

F232  
90

PRODUCTION NO. 2

*Sociology of Fertility Series Presents*

NUMBER ONE

**FERTILITY  
OF ZEMI WOMEN  
IN NAGALAND**

2

*Sponsored by*

**Research Division**

**INSTITUTE OF SOCIAL STUDIES**

**179, Bipin Behari Ganguly Street,**

**Calcutta-12 ( INDIA ).**

PUBLICATION DIVISION  
**Institute of Social Studies**

179, Bipin Behari Ganguly Street,  
Calcutta-12 (INDIA).

First Published 1971

All rights reserved by  
Kanai Lal Bhowmik, 1938 —



Published in India by Alok Kumar Datta for the Publication Division of the Institute of Social Studies, 179 B. B. Ganguly Street, Calcutta 12 and printed by him at C. Mukherjee & Co. 182, B. B. Ganguly Street, Calcutta-12.

## CONTENTS

Preface  
Foreword

<b>1. PROLOGUE</b>	<b>17</b>
Fertility of Indian Women : 20 ; Differential Fertility of Scheduled Tribes, Scheduled Castes and other Communities : 21 ; General Purpose of this Study : 23 ; Previous Studies on Fertility in India : 24 ; Objectives of this Study : 27 ; Methodology : 28.	
<b>2. SOCIO-DEMOGRAPHIC BACKGROUND</b>	<b>36</b>
Age Composition : 36 ; Sex-Ratio : 39 ; Individual Economic Status : 40 ; Occupation : 46 ; Land Ownership : 47 ; Income : 48 ; Wealth : 50 ; Economic Status of Family : 51 ; Education : 52 ; Marital Conditions : 54 ; Family Size : 56 ; Family Type : 56 ; Lineage : 58 ; Clan : 59 ; Religion : 59.	
<b>3. FERTILITY BACKGROUND</b>	<b>61</b>
Menarche : 61 ; Pregnancy and Birth : 63 ; Birth and Fertility Rates : 74 ; Reproduction Rate : 77 ; Menopause : 83.	
<b>4. DIFFERENTIAL FERTILITY</b>	<b>84</b>
Demographic Characteristics and Fertility : 85 ; Economic Characteristics and Fertility : 97 ; Education and Fertility : 103 ; Social Characteristics and Fertility : 108 ; Religion and Fertility : 113.	
<b>5. EPILOGUE</b>	<b>114</b>
Summary and Discussion : 114 ; Fertility Trend : 118 ; Proposed Research : 120.	
<i>Bibliography</i>	
<i>Author Index</i>	
<i>Subject Index</i>	

## FOREWORD WRITTEN BY

**MINENDRA NATH BASU**, M. Sc., P. R. S., D. Phil., F. R. A. I.  
University Professor and Head of the Department  
of Anthropology, Calcutta University, and Professor of  
Sociology, Indian Institute of Social Welfare and Business  
Management, Calcutta.

### AUTHORS

**KANAI LAL BHOWMIK**, M. Sc., M. A., D. Phil.  
Director, Institute of Social Studies and Lecturer in Rural  
Sociology, Department of Agricultural Extension, Kalyani  
University.

**MANAS KAMAL CHOWDHURI**, M. Sc.  
Research Associate, Institute of Social Studies, Calcutta.

**PURANJAN DAS**, M. Sc.  
Research Associate, Institute of Social Studies, Calcutta.

**KALI KUMAR CHAUDHURI**, M. Sc.  
Research Associate, Institute of Social Studies, Calcutta.

## TABLES

1.1.	Population of India and Rate of Growth	19
1.2.	Birth Rate, Death Rate and Natural Increase per Thousand Population in India	19
1.3.	Average Number of Children Born Alive per Woman	21
1.4.	Showing Distribution of Population in Zeliang Kuki Area	31
2.1.	Age-Structure of Benreu, Nagaland and India	36
2.2.	Percentage Distribution of Population of Benreu by Age and Sex	37
2.3.	Percentage Distribution of Population of Benreu and India by Age and Sex	40a
2.4.	Distribution of Sex-Ratios by Age for Benreu, Nagaland and India	40b
2.5.	Distribution of Population of Benreu, Nagaland and India by Working Status and Sex	41
2.6.	Showing Non-Working Population by Age as Proportion of the Total Population	42
2.7.	Percentage Distribution of Dependants According to Category of Dependency	44
2.8.	Distribution of Working Population of Benreu by Earning Status and Sex	45
2.9.	Showing Distribution of Earners by Sex and Age as Proportion of the Total Population	46
2.10.	Percentage Distribution of Earners by Sex and Occupation	49
2.11.	Percentage Distribution of Family and Population by Holding Size	49
12.	Percentage Distribution of Family and Population by Income	50

2.13.	Percentage Distribution of Family and Population by Wealth	51	3.7.	Percentage Distribution of Women and Number of Live-Births	69
2.14.	Percentage Distribution of Family and Population by Economic Status of Family	52	3.8.	Percentage Distribution of Women by Age and Number of Children Dead	70
2.15.	Percentage Distribution of Population by Sex and Literacy	53	3.9.	Percentage Distribution of Women by Age and Number of Children Who Died Within One Year of Birth	70
2.16.	Percentage Distribution of Population by Sex and Level of Education	53	3.10.	Percentage Distribution of Women by Age and Number of Children who Died After One Year of Birth	71
2.17.	Percentage Distribution of Population by Sex and Marital Status	54	3.11.	Percentage Distribution of Women by Age and Number of Surviving Children	72
2.18.	Percentage Distribution of Population by Age and Marital Status	55	3.12.	Percentage Distribution of Women by Age and Number of Children Living Elsewhere	73
2.19.	Percentage Distribution of Female Population by Age and Marital Status	55	3.13.	Percentage Distribution of Women by Age and Number of Children Living in Family of Orientation	73
2.20.	Percentage Distribution of Family and Population by Size of Family	56	3.14.	Age Specific Fertility Rates of Ever Married Women Aged 15-44	76
2.21.	Percentage Distribution of Family and Population by Family Type	57	3.15.	Age Specific Fertility Rates of Married Women Aged 15-44	77
2.22.	Percentage Distribution of Family and Population by Lineage	58	3.16.	Age Specific Fertility of Ever Married Women Aged 15-44 in Relation to Female Births	78
2.23.	Percentage Distribution of Family and Population by Clan	59	3.17.	Age Specific Fertility Rates of Ever Married Women Aged 15-44 in Relation to Female Births	78
2.24.	Percentage Distribution of Family and Population by Religion	60	3.18.	Net Reproduction Rate for Ever Married Women Aged 15-44	79
3.1.	Distribution of Women According to Age at Menarche	62	3.19.	Net Reproduction Rate for Married Women Aged 15-43	80
3.2.	Results of Conceptions Reported by 214 Selected Married Women	63	3.20.	Length of Generation of Ever Married Women Aged 15-44	81
3.3.	Percentage Distribution of 214 Women by Age and Number of Conceptions	64	3.21.	Length of Generation of Married Women Aged 15-44	81
3.4.	Percentage Distribution of Women by Age and Pregnancy Wastage	65	3.22.	Standardised Birth Rate of Ever Married Women Aged 15-44	82
3.5.	Percentage Distribution of Women by Age and Number of Miscarriages and Abortions	66	3.23.	Standardised Birth Rate of Married Women Aged 15-44	82
3.6.	Percentage Distribution of Women by Age and Number of Still-Births	67	3.24.	Distribution of Women by Age at Menopause	83
			4.1.	Fertility Performance and Present Age of Women	86

