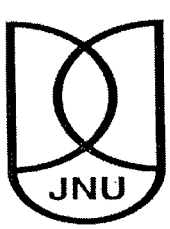
FAMILY PLANNING AMONG MUSLIM WOMEN OF BIHAR: A STUDY IN TWO DISTRICTS.

Dissertation submitted to Jawaharlal Nehru University in partial fulfilment for the requirements of the award of the degree of

MASTER OF PHILOSOPHY

NISHAT FARAH AHMAD



CENTRE FOR THE STUDY OF SOCIAL SYSTEMS
SCHOOL OF SOCIAL STUDIES
JAWAHARLAL NEHRU UNIVERSITY NEW DELHI- 110067
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जवाहरलाल नेहरू विश्वविद्यालय
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110 067

Centre for the Study of Social Systems
School of Social Sciences

Tel.:26704408
Fax.: +91-11-26742539

July 25, 2011

Certificate

This dissertation entitled '**Family Planning Among Muslim Women of Bihar: A Study In Two Districts**' submitted by Miss Nishat Farah Ahmad to the centre For the Study of Social Systems (CSSS), Jawaharlal Nehru University, in partial requirement for the award of the degree of Masters Of Philosophy (MPhil), is an original work and has not been submitted so far, in part or full, for any other degree or diploma of any university.

We recommend that the dissertation be placed before examiners for evaluation.

Prof. Susan Vishvanathan

(Chairperson)

Chairperson
CSSS/SSS
Jawaharlal Nehru University
New Delhi-110067

Dr. V. Sujatha

(Supervisor)

Associate Professor
Centre for the Study
of Social Systems
School of Social Sciences
Jawaharlal Nehru University
New Delhi

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Nishat F. Ahmad

Nishat Farah Ahmad

Dedicated to My....

Mother

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Nishat

Contents

LIST OF ABBREVIATION

ADRI- Asian Development Research Institute

AIDS- Acquired Immuno Deficiency Syndrome

ANM- Auxiliary Nurse Midwives

APHC- Additional Primary Health Centre

ASHA- Accredited Social Health Activist

BPHC- Block Primary Health Centre

CHC- Community Health Centre

CNA- Communities Need Assessment

DHAP- District Health Action Plan

DLHS- District Level Health Survey

ENT- Ear, Nose And Throat

EPI- Expanded Programme Of Immunization

FP- Family Planning

FY- Financial Year

GDP- Gross Domestic Product

HITTS- Health Department Operated Incentive Based Target Oriented Time Bound And Sterilization Focussed Programme

HIV- Human Immuno Deficiency Virus

HSC- Health Sub-Cente

ICPD- International Conference On Population And Development

ICTC- Integrated Counselling Testing Centre

IES- Information, Education And Communication

IMR- Infant Mortality Rate

IPPF- International Planned Parenthood Federation.

IUD- Intra Uterine Device

JSK- Janasankhya Sthirata Kosh

JSY- Janani Suraksha Yojana

MDG- Millennium Development Goal

MHO- Muslim With Heredity Occupation

MMR- Maternal Mortality Rate

MMU- Mobile Medical Unit

MNHO- Muslim Without Heredity Occupation

MO- Medical Officer

NACO- National Aids Control Organization

NFHS- National Family Health Survey

NGO- Non-Government Organization

NHRM- National Rural Health Mission

NPP- National Population Policy

NRR- National Research Registration

NSS- National Sample Survey

NSSO- National Sample Survey Organization

NSV- Non-Scalpel Vasectomy

OBC- Other Backward Caste

PHC- Primary Health Centre

PPP- Public Private Partnership

RCH- Reproductive, Child Health

SC- Schedule Caste

ST- Schedule Tribe

STD- Sexually Transmitted Disease

STI- Sexually Transmitted Infection

SWOT- Strength, Weakness Opportunity Threat

T.T- Tetanus Toxoid

TFA- Target Free Approach

TFR- Total Fertility Rate

U.N- United Nations

UIP- Universal Immunization Programme

UNFPA- United Nations Population Fund

UNICEF- United Nations Children Emergency Fund

WHO- World Health Organization

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Introduction

'Women in much of the world lack support for fundamental functions of human life. They are less well-nourished than men, less healthy, more vulnerable to physical violence and sexual abuse. They are much less likely than men to be literate, and still less likely to have professional or technical education. Should they attempt to enter the work-place they face greater obstacles, including intimidation from family or spouse, sex discrimination in hiring, and sexual harassment in the work-place- all, frequently, without effective legal recourse. Similar obstacles often impede their effective participation in political life. In many nations women are not full equals under the law: they do not have the same property rights as men, the same right to make contract, the same rights of association, mobility and religious liberty. Burdened often with the "double day" of taxing employment and full responsibility of housework and child care, they lack opportunities for play and for cultivation of their imaginative and cognitive faculties. In all these ways, unequal social and political circumstances give women unequal human capabilities' (Nussbaum, 2000)[1].

And in traditional patriarchal structure of India, whereby men take almost all decision of a women's life this opportunity to realize one's capabilities and freedom of choice is least realized. It is therefore imperative that women should be given an equal opportunity least of it regarding their health in general and above all for her own reproductive health. Especially since the existing social structure, where motherhood is upheld, and the fundamental right, to make a family can be, for women, a matter of life and death. Laws, social attitudes and traditional values that impair women's reproductive decisions reduce their right to protect their own lives and health, and those of their children' (IPPF, 1990)[2]. Based on this the United Nation setup a UN Convention on the Elimination of All Forms of Discrimination Against Women (the Women's Convention), which guarantees women the human right to plan the size and structure of their families by providing access to abortion and family planning

[1] Nussbaum.C.Martha; 'Women and human development- The Capabilities approach'; Cambridge university press, 2000.

[2] International Planned Parenthood Federation.

knowledge and services, as well as equality in decisions regarding marriage and divorce, and in other areas of life that allow women to take effective decisions for themselves. And within their families and maternity protection that protects women's rights in their roles of production and reproduction. Ratification of the Convention by the member countries assures that the countries agree to eliminate discrimination against women in all civil, political, economic, social and cultural areas, including health care and family planning. The establishment of reproductive rights by law is a crucial starting point from which women may begin to exercise these rights. The Convention is an important touchstone of progress. It provides hope and a framework for action. By June 1990, 103 out of 159 UN member states had ratified the Convention. Other seventeen countries had also signed, but not ratified the Convention. Among others, the latter include Netherlands, Switzerland, United States and India (IPPF, 1990).[3]

This freedom for the realization of a one's capabilities through their own choice over their health as whole and particularly reproductive health is a big step towards empowerment of women as their status and role in decision making in reproduction have an important bearing on the success of family planning and the long-term reduction in fertility of a country. In society where women are mainly concerned with domestic affairs and raising children, fertility would be higher. Subordination of women to men and lack of communication between husband and wife have been suggested as obstacles to the diffusion of family planning and reduction in fertility[4] . And in a country like India where high fertility rate and low rate of family planning acceptability is a major concern, despite long and extensive history of family planning policies, women empowerment and their choice are of utmost importance.

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[3] Family Planning and the Reproductive Rights of Women, By Malini Karkal in Understanding Women's Health Issues: A Reader Edited by Lakshmi Lingam.1998.pg.228
(source:http://www.cwds.ac.in/library/collection/elib/gender_and_health/fp_family_planning_and_the_reproductive)

[4] Female status and fertility behaviour in metropolitan urban area of Bangladesh by Rafiqul Huda Chaudhury; www.Jstor.org

Brief review of India's vis-à-vis the population scenario world

Despite the long standing recognition among the governments of the south Asian regions that rapid population growth represents an obstacle to development and even after their rigorous efforts in establishing family planning programmes to reduce fertility rates, the region continues to have, by and large high fertility rate. Except in the case of Sri Lanka and Kerala region, where they have been able to lower their rate of fertility, in most of other south Asian regions fertility is declining at a far slower pace than anticipated.

This problem of high population growth seems to be the greatest in the sub-continent of India as china a country with the largest population has been able to stabilize its growth through regressive population "control" policies. The population of India as per the provisional population totals of Census 2011, is 1,210,193,422 compared to a total of 1,028,737,436 in 2001.In absolute terms, the population of India has increased by more than 181 million during the decade 2001-2011 absolute addition to the population during the decade 2001-2011 is slightly lower than total the population of Brazil, which is the sixth most populous country in the world! Similarly the density of population of India which is 789 persons per square mile is one of the highest in the world. Ten times that of United States, the third most populous country in the world. The three most populous countries, namely, China, India and USA, together account for four of every ten persons of the world. At present, a little more than one out of every six persons in the world is from India. The gap between India, the country with the second largest population in the world and China, the country with the largest population in the world has narrowed from 238 million in 2001 to nearly 131 million in 2011. On the other hand, the gap between India and the United States of America, which has the third largest population, has now widened to about 902 million from 741 million in 2001. The population of India is almost equal to the combined population of U.S.A., Indonesia, Brazil, Pakistan, Bangladesh and Japan put together and the population of these six countries totals 1214.3 million! A point that is striking is that while India accounts for a meagre 2.4 percent of the world surface area of 135.79 million square kilometres, it supports and sustains a whopping

17.5 percent of the world population.[5] This upsurge in the graph of Indian population clearly shows that ineffectiveness of any government policy to stabilize the population increase.

Indian Population scenario

Population stabilization has been a challenge for the Government since independence. And government of India adopted various population policies from time to time garnering to the need of the hour as the passive, clinic-based approach of the 1950s, gave way to a more proactive, extension approach in the early 1960s. A number of clinics were opened during the first two plan periods (1951-61) to provide contraceptive services, especially for women through socially trained female workers. Moreover, during the third plan (1961-66), the 'clinic approach' was shifted to an 'extension approach' to provide information to all eligible couples about every contraceptive method offered by the program. The late 1960s saw the emergence of a 'time-bound', 'target-oriented' approach with a massive effort to promote the use of IUDs and condoms followed by more forceful 'camp approach' to promote male sterilization in the 1970s. However, from the early 1960s until the 1990s, the family planning management program of the state was hindered by government determined targets for contraceptive acceptance. Such an approach to achieve the targeted demographic goals received several criticisms and following International Conference on Population and Development Cairo adopted NPP 2000, which later laid the foundation of NHRM and the decentralization of health infrastructure in India into Primary health centre, community health centre and state level medical college cum hospital as well as specialized hospitals. Furthermore, since most of these earlier population policy proved to be ineffective to reach its desired goals, the government focused various studies on the fertility pattern of women in India. In order to know about the various reasons pertaining to the failure of population policies and high fertility rate, the Indian government focused towards the population research on fertility and family planning. And for this, the government of India created a board in 1956, which appointed a sub-committee on demographic study in the same year on whose recommendation the establishment of four demographic research centres in

[5] http://www.censusindia.gov.in/2011-prov-results/data_files/Final%20PPT%202011_chapter3.pdf

different parts of India took place. For conducting studies in fertility and mortality and factors associated with them in all parts of India. And for this purpose large surveys were conducted through the length and breadth of India. But till the sixties these studies on fertility were mostly survey based and exploratory in nature. The focus was on the macro level rather than at the micro level. In other words it was only in 1960's that a comprehensive and analytical research began in the field of fertility and mortality studies of Indian population. (Sandhu1996)[6]. Studies such as National family planning health survey (NFHS) were conducted to see the relationship between various socio-economic and cultural reasons for the fertility behaviour and their attitude towards family planning and various contraceptive methods. The Population pattern of India has shown some improvements such as; *Firstly,* the decadal growth percent has taken a negative shift since 1971. From 13.31 percent in 1951 it accelerated until 1971 to 24.80 percent but since then it is only 17.64 percent recorded from 2001 to 2011. This clearly shows a positive result, for the population policies implemented by the government in every five year plans. (See chart)

Census years	population	Decadal growth		Change in decadal growth		Average annual exponential growth rate (percent)	Progressive growth Rate over1951 (percent)
		Absolute	percent	Absolute	Percent		
1	2	3	4	5	6	7	8
1951	36,10,88,090	4,24,27,510	13.31	2744168	0.91	1.25	51.47
1961	43,92,34,771	7,81,46,681	21.64	35719171	8.33	1.96	84.25
1971	54,81,59,652	10,89,24,881	24.80	30778200	3.16	2.20	129.94
1981	68,33,29,097	13,51,69,445	24.66	26244564	-0.14	2.22	186.64
1991	84,64,21,039	16,30,91,942	23.87	2,79,22,497	17.12	2.16	255.05
2001	1,02,87,37,436	18,23,16,397	21.54	1,92,24,455	10.54	1.97	331.52
2011	1,21,01,93,422	18,14,55,986	17.64	8,60,411	-0.47	1.64	407.64

Population growth in India: 1951-2011[7]

[6] Jasmeet Sandhu; 'sociology of fertility'; Rawat publications, 1996

[7] http://www.censusindia.gov.in/2011-prov-results/data_files/Final%20PPT%202011_chapter3.pdf

Secondly, even the fertility rates in India continue to fall steadily. According to sample registration system, India's total fertility rate (TFR), 4.8 in 1971 dropped to 2.8 in 2006. Even data from the three rounds of national family planning health survey (NFHS), which provides alternative estimates of TFR for India, also suggests a clear decline in fertility rates, from 3.4 in 1992-93 (NFHS1) to 2.9 and 2.7 in 1998-99 and 2005-06 (in NFHS 2 and 3). Even the birth rates have declined which corroborate to the decline in fertility rate as well. Overall India's crude birth rate has fallen from 36.9 in 1971 to 22.8 in 2008. Interestingly according to NFHS 3 of 2005-06, urban India as a whole and urban area in 11 of the 29 states covered by the survey had reached fertility level of 2.1. A figure projected by the U.N till 2020.

Thirdly, longevity continues to improve in India. In 1950, life expectancy in India was merely 32 years whereas in 2006 it has nearly doubled to 63.7 years. Even the life expectancy of women has improved and is now better than males in India with 66.1 years in 2006. As the life expectancy of women was lesser than males in between 1950 to 1981, a phenomena characterized only in India as life expectancy of women have always been greater in other parts of the world.

Fourthly, even there is a change in the age structure, as the birth and death rates declined it gave India, a definite demographic advantage. The proportion of population below the age of 15 years increased from 20 percent in 1981 to 35.3 percent in 2001. Even the proportion of elderly, i.e. sixty years and older increased from 6.2 percent in 1981 to 7.6 in 2001. There has also been an increase in the population aged 15 to 59 years from 53.9 percent in 1981 to 56.9 percent in 2001. And the absolute size of this age group is always increasing, leading to higher number of job-seekers in the labour force. As a result India now has one of the youngest populations in the world.

Despite of these improvements in general demographic condition, (India is still reeling under the pressure of high fertility rate especially more so in) some particular region of our country, have higher fertility rate, especially the Hindi speaking belt of Uttar Pradesh and Bihar. And also Madhya Pradesh, Rajasthan, Jharkhand, Chhattisgarh have high Total fertility rate of 3or more than 3. And some regions like

Tamil Nadu and Kerala with only TFR of 1.7 and Punjab and west Bengal with 1.9. But Bihar outshines all the other states of India with as highest TFR of 3.9 (which was 4 in census 2001) followed real close by Uttar Pradesh with TFR 3.8. A closer look at socio- cultural aspect of people in these regions with high total fertility rate show various variables play significant role in shaping women's fertility. One such variable is the education level of women. While describing about role of education of women and their fertility pattern, Amartya Sen (1994)[8] states that 'Contrasts between the records of Indian states offer some substantial lessons here. While Kerala, and to a smaller extent Tamil Nadu, have surged ahead in achieving radically reduced fertility rates, other states in India in the so-called "northern heartland" (such as Uttar Pradesh, Bihar, Madhya Pradesh, and Rajasthan), have very low levels of education, especially female education, and of general health care (often combined with pressure on the poor to accept birth control measures, including sterilization, as a qualifying condition for medical attention and other public services). These states all have high fertility rates—between 3.8 and 3.9. Regional contrasts within India strongly argue for the collaborative approach (in which governments and citizens would together produce economic and social conditions favouring slower population growth), including active and educated participation of women.

Another variable can be the age of women; since women in these region of India don't go to school the prevalence of child marriage (i.e. before the legal age of 18) is quiet high and 46 percent of women aged 18-29 have got married even before the legal age. Bihar again has the most number of such marriages with 64 percent girls getting married before reaching 18 years[9]. Thus, more women enter reproductive years in Bihar before reaching even 18 years. Another factor that play a role in effecting the fertility rate of a women can be her economic independence, however Tulsi Patel (1994)[10]; from her field experience of Mogra district states that states that social milieu of the district does not value even gain-fully employed women, who are working in farms. Apart from these other important factor that influences the use of

[8] Sen, A. (1994). Population: Delusion and Reality. *The New York Review, 41*(15), 62-71.
[9] National Family planning health survey-3; volume 1; 2005-2006.
[10] Tulsi Patel; Fertility Behaviour: Population and Society in Rajasthan village; oxford university press, 1994

family planning method by women can be the health infrastructure and health facility available by the government.

It is on the interplay of these variables with the women's acceptability of family planning methods that I would try to study and especially that of Muslim women whose fertility rate is higher than other religious communities (3.6 for Muslims, 2.8 for Hindus, and 2.4 for Christians). Studying whether another variable which shows a pattern but has yet to be carefully examined in relation to fertility is religious affiliation of women has a role to play (in this case Islam), on the Muslim women's attitude towards family planning and contraceptive use will be important to find out factors impinging on fertility decision- making. Islam encourages marriage and procreation within marriage, but there is considerable uncertainty about whether Islam favours or prohibits the use of contraception (Boonstra2001; Khan 1979; Akbar 1974). Whether religious values is an independent variable in itself or an intervening variable that augments the effect of other crucial variables like education, income, and access to health services would be an interesting question to examine, for the women living in Bihar. As it is difficult to cover such a diverse state like Bihar, present study, will hence focus on the two districts of Madhubani and Patna, both important urban agglomeration of the state of Bihar, famous as the political hub (Patna) and the cultural hub (Madhubani). Thus, the present study, "Family Planning among Muslim Women of Bihar: A study in Two Districts", would look at fertility, in relation to women's attitude and behaviour towards the various family planning methods and contraceptive use. Here the aim is to illustrate what factor influence women decision- making regarding their health, my study mainly focus on the use of contraceptives by the Muslim women in Bihar and especially on two districts of Madhubani and Patna.

Aims and objectives

The main aim/objective of the proposed study is:

1. To assess the basic strategies and conceptual framework of the family planning method for population control in India and of Bihar from the year 1950-2001, based on various data available through NFHS and Census 1950-2001

2. To assess the level of infrastructure facilities, such as number of health clinics available in the India, Bihar and in these two districts, number of personnel employed in these clinics, the budget allotted by the government for improving the fertility condition of clinic and the adequacy of these clinics as well as the campaigns or the measures taken up by the government to make people aware of these facilities, available for implementation of the family planning programme in Bihar and also to examine the effectiveness of these implemented programmes in Patna and Madhubani. And their role in effectiveness of family planning awareness, and also to see how resources or rather lack of it play a part therein.

3. To find the relationship between the modernization and attitude of women towards family planning methods in order to limit the size of their family. This study will focus on various questions, such as the following while conducting study in these two cities:-

- What is the role of various agents of modernization such as economic development i.e. the income of family as well as the women themselves, education, technological advancement in the field of family planning methods like invention of newer contraceptive methods etc on shaping the attitude of Muslim women of India towards these methods?
- What is the role of education on Muslim women acceptability of these family planning methods? Does women who are financially independent are more positive towards these methods?

4. And also to assess the role of religious values in the acceptance or non-acceptance of family planning methods among Muslim women of Bihar.

