of the increase in economic activity, the economic dependency ratio decreased from 174.4 dependents per 100 economically active persons in 1973 to 107.5 in 2001 (Figure 5.2). The drop in dependency is not solely due to the increase in economic activity; the dwindling proportion of the population at childhood ages was also partly responsible. This is evident from the larger changes in the crude activity rate than those in the refined activity rate. The drop in dependency between 1973 and 2001 is much greater in urban than rural areas.

A comparison of the activity rates of Myanmar with those of other countries in the region given in Table 5.2 shows the crude rate in Myanmar is relatively high, next only to Thailand, whereas the refined rate is among the lowest; only Indonesia has a rate lower than Myanmar. A higher crude rate than many countries is a reflection of the lower proportion of the population at childhood ages in Myanmar.

Table 5.2	Economic activity rates for males and females for selected countries in the region			
Country	Years	Both Sexes	Males	Females
Crude activity rates				
Bangladesh	1999-2000	47.3	56.3	37.5
Cambodia	1998	44.8	44.9	44.6
Indonesia	1998	45.4	55.8	35
Malaysia	2000	41.3	52.7	29.4
Philippines	2001	n.a	n.a	n.a
Thailand	2000	54.4	60	48.8
Myanmar	2001	48.2	58.8	38.4
Refined activity rates (Aged 15 years & over)				
Bangladesh	1999-2000	72.1	87.2	55.9
Cambodia	1998	77.0	81.2	73.5
Indonesia	1998	65.3	81.2	49.9
Malaysia	2000	n.a	n.a	n.a
Philippines	2001	67.5	82.3	52.8
Thailand	2000	72.7	80.6	64.9
Myanmar	2001	66.0	83.3	50.6

Sources: 1973 & 1983 Censuses 1991 PCFS, 2001 FRHS and http://laborsta.ilo. Org/cgi-bin/brokerv8.exe

Note: n.a – not available.

5.2.2 Economic activity by marital status, educational attainment and household headship.

Economic activity is related to marital status somewhat differently for men and women (Table 5.3). Among men, the highest activity rate is obtained for the married group followed by the divorced group whereas for women the highest rate is in the divorced followed by the single (never married) group. Among both men and women, the lowest rates are obtained for the widowed group, the reason probably being the widowed are generally older. These observations hold true in rural as well as urban areas.

Shown in the same table are economic activity rates by educational attainment. If we consider the three largest education groups, namely, primary, middle and high school, a definite pattern emerges: the higher the education, the lower is the economic activity rate among both men and women in rural and urban areas. Part of the explanation probably is that as education increases the proportion still pursuing education and hence who are not working or not even looking for work, also increases. An upswing at the university level education seems to support this contention because after university level education many people start looking for jobs. At lower levels of education dropping out and looking for job is more common, pushing the activity rate up.

Table 5.3   Refined economic activity rate (Aged 15+) by marital status, educational attainment and household headship, 2001 FRHS

Particulars	Total			Urban			Rural		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Marital status									
Single	73.8	59.3	66.4	64.8	50.8	57.5	77.5	63.1	70.1
Married	92.4	49.1	70.7	87.1	42.4	64.6	94.3	51.4	72.8
Widowed	55.9	40.9	44.3	43.6	32.9	34.9	59.4	44.2	47.9
Divorced	86.7	73.4	77.4	84.4	70.4	75.0	88.1	74.8	78.6
Total	84.0	52.3	67.2	76.6	45.2	59.7	86.7	55.0	70.0
Education									
No education	82.9	45.1	59.1	68.1	34.9	45.3	85.0	47.1	61.4
Primary	93.2	59.6	74.1	87.9	47.9	62.8	94.1	62.3	76.5
Middle School	84.2	51.3	70.4	82.6	45.4	66.2	85.1	55.2	73.0
High School	63.2	36.6	50.7	64.3	37.1	51.2	61.9	36.0	50.0
University	71.8	60.1	65.2	74.7	61.1	67.0	65.1	57.6	60.9
Others	83.0	44.1	68.3	71.4	33.2	55.9	84.3	45.6	69.8
Total	83.9	52.3	67.1	76.6	45.2	59.7	86.7	55.0	70.0
Headship									
Head	89.5	54.6	82.8	82.0	45.7	73.3	91.8	58.5	85.9
members	78.9	52.0	61.2	72.7	45.1	55.1	81.5	54.7	63.6
Total	84.0	52.3	67.2	76.6	45.2	59.7	86.7	55.0	70.0

The relationship between household headship and economic activity is also shown in the same table. The active rates among household heads are higher marginally among women and significantly among men than the rates for other members in the household. This probably is because of the fact that heads are adult members and more importantly the heads are usually breadwinners, in other words, household headship and economic activity go together.

5.2.3 Age specific activity rates

Participation in economic activity is related, among other things, to the age of a person. The age specific activity rates reveal how early men and women enter the labour force and when they exit due to retirement and involuntary withdrawal. The age pattern of economic activity is likely to be very different for men and women. In the case of men, the variations in the patterns of age specific activity rates primarily reflect the differences in the age of entrance into labour force and involuntary withdrawal into inactive status. In almost every society, able-bodied men in the intermediate ages would be engaged in income producing work and most of those not actually employed are likely to be reported as unemployed. Males in rural communities generally enter the labour force earlier on the average, and continue working to more advanced ages than they do in urban areas. In the case of females, variations in the age patterns of activity rates across countries are sometimes attributed to cultural differences. In many societies, the extent of women's participation in labour force is related closely to their marital status and the number and ages of children under their care, as these factors affect their need for income, the amount of time and energy which they can spare for activities outside home and social concepts of the role considered proper for women. The ages at which women marry and bear children, together with the conditions of participation of wives and mothers in economic activities, affect not only the size of female labour force but also the relative levels of specific activity rates in different age groups of the female population.

The age specific rates of participation in economic activity of males and females are shown in Figure 5.3. At all ages, the activity rates are higher for men than women. Between 1973 and 2001, there was considerable growth in the activity rates at all ages for women, both in rural and urban areas. For both men and women, the activity rates are higher in rural than urban areas. This is probably because of a relative lack of schooling facilities for children and a near absence of retirement age for the older people in agriculture compared to occupations that predominate urban areas.

Figure 5.3 Labour force participation rate (urban)

Figure 5.4 Labour force participation rate (rural)
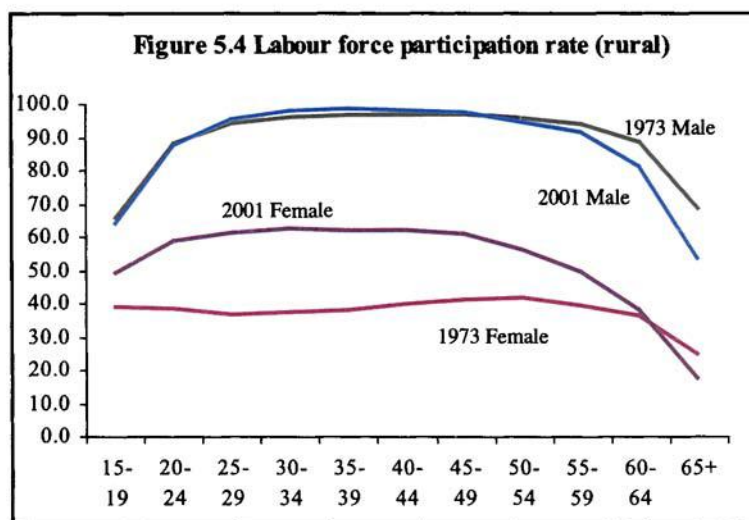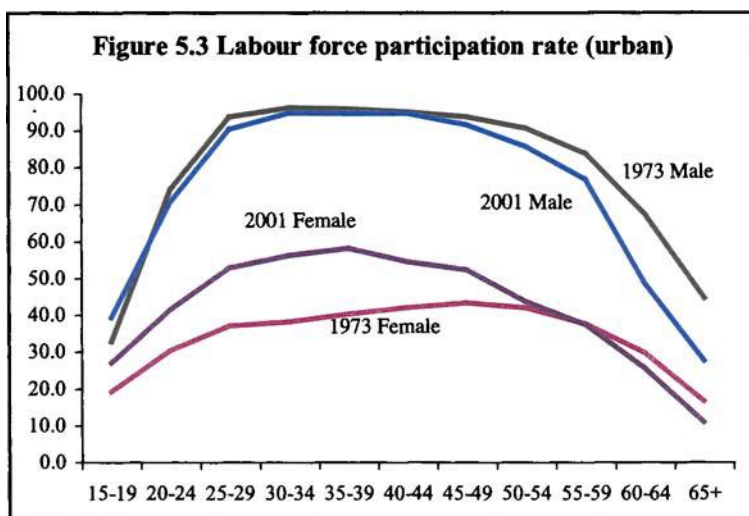
5.2.4 Structure of economic activity

The structure of the work force reflects its development level and productive efficiency. A clear picture of the distribution of the work force, its trends and composition are essential in the formulation of policies and programmes. This forms a basis for forecasting labour absorption in different sectors in future under different assumptions of economic change.

