# Chapter VI

# TRENDS AND DIFFERENTIALS IN FERTILITY

### A. Introduction

As in the case of mortality, a time series analysis of trends and differentials in fertility in Nepal is rendered difficult by the lack of reliable data. In the absence of vital registration statistics, the only source of data available for estimating the past levels of fertility are the censuses of population undertaken in 1952/54, 1961 and 1971, the censuses of 1961 and 1971 collected data on children born in the year prior to the census. However, estimates of crude birth rates based on these data were in the low 30s for 1961 and low 20s for 1971. these rates were very low compared to the 1975 crude birth rate of 45 per thousand estimated on the basis of the 1974-1975 demographic sample survey and the Nepal Fertility Survey. Even the census information on children ever born by age of the mother indicated an average of 5 in 1961 and 4 in 1971,<sup>1</sup> a large deviation from the 6.25 estimated on the basis of the 1974-1976 demographic sample surveys. It would thus appear that the Nepalese census data suffer from substantial underreporting of births. Besides, the rang of fertility measures that can be generated from the census data are limited because of the types of questions asked.

The estimates of fertility levels obtained from census data have been adjusted upwards by demographic techniques to compensate for the evident underreporting of births. Moreover, procedures have been devised by demographers and statisticians to arrive at estimates of crude birth rates through indirect methods.<sup>2</sup> A number of these measures have been applied to the data collected in the three censuses since 1952/54 and the resultant estimates are discussed in the sections to follow.

In addition to the censuses, the few sample surveys conducted on an *ad hoc* basis also

provide rough estimates of the fertility level in the country at various points of time. The Nepal health survey of 1965-1966<sup>3</sup> provided six different estimates of the crude birth rate ranging from 39 to 65. these crude birth rates, like the mortality rates obtained from the survey, are of doubtful validity because of the weaknesses in the sample design and survey methodology. The three rounds of the demographic sample survey of Nepal conducted in 1974-1975, 1976 and 1977-1978, and the Nepal Fertility Survey conducted in 1976 as part of the World Fertility Survey programme provide relatively more reliable estimates of fertility levels for the mid-1970s.<sup>4</sup>

It has to be noted, however, that information on children ever born collected through censuses or survey is subject to serious errors

"because of faulty memory of the women, especially an older women who bore her children a long time age, or because of lack of knowledge on the apart of a respondent who may be a person other than the women involved. Children who died soon after birth are likely to be omitted as children who left home a long time ago."<sup>5</sup>

While no attempts were made to evaluate the quality of the data collected in the demographic sample surveys, the Nepal Fertility Survey has been assessed in great detail to determine the extent to which the reporting errors affected to fertility estimates.<sup>6</sup> This evaluation indicated that the respondents have little knowledge of their age and marital duration, or of the dates of birth and death of their children. Another type of error appears to have been inaccurate reporting of the date of the past event, that is, event displacement. Such displacement of vital events results in an concentration or apparent attenuation in frequency of events allocated to particular periods in the past, thus giving a false picture of the time pattern of fertility. Another important form of error detected is the omission of past events in the detailed fertility history provided by each respondent because of memory lapse or misunderstanding of the questions.

The limitations of the fertility data from the censuses and surveys have to be borne in mind in interpreting the various estimates obtained on the basis of these data.

## **B.** Measures of Fertility

## 1. Crude Birth Rates

The simplest and most common measure of fertility is the crude birth rate which is defined as the number of births in a year per thousand midyear population. In the absence of vital registration data, several estimates of crude birth rate at different points in time have been prepared by various scholars and institutions by applying indirect techniques to the relevant data collected in the censuses.

Using a demographic analysis of the 1952/54 census data, the United Nations<sup>7</sup> secretariat estimated the crude birth rate for the same period at 45.0 per thousand of the population. Vaidiyanathan and Gaige<sup>8</sup> arrived at an estimated crude birth rate of 48.7 for 1954 by applying the quasistable population model to the 1952/54 and 1961 census data. The Central Bureau of Statistics<sup>9</sup> estimated the average birth rate for the 1951-1961 period at 40.0 per thousand of the population. All these estimates are for about the same period, but the highest one, 48.7 by Vaidiyanathan and Gaige, is about 22 per cent higher than the lowest, 40.0 by the Central Bureau of Statistics. The substantial differences in the various estimates clearly show the extent of uncertainty about the true level of fertility in the 1950s.