Methodology

This proposed study "family planning among Muslim women in India: a study of Bihar", is mostly based on the secondary sources of data. Secondary sources are basically those data which have already been collected for another purpose and subsequently requires a detailed analysis of whether the information would be suitable.these can be in both quantitative data i.e. research that mainly refers to the systematic empirical investigation of quantitative properties and phenomena and their relationships. And the objective of quantitative research is to develop and employ mathematical models, theories and/or hypotheses pertaining to phenomena.

These data are often presented in tabular or graphical form, which are then analyzed in order to support their argument. In this study, I am referring to quantitative data obtained from the census of India from the year 1950-2001, as well as the data provided by the National Family Health Survey (NFHS) 1, 2 and 3. As well as the data obtained by the District level Health Survey conducted in Bihar. I would then to analyze these data to formulate a relationship between these data and my line of argument to substantiate my hypotheses.

Also since this study focuses on ethnographic aspect such as culture, religion and attitude and behaviour of people of a particular sect my study will also be based on qualitative analysis as well. Qualitative data are extremely varied in nature and it generally includes various kinds and types of data that are not in numerical form. For secondary source of data collection quantitative data refers to those written data available already and which can somehow be related to the particular topic of research. These data can be in the form of journals, books, newspaper, autobiography, biographies etc. these kind of data provide an in- depth analysis of the particular topic of research. Thus, usually this refers to existing documents (as opposed transcripts of interviews conducted for the research). It can include newspapers, magazines, books, websites, memos, transcripts of conversations, annual

reports, and so on. These data are generally for some form of content analysis for a more objective evaluation of the work under study.

Rationale of study

Among the Muslim population of India the percentage increase during 1951-61, 1961-71, 1971-81 and 1981-91 was 33, 31, 31 and 33 respectively for Muslims and 21, 24, 24 and 23 for Hindus. The census result of 2001 shows that the population age group from 0-6 years (one of the determinants of fertility) was maximum among Muslims with that of 18.7%. So it was important to study as to why there was a trend of growth in population among Muslim, one reason is that of Muslim women attitude and behaviour towards family planning was found to be less favourable than that of Hindus. Thus my study mainly focuses on the Muslims women especially residing in the two districts of the state of Bihar i.e., Patna and Madhubani and their attitudes towards the family planning method. In my proposed study 'Family planning among Muslim women of Bihar: A study In Two Districts'. I would look into the aspect as to how far religious values play a role towards building an individual's positive or negative attitudes towards family planning programme/methods and also I would like to find as to what extent agents of modernization, namely school education and economic development such as family as well as women's personal income changes Muslim women attitude and behaviour towards these programme. I shall study two districts of Bihar in order to look at the government's role in the success of these programmes. Furthermore I would analyze as to why the success of the same programme under the same government yield different rate of success. Thus I shall conclude my study by finding as to how far modernization agencies can influence the attitudes and behaviour of these Muslim families and women, and to look at the change in the level of acceptance of these family planning methods among these Muslim women.

Area of Study

The proposed study mainly focuses its study on the women and especially Muslim women of two districts called Patna and Madhubani in Bihar.

Patna the capital city of Bihar and is located on the bank of river Ganga. It was found to be one of the fastest growing city in India in June 2009 World Bank voted Patna to be the second best place to start business in India after Delhi. The economy of Patna is based on the local service industry. Patna has the highest per capita gross district domestic product in Bihar. The population of Patna is 47, 09,851(census 2001). The population density is 1132 persons per square kilometre. There are 839 females to every 1,000 males. The overall literacy rate is 63.82% (according to the census of 2001) and the female literacy rate is only 52.17% in respect to male literacy rate of 73.81% (according to census of 2001). The total Muslim population of Bihar is 13,722,048 which constitute to about 16 percent of the total population; and the total Muslim population of Patna is 36, 61, and 64 which is quite high.

Many languages are spoken in Patna. Hindi and Urdu are the official languages. The native dialect is Magahi, named after Magadha, the ancient name of Bihar. Dialects from other regions of Bihar spoken widely in Patna are Angika and Bhojpuri. Yet another language is Maithili. There is also a good number of Urdu and Bengali speaking population too.

And second district in the area of study is Madhubani; Madhubani District is one of the thirty-eight districts of Bihar. And Madhubani town is the administrative headquarters of this district. Madhubani district is a part of Darbhanga division. The district occupies an area of 3501 km^2 and has a population of 3,570,651 (as of 2001). This is the centre of Mithila, a region where the main language is Maithili. The total literacy rate of Madhubani is 42.35 percentage and female literacy of 26.56 percent with respect to male literacy of about 57. 26percent. Madhubani has 64, 15, 79 total number Muslim population (census 2001). It is famous for its Madhubani style of painting.

I chose both these places in order to be able to study both the district comparatively one being the city and one being a small city therefore it will be interesting to study as how places under the same government rule and similar policy yield different result especially with respect to women fertility and their behaviour and attitude towards various family planning methods.

Review of literature

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO). And good health is sought not just for pleasure, nor only for reducing pain, but also for expanding a person's significantly important capabilities and freedoms[11]. But this basic right of good health is denied to women in general especially in India. Whereby, women are treated with subordination and unequally right from their birth. (Monica Das Gupta et al, 1995) very beautifully and interestingly examines the health problems of women, throughout their life cycle, especially of that of Indian women. It narrates the problem that an Indian women faces from the day of their birth till their death that is from cradle to grave both at the family as well as societal level. It narrates a beautiful story of Tagore in the beginning to explain the desperateness of a women, who have every material need of comfort but still doesn't have the power, the power to make one's own decision. It is from this that this book through its myriad essays touches the life of women. So, the central theme of this book centre's mostly not at the gander inequalities in Indian society per se but focuses mainly on the adverse health outcome of women living in Indian society through its various phase of life. And how these adverse health of women in India is the outcome of the low value placed on the Indian women and their powerlessness in patriarchal societies like India. Though this book focuses on various stages of a women's life it mostly stresses on the problems that arise in women's health at their reproductive years. This book is divided into three parts that of 'childhood and the early years', 'The reproductive years' and the 'Old age'.

[11] Amartya Sen. Health: the perspective of knowledge. (http://www.institut.veolia.org/en/cahiers/sustainable-development-knowledge/ideas-broadening/sen.aspx)

In the first part, the authors show how neglect of women at an early stage in the Indian household leads to a lot of health problems in their life and also how this neglect which is mostly because of the son preference in Indian families, leads to many female infants deaths. Moving with this as the central theme Sunita Kishore's (ibid), essay reviews the literature of sex differentials in mortality in India, focuses on the relationship between the effect of development on child mortality and women's study. Based on her study she states that neither 'modernization' nor urbanization has any effect on these two variables. And based on district level analysis, she further analyzes how female mortality is affected by cultural factors (patrilocal exogamy) and economic factor (based on the study of female labour force). Further in the same section, Shiv Kumar (ibid) in his essay states that high infant mortality need not necessarily be a 'medical problem', and associates child survival to women's capabilities, i.e. the level of public provisioning of wide range of commodities and services and the level of entitlements of the individual or household upon whom the child is dependent. While stating the example of women of Manipur, who have better statuses in the society Shiv Kumar relates it to the high survival rate of infants. Further he states that this high status of women in Manipur is Due to existing strong social sanctions, whereby people act as collective making demands on the government system equally women. Which is very important for the progress of the society and its women's to realize their full potential.

This book shifts its focus on the reproductive years of women stresses on the problems faced by women in this stage of life. This section comprises of five broad essays. In the first essay P.N.Mari Bhat et al (ibid) brings up a technique to calculate the exact maternal mortality rate as there is lack of data available on this account. As the peak mortality rate among women is at this stage.

In the second essay in this section, Jeejabhoy and Rama Rao (ibid), while reviewing various data on maternal mortality states that maternal mortality is just the a small part of the women's total reproductive problem and how childbirth during adolescence, lack of nutrition during early childhood ending in anaemia or even morbidity suffered by women after childbirth are other reasons behind women's poor health in their reproductive years. Furthering this point of various reasons behind

women's poor health, Basu (ibid) in her essay narrates how in various ways women's role leads to gender differences in health and survival in either direction. Here she explains the ways in which differences in women's role in society, leads to differential in the sex-differential in health and mortality. For example a society where women are more economically independent they tend to have lesser female health problem.

Ravindran (ibid) shifts on another aspect of women's health problem in her paper based on her field work conducted on women's health in rural area of Tamil Nadu, proved that most of the women suffer from various morbidity problems but most of them were not sought for any medical treatment and hence proves that a more clinical research should be done in order to objectively determine the levels and pattern of reproductive morbidity.

Ramasubban further broadening the Diaspora of women's health problem discusses the difficulties that women have to bear in order to avoid sexually transmitted disease (STD) including AIDS (acquired immuno deficiency syndrome). Ramasubban focusing on sex-workers, states their dilemma as to how they cannot force their customers to wear condoms and also if infected cannot bear the cost of the treatment (here though I would like to state that since the advent of female condoms this problem has been somewhat over in the recent years).

Focussing on the reproductive health of women in India, Jeejabhoy and Ramasubban (2000), in this anthology of essays by eminent scholars provides a comprehensive overview of the reproductive and sexual health of women in India. These ten essays synthesis what is known about every dimension of the reproductive health situation in India, ranging from the situation of adolescents, to the magnitude and patterns of reproductive tract and sexually transmitted infections, various essays on varied topic cast a wide net, combining information from the social science and bio-medical literature, highlighting women's perspectives and women's needs. These essays collectively highlight the poor reproductive health situation in the country and draw attention to the socio-cultural and programmatic factors that have acted to impede women's attainment of reproductive health and informed reproductive choice. Here Jejeebhoy and Ramasubban takes on the definition of reproductive health as '*a state*

of complete physical, mental and social well being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes' a definition which emerged from the 1994 international conference on population and development (ICPD) held in Cairo. And further they illustrate those provisions that must be provided in order to attain excellent reproductive health of women (2000; pg15). The definition implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, and how often to do so. Implicit in this last condition are the rights of men and women to be informed of and to have access to safe, effective, affordable and acceptable methods of family planning of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples the best chance of having a healthy infant. Hailing this concept of reproductive health the author's say this concept 'underlines a commitment to respond to women's health needs throughout their life-cycle' (pg16). This concept recognizes that women's needs are different than that of men both biologically and socially. And many inequalities are persistent in women's life make their health more vulnerable. Thus, this concept makes women's health as basic human rights without which women cannot play their part fully either career wise in family or their complete social and economic development. This concept focuses reproductive health whereby both men and women can attain a state of complete physical, mental and social well being.

Jejeebhoy (ibid) then focuses on the reproductive health of adults. She states that despite the fact that adolescents represent almost one quarter of the Indian population estimated to be almost 190 million aged 10-19; their reproductive health needs are poorly understood and ill served. This essay documents the existing research on sexual and reproductive health, explores the knowledge and attitudes among this population in India, and highlights limitations of methodologies currently employed in research on adolescent reproductive health in India. One serious limitation is the lack of attention in almost every dimension of their reproductive health, including sexuality, adolescent's pre-marital sexual behaviour, reproductive morbidity, and

abortion-seeking and reproductive choice. What is needed is more behavioural research that explores the levels, patterns, and sociocultural factors underlying adolescents' reproductive health; assesses adolescent reproductive health needs and ways in which health and information services can be structured to respond to these needs in light of the social, cultural and economic constraints that adolescents face; and explores appropriate methodological alternatives, recognizing the need for community-based research, as well as the difficulties of conducting such research under the sociocultural constraints prevailing in India. At the same time, this review argues for far more attention within programs to address adolescent reproductive health service and information needs.

Further Pertti (ibid) reiterates Jeejabhoy's findings about the level of sexual activity among the youth. He mostly focuses on studies of sexual behaviour among adults and youth conducted in the 1990' by various scholars as well as magazine. He puts the rapid increase in the number of HIV and AIDS patients as the focal point of change when the study of sexual behaviour and activity among youth gained imputes earlier to which India presumed that due strong traditional fold of society where chastity is practiced among unmarried men and women, India is safe from the spread of the disease only to get a rude shock in the findings of NACO,1993 which showed that only in the city of Mumbai the number of HIVpositive patient increased from 1 percent to 50 percent from the year 1984-1990.Essay gives some key findings in the patterns of sexual activity found among the youth and adults and gives a great insight so that one can focus on spreading safe sex education given the rapid increase of HIV. His essay provides fascinating information on the whole sexual activity of the youth in India both men and women residing in rural as well as urban areas. He provides insight into the mapping of locations of sexual contact which can be from brothel to cheap hotels to truck parking areas etc. also this essay gives an interesting information regarding the sexual activity of youth who though go to sex- workers for their urge but in a very less proportion and many have sexual encounters with older married women be it their relatives or their neighbours but majority do it with their girlfriend or boyfriends who are unmarried youth of their villages or town. Though discrepancy exist in their attitude towards this relationship as for men this

relationship is for physical pleasure for a girl it is a long term commitment of love. The study also reveals about the male to male sexual activity that exist among youth. Interesting information that comes forth in this essay is that men and women both do not consider premarital sex a taboo anymore especially the college students.

Furthering her studies of women's reproductive health Jeejabhoy (ibid) reviews the level and patterns of maternal health and mortality in India. This essay is divided into two distinctions at first jejeebhoy discusses about the existing statistical data on level of maternal health and mortality. Followed by, the examination of the underlying factors in terms of immediate, intermediate and background determinants that contribute to the persistence of high maternal mortality and morbidity in India. India accounts for 19 percent of all live births worldwide and for as many as 27 percent of all maternal deaths. Jejeebhoy then also gives the meaning of what exactly is meant by maternal mortality, 'maternal mortality is defined as the death o f a woman while she is pregnant or within 42 days of delivery, or 90 days of termination of pregnancy, irrespective of duration or site of pregnancy from any cause related to or aggravated by the pregnancy or its management' (pg135). About 437 out of 100,000 pregnant women die each year of pregnancy related causes and between 4 and 5 million women suffer from ill health associated with pregnancy, all which are largely avoidable with a little effort from the government. Further on she states that maternal mortality accounts for most of the deaths among the women of reproductive age, also the highest among these are the rural women. But this rate or number of maternal mortality varies in different region like in Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan have twice the rate of maternal mortality (823/100,000). She also laments the lack of studies that are done in this field and says that even the studies that do exist are remarkably consistent. In India the rate of miscarriage, stillbirths, perinatal mortality and neo-natal mortality is also disturbingly high. She then shows through data how even the number of morbidity is very high among women of reproductive age as nearly 40 to 45 percent of women report morbidity associated with pregnancy and childbirth, 18 to 25 in antenatal state, 12 to 18 percent in intra-partum stage, and 19 to 23 in the post-partum phase. And out of all these mortality due to pregnancy

majority of them are preventable given that both knowledge and means of prevention are available.

Then she moves on to explain the various **immediate** factors that cause maternal mortality and morbidity, which she divides in either direct or indirect causes. Direct causes mainly refer to those complications which occur during pregnancy or up to six weeks after delivery or termination of pregnancy from any cause related to or aggravated by the pregnancy and its management. These are haemorrhage, hypertensive disease of pregnancy, infection, abortion and obstructed labour. Whereas, indirect causes are those that may have been presented from before pregnancy but got aggravated due to pregnancy. These are diseases like anaemia, malaria, hepatitis, tuberculosis and to lesser extent heart diseases and high blood pressure of some origin. Anaemia is the leading indirect cause of maternal mortality and morbidity. The **intermediate** factors are refer to various causes such as health and nutritional status of a women, nutrition status mainly refer anaemia, height and weight, infection and parasitic diseases, Other chronic disease such as hypertension, Prior history of pregnancy complications etc. women's health behaviour and use, such as their awareness about what constitute good health, awareness of danger signals, use of modern care of delivery. Whether, pregnant women use trained attendants at the time of giving birth or not. Moving on jejeebhoy then key recommendation for future research in the field of the study of maternal mortality and morbidity such as to study community based information on maternal morbidity or women's powerlessness and maternal health, also study which addresses the inadequacy of health system in India etc.

Moving away from other aspects of women's reproductive health, Ganatra focuses on the review of existing evidence on abortion in the Indian context. In the year 1971, the medical termination act replaced the Indian penal act of 1862, and abortion was legalized on various medical and social grounds in India. Ganatra here focuses mostly on induced abortion and its context in India, and laments the inadequacy of data available in this field of study even till the present year. And even in the existing data there is a considerable inter-study variation in estimating the abortion ration. Government statistics shows a ratio of 1.3 to 2.1, nations estimates based on various

sources arrive at around 18 to 45, whereas community based study suggest somewhere in the middle. A thorough based study of rural India estimates around 14 induced abortions every 100 live births. The age groups of 20-29 yrs are found to be the one going most for induced abortions. The reasons for abortion are mainly to limit the size of family or maintain a gap in the births of children. This indicates the extent to which there is an unmet need and knowledge about the contraception in this country. Ganatra describes then that it is the situation of women in the family that shapes the context of abortion. Like for unmarried girls abortion usually takes place in the second trimester due late detection of pregnancy, indicating the lack of sex study knowledge among the youth in India. Also usually the decision-making power of a woman to abort lies mostly with the husband to less extent to the mother-in-law. And even the quality of care provided to the women after the abortion is not good at home. And even the health services provided are poor in both conducting an abortion and counselling is limited often post-abortion contraceptives are forced on women. Another aspect that Ganatra focuses on is the sex-selective abortion present in India. These abortions are conducted in order to control the composition of a family, and it is the majority who aborts after the detection of girl foetus. And even after the bill of prenatal diagnostic technique 1994, which prohibits the disclosure of sex of foetus. This practice is very much prevalent and this decision is generally out of a woman's hand they have to follow their husband's decision even if it might not be good for a women's health. Also government's inability to provide proper abortion centre has given rise to various illegal abortion centres. Which are distributed to a larger extent they provide poor facility result in greater rate of maternal mortality and morbidity of women during induced abortions.

Then Oomman (ibid), shifts into another direction of women's reproductive ill health, till now the focus was mainly on maternal mortality and abortion etc. And focuses on those diseases which are silently endured and consider normal part of womanhood, these are various gynaecological problem such white discharge, infertility, menstrual problem, prolapsed and problem in intercourse etc. through various studies conducted in variety of regions, she highlights the various morbidities existing in the society. Some which can only be detected in laboratory like cervical infections, some

which can be clinical examination like prolapsed and some can only be self reported like menstrual problem etc. here again lack of existing studies is narrated. This essay then discusses women's perception of these morbidities. Generally they consider it as a normal part of women's life and many a times when it is detected they are too shy to inform. Here again Oomman shows how women's decision regarding these matters depend on the amount of inter- spousal communication and the proper treatment to be provided is decided by the husband, indicating the low level of decision making power that a woman have over her own body.

Further, Ramasubban (ibid) carries a focussed study on the knowledge of men and women regarding STIs, which are one of the main reasons for the epidemic of HIV/AIDS in India. She mainly focuses her study on sex workers who are forced into sex work for economic survival. And shows how women who are biological more susceptible to STI transmission has to suffer because of their husband who migrates for job and leads a sexual active life with sex-workers, heterosexual relation or sometime homosexual relations and transmits diseases to their wife resulting in various viral diseases and cervical cancers. Though Ramasubban also repent lack of elaborate study in this direction and concludes for more empirical studies of the structure of sex workers in both rural and urban areas.