The analysis in this section is carried out according to the three principal classifications of the economic characteristics: (i) Occupation, (ii) Industry, and (iii) Employment status of the work force. Occupation represents the type of work which the individual performs; Industry represents the functions of an establishment or enterprise where individuals work; and the employment status comprises of four primary categories, namely, employees, employers, own account workers and unpaid family workers.

The composition of labour force in terms of each of these classifications reflect an important aspect of the structure of the economy, closely related to the level of a country's development and productive efficiency.

Industry, occupation and status are among the least reliably reported items in population enumerations. In addition to errors in the reporting of these items, the statistics are affected by errors in the reporting of individuals as economically active or inactive and by the variations in the definitions of labour force, which bear unevenly on different industries, occupations and status groups. For example, when few of the women in farm households who take part in farm work are reported as economically active, not only the size of the labour force is understated but also affected are the shares of agriculture in the industry classification of farm labourers in the occupation classification, and of unpaid family workers and possibly own account workers in the status classification. International standards for classification of industry, occupation and status have been developed (ILO: The International standard classification of occupations, 1988), and are used here.

5.3   Occupational structure

The occupational distribution of the employed population is shown in Table 5.4. In rural areas, a vast majority of the employed population, 83 percent among men and 74.2 percent among women, are agricultural workers. In urban areas, the two occupation categories, namely, service workers and craft and related workers dominate with over 23 percent of men and 42 percent of women working in the former and 21 percent of men and 13 percent of women working in the latter category. There is a consistent rural-urban differential in the occupation structure. In all occupational categories except agricultural workers, the proportionate share of the remaining occupational groups are all larger in urban than rural areas, and this is true of males as well as females.

Table 5.4	Percent distribution of employed population by occupational groups, sex and urban-rural residence, 2001 FRHS								
Occupation	Total			Urban			Rural		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Administors	0.7	0.5	0.6	2.2	1.3	1.8	0.3	0.2	0.2
Professionals	1.1	3.5	2.1	2.9	8.9	5.3	0.6	1.8	1.1
Technicians	2.5	1.6	2.1	7.3	4.7	6.3	1.0	0.7	0.9
Clerks	1.5	2.0	1.7	4.5	7.2	5.6	0.6	0.4	0.5
Service workers	8.6	19.2	12.9	22.6	41.8	30.3	4.3	12.3	7.6
Agricultural workers	66.5	59.0	63.4	14.1	8.9	12.0	83.0	74.2	79.4
Carft and related workers	8.8	8.4	8.6	20.8	12.9	17.6	5.1	7.0	5.9
Plant and machine operators	4.0	1.6	3.0	10.0	4.2	7.7	2.2	0.8	1.6
Elementary occupations	5.6	4.3	5.1	14.1	10.0	12.4	3.0	2.5	2.8
Not Classifiable	0.5	0.0	0.3	1.6	0.1	1.0	0.2	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	50959	35225	86184	12165	8231	20396	38794	26994	65788

The occupational distributions also vary by sex. In urban areas, there are categories such as professional, clerical and service workers in which the proportionate share is higher for women than men. In rural areas, professional, service workers and craft and related workers are the categories having a higher share for women than men.

5.3.1 Occupational distribution by educational attainment

The relation between occupation and educational attainment is shown in Table 5.5 for rural and urban areas separately. In rural areas, the major occupation is agriculture and its share is more than sixty percent among the lower education (less than high school) groups. The shares of other blue collar occupations such as crafts and related works and elementary occupations are also greater among the lower educated groups than the higher educated groups. Elementary occupation group covers occupations which require the knowledge and experience necessary to perform mostly simple and routine tasks, involving the use of hand-held tools and in some cases considerable physical effort, and, with few exceptions, only limited personal initiative or judgement. On the other hand, high school and university educated are mostly in the white collar occupations such as administrators, professionals, technicians, clerks and to a certain extent, in service occupations.

The association of lower education with blue collar jobs and higher education with white collar jobs is evident also in urban areas. Among those with less than high school education, the share of service occupations is nearly a third and the share of other blue collar occupations such as agriculture, crafts and elementary occupations, are also substantial. The share of white collar occupations, namely, administrators, professionals, technicians and clerks are substantially larger among the high school and university educated than among the lower educated persons.

Table 5.5	Occupational distribution by educational attainment, by urban-rural residence, 2001 FRHS									
Highest educational attainment	occupation group									
	Adminis trators	Professi onals	Techni cians	Clerks	Services workers	Agricult ural workers	Craft and related workers	Plants machine operators	Elementary occupation	Total	Number
Total											
No education	0.1		0.4	0.0	8.9	63.9	4.6	1.1	21.1	100.0	14138
Primary	0.2	0.1	0.5	0.2	10.7	59.6	8.0	1.8	19.0	100.0	39483
Middle school	0.7	0.5	2.6	1.0	17.7	44.4	14.2	5.7	13.2	100.0	16349
High school	3.1	4.1	7.7	8.0	24.8	24.6	11.8	8.3	7.5	100.0	7333
University	8.8	31.8	12.8	15.0	16.2	5.1	5.0	3.5	1.8	100.0	4282
Others	0.2	0.3	0.7	0.1	5.9	66.7	4.9	1.3	20.0	100.0	4593
Total	0.9	2.1	2.1	1.7	13.0	52.1	8.6	3.0	16.4	100.0	86178
Urban											
No education	0.5		1.6	0.1	33.2	25.3	12.7	4.3	22.3	100.0	1539
Primary	0.8	0.2	1.8	0.8	33.7	15.0	20.1	5.7	21.9	100.0	5572
Middle school	1.5	0.9	4.5	2.1	32.4	8.9	24.3	10.0	15.5	100.0	5738
High school	3.7	3.8	10.2	10.8	32.2	4.9	15.5	11.4	7.5	100.0	4016
University	9.4	27.5	15.2	17.2	17.7	1.8	5.7	4.1	1.3	100.0	3115
Others	1.2	1.0	2.2	1.0	24.0	27.4	18.0	4.1	21.2	100.0	415
Total	2.8	5.3	6.2	5.6	30.4	10.3	17.6	7.7	14.1	100.0	20395
Rural											
No education	0.0	0.0	0.2	0.0	5.9	68.6	3.6	0.7	20.9	100.0	12599
Primary	0.1	0.1	0.3	0.1	6.9	66.9	6.0	1.2	18.5	100.0	33911
Middle school	0.3	0.3	1.6	0.4	9.8	63.6	8.8	3.4	11.9	100.0	10611
High school	2.5	4.6	4.7	4.7	15.8	48.5	7.4	4.4	7.5	100.0	3317
University	7.1	43.2	6.6	9.0	12.1	14.0	3.1	2.0	3.0	100.0	1167
Others	0.0	0.2	0.6		4.1	70.6	3.6	1.0	19.9	100.0	4178
Total	0.3	1.1	0.9	0.5	7.6	65.0	5.9	1.6	17.1	100.0	65783

5.4. Industry

The industrial classification of employed males and females in rural and urban areas are presented in Table 5.6. As one would expect, in rural areas a great majority of the employed, 83 percent among men and 75 percent among women, are agriculture workers. In urban areas, the trade industry, employing about 24 percent of the men and 44 percent of the women, is at the top of the list. Next is the services industry, which employs nearly 26 percent of men and 31 percent of women.

Again a very clear rural-urban differential exists in the industrial classification. The agriculture industry is the only one whose proportionate share is several times higher in rural compared to urban areas. For all other industries, the proportionate share is higher in urban than in rural areas. This is true of males as well as females.