Several estimates of crude birth rate are available for the 1960s. The age distribution of the 1952/54 1961 censuses adjusted for under and enumeration formed the basis for estimating a crude birth rate of 47.0 for 1961 by Krotki and Thakur, <sup>10</sup> while Gubhaju's estimate obtained by the application of the over-all survival ratio method was 42.1 per thousand of the population.<sup>11</sup> By adjusting the age-sex distribution of the 1961 and 1971 censuses, the united States Bureau of the Census<sup>12</sup> obtained a crude birth rate of 44.6 for 1961-1966 and 43.8 for 1966-1971. the vital registration pilot  $project^{13}$ which was conducted by the Central Bureau of Statistics in some selected areas in 1968 revealed a birth rate of 42.0 per thousand of the population. For the decade 1961-1971, the Central Bureau of Statistics<sup>14</sup> estimated by indirect method a birth rate of 41.0 on the basis of the age data of the 1961 and 1971 censuses.

There are four estimates of the crude birth rate available for the year 1971. The United States Bureau of the Census<sup>15</sup> arrived at a rate of 43.4 by the method referred to earlier. By applying the Rele method to the 1971 census data, Karki<sup>16</sup> estimated a crude birth rate of 42.4 for the same year, while the same estimate was also arrived at by Gubhaju.<sup>17</sup> The estimate of 42.0 made by the Central Bureau of Statistics<sup>18</sup> for 1971 was very close to the estimates of Karki and Gubhaju.

As noted earlier, the three rounds of demographic sample surveys conducted in 1974-1975, 1976 and 1977-1978, as well as the Nepal Fertility Survey conducted in 1976 as part of the World Fertility Survey programme, provide more reliable estimates of the crude birth rates for the mid-1970s. The results of the demographic sample surveys have been adjusted on the basis of a "quality control sample" – a re-interview of approximately 8 per cent of the sample in 1974-1975 and 1976, and of 10 per cent of the sample in 1977-1978. The 1974-1975 survey gave an adjusted crude birth rate of 44.7, while the corresponding rates for 1976 and 1977-1978 were 46.8 and 42.6 respectively.<sup>19</sup> The difference in the estimates of crude birth rates from the three demographic sample surveys "might rather be a reflection of the relative efficiencies with which the different surveys were carried out and processed than any real difference in the level of fertility in successive years.<sup>20</sup> The Nepal Fertility Survey of 1976<sup>21</sup> gave an unadjusted crude birth rate of 43.6 per thousand of the population. However, the united States Bureau of the Census estimated a rate of 45.5 based on age-specific marital fertility rates and data on currently married and total female populations obtained from the household schedules of the survey.<sup>22</sup>

The various estimates of crude birth rates for Nepal are summarized in table 33. It will be seen that most of the estimates indicate a birth rate of 45 to 49 per thousand for the 1950-1960 decade and about 42 to 45 in the 1960s and 1970s. In comparison with many developing countries of the region, these rates are very high. In justification of their estimates of fertility levels for 1954, Vaidiyanathan and Gaige pointed to the prevailing social, cultural and economic conditions predominantly favouring large family size and higher fertility in Nepal.<sup>23</sup> These conditions have not changed radically over the past 25 years, and thus it is not likely that any dramatic fall in fertility has taken place so far.<sup>24</sup>

### 2. Child-woman Ratio

In countries where the birth registration system is inadequate or non-existent, the index commonly used to measure fertility is the child-woman ratio. This ratio is computed by dividing the number of children under 5 years old in the population by the number of women in the reproductive agegroup 15-49 years. the number of children and the number of women are obtained from a population census or a demographic survey. The childwoman ratio constructed on the basis of the

g Government of Nepal, *The Analysis of the Population Statistics of Nepal*(Kathmandu, Central Bureau of Statistics, 1977).