Visaria (ibid) in her essay deals with the demographic profile of India which addresses fertility, family planning, and economic issues. India is described as a country shifting from economic policies of self-reliance to active involvement in international trade. Wealth has increased, particularly at higher educational levels, yet 25 percent still live below the official poverty line and almost 66percent of Indian women are illiterate. The government program in family planning, which was instituted during the early 1950s, did not change the rate of natural increase, which remained stable at 2.2 percent over the past 30 years. 1993 marked the first time the growth rate decline to under 2 percent. The growth rate in 1995 was 1.9percent. The total population is expected double in 36 years. Only Nigeria, Pakistan, and Bangladesh had a higher growth rate and higher fertility in 1995. India is geographically diverse (with the northern Himalayan mountain zone, the central alluvial plains, the western desert region, and the southern peninsula with forest,

mountains, and plains). There are regional differences in the fertility rates, which range from replacement level in Kerala and Goa to 5.5 children in Uttar Pradesh. Fertility is expected to decline throughout India due to the slower pace of childbearing among women over the age of 35 years, the increase in contraceptive use, and increases in marriage age. Increased educational levels in India and its state variations are related to lower fertility. Literacy campaigns are considered to be effective means of increasing the educational levels of women. Urbanization is not expected to markedly affect fertility levels. Urban population, which is concentrated in a few large cities, remains a small proportion of total population. Greater shifts are evident in the transition from agriculture to other wage labour. Fertility is expected to decline as women's share of labour force activity increases. The major determinant of fertility decline in India is use of family planning, which has improved in access and use during the 1980s. If India is to keep a stable population fewer than 1.6 billion in the future, Indians may have to accept only one child per family.

Foo and Koenig (ibid) elaborates India's family planning program which represents one of the earliest and most ambitious efforts in a developing country to address the issue of high fertility. Despite its more than four decades of existence, little is known concerning how the program is implemented at the field level, especially in relation to the quality of services provided. In this article, empirical evidence on the accessibility and quality of services provided through the Indian family planning program is reviewed and synthesized. The review highlights the serious and systemic shortcomings in quality of care that characterize the Indian program in such areas as restricted method choice, limited information provided to clients, poor technical standards, and low levels of follow-up and continuity of care. The factors constraining higher service quality are subsequently reviewed, and the prospects for improving quality of care within the Indian program are assessed.

Here again Rishyasringa (ibid) addresses the social processes that influence the situation of women and their ability to make informed reproductive choices. The essay provides an overview of the situation of women in terms of their access of their employment, wages, credit and education as these condition clearly plays a role in enhancing women's say in their own lives. This essay further states how the

compromise of even elementary school of girls and gender disparities in health and nutritional care from early childhood. The author thus, calls for a holistic perspective in order to address women reproductive health and rights and to place them within the context of women's lives more generally. And stresses on various structural changes are it in power dynamics to all the spheres that effect women's life economy or education.

From reproductive health in general, Jejeebhoy (1995) moves on to study education of women as the socio-cultural factor influencing women reproductive behaviour and ultimately in lowering down the fertility rate. Jejeebhoy recognizes Women's access to education as a fundamental right and elaborates how at the national level, educating women results in improved productivity, income, and economic development, as well as a better quality of life, notably a healthier and better nourished population. It is important for all kinds of demographic behavior, affecting mortality, health, fertility, and contraception. The personal benefits that women attach to education vary widely according to region, culture, and level of development, but it is clear that education empowers women, providing them with increased autonomy and resulting in almost every context in fewer children. Beyond these few general assertions, however, there is little consensus on such issues as how much education is required before changes in autonomy or reproductive behavior occur; whether the education-autonomy relationship exists in all cultural contexts, at all times, and at all levels of development; and which aspects of autonomy are important in the relationship between education and fertility. It is in the need to address these fundamental issues that this book took shape. The author reviews the considerable evidence about education and fertility in the developing world that has emerged over the last twenty years, and then passes beyond the limits of previous studies to address three major questions; does increased education always lead to a decrease in the number of children, or is there a threshold level of education that a woman must achieve before becoming a mother. What are the critical pathways influencing the relationship of women's education to fertility? Is fertility affected because education leads to changes in the duration of breast-feeding? Do improvements in education empower women in other areas of life, such as their

improving exposure to information, decision-making, control of resources, or confidence in dealing with family and the outside world?

Supported by full documentation of the available survey data from all the regions of the world Latin America, Middle East, sub-Saharan Africa, south Asia etc, this study concludes that such contextual factors as the overall level of socio-economic development and the situation of women in traditional kinship structures complicate the general assumptions about the interrelationships between education, fertility, and female autonomy. As she says that the setting of women also plays an important role albeit education in determining education, though she points secondary level education as the minimum level for gaining any autonomy by women, but she is quick to point that society with little egalitarian setting such as that of Latin America even little education helps. It further lays out the policy implications of these findings and fruitful directions for future research. And also illustrates that despite of all education does improvements in education empower women in other areas of life, such as their improving exposure to information, decision-making, control of resources or confidence in dealing with family and the outside world, though the desired year of education may vary from society to society. Thus, this book gives a beautiful and vivid description of the relationship of education on the health of women. Since, education makes women more aware empowered and especially someone who is able to making decision.

A large body of scholars also points to the role of rising female education in lowering fertility i.e. female literacy having a positive effect on lowering the fertility rate, in their various studies, Bulatao and Lee (1983), Cleland and Wilson (1987), Basu (1992), Dreze and Murthi (1999), Satia and Jejeebhoy (1991), Sen (1994), Castro (1995), Jeffrey and Basu (1996), Srivastava (1990).

From education as tool of improvement women's health especially reproductive health and creating autonomy among women, Sen (1994) further moves on to stress on all round development of people in bringing down the rate of fertility. Sen refutes the present stand on growing population by terming it as "population problem" especially in the developing countries. He does not believe in the ongoing theory

about shortage of food as he states that there are no empirical studies to prove that world is experiencing shortage of food and argues, that by giving priority to "family planning arrangements in the Third World countries over other commitments such as education and health care," international policy makers "produce negative effects on people's well-being and reduce their freedoms."

In the essay Sen discusses two opposing approaches to population control. These two approaches are "collaboration" and "override" The collaboration approach calls for a voluntary choice as well as a collaborative solution to controlling the population growth. The collaborative approach relies on more choices for men and women, a more educated and rational decision on the part of both men and women, and an open arena for a more extensive discussion on such subjects. These men and women are able to make such rational decisions based on the opportunity to be more educated and with a sense of self-confidence when presented with the ability to do so by having public policies such as family planning, health care, bigger and better education facilities and a sense of economic well being. Our ability to solve problems by making rational and educated decisions seems like a better alternative than to forcing a resolution. The "override" approach works by means of legal or economic coercion, such as the means that China forces with their "one child policy."

With this approach, the government may deny individuals of job opportunities or deny housing. These people are left with no other choice but to follow along with what the government would want them to do.

Although the collaboration method results in a higher standard of living with higher levels of consumption as well as increases threats to the environment, Sen believes that it is still the preferred method of controlling and curbing the population at hand.

For one, "override" leaves the individual with very few choices. It limits their freedom. As with China, it can lead to neglect and often endangerment to a second child. More often than not, since a male child is favoured among the Chinese, female children have been reported to have been severely neglected and speculations that female infanticide may occur.

Thus, in his essay by giving the example of Kerala he states that the government policy should give impetus to the development and education of its people and this

will bring down the fertility rate. As well as women will have freedom of choice and knowledge as well.

This importance of Women's free choice for the betterment of her reproductive health is taken one notch up by Nussbaum (2000), In *Women and Human Development*, Martha Nussbaum attempts to shift the theoretical terrain on which international development policy is currently situated. In doing so, she constructs a Universalist feminist philosophy based on central human capabilities that, if met, would provide the minimum threshold necessary for the development of all people. In first chapter, Nussbaum deals extensively with criticisms of universalism. The second chapter aims to show that the capabilities approach provides a better method to compare people's quality of life than approaches looking at utility or GDP. In the final two chapters Nussbaum elaborates on this approach in relation to two problems in international development, namely the legal and political status of religion and the legal and political status of the family. Throughout the book, Nussbaum uses two examples from women's lives in India and she brings in numerous concrete legal cases from India and the US. Nussbaum also relies on her experience in India on two recent trips which had a profound impact on her. The book is an explicit attempt to engage non-specialist audiences and a more philosophical volume on the capabilities approach is promised for later.

The central problem Nussbaum confronts is the strong co-relation between gender inequality and poverty. "When poverty combines with gender inequality", she writes, "the result is acute failure of central human capabilities" (pg 3). And she states that the denial of basic human needs and basic rights is "frequently caused by their being women' (pg. 4). She furthermore argues that "international political and economic thought should be feminist attentive (among other things) to the special problems women face because of sex... problem without understanding of which general issues of poverty and development cannot be well confronted". Thus, although her specific focus is on the situation of poor women in India. In place of cultural relativism and aggregated conceptions of the good put forward by utilitarian economics, Nussbaum proposes a set of interrelated and indivisible capabilities, conceived as human rights that offer moral guidance for the development of political principles that can be translated into

constitutional guarantees. The capabilities provide individuals with opportunities for functioning, for making self-defined choices possible. These choices, however, are virtually meaningless without the material preconditions that enable their functioning. So she raises the central question that drives the capabilities approach is: What are individuals actually able to do or to be?

Nussbaum develops and applies Amartya Sen. widely respected "capabilities approach" as a vehicle for overcoming the oppression and exploitation of women. She however adds to Sen's approach and goes beyond the framework, developing "threshold level of capabilities" as a basis for central constitutional principles that citizens have the right to demand from their governments" (pg.12).Primary objective is to place these spheres of choice "beyond the whim of majoritarian politics" by translating them into constitutional guarantees. For her, the political goal of justice, of meeting the threshold for each capability, supersedes liberty--outweighing and morally constraining choices that conflict with the central principle of political liberalism: "do no harm to others." Ensuring equal access to the central capabilities, she argues, should "constrain all economic choices" (p. 33). Individual and collective choices that result in differential access to the capabilities, she argues, ineluctably violate this governing principle.

Given existing social inequities and asymmetrical relations of power, the capabilities approach requires "spending unequal amounts of money on the disadvantaged" in order to bring every person up to the "same level of capability to function" (p. 99). Thus, universalizing opportunities for full human functioning would require redistributive policies, although the absolute level of resources devoted to establishing functional capabilities would differ according to the specificity of material conditions. Because the exercises of certain types of functioning in childhood are an essential precondition to developing "a mature adult capability," Nussbaum argues that the state has a compelling interest in "any treatment of children that has a long-term impact on these capabilities" (p. 90). Thus, it is imperative that children be given genuine opportunities to exercise capabilities that are vital to their functioning as future citizens. In addition to material prerequisites, Nussbaum also states that the, actual functioning depends on an internal process of self-definition, of developing a conception of self as a "bearer of rights and a citizen whose dignity and worth are equal to that of others" (p. 13). The practical value of

Nussbaum's theorizing lies in providing poor women with a "framework in which to view what is happening to them and a set of concepts with which to criticize abuses that otherwise might have lurked nameless in the background of life" (p. 36).

Nussbaum's list of ten central capabilities, which are tentative and open to revision, reflect her awareness of the "specific details and dynamics" of poverty in India—a situation that led to her to place greater emphasis on issues such as bodily integrity, control over one's political and material environment, and human dignity. The list also reflects Nussbaum's belief that the problems of poor women in the developed and developing world should take centre stage among the concerns of middle-class women. In addition to ensuring the basic capabilities of life and bodily health, she is concerned with internal capabilities, such as the ability to "imagine, think, and reason," to develop and sustain emotional bonds, to formulate conceptions of the good through critical reflection, and to affiliate with and show compassion for others. Truly human functioning, she argues, also means being able to "laugh, play, and enjoy recreational activities," as well as the ability to "live with concern for and in relation to animals, plants, and the world of nature" (pp. 78-80). The capabilities serve as a kind of moral umbrella designed to accommodate cultural variation while establishing cross- cultural thresholds of human capability.

Throughout the book, she weaves personal case histories of poor women into her argument to challenge the introducing global feminist standards in entrenched patriarchal societies. Feminism in India runs up against long standing global feminist standards.

In other words, Nussbaum central aim is to develop "cross-cultural norms of justice, equality and rights" that make international quality of life comparisons possible while remaining sensitive to local particularities (p. 7). She grounds her work in the concrete realities and substantive issues facing poor working women in India, using the specificity of two women's lives as dialectical reference points in constructing and justifying her theoretical positions. In doing so, Nussbaum constructs an unusual philosophical argument infused with the voices, and informed by the life experiences, of the women for whom she is theorizing. Intent on making her philosophy "responsive to reality," Nussbaum's analytical arguments continually reach out to the reality of everyday social

life for relevance and meaning, all the while maintaining a firm commitment to developing universal standards of human capability. Nussbaum's book provides useful discussions of several major topics in the areas of global ethics, development and political philosophy. As she discusses the universalism/relativism problem, the debate on what should be measured to assess people's quality of life, the role of religion, the importance of care and justice and the role of constitutional change in creating opportunities for better lives. It is also interesting to see that the author does not engage much with other authors on these debates. And her main sources of reference are Sen, Rawls and literature with examples from India. Thus, all in all this book is a vigorous and valuable application of the capabilities approach to the issues of gender justice. She helps us to see the strength and utility of Sen's "capabilities approach".

Thus, by proposing a new kind of feminism that is genuinely international, Martha Nussbaum in this book argues for an ethical underpinning to all thought about development planning and public policy, and dramatically moves beyond the abstractions of economists and philosophers to embed thought about justice in the concrete reality of the struggles of poor women. In this book, Nussbaum argues that international political and economic thought must be sensitive to gender difference as a problem of justice, and that feminist thought must begin to focus on the problems of women in the third world. Taking as her point of departure the predicament of poor women in India, she shows how philosophy should undergird basic constitutional principles that should be respected and implemented by all governments, and used as a comparative measure of quality of life across nations. Nussbaum concludes by calling for a new international focus to feminism, and shows through concrete detail how philosophical arguments about justice really do connect with the practical concerns of public policy.

Nussbaum arguments for providing women resources, for them to realize their full capabilities, but there are many other variables as well which plays crucial role in determining health of women as Doron and Broom (2010) give impetus on culture and states 'illness and pathological behaviours do not take place in a cultural vacuum, and existing health conditions are shaped by class distinctions, caste structures and gender relations'. The importance of culture on conditioning reproductive health has been given

importance by many scholars (Pati, 2003), (Obermeyer, 1993). Study of Patel (1994) deals with much focused study, and looks at the role of social structure like tradition, customs and culture play into women's use of contraceptive methods. Patel in her own words reveals the variant picture of the practice of contraception through Anthropological perspective by the help of ethnographic data. This essay begins with a brief history of the Family planning in India. Patel explains how India which adopted the family planning programme in 1950's in order to avert crisis of population growth. These programmes were base on the neo- Malthusian philosophy that human intervention can check on population growth through birth control methods. With the core belief that people need to be persuaded and sometimes even are forced if necessary to have fewer children for the development of the nation. This neo-Malthusian philosophy through family planning has been a country specific strategy throughout India in birth-control movements. She states how the family planning in India has moved through various stages as classified by Srinivasan (1995) in the different five year plans. The family planning programmes and policies have undergone various changes in its concentration as well as its desired result or goals to be achieved. This phase began from "*Clinical approach*" (1951-1961) which sought to reduce the birth rates to the extent necessary to stabilize the population at a level consistent with the requirements of the national economy, during this era a number of family planning clinics were opened across India assuming that the citizen of India were already eager to accept the various family planning methods. But when there was still increase in the population growth the focus shifted from clinical approach to what is called the "*extension education approach and low intensity HITTS (health department operated incentive-based Target-oriented, time bound and sterilization-focused programme) model*" (1962-69), this approach focused on sterilization as the main approach for controlling population growth. And was time bound to reach a particular goal. This approach which began in 1960 entered into a "*high intensity HITTS approach*" in the year 1969-1975, which then took an ugly turn with the advent of the national emergency in 1975-1977, during this period the rights of the citizens were suppressed to the extent that in some places especially Uttar Pradesh and Bihar people were forcefully sterilized and so it is said a number of sterilizations were done and only in India from April 1976 to march 1977 around 8.26 million sterilizations took place. This was more

than the number of sterilization done in the previous five years, and much more than any other country in the world as well. And as a result of this emergency the citizen did not brought the same party in power in the next general election. And there was tremendous backlash of people on the family planning in India and especially on the insistence of the vasectomy. The new government tried to improve the existing scenario first by changing its name from 'family planning' to 'family welfare', and also by changing the approach by reducing the target on sterilization. Policy were revised which was against the compulsion of sterilization and stressed on education and wholly voluntary approach. This government though rose the legal age of marriage of a girl to 18 and a boy's to 21 years. This phase is known as the *"Recoil and Recovery phase*" (1977-1994) as even in the fifth five year plan (1980-85), a working group was set up by the planning commission to formulate long term policy goals and programme targets for family welfare programmes this shift here clearly indicated the shift in the mind sand approach of family planning policy makers after the emergency period got over. Even though the HITTS family planning programme was revived by setting and desired goals until the year 2000 as to achieve a crude birth rate to 21 and to achieve 60 percent of contraceptive prevalence through modern method etc, still the vigour of this approach was less intense. And then there was shift from focusing on sterilization to emphasis on spacing method on child survival programme. These were set-up throughout the rural areas in primary health centre without any aggressive campaigns or even mass camps for sterilization as in earlier years. Since the year 1995 after the international conference on population and development (ICPD) in Cairo, with the help from the international organizations like UNICEF (United Nations Children Emergency Fund) and WHO (World Health Organization), universal immunization programmes (UIP) and expanded programme of immunization (EPI) were launched in a systematic manner covering all the districts of India, but still the debacle of family planning programme post-emergency could not be revived fully and people in general regarded family planning programmes and specifically vasectomy in a wrong light.

Sterilization continues to be the most popular method worldwide for preventing pregnancy. Despite male sterilization being cheaper than its counterpart still about 70 percent of the sterilization is performed on women. Patel further based on her

ethnographic study in the Mogra district of Rajasthan explains about the fertility behaviour of people of rural Rajasthan and also elucidate the changed attitude of women and their decision making power with respect to the family planning adoption. In other words this essay explains the meaning in which women access and perceive sterilization during their reproductive life course. In her study Patel found through the study of various families that sterilization is still the main method of family planning in rural India and the non terminal contraception still lags way behind that of sterilization. People adopt the method of sterilization only when an optimum number of children (which can be two or more boy child) are achieved. This essay gives out interesting facts that in child bearing is only accepted up to a certain age in the society as women who have generally become a mother-in-law and if a women does conceive she is ridiculed in the society this is known as the "*pregnant grandmother*" syndrome, thus one sees that there is a cap on a women's fertility years in the society. And even it was noted that only the first or the first boy born was much celebrated as there is an optimum number fixed by the society as well and children born after this are generally consider unwanted and are even given names for example '*Aichuki*' (enough of coming),or '*santos*' (satisfaction).Patel also further elucidates how a women has to negotiate her way in order to get sterilization done , here Patel explains a very important aspect of women's own decision-making regarding her fertility as it is necessary for her to get the permission of her parents-in-law if they are living with the couple and especially of that of the mother-in-law. Through her study Patel shows how mother-in-law in the fear of complications after the operation resulting in the daughter-in-law inability to do household chores, which could result in disruption in the working of the home do not allow their daughter-in-law to do sterilization and sometimes even the husband agrees the denial of the mother-in-law is more than enough to stop her from performing the sterilization and sometimes some mother-in-law also oppose it due their past history of seeing to many deaths but still in some cases the mother-in-law themselves take them to get the sterilization done though this number is really low. Nevertheless it was interesting to see that disapproval by the husband or the mother-in-law is not always the effective deterrent to a women's final decision to get sterilized. When women are sure that their decision would not hamper their husband and their family much they are emboldened to opt for sterilization even at the back of their

husband or mother-in-laws this shows how even women in rural India are rising and making decisions for themselves and their life. But one thing that is worth noting is that these people only opt for sterilization when they have achieved the optimum number of children especially boy child else they keep on conceiving in lieu of a male child but only until the grandmother syndrome takes over. Also people opted for sterilization only after waiting for a specific time even though the couple reach the optimum number of kids as they wait for the survival of their kids especially in places were infant mortality rate is high. And thus, it is seen that with the decrease in the rate of infant mortality rate and also infant under5 mortality rate more and younger couples are opting for sterilization.