A male-female differential also exists in the industrial classification. There are three industries, namely, manufacturing, trade and services, whose share in employment is greater for women than men. In all other industries including agriculture, the proportional shares are greater for men than women. These findings are true of rural as well as urban areas.

Table 5.6 Percent distribution of employed population by industrial classification, sex and urban-rural residence, 2001 FRHS

Industry	Total			Urban			Rural		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Agriculture	67.0	59.4	63.9	15.1	9.7	12.9	83.3	74.5	79.7
Mining and quarrying	1.1	0.4	0.8	1.6	0.6	1.2	0.9	0.3	0.7
Manufacturing	3.3	6.7	4.7	7.1	11.4	8.8	2.1	5.2	3.4
Chemical	2.2	0.7	1.6	6.2	1.7	4.4	0.9	0.4	0.7
Construction	3.0	0.2	1.9	6.4	0.5	4.0	1.9	0.2	1.1
Electric and gas	0.2	0.0	0.1	0.5	0.1	0.4	0.1	0.0	0.1
Trade	8.8	20.2	13.5	23.9	43.9	32.0	4.1	12.9	7.8
Transport	5.0	0.2	3.0	13.5	0.7	8.3	2.3	0.1	1.4
Services	9.4	12.2	10.5	25.7	31.4	28.0	4.4	6.4	5.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	50959	35225	86184	12165	8231	20396	38794	26994	65788

5.4.1 Industrial sectors

Employed persons are grouped into three broad industrial sectors as shown in Table 5.7. The primary sector consists of agriculture, forestry, hunting and fishing; the secondary includes mining, quarrying, manufacturing and construction; and grouped into the tertiary sector are electricity, gas, water, transport, communication and other services.

About 64 percent of the employed population in the country are in the primary sector and another 27 percent in the tertiary sector. Those in the secondary sector form only about nine percent.

There is a substantial difference in the sectoral distribution between rural and urban areas. In rural areas, only 20 percent of the employment is outside the primary sector and the majority of the 20 percent belongs to the tertiary sector; whereas in urban areas more than 87 percent of the employment is outside the primary sector, the bulk of which belong to the tertiary sector.

The predominance of the primary sector in the rural and the tertiary sector in the urban areas is true with respect to both men and women. However between men and women, the share of the primary sector is lower for women (59.4 percent) than men (67.0 percent), whereas the share of the tertiary sector is higher for women (32.6 percent) than men (23.5 percent). This feature is observed in rural as well as urban areas.

Table 5.7	Percent distribution of employed population by industrial sector, sex and urban-rural residence, 2001 FRHS				
Residence	**Industrial Sector**				
	Primary	**Secondary**	**Tertiary**	**Total**	**Number**
Total					
Male	67.0	9.5	23.5	100.0	50959
Female	59.4	8.0	32.6	100.0	35225
Total	63.9	8.9	27.2	100.0	86184
Urban					
Male	15.1	21.3	63.6	100.0	12165
Female	9.7	14.2	76.1	100.0	8231
Total	13.0	18.4	68.6	100.0	20396
Rural					
Male	83.3	5.8	10.9	100.0	38794
Female	74.5	6.1	19.4	100.0	26994
Total	79.7	5.9	14.4	100.0	65788

5.5. Employment status

The relative sizes of the employee group, own account workers and unpaid family worker groups are indicative of the level of economic development of a country. In the employment status classification shown in Table 5.8, the group of own account workers stands out as the largest group among men and women in rural as well as urban areas. The share of this group in the employed population is 42 percent for men and 47 percent for women in urban; and 55 percent for men and 44 percent for women in rural areas. Next comes the private employee group in the urban areas (28.3 percent) and unpaid family worker group in the rural areas (24.8 percent). It is important to note that the share of the unpaid family worker group in rural areas is nearly twice (33.4 percent) as high for women as for men (18.7 percent). The Government employee group is much larger in urban (15.2 percent) than in rural areas (2.4 percent). Interestingly, the share of this group in the employed population is somewhat greater for women than for men, both in urban and rural areas.

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Table 5.8 Distribution of employed population by employment status, sex and urban-rural residence, 2001 FRHS									
Employment Status	**Total**			**Urban**			**Rural**		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Employer	2.5	1.3	2.0	3.7	2.0	3.0	2.1	1.1	1.7
Own account worker	51.7	44.5	48.7	41.7	46.5	43.6	54.8	43.8	50.3
Govt: Employee	5.0	6.0	5.5	13.6	17.6	15.2	2.4	2.6	2.4
Private Employee	23.9	18.8	21.8	33.0	21.4	28.3	21.1	18.1	19.9
Unpaid family worker	16.1	28.5	21.2	7.6	12.0	9.4	18.7	33.4	24.8
Other	0.8	0.9	0.8	0.4	0.5	0.5	0.9	1.0	0.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	50959	35225	86184	12165	8231	20396	38794	26994	65788

5.6. Reasons for being economically inactive

Those who were not currently employed belonged either to the unemployed category or to the group who were not seeking work. For the latter group which is the inactive group, reasons were elicited as to why they were not seeking work and these are shown in Table 5.9. Among the reasons for being inactive, three reasons namely, housework, being a student and being dependent, are at the top of the list, accounting for more than 90 percent of the total. Rural-urban and male-female differentials do exist. Housework is the reason reported by nearly 54 percent of the women while it was less than two percent in the case of men. Being a student was the reason advanced by about 44 percent of the men and 13.5 percent of women. There is a clear urban- rural difference in the proportion of women reporting " being a student" as the reason for economic inactivity – the urban proportion is nearly twice (19.9 percent) as high as the rural proportion (10.5 percent). Being a dependent was mentioned by 34 percent of men (25 percent in urban and 40 percent in rural) and 29 percent of women (26 percent in urban and 30 percent in rural).

It is important to note that housework as a reason for economic inactivity has dropped from 72.7 percent in 1973 to 51.4 percent in 1983 and to 41.8 percent in 2001. This reason, being of particular importance for women, exhibited a drop from 86.0 percent in 1973 to 64.4 percent in 1983 and to 53.8 percent in 2001. The proportion of women reporting ' being a student' as the reason for economic inactivity went up from 5.4 percent in 1973 to 6.5 percent in 1983 and further to 13.5 percent in 2001.

Interestingly, housework as a reason for inactivity was more common among women (53.8 percent) than men (1.7 percent); being a student was the reason more often found among men (43.7 percent) than women (13.5 percent) whereas being a dependent as a reason was advanced by both men (33.9 percent) and women (28.8 percent).

Table 5.9   Percent distribution of economically inactive population aged 15 and over by sex, reasons for not

being in labour force, and urban-rural residence, 1973-2001

Reason	Total			Urban			Rural		
	1973 Census	1983 Census	2001 FRHS	1973 Census	1983 Census	2001 FRHS	1973 Census	1983 Census	2001 FRHS
Both sexes									
House work	72.7	51.4	41.8	59.2	37.1	36.5	77.9	58.3	44.5
Students	11.9	11.9	20.5	25.3	22.3	27.0	6.7	6.9	17.1
Physically disabled	1.3	0.6	0.7	0.8	0.3	1.0	1.5	0.7	0.5
Income recipients	1.1	1.6	3.3	2.6	3.9	6.4	0.5	0.5	1.7
Ill health	4.8	2.7	3.3	4.3	2.3	3.2	5.0	2.9	3.3
Dependents	*	26.8	30.0	*	28.0	25.4	*	26.2	32.3
Others	8.2	4.9	0.5	7.8	6.0	0.6	8.3	4.4	0.5
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	9386139	11507603	45174	2581457	3544865	15308	6804682	5745729	29866
Male									
House work	13.5	3.9	1.7	6.1	2.0	1.4	17.9	5.3	1.8
Students	40.8	31.6	43.7	59.2	41.7	46.0	29.8	24.0	42.3
Physically disabled	3.3	1.5	1.8	1.7	0.6	2.6	4.2	2.1	1.3
Income recipients	3.8	6.5	10.0	7.0	11.6	17.0	1.9	2.6	5.4
Ill health	10.5	5.9	7.5	8.1	4.1	7.0	12.0	7.2	7.9
Dependents	*	33.6	33.9	*	23.6	24.8	*	41.2	39.9
Others	28.1	17.1	1.4	17.8	16.4	1.3	34.2	17.7	1.5
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	2622065	3576355	10404	838816	1238513	4142	1783249	2337842	6262
Female									
House work	86.0	64.4	53.8	76.6	50.9	49.5	89.2	70.0	55.8
Students	5.4	6.5	13.5	14.1	14.7	19.9	2.4	3.1	10.5
Physically disabled	0.9	0.4	0.3	0.5	0.2	0.4	1.0	0.4	0.3
Income recipients	0.5	0.3	1.3	1.2	0.9	2.5	0.3	0.1	0.8
Ill health	3.5	1.9	2.0	3.1	1.6	1.7	3.6	2.0	2.1
Dependents	*	24.9	28.8	*	29.7	25.6	*	22.9	30.3
Others	3.7	1.6	0.3	4.5	2.0	0.4	3.4	1.4	0.2
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	6764074	7931248	34770	1742641	2306352	11166	5021433	5624896	23604