4.2. Fertility Performance and Age at Menarche	87
4.3. Fertility Performance and Age at Marriage	89
4.4. Fertility Performance and Age at Birth of First Child	90
4.5. Fertility Performance and Age at Birth of Last Child	91
4.6. Fertility Performance and Difference Between Age of Husband and Wife	92
4.7. Fertility Performance and Duration of Marriage	93
4.8. Fertility Performance and Marriage First Birth Interval	94
4.9. Fertility Performance and Pregnancy Wastage	95
4.10. Fertility Performance and Mortality of the Children	96
4.11. Fertility Performance and Working Status of Family	99
4.12. Fertility Performance and Holding size of Family	100
4.13. Fertility Performance and Annual Income of Family	101
4.14. Fertility Performance and Size of Family Wealth	102
4.15. Fertility Performance and Literacy of Women	105
4.16. Fertility Performance and Husband's Education	106
4.17. Fertility Performance and Family Education	107
4.18. Fertility Performance and Family Size	109
4.19. Fertility Performance and Family Form	110
4.20. Fertility Performance and Husband's Lineage	111
4.21. Fertility Performance and Husband's Clan	112
4.22. Fertility Performance and Religion	113
5.1. Association of Attributes to Incidence of Higher Fertility	118
5.2. Fertility Trend	119

## PREFACE

Researches in demography and fertility in India have attracted much more attention in recent decades owing to the fact that the speed of national reconstruction in this country has considerably been lowered down by the problem of population explosion which has very adversely affected the population-resource ratio. This very challenging situation to human welfare has concerned the people of all ranks and files in the country. Social scientists and human biologists of India do not constitute a group of isolates and naturally they have taken up some active interest in studying the nature and intensity of this problem with a view to defining a battery of all important measures which can very effectively solve this problem of human progress and welfare. However, it can not be denied that no concerted action has yet been made to take up a study in demography and fertility among the tribals in India who constitute a population of 30 million living souls. This is possibly due to the fact that the undertaking of any study on tribal community is a monopoly of the anthropologists who have very little time and training to take up demographic research and fertility study.

Fortunately enough, the Research Division of the Institute of Social Studies has to its credit some research workers who have sufficient training in both anthropology and demography. A preliminary session on this problem has led the Research Division to take up an experimental programme on fertility study.

This first research project on demography and fertility has, in course of time, initiated many a research deals which have ultimately led the Research Division to organise a new section on 'SOCIOLOGY OF FERTILITY'. This Research Section has so far completed the following fertility studies: Fertility of Muslim Women in Lower Bengal, Fertility of Dule Bauri Women

in West Bengal, Fertility of Angami Women in Nagaland and Fertility of Pundra Women in Lower Bengal. Besides these, the investigation has already been in progress among the Hindu Women of the Sub-Himalayan Tract, the Raju Women of Orissa-Bengal Border, the Tiyar Women of Lower Bengal, the Nuliya Women of Orissa, the Kaora Women of Lower Bengal, the Sumandal Women of Western Bengal, the Gaddi Women of Himachal Pradesh, the Bagdi Women of Lower Bengal, the Methor Women of Western Bengal, and the Santal Women of West Bengal. Although the work on FERTILITY OF ZEMI WOMEN IN NAGALAND has initiated a good number of studies relating to demography and fertility, this being the pioneer study could not avail the opportunity of receiving all methodological sophistications and the refinements which were ultimately developed by the researchers of this Institute of Social Studies in course of working on this project and similar such other projects. Besides that, our poor financial resources could not allow us to do more than that we have done. We have tried our best but still there are many printing mistakes which, we believe, will not very much hamper the nature and spirit of this research monograph. However, we promise to pay in future more and more attention to this aspect of printing and to minimise the annoyance of our kind readers and patrons.

A 'Preface' to this book will remain incomplete if we fail to mention the services we have received from the Institute of Social Studies which is a voluntary research organisation of all young social scientists and human biologists who have a stronger faith in cooperative undertaking and in the dynamicity of a group personality. This Institute has become organised to answer all the needs and demands of those young researchers who have little resources to cope with any of these problems. The foundation of the Institute rests on the belief that the pooling of all little resources together is apt to solve the problems of the young researchers. This Institute has provided the authors of this book with a generous fund to complete this research project and to publish this book. Moreover, the Institute has very successfully

developed a group personality which encourages the members and associates to work in close cooperation without raising any question on individual upliftment. In fact the production of this book is to the credit of all members and associates of the Institute who rendered their all possible services at all necessary junctures of this work. We are very much thankful to them for their ungrudging help and assistance. However, for the shortcomings not all the members or associates of the Institute but the authors or this book remain wholly responsible.

We are very much grateful to Professor M. N. Basu who has very kindly given a 'Foreword' to this book. We also remain very much grateful to the people of Benreu who spent many of their important hours with us and rendered all possible help and cooperation in understanding their society, language and culture

Field Station  
INSTITUTE OF SOCIAL STUDIES  
DAKSHIN BARASAT  
24-Parganas ( West Bengal )  
FIRST JANUARY, 1971.

