

Chapter - I

INTRODUCTION

Introduction

The study of population is an important theme in the field of social science research. Human fertility as a dynamic branch of study in demography therefore, pre eminently occupies an important position in population research. Fertility "refers to the actual reproductive performance whether applied to an individual or a group" (U. N. Multilingual Demographic Dictionary, 1958). The measurement of fertility may be of different kinds of which Total Fertility Rate (henceforth TFR) and Gross Reproduction Rate (henceforth GRR) are considered to be good for comparison between different groups, where as Crude Birth Rate (henceforth CBR) is considered effective as well as easy to calculate and comprehend.

Growth of population and replenishment of human society depends largely on human fertility i.e. biological replacement and therefore, plays a positive role in the population dynamics. Human fertility has been traditionally investigated in two separate disciplines: Biology and Social Sciences. In Social Science, the study of human fertility is considered as one of the most important aspects of investigation.

In the population dynamics fertility plays both positive and negative roles. Very low fertility, particularly below the replacement level may threaten the society by extinction as question raised by Morgan (2003) "Is low fertility a

twenty-first century demographic crisis?" (Morgan, 2003, p. 589). On the other hand high fertility may create several economic, social and political problems of varied nature. This replacement is a very delicate at the same time complicated process. "Within the biological limits of human fertility, several social, cultural, psychological, as well as economic and political factors are found to operate, and these are responsible for determining the level of differentials of fertility" (Bhende and Kanitkar, 2003, p. 241).

The dynamic character of fertility was realized after the 'Great Depression' of the early 1930s. The 'Baby Boom' of North America and Canada following the economic recovery resulted in "never-to-be-forgotten embarrassment" to the demographers as all the estimation and anticipation were proved to be wrong due to declining birth rates. Checking population growth by arresting fertility requires thorough knowledge of cultural, social, economic, political and anthropologic setting. Under the above circumstances the "Social scientists involved in other fields – such as economics, psychology, sociology and anthropology - as well as biologists started taking a great deal of interest in the field of human fertility. Policy-makers, administrators, medical doctors and newspaper reporters have also started taking an interest in the study of fertility, mainly from the point of view of application of such knowledge to the family planning programmes, and they have also contributed to the research in the field" (Bhende and Kanitkar, 2003, p. 243).

Among several other reasons of growing interest in the field of fertility study, Bhende and Kanitkar (2003) have identified "One of these is that the age structure of any population is primarily determined by fertility and that the bulges and gaps in this age structure can have serious repercussion with social, economic and political overtones" (Bhende and Kanitkar, 2003, p. 243).

Conceptual Framework

In population science, normally three basic demographic events are encountered such as births, deaths and migration, which largely affect the population size of an area. Births and deaths are technically known as fertility and mortality respectively. The balance between these two thus lead to a natural increase in population and sometimes decrease in population size too. Births are, therefore, crucial for biological replacement of human population and also for the survival of the human society as a whole. Fertility in this context occupies a centrally important place while studying the demographic pattern of an area.

The term 'fertility' is generally used to "connote the actual reproductive performance of a woman or the number of children a woman has or the average number of children for a group of women" (Srinivasan, 1998, p. 61).

Even though child bearing is basically a biological phenomenon, it is generally argued that variations in the level of fertility are not primarily due to the difference in physiological capacity but are more often produced by

responses of individuals and couples to the social system in which they live. Biological and behavioral factors which directly influence fertility, and through which social, economic and other factors come in to influence the child bearing are called 'proximate Determinants' or 'Intermediate Fertility Variables' (Bongaarts and Potter, 1983).

Rapid growth of population due to higher rate of fertility is generally viewed as a retarding factor for economic development. As a matter of fact, population and development are intertwined. According to Patnaik (1984) "Controlling fertility is an essential pre-requisite for economic development" (Patnaik, 1984, p. 5). Some researchers are of view that changes in socio-economic set up are essential in order to achieve a deliberate reduction in fertility status. The author considered socio-economic development as the most important pre-requisite.

Total Fertility Rate (TFR) which is considered to be a good measure of reproductive performance could be defined as "the total number of children that would ever be born to a (hypothetical) group of women, if the group passed through its reproductive span of life with these rates in each year" (Communication Action Research Centre, ISI, Calcutta, p. 34). Similarly, Gross Reproductive Rate (GRR) is defined as "the number of daughters a cohort of women is expected to produce if there is no attrition in the cohort due to mortality" (Bhende and Kanitkar, 1997, p. 271). On the other hand, Crude Birth Rate (henceforth CBR) is one of the most common; the most easily calculated and most easily understood measures of fertility rates. "The

crude birth rate is the ratio the total registered live births in some specified year in a particular area to the total mid-year population of that area multiplied by 1,000" (Bhende and Kanitkar, 2003, p. 266).