* n. a – Not listed as a reason in 1973 census

5.7. Unemployment

When manpower resources are not fully utilized, it takes the form of unemployment and underemployment. While the former relates to a complete lack of employment for a part of the labour force, the latter relates to employment which does not sufficiently occupy the worker's time and productive capabilities such that it yields inadequate earnings. The level of unemployment and underemployment in a country is

primarily determined by the economic conditions, though demographic trends also exert influence through their effect on the size and composition of the labour force. Though unemployment represents the difference between the labour supply and demand, its level is also influenced by a variety of factors, such as establishment, attitudes and patterns of behaviour relating to job security, occupational mobility, and labour migration. Another important factor is the economic structure reflected by the shares of employees and other work status groups in the labour force. The brunt of the unemployment is borne by workers who have the status of employees. Own account workers and unpaid family workers, on the other hand, are more likely to be underemployed than face complete lack of employment in adverse circumstances. In the 2001 FRHS, data on underemployment are not available.

The unemployment rate is considered a primary economic indicator. It is defined as the percentage of unemployed workers in the labour force. The age-sex composition of the labour force may have some effect on the level of unemployment. Other factors being equal, the greater the share of women in the labour force, the less unemployment is likely to be recorded, since women are more likely than men to withdraw into inactive status when they are out of jobs.

Unemployment rates are likely to be different between rural and urban areas and also between males and females. Unemployment rates also depend on the season in which data collection is undertaken. These differences are clearly evident in Myanmar data presented in Table 5.10. The censuses of 1973 and 1983 were conducted in the month of April whereas the FRHS of 2001 was undertaken in December – January which falls in the agricultural season. Higher rates of unemployment are witnessed in 1973 and 1983 than in 2001 because of the above mentioned seasonality effect, namely the higher rates are due to the fact that the data collection was undertaken after the agricultural season ended. As one would expect, this fact is more significantly shown by the much higher rates of unemployment in rural (11.4 percent in 1973 and 14.5 percent in 1983) than urban (5.1 percent in 1973 and 5.0 percent in 1983). As the 2001 FRHS was undertaken during the agricultural season, not only the overall unemployment rate was lower, but also the rural unemployment was much lower (0.9 percent) than the urban unemployment (3.6 percent). Male unemployment was higher than female unemployment at all times, probably because more men than women "look for jobs".

Table 5.10	Unemployment rates among males, females in urban and rural areas, 1973-2001		
Year	Male	Female	Both Sexes
Urban			
1973	5.8	3.6	5.1
1983	5.6	3.8	5.0
2001	3.8	2.0	3.6
Rural			
1973	13.6	6.7	11.4
1983	16.0	11.8	14.5
2001	0.9	0.6	0.9
Total			
1973	11.9	6.0	10.1
1983	13.6	10.1	12.4
2001	1.6	1.0	1.6

5.8. Regional variations in economic activity

The crude and refined activity rates of men and women are shown in Table 5.11 for the nine domains made up of states and divisions as shown in the table. The activity rates for men do not vary much, whereas the rates for women exhibit wide variations in both crude and refined rates across domains. The crude activity rate for men varied between 51.3 percent for Rakhine State and 61.8 percent for Magway, whereas the variation in women's activity rate is between 21.5 for Rakhine and 48.0 for Chin/ Sagaing.

Similarly the refined activity rate for men varied between 79.1 for Yangon Division and 85.3 for Kayin/ Mon/ Tanintharyi , while the female activity rate varied from 29.6 in Rakhine to 64.7 recorded for Chin/ Sagaing.

Table 5.11	Regional differences in the crude and refined activity rates, by sex, 2001 FRHS					
	Crude activity rate			Refined activity rate		
Domain	Male	Female	Total	Male	Female	Total
Domain 1	58.7	46.5	52.4	84.7	64.3	74.1
Domain 2	59.9	39.0	49.1	85.3	50.2	66.7
Domain 3	57.0	48.0	52.3	82.0	64.7	72.6
Domain 4	57.8	31.5	44.0	81.6	41.3	60.0
Domain 5	61.8	42.0	51.4	85.3	55.1	69.2
Domain 6	61.0	47.0	53.7	83.4	60.0	70.8
Domain 7	51.3	21.5	36.0	83.0	29.6	54.8
Domain 8	59.2	34.5	46.3	79.1	42.2	59.6
Domain 9	60.0	28.3	43.7	85.3	37.9	60.6
Total	58.8	38.4	48.2	83.3	50.6	66.0

Note: Domain 1 Kachin/Kayah/Shan   Domain 4 Bago   Doamin 7 Rakhine
Domain 2 Kayin/Mon/Tanintharyi   Domain 5 Magway   Domain 8 Yangon
Domain 3 Chin/Saging   Domain 6 Mandalay   Domain 9 Ayeyarwady

The share of the three industrial sectors – primary, secondary and tertiary – among different domains exhibit variations (Table 5.12). Across all the domains, urban employment was dominated by the tertiary sector and the rural employment by the primary sector, a finding similar to what was obtained for the country as a whole. The primary sector in the urban areas and the tertiary sector in the rural areas exhibited wide variations. Secondary sector employment dominate most in Yangon and Mandalay, aside from Yangon and Mandalay, significant proportions of the urban population are involved in the primary sector.

| Table 5.12 | Share of primary, secondary and tertiary sectors in employment, by domain and urban-rural residence, 2001 FRSH |

Domain	Industrial Sector				
	Primary	Secondary	Tertiary	Total	Number
Total					
Domain 1	70.0	6.2	23.8	100.0	11735
Domain 2	54.9	10.3	34.8	100.0	8210
Domain 3	76.4	6.7	16.8	100.0	11785
Domain 4	65.6	9.5	24.9	100.0	8546
Domain 5	76.1	6.8	17.1	100.0	9079
Domain 6	64.0	12.1	23.9	100.0	12082
Domain 7	71.1	3.9	25.0	100.0	4317
Domain 8	22.6	18.0	59.4	100.0	9408
Domain 9	71.7	4.9	23.4	100.0	11022
Total	63.9	8.9	27.2	100.0	86184
Urban					
Domain 1	24.5	14.7	60.8	100.0	2577
Domain 2	24.7	14.7	60.6	100.0	1919
Domain 3	20.6	15.1	64.3	100.0	1603
Domain 4	14.1	18.8	67.1	100.0	1567
Domain 5	14.5	17.1	68.3	100.0	1141
Domain 6	5.6	25.2	69.3	100.0	2631
Domain 7	19.6	10.6	69.8	100.0	717
Domain 8	4.1	21.2	74.7	100.0	6711
Domain 9	16.6	13.4	70.0	100.0	1530
Total	13.0	18.4	68.6	100.0	20396
Rural					
Domain 1	82.7	3.8	13.4	100.0	9158
Domain 2	64.1	8.9	27.0	100.0	6291
Domain 3	85.2	5.4	9.3	100.0	10182
Domain 4	77.1	7.5	15.4	100.0	6979
Domain 5	85.0	5.3	9.7	100.0	7938
Domain 6	80.2	8.4	11.3	100.0	9451
Domain 7	81.4	2.6	16.1	100.0	3600
Domain 8	68.7	10.1	21.2	100.0	2697
Domain 9	80.6	3.6	15.9	100.0	9492
Total	79.7	5.9	14.4	100.0	65788

Note:
Domain 1 Kachin/Kayah/Shan　　Domain 4 Bago　　Domain 7 Rakhine
Domain 2 Kayin/Mon/Tanintharyi　Domain 5 Magway　Domain 8 Yangon
Domain 3 Chin/Saging　　　　　Domain 6 Mandalay　Domain 9 Ayeyarwady

5.9. Economic activity of migrants and non-migrants

5.9.1. The role of migration

Migration can play an important role in improving the balance between labour supply and demand. The short-run effect is to raise the crude activity rate in areas of in-migration and to lower it in areas of out-migration. This, of course, depends on the age-sex composition of the dependents who accompany the primary migrant. The influence of migration on the growth of the labour force and the crude activity rate, thus, depends on whether it is a case of individual-migration or familial migration. Seasonal and other temporary movements of workers, as well as migration of a more permanent nature are important to meeting local labour requirements. Rural to urban migration is often viewed as a shift of manpower from agricultural to non-agricultural industries.