K. L. Bhowmik  
M. K. Chowdhuri  
P. Das  
K. K. Chaudhuri

## FOREWORD

Anthropology is the science of 'man and his works'. However to a layman this connotation has but only one meaning and that is—a science which deals with tribes and tribal societies. Although it is no denying that this is true to a great extent, nevertheless it is not the only concern but one of the many ramifications of that branch of science which is still striving hard to establish its proper place in the vast array of other already established scientific branches of human knowledge. In fact, anthropology concerns with all that can be known about man which is limited neither by time nor by space. It further deals with all levels of man of past or present, whether primitive or civilised or in the transitional phase. It includes in its perview also the study of man's psychology, physiology, thinking, action, mode of living, growth and progress. By growth it is implied both qualitative and quantitative growth.

Till recently, anthropology was engulfed in a static approach. It took up studies of bones, blood, or tribe—its beliefs and customs, in its own way. It was complacent with the results reached at by the traditional methods. Moreover, it jealously guarded its sphere of influence and discouraged encroachment of other allied sciences vehemently even at the cost of stagnation, as it completely overlooked the fact that the history of living world was the history of change in time and space. Once this realisation finds ground with the anthropologists, the static approach followed by them so rigidly so long is bound to find disfavour and is therefore doomed to rejection in the face of changed approach of reality.

It is, therefore, apparent that the static approach of anthropology, although has its importance and value in its own right,

can never be a full answer to the problems. In fact, under the growing awareness of group dynamism, an integrated approach is the only plausible solution. Diverse branches of social science with their overlapping boundaries should be so integrated as to look a particular problem under study a harmonious whole.

Of late, anthropology too has begun to catch up with this new approach. Through experience, anthropologists have realised that this type of process-oriented unitary outlook affords better understanding of human problems in its total perspective. It is, therefore, not surprising that young workers in the field should try to take advantage of this changed outlook and experiment in group dynamics and to improve the quality of their works along with quantity. This is evident in the ventures of the members of the Institute of Social Studies who believe sincerely in the spirit of group cooperation and dynamic approach to the problems.

The book on 'Fertility of Zemi Women in Nagaland' is a good departure in this respect from hitherto published materials available on the subject. These are either too empirical or are purely descriptive in nature, where the emphasis is laid to strict adherence to the particular branch of discipline. Whereas, in this work, demography of a tribal group has been attempted from the point of anthropology successfully. After all at the present moment, India is at the cross road. Apart from her multifarious problems, population problem is the most important and most vital, and it should be dealt with immediately. The limitations of our resources make it more imperative, if not necessary, to dedicate ourselves to the cause of finding the solution with all earnestness and vigour.

Rapid growth rates hinder economic development in underdeveloped countries. So the population problem is being realised by the economists, the social scientists like the anthropologists and the sociologists and also by the politicians as a problem of growth rates. That the human population has already put stress upon the carrying capacity of the earth itself should be recognised by the scientists, responsible persons, not just by the ecologists alone. Time has come for humanity to take a careful

look and try to make some serious thinkings for the optimum population size.

India, like other economically underdeveloped countries of the world, is handicapped in her attempts to deal with her population problems for the lack of sufficient reliable information in this field. The situation is further bleak in respect of her tribal population though it contributes to a good measure to the make up of total population of India. Attempts have been made now and then to unfold demographic characteristics of the people living in the rural and urban areas of India, but very few have taken scientific notice of these phenomena among the much neglected tribal groups living in the far-off places in India. This might be due to the non-interest of the demographers in this ecological set up of the tribals. It is, therefore, very natural that the anthropologists with demographic outlook should come forward to tackle this situation. After all, all sorts of information on population from all sorts of Indian people are needed for the effective solution of her problems.

This book 'Fertility of Zemi Women in Nagaland' is, therefore, a good attempt in this direction in the right moment. It is mainly concerned with the studies of fertility pattern of the tribal women of a particular tribe of Nagaland. Though it is a humble approach to the problem, yet its value can not be undermined, if not for anything but at last for its value as a pioneering work. The experience gained here can be best utilised in developing studies among other tribes of this region or elsewhere in India faced with similar problems. It is hoped that this book will contribute in good measure to the understanding of the salient features of the problem and also to the growing realisation that we can not afford to be indifferent about the tribal population.

This book covers all possible aspects of fertility and all the topics have been thoroughly and clearly dealt with. The book is divided into three chapters: Prologue, Socio-Economic Background, Fertility Background, Differential fertility, and Epilogue. In the first chapter mention has been made of the fertility of

Indian Women, the differential fertility of the scheduled castes and scheduled tribes of India and a review has been made of the different studies on fertility in India. The methodology of the study has also been discussed here. These chapters will prove to be very helpful to all concerned with the study of fertility in India. The second chapter, dealing with the socio-economic background of the population, has taken into consideration the age and sex composition, sex-ratio, individual and family economic status, occupation, land ownership, income, wealth, education marital status, family size, family type, lineage, clan and religion. This chapter has delineated clearly an all important setting for building the superstructure of fertility study. The third chapter, devoted to fertility background, has included age at menarche, frequency of pregnancy and birth, birth and fertility rates, reproduction rates and age at menopause. The rates which have been clearly defined and dealt with are crude birth rate, general fertility rate, total fertility rate, gross reproduction rate, net reproduction rate and standardised birth rate. A special mention may be made of the calculation of length of generation of the female folk. All these sections have been clearly delineated and the data are presented in a lucid language.

I believe the members and associates of the Institute of Social Studies will get chances to carry on future research in this field of their proposed research with full cooperation, coordination, collaboration in forces of unity—unique features of a team work. This book, I feel, will be of great help to the readers, research workers and teachers of all branches of Social Sciences and Human Biology.