Some researchers are further of view that lowering of fertility could also lead to demographic crisis. Morgan (2003) has shown that "nearly half of the world population in 2000 lived in countries with fertility rates at or below replacement level, and nearly all countries will reach low fertility levels in the next two decades" (Morgan, 2003, p. 589).

United Nations Population Division (2002) shows that there are 64 countries in the world with fertility at replacement level or lower. As many as twenty three countries have recently passed through a transition to low level of fertility. In this respect only 16 countries with merely 3 percent of global population do not exhibit any clear evidence of a fertility transition.

India having a major proportion of world population is observed to be experiencing an early stage of fertility transition. Hence, with 20 percent of decadal growth rate and population figure reaching almost 110 crores, India is probably heading towards a demographic crisis. Quite high growth rate of population with considerable differentials between different religious groups has also created a situation leading to mutual distrust among communities in the country. On the other hand politicization of fertility in recent times has created a lot of social upheavals. In this context it is, therefore, high time that scientific 'analysis of the determinants of fertility is felt quite imperative and,

therefore, the whole situation concerning fertility warrants a thorough scientific probe in a wider perspective.

Statement of the Problem

Differentials in fertility by religion are a much-debated issue in the present day context. As far as various religious and ethnic communities are concerned, there might be variation in fertility rate. But how significant is this variation is a matter of serious research and investigation. The area under the present study comprises Darjeeling hills and the areas of Sub-Himalayan parts of Darjeeling district. As far as the area under study is concerned, there exists much diversity in terms of ethnicity, culture, social customs, and occupational status of different ethnic communities in the area. However, major religious communities inhabiting the area are Hindus, Muslims, Christians and Buddhists.

The district of Darjeeling with a population of 16,09,172 is really a multi-ethnic region. With relatively high population density of 511 persons per square kilometer (2001) and a quite high growth rate of 23.79 percent, much above the national average, is bound to have high fertility. The region has population belonging to all leading religious groups of India. With 72.92 percent and 11.02 percent of total population, Hindus and Buddhists are leading two religious groups in the district with significant presence of Christians & Muslims.

Table 1.1: Religious Break-up of Population in Darjeeling District (2001)

Sl. No.	Religious Community	Population (2001)	Percent to total population (2001)
1.	Hindu	1237714	76.92
2.	Buddhist	177327	11.02
3.	Christian	99232	6.17
4.	Muslim	85378	5.31
5.	Sikh	2229	0.14
6.	Jain	1078	0.07
7.	Others	5507	0.34
8.	Non believer	707	0.03
Total		1609172	100

Source: Final Population Totals (W.B.), Census of India, 2001.

Differentials in fertility have been studied by many researchers. In this context the works done by S. Philip Morgan (2003), Rehana Siddiqui (1996), Bongaarts and Potter (1980) as well as Davis and Blake (1956) require special mention. United Nation's population division is one of the most important agencies working on fertility.

In India, International Institute of Population Science (IIPS, Mumbai), is engaged in the study of various demographic characteristics of population in the country. Basu (1997) and Alagarajan (2003) are some of the leading researchers who have extensively studied different aspects of fertility in India.

A number of researchers in India have also tried to examine the religious differentials in fertility. While doing so what they probably missed is that they have considered population of a religious group as homogeneous in terms of socio-economic condition. Because of this factor perhaps no researcher has ever tried to examine the fertility behaviour among population of different religion belonging to the same socio-economic strata.