This kind of migration is also likely to lower the employment rate for the country as a whole, since certain migrants who previously were employed or underemployed in agriculture are less likely to be employed in towns and cities. On the other hand, women who did not work in agricultural type of activities, may find urban types of jobs more suitable to them, resulting possibly in a rise in female activity rate.

Comparisons of occupational distributions of migrant and non-migrant groups may throw some light on the role of migration on economic activity.

5.9.2. Labour force participation rate by migration status

In this analysis, migrants are defined as persons whose current place of residence is different from their place of birth and who have lived elsewhere. Current migrants are those whose last five years residence is different from residence at the time of enumeration. Labour force participation rates of migrants and non-migrants, in terms of current and life-time migration status, are shown in Table 5.13. In the case of current migration, a slightly higher level of economic activity is observed for migrants compared to non- migrants among males in rural as will as urban areas. The same cannot be said for females. In the case of life-time migration, migrants seem to have slightly higher economic activity than non-migrants among males, whereas it is the opposite for females.

Table 5.13 Labour force participation rate by migration status and urban-rural residence, 2001FRHS

Migration Status	Total			Urban			Rural		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Current migrants									
Current migrants	85.6	46.5	64.8	82.5	45.5	62.4	90.0	48.0	68.7
Non - migrants	83.9	52.6	67.3	76.0	45.2	59.4	86.6	55.2	70.0
Total	84.0	52.3	67.2	76.6	45.2	59.7	86.7	55.0	70.0
Life-time migrants									
Never moved	84.4	53.9	68.2	75.0	46.3	59.6	86.5	55.7	70.2
Life-time migrants	82.4	46.5	63.5	78.4	44.0	59.8	87.6	50.3	68.6
Total	84.0	52.3	67.2	76.6	45.2	59.7	86.7	55.0	70.0

Occupational distributions of migrants and non-migrants are shown in Table 5.14 for current migration. Occupational differences exist between the group of migrants and non-migrants. Among the non-migrants, agricultural workers constitute the largest category of the employed population both among males (68.1 percent) and females (60.2 percent). Service workers and the craft and related worker groups are the next significant groups. Notably, the service worker category is larger among females (18.9 percent) than males (8.3 percent). A similar pattern exists for the migrant group also. However, agriculture in the migrant population, proportionately, is only half as much as that in the non-migrant group. Interestingly, the service occupation in the migrant population is proportionately twice as much as in the non-migrant group.

Table 5.14   Occupation distribution of employed population by current migration status, 2001 FRHS

Migration status and Occupation	Sex		
	Both sexs	**Male**	**Female**
Migrant			
Administrators	1.5	1.8	1.1
Professionals	3.6	2.5	5.6
Technicians	4.9	5.5	3.7
Clerks	3.1	2.4	4.2
Services workers	20.4	16.5	27.2
Agricultural workers	30.4	32.8	26.3
Craft and related workers	14.2	16.2	10.8
Plants machine operators	8.5	9.8	6.1
Elementary occupation	12.1	10.4	14.9
Not classifiable	1.3	2.0	0.2
Total	100.0	100.0	100.0
Number	3560	2261	1299
Non-Migrant			
Administrators	0.6	0.7	0.4
Professionals	2.0	1.1	3.4
Technicians	2.0	2.4	1.5
Clerks	1.6	1.4	1.9
Services workers	12.6	8.3	18.9
Agricultural workers	64.9	68.1	60.2
Craft and related workers	8.4	8.5	8.3
Plants machine operators	2.8	3.8	1.5
Elementary occupation	4.8	5.4	3.9
Not classifiable	0.3	0.4	0.0
Total percent	100.0	100.0	100.0
Total Number	**82627**	**48699**	**33928**

Occupational distributions are also compared between the life-time migrant and non-migrant groups (Table 5.15). While the findings are similar to those of current migration status groups, the share of agriculture in the non-migrant group is about half of that of migrant group whereas it is the other way in the case of current migration. Life time migration probably was the result of a need to seek employment.

Table 5.15	Occupational distribution of employed population by life-time migration status, 2001 FRHS		

Migration status and Occupation	Sex		
	Both sexs	Male	Female
Non-Migrant			
Administrators	0.4	0.4	0.3
Professionals	1.6	0.8	2.8
Technicians	1.4	1.6	1.1
Clerks	1.2	1.1	1.4
Services workers	10.5	6.7	15.9
Agricultural workers	70.8	74.4	65.6
Craft and related workers	7.7	7.2	8.3
Plants machine operators	2.2	3.0	1.2
Elementary occupation	4.1	4.6	3.4
Not classifiable	0.1	0.2	0.0
Total percent	100.0	100.0	100.0
Number	68237	39831	28406
Life time Migrant			
Administrators	1.6	1.9	1.2
Professionals	3.6	2.3	5.8
Technicians	4.9	5.7	3.6
Clerks	3.5	3.0	4.4
Services workers	21.9	15.7	32.1
Agricultural workers	35.6	38.0	31.4
Craft and related workers	12.5	14.7	8.9
Plants machine operators	6.2	7.8	3.5
Elementary occupation	9.2	9.4	9.0
Not classifiable	1.0	1.5	0.1
Total percent	100.0	100.0	100.0
Number	17950	11129	6821

5.10. Women's share in economic activity

Women work long hours. But many of them are not considered to be working at all. There are several reasons for such a phenomenon. The reasons range from methodological flaws in data collection to reasons related to culture, tradition and perceptions about women's economic roles. Women work longer hours than men but much of the work they do is in the realm of caring, nurturing and household maintenance. In other words, women work in the informal sector for little or no wage resulting in the invisibility of women's work. Most of the time, women report themselves as non-workers because they tend to regard their labour as "domestic responsibilities" and therefore outside the market related or remunerated work. Even outside the home, much of the work women do remains invisible. For example, in the agricultural sector, women's work is concentrated in such activities as weeding, livestock rearing and post-harvest processing, all of which receives little compensation or recognition since economic value is attributed