Nepalese census data are compared with the corresponding ratios for selected countries in table 34.

Table 33	. Estimated	crude bir	th rates,	1952-1978
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Period/ year	Source of estimate	Estimated crude birth rate
1952/54	United Nations <sup>a</sup>	45.0
1954	Vaidiyanathan and Gaige <sup>b</sup>	48.7
1951-1961	Central Bureau of statistics <sup>c</sup>	40.0
1961	Krotki and Thakur <sup>d</sup>	47.0
	Gubhaju <sup>e</sup>	42.1
1961-1966	United States Bureau of the census <sup>f</sup>	44.6
1968	Vital Registration Pilot project <sup>g</sup>	42.0
1966-1971	United States Bureau of the census <sup>f</sup>	43.8
1961-1971	Central Bureau of statistics <sup>g</sup>	41.0
1971	United States Bureau of the census <sup>f</sup>	43.4
	Karki <sup>n</sup>	42.4
	Gubhaju <sup>′</sup>	42.4
	Central Bureau of statistics (adjusted) <sup>j</sup>	42.0
1974-1975	Demographic Sample Survey (adjusted) <sup>k</sup>	44.7
1976	Demographic Sample Survey (adjusted) <sup>k</sup>	46.8
	Nepal Fertility Survey (unadjusted)	43.6
	Nepal Fertility Survey (adjusted)	45.5
1977-1978	Demographic Sample Survey (adjusted) <sup>k</sup>	42.6

Sources: a Population Bulletin of the united Nations (United Nations Publication, Sales No. 64. XIII. 2).

b K.E. Vaidiyanathan and F.H. Gaige, "Estimates of abridged life tables, corrected sex-age distribution and the birth and death rates for Nepal 1954", *Demography* (India), vol. III, No. 2, 1973.

c Central Bureau of Statistics, *Population Projections for Nepal 1961-1981*, Kathmandu, 1964.

d K.J. Krotki and H.N. Thakur, "Estimates of population size and growth from the 1952-54 and 1961 censuses of the Kingdom of Nepal", *Population Studies*, vol. 25, No. 1, March 1971.

e B.B. Gubhaju, "Fertility and Mortality in Nepal", *Journal of the Nepal Medical Association*, vol. 13, Nos. 5 and 6, October and December 1975.

f United States Bureau of the Census, Country Demographic Profiles, "Nepal", November 1979.

h Y.B. Karki, "Fertility differential in Nepal-1971", seminar paper submitted as a part requirement for the Certificate Course in Population Studies, 1978-1979, at the International Institute for Population Studies, Bombay, May 1979, (mimeo).

i B.B. Gubhaju, " An abridged life table construction for Nepal for the period 1961-1970", Research, Planning and Evaluation Division, Nepal FP/MCH Project, 1974.

j Central Bureau of Statistics, *Population Projections for Nepal 1971-1986*, Kathmandu, 1974.

k Central Bureau of Statistics, *The Demographic Sample Survey of Nepal Third year Survey*, 1977-1978, Kathmandu, July 1978.

1 Nepal Fertility Survey 1976, First Report (Kathmandu, Ministy of Health, Nepal FP/MCH Project, 1977).

It will be observed from table 34 that the childwoman ratio for Nepal is substantially low compared to the corresponding ratios for many countries in the region. For instance, the ratio for Sri Lanka in 1953 and 1963 were higher than the ratios for Nepal in 1952/54 and 1961 respectively. In 1971, the ratio for Nepal is higher than that of Sri Lanka; but lower than that of several countries including its neighbours, India and Pakistan. It has, however, to be noted that as a measure of fertility, the child-woman ratio has many weaknesses. In the first instance, it is directly affected by the under-numeration of young children, which in Nepal is believed to be comparatively very large.<sup>25</sup> In fact, when the 1971 census data is adjusted for undernumeration of children, the child-woman ratio works out at 640.<sup>26</sup> A second factor affecting the interpretation of the child-woman ratio is mortality both among women of childbearing age, as well as among children under 5 years of age who are survivors of births in the preceding five years. it is well known that death rates for children as well as for women in the reproductive age groups in Nepal are higher than the corresponding rates for most countries of the region. But since the survival rate is much higher for women aged 15-49 years than for children aged 0-4 years, the ratios underestimate recent fertility.