Department of Anthropology  
University of Calcutta  
Calcutta : 1st. January, 1971

M. N. BASU

1

## PROLOGUE

Planning the country is, to-day, an international programme. In each and every country it has become a growing concern to the citizens and their government to avoid all haphazard actions in general and to stimulate programme oriented actions in particular. This is a product of long standing experiences which were earned by the mankind through generations and were evolved from the course of struggle for existence. In due course of time, the cumulative effect of this human experience has become properly analysed and universally understood, and as a result it has now become almost obligatory for each and every member of human society to contribute all his energy in developing technology, in organising community life and in strengthening all practical treaties related to human welfare and peaceful co-existence. All these have activated the urge for developing nations through national planning. A national planning is conceived in terms of certain well defined plans and programmes which are so made as to answer all the needs of the country for a specific period of time. In drawing these plans and programmes it is always seen that these are related to one another and never make any cross with the nature of action situation and the availability of resources.

Thus the affairs related to planning demand an extensive and intensive collection of all necessary facts from all corners, a thorough and intimate understanding of many a facts together, and a scientific evaluation of those facts within a common frame of reference. These demands in general and an academic interest in particular have led the social scientists to undertake

many social surveyes in the fields of varied interests. These interests have given a wider coverage by studying numerous aspects of man, society and culture, and as a result some specialised branches of social sciences have ultimately been developed. The branch of population sociology has been emerged during this period of specialisation in social research, and the discipline has ultimately become concerned with all socio-cultural aspects of population statistics. Although the question of population has attracted the attention of statesmen and philosophers since ancient times, it is only recently that many a positive and organised attempts have been made to investigate systematically and to report scientifically the causes of population change, the specific ways in which population dynamics influence human welfare, and the socio-cultural factors which bear a tremendous impact on the change of population.

India is the second largest country in the world after China. In 1961 census, the country recorded a population of 439·2 million as against 361·1 million in 1951 giving an increase of 21·63 per cent. However, it can not be denied that the actual size of population in 1951 census was probably greater than 361·1 million as the then Census Commissioner reported that 'for every thousand persons included in the census count, eleven other persons were probably omitted' (Gopalaswami, 1953:2). With reference to Table 1·1 it may be concluded that the population in India is growing at a rapid rate since 1921. The main cause acting behind this rapid growth of population is the decline in the death rate, and not an increase in the birth rate (Agarwala, 1967:12). In support of this statement it may be noted that the birth rate was 49 per thousand in 1891 and became reduced to 42 in 1961, while the death rate was 40 per thousand in 1891 and became reduced to 23 in 1961. A close scrutiny of the figures displayed in Table 1·2 reveals that the level of decrease of the birth rate does not keep any pace with the level of decrease of the death rate, and as a matter of fact the death rate has rapidly declined while the birth rate has followed a very slow and gradual decrease. Driver has made a

brilliant discussion on the background of declining death rate (1963:3). He observes that deaths due to malnutrition, famines, and gastro-intestinal ailments are being decreased through improved agricultural production and purification of water

TABLE 1·1  
POPULATION OF INDIA AND RATE OF GROWTH

Year	Population (in million)	Decade	Rate of Growth
1901	238·4	1901—1911	5·75
1911	252·1	1911—1921	— 0·31
1921	251·3	1921—1931	11·00
1931	279·0	1931—1941	14·22
1941	318·7	1941—1951	13·31
1951	361·1	1951—1961	21·51
1961	439·2	—	—

Source : Bose, Mitra, Gupta and Mukherjee, 1965:325.

supplies. In addition, the Government of India and the World Health Organisation have launched many public health programmes of modern sanitation, medical care and preventive

TABLE 1·2  
BIRTH RATE, DEATH RATE AND NATURAL INCREASE  
PER THOUSAND POPULATION IN INDIA

Decade	Birth Rate	Death Rate	Natural Increase
1881—1891	48·9	41·3	7·6
1891—1901	45·8	44·4	1·4
1901—1911	49·2	42·6	6·6
1911—1921	48·1	47·2	0·9
1921—1931	46·4	36·3	10·1
1931—1941	45·2	31·2	14·0
1941—1951	43·1	30·9	12·2
1951—1961	40·0	21·7	18·3

Source : Driver, 1963:4.

medicine which have imposed a positive check in lowering the incidence of small-pox, cholera, plague, malaria, filariasis, tuberculosis, and venereal diseases. All these have contributed to a rapid drop in the death rate and a simultaneous decrease in the

incidence of sterility in the population. The net result of all these is the population explosion which has invited many a troubles and adversely affected the socio-cultural life of the Indians.

### FERTILITY OF INDIAN WOMEN

A woman is biologically fit to participate in fertility performance when she is in the age-group of 15-44 years. Thus, it is theoretically possible for a woman married at age 15 and having an uninterrupted married life for the next 29 years to have 29 children, but in reality the total fertility per average woman rarely exceeds 10 children. As regards Indian women, the total fertility is far below this maxim. On the basis of available information it can be said that an Indian woman gives birth to an average of 6-8 children, if her married life is not interrupted. Data relating to fertility on all India basis are not available. The Indian censuses in 1911, 1921 and 1931 carried out some fertility enquiries which were confined to small areas. In 1951 census, fertility data were collected from places in Travancore-Cochin, Madhya Pradesh, and West Bengal, and during 1961 census the Registrar-General's office carried out a registration study and collected data on fertility. Further-more, data on fertility were recorded in a number of surveys carried out in different places of the country. From the findings enumerated in Table 1.3 it may be inferred that several attempts have been made to know the total fertility of Indian women, but no concerted action is yet made to present an all India picture; and the total fertility of Indian women as comes out from several studies is relatively low. The table also shows that fertility in urban areas is not lower than that is found in rural areas, which is something contrary to demographic expectation. As a matter of fact, the average fertility performance in rural areas is a little below in comparison with that is reported from urban areas. As to the absence of rural urban difference in fertility in India, Agarwala holds that it 'is not surprising in view of the fact that the factors which contribute to this difference have not yet started operating in urban area' (1967:36).