Though there was an increase in the number of couples or women who opted for sterilization this number was still far less than the desired goals. And also the use of non-terminal family planning methods was very less and much has to be done on the part of the government to make people aware of these methods. All in all Patel's essay throws light over the reproductive life of rural women through her ethnographic study based in Mogra district of Rajasthan, were there is usually unconditional applause or approval of motherhood, on the other hand continuous procreation of children is not appreciated. Though the first child is celebrated with much aplomb this tend to wade away in the birth of other children especially fourth or fifth unless it's the birth of the first male child. And older couple are ridiculed if they procreate, a pregnant grandmother are subjected to a lot of harsh criticism and is considered a dishonour to her family. Getting sterilized becomes the way out of such ridicule and disapproval and thus through her study Patel found it to be more common among older mother's. And this process of sterilization has also shown how it becomes a way for women to have control over their own body and fertility.

While Tulsi Patel focuses on varied social structure of customs, culture and tradition to look at the contraceptive use of women. Many scholars have studied the role of religion too on fertility of women. Especially of Islam on Muslim women's contraceptive use as a higher fertility rate among Muslims have been found in comparison to other religion in India. Khan (1979) in his essay takes cue from the Inkles and Smith (1974), twenty four major themes in which modernity can be manifested. He states that though modernization is a multivariate phenomenon and has been defined differently, however he states that a

common thread which appears in all the definition is the visualization of modernization as a process which leads the social and economic systems towards a higher level of development. It is something good something desirable (pg 253). Khan takes the attitude towards family size restriction as one of the modernization theme defined by Inkles and Smith, and studies the Muslim population of Kanpur. His study is conducted out to debunk the general belief stated by Sudhir Hendre , 1971 that Muslims are not accepting family planning and that one day, if the growth rates of Muslims and other minorities are not arrested, the Hindus would be outnumbered by the non-Hindu communities. The political overtones of this thought resulted in lot scholars towards the problem of differential fertility and the practice of family planning by religion in India. Agarwala (1974) On the basis of his calculation out rightly rejected the fear that Muslims can ever outnumber the Hindus. Khan in his study attempt to assess the knowledge, attitude, and practice of family planning among the Muslims in urban setting, through a field study based in Kanpur city of Uttar Pradesh which has a high Muslim population. He divides his samples into two homogenous groups based on occupation; one is Muslim with heredity occupation (MHO) and another Muslim with no hereditary occupation (MNHO). Khan further carries on extensive study on these groups male as well as their wives were studied, he asked question varying from their and education to their knowledge of contraceptives, though he found that almost all of them knew about condoms and loops, vasectomy and tubectomy were not very famous, on further inquisition on what is meant by these procedure khan found out that many did not have proper knowledge about these methods even after knowing their names. Furthermore, he states that due to vagueness about the knowledge of family planning methods many feared of complication and injury through their usage. He also found that MHO group uses less of contraceptive methods than MNHO group, this stems to the fact that the MNHO group was culturally different from MHO as they were relatively better educated, more exposed to mass communication and less orthodox. As in MHO children were considered to be an additional working hand and hence were more valued among them.

Using the same data, khan (1978)[12] demonstrated that from a set of large number of variables, when all were working simultaneously, number of living children, perceived economic status, husband-wife communication and empathy, perceived economic burden, exposure to mass media and contraceptive knowledge of wife were important predictors of family planning acceptors. The MHO who were relatively at lower level of contraception had also scored low for these variables, hence proving that agents of modernization such as education, economic status and exposure to mass media plays a very important role in family planning acceptability rather than religiosity of individual.

Many scholars have supported this view like Weigl (2007), while lamenting the lack of or rather ignorance of 'agency' of women in constructing their own reproductive outcome in the empirical studies and demographic literature as they are preoccupied with studying the status and autonomy. Furthermore he states the bad state of women's health, due to undernourishment as well as limited access to medical facilities. Based on his study in Nizammuddin Basti Weigl found that women there are not averse to the notion to the use of contraceptive methods rather it is due to the husband's and in many cases in-laws not giving permission to it they don't use any contraceptive methods even if they want to. Also another fact that Weigl came across in among Muslim women of this area, is that many use abortion as a means to avoid unwanted birth of child though not as a means of contraceptive methods. Mostly women in this area want fewer children especially after infant survival rate has increased.

Thus, he argues that women's reproductive decisions and practices are a product of complex interrelationship between their use of governmental health facility, national family planning policies, socio-cultural norms, socio-economic constraints, and their poor state of health. And religion plays only a minor role in determining the fertility decisions of women, though it is a component in determining fertility patter it is as he states not an overarching determinant. And during his study could find only one woman who mentioned of having children as religious duties.

[12] M.E.Khan 'determinants of Muslim fertility in an urban setting', population and health perspective and issues, 1978; pg-62-78.

And on the similar ground many scholars argue that lower contraceptive use and higher fertility among Muslims is mainly due to their lower socioeconomic status (Iyer 2002; Mistry 1999; Shariff 1995; Sharma 1994; Johnson 1993; Ghosh and Das 1990; Singh 1988; Ranganekar et al. 1987; Krishnan 1984; Chaudhary 1982; Khan 1979)

Chapters discussed in this dissertation

My Dissertations "**Family Planning Among Muslim Women Of Bihar- A Study In Two Districts**" focuses on the overall behavioural pattern of women i.e. their ability of decision making in relation to the family planning methods and their attitude towards their acceptance which I have broadly discussed in my introduction and in order to further justify my rationale of study I have divided this work in three broad chapters excluding the introduction and conclusion.

In the *first* chapter- **Health Policy, Health Services and Family planning; the case of Bihar**: I study the policy and planning related to health that exists in India and also in Bihar both by the state as well as the central government. This chapter focuses on all the policies that are being implemented in the state of Bihar and also the planning that are or has taken place for success of these policies in order to improve the health of its people, but in this chapter though I talk about various health policy in Bihar I mainly focus on policy pertaining to women's health especially in relation to family planning methods and their fertility. Here so, I would deal elaborately with the health infrastructure available to the people in Bihar especially women i.e. the number of clinics available, number of personnel like doctors, nurses, '*ayas*' in such clinics as well as the infrastructure of these clinics whether they have adequate equipments available and also look at the budget allotted by the government for health welfare especially in the area of family planning and women health and will also look at the efforts that the government is taking towards making the citizen aware of these policies and planning, i.e. the campaign that the government is implementing in order to make the citizens of that area aware about the health facilities that are being provided.

In the *second* chapter –**Modernization, Fertility pattern and contraceptive use of women**: I focus on the modernization of India and Bihar, especially in the field of education and economic development etc. In other words this chapter mainly studies the relationship between the variables of modernization such as education and economic development which refers to the income of the family also income of the women themselves. This chapter will also focus upon the modernization in the field of family planning methods that are happening i.e. the new methods of family planning that have evolved and whether these innovation have brought about changes in the women attitude and behaviour in Bihar Therefore, this chapter mainly focuses upon the relation between the variables of modernization such as education, economic development of the family as well as women at same time also focusing on the technological advancement in the field of family planning and contraceptives and their effect on the behavioural pattern and attitude of women in accepting the family planning method. Thus, this chapter focuses the co-relationship of these variables of modernization and the fertility pattern of women of Bihar. Another aspect that this chapter focuses on is the socio-cultural factor and its link with fertility rate and also effect on women's contraceptive use in India and mainly in Bihar.

In the *third* chapter- **Modernization, health services and fertility of Muslim women; Madhubani and Patna districts of Bihar**: this chapter now focuses on studying 'women' in general to studying Muslim women, and their attitude towards family planning and contraceptive use in relation to the health infrastructure, and women fertility pattern in relation to modernization agencies like education of women and availability of modern health infrastructure and facilities in these two districts. So this chapter basically this chapter focuses its study upon Muslim women and their fertility pattern and attitude towards family planning, as Bihar has large Muslim population 13,722,048 persons according to the census of India 2001 and with 6,660,140 females showing a vertical growth it is interesting to study these Muslim women. But here as well the focus will be on Muslim women of the two districts of Patna and Madhubani. And it on these study that I will find whether the agents of modernization does have an effect on Muslim women's attitude and behaviour pattern towards family planning methods and also to find as to what are the

differences between health infrastructure provided by the government in these two districts under the same government and then to deduce as to how far better health infrastructure does have an effect on the acceptance of family planning methods among these Muslim women. So basically this chapter tries to analyze as to how age, religion are interrelated to fertility rate of women? And as to what extent Islam play in women's determining their contraceptive usage.

Chapter 1

Health Policy, Health Services and Family planning. The case of Bihar

Health policy and Family Planning in India

Population growth has always been a major concern for India, as a result of which the government has a long and explicit history in population policy. The government of India began one of the earliest national, government-sponsored family planning efforts in the developing world. At that time, the government of India assumed that the annual population growth rate which was below 1.3 percent (1941-51) would continue to grow at the same rate. But this did not happen and the growth rate was much greater in the later decades. Also at that point the government believed that just like any developed country India's population growth will also drop with the increase in the standard of living and industrialization. In the 1950s, existing hospitals and health care facilities made birth control information available, but there was no aggressive effort to encourage the use of contraceptives and limitation of family size. By the late 1960s, many policy makers believed that the high rate of population growth was the greatest obstacle to economic development.

This thought led the government to employ goal- oriented or target oriented policies. The first goals for the Indian health services were suggested by the Bhore committee (1946) the recommendations of which laid the foundations of the health services in the country. These included both short-term program for two five year plan periods and a long term program for a distant future... (Nayar2011)[13]. In 1966, a full-fledged department of family planning was established within the central ministry of health and family planning programme was made 'centrally-sponsored', indicating that it would be entirely funded by the central government. Financial incentives were also introduced for sterilization acceptors, and sterilization was made target- oriented.

[13] Gaps in Goals: The History of Goal-setting in Health Care in India: K.R.Nayar (Oman medical journal; 2011); Vol, 26.

Furthermore government kept on trying to curb the menace of growing population through various policies in the five year plans on the same footing of target oriented efforts, and even the law on abortion was liberalized in India by the Medical Termination of Pregnancy Act of 1971 and came into force from April 1972. The major concern of the Committee that was appointed to examine the abortion situation before the law was passed, was said to be the health hazards of illegal abortions to which women resorted to. The Committee estimated 3.9 million abortions per year whereas the International Planned Parenthood Federation (IPPF) had estimated these to be 5 million. The law provides abortions virtually on all conditions, and is one of the most liberal laws in the world. The figures of March 1988 show that there were as many as 6,126 medical institutions approved for abortions. In addition, there are several private practitioners who provide abortion services (Karkal, 1991)[14]. But the black-mark incident of the government enforced sterilization during emergency (1975-77), which filled people's mind towards these family planning policies with antagonism, changed the way the government handled these population policies and made it more welfare oriented. During the 1980s, an increased number of family planning programs were implemented through the state governments with financial assistance from the central government. In rural areas, the programs were further extended through a network of primary health centers and sub centers. By 1991, India had more than 150,000 public health facilities through which family planning programs were offered. Four special family planning projects were implemented under the Seventh Five-Year Plan (FY 1985-89). One was the All-India Hospitals Post-partum Programme at district- and sub district-level hospitals. Another program involved the reorganization of primary health care facilities in urban slum areas, while another project reserved a specified number of hospital beds for tubal ligature operations. The final program called for the renovation or remodeling of intrauterine device (IUD) rooms in rural family welfare centers attached to primary health care facilities.

[14] Abortion Laws and the Abortion Situation in India: Reproductive and Genetic Engineering', Journal of International Feminist Analysis, Vol.4, No. 3. By Malini Karkal

Despite these developments in promoting family planning, the 1991 census results showed that India continued to have one of the most rapidly growing populations in the world. Between 1981 and 1991, the annual rate of population growth was estimated at about 2 percent. The crude birth rate in 1992 was thirty per 1,000, only a small change over the 1981 level of thirty-four per 1,000. However, some demographers credit this slight lowering of the 1981-91 population growth rates to moderate successes of the family planning program. In financial year (FY) 1986, the number of reproductive-age couples was 132.6 million, of whom only 37.5 percent were estimated to be protected effectively by some form of contraception. A goal of the seventh plan was to achieve an effective couple protection rate of 42 percent, requiring an annual increase of 2 percent in effective use of contraceptives. One reason for the inefficiency of these well intended but miscalculated policies could be that largely the programs had been characterized by an ad-hoc nature offering a one-shot solution to the problem of the high rate of fertility. It was IUDs in the 1960s, vasectomy in the 1970s and tubectomy in the 1980s, where administrators, family planning workers and politicians put all their efforts in achieving the stipulated target by any one method. Thus, these programs which needed a delicate touch of social nurturing became a game of sheer numbers (Govt. of India, 1978[15], 1982[16]; Wadia, 1984[17]).

The heavy centralization of India's family planning programs at times prevented consideration of regional differences. Centralization is encouraged to a large extent by reliance on central government funding. As a result, many of the goals and assumptions of national population control programs do not correspond exactly with local or regional attitudes toward birth control by the people. Thus, lack of holistic approach, totally government based program with little involvement of local people; targeting only women for contraception; poor counseling; excessive focus on target achievement as an end in itself rather than as a guide; poor follow up services; and need based programs can be said to be one of the few reasons for the failure of the

[15] Government of India; Central Calling, March 1978; Department of Family Welfare.

[16] Government of India, 1982, Yearbook 1980-81, Ministry of Health and Family Welfare

[17] Wadia, A. B., 1984, —The Family Planning Programme in India: The Non-governmental Sector‖, The Journal of Family Welfare.

success of earlier policies. Especially, since the involvement of civil society has always yielded positive results for any government development programmes programme.

As at the Jamkhed Project in Maharashtra, which has been in operation since the late 1970s and covers approximately 175 villages, the local project directors noted that it required three to four years of education through direct contact with a couple for the idea of family planning to gain acceptance. Such a timetable was not compatible with targets. However, much was learned about policy and practice from the Jamkhed Project. The successful use of women's clubs as a means of involving women in community-wide family planning activities impressed the state government to the degree that it set about organizing such clubs in every village in the state. The project also serves as a pilot to test ideas that the government wants to incorporate into its programs. Government medical staff members have been sent to Jamkhed for training and the government has proposed that the project assume the task of selecting and training government health workers for an area of 2.5 million people.

Another important regional family planning program is the Project for Community Action in Family Planning. Located in Karnataka, the project operates in 154 project villages and 255 control villages. All project villages are of sufficient size to have a health sub center, although this advantage is offset by the fact that those villages are the most distant from the area's primary health centers. As at Jamkhed, the project is much assisted by local voluntary groups, such as the women's clubs. The local voluntary groups either provide or secure sites suitable as distribution depots for condoms and birth control pills and also make arrangements for the operation of sterilization camps. Data provided by the Project for Community Action in Family Planning show that important achievements have been realized in the field of population control. By the mid-1980s, for example, 43 percent of couples were using family planning, a full 14 percent above the state average. The project has significantly improved the status of women, involving them and empowering them to bring about change in their communities. This contribution is important example of civil society intervention, to overcome especially when we see the way in which the

deeply entrenched inferior status of women in many communities in India negates official efforts to decrease the fertility rate.[18] The fate of family planning program is well-known which went through rough roads on a number of occasions. Adoption of a stringent control rather than welfare strategy, excessive use of coercion to achieve targets, use of methods with perceptible side effect, thrusting targets on the personnel and disturbing the integrated working of the health services for intensive drives etc. are all reasons which created a negative stereotype regarding the program. Failure in achieving the goals of National Research Registration (NRR) 1 could be attributed to the social determinants which the techno-centric program could not address.

Paradigm shifts took place in India's population policies from the earlier methods-mix target approach to the target free approach (TFA) in April 1996, subsequently renamed as the community's need assessment (CNA) approach in late 1997. Then shifted to what have duly being emphasized as the reproductive and child health (RCH) quality services package. Following the International Conference on Population and Development (ICPD) held at Cairo, Egypt in 1994, a major review was undertaken with the support of the World Bank and other agencies in 1994-95. Discussion on the need for a population policy continued and a revised population policy was prepared in March 1999 and as an outcome, method-specific contraceptives targets were abolished and the emphasis shifted to decentralize planning at district level based on community need assessment, and implementation of programs aimed at fulfilling unmet needs. This approach eliminated nationwide mandated targets for contraceptive acceptance, but continues to allow for locally determined targets at the community level, where grassroots workers were assigned targets for their service areas after assessing the needs of client (Ashford, 2001)[19].

A fresh draft of the National Population Policy (NPP) was prepared and was adopted by the government in 2000. Where the target-driven approach was only discontinued

[18] http://www.mongabay.com/history/india/indiapopulation and family planning policy population projections.
[19] Ashford, L. S., 2001, —New Population Policies: Advancing Women's Health and Rights. Population Bulletin, PRB, Vol. 56, No. I.

and largely the reproductive child health (RCH) philosophy was advocated for the health workers.

The National Population Policy of 2000 is one of the landmarks in the efforts to improve the maternal health as well as all round health of the people of India as it mentions:-

'In the new millennium, nations are judged by the well-being of their peoples; by levels of health, nutrition and education; by the civil and political liberties enjoyed by the citizen ,by the protection guaranteed to children and by provisions made for the vulnerable and disadvantaged. The vast number of people of India can be its greatest asset if they are provided with the means to lead a healthy and economically productive life' (A.R.Nanda, 2010)[20].

This policy is guided by important considerations of human development, equity and human rights. And this policy also sees a remarkable shift from the earlier Indian population policy that was demographically driven and target oriented to be focusing more on reproductive health of a women. Also one can see a heavy influence of the Alma Ata declaration of, 1978 when it emphasizes on establishing a strong community based primary health-care system that delivers effective reproductive and health services to women and children. The policy also reflects its commitment to the ICPD declaration by the government when it views reproductive health from the perspective of an individual's right to access health information and services, and make decision based on informed choice. The two important demographic goals of the National Population Policy (2000) are achieving the replacement fertility level (TFR 2.1) by 2010 and a stable population by 2045. The states were also directed to prepare State specific Population Policies. Thus, National Population Policy, 2000 is more humane and effective development policy aimed at improving overall quality of life. It is more gender-sensitive and incorporates a comprehensive holistic approach. And Since ICPD, the central and state governments have initiated many programs to

[20] National population policy 2000: what it can achieve realistically by A.R.Nanda (essay from the book handbook of population and development,2010) pg:72-80

slow the population growth, as the National Commission on Population[21] (constituted in May 2000 under the Chairmanship of the Prime Minister of India) is another attempt by the government to provide overall guidance for population stabilization by promoting synergy between demographic, educational, environmental and developmental programs. Recently, Government of India has constituted five Expert Groups for studying the population profile of the States of Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh, and Orissa to identify weaknesses in the health delivery systems and to suggest measures to improve the health and demographic status of these States[22]. Another important initiative for population stabilization is constitution of Janasankhya Sthirata Kosh (JSK) (Population Stabilization Fund - a public-private-partnership model) to provide proper guidance and information about the reproductive health care including for adolescents with a corpus fund of Rupees 1 billion.