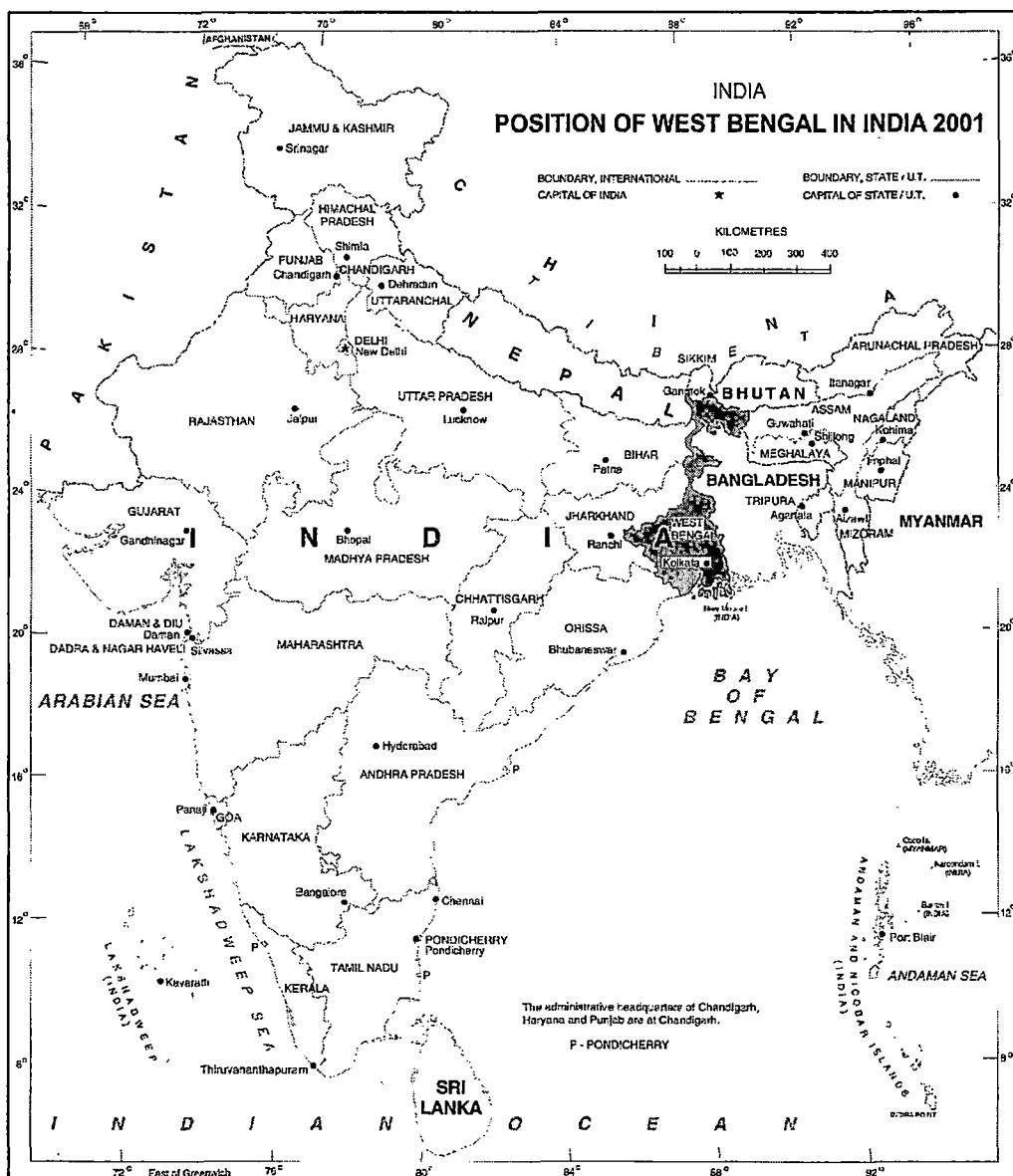
Variation in fertility could depend on a number of socio-economic and cultural factors among others. Among socio-economic determinants, occupation, educational attainment of the couple, income of the family and age at marriage of a woman are expected to be associated strongly. Therefore, the explanatory variables (independent variables) as mentioned above carry greater significance and have, therefore, been analyzed to see how fertility behaviour changes with changing socio-economic conditions of a couple in the area under study.

Study Area:

The present study area comprises the entire district i.e. Darjeeling hills and the adjoining sub-Himalayan areas of Darjeeling district. The district has four sub-divisions, 17 Police Stations and 12 Community Development Blocks (administrative unit lower than sub-division but higher than Panchayat, henceforth referred as C. D. Block) out of which 4 C. D. Blocks are in the Sub-Himalayan region of Darjeeling district and rest eight blocks are rural.

The area under investigation is by and large multi-ethnic and multi-lingual. The major religious groups residing in the area are Hindus, Muslims, Christians and Buddhists. The area is moderately populated in which the hilly part of the District is relatively sparsely populated. However, the plain portion of the district, mainly Siliguri sub-division of Darjeeling, is moderate to densely populated. The whole region has experienced an influx of refugees from Bangladesh, Bhutan and Tibet in the recent past and more recently the Bhupalese from Bhutan.