Figure 5.5 Women's Share in employment

1973

1983

Female

2001
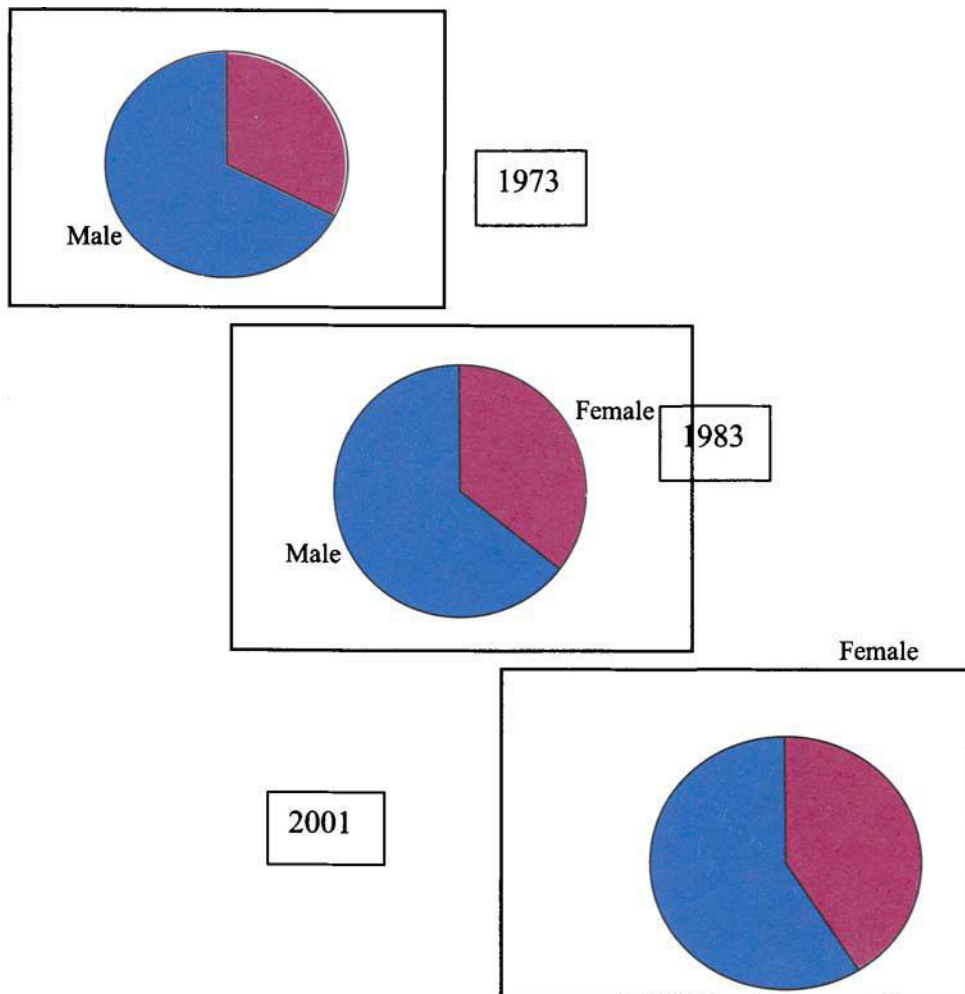
5.10.3. Occupation

It was noted above that both in labour force and employment, female share had remained less than the male share. In certain occupations, however, the female share has surpassed the male share. Professionals and service workers in rural as well as urban areas and clerks in urban areas fall in this category of women's share exceeding men's share (Table 5.17). In other occupations, women's share fell a great deal short of men's share.

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exclusively to agricultural output. Economic value can be attributed to such activities on the basis of an implicit opportunity cost. This is outside the practice of national accounting systems of countries in the region.

The present data permits analysis of women's share in various aspects related to economic activity in Myanmar.

5.10.1 Female labour force participation

Women's share in labour force participation has been increasing over the years (Table 5.16). It was 31 percent in 1973 which rose to 35 percent in 1983 and 41 percent in 2001. More or less the same kind of increase was obtained both in rural and urban areas. The rural-urban difference however was only marginal.

Table 5.16	Female share in labour force in rural and urban areas, 1973-2001		
Year	**Total**	**Urban**	**Rural**
1973	31.1	31.2	31.1
1983	34.7	32.8	35.2
2001	40.7	40.0	41.0

Female share in labour force is equally low in most of the South East Asian countries with known data- 38.8 percent in Indonesia, 34.7 percent in Malaysia, 39.3 percent in Philippine and 37.5 percent in Bangladesh; while only Thailand having a higher rate with 45.0 percent. (Source: http://laborsta.ilo. Org/cgi-bin/brokerv8.exe)

5.10.2. Employment

The level and trend of female share in employment (Figure 5.5) was very similar to that in labour force. Women's share in employment witnessed an increase from 31 percent in 1973 to 36 percent in 1983 and further to 41 percent in 2001. A consistent increase has been observed in rural as well as urban areas. Again the rural-urban difference in female share was only marginal.

Table 5.17	Female share in occupations in rural and urban areas, 2001 FRHS		
Occupation	**Total**	**Urban**	**Rural**
Administrators	29.8	29.4	30.6
Professionals	68.0	67.7	68.5
Technicians	31.0	30.0	33.1
Clerks	47.9	52.2	33.1
Service workers	60.6	55.6	66.8
Agricultural workers	38.0	30.1	38.4
Craft and related workers	39.5	29.6	48.8
Plant and machine operators	21.7	22.2	21.0
Elementary occupations	34.5	32.4	37.3
Not classifiable	4.5	3.0	9.2
Total	**40.9**	**40.4**	**41.0**

5.10.4. Industry

The industry classification presented in Table 5.18 shows that trade and manufacturing industries are the two industries where women's share exceeded men's share, marginally in urban areas and vastly in rural areas. Service industry, it may be said, was evenly distributed between men and women.

Women's share was 58.6 percent in manufacturing, 61.1 percent in trade and 47.2 percent in service industry; in other industries it was less than 20 percent. A meager 3.5 percent is women's share in transport and construction industries. It may be recalled that, in rural areas an overwhelming proportion of men (83.3 percent) and women (74.5 percent) worked in agriculture, yet women's share in this sector was only about 38 percent.

Table 5.18	Female share of employment by industry, in urban and rural areas, 2001 FRHS		
Industry	**Total**	**Urban**	**Rural**
Agricultural	38.0	30.3	38.3
Mining & quarrying	20.0	20.6	19.7
Manufacturing	58.6	52.2	63.9
Chemical	18.5	15.4	24.6
Construction	4.9	4.9	4.9
Electiric & gas	12.5	13.2	11.1
Trade	61.1	55.4	68.4
Transport	2.7	3.1	2.0
Services	47.2	45.3	50.4
Total	**40.9**	**40.4**	**41.0**

5.10.5. Industrial sectors

In all the three sectors- primary, secondary and tertiary - women's share was higher in rural than in urban areas (Table 5. 19). Female share was larger than male share in the rural tertiary sector (55 percent) and the lowest (30 percent) in the urban primary sector, The tertiary sector which includes wholesale and retail trade, restaurants and hotels, transport and storage, social and personnel services, among others seem to be in the hands of women in rural areas.

Table 5.19	Female share of employment by major industrial sectors in rural and urban areas, 2001 FRHS		
Industrial sector	Total	Urban	Rural
Primary	38.0	30.3	38.3
Secondary	36.8	31.1	42.4
Tertiary	49.0	44.8	55.3
Total	41.2	41.5	41.1

5.10.6. Employment Status

Employment status given in Table 5.20 show that women share is less than men in every category as expected. However a slight edge for women over men was found in the unpaid family worker category both in urban (52 percent) and rural (56 percent) areas. Also female comprises nearly half (46 percent) of government employees which is thought more secure for their livelihood.

Table 5.20	Female share of employment status categories in urban and rural areas, 2001 FRHS		
Employment Status	Total	Urban	Rural
Employer	26.3	26.5	26.3
Own account worker	37.3	43.1	35.8
Govt. Employee	45.9	46.8	44.1
Employee in organization	26.9	24.9	28.8
Private employee	35.2	30.4	37.2
Unpaid family worker	55.7	52.0	56.1
Other	43.8	43.3	43.9
Total	**40.9**	**40.4**	**41.0**

5.11. Conclusion

Over the past three decades, the economic activity rate for women increased by nearly fifty percent, and the increase was greater in rural than urban areas. Men's activity rate was more or less constant during this time. The economic dependency ratio declined substantially in the past three decades. Although the increase in economic activity was part of the reason, the dwindling child population was also responsible.

Marital status and educational attainment are related to economic activity. For men, the highest activity rate was obtained for the married group followed by the divorced group, whereas for women, the highest rate was for the divorced group followed by the never married group. In the three education groups – primary, middle and high school – those with lower levels of education exhibited higher rates of economic activity probably because of earlier entry into the labour force at lower levels of education.

The occupational distribution of the employed population showed that a vast majority of those employed were in agriculture, whereas in urban areas, the two largest occupation groups were service workers and craft and related workers. There is an association between level of education and type of occupation. Both in rural and urban areas, there is an association between lower level of education and employment in blue collar jobs such as agriculture, crafts and elementary occupations; a higher level of education is associated with employment in white collar jobs such as administrators, professionals, technicians and clerks.

A clear rural-urban differential exists in the industrial classification. Agriculture is the only one whose proportionate share is several time higher in rural than in urban areas. For all other industries, the proportionate share is higher in urban than in rural areas. There is also a distinct male-female differential. There are three industries, namely, manufacturing, trade and services whose share in employment is greater for women than men. In all other industries, including agriculture, the proportionate share is greater for men than women. There is a rural-urban difference in industrial sectors. Predominance of

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primary sector in rural and tertiary sector in urban areas is true with respect to both men and women. In the employment status classification, the group of own account workers stands out as the largest group both among men and women in rural as well as urban areas.

Among the reasons for inactivity, house work was mentioned more often by women than men, being a student was mentioned more often by men than women, whereas being a dependent was mentioned nearly equally by men and women.