So, it is apparent the government of India is leaving no stone unturned for the success its population policy. And it was this post-Cairo realization that later laid the foundation of National Rural Health Mission (NHRM) which was the government of India launched in April 2005, and brought all programs including Reproductive and Child Health (RCH) and population stabilization under one umbrella. The NRHM seeks to provide universal access to equitable, affordable and quality health care, which is accountable at the same time responsive to the needs of the people, thus, the government took a big step towards decentralizing the health policy so that it is feasible to reach to the people especially living in rural India. And it is this process of decentralization that a multi-level health service structure was formed in India, so that the benefits could reach to the people at the grass-root level. So in India, family planning services are available not only without cost, but financial incentives, is provided for the acceptors of methods such as sterilization and IUD. Besides individual medical practitioners and other government and private centre's, these

[21] The National Commission on Population has been re-located from Planning Commission to the Ministry of Health and Family Welfare for ensuring comprehensive and multi-sectoral coordination of Planning and implementation between health and family welfare on the one hand and the schemes of the related Departments on the other

[22] India. 2009. Publication Division. Ministry of Information and Broadcasting, Government of India

services are provided through the government funded primary health centre's (PHCs) and sub-centre's in rural areas, and health posts and urban centre's in urban areas.

Structure of Health services in India

Though a paradigm shift has taken place in the vocabulary used in population policy and national health policy and programme documents, it seems it will take a long time to bring about real paradigm shift in the thinking behind the word, and the provision of the infrastructure to realize the ideals. As the Health and Family Welfare Department is committed to provide preventive and curative Health Services to the people of the State through a good net-work of medical institutions at three levels such as Primary health centers (PHCs), Community health centers (CHCs) or referral hospitals and hospitals attached to state level medical colleges or specialized hospitals. PHC's are the corner-stone for the health support for rural people along with its sub-centers. It is equipped with basic instruments and personnel, like a Medical Officer, Block Extension Educator, a female Health Assistant, a compounder, a driver and laboratory technician. It is equipped with a jeep and necessary facilities to carry out small surgeries. And it covers a population of around 100,000 spread in around 100 villages. It is maintained by the state government under the minimum need programme and basic minimum services programme. And at present fourteen paramedical and other staff support a Medical Officer. A PHC acts as a referral unit for 6 Sub Centers. It has 4 - 6 beds for patients. The activities of Primary Health Centers involve curative, preventive, primitive and Family Welfare Services. There are 23236 PHCs functioning as on September 2005 in the country as compared to 23109 in September 2004[23]. But there are also many sub-centers which cater to a population of 5000 people and 3000 in hilly regions comprising of a male and a female multi-purpose services provider and provides simple immunization and family planning services. Furthermore there are community level health centers (CHC) under which four primary health centers are stationed and caters to a population of about 1, 20,000 in plains and 80,000 in hilly region. These are better equipped with 60 beds and specialist care in medicine, Obstetrics and Gynaecology,

[23] http://india.gov.in/citizen/health/primary_health.php

Surgery and Paediatrics. Secondary level of health centres are generally the first level of referral services, the Hospitals at Sub-Divisional level and District Hospitals serve as secondary level of health care system and give support to the services being provided in the Primary Health Care System. Since CHCs in a way also provide specialist services, these can be considered as a part of the secondary level health care system. Hospital Services at the secondary level play a vital and complementary role to the Primary Health Care System and together form a comprehensive district based health care system. A health care system based on PHC cannot exist without a network of hospitals with responsibilities for supporting primary care and hospital care. Both are essential part of a well-integrated health care system in India. Tertiary level health centers are generally provided by the specialized hospitals and hospitals attached to State Medical Colleges. These institutions besides providing support to the secondary level health care system are expected to carry out research and manpower development for the health services of the State. But apart from these the states also have Family Planning centers that cater to the family planning needs of the urban sector.

Bihar: An Overview of Population Trends

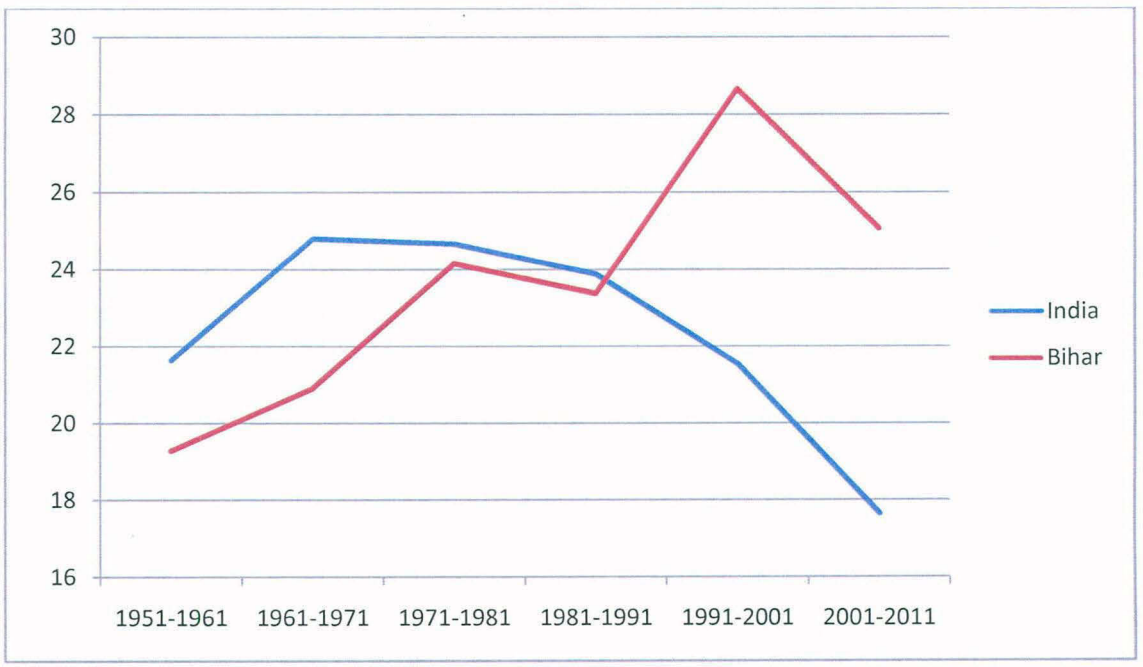
The ideology of birth control and small families, propagated through the family planning programme and the mass media, has taken root among the people in large parts of the country which are today set on a steady path of population decline but the agenda is still unfinished in those region were the fertility is still high and there is a continuing high birth rates (Ramasubban, 2010)[24]. And Bihar is essentially one such region.

Of India's 28 states and 7 union territories, Bihar is arguably one of the poorest and least developed. Lacking effective governance, the state is characterized by widespread poverty, high unemployment, high illiteracy, and limited health care. According to the 2001 census, the population of the state of Bihar is 82,998,509 persons, consisting of 43,243,795 males and 39,754,714 females. The state accounts

[24] Fertility and epidemiological transitions: cracks in India's health policy: Radhika Ramasubban (handbook of population policy)

for 8.07% of the country's population (1,028,737,436) currently (2007), India's population is estimated at 112 crore while that of Bihar is estimated at 9.2 crore. The population of the state is predominantly rural, with 89.5% of the population (74,316,709 persons) residing in rural areas. According to the 2001 census, 273,836 persons were living in institutional households, against 170,412 persons in 1991. Further, 42,298 persons were houseless in the 2001 census, against 35,355 houseless persons in the 1991 census. If we look at the decadal growth of Bihar (see graph below) the population of Bihar grew From 19.29 in 1951-61 to 20.91 in 1961-71, from 24.16 in 1971-81 to 23.38 in 1981-91, and from whopping 28.67 to 25.07. And now Bihar ranks as the third most populous state in the country rising from the fifth position in 1991. Even the State has population density of 881 per sq. km. (as against the national average of 312). Thus, state of Bihar has an area of 94,163 sq. km. and a population of 82.9 million. There are 9 divisions, 38 districts, 101 sub divisions, 533 blocks and 45,098 villages[25].

The below graph clearly show Bihar's decadal growth with respect to India.



Source: Census of India 2011By Ministry of Home Affairs, Government of India

[25] http://www.popfound.org/bihar1.pdf

Over the 1990's several studies have addressed various aspects of sexual and reproductive health in India in depth, however, very few studies focuses on the state Bihar. (Jejeebhoy2007).[26] Though we can extrapolate the studies of different settings to Bihar, but one can not overlook the fact that the dearth of evidence focused specifically on Bihar has rendered it difficult to study the various levels, patterns and aspects of sexual and reproductive behaviour health of people in Bihar. Similarly the contextual and socio-cultural factors impending sexual and reproductive health of people have also not been understood in-depth. As a result the strategies and action to enhance and improve the sexual and reproductive health even in this 21st century remains generic and uninformed about the special needs of women and men in these settings. Despite the fact that Bihar is the third most populous and second most densely populated state in India, even though the demographic trend of Bihar is more alarming than any other state of India due to its economically backwardness and high population growth rate. The table below just shows the demographic pattern in Bihar with comparison to India in the last to census.

Serial no.	India / state	Population 2001			Percentage growth rate		Sex ratio female/1000	
		persons	male	females	1981-1991	1991-2001	1991	2001
1	India	1102,70,152,47	53,12,77,078	49,57,38,169	23.86	21.34	927	933
2	Bihar	8,28,78,796	4,31,53,964	3,97,24,832	23.38	28.43	907	921

Source: census of India of respective years[27]

So, Bihar exhibits poor progress over much of the past two decades (barring the improvement in the sex ratio of female per thousand males). As there is high dependency on agriculture (The state has the highest proportion of rural population with almost 90 per cent living in rural areas) and wide-spread poverty with significant proportion of its population living below the poverty line, about 49 per cent of the state's rural population lives below the national poverty line. (NSS2007)[28]. While there has been a distinct policy shift and input into the development of the state in the last two years, Bihar remains a

[26] Jejeebhoy, Shireen: Economical and political weekly, December 1, 2007.
[27] Cited in Prasad, Ankit: Social welfare and social action.(http://books.google.co.in/)
[28] National Sample Survey Organisation,2007

region characterised with rigid multiple social divisions, and one of the lowest development indicators of health, education, per capita income and infrastructure in the country. According to 2001 census Bihar has the lowest literacy rate in the country with only 48 percent against the national average of 65 percent. Rural literacy of Bihar is just 44 per cent. And of particular concern is the lowest female literacy level in the country at just 33 per cent and only 28 percent in rural areas. Thus one can see that literacy rate both of the general population and especially women aged 15-49 years in particular is far less (only 38percent) than that of the country (59percent) or from any other part of the country. It is the only state where primary enrolment fell between 1993 and 1999. 80 percent of the bottom quintile heads of household have no education at all. Even two indicators suggesting socio-economic conditions such as type of houses and ownership of television seems to be in the lower level in Bihar as only 20 percent of the population of Bihar resides in a '*pucca*' house compared to all India average of 41 percent, and only 18 percent of houses in Bihar own a television compared to national average of 44 percent. And if we turn our focus towards the health scenario as we have seen in previous chapters that Bihar only presents a gory picture of the health condition and infrastructure, with lower sex-ratio, high maternal and infant mortality rate, household size is larger than any other state and it is interesting to note that Bihar is the only state which has and a very poor health infrastructure Bihar no wonder presents one of the worst living condition to its population. As fewer than one in three rural women in this state live in a village with primary health centre or sub-centre's (compared to 45 percent all India) and fewer than two in five live in villages with middle school or post-office (compared to all India of 45 percent and 43 percent respectively) [IIPS and ORC Macro,2001][29]. These data just present the poor socio-economic condition of the state of Bihar which goes on to affect the fertility behaviour of women. Bihar has a very high total fertility rate (3.9 children per woman according to NFHS-3 in 2005-06) in comparison to other states and country fertility rate (2.7 children per woman). Except for Infant Mortality Rate (IMR), which is only marginally higher in Bihar than in India, the demographic situation of Bihar is extremely difficult. On the socio-economic front too, Bihar lags far behind the other states due to its high fertility, educational backwardness, and unemployment.

[29] As cited in Jejeebhoy, Shireen. Economical and political weekly; December 1, 2007.

Considering the literacy scenario is the worst in the country among boys, only 14.6 percent in urban areas and 14.2 percent in rural areas have completed primary school, and only 14.8 percent of urban girls and 8.6 percent of rural girls have done the same. And as Healthcare provision in rural areas is limited, many self styled doctors or informal rural medical practitioners or rather known as 'jhola chap doctors', traditional birth attendants (called *dais*), and some traditional healers have emerged in Bihar. Only 11 percent of children aged 12-23 months have been fully immunized against childhood vaccine-preventable diseases by the government's immunization program. Knowledge of reproductive health and related issues of sexuality is extremely limited.

Though in the NPP 2000 the states were directed to prepare State specific Population Policies.; Bihar state does not have state specific population policy and most of program and policies are still guided by the Central government and National Population and Health Policy[30]. It was reported that Bihar would have a "new population policy which is being framed in collaboration with United Nations Population Fund" but it is yet to be formulated. Since the State specific initiatives were not supportive in Bihar, it played a crucial role in poor performance of the state in term of demographic achievements because of various reasons. As a result, the family planning program was unable to reach the hearts and minds of the people. And presently Bihar is home of various diseases like kala-azar, malaria, Falaria, tuberculosis, blindness etc and it is because of the persistence of such diseases that government of Bihar has various health policies running simultaneously under its belt which are mostly central policies only, such as Routine Immunisation, Iodine Deficiency Disorders, Leprosy Eradication, National TB Control Programme, Blindness Control Programme, Falaria Control Programme, Anemia Control Programme, Malaria - Kala Azar Control Programme, Vitamin - A Programme, National Rural Health Mission (NHRM).

[30] Anant Kumar and Jay Satia; POPULATION STABILIZATION IN BIHAR, INDIA: Situational Analysis and Future Directions. Presented to Population communication, Pasadena, California

Health Status and Health Services Bihar

The health status of its population reflects the socio-economic development of a state. Health status is shaped by a variety of factors -level of income and standard of living, housing, sanitation, water supply, education, employment, health consciousness and personal hygiene, and the coverage, availability, accessibility, acceptability and affordability of health services. The poor health status of states is a product of inadequate nutrition, lack of protected water supply, and overcrowded and insanitary housing conditions. These conditions are conducive to deficiency diseases, airborne diseases, and waterborne diseases, which dominate the morbidity and mortality pattern in less developed regions. And the health of people of Bihar unfolds one sad story. Aforesaid charts just present the grim picture of the state's health condition of the people:

S. No.	Item	Bihar (in %)	India (in %)
1	Total population (Census 2001) (in millions)	82.9	1028.61
2	Decadal Growth (Census 2001)	28.43	21.54
3	Crude Birth Rate (SRS 2008)	28.9	22.8
4	Crude Death Rate (SRS 2008)	7.3	7.4
5	Total Fertility Rate (SRS 2007)	3.9	2.6
6	Infant Mortality Rate (SRS 2008)	56	53
7	Maternal Mortality Ratio (SRS 2004 - 2006)	312	254
8	Sex Ratio (Census 2001)	919	933
9	Population below Poverty line	42.60	26.10
10	Schedule Caste population (in millions)	13.05	166.64
11	Schedule Tribe population (in millions)	0.76	84.33
12	Female Literacy Rate (Census 2001)	33.1	53.7

Although the health infrastructure in the state is improving, it needs further improvement considering the wide variations in coverage at the district level. There are 10, 793 health centers in Bihar, of which 533 are rural Primary Health Centers (PHCs), 69 urban PHCs, 8858 sub-centers, 1243 additional PHCs, and 70 Community Health Centers (CHCs) or referral hospitals (Annex 2). In total 105 PHCs have been strengthened with three staff nurses each to make them functional for round the clock every day of the year works, 70 CHCs are functioning on 24/7. A total of 76 facilities have been made operational as first referral units (FRUs) at district and sub-district levels. No districts have functional Mobile Medical Unit (MMU). And Presently there are 23 Urban Family Planning Centers, 64 Urban Revamping Centers and 52 Post Partum Units are functioning in the State of Bihar alone(NFHS-2)[31].

But still they are much less than the desired number needed for the development and welfare of the people or rather to maintain a particular standard of healthy living of a citizen. This one can reason with a very low number of infrastructures available. The following charts which show huge numbers in the shortfall of medical personnel from that of required in Bihar just validate this point:-

[31] National Family Health Survey (NFHS-2)1998-1999. Bihar., Mumbai: International Institute for Population Sciences, 2001,p.20

Item	Required	In position	Shortfall
Sub-centre	14959	8858	6101
Primary Health Centre	2489	1641	848
Community Health Centre	622	70	552
Multipurpose worker (Female)/ANM	10499	9127	1372
Health Worker (Male) MPW(M) at Sub Centers	8858	1074	7784
Health Assistant (Female)/LHV at PHCs	1641	479	1162
Health Assistant (Male) at PHCs	1641	634	1007
Doctor at PHCs	1641	1565	76
Obstetricians & Gynaecologists at CHCs	70	21	49
Physicians at CHCs	70	38	32
Paediatricians' at CHCs	70	17	53
Total specialists at CHCs	280	104	176
Radiographers	70	15	55
Pharmacist	1711	439	1272
Laboratory Technicians	1711	135	1576
Nurse/Midwife	2131	1425	706

As well as that of the number of clinics and hospitals available in Bihar are way short than any other state in the country. And as one of the major reasons for inadequate family planning service is the weak health infrastructure. The shortfall in facilities compared to those required according to population norms were 41% for sub-centers, 32% for primary health centers and 79% for community health centers in Bihar.

Health Institution	Number
Medical College	8
District Hospitals	25
Referral Hospitals	70
City Family Welfare Centre	12
Rural Dispensaries	366
Ayurvedic Hospitals	11
Ayurvedic Dispensaries	311
Unani Hospitals	4
Unani Dispensaries	144
Homeopathic Hospitals	11
Homeopathic Dispensary	179

Data source: RHS Bulletin, March 2008, M/O Health & F.W., GOI[32]

These data(charts) clearly show that in Bihar, there are substantial gaps in sub-centres, primary health centres, and a very large gap in community health centres along with shortage of manpower, drugs and equipments necessary for Primary Health Care and woefully inadequate training facilities. The State has a shortage of 1210 health sub-centres, 13 Primary Health Centres (PHCs), and 389 Community Health Centres. Besides, out of the 38 districts, only 24 districts hospitals are currently functional.

Trained health human resource is another important concern for the State. At present, on an average 5 doctors are in position for every 100,000 population in the state. There are district wise differences in availability of doctors. While 49 doctors are available per 100,000 population in Khagaria and 38 in Gopalganj, there is only one doctor available per 100,000 populations in Arwal district. Except Khagaria and Gopalganj, no district has more than 18 doctors per 100,000 populations. The

[32] http://www.mohfw.nic.in/NRHM/State%20Files/bihar.htm

situation is even more acute for staff nurses. There are only 2 Grade a staff nurses in position for every 100,000 population. The same pattern repeats in the availability of Auxiliary-Nurse Midwives (ANMs) who staff sub-centers. The appointment of community-based volunteer workers (Accredited Social health Activists ASHA) has been much closer to target but their training, efficiency and involvement is a matter of concern. There is a shortage of 3376 Medical officers and 19945 Auxiliary Nurse Midwife (ANM). The number of PHCs adequately equipped with equipments stands at only 6.2% compared to the national figure of 41.3%. There is also inadequate and erratic availability of essential Drug supplies, ORS packets, weighing scales, etc.