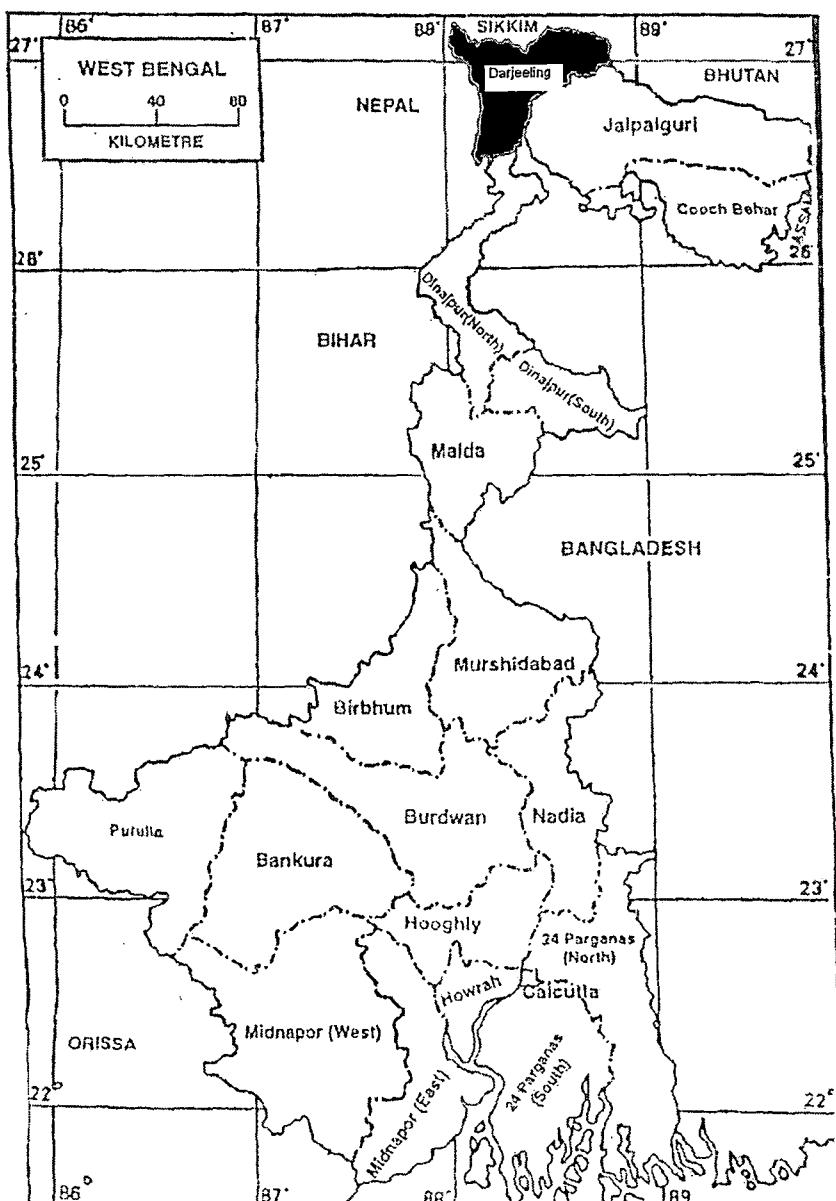
A short demographic profile of the district is presented in the table-1.2. The table shows that the region has a moderate density of population, certainly below the state average. Sex ratio, in favour of females in the district, is well above the state as well national average. The decadal growth rate is slightly higher than national average. Similarly, the rate of urbanization is slightly higher than state as well as national average. The higher rate of urban growth is owing to the fact that Siliguri is one of the fastest growing cities in India. High concentration of urban population has caused a slightly higher urban growth in the district.