### DIFFERENTIAL FERTILITY OF SCHEDULED TRIBES, SCHEDULED CASTES AND OTHER COMMUNITIES

The people of India are, according to administrative decorum, classified into two broad categories: the scheduled population and the non-scheduled population. The scheduled population include the members of scheduled tribes and scheduled castes; and their scheduled position is being enhanced according to the notification of the President of India. These scheduled

TABLE 1.3  
AVERAGE NUMBER OF CHILDREN BORN ALIVE PER WOMAN

Fertility Enquiries	Average Number of Children	
	Rural	Urban
Travancore-Cochin, Census (1951)	6.6	6.4
Madhya Pradesh, Census (1951)	6.1	6.3
West Bengal, Census (1951)	6.0	—
Uttar Pradesh, Sample Census (1952-53)	6.2	—
Registration Data (1961)	—	6.6
National Sample Survey, 16th. round (1960-61)	—	6.5
Mysore Survey (1952)	6.0	6.2
Lucknow and Kanpur Survey (1951)	—	7.8
Delhi Survey (1958-60)	7.1	—

Source : Agarwala, 1967 : 37

people are socio-culturally lagging behind and, therefore, need some special care and privileges for their upbringing. Accordingly many important measures have been taken up by the State as well as the Union Government. Side by side the non-government agencies are also carrying on their missionary activities and social work in different parts of India. Now it is a question to answer whether this administrative classification has any bearing on the fertility performance of women.

It is very much difficult at the moment to give an adequate answer to the above question because of the shortage of data relating to this particular issue. However, some attempts have scatterdly been made to collect data on differential fertility by

group affiliation through local surveys. As for instance, Sen reported from her study in Calcutta that the Bengali Brahmins have a lower fertility than that of the Vaidyas and the Kayasthas (1953:46). In Poona District it is observed in the city area that the Hindus and the Jains have a higher fertility than that is found among the Muslims, Christians and other non-Hindu communities. It has also been reported that the Brahmins among the Hindus have lower rates than the Backward castes and the other Castes (Dandekar and Dandekar, 1953:63). However, the observation made in the non-city area of Poona District gives a different picture. There the performance of fertility does not bear any relationship with caste affiliation or religious affiliation (Dandekar and Dandekar, 1953:96 & 101). Striking differences among castes in fertility performance are also absent in other regions of India (Gupta and others 1955:41). In Kanpur survey, it was found that the fertility of Muslim women was 8 as compared to 7 of the Hindu women (Majumdar, 1960:174). A study reported from Maharashtra shows that the level of fertility is lower among the Maharashtrian Brahmins than that is found by Sen among the Bengali Brahmins (Rakshit, 1962:153). In Central India, Driver observed that the Muslims and the Hindus 'are virtually identical in fertility performance but differ greatly in their median ages at marriage' (1963:88). Further, he noted that 'there is neither a direct nor indirect association between the fertility averages and the median ages at marriage for wives in the caste groups', though the scheduled castes in general have a lower fertility in comparison with that of the Brahmins and other higher caste groups (1963:92). Nambiar, in connection with the census operations of 1961, conducted a survey on the fertility of the Toda women who live in the Nilgiri Hills of Madras and are famous for the practice of polyandry. His findings show that the Toda women, in an average, do have 5.7 children; and when the barren women are exchanged this comes about 6.7 (1965:34). From the above discussion it becomes apparent that the studies so far made have neither given a wider coverage nor came to draw one and the same

conclusion. Still it can not be denied that this particular issue has already received some attention from the population sociologists.

#### GENERAL PURPOSE OF THIS STUDY

This is a study of fertility pattern as found among the Zemi Nagas in a Nagaland village. It comes under the discipline of population sociology. Although this discipline is still very young, it has already patronised a very large number of studies to know the levels of procreative capacity of different groups of people in the world. All these studies have been made in respect to fertility, though it is known to each and every demographer that the measure of fertility does not give the exact level of procreative capacity of a population at any time. The procreative capacity of a population can accurately be computed only when someone adopts a measure of fecundity. But fecundity is so biologically oriented that it is next to impossible to measure it demographically, while a survey on fertility, which measures only actual reproductive performance, is relatively easier to undertake. However, it should always be borne in mind that fertility and fecundity are two different dimensions and evaluate the reproductive affairs in two different ways. As Reynolds and Macomber (1924) observe that in some cases the union of a particular male and a particular female may be sterile although each may be fertile in other unions. Thus it may happen that some persons are biologically fecund but do not get a sociobiological chance of proving their fertility. In all such cases the persons concerned are, from fertility point of view, considered to be sterile. In the present study we have relied on the working concept of fertility though we are quite aware of the limitations it bears.

The general purpose of this study is to delineate a faithful account of fertility pattern as found among the members of a hill tribe in India. This study, in the first place, intends to describe all socio-demographic characteristics of the population; and on the background of these characteristics it is proposed to unravel all socio-biological facets of fertility performance and to evaluate the impact of all socio-cultural characteristics on the level of

fertility performance. The general outline of this study is so designed that it can squarely give a fair treatment to all academic and applied aspects of population statistics with reference to a particular field situation. On the academic side, the methods followed and the materials presented in the study are to help the population sociologists in predicting the future fertility trends and to develop some methodological refinements; and on the applied side, the nature and contents of this study are expected to render some practical help to the planners, administrators and welfare workers in getting the facts from actual field situations and in understanding the figures in the background of some tangible terms.

#### PREVIOUS STUDIES ON FERTILITY IN INDIA

In India, the fertility enquiry was first introduced by the census of 1911, and afterwards it gradually gained a momentum through different census operations. In addition to this census approach, several attempts were made afterwards to know the different aspects of fertility through local surveys and individual studies. Gradually it happens that some scholars from different branches of social science and human biology took a keen interest in studying the reproductive life of Indian women with special reference to some aspects of general fertility (Curjel, 1920; Sen, 1953; Rakshit, 1962; Bhowmik and Bhowmik, 1967; Bhowmik and Gupta, 1968; Bhowmik and Chaudhuri, 1969; Bhowmik and Chowdhury, 1970; and Bhowmik and Das, 1970). In addition to these studies relating to human reproduction several fertility surveys in different regions of India were carried out by several scholars from different disciplines. In the Punjab a fertility survey was made to know its relation with economic and social status (Jain, 1939). Afterwards a study on the demography of the Paris was carried on (Chandrashankar, 1948). The social survey of Kolhapur city by the Gokhale Institute of Politics and Economics made a detailed investigation of population and fertility (Savani, 1948). In latter years this Institute carried on some other fertility surveys. The fertility survey made in the district of Poona described the fertility pattern of