Table 34. Child-woman ratio <sup>a</sup>, selected countries of the ESCAP region, various censuses

Conouro		Child-Woman Ratio												
year	Nepal	Bangladesh	India	Indonesia	Malaysia	Pakistan	Philippines	Republic of Korea	Sri Lanka	Thailand				
1947										626				
1948							650							
1951			549			981								
1952/54	512													
1953									654					
1955								664						
1957					800									
1960					768 <sup>b</sup>		729	790		697				
1961	572	867	659	714		832								
1963									686					
1970					709		693	591		727				
1971	587		652	667					552					
1974		851												

Sources: Demographic Yearbook 1965 and 1975.

For Nepal, data are from Government of Nepal, *The Analysis of the Population Statistics of Nepal* (Kathmandu, Central Bureau of Statistics, 1977). For Bangladesh, data are taken from the draft chapter of *Population of Bangladesh*, Country Monograph Series in preparation. Sri Lankan data are taken from *Population of Sri Lanka*, Country Monograph Series No. 4 (Bangkok, ESCAP, 1976), table 116, p. 155.

a Number of children aged 0-4 per 1,000 women aged 15-49. b East Malaysia only. Comparison of child-woman ratios over time in one country or of the ratios between countries for the same time has to take into consideration factors other than differential mortality. The lower child-woman ratio for Sri Lanka compared with Nepal in 1971 was largely due to the concurrence of two factors. First, the substantial decline of fertility in Sri Lanka since the early 1960s resulted in a smaller number of children in the numerator of the child-woman ratio. At the same time, the continuing decline in mortality of women aged 15-49 years brought about an increase in the number of women in the denominator. As a result of these two changes, the child-woman ratio in Sri Lanka fell from 686 in 1963 to 552 in 1971.

Another defect of the child-woman ratio is that the broad age range used for women of 15-49 years does not take account of their age distribution within this range, and fertility is of course closely related to age.<sup>27</sup> For instance, in Nepal, women get married at a very early age, and the fertility is higher among younger than older women of the reproductive cohort, while in countries like Sri Lanka where there is an increasing tendency to postpone marriages and the average age at marriage for women is substantially higher than in Nepal, the highest fertility rate has occurred among women in the older age groups.<sup>28</sup> These factors have also to be taken into consideration in an international comparison as well as in comparison of fertility trends within the same country.

### 2. *Age-specific Fertility Rates*

A more refined measure of fertility is the agespecific fertility rate which is the number of births during a year to women in a given 5 year age group per thousand women in the same age group. The relevant data collected in the censuses and the national sample surveys have been used to estimate the age-specific fertility rates at different points in time.

The central Bureau of Statistics<sup>29</sup> calculated the age-specific fertility rates on the basis of the data on ever-born children and number of births occurring during the previous year collected in the 1971 census by the application of the Brass technique. The United States Bureau of the Census<sup>30</sup> has estimated the age-specific fertility rates for 1971 on the basis of estimated trends in fertility during the period 1961 to 1975. The relevant data collected in the three rounds of the demographic sample survey of Nepal<sup>31</sup> have also been used to calculate the age-specific fertility rates for the respective years.

From the detailed fertility data collected in the Nepal Fertility Survey of 1976, the number of births in the twelve-month period prior to the National Fertility Survey and the age of women at that time have been used to construct a synthetic age-specific fertility schedule for the year prior to the survey (most of 1975 and part of 1976).<sup>32</sup>

The various estimates of age-specific fertility rates for Nepal are summarized in table 35. The pattern of age-specific fertility rates derived from the various sources appear to be similar. The rate of childbearing is low at ages under 20 but rises to a peak at ages 25-29 where the majority of the women are married and fecundity is at its highest level. According to all estimates, the second highest fertility rate is experienced by women aged 20-24 years. after the age of 30, there is a gradual reduction in fertility rate, reaching a low level at ages 45-49.