Map 1.1

Location of West Bengal in India

Source: Census of India



Map 1.2 Location of Darjeeling District in West Bengal

Table 1.2: Demographic Profile of Darjeeling District, 2001

Sl. No.	Demographic Attributes	Data (2001)
1.	Total Population	16,09,172
2.	Area (Sq. Km)	3,149
3.	Population Density (Arithmetic)	511
4.	Sex Ratio	943
5.	Decadal Growth Rate (Percent) for the Decade 1991-2001	23.79
6.	Percent of S. C. to Total Population	16.09
7.	Percent of S. T. to Total Population	12.69
8.	Percent of Urban Population to Total Population	32.34
9.	Work Participation Ration (%)	35.39
10.	Proportion (%) of Main Workers to Total Workers	84.09

Sources: 1. Primary Census Abstract, Total Population Table A-5, Census of India, 2001.
 2. Figures at a Glance, Provisional Population Totals (W.B.), Census of India, 2001.

Survey of Literatures:

Human fertility has been a very interesting issue of discussion and research among the demographers in particular and social scientists in general. Among the western researchers Kingsley Davis, Judith Blake, John Bongaarts and Robert Potter are some of the brightest stars in the galaxy of contemporary researchers in the field of demography. From the studies conducted by the different scholars, it is clear that fertility primarily depends

on some physiological factors such as (i) adolescent sterility, (ii) Post-partum sterility and average interval between successive births, (iii) Primary and secondary sterility, (iv) Reproductive wastage as well as some social and cultural factors termed by Davis and Blake as intermediate variables (Bhende and Kanitkar, 2003, pp. 249-254).

Davis and Blake (1959) had convincingly deliberated that socio-economic variables could not have a direct effect on fertility, and they have to operate through other variables which they termed 'intermediate variables'.

One of the pioneering works 'Techniques of Population Analysis' in the field of fertility is done by Barclay (1985). Here the author discussed different approaches to measure fertility. He has further discussed the peculiarities involved in birth statistics and thereby fertility measurement too. Barclay (1985, 168-169) opines that the problem of measuring fertility evolves due to the followings:

- a) Among the people who are "exposed to risk" of child birth, parenthood is an event that can occur more than once.
- b) A birth involves two parents, but birth rates must be restricted to one or the other.
- c) Parenthood is limited to a portion of a population.
- d) A small proportion of births, perhaps in the range of one to two percent, produce more than one child (twin cases) and thereby creating confusion into fertility rates.

e) Personal choice and preference have a wide variety of influence on fertility.

Along with different types of measurements and projection of fertility Spiegelmann (1955) discussed the need for birth statistics and fertility measurement. In his own words "Birth statistics and measures of fertility are also essential to a community in planning its programs of infant and maternal care, child care, and also school development" (Spiegelmann, 1955, p. 153).

Cain's (1985) study of 'Relationship between Landholding and Fertility' throws light on the basis of analyzing "The Land-Security Hypothesis" and "The Land-Labour Demand Hypothesis" in the context of Bangladesh. His study could not conclusively establish the relationship between the two. "Our discussion of the relationship between landholding and fertility, and the pertinence of the land-security and land-labour demand hypothesis, illustrates the potentially high cost of abstracting from the institutional context of individual and household behaviour" (Cain, 1985, p.15).

Bongaarts and Potter (1983) in their pioneering work on 'Fertility, Biology and Behaviour: An Analysis of Proximate Determinants' identified independent variables of fertility which they called 'Proximate Determinants'. To put in their words, "the biological and behavioral dimensions of human fertility are linked through a set of 'Proximate Determinants' or 'intermediate fertility variables'. Age at the first marriage, the use of contraception, and the breast feeding duration and pattern are some of the Proximate Determinants"

(Bongaarts and Potter, 1983, p. ix). Socio-economic factors and health and nutrition are the determinants of proximate variables but "...health and nutrition are, in general, relatively unimportant determinants of fertility. Socio-economic factors must therefore be the principal causes of fertility trends and differentials" (Bongaarts and Potter, 1983, p. 14).

Influence of religion on fertility behaviour has been studied by McQuillan (2004) at length. In his study "When Does Religion Influence Fertility?" Fertility' pointed out that religion may have influence on fertility only when following pre-conditions are fulfilled.

- a) The religion in question must articulate behavioral norms that have linkages to fertility out-come.
- b) A religious group must possess the means to communicate its teaching to its members and to enforce compliance.
- c) Religious groups are more likely influence the demographic choices of their followers when members feel strong sense of attachment to the religious community.