Although things are improving under NRHM Program, it will take time to show its results considering the poor infrastructure and manpower shortage in the State. There is an increase in outpatients and institutional deliveries and several public-private-partnerships (PPP) interventions have been implemented to increase the family planning services and contraceptive use. Although the Janani Suraksha Yojana (JSY) assistance is received by lower percentage of women (only 73.6 % villages have any beneficiary of JSY), DLHS II and III survey show that there is 8.9 % increase in institutional deliveries in the State. The NRHM Bihar State report shows increase in institutional delivery in the State with total 1.05 million JSY beneficiaries (institutional delivery increased to 28% from 19%)

As per the 11th Plan approach paper of Government of Bihar, there is only one sub-centre for 10,000 populations. However, according to the national norms there should be at least one sub- centre for 5000 population. Moreover, Bihar has one Primary Health Centre for one lakh population where ideally there should be one PHC for every 30,000 population.

Not surprisingly, given the quality of public health facilities, the NSSO revealed a drastic decline in the share of public health facilities in treatment of ailments in both rural and urban areas. This lack desired in fact minimum degree of health services and facility of Bihar does effect the everyday health condition of its citizen; as a state predominated by agriculture and extreme poverty driven the people do not have money to invest on health and in such situation when the government aids are also

not provided properly one can only think of the grim health situation of the people of Bihar. One such situation is the maternal health of women.

Family planning performance in Bihar

Despite the improvements in certain indicators, policies, programs, investments by the government, and donor agencies, population stabilization initiatives in Bihar state are a serious demographic challenge and a cause of concern for the social and economic well being of the State. One of the several root causes of the delay in population stabilization and fertility reduction in the State has been the changing national population policies towards family planning programs. On several occasions, goals were established but not met, resulting in subsequent revisions.

Bihar holds the fourth highest rate of maternal mortality in the India 371 per 100,000 live births which is above the national level of 301. The high level of MMR can be attributed to low level of institutional deliveries (23.2% compared to national figure 41%), high level of anaemia among women (63.4% compared to national figure of 51.8%), low provision of iron and folic acid tablets to ante-natal cases (8.1% compared to national figure of 20.4%), and low level of full ante-natal coverage (5.4% compared to national figure of 16.4%).

As per NFHS-3, mothers who had at least three ante-natal care visits for their last child were a mere 16.9% in comparison to the national average of 50.7%. In fact, the majority of women do not receive any ante-natal care whatsoever (66%). Births attended by skilled personnel were also low at 30.9% in comparison to the national average of 48.3%.

Nutrition levels of pregnant women are troubling. For only 30 percent of their last births, did mothers receive iron and folic acid supplements (IFA) and for only 10 percent of the births did mothers consume IFA for the recommended 90 days or more.Key indicators related to family planning show the poor health status of maternal health in Bihar. Roughly 51.5% of the girls in the State get married below the age of 18 years compared to the national figure of 28%. The proportion of

couples practicing any method of contraception is 34% against the national figure of 53.9%.

It is this dismal condition of the health scenario of the state that has leads the Government of Bihar to identify the following steps in improving performance of family planning program[33]

- Need for more Skilled manpower
- Infrastructure needs strengthening: more so in rural areas
- Improvement in counseling and expand informed choice of methods
- Regular contraceptive supply
- Improve quality of services
- Reduce seasonality in work as operations are mostly conducted in specific months / seasons

It is after this that several actions have been taken in Bihar including preparation of district family planning action plans, training of service providers for IUD insertion and Non-Scalpel Vasectomies (NSVs), population education in school textbooks and steps to strengthen IEC for family Planning. The state has also formed the population council at state level and coordination committees at various levels. To activate the service delivery system, there are performance-based awards for district magistrates and civil surgeons, block levels and village level health volunteers (ASHAs) which are top performers. There are proposals to increase incentives to ANMs for IUD services as well as improve community-based distribution. The plans are for public-private partnership for FP service delivery. In partnership with UNFPA, programs for adolescent sexual and reproductive health services in school as well as out-of-school settings are being implemented. The David and Lucile Packard Foundation has

[33] C. K. Mishra (2010). Family Planning Strategies for Population Stabilization and Sustainable Development: Bihar 2010; Presented at the National Consultation on Repositioning Family Planning. New Delhi 5th May 2010. www.mohfw.nic.in accessed on August 20, 2010.

supported an NGO, Janani, to promote private sector service delivery through social franchising as well as expanding clinical network for FP services.

There are incentives to eligible poor couples from backward districts that fulfill responsible Parenthood Practices: to promote delayed marriage, spacing of children and celebration of birth of girl child. There are also several government schemes to empower women including reservation for women at local government level. Population Stabilization Fund of India held motivational meetings for the field level staff for promoting IUD and sterilizations in low performing districts. More than 95% of staff has attended these meetings. The outcome is positive as from 40,000 IUDs annually, 214,000 IUDs had been inserted by the end of 2009-10.

The David and Lucile Packard Foundation has implemented leadership development program in Bihar and a large number of government and NGO have been developed. This can serve as an important resource for the state. Recent initiative by the Bill and Melinda Gates Foundation to improve family health in collaboration with CARE is another opportunity. Presently, the program focuses on eight selected districts (Patna, Begusarai, East Champaran, West Champaran, Samastipur, Khagaria, Gopalganj, and Saharsa) and is likely to be extended to all districts. Because of these initiatives and state government's increased interest, number of family planning sterilizations has increased considerably from 88126 in 2004-2005 it has reached 404741 in 2009-2010.

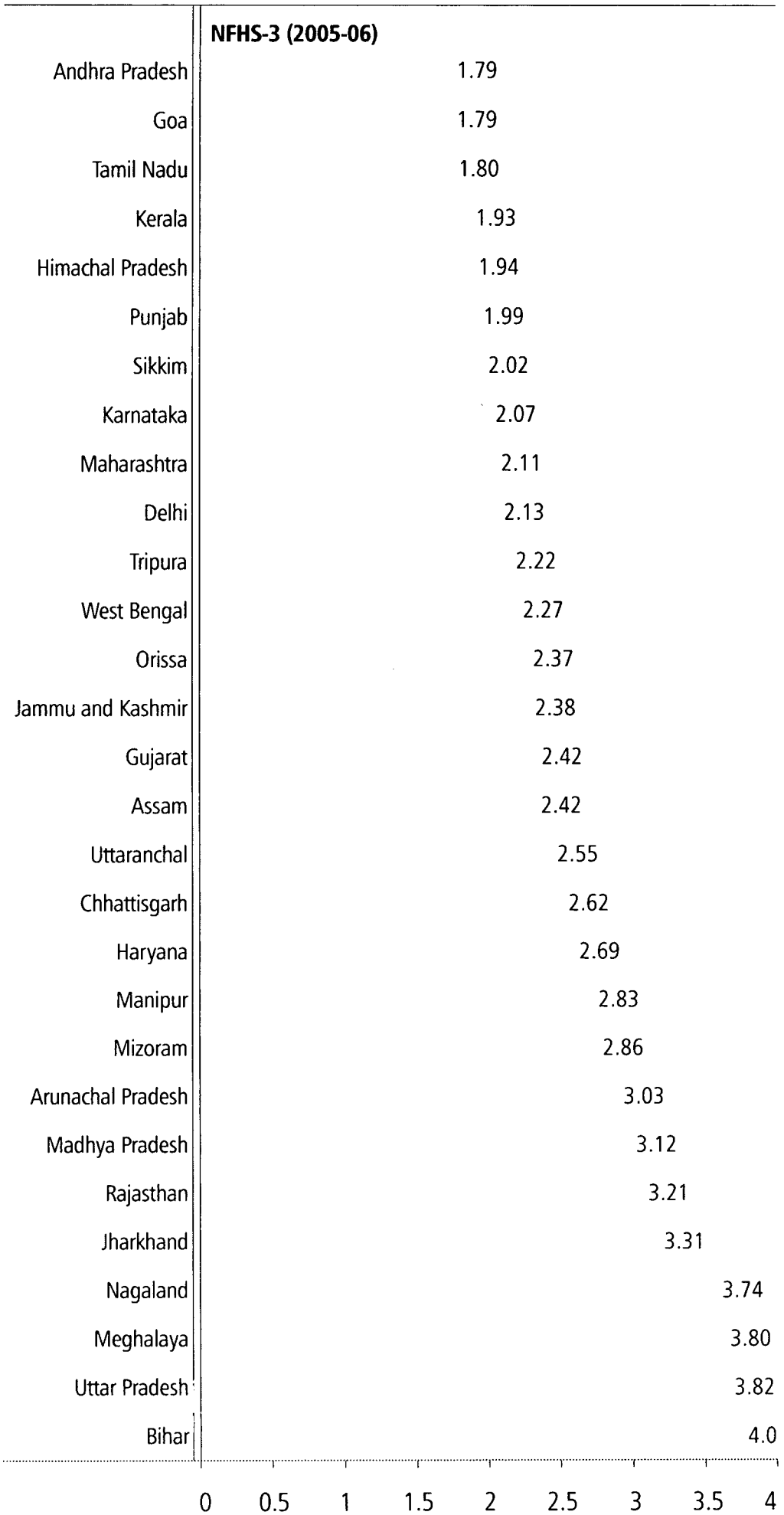
Although the government of Bihar has recently taken several steps to strengthen family planning program, the poor performance of Bihar state in population stabilization initiatives are primarily because of lack of political commitment and shared vision, and weak leadership of program. In the past and in the present, the state, its leadership including NGOs and civil society has not ascribed the importance to population stabilization. Most of the initiatives taken in this direction in the state are because of the private donors and central government initiatives.

Thus, the poor health infrastructure and non-focused family planning program are likely to lead to persistently high fertility regime. It would be improper to have a

unilinear reasoning for this complex problem of population welfare, as many low level socio-economic development as well as poor performance of government sponsored family planning program also plays a major role. Bihar falls almost to the bottom of the list of development in India with its low levels of education, low age at marriage; poverty, gender disparity, etc have all resulted in modest declines in infant and child mortality and have contributed to maintaining high fertility. As poor health status, high infant and maternal mortality coupled with high fertility is a vicious cycle, which needs to be broken by focusing at all level of development. Thus the fertility pattern behaviour of women and the effect of various socio-economic as well as cultural indices on women's fertility are also important to study in order to fully understand the reason for the high population growth in a society. It is this aspect that I look into in my next chapter.

FERTILE GROUNDS

State-wise total fertility rates



Chapter two

Modernization, Fertility pattern and contraceptive use of women

In 1983, the goal of the country's National Health Policy was to have a replacement value total fertility rate of 2.1 by the year 2000, which unfortunately the government could not fulfill. And one of the primary goals that government put forth in the NPP 2000 was to reduce the total fertility rate to 2.1 by 2010. As the total fertility rate in India remains at the high number of 2.62(census 2011), that goal again was not achieved. Despite the fact that fertility continues to decline in India from 3.4 (NFHS-1) to 2.7 (NFHS-3), but it is still well above the replacement level of 2.1. Though India could not achieve the replacement level of fertility of 2.1, many of its state did, as in a heterogeneous society of ours even fertility rate varies greatly from one place to another.

Variation in fertility rate among states in India

Ten states with total of 35 percent India's population, like Tamil Nadu, Andhra Pradesh, Goa, Sikkim, Himachal Pradesh, Punjab, Delhi, Maharashtra, Karnataka and Kerala have already reached below replacement level of fertility and some states six states comprising of 20 percent of India's population like Tripura, west Bengal, Orissa, Gujarat, Assam, and Jammu and Kashmir have almost reached the below replacement level with fertility of between 2.1 and 2.4. whereas, nine states with a total of 19 percent of population of India like Uttaranchal, Chhattisgarh, Haryana, Manipur, Mizoram, Arunachal Pradesh, MP, Rajasthan, and Jharkhand still has high fertility with TFR around 2.5 to 3.6. The worst condition in TFR however is of the four states comprising of 25%of India's population like Bihar, Uttar Pradesh, Meghalaya and Nagaland with TFR above 3.6 especially in case of Bihar which has a TFR 4 and this is the only state where TFR increased by 0.3 from NFHS 2 to NFHS 3. Otherwise in all other states with high TFR the TFR either remained same as in the case of Nagaland or decreased as in Uttar Pradesh, Manipur (0.2 each), Madhya Pradesh (0.3), Rajasthan (0.6), and Meghalaya (0.8).

Rural-Urban fertility rate variation

There is great variation in the rural and urban TFR as well. Urban women have already achieved replacement level fertility, having a total fertility rate (TFR) of 2.1, whereas the TFR among rural women (3.0) is still too high. So it is very important for the government to focus its attention to these states with high fertility rate especially Bihar. These figures however also bring into focus the large ridge that exists between north and south with respect to development. This can be due to various cultural and social differences; especially as son preference is not as strong in south as the northern and western belt of India (Visaria, 2000).

The fertility rate of a population cannot be measured as an entity in itself as various factors and variables play a distinct role in determining it. These factors can be the age at marriage, economic index, education, government health facilities, use of contraceptive methods, culture and traditions etc. it is thus, imperative to see the role of all these variables on the determining the fertility of India.

Socio-Culture Variable And Their Relationship Of With Fertility Of Women In India

Age of Marriage

A substantial number of women still get married in India before even reaching the legal age of 18 years. Though the percentage of women getting married at the age below 18 years is decreasing, still 46percent of women aged 18-29 have got married even before they have reach 18years of age, despite of the fact that the government has termed it as crime to marry before the legal age of marriage i.e. 18 years. This pattern of early marriage prevalent in many parts of India influence on fertility rate deeply; as women who are married early not only enter early into sexual relationship early as a result their child bearing year also start early.

Here also there is great regional variation where Bihar again tops the list with 64percent, followed by Jharkhand (60 percent), Rajasthan (58 percent), Andhra Pradesh (56 percent), Madhya Pradesh (53 percent), west Bengal (53 percent), Uttar Pradesh (52

percent) and Chhattisgarh (51 percent). Not only women in India even around 27percent of men get married before reaching their legal age of 21 years in India. This early marriage increases the reproductive spam of a women's life and as according to NFHS 3, 12percent of women aged 15-19 years were already mothers, 4percent were pregnant with their first child, so in total 16percent of women aged 15-19 years have already have begun child bearing[34].

National Family Health Survey 3, that provides information on population, health and nutrition in India and each of its 29 states, based on field work conducted between December 2005 and August 2006, showed that 70% of women were married by the age of 18 in Uttar Pradesh, Bihar, combined with Jharkhand and Rajasthan. Whereas, in comparison less than, 20% of women in Kerala have early marriages. But even within state there are some variations in these percentages from one district to another.

Districts Sapaul, Katihar and Darbhanga in Bihar like had 98% teenage mothers, followed by Kamrup in Assam, with 56%, and Hingoli in Maharashtra with 35%. In comparison, Thoothukudi in Tamil Nadu and Hamirpur and Kangra in Himachal Pradesh had only 1% teenage mothers[35].

In districts across the country, the incidence of early marriage among women was as high as 83% and 73% respectively in Sharaswati, in Uttar Pradesh, and Jamui in Bihar. In comparison, Chamoli in Uttarakhand and Alapuzza and Pathanamihitta in Kerala reported no underage marriages.

The persisting high fertility rate tends to make us ask as to what can be the reason behind this slow rate of fertility decline in India? One can be the age but as various studies (jejeebhoy 1995, Sen 1994 et all) have proved that fertility rate of a country is a product of interrelationship of various variables, thus, it can it be the low level of human development as of 2007, India ranked 126th on the United Nations' Human Development Index, which takes into account social, health and educational condition in a country. So,

[34] National Family Health Survey-3; volume 1
[35] ibid

it is important to look at how agents of modernization such as education or economic independence of women affect the fertility behaviour of women especially in India.

Fertility is strongly correlated to wealth and education levels. The total fertility rate or TFR decreases steeply by the household's wealth index, from 3.9 children for women living in households in the lowest wealth quintile to 1.8 children for women living in households in the highest wealth quintile. The TFR for India is 1.8 children higher for women with no education than for women with 12 or more years of education.

Education and fertility

It has been seen that an inverse relationship exists between fertility and educational level (United Nations, 1961, Mandelbaum, 1974 et al). It has been found that in India education especially that of women not only changes the outlook of the person regarding value of children and ideal number of children preferred, but also leads to greater acceptance of family planning. It also rises the age at marriage thus cutting down the reproductive span of women. In 'Mysore population study' (UN, 1961) it was found that among all social and economic factor it is the educational status of women which had the most significant relation to fertility in Bangalore. Even according to the report of population institute, Washington, more schools and more jobs for women will play a huge role in holding huge growth in number of people in third world (Indian express, 23january1990).[36]

The importance of education with relation to bringing down fertility rate by making them empowered, autonomous and making them capable of making social choice has been supported by many earlier studies (Jejeebhoy1995, Sen 1994, Dreze and Murthi 1999, Satia and Jejeebhoy 1991, Sen 1994, Castro 1995, Jeffrey and Basu 1996, Srivastava 1990).

Female education can be expected to reduce desired family size for a number of reasons. Education raises the opportunity cost of women's time and, generally, opens up greater opportunities for women that often conflict with repeated child-bearing. This may lead educated women to want fewer children. Also educated women may have higher

[36] Sociology of fertility by Jasmeet Sandhu; 1996, Rawat publication, India.

aspirations for their children, combined with lower expectations of them in terms of labour services. This may also reduce desired family size, especially if there is a trade-off between the number of children and the time available for each child. And most importantly, educated women may be more receptive to modern social norms and family planning campaigns (Dreze and Murthi, 1999).

This table below just gives a glimpse of the relation of education and Total fertility rate (TFR) in India according to NFHS 3.

Years of education obtained	TFR of women
No education (illiterate)	3.6
Less than 5 years of education	2.5
12+ years of education	1.8

The importance of education in bringing down fertility can be seen with the example of e different ways Kerala has been successful in bringing in that fertility down is through education. They have schools in the villages. They have essentially empowered women through higher female literacy rate and that has helped to bring the total fertility rate down

Similarly, the economical independence or occupation of women also was seen to be having a positive relation in bringing down the TFR of women in India. Greater female participation has often been suggested as a means of reducing fertility. This suggestion is based on the assumption that employment outside the home provides alternative satisfactions for women which may compete with her raising children (Berelson, 1969). Further it is said that working women will also tend to practice contraception more frequently to have fewer children than non-working women, however such relationship between female labour force and fertility decline may exist in developed countries, the scenario is not so in case of developing countries as occupation unaccompanied by education does not have any significance in lowering the fertility rate among women (Jain, 1988). But women who are educated and working it was observed that they have a

low level of fertility rate. As the income also increased its helps to alleviate poverty and bring development. With growing incomes and educational profiles of women, there has been rapid change in fertility preferences over the years. For instance, over the 13 years between NFHS-1 and NFHS-3, the percentage of women with one living child who say they do not want more children doubled from 14 per cent to 28 per cent. The percentage of women with two living children who want no more increased from 60 to 83 per cent. Even among women with no education, more than three quarters were inclined to have only two children in the early 2000s. However, here again state-wide disparities showed up — more than 90 per cent of women with two living children wanted to stop childbearing in Delhi, Himachal Pradesh, Punjab, Sikkim, Tripura, Andhra Pradesh and Tamil Nadu. The percentage of women with two living children who want to stop childbearing is lowest in Meghalaya (36 per cent), Mizoram (43 per cent), Nagaland (58 per cent) and Bihar (60 per cent).