the population in general and rural-urban differences relating to fertility performance in particular (Dandekar and Dandekar, 1953). It is found that the level of fertility is a little higher than that is found in the non-city area. A further survey was carried on in three neighbouring districts of Nasik, Kolaba, and Satara (North). It is found that in two of these districts the rural women have slightly higher gross reproductive and maternal net reproductive rates than the urban women, while the condition found in the other district is just the reverse (Sovani and Dandekar, 1955: 71 & 158). Afterwards a detailed survey was carried on by the Gokhale Institute in six rural centres in six districts of Parbhani, West Khandesh, Ahmednagar, Ratnagiri, Belgaum, and Gulbarga of Western India (Dandekar, 1959). This study has made an interesting inference that the level of fertility in general seems to have remained more or less unchanged in recent years, though the investigation has reported some evidence, at some of the centres, of a certain decline in fertility in recent years. The Princeton University contributed three valuable studies on Indian population and fertility (Davis, 1951; Coale and Hoover, 1958; and Driver, 1963). In the first of the series Davis analysed the data from the censuses of India and Pakistan and presented a fertility background of the population in relation to socio-demographic characteristics of the people. The second study as made by Coale and Hoover deals with the potential effect of declining mortality on population growth and economic development in India. The third one of the series was based on a survey of households conducted by Driver in Nagpur District, and the study was made to determine (i) 'whether the number of children ever born varies among women who are differentiated: by place of residence, religious or caste affiliation, employment status, and educational achievement, and by the type of occupation, annual earnings, land ownership, and educational achievement of their husband,' (ii) 'whether the differences or similarities among sub-groups in fertility are related to their age distribution,' (iii) 'whether there is any connection between the fertility averages of sub-groups in each social category and the ages

at which their women usually marry', (iv) 'whether the fertility averages of sub-groups are related to the percentage of their women who have membership in a joint family,' and (v) whether there is any relation between the fertility averages of sub-groups and the percentage of their couples using birth control devices.' The National Sample Survey, No. 7 under the subtitle of Couple Fertility has given a wider coverage in delineating the fertility background of Indian population in general (Gupta and others, 1955). A detailed examination of a number of aspects of fertility rates and differential fertility was carried out in a sample survey in Calcutta (Mukherjee, 1961). The study has been made with the proposition that the human fertility is essentially related to environment, culture and economy. With reference to this background the study has made an attempt to examine the differential rates among two groups of women. The first group includes those who have lived in the city all their life and have settled long enough in the city to become more or less urbanised. The second group consists of those women who have migrated from the rural areas to the city within a comparatively short period of time and therefore have not become fully urbanised. This study reveals that the women with more urbanisation are exposed to a lower fertility. Further, the findings have shown that the factors like age at marriage of woman, duration of married life, age of woman at first birth, family size, family income, husband's occupation, and education of woman bear some relationship with the fertility performance of woman. Chandrasekhar carried on a detailed demographic survey in a Madras village. This study has presented birth rates, death rates and factors contributing to those rates. As regards differential fertility he has found the highest fertility among the caste Hindus, followed by the Harijans, and Muslims and Christians (1962 : 153).

This brief review of studies on fertility in India reveals that the subject of fertility has long been recognised to Indian scholars but it is only recently that the subject has received some considerable attention. However, it is known to each and every

population sociologist that to draw any valid conclusion or to make any generalisation requires the collection of all necessary data from all groups of population and from all corners of the country. Thus the few number of studies so far made do not give an overall estimate of fertility pattern of Indian women but provide the future workers with the required leads and impetus in carrying on researches in their respective fields of studies.

#### OBJECTIVES OF THIS STUDY

Researches undertaken by the social scientists over space and time have led them to isolate human characteristics, to understand those characteristics in the background of socio-cultural values, and to group all human beings according to the merits of these characteristics. These are done before any attempt is made to know a part or the whole of cultural dynamics, or to analyse a part or the whole arena of societal interactions. This particular way of conceiving all human affairs and analysing all human behaviour has become very much popular in current anthropological and sociological research. In recent decades the following of this tradition in demographic research has earned a considerable attention. In fact, several investigators belonging to the discipline of population sociology have reported fertility patterns of groups of people differentiated according to either residence, religion, literacy, caste, economic status, or any other characteristic. As far as the demographic situation in India is concerned, several scholars from various fields of social sciences and human biology have already carried on some valuable studies on human fertility and have concluded from their findings that there is a strong basis for assuming a differential fertility in different strata of one and the same population. Sociological studies have already made it clear that each and every human being in the society has a particular role to play. The role he plays determines the volume and the direction of his deeds. Thus in sociological studies to know the role of an individual is a must particularly when somebody wants to know the deeds he has done. In any society the role of an individual becomes determined by the status he owns. In acquiring a particular status the indi-

vidual depends on the set of personal characteristics he possesses. Therefore, the complex of personal characteristics of an individual determines the length, breadth and depth of what he did, what he does, and what he is to do. This situation has led us to organise the main objective of our study which assumes that personal characteristics have some influence on fertility performance. In agreement with this main objective some secondary objectives are organised to study the socio-demographic background of the population, fertility background of the population, and the relation of some important personal characteristics with fertility performance.

#### METHODOLOGY

This study is a part-product of a larger project entitled "Intensive Study of a Zemi Village in Nagaland". The field investigation was carried on in 1961-62. The methodological procedures employed in developing and presenting this study do not fundamentally differ from those used in the majority of demographic investigations in India, though in some places we have utilised some of the methodological procedures which are characteristically made use in ethnographic researches and village studies. The present discourse includes a discussion on the area, the people, the village, and the investigation.