He further observes "When these three attributes are present, it is very likely that religion will influence demographic behaviour. Nevertheless, the consequences of the religious influence are not uniform. For example, there is a general sense that religions tend to be pronatalist and thus encourages higher fertility. While this is true in most cases, it need not be so all the times. The case of Iran is an instructive current illustration of a situation in which a highly institutionalized religion has played an important role in the spread of

family planning and, ultimately in reducing rates of fertility (MaQuillan, 2004, p. 51)

Reddy (2000), using National Family Health Survey (henceforth NHFS)

- I and NFHS – II data, has shown that growth rate of Muslims is higher than Hindus. To quote Reddy “the foregoing data and analysis convincingly demonstrate that the Muslim population is growing at a faster rate than that of Hindu population, the fertility of Muslims is higher than that of Hindus.....” (Reddy, 2000, p.?).

Moulasha and Rama Rao (1999) tried to find out relation between religion and fertility to depict a picture “..... fertility rate among Muslim women is significantly higher than Hindu women”. But while discussing about findings of Rama Rao and Moulasha, Jeffery and Jeffery (2000) observed that “the recent contribution by Moulasha and Rama Rao (1999) to the debate on relationship between religion, fertility and family planning, uses National Family Health Survey data in a misleading way” (Jeffery and Jeffery, 2000, p. ?).

Among other Indian researchers, studying fertility differentials, Abusaleh Shariff and R. B. Bhagat are two pioneering scholars who have a number of very distinguished works to their credit. Bhagat has worked extensively on fertility differentials particularly after 2001 census. The author (2001) in his study “Census and the Construction of Communalism in India” tries to see illdesign in creating confusion by presenting data on births in a

misleading manner. "Census in independent India until 1991 hides more than it reveals. It is now obvious that the census of 2001 is more conscious of this fact and intends to publish the socio-economic data along with demographic data on religion" (Bhagat, 2001, p. 4356). Bhagat (2004) analyse the data on birth rates, decline in fertility and acceptance in the wake of saffron demographers claiming that Hindus are going to become a dying race due to higher fertility among Muslims and at the same time infiltration (Muslim) from neighbouring Bangladesh. He further emphasizes that "Those who abuse demography for communal ends do not recognize the facts; in recent years rate of acceptance of family planning practices has been rising faster among Muslims than among Hindus and fertility has been falling more rapidly among the Muslims" (Bhagat, 2004, p. ? accessed from EPW website).

Hindu-Muslim fertility differentials has been studied by Bhagat and Praharaj (2005) where they find that the population growth rate of Muslim is relatively higher as compared to Hindus and prevalence of family planning measures are little less among the Muslim while comparing with Hindus. They find sex selective abortion is one of the reasons of higher fertility as compared to Hindus as it is clear from the child sex ratio of 950 among Muslims as against 925 among Hindus. Socio-economic and educational backwardness of Muslim is found to be very influential factor. However, Bhagat and Praharaj (2005) are optimistic about declining fertility rates among Muslims and they continue "It is true that a Hindu-Muslim differential in fertility persists in India's demographic reality, but it is no more than one child. It is not too large to swamp India's Hindu majority in the foreseeable future. Nor is the gap likely to



persist for a very long time as we find that the fertility level among Muslims declines with increasing level of education and standard of living. The faster increase in family planning among Muslims supports this conjecture" (Bhagat and Praharaj, 2005, p. 417).

Basu (1997) in her work on "The 'Politicization' of Fertility to Achieve Non-Demographic Objectives" argues that it is the hidden agenda of the hard line Hindu communalists and their cohort so called 'expert demographer' who take shelter to demographic argument to initiate intervention in Muslim life through pressurizing government and policy makers. She adds further "They do not even extend the demographic argument to consider other concomitants of religion-fertility relationship in the country, poverty and education in particular. If they did, the policy would be for increased resource into the socio-economic development of the Muslim minority. Instead the entire emphasis is on interventions in Muslim life which have at best a tenuous relationship with fertility" (Basu, 1997, p. 6).

Jeffery and Jeffery (2000), on the other hand, tried to analyze the regional variation of fertility which has a great impact on over all fertility of Muslims. They opined "part of the explanation for high Muslim fertility in India as a whole, merely reflects the fact that Muslims are a larger proportion of the population in North India (where the fertility rates are relatively high) than they are in the rest of India (where fertility rates are relatively low)". They further found that "Hindu fertility rates in much of North India are higher than many Muslim fertility rates in South India".