Contraceptive usage in India

One of the direct methods to control family planning is the use of contraceptives. Citation of such huge number in the rise of population does not mean that the family planning programmes of the government have failed to make its mark completely. Barring Bihar every other state in India has reduced its fertility rate and so it will be wrong to completely overlook the efforts and results of these family planning programs in India. The provision of contraceptive information is fundamental to enhance the capability of women and men (including adolescents) to make informed choices about reproductive health. According to NFHS 3, the knowledge of family planning methods was found to be universal in all part of India and almost ninety nine percent of women were aware of some or the other form of family planning methods and the small family norm was widely accepted. Family planning use did rise in India albeit gradually, from thirteen percent of couples in 1970 to fifty three percent for 2002–2004 period. Given the logistical problems of supplying information and services to more than two hundred and fifty million women of reproductive age, this increase is a remarkable achievement. Though women's knowledge of contraception is nearly universal, the knowledge of traditional methods such as rhythm and withdrawal is less common. Most Indian women

tend to use female sterilization, but other modern methods, such as intrauterine devices (IUDs) or the pill, etc are also well known. Female sterilization remains the most common method of family planning. Female sterilization rose from twenty seven to thirty four percent of contraceptive methods used between NFHS-1 (1992–1993) and the Reproductive and Child Health (RCH) Survey of 2002–2004. Seventy-nine percent of women and 87 percent of men report knowledge of male sterilization. Among the three spacing methods offered by the government family planning programme (pill, IUD, and condom), the pill is most widely known among women (85 percent) and the condom is most widely known among men (93 percent). To facilitate the informed choice of family planning methods, it is desirable that people are aware of a wide variety of contraceptive methods. However, a large proportion of women and men do not know about many of the methods. Sixty one percent of women and 49 percent of men reported knowledge of all three modern spacing methods in the programme (IUD, pill, and condom). But those women familiar with them, "spacing" methods such as the pill and IUD are widely mistrusted for fear of side effects, and female sterilization is often viewed as the best alternative. Knowledge of the IUD is quite low among men (51 percent). Recently marketed modern methods have much lower recognition than other modern methods. Injectables are known to 49 percent of women and 45 percent of men, female condoms are known to only 8 percent of women and 17 percent of men, and emergency contraception is known to only 11 percent of women and 20 percent of men. Among traditional methods, the rhythm method is better known than withdrawal. The mean number of methods known is an indicator of the breadth of knowledge of family planning methods. In India, men know slightly more methods (5.8) of family planning than women (5.5), on an average.

This knowledge of any method or any modern method despite being universal in both urban and rural areas, a higher proportion of urban women and men know each method than their rural counterparts, with the exception of folk methods, which are known by very few women overall. Awareness of spacing methods is much higher in urban areas than in rural areas. For example, 81 percent of currently married women in urban areas know all three spacing methods, compared with 59 percent in rural areas. The method-specific pattern of knowledge among urban and rural women and men is similar. On

average, currently married women from urban areas know one more method than their rural counterparts. The urban-rural gap is somewhat smaller for men.

Knowledge of contraceptives differ in various states of India, The knowledge of any modern contraceptive method among currently married women is almost universal (94 percent or more) in all states except Meghalaya (88 percent) and Nagaland (83 percent). Female sterilization is the most widely known method in 26 of the 29 states. At least 90 percent of women know female sterilization in every state except Arunachal Pradesh (88 percent), Meghalaya (78 percent), and Nagaland (69 percent). Three-quarters of women are aware of the pill in every state except Nagaland (66 percent), Andhra Pradesh (63 percent), and Karnataka (69 percent). In Delhi, Uttar Pradesh, Bihar, Assam, Sikkim, and Tripura, the pill is known to almost all women (95 percent or more). Although women's knowledge of male sterilization decreased somewhat between NFHS-2 and NFHS-3 in general, but more than 9 in 10 women in Delhi, Chhattisgarh, Madhya Pradesh, Uttar Pradesh, and Bihar reported knowledge of male sterilization. The awareness of family planning methods, especially of spacing methods, varies widely across the states. In Delhi, Haryana, Punjab, Uttar Pradesh, Manipur, Sikkim, Gujarat, and Kerala, the level of awareness of each of the three spacing methods (pill, IUD and condom) exceeds 80 percent. On the other hand, less than two-thirds of women in Nagaland and Andhra Pradesh are aware of each of these three methods. Injectables are not included in the family planning programme of the Government of India. Still, in Delhi, Uttar Pradesh, and Sikkim, 80 percent of women or more are aware of Injectables. In most states, awareness about the newly marketed methods (female condoms and emergency contraceptives) is quite scant, although emergency contraception is more likely to be known than female condoms in 21 states. About one in every five women or more is aware of female condoms only in Delhi (28 percent), Goa (20 percent), and Kerala (31 percent). At least one in every five women is aware of emergency contraception in Delhi (32 percent), Madhya Pradesh (21 percent), Manipur (23 percent), Tripura (43 percent), Goa (21 percent), Gujarat (28 percent), and Kerala (24 percent). In most states, at least 90 percent of men are aware of any modern family planning method, female sterilization, male sterilization, and condoms[37]. Though the knowledge of one or the other form of

[37] National Family Health Survey -3, 2005-2006, vol.I

contraceptive method is widely known, the usage of contraceptive among women is still below the desired rate in India. The aforesaid chart just presents the usage of various types of contraceptive methods in India since 1992-2004

Contraceptive Methods Used in India, 1992–1993 to 2002–2004

	Percent of married women ages 15–49 using contraception		
	1992–93	1998–99	2002–04
Any method	40.6	48.2	53.0
Any modern method	36.3	42.8	45.7
Pill	1.2	2.1	3.5
IUD	1.9	1.6	1.9
Condom	2.4	3.1	4.8
Female sterilization	27.3	34.2	34.3
Male sterilization	3.4	1.9	0.9
Any traditional method	4.3	5.0	7.3
Periodical abstinence	2.6	3.0	4.1
Withdrawal	1.4	2.0	2.7
other	0.2	0.4	0.5
Not using a method	59.4	51.8	47.8

Source: International Institute for Population Sciences (IIPS), National Family Health Survey 1992–93 (1995); IIPS and ORC Macro, National Family Health Survey (NFHS–2) (2000); and IIPS, Reproductive and Child Health: District Level Household Survey 2002–04 (2006).[38]

From the above data of contraceptive knowledge in India one can deduce these characteristics of contraceptive use in India, that there is

- predominance of non-reversible methods, particularly female sterilization;
- Limited use of male-/couple-dependent methods;
- High discontinuation rates;
- Negligible use of contraceptives among both married and unmarried adolescents

[38] India's Population Reality: Reconciling Change and Tradition: by Carl Haub and O.P. Sharma; Population bulletin; vol.61,no.3,sep,2006 (A Publication of the population reference bureau)

Over the past decades only two new modern contraceptive methods have been introduced India namely intra uterine device (IUD) and emergency oral contraceptive pills so many other new modern contraceptives like Injectables etc are not even available in the public health clinics in India. This disparity in availability of new methods as well as shortage of staff and lack of thorough and informed choices for the women have led to a great ridge between the needs of contraceptive methods and the availability of them. Especially since it has been noted that the small family norm is widely accepted (the mean ideal family size currently reported by young people is 2.5 children) and so the demand of contraceptives have increased many folds.

Unmet needs of contraceptives in India

Despite improved availability and access to contraceptive services, a substantial proportion of pregnancies in India are unplanned (mistimed or unwanted). It is estimated that if all unwanted births could be eliminated, the total fertility rate would drop to the replacement level of fertility. Data from NFHS–2, for example, show that 21 per cent of all pregnancies that resulted in live births in the three years preceding the survey (including current pregnancies) were unplanned—12 percent mistimed and 9 per cent definitely unwanted (IIPS and ORC Macro 2000). In all likelihood, this is an underestimate of unintended pregnancies because longitudinal survey data reveal women's tendency for ex post revision of their preferences in favour of the want of existing children (Bankole and Westoff 1998). Moreover, a substantial proportion of unintended pregnancies may be terminated through induced abortion. Estimates show that about 6.7 million induced abortions take place annually in India (National Commission on Population 2002). Several studies report that the desire to limit family size and to space the next birth are the main reasons for abortion mentioned by the majority of abortion seekers (Ganatra 2000). These findings provide clear evidence of the substantial unmet needs of women in India.

The concept of unmet need for contraception, originally coined to reflect the discrepancy between fertility preferences and contraceptive use (Casterline and Sinding, 2000), has evolved over time. Conventionally, currently married women who are not using any contraceptive method but who do not want any more children, or who want to wait two or

more years before having another child, are defined as having an unmet need for family planning.

The main reason behind this unmet need can be that most women and men do not have access to a wide choice of contraceptives, particularly those who are dependent on the public sector (76 percent of current users of modern methods). Inadequate knowledge of contraceptive methods and incomplete or erroneous information about where to obtain methods and how to use them are the main reasons cited for not accepting family planning. There are pronounced regional differences in the proportion of women with an unmet need for contraception. NFHS–2 data show that the level of unmet need was higher in the northern and north-eastern states than in the southern states 19 percent versus 11 percent. There are substantial differences in unmet need within each region as well. In the southern states, for example, 8 per cent of married women in Andhra Pradesh had an unmet need for contraception, compared to 17 per cent in Goa. Similarly, the level of unmet need in the northern states ranged from 7 per cent in Punjab to25 percent in Bihar and Uttar Pradesh. In the north-eastern states, unmet need ranged from 16 percent in Mizoram to 36 per cent in Meghalaya (IIPS 2000). The other major reason can be the shortage of staff and infrastructure in the various clinical setups for family planning.

So in order to increase the chances of India to stabilize its growing population it is important for India to improve its shortage and address to the unmet needs of couples in India.

From the above analysis we saw that a huge state wise variation exist in India pertaining to fertility rate, In states such as Bihar and Uttar Pradesh, fertility remains above four children per woman and is declining only slowly. But these two states, with about 95 and 190 million populations at present, respectively, account for one fourth of the country's population. In 2001, their populations numbered 166 and 83 million. Other states where the average number of children is above three are Madhya Pradesh and Rajasthan. Clearly, success at reducing the population growth rate now depends on the future trend of fertility in these states. It is due to this reason that government has shifted its focus on these states to bring down its total fertility rate.

Bihar stands out as a state at worst position pertaining to its fertility rate, in the above analysis. So let us look at the socio- cultural and fertility scenario of this state.

Contraceptive use in Bihar

Despite of all these factors one should not overlook the fact that the Family planning services have improved in Bihar, if one study the result of the three National family health survey (NFHS) surveys however, this improvement is insufficient as Bihar's contraceptive use still continue to be lower than for India as a whole. This trend can be attributed to various factors as there is overwhelming focus on female sterilization as a family planning method in comparison to male sterilization and other temporary methods. This is consistent with the all-India trend. Although resort to spacing methods has improved over the NFHS survey years, the level of condom use is very low (2.3% in NFHS-3) with use of pills and IUDs being even lower (1.3% and 0.6%, respectively). The trend remains the same for Reproductive child health programme.

Some reasons for the failure of family planning include: lack of health facilities and staff to deliver services, low exposure to mass media in Bihar, low exposure of family planning messages in the community, particularly among rural and socioeconomically disadvantaged groups[39]. Various research and study show that there is lack of community level participation as well. And also due to lack of complete information about various methods of family planning, some studies show that only about one fourth of the clients were informed about the advantage as well as the disadvantage of the family planning methods and rest were mostly informed about the advantages of specific methods (Foo and Koenig, 2000[40]). All this adds to the high total fertility rate of Bihar is 4.0 as per NFHS-3 which is higher than that of India (2.7).

[39] Child health scenario in Bihar: by world vision India

[40] Cited from 'functioning of health and family welfare programme: A comparative study of Bihar and Kerala by M.E.Khan and C.V.S. Prasad

Socio-Culture Variable And Their Relationship Of With Fertility Of Women In Bihar

Age at marriage

High TFR is associated with high percentage of women marrying before the age of 18 years (60.3% in Bihar).Almost one-fourth (25.0%) of married women in the age group of 15–19 years were pregnant at the time of the survey. Median age at first birth was 18.7 years. As per NFHS-3, the proportion of women aged 20–24 married by the age of 18 in rural Bihar (65.2%) is almost twice that of urban Bihar (37.3%). Percentage women marrying below the age of 18 has a positive correlation with education. And this is especially higher among those girls with no education. Also it should be noted that NFHS-1 and 2 data show that across religion there is a differential in age at marriage. Higher percentages of Muslim girls marry below the age of 18 than Christian girls. The age of marriage also shows significant increase with standard of living. More number of girls from poor families with low standard of living marries early than girls from families with higher standard of living.

Urban-rural contraceptive usage;

Current use of contraceptive method is considerably high in urban areas in the state (50.6%) than in rural (31.4%).This is true for each specific modern or traditional method.

Education of women and contraceptive use;

The use of contraceptive method is much lower among illiterate women (29%) than women who have completed ten years and above of education. The differences by education are also on account of the predominance of sterilization in the method mix and the fact that more educated women tend to be younger women who may not yet have reached their desired level of fertility. The use of spacing methods and traditional methods rises with education.

education	< 5 years	5-7	8-9	10-11	12+
Bihar TFR	4.6	NA	3.2	3.2	2.4

Even in the Contraceptive prevalence one can see that there is variation in its usage across various religions, it is the lowest among Muslims and approximately three times higher among Hindus and Christians[41]. The low use of contraceptive methods in Bihar is contradictory to the 100% awareness levels among women and 99.4% among men of contraceptive use in Bihar (NFHS-3). Awareness of limiting methods among women is 99.9% for female sterilization and 92.3% for male sterilization; the corresponding figures for awareness among men are 98.0% and 95.8%, respectively. For both men and women awareness of spacing methods is very low for pills (95.7% for women and 86.5% for men), IUDs (79.15% and 48.2%), male condom (81.9% and 91.3%) and emergency contraception (4.7% and 19.8%).

In recent years the focus of the family planning programme has been on women and especially female sterilization. Male sterilization in Bihar is less than 1% (0.6% in NFHS-3 and 0.4% in RCH II) as compared to total sterilization (24.4% for NFHS-3 and 22.3% for RCH II, little attention has been paid to men, their role, needs, responsibilities, and involvement. Although men constitute half of the reproductive equation, the stereotype that most men do not care about family planning persists and family planning has been considered as women's business. This just shows the seeped in patriarchal structure of the society of Bihar. Also the low use of contraceptive use can be attributed to the huge amount of unmet needs of contraceptives available in Bihar. Also the amount spent on health sector by the state of Bihar is lesser than in any other state of India. If the government try to overcome these shortcomings one could see a different trend emerging in Bihar in the near future, but until then one can only state the dire need that Bihar is in need of a proper implementation of policies not only in the health sector but in all other sector of economy and education as all these are cast in a web of inter-dependence.

And it is in need of this that there have been marked improvement or rather step towards improvement in the recent trends by the state government, both for socio-economic and family planning program, are promising. The socio-economic correlates of fertility are accelerating in their progress. The Right to Education act has been passed. Although its implementation will require enormous investments and 220,000 new teachers would have

[41] NFHS-3 cited from http://www.popfound.org/bihar1.pdf

to be recruited. However, it will lead to much higher levels of education, particularly that of females. Although income levels are known not to be strongly correlated with fertility decline, recent estimate of State domestic product suggests that it grew by about 11% compound annual growth rate in last 5 years compared to a negligible increase during the previous 5 years. While this may impact fertility only indirectly, it will provide more resources for overall socio-economic development. IMR has been steadily declining. Health infrastructure should also improve under the NRHM.

If the state implements these measures one can only be cautiously optimistic about accelerated decline in fertility and eventual population stabilization in not too distant in future in this state of Bihar

Chapter 3

Modernization, Health Services and Fertility among the Muslim women

Madhubani and Patna district of Bihar.

Diverse regional and cultural factors also affect fertility patterns in the Indian population. For instance, Tribal populations have distinct kinship patterns and gender relations, including higher rates of female labour force participation, which may encourage lower fertility. Similarly, the higher status of women and weaker hold of patriarchy in south India are believed to contribute to lower fertility rates.

Religion has immense social, economic, and political significance in most societies, and it plays an important role in sanctioning or promoting acceptance of or creating resistance towards family planning (Mistry, 1999). In India, lower contraceptive use rates and higher fertility rates among Muslims than among Hindus and people of "other" religions1 are well documented (IIPS and ORC Macro 2000)

Fertility rates tend to be higher among Muslims than in other communities, although the extent to which this relationship holds after controlling for various socioeconomic disadvantages experienced by Indian Muslims (e.g., lower incomes and literacy rates) needs to be studied.

Islam and Family planning

The reasons for lower contraceptive use and higher fertility among Muslims are highly debated in both academic and political circles.

Previous research in India has focused primarily on socioeconomic explanations of higher fertility and lower contraceptive use among Muslims but has found conflicting evidence. Some argue that lower contraceptive use and higher fertility among Muslims is mainly due to their lower socioeconomic status (Iyer 2002; Mistry 1999; Shariff 1995;

Sharma 1994; Johnson 1993; Ghosh and Das 1990; Singh 1988; Ranganekar et al. 1987; Krishnan 1984; Chaudhary 1982; Khan 1979), while others argue that it is due to pronatalist ideology and greater opposition to family planning among Muslims (Alagarajan and Kulkarni 1998; Gandotra et al. 1998; Ramesh et al. 1996; Bhende et al.1991). Let us look at what Islam's stand is on family planning.

Family planning in Islam

The Quran (or Koran) is the primary source of religious authority in Islam. *Hadiths* (the recorded sayings of the Holy Prophet), *Taqreer* (verbal or silent approval of the Prophet), and *Sunnah* (acts of the Prophet) are other sources of religious teachings for Muslims (Khan 1979). In practice, most Muslims rely on interpretations of the Quran and other religious writings by local *ulama* (Islamic scholars), resulting in wide variation in the understanding of Islam across cultures and schools of religious thought (Boonstra2001).

Islam encourages marriage and procreation within marriage, but there is considerable Uncertainty about whether Islam favours or prohibits the use of contraception (Boonstra 2001; Khan 1979; Akbar 1974). According to some, Islam is open to various interpretations regarding acceptability of contraception (Obermeyer 1994), and it neither supports nor hinders fertility decline (Karim 1997). The Quran mentions children as the "decoration of life" and forbids infanticide, which is interpreted by some to imply that Islam does not permit contraception. On the other hand, some argue that several Quranic verses imply that the "well-being of children overrides concerns for a large family," thereby suggesting that contraception is acceptable in Islam (Boonstra 2001; Underwood 2000). Moreover, there is evidence from some *Hadiths* that the withdrawal or coitus interruptus method (*al'azl*) was practiced by the Prophet's followers with his knowledge, and that he did not forbid it and may even have encouraged it (Boonstra 2001; Underwood 2000; Akbar 1974).

Most *ulama* agree that *al'azl* is permissible in Islam, but it should not be practiced without the woman's consent. By analogy, modern temporary methods of contraception, such as the condom and diaphragm, which have the same aim as the withdrawal method—to prevent the sperm from fertilizing the egg—are also generally considered

permissible (Boonstra 2001; Underwood 2000; Akbar 1974). However, some *ulama* question the acceptability of oral contraceptives and implants (Boonstra 2001). Most *ulama* agree that surgical methods to permanently end fertility, such as sterilization, are forbidden in Islam (Khan 1979; Akbar 1974).

Since most of these studies suggest that contraceptive use i.e. the reversible method is widely accepted in Islam; it is then important to study exactly what is then the reason of low contraceptive use and high fertility rate among Muslims. One can assume four broad reasons for this;

1. Differentials in socioeconomic status of Muslims; As it has already been stated that socio-economic status of a population plays a very important role in determining its fertility rate, the literacy rate among Muslims are less with only of 59.1 percent literacy rate it effects the fertility rate of the community as education especially that of women plays a very important role

2. Greater opposition to family planning among Muslims; Muslims due to illiteracy lack even the basic knowledge about their religion and often more conservative Islamic leaders interpret, Islam to be against family planning as a whole have openly campaigned against the use of condoms or other birth control methods, consequently making population planning in many countries ineffective. And thus many oppose the use of contraceptive methods at all. Though studies have revealed that very few percent of people blame religiosity for their lack of use of contraceptive methods (khan, 1974, 1979, Weigl, 2007)

3. Heavy reliance of India's family planning program on sterilization and Muslims' preference for non-terminal methods and; mentioned earlier, there is evidence that Muslims in India prefer temporary methods of family planning over sterilization. And India's reliance on female sterilization and lack of appropriate measures and facilities to impart knowledge about other reversible methods can be one of the reasons for Muslims less positive attitude towards family planning.