			Total						
Year	Source of estimates	15-19	20-24	25-29	30-34	35-39	40-44	45-49	fertility rate
1971	Central bureau of statistics <sup>a</sup>	74	267	310	261	196	109	43	6.3
1975	United states Bureau of the Census <sup>b</sup>	114	287	296	257	188	92	39	6.4
1976	United states Bureau of the Census <sup>b</sup>	119	296	295	254	192	87	30	6.4
1974-1975	Demographic Sample Survey <sup>c</sup>	114	270	297	260	169	89	50	6.3
1975-1976	Nepal Fertility Survey <sup>d</sup>	145	290	295	269	169	75	23	6.3
1976	Demographic Sample Survey <sup>e</sup>	138	305	284	252	170	95	34	6.0
1977-1978	Demographic Sample Survey <sup>f</sup>	127	294	294	252	180	92	24	6.2

Table 35. Age-specific fertility rates, 1971-1978

Sources: a Government of Nepal, *The Analysis of the Population Statistics of Nepal* (Kathmandu, Central Bureau of Statistics, 1977.)

b United States Bureau of the Census, Country Demographic Profiles, "Nepal", November 1979 (mimeo).

c Central Bureau of Statistics, *The Demographic Sample Survey of Nepal 1974-1975*, report prepared for the Government of Nepal by A.K. Bourini, Kathmandu, May 1976.

d Noreen Goldman, "World Fertility Survey data quality: a case study of Nepal", paper presented at the World Fertility Survey Workshop, East-West Population Institute, Hawaii, January 1979 (mimeo).

e Central Bureau of Statistics, *The Demographic Sample Survey of Nepal, Second year Survey, 1976*, rport prepared for the Government of Nepal by A.K. Bourini, Kathmandu, February 1977.

f Central Bureau of Statistics, *The Demographic Sample Survey of Nepal, Third year Survey, 1977-1978*, Kathmandu, July 1978.

It is also evident from the table that there have been no significant changes in the level of fertility over the years as measured by the total fertility rate. Each woman in Nepal passing through her reproductive ages 15-49 would on an average give birth to six children. This average seems to have remained unchanged from 1971 to 1978.

### C. Fertility Differentials

An attempt has been made to identify possible differentials in the levels of fertility between various regions and groups of people in Nepal by utilizing the same source of data mentioned earlier. As noted earlier, the limitations of these data have to be borne in mind in interpreting the analysis of fertility differentials.

### 1. Zonal Differentials

On the basis of the 1971 census data,  $Karki^{33}$  estimated the crude birth rate, child-woman ratio

and total fertility rate for each of the fourteen administrative zones of Nepal. These fertility selected measures. together with some demographic and social indicators. are summarized in table 36. It will be seen from the table that while the crude birth rate for the country as a whole was 42.4, there were seven zones in which this rate was higher, and seven others in which it was lower, than the national average. A crude birth rate of over 45 per thousand has been recorded for Bheri and Rapti zones, while birth rates close to 45 have been recorded for mechi and Koshi zones. The lowest birth rate is 38.2 for Dhaulagiri and Gandaki while Bagmati with an estimated rate of 39.5 ranks the third lowest.

The differences in the fertility levels between the regions could be explained in terms of a number of demographic and social factors. The zones in which the birth rates are relatively higher are generally those where the mean age at marriage of women and the literacy rates, particularly those of women, are relatively low. The proportion of currently married women particularly in the peak reproductive ages is also relatively high in these zones. Some of the high fertility zones are also located in the Terai where the recent activities relating to land development and settlement have resulted in an immigration of young families with wives at the ages of maximum fertility. The zones with low birth rates are generally characterized by a relatively higher literacy rate for males and females, a higher proportion of males in the total population, higher mean age at marriage and a lower proportion of currently married women, particularly in the most fertile age groups.

There are, however, exceptions to the general observations made in the preceding paragraph. For instance, in the Mechi and Koshi zones where the literacy rates for both males and female are relatively high and the proportion of currently married women in the age groups 15-29 are significantly lower than the national average, the crude birth rates are relatively high. However, the Lumbini, Seti and Mahakali zones, where the mean age at marriage of women is the lowest, the proportion of currently married women is higher and literacy rates relatively lower, have recorded lower crude birth rates than Rapti, Bheri, Mechi and Koshi. These abnormalities are largely due to differences in age composition of the population caused by immigration and out-migration, as well as in the religious composition.