One of the pioneering works in the field of fertility differentials in India is done by Shariff (1995) in the form "Socio-economic and Demographic Differentials between Hindus and Muslims in India". He finds that with respect to all indicators of socio-economic development, the Muslims are lagging behind the Hindus including work participation, employment and education causing higher fertility among Muslims as compared to Hindus. He further finds some explanation for higher fertility among Muslims as he adds "But child mortality among both the urban and rural Muslims is comparatively low. A combination of a positive growth of population and low child mortality seems to have enabled a marginally higher growth of Muslim population in India. A simulation exercise reproduced in this paper suggests that the Muslim population will not overtake the Hindu population in India during foreseeable future" (Shariff, 1995, p. 2953).

Mehta (2005) in his writing published in Economic and Political Weekly points out "...shows that fertility in Muslims displays a consistent pattern of decline with socio-economic development, in general and educational development in particular. Thus the population growth difference between Hindus and Muslims will ultimately narrow down. A more realistic assumption would, therefore, be to assume that population of both Hindus and Muslims decline at an accelerated pace so as to approach a stationary state by the mid-21st century" (Mehta, 2005, p. 160).

McClamroch (1996) of University of Michigan in her study 'Total Fertility Rates, Women's Education and Women's Work: What are the Relationships?' tries to identify the role of women's education and work participation ratio on reducing Total Fertility Rates. According to Ruth Dixon Mueller (1993), education of women can indirectly decrease fertility in three ways. Increasing the number of years that women are in school, delays marriage and reduces the time duration that women are exposed to the possibility of conception. Education creates aspiration for higher standard of living, thereby decreasing the desired number of children in a family. Education exposes women to knowledge, attitudes and practices favourable to birth control that would enable women to have their desired number of children (Dixon-Mueller, 1993, pp. 121-123).

Das (1975) found that higher infant mortality rate results in a higher fertility. Singha (1975) bolstered this point in his study 'Infant Mortality and the Level of Fertility in India: A Review', (Demography India, 1975, Vol. 2, pp. 457-473). He observed "The prevailing high infant mortality fosters a feeling of insecurity of life at early age in which more births are favoured to make up loss".

Siddiqui (1996) of Pakistan Institute of Development Economics, Islamabad, used over 15 explanatory variables to find out 'The Impact of Socio-economic Factors on Fertility Behavior: A Cross Country Analysis'. She infers that with a little variation, in case of different countries, most of the variables actually explained fertility in the expected way. She further observed

"The Impact of Infant Mortality is, as expected positive and statistically significant in most cases". She further added "female literacy has a negative and statistically significant impact on fertility".

From the survey of literatures, it is clear that fertility differentials and their causes have been studied but what is significantly missing is an overall combination of religion and socio-economic determinants. How fertility is being controlled by socio-economic conditions across religious groups, remains unanswered. Educational attainment of couple along with their parents may have significant bearing on fertility. The influence of occupation of both spouse is another area which is relatively unexplored. Population belonging to same socio-economic strata may have same fertility, irrespective of religious affiliation. This aspect has perhaps not yet been investigated satisfactorily.

Objectives:

The present study primarily aims at identifying the determinants of differentials in fertility in the study area. However, the extent to which these determinants control fertility is a basic question which needs to be investigated further in this direction. The objectives of the present study could, therefore, be outlined as follows:

1. To evaluate the extent of differentials in fertility by religions in the study area.
2. To evaluate the impact of educational attainment of husband and wife on fertility.

3. To measure the extent to which occupation of the couple (husband and wife) influences fertility.
4. To estimate the impact of family income on fertility.
5. To evaluate the influence of age at marriage of women on fertility rate.

Research Questions

The following research questions will be tested during the course of the study:

1. What is the influence of religion on fertility in the study area?
2. Whether TFR and CBR for a group of people with the similar socio-economic background but belonging to different religion are same or different?
3. Whether a group of people belonging to the same religion but having varied educational attainment, income and occupation has equal fertility?
4. How much variation in fertility is observed when income enhancement takes place?
5. To what extent occupation of husband and wife influences the fertility rate?
6. What happens to fertility rate when educational attainment level of the couple is high?
7. Is there any relationship between age at marriage and fertility rate?

Database:

Two types of data will be used in the study –

- A. Primary data,
- B. Secondary data.

A. Primary Data:

Primary data have been collected from the study area through interview of the couples with pre-designed schedules. A pilot survey was conducted at few places in the study area before finalization of the schedule.