**The Area :** The area of investigation is located in the newly formed State of Nagaland. Nagaland is the sixteenth State of the Republic of India. It lies between 25°6' and 27°4' North and 93°20' and 95°15' East, and is bounded by Manipur on the south, with Burma to the east, the Tirap Frontier Division of the North-East Frontier Agency to the north, and valley of the Assam plains on the west. The State covers an area of 16,488 square kilometers and is divided into three districts of Kohima, Mokokchung, and Tuensang. Each district is again divided into three sub-divisions. The capital of the State is at Kohima which is located some 4,800 feet above the sea-level. This country is thoroughly mountainous and is provided with remarkable topographical variations. As to the formation of the present State of Nagaland it may be noted that it includes the former

Naga Hills District of Assam and the Tuensang Division of the North East Frontier Agency. The Naga Hills District of Assam was established in 1881. On 1st. December, 1957 Tuensang Division was added to this district, and the new administrative unit was then formed known as NHTA (Naga Hills and Tuensang Area). This change, it is presumed, was following the acceptance by the Government of India of a resolution passed by the first Naga Peoples Convention held in Kohima on 22nd. August, 1957. In October, 1959 the Convention of the Naga peoples at Mokokchung recommended to rename the area as Nagaland which was accepted by the Government of India on 18th. February, 1961 as the first step to the constitution of Nagaland into a full-fledged state. It was on 21st. August, 1962 that the late Sree Jawaharlal Nehru, the then Prime Minister of India, introduced a Bill to legalise the formation of the State of Nagaland. Finally on 1st. December, 1963 it was inaugurated by Dr. S. Radhakrishnan, the then President of India.

The State of Nagaland is inhabited by 369,200 souls of which 178,173 belong to fair sex (Census, 1961). In the population structure there is a male domination which gets expression in terms of 1072 males per 1,000 females. This very sex-ratio is well in agreement with that of Indian Union where the ratio gives 1063 males per 1000 females. The density of population per square kilometer gives a return of 22 individuals while it comes about 134 in Indian Union. The occurrence of this very low density in Nagaland is possibly due to the nature of topography which is being characterised by hills and forests. As per administrative decorum the people in India are categorised into two : scheduled and non-scheduled populations. The scheduled people are again divided into two : scheduled castes and scheduled tribes. In the state of Nagaland there are 25,377 souls belonging to non-scheduled people, 126 to scheduled castes and 343,697 to scheduled tribes. The present study is made among the Zemis, a scheduled tribe, who live in the Zeliang-Kuki Area of Nagaland.

The Zeliang Kuki Area is located in the south-west corner of Nagaland. This Area, with its administrative headquarters at

Peren bounded by Manipur on the south, Angami Naga Area on the east, and Assam on the north and the west, is entirely covered with ranges of hills and big dense forests. Most of the people live on the tops of hills and on the higher elevations while the unhealthy foot-hills towards the plains are thinly populated (Bhowmik, Gupta and Bhowmik, 1969 : 118). This area has not yet received the benefits of varied modern communications. There is only one jeepable road connecting this Area with Dimapur-Kohima-Imphal Road.

The Zeliang-Kuki Area is composed of 55 villages of which belong 25 to the Zemi, 18 to the Kuki, 5 to the Liangmai, 5 to the Sema, and 2 to the Nepalese. As regards the enumeration of 25 Zemi villages a point of clarification should be noted. Peren (also known as Birema) the headquarters of the Area is considered a village here though an attempt in making it a little town is now in progress. Only a little away from this emerging town there still remains the traditional village known as Peren. The other 23 Zemi villages are Nsong, Lalong, Tesen, Benreu, Nabanpungwa, Beisumpui, Gaili, Heningkunlwa, Njauna, Nganlong, Ngolwa, Ndunglwa, Kendung, Lamhei, Haingkui, Tampai, Penlwa, Punglwa, Zalukie, Nkiyo, Peletkie, and Heleilwa. The 18 Kuki villages are Phanjang, Bongkalong, Bolsal, Khelma, Chalkot, Chamcha, Bolbung, Inbung, Lillen, Machangbung, Saitihem, Saljang, Soget, Songsang, Vongkithan, Tening, Mawa and Paikhulum. The 5 Liangmai villages are Njan, Tening, Ntu, Nchangram and Tepun. The 5 Sema villages are Kiavi, Zutovi, Lothavi, Tesuphe and Dziikhu. And, the two villages for the Nepalese are Pimla and another Nepalibasti whose name is not given. The Table 1'4 shows the distribution of population. The enumeration is not made after a house-to-house survey in the Area but is based on the statements given by the village headmen and by leaders of the Area. Some of these statements were checked out by the results received from a house-to-house survey of a few villages. This checking shows that these statements do not differ much from the actual field situations. Thus the Table 1'4 describes that in the Area there are 13, 068

souls consisting of 6,331 males and 6,737 females. As regards the numerical strength of each group of people it is seen that the Zemi Nagas have the first rank, the Liangmai the second, the Kuki the third, the Sema the fourth, and the Nepalese the fifth.

TABLE 1'4  
SHOWING DISTRIBUTION OF POPULATION IN ZELIANG KUKI AREA

People	No. of Villages	Population		Total	Percentage of Female	Average Size of Village
		Male	Female			
Zemi	25	3,674	3,729	7,403	50.37	296
Liangmai	5	1,127	1,187	2,314	51.29	463
Kuki	18	926	1,198	2,124	56.40	118
Sema	5	418	486	904	53.76	181
Nepalese	2	186	137	323	42.21	162
Total	55	6,331	6,737	13,068	51.55	238

**The People :** This study is made among the Zemi Nagas in Nagaland. They are numbering about 7,403 souls consisting of 3,674 males and 3,729 females (Bhowmik, Chaudhuri and Chowdhuri 1968:14). Linguistically they belong to the Naga group of the Tibeto-Burman family. Each Naga tribe has its own dialect which, however, shows many a variations. To this Elwin has noted, "In some areas the dialect differs from village to village and in earlier days men and women in the same household sometimes had to use different forms of speech" (1961:12). In spite of all these dialectical variations, the members of each and every Naga tribe occupy a common territory and share the same type of social organisation, ritual structure, technology and political organisation. Before the advent of the British administration and Christian Missions in the area, the Nagas had no written language of their own. This is for the fact that they neither developed a script of their own nor adopted the script either from the Meiteis (Manipuris) or from the Ahoms (Assamese) who were and are their immediate neighbours. During the period of British rule, the administrators and the missionaries tried their best to introduce the Roman script. At the beginning, the people gave the most resistance to the acceptance of this innovation. However, in the long run their cumulative experience of a direct

contact with the modern civilisation and a long persuasion in missionary way have made them convinced to accept the Roman script in developing their age-old dialects.