The unemployment rate was much lower in 2001 than in 1973 and 1983 mostly due to the fact that data collection took place in the agricultural season in 2001 which was not the case in 1973 and 1983. Male unemployment was higher than female unemployment probably because more men than women 'look for work'.

Regional variations exist in the economic activity rate particularly of women. As in the country as a whole, urban employment was dominated by the tertiary sector and rural employment by the primary sector in all the domains in the country.

Differences were seen between migrant and non-migrant groups in the economic activity and also in occupational distributions, which again were different for men and women.

Although women's share in economic activity and employment have been much less than men's share; it has been increasing during the past three decades. In certain occupations such as the professions and service work, women's share even exceeded men's share. Similarly in the trade and manufacturing industries, women's share exceeded that of men. Among the industrial sectors, however women's share was larger than men's share only in the rural tertiary sector and the lowest share was in the urban primary sector. Among the employment status groups, a slight edge was noted only in the unpaid family workers category which again is not a favorable sign.

The analysis presented in this chapter leads to the following recommendations.

Seasonality effect was so severe in the present data that meaningful trends could not be established. The choice and length of reference provide for economic activity should be such that the seasonality effect should not render the data unusable. There is a need for careful consideration of the enumeration period especially for labour force information.

Methodological flaws in the measurement of women's economic activity are often responsible for lower participation rates for women, this need to be addressed and remedied to the extent possible. Therefore women's activities should be considered in detail.

Classifications of occupation, industry etc need to be standardized so that meaningful time trends could be established.

Underemployment should be addressed through incorporating additional questions on the hours of work performed per week etc.

Greater adherence to standard definitions and international classifications will enhance the value of analysis particularly from the point of view of international comparisons.

CHAPTER VI

DISCUSSION AND RECOMMENDATIONS

CHAPTER VI

DISCUSSION AND RECOMMENDATIONS

6.1 Introduction

The 2001 Fertility and Reproductive Health Survey is the third in a series of national surveys conducted by the Department of Population. The surveys use similar methodologies and instruments. This series of surveys allows trends in reproductive health to be established at the national and regional levels.

In this report four topics are analysed in-depth. These topics were selected for a variety of reasons. The chapters on the situation of never-married women and labour force were included because there has been relatively little information published on these two topics and both topics are of contemporary interest. Child health and mortality and contraceptive use dynamics were included as topics for analysis because of the centrality of these two areas to reproductive health.

This concluding chapter highlights key findings from the four chapters and identifies key programmatic and research recommendations.

6.2 Age at marriage and situation analysis of never married women in Myanmar

Compared to other countries in the region, marriage in Myanmar occurs at a late age. In large part this is a result of the relatively high proportions, especially among women, who remain unmarried into their thirties and forties. Among those women who had ever-married, the mean age at marriage of women as measured by the 2001 FHRS was only 20.4 and for every age group from 15-19 to 45-49, mean age at marriage was 21 or less. A significant proportion of women marry before age 20.

However, an alternative measure of age at marriage that takes into account the proportions not married at the time of the survey indicates a mean age of marriage for women in 2001 at 25.8. In 2001, at ages 45-49 almost 12 percent of women had never married. For women aged 30-34 the percentage is 25.9. These proportions are considerably higher than found in other countries in Southeast and East Asia, even those considered to have late age at marriage.

The age at marriage has been increasing, mainly as a result of increased proportions not marrying. Most of this increase occurred between 1991 and 1997, with relative stability in age at marriage between 1997 and 2001. Although, as with most other countries, the proportions never-married increase with increasing education and are higher in urban than in rural areas, even among women with low levels of education and among rural women, a considerable proportion of women remain unmarried through their reproductive ages.

Women who never marry, compared to women who are ever married, tend to have high levels of education, be in the labour force, work as an unpaid family worker or work as a private employee, and work in the services and manufacturing sectors. They are also more likely to live in smaller households. Most never married women who are household heads are middle aged, and most ever married women who are household heads are elderly.

While a large proportion of never-married women in their thirties and forties appear to be residing with and caring for elderly parents, by their fifties most never-married women are either living with other relatives or are heads of their own household. This transition presumably occurs upon the death of their parents.

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More research is required on the economic situation of never-married women. Although the characteristics of never-married women suggest that substantial proportions are well educated, the majority of the never married have low levels of schooling and live in rural areas. As these women do not have children to care for them when they are elderly, there is a need to determine how these women are supported.

6.3   Child health and mortality

There are numerous factors affecting child health and mortality. Some of those factors are under the direct control of public health officials and others are not. Generally, there has been an improvement in levels of care provided to pregnant women and their infant children by the health system. Most of the improvement, however, appeared to occur in the first half of the 1990s, with little change between 1997 and 2001 in several key indicators. Although antenatal visits occurred for over 80 percent of infants born in the five years before the 2001 survey and 38 percent received the recommended four or more visits, these levels were basically the same as those observed for births in the five year period before 1997. Similarly, while trained personnel attended almost all births in the 1990s, the rapid increase in the proportion attended by doctors and nurses and decreases in the proportions attended by traditional birth attendants that were observed between 1991 and 1997, did not continue from 1997 to 2001. Over 80 percent of births took place at home. Among the births delivered at home, 66 percent of births in urban areas and 46 percent of births in rural areas are assisted by medical professionals.

In 2001, only 16 percent of women who had been pregnant in the five years before the survey had not received any doses of tetanus toxid vaccination, this was a large decline from the 37 percent in 1991 but a much smaller decline from the 19 percent observed in 1997. Interestingly, the reduction in the pace of improvement between 1997 and 2001 came mainly as a result in increases in proportions not receiving vaccinations among urban and more highly educated women. A similar situation can be observed for immunization for children. There were very rapid increases in levels of immunization for childhood disease during the 1990s. In 1991, 51 percent of surviving children under five had been immunized against four childhood diseases at the time of the survey. This increased to 74.4 percent in 1997 and remained relatively stable at 73.6 percent in 2001. Rates of immunization had increased in rural areas but declined slightly in urban areas. They had also increased among children born to mothers with low levels of education but had declined for children of mothers who had a middle scnool or high school level of education.

It is difficult to understand why the rapid improvements in coverage of immunization programmes and antenatal programmes that was evident in the early 1990s did not continue from 1997 to 2001, and why the situation for more socially advantaged women remained stable during the latter half of the 1990s. Because of the high levels that had been achieved in many of these indicators by 1997, further improvements are more difficult to achieve.

There were substantial improvements in child health, as measured by the prevalence of diarrhoea, between 1991 and 1997 and these improvements continued through the period to 2001. Improvements were observed for children from all backgrounds. A major factor in these increases appears to be improvement in household sanitation facilities. Of those children who experienced diarrhoea, there was a rapid increase in the proportion treated with ORS therapy, with most of the increase occurring between 1997 and 2001.

Although the majority of infants under the age of four months are exclusively breastfed, a substantial minority (37 percent) receives supplementary food at these ages. The proportion receiving supplementary food is higher in urban areas than in rural areas. The analysis indicated a relationship between breastfeeding status and the prevalence of diarrhoea. The results suggest a need to more aggressively promote exclusive breastfeeding, especially in urban areas.

The data from the FRHS and previous surveys suggest that there has been some improvement in infant and child mortality rates over the last 10 years, while retrospective rates from the 2001 FRHS indicate little change. Whatever the extent of change the levels remain high. The analysis of the determinants of infant and child mortality presented in Chapter III show strong associations between reproductive patterns and the likelihood of an infant surviving. The probabilities of an infant surviving to 12 months are much higher after a previous birth interval of 18 months or more, when they are parity two or three compared to parity four and above, and when mothers are aged 20 to 34, compared to 19 and below or 35 and above.

6.4   Contraceptive use dynamics

Contraceptive use in Myanmar is increasing. In 2001, 37 percent of currently married women were using contraception, a more than doubling of the level of contraceptive use since 1991. Initiation of contraceptive use is also commencing at earlier ages. Although the median duration to first contraceptive use for women in the 2001 FRHS was over 10 years, for women in their twenties the median duration after marriage before commencement of use was less than three years. In 1991, the mean number of living children at the time of first contraceptive use was 2.2; this had decreased to 1.7 by 2001. Almost one-quarter of women had first used contraception before the birth of their first child and over one-half had used contraception before the birth of their second child. The results clearly indicate the demand for contraceptives for spacing purposes immediately after marriage and at early stages of family formation.