### 2. Rural-urban Differentials

The estimates of crude birth rate for urban and rural areas based on the results of the three rounds of the demographic sample survey are shown in table 37. It will be noted that the estimated crude birth rates for rural areas were about 50 per cent higher than those for urban areas in all three survey years. this differences may be in reality even larger if it is true, as some reports indicate, that urban births were less underreported than the rural ones. But the differences in the sex and age composition between the urban and rural areas may somewhat mask the true extent of the differentials in fertility.

The age-specific fertility rates given in table 38 show that the rates for rural areas are higher than the urban areas in all age groups, the former exceeding the latter, particularly at the youngest and oldest childbearing ages by almost 100 per cent. "Though there is significant difference in the level of fertility in urban and rural areas, the difference cannot make any significant impact upon the over-all fertility level of the entire country because of extremely small proportion of urban population."<sup>84</sup>

Administra - tive zones	Fertility measures <sup>a</sup>		Demographic indicators		Proportion currently married women at various ages <sup>a</sup>						Literacy <sup>c</sup>				
	Crude birth rate	Child woman ratio	Total fertility rate	sex ratio <sup>b</sup> (M/100)	Mean age at marriage <sup>a</sup> (females)	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Both sexes	Males	Female s
Mechi	44.9	647.9	6.0	106.0	18	44.2	83.0	93.0	93.9	91.9	86.4	82.1	17.8	29.0	5.6
Koshi	44.6	638.7	5.9	103.9	18	51.6	87.7	94.3	94.6	91.6	89.0	80.9	18.6	30.1	6.3
Sagarmatha	43.3	574.6	5.5	99.5	16	60.8	91.9	95.4	94.9	90.8	86.4	77.9	13.0	23.5	2.5
Janakpur	43.5	541.2	5.4	100.8	15	71.5	94.5	96.6	95.6	91.7	86.4	78.2	10.9	19.5	2.3
Bagmati	39.5	570.6	5.1	103.8	18	49.5	85.6	92.9	93.4	90.8	86.1	82.1	18.7	29.6	7.2
Narayani	43.7	606.5	5.3	105.7	15	76.6	96.4	97.7	96.6	93.4	88.6	81.6	12.9	21.6	3.5
Gandaki	38.2	542.5	4.9	94.9	18	54.6	88.4	94.3	93.9	91.6	86.7	82.0	18.3	34.1	3.9
Lumbini	41.6	570.9	5.2	101.1	15	71.1	95.3	97.2	96.0	93.1	87.0	80.7	16.5	29.0	4.2
Dhaulagiri	38.2	534.0	4.9	96.1	19	42.4	80.1	90.6	91.4	90.1	84.8	80.2	14.0	25.7	3.0
Rapti	45.2	627.5	5.6	96.9	18	51.8	90.0	95.0	94.7	91.3	84.0	78.6	10.0	18.6	1.5
Karanali	40.8	556.4	4.8	105.1	17	63.7	91.8	95.4	94.3	90.4	81.8	77.6	6.4	11.6	0.8
Bheri	45.5	629.1	5.6	104.4	17	63.3	93.8	96.6	96.1	93.0	86.9	82.1	9.1	15.7	2.0
Seti	41.3	557.1	4.9	99.4	15	66.2	94.7	97.1	96.3	94.2	88.1	84.3	7.5	13.8	1.1
Mahakali	41.6	559.5	5.1	102.9	15	80.6	96.3	97.1	95.6	92.8	86.8	81.7	14.3	26.0	1.9
Nepal	42.4	586.8	5.3	101.4	17	60.2	91.1	95.4	95.0	92.0	86.6	80.6	14.3	24.7	3.7

Table 36. Selected fertility measures and demographic and social indicators for various administrative zones, 1971.