Racially they have been described as the Indo-Mongoloids (Elwin, 1961:5) and are recorded as the Kirata in old Sanskrit literature (Chatterjee, 1946), while Hutton in his monograph on the Angami Nagas has described these neighbours of the Angamis as the Kacha Nagas (1921:352). It is held that the name 'Kacha Naga' was given to this tribe by the Angamis and was, later on, brought to use by the British administrators working in the area but was never accepted by the people themselves. One legendary tale goes on to describe that in the later part of the eighteenth century when the British regiment came in the lower part (South-West) of the Angami area, the Angami interpreter with them, on enquiry, reported that down in the dense forests lived the Kacha Nagas or the jungle people. In Angami dialect 'Kacha' means jungle, while in the dialect of the so-called Kacha Nagas the jungle is known by the term 'hegung'. In explaining this situation Soppitt claimed that the name Kacha Naga was given to this tribe by the Assamese while the people used to designate themselves as Empeo (1885:2). However, the members of this tribe living in Nagaland do not admit the recognition of such a name (Bhowmik, Gupta and Das 1969:2). Thus we do not have at the moment any positive evidence to level them as Empeo or Kacha Naga. In a way to clarify this situation Bower holds that the so-called Kacha Naga is a fair population (nearly 0.1 million) composed of three distinct but allied tribes (1950:44) : Zemi, Liangmai, and Ruongmai (or Kabui). These people are now fond of using the name Zeliangruong in place of the giving name of Kacha Naga which, following their statement, means nothing but a group of jungle people and naturally has nothing to do with their tribal name of Zeliangruong. In the newly formed State of Nagaland there is no family of Ruongmai, but there are the Zemis and the Liangmais who live in the Zeliang-Kuki Area of the district of Kohima. The members of civil administration in Nagaland recognise these people

( Zemi and Liangmai ) as belong to a mixed tribe, known as Zeliang ( Bhowmik, Das and Chaudhuri, 1968 : 2 ). It is often seen that they, in the form of Zeliang or Zeliangruong, sometimes count their unity in a broader perspective, but it is a matter of regret to say that they never maintain such a healthy expression of unity in their thoughts, actions and sentiments. In fact, the present expression of Zeliang is assigned to them by the current administration in Nagaland, and the name of Zeliangruong is an outcome of a popular slogan which is motivated by infranationalism ( Roy Burman, 1968 : 91 ) which usually comes into being for some political bargaining. An anthropologist working among them, however, does not find enough ground to group them as a single tribe, but he finds each of the Zemi, Liangmai and Ruongmai as a distinct tribe having a distinguished socio-cultural system of its own (Bhowmik, Ghosh and Gupta, 1968:3).

The present discussion is a product of investigation made among the Zemi Nagas in Nagaland. They live in the Zeliang-Kuki Area, and on the numerical strength of population they surpass all other groups living in the Area. Their folk-tales suggest that they were in this locality before the Liangmai Nagas came in. According to local information it may be said that the Kukis came in this locality only after the First World War, and still they do not possess any land of their own within this territory but live on the land of either the Zemi or the Liangmai by paying 'lunget' or land-tax to the owner. There are a few villages of the Sema Nagas and of the Nepalese. The former came in this locality after the Second World War and the latter came very recently. Besides these peoples, there are the few souls of different racial affinities and of different geographic entities who have temporarily established shelters in this locality following their assignments with military protection and civil administration. Thus the present study is made only with reference to the Zemi Nagas who are more numerous and are true representatives of the indigenous culture in the locality. They are basically hoe-cultivators and largely practise shifting hill cultivation. Now-a-days they are, however, making the best use of terrace cultivation which is a

recent innovation to them. Their staple food is rice which is supplemented by millet, maize, wild games, different varieties of fish, wild roots and tubers, and domesticated animals like fowl, pig and *mithun* (*Bos frontalis*). The Zemi Nagas practise an extreme form of village autonomy which gets an expression in the conduction of the affairs of the village community. Each village community acts as an autonomous body or village republic in regulating its economic, political and religious needs. Previously they had no authority of extra-village origin, or inter-village federal leadership. But now-a-days, the contact of the people of one village with those of another is going to be speedily increased due to the cumulative effect gained from the abolition of head hunting and inter-village warfare, the introduction of terrace cultivation and improved agricultural practices, the spread of modern education and Christianity, and the exerting influences of one and the same political authority over all the Naga villages. This increasing contact is bringing a new form of inter-dependence among the villages, and is extending the village community on a level of true society by uniting a large number of interacted individuals in a sphere of common need.

**The Village :** The village under study is Benreu which is styled as Nakama by the neighbouring Angamis. It is the largest village in the area. This village is wholly populated by the Zemi Nagas, save and except a few officials of extra-village origin. There are 214 Zemi families having a population of 571 males and 544 females. From the economic standpoint, this village is an agriculturally developed village with food producing economy as the prime one. The subsidiary means of livelihood in this village are of different sorts : some are in government services, some in development works as contractors, some in trading or business, while lots of them are in various fields as day-labourers or simply porters in carrying articles from place to place. The characteristic feature of this type of village is the acceptance of terrace or wet cultivation. The next important point is the amount of agricultural products which can barely support the living of the people of this village for approximately eight

months. However, the villagers do not try to make up the food deficiency through their traditional means of hunting games or collecting jungle products. Instead of that, they utilise their best and most energy in putting up all the efforts to earn money from external agencies, and thereby they supplement their food supply. This village is also educationally developed, and the impact of Christianity is well marked.

**The Investigation :** The investigation was carried on in 1961-62. It was divided into five phases. In the first phase each head of the family living in the village was interviewed in order to get the basic information of all the family members living under him. For this purpose a preliminary family census form was employed. In the second phase of study all the pedigrees of all the families were traced. In the third phase of study a structured schedule was employed and the family heads were interviewed to get some important characteristics of the family. In the next phase of study two different schedules were administered to get individual information from male and female. In the fifth phase of the study some individual cases with all necessary details were recorded through depth interview technique. Descriptive materials relating to the foundation of village, village history, functioning of socio-cultural institutions, structure and function of different social groups as prevalent in the village were collected by following the narrative method and case history method. Some of the local personalities extended their valuable services in carrying on this investigation. Their undertaking of various roles of interpreters, investigators, and most dependable respondents had not only made this research project a success but also added enough strength in increasing the validity and consistency of the data presented here.