Women initiating contraception were most likely to use the injectable. The other popular method of first use was the daily oral pill. This latter method was the most popular method for women who started contraceptive use before their first child was born. Thereafter, the injectable was by far the most popular method of first use. Over time the proportions using the injectable as their first method has increased. For women starting contraceptive use between 1997 and 2001, 54 percent used the injectable. Relatively small proportions commenced contraceptive use with traditional methods, suggesting that women generally had good knowledge of contraceptive options before they commenced use.

Although the data are not well suited for examining contraceptive switching, the available data indicate that contraceptive use in Myanmar has largely evolved into a two-method mix consisting of the daily pill and the injectable. Over three quarters of women using the injectable at the time of the survey had also used this as their first method of contraception. Where switching did occur, most of it occurred between these two methods. Furthermore, over 75 percent of current non-users who expressed an intention to use in the future stated that they would use the injectable or daily pill. Although only a small proportion of women were using traditional methods of contraception, over one-half of these women had previous experience of contraception, with the majority of these women having used either the injectable or pill. Some women do not wish to use the injectable or pill, and as their choices of other modern methods are limited, many choose traditional methods of contraception.

Almost one quarter of contraceptive users in 2001 stated that they were using contraception for spacing purposes. This represented an almost 8 percentage point increase over 1991. Over the ten-year period 1991 to 2001, there was a marked reduction in the contraceptive method mix of spacers. In 1991, 28 percent of spacers were using traditional methods. This had decreased to only 10 percent in 2001. In contrast about 11 percent of limiters were using traditional methods, only a three percentage point decline from 1991. The injectable and the pill were the most popular methods for both spacers and limiters. Use of traditional methods, for both spacing and limiting purposes increased with education.

Although the level of contraceptive use more than doubled between 1991 and 2001, the level of unmet need for contraception decreased by only a small amount. In 1991, 20.6 percent of women had an unmet need for contraception. By 2001 this had declined to 17.8 percent. These results suggest that while the supply of contraceptive services has increased over the last 10 years the demand has also increased. The levels of unmet need recorded in Myanmar are slightly higher than those recorded for other Asian countries, with levels of unmet need for spacing being much lower, and for limiting much higher, than recorded in other Asian countries.

There is greater variation among socio-economic groups in unmet need for limiting than for spacing. The highest level of unmet need for spacing is found for women with a university level of education, while these women have among the lowest levels of unmet need for limiting. Unmet need for limiting is concentrated among women with three of more living children living in rural areas.

The reasons why women with unmet need were not using contraception at the time of the survey vary. However, the main reason, especially for limiters, is health related. Twenty eight percent of women with an unmet need for limiting gave this as their reason for not using. Another 12 percent said that they were opposed to contraceptive use. Relatively small proportions of women cited lack of knowledge, cost, or access to methods as the reasons for not using.

6.5   Labour force

There is very little national level data available on labour force structure and economic activities in Myanmar. Data are available from the 1973 and 1983 national censuses, although differences in the timing of these censuses compared to the timing of the 2001FRHS mean that comparisons between these three sources of data must be made with care.

Over the last thirty years there have been increases in the crude labour force participation rates from 36.4 percent in 1973 to 48.2 percent in 2001. A large part of this increase can be attributed to the declining proportion of children in the population. The refined labour force participation rates increased from 60 to 67.2 between 1973 and 2001. The refined activity rates for Myanmar in 2001 are similar to those observed for other countries in Southeast and East Asia.

The changing age structure of the population also resulted in a decline in the economic dependency ratio. By 2001, compared to 1973, there was a substantially greater proportion of the population in the labour force. This situation provides the potential for higher level of economic growth. Another reason for increases in the activity rates were increased rates of economic activity by women. For 1973 to 2001 there were very little change in the refined activity rates of males, while the rates of increase for females was from 36.3 to 52.3. These increases occurred in both urban and rural areas. The labour force

participation rates of women increased at all ages. The increases were greatest, however, for women in their reproductive ages. Therefore, one factor that may have contributed to higher levels of female labour force participation could be reduced fertility.

The vast majority of the labour force, particularly in rural areas, was engaged in agriculture. Overall, 64 percent of the labour force worked in agriculture. In urban areas the industrial sector that employed the highest proportion of the labour force was trade (32 percent) followed by services (28 percent). Overall, less than five percent of the labour force worked in manufacturing, with this proportion being highest (8.8 percent) in urban areas. A greater proportion of females than males were employed in manufacturing. Consistent with this industrial structure, almost one-half of workers were self-employed, with the proportion slightly higher in rural than in urban areas. About one-quarter of workers in rural areas were unpaid family workers, with the majority of these being female. In urban areas slightly over one-quarter of workers were private employees, with another 15 percent working as government employees.

The three main reasons for not being engaged in the labour force were: housework; student; dependent. Women were much more likely than men to report being engaged in housework, although the proportion reporting being engaged in housework has declined over time. Similar proportions of males and females reported not working because they were dependents. It should be noted that reported unemployment rates were low, being only 1.9 percent in rural areas and 3.6 percent in urban areas.

Migrants have slightly higher economic participation rates than non-migrants. The occupational distribution of migrants differs considerably from that of non-migrants. With migrants much more likely than non-migrants to be found in service occupations and as craft workers. It appears that migrant workers have provided much of the labour force for the expansion of the tertiary sector of the labour force.

6.6   Programme and policy implications

- The majority of young women, and men, go through their adolescence and young adult years unmarried. It is therefore important that this group of young people be addressed in reproductive health programmes.

- What appears to be strong community support systems for elderly never-married need to be maintained, and where necessary, improved.

- This research has clearly demonstrated the large detrimental impact of short birth intervals on infant and child mortality. Greater efforts should be made to promote longer birth intervals through access to affordable and effective contraception.

- To expedite reduction in infant and under-five mortality, and improvement in child health in Myanmar, greater efforts and resources should be given to strengthen the integrated maternal and child programme to include reproductive health/family planning, at both national and local levels.

- Significant proportions of infants under the age of four months receive supplementary foods. Intensified efforts to promote and support exclusive breastfeeding of young infants. These efforts are especially important in urban areas.

- More attention needs to be paid to the quality of care provided in the birth spacing programme through providing more method choice and improving the quality of contraceptive counselling.

- The level of unmet need for contraception remains unacceptably high. Some of this unmet need can be met by increasing affordable access to contraceptive services. However, there is also a need to find acceptable birth spacing options to those persons who have an unmet need but who are opposed to the use of contraception.

- The IUD and sterilization are methods that are highly effective, inexpensive and have relatively few side effects. Yet only a small proportion of couples uses these methods. If barriers to the use of these methods could be identified and overcome, women would have a wider range of choice of contraceptive methods.

- There is a need to conduct regular labour force surveys in order to track such key indicators as labour force participation rates and unemployment and underemployment rates. Because of seasonal impacts on labour force activities, particular care must be taken when designing these surveys.

6.7   Research needs

- It is unclear why high proportions of women in Myanmar women do not marry. Both qualitative and quantitative research is required to understand this phenomenon.

- Much more research is required on how changing marriage patterns impact upon household composition, care for the elderly, and inter-generational relations.

- On most indicators related to child health disparities between urban and rural areas declined between 1991 and 2001. However, the declines that occurred in the latter half of the period occurred as a result of stability, or even reversals, in the levels of indicators in urban areas. Research is required to understand the reasons underlying the slowdown in improvements in child health in urban areas.

- There exist no national-level data that can be used to measure method-specific contraceptive continuation rates and failure rates. There is also no data that provide detailed information on patterns of contraceptive switching. Information on these areas is extremely important for the birth spacing program. To the extent that this research can incorporate information on the quality of care provided in contraceptive services, it would be possible to link birth spacing services to the dynamics of contraceptive use.

- Unmet need for contraception remains high. However, there is limited information about the reasons for unmet need. Research is required to explore issues related to side effects and to opposition to contraceptive use.

- Female labour force participation appears to be high and increasing in Myanmar. However, there still is a large proportion of the female population who do not participate in the labour force. Research is required to accurately measure female economic activities and to investigate the reasons for non-participation in the labour force.

- There is little information available in Myanmar about linkages between changing labour force structure and migration. The impact of migration on economic activities needs to be documented.

- The changing age structure, primarily a result of fertility decline, has had positive impacts on dependency ratios. In order to improve economic planning the impacts on the labour force of future changes in the age structure need to be modeled.

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