B. Secondary Data:

Secondary data have been collected from the published sources such as –

- (a) Fertility tables and other publication of Census of India, Registrar General of India, Ministry of Home, Government of India.
- (b) Sample Registration System, Registrar General of India, Ministry of Home.
- (c) National Sample Survey (NSS) rounds by CMIE, Mumbai and Pune.
- (d) National Family Health Survey Reports by IIPS, Mumbai.
- (e) Statistical Handbook of Darjeeling, Bureau of Applied Economic and Statistics, Government of West Bengal.
- (f) Office of Bureau of Applied Economic and Statistics of Darjeeling District (Government of West Bengal), Darjeeling.

Sampling and Survey Process

Sample respondents in this study are married female in the age group of 15-49 years which have been considered as childbearing age group. The sample respondents have been selected/drawn out of the universe primarily following multi-stage random sampling. But at the first stage six blocks and Siliguri Municipal Corporation have been selected (table-1.3) using clustered random sampling. At the second stage a number of mouzas (revenue village) and wards (Municipal area) have been selected using random sampling with the help of random table from out of the list of villages/mouzas/wards available in the census publication of C. D. Block-wise list of villages and wards from the village and town directory of Census of India.

Table 1.3: Distribution of sample C. D. Blocks for sample villages

C. D. Blocks	Sample C. D. Blocks	Remark
Darjeeling Pulbazar	Selected	Both Rural and Urban
Rangli Rangliot		
Kalimpong - I		
Kalimpong - II	Selected	Both Rural and Urban
Gorubathan		
Jorebunglow Sukiapokhri		
Mirik	Selected	Both Rural and Urban
Kurseong		
Matigara		
Naxalbari	Selected	Only Rural
Phansidewa	Selected	Only Rural
Kharibari	Selected	Only Rural
Siliguri (Municipal Corporation)	Selected	Only Urban

Source: Prepared by the researcher for the purpose of this study.

At the third stage the list of households with married female in the age group of 15-49 years have been collected from Integrated Child Development Scheme (ICDS) Centres i.e. Anganwari Centres and also from the ASHA workers. Using random table the respondents were selected randomly. Replacement was allowed only when the respondent was not available even on the subsequent day too. The replacement was essentially the next available lady in the list.

Following the sampling method a good number of respondents were selected from the major religious group i.e. Buddhists, Christian, Hindus and Muslims. Keeping in view the religious composition of the district of Darjeeling, i.e. the study area, the state of West Bengal and the country as a whole sample size have been decided upon. It was estimated that 100 Buddhists, 100 Christians, 200 Hindus and 200 Muslims would be satisfactorily representative of the religions in the district. The sample families have been interviewed with a pre-designed schedule. Before finalization of the schedule a pilot survey was carried out in the field. The respondents have been interviewed directly by the researcher

Methodology

TFR and CBR have been calculated from the data collected from different primary and secondary sources. Mean, Standard Deviation (SD) and coefficient of variation (CV) of TFR and CBR have been calculated to examine the variation in fertility between different religious groups. Mean, S. D., and C. V. for one religious group with different socio-economic background and also

mean and C.V. for the same socio-economic strata of a population group with different religious background have been calculated to examine the difference of fertility.

In order to reach into the depth of the problem number of births and number of pregnancies too have been included to depict fertility and subsequently statistical analysis has been conducted.

Correlation coefficient (Karl Pearson's) has been calculated between different income levels (per capita income) and fertility. Similarly, different educational attainment levels of the respondents, their parents and also husbands have been correlated with fertility level in order to find out correlation coefficient. Student's T-Test has been conducted to examine the level of significance of the relation. Age at marriage is taken as one of the important determinant of fertility and hence it has been correlated with the fertility level.

Linear Regression (Least Square Method) analysis taking fertility (number of pregnancies) as dependent variable and per capita income, level of per capita expenditure, age at marriage, level of educational attainment of respondents, parents as well as thier husband and also occupation as independent variables have been done to estimate the extent of influence of each explanatory variable on fertility.

Selection of Variables

A. Independent Variables

There might be many variables on which fertility depends. Amongst the variables, religion, annual income of the family, educational attainment of the parents of the respondents and their husbands as well, occupation of the couple are considered to be important. Age at marriage of the respondents has been taken as explanatory variable. The above mentioned variables could be assumed to be having a stronger impact on the fertility of the group of people.

B. Dependent Variable:

Total Fertility Rate and Crude Birth Rate are two dependent variables. For further statistical analysis, number of births and number of pregnancies have also been taken as dependent variables.

Scheme of Chapterization:

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