*Sources:* a Y.B. Karki, "Fertility differential in Nepal, 1971", seminar paper submitted as a part requirement for Certificate Course in Population Studies, 1978-1979, at the International Institute for Population Studies, Bombay, May 1979, table 2.

b Population census, 1971, vol. II, part I, Social Characteristics, table 5.

c Government of Nepal, *The Analysis of the Population Statistics of Nepal*, (Kathmandu, Central Bureau of Statistics, 1977), Table 5.3. The Literacy rates were calculated in respect of the population aged 10 years and over.

Table 37.	Estimated	crude	birth	rates	by	rural-urban
residence,	1974-1975	, 1976,	, 1977	-1978		

Area	1974-1975	1976	1977-1978
Rural	45.2	47.2	46.5
Urban	28.2	32.4	29.5
Total	44.7	46.8	42.6

*Source:* Central Bureau of Statistics, *The Demographic Sample Survey of Nepal, Third Year Survey 1977-1978,* Kathmandu, July 1978, p. 1.

Table 38. Age-specific fertility rates, urban and rural areas, 1974-1975 and 1977-1978

	Urban	areas	Rural areas			
Age group	1974-1975	1977-1978	1974-1975	1977-1978		
5-19	64.5	57.8	111.2	129.3		
0-24	204.7	242.7	271.9	298.8		
5-29	186.4	203.7	300.7	296.6		
0-34	155.1	129.4	263.1	255.7		
5-39	94.0	88.2	171.6	182.7		
0-44	30.5	38.7	91.3	72.8		
5-49	15.7	7.3	50.6	24.6		
otal fertility rate	3.75	3.84	6.33	6.31		
ross production rate	1.82	1.87	3.07	3.06		

*Source:* Central Bureau of Statistics, *The Demographic Sample Survey of Nepal, Third year Survey 1977-1978,* Kathmandu, July 1978, p.3.

### **3.** Other Differentials

The number of live births to the eligible women by marriage duration and selected background variables is presented in table 39. By residence, the differentials widen only for longer marital duration which indicate that women reproduce at similar paces at the initial stages of reproduction. Contrary to expectation, there is some evidence that women with some education and those who can read have a slightly higher average number of children ever born during the early stages of marriage than those with no schooling or tho se who cannot read. There Table 39. Mean number of children ever born bybackground variables and marriage duration

Backgroun	Marriage duration (years)									
d variables	0-4	5-9	10-14	15-19	20-24	25-29	30+			
Residence										
Hill	0.5	1.7	3.1	4.4	5.3	5.9	6.2			
Terai	0.5	1.7	3.2	4.4	5.3	5.7	5.7			
mountain	0.3	1.6	2.8	4.3	4.8	-5.5	6.5			
Respondent s education										
No schooling	0.5	1.7	3.1	4.4	5.2	5.8	6.0			
some schooling	0.4	2.0	-3.5	*	*	*	*			
Respondent s literacy										
Cannot read	0.5	1.7	3.1	4.4	5.3	5.8	6.0			
Can read	0.5	2.0	3.4	-4.3	*	*	*			
Husband's education										
No schooling	0.5	1.7	3.1	4.4	5.3	5.8	6.1			
some schooling	0.4	1.7	3.1	4.3	5.0	-5.8	-5.4			
Husband's literacy										
Cannot read	0.5	1.7	3.2	4.5	5.4	5.7	6.0			
Can read	0.4	1.7	3.1	4.3	5.0	5.8	6.1			
Religion										
Hindusim	0.5	1.7	3.1	4.4	5.3	5.8	6.0			
Buddhism	0.5	1.7	3.6	4.3	*	*	*			
Islam	0.4	1.3	2.7	4.3	*	*	*			

Source: Nepal Fertility Survey 1976, First Report, (Kathmandu, Ministry of Health, Nepal FP/MCH Project, 1977), table 5.3.

Note: () less than 30 cases

appears to be no differential in fertility by husband's education and literacy status.

By and large, the differences in family formation patterns of various population sub-groups are relatively small. Considering the limitations of survey data, it would be hazardous to draw farreaching conclusions from such small variations as are observed in the table. Further research and in-depth analysis of the data are required before firm conclusions on differential fertility can be reached.