4. Heavy reliance of the program on public-sector sources and Muslims' preference for private-sector sources due to their concerns about privacy; it is also seen that Muslims

rather choose private clinics over public clinics due to privacy reasons and also for the convenience of choosing gender of the doctors, due to purdah reasons.

So, it is important to focus on regions such as Uttar Pradesh, Bihar etc where the Muslim population is high and socio-economic variables are low resulting in high fertility. A closed analysis of these regions will also indicate that the relationship of quality of care and facility and socioeconomic development, and if all these aspect improve then it is imperative that people barring any age, class and religion would accept family planning and as a result fertility rate will decline as Sen, 1994 and Nussbaum, 2000.

Muslims fertility in Bihar

Bihar has along with west Bengal and Uttar Pradesh constitute about 47 percent of total Muslim population in the country, and one of the highest Muslim populated states in India. According to 2001 census, the Muslim population in Bihar was 137.2 lakhs constituting 16.5 per cent of the state's total population and 9.9 per cent of the country's total Muslim population.

The picture of the Muslims in Bihar that emerges from various surveys that have been conducted is that of a community steeped in poverty, with very low income levels to make out a living. A Times of India report[42] states that Muslims in Bihar stayed deprived of benefits of the government poverty alleviation programs as well, out of five programmes that are employment and income oriented initiated by the government, Integrated rural development program (IRDP) is the only one which reached some rural Muslim household, 5.3 percent which is still very poor rate. This number is very limited as considering the fact that 48.5 percent of rural Muslims of the state lives below the poverty line and barely ten deserving and poor household have benefited from these programmes. And the remaining so called welfare oriented poverty alleviation programmes are practically nonexistent or merely existing on papers for Muslims of both rural as well as urban areas. Even the minority finance cooperation scheme, practically does not exist. These are some of the startling facts that have come up in a recent survey

[42] Times of India: Patna, January 23rd, 2005 by Pranav.K.Chaudhary.

carried out by the Bihar State Minorities Commission (BSMC) on the socio-economic condition and education of Muslims in Bihar. Migration is also high among Muslims than the general population of the state. There are 63 migrants for every 100 Muslim households in rural Bihar and 24 migrants for every 100 families in urban areas. The high percentage of migration among Muslims is a result of the overall poor socio-economic conditions of Muslims. Two out of three Muslim households in rural Bihar send at least one of their working members away to earn. Most of the Muslim migrants are males aged 28.5 years in rural areas and 27.4 years in urban areas. As a result of high migration of men, 10.5 percent women head their families in rural areas; this migration is particularly high among Muslims in Gaya, Aurangabad, and Vaishali and Darbhanga districts. More than 40 per cent of Muslims in Siwan and Gopalganj districts go to Gulf countries to earn a living. Their low income levels affect their position in all other sectors. The overall literacy rate among the Muslims in Bihar is lower than the general population and the extent of educational exclusion is substantial among the young Muslims. Literacy rate among Muslim 42.0 percent in Bihar, whereas the female literacy of Muslims is barely 31.5 percent. According to the census 2001; the decadal growth of Muslim slightly higher at 29 percent in Bihar than, the decadal growth of the whole population at 28.4 percent. The Muslim population in Bihar as we saw is steeped into extreme poverty the survey conducted by Patna-based Asian Development Research Institute (ADRI) and sponsored by Bihar State Minorities Commission. Bares the fact that about 49.5 percent of rural Muslim families and 44.8 percent of the urban Muslim households fall below the poverty line, 19.9 percent among them are acutely poor, and 28.04 per cent Muslims in rural areas are landless labourers. Also startling was the fact that most of the Muslims are debt-ridden survey reveals around 41.5 percent in rural areas and 24.9 percent in urban areas Muslims are in debt, revealing the economical strata of Muslims in general in Patna. Educational backwardness is also a key factor responsible for the social cultural economic and political backwardness of the Muslim community in Bihar. Very few authentic studies are available on this subject. It is seen that despite many central and state government sponsored educational schemes for minorities, only 36 percent Muslims are literate in the state of Bihar. And the number of illiterates among Muslims is as high as 64%. Primary to Higher Secondary 33.6 percent, in Higher education graduation, post

graduation and Technical, the combined figure is 2.4 percent, as per census report 2001. For the district of Patna the literacy among Muslims is much lower than the general literacy, the total literacy percent of Muslims is 56.33 in which only 41.35 percent of women are literates, similarly in Madhubani district the only 33.22 percent of Muslim population are literate in which the literacy rate of women are only as low as 16.75 percent. As we saw that Muslims in India and Bihar in particular have higher decadal growth than the general decadal growth, this is also due to the fact that Muslims in general have less positive percentage in the usage of family planning methods. The fertility rate is slightly higher with among Muslims in Bihar with 4.81 (than 3.86 among Hindus) and this also indicates lower use of family planning among Muslims. As districts with higher Muslim population proportions depict lower RCH-statuses implying lower utilization of RCH services, higher fertility, lower contraception, and lower age at marriage. Despite accounting for important predictors like women's literacy and work participation, the extent of urbanization, etc. Either concentration of Muslims in districts which are lacking in terms of health and developmental infrastructure facilities or possibly the lower utilization of RCH services and demographic backwardness in terms of higher fertility and lower contraceptive usage could be the reasons for such a phenomenon. However, the results suggest that the Muslim dominated districts depict a lower RCH-status and thus need focused attention towards improvement of the same[43]. But it will be wrong to examine religion as the reason behind Muslims unacceptability of family planning, though it is true that Muslims have lower contraceptive usage only 19 percent Muslims in comparison to 36.9 percent Hindus use any form of family planning method, as well as use of any modern methods is only 12.7 in comparison to 31.9 percent among Hindus. But it is also important to see that the need of contraceptive is higher among Muslims 31.7 percent (14.3 percent for spacing and 17.3 for limiting) than Hindus 21.2 percent (10.3 for spacing and 11.2 for

[43] Suresh Sharma; REPRODUCTIVE AND CHILD HEALTH STATUS IN INDIA: DISTRICT LEVEL ANALYSIS; Population Research Centre Institute of Economic Growth.

limiting). Thus it shows that most of the Muslim population does not have access to any health care. The situation is proportionally more severe for the lower-income groups. For example, among the lowest group 24 percent of the ill or injured does not seek medical care "due to expense or distance factors". This also creates higher unmet need for contraceptives among Muslims with 19.0 percent for any method and 12.7 percent for any modern methods.

Thus, in my opinion higher fertility rate among Muslims is not only due to religion rather due to lack of socio economic development of Muslim population, if we look at Iran, Indonesia, Turkey and Tunisia, to name just four major Islamic countries. They all promote family planning and have been successful in reducing population growth, even more successful than India. And religion can only play as an intervening variable which can be overcome with the correct form of socio-economic as well as infrastructure development as we can see the example of Bangladesh, which has seen remarkable improvement in contraceptive use despite low level of education through providing its citizen infrastructure and wide information regarding family planning. Closer home in Kerala with, there is more family planning among Muslims than Hindus in U.P. as literacy is high among Kerala Muslims. Thus sterilization among Kerala Muslims is 42.7percent whereas among Hindus in U.P it is only 18.2 per cent. Similarly in Tamil Nadu Muslims have 49 percent contraceptive prevalence rate in comparison to Uttar Pradesh total of 28percent. Even in Andhra Pradesh 47percent, West Bengal 56 percent Muslim use one or the other form of contraceptive method.

Since studying Bihar per se would be tough task, owing to its large population and great geographical and cultural diversities, thus, in this chapter I focus mainly on two important districts in the urban agglomeration of Bihar, i.e., Patna (the capital of Bihar) and Madhubani (owing to its rich art and culture, can be termed as the cultural hub of Bihar). Both these districts have very important place in the history as well as the development of Bihar.

The history and tradition of **Patna** go back to the earliest dawn of civilization. The original name of Patna was Pataliputra, largest city in eastern India after Kolkata. The modern city of Patna is situated on the southern bank of the Ganges. The city also

straddles the rivers Sone, Gandak and Punpun. The population of Patna district is about 47, 18,592(2,519,942 males and 2,198,650 females), 2,757,060 reside in rural area whereas 1,961,532 habitat urban region. The main languages spoken in this region are Hindi, Urdu, and Bhojpuri, local dialects like Maithili and Magahi and to a small degree angika. Patna is the largest town and headquarters of Patna district, Patna division and Bihar state. Patna is the capital of Bihar state. It is mainly an administrative and educational centre of Bihar. It has however a few ancient sacred places as also places of tourist interest. Patna has also emerged as a big and rapidly expanding consumer market, both for Fast Moving Consumer Goods (FMCG), as also for other consumer durable items. A large and growing population, and expanding boundaries of the city, is also spurring growth of service sector. Several multinational companies have also come up at Patna; one example is Tata Consultancy Services. The hinterland of Patna is endowed with excellent agro-climatic resources and the gains of the Green Revolution have enabled the older eastern part of Patna (locally called as Patna City) to develop as a leading grain market of the state of Bihar, the second biggest in eastern India. Rice is the main crop of the district. It accounts for more than one third gross area sown. Other important food grains grown are maize, pulses and wheat. Non-food crops consist mostly of oil-seeds, sesame seeds cash crops such as vegetables; water-melons etc. are also grown in Diara belt. The rapid economical development of this region can further be reinstated by the fact that in June 2009, The World Bank ranked Patna as the second-best city in India to start a business, after Delhi[44]. Despite of all these economical growth the literacy rate of the district is 62.92 (73.34 males and 50.83 females) which is less than the respective states and their capitals.

[44] "New Delhi, Patna best cities to start business: World Bank". *'The Times of India'* PTI (The Times of India); 30 June 2009.

Madhubani

Historically and culturally Madhubani is one of the important places in the country. Its rich culture and tradition is internationally known. It was part of Darbhanga district but was made a separate district in the year 1972. It falls in the northern part of Bihar (north of the Ganges) spread in 3501 sq. Km. The total population of Madhubani is The district has a total population of 35, 75,281 (18, 37, 03, 61 males and 17, 33,290 females) out of which rural population has a share of 34, 50,736 and urban population has a share of 1, 24, 545, as per 2001 census. And have five divisions and twenty one blocks and Darbhanga, Sitamarhi, Supaul and Saharsa districts surround it. Madhubani is one of the most populous districts in the state. This huge population resides mostly in rural areas, even from Bihar's point of view the rural population of Madhubani is very high 96.52%, second highest after Kaimur, 96.77%. Its population density is 1020 p/s. Km; it is 880 for the state, (140 p/s km. more).

Agriculture is the main source of income in the block. But schedule caste (SCs) and (more than 60%) OBCs, do not own land. The main source of income for them is labour and they do not get work for more than 3-4 months in one calendar year. Their income is indefinite, irregular and terribly low. A rough estimate indicates that the average monthly income of the target family is between Rs. 450 to Rs.900 from all sources. Women are paid less as wage in comparison of males and they do not have specialized skill either, which could fetch income for them due lack of education. Though, geographically, district is highly fertile and falls in the Gangatic plain in the Himalayan side but small streams of Kamala, Balan and Baghmati floods affect during rainy seasons, due to which the agriculture which is the main income resource for the people suffer. And today, a place which was once known to be sugar-producing area, it has experienced a declining trend in the production of sugarcane in past few years. The sugar industry is on the verge of collapse. Other industries like spinning, Khadi and fisheries are also dying. Seasonal or permanent migration of workforce-skilled labour, semi-skilled labour is very high from the district as a whole (Jha; 2004)[45].

[45] Jha.K.Dhirendra: 'grass widows of Bihar' from the book 'the unheard screams' reproductive health and women's lives in India; edited by Mohan Rao, zubaan publication 2004.

Even the education level of this region is very poor the literacy rate of the district is 42.35 per cent (57.26 percent for males and 26.56 percent for females), which are lower than the respective rates of the state. (Government of India, 2001)[46]. Government schools are run for the namesake. The attendance of both children as well as teachers is thin while present enrolments are shown much higher than reality. The enrolment of girls in the schools is very low than the boys. Children instead of going to school waste their time, or in some cases they earn for the family in compulsions. The majority of the child labour belongs to scheduled caste population who works in the nearby markets or adjacent towns.

Health status of Patna and Madhubani

As it has already been mentioned that the state of Bihar lacks in infrastructure and development be it the state owning high ranking in poverty index, fertility rate, mortality rate, etc or low literacy rate, contraceptive use and other socio- economical condition etc. though the scenario is gradually changing in the recent times the pace is very slow and Bihar still remains one of the least developed state of India. The first chapter explained in detail how the health Services and infrastructure in Bihar are extremely poor in condition though there have been some progressive changes. According to a joint report prepared by health society and UNICEF, there are major gaps in the infrastructure of health institutions and the health Services are in shambles in Bihar. Residents in rural areas face difficulty in getting even primary level health Services. According to health secretary funds were allotted to Building Construction Corporation several years back but they have failed to deliver. The required number of primary health centres' in state is two thousand four hundred and eighty nine whereas there are only five hundred and thirty three of them only existing at present, there is a whopping 78% shortfall, resulting in a huge gap between supply and demand for the population. Similarly the required number of referral hospitals is six hundred and twenty two but there are only seventy such hospitals. Also while there is need of one hundred and one sub-divisional hospitals in the state there are only twenty two existing as of now. The joint report also states that even all the 38 districts of Bihar does not even have a district level hospital and only twenty

[46] Government of India (2001), Central Statistical Organization, New Delhi.

five districts have the centres'. The situation is not better in case of additional primary health centres' while there is need for two thousand seven hundred and eighty seven such centres' there are only one thousand two hundred and forty three at present. Bihar has only six medical colleges out of the need are for at least eighteen such colleges. Bihar is also facing an acute shortage of personnel with severe shortage of medical and paramedical employees. There is 46% shortage of doctors, 30% ANMs, 54% for nurses and 57% for lady health visitors in different health depts.[47] with such disparity in the need and availability of infrastructure it's no wonder then that the health condition of Bihar is in atrocious state. Bihar experiences a wide variety of diseases such as tuberculosis, filaria, malaria, leprosy, kala Azar etc. so much so that it is said Bihar contributes about 80 % disease burden in country[48]. Even the available indicators on maternal health care suggest that, India the maternal mortality rate is still very high in India. The number of women is dying due to complications during pregnancy and childbirth has decreased by 34% from an estimated 5.46 lakhs in 1990 to 3.58 lakhs in 2008 but is still on the higher side. India is home to highest number of women dying during child birth across the world. India's MMR stood at 570 in 1990 which fell to 470 per 100,000 live births in 1995,390 in 2000, 280 in 2005 and 230 in 2008. And has an annual increase of MMR by 4.9% since 1990 now records 63,000 maternal deaths a year.

Even though the progress is notable the annual rate of decline is less than half of what is needed to achieve the MDG target of reducing the MMR by 75% between 1990 and 2015. And pregnant women still die from four major causes- severe bleeding after child birth, infections, hypertensive disorders and unsafe abortion[49].The situation in Bihar is considerably worse than that of India in general. The maternal mortality ratio in Bihar is 531 per 1000 in comparison to 398 nationally. Pregnancy related care correspondingly reaches far fewer women in Bihar than in India on average, including antenatal, delivery related and post-partum care. For example, while half of all women in India on average have received the recommended three antenatal care visits, only 17 percent in Bihar,

[47] The Telegraph; December 2010

[48] National rural health mission 2005-2012; National Vector Borne Disease Control Programme (Ministry Of Health and Family Welfare) Government Of India

[49] "*Trends in Maternal Mortality*" released jointly by WHO,UNICEF, UNFPA and World Bank; http://www.sociologyguide.com/surveys-and-reports/trends-in-maternal-mortality.php

respectively report at least three visits. Likewise fewer than one third women were delivered by a skilled attendant in Bihar compared almost have in India as a whole. Disparities in institutional delivery are equally wide. Even those who did not deliver institutionally very few among then also receive post-partum care in the two days following delivery; 36 percent in India as a whole and only 15 percent in Bihar. And these disparities come from wide gender disparity existing in the socio-cultural thread of society in Bihar, as the data on schooling also clearly suggest that girls have far less chance of being literate or get education in adolescence than the boys. As NFHS 2 suggest that 58 percent of boys aged 15-17 attend school In Bihar in comparison to only 42 percent of girls in the similar age group. Not only is the literacy rate low, even the infant and child mortality rate of female are much higher than that of male clearly showing the difference in attitude towards female child's care and feeding practice. This can be attributed to the fact that women in India in general and Bihar in particular have less autonomy and decision-making power regarding their health or any other matter of their life. Since my dissertation focuses on the reproductive health status of the districts of Madhubani and Patna let us glimpse into the various aspects of health condition persisting in these two districts.

If we talk about the infrastructure and health personnel, it is rather poor in both the district though Patna being the capital of the state has slightly improved and better condition than other regions of the state. But still healthcare scenario in Patna district is not satisfactory, says the report of the District Health Action Plan (DHAP), 2010-11, prepared by National Rural Health Mission (NRHM), Bihar. The major weaknesses pointed out in the report concerning Patna district included lack of co-ordination between different agencies in urban areas, non-availability of specialists at block level, inadequate number of auxiliary mid wives (ANMs) right from primary health centres (PHCs) to health sub-centres (HSCs) and apathy towards work amongst grassroots workers. This can be seen for a fact that Patna with its population of 4,718,592 (25, 14,949 males and 21, 94,902 females) out of which 41.6 percent are urban population. With 23 blocks, 6 sub-division, 331 gram panchayat and number of revenue villages 1451.

In the heavily populated state of Bihar, Patna is one of the most populated districts with a density of more than 1405 people per square kilometre, and for its huge population and Patna Only has 23 pHC's, 4 referrals, 23 (block primary health centre's) BPHCs , 60 (additional primary health centre) APHCs though 96 has been sanctioned by the state, similarly the number of HSC' currently working is 393 out of the sanctioned 418, parallel story is of the Aganwadi centre which has a number 3652 in existence out of the sanctioned 3937. More so, this district only has 5 urban hospitals and only 4 medical colleges. It's then not surprising that not only Patna lacks in the field of providing clinics it also lacks in the number of medical colleges, for such a huge population having just four medical colleges reinstate the reason for not only lack of infrastructure as in clinics but also shortage of trained medical personnel. According to DLHS-3, Out of the requirement of 250 doctors Patna just has 77 of them; even ANM requirement in the region is of 520 but has only 418 currently. And have only 10 'grade A' nurse, 65 paramedics. And even those existing pHC's, CHC's, BPHC, APHC etc are not up to the required standards, there are still many government pHC's in various regions of Bihar that are setup in rented buildings and the quality of in-house condition leaves a lot to be desired for and in many of these centre's there are barely any staff. This can be seen in the fact that the pHC's' and CHC's that exist presently are not fully equipped notwithstanding its existence being far less in number than required, in Patna alone out of 2 CHC, there is only one with personal computer, though both have operation theatre, labour room, large deep freezer, are having 24 hrs water supply and availability of gynaecologist or obstetrician but one of these CHC have general surgeon, though five medical officer in this district are trained for prevention, care, and support for HIV/AIDS during the last five years, there are no medical officer who have received the training of non-scalpel vasectomy (NSV) during the last five years nor are there any medical officer who have received training with regards to basic emergency obstetric care during last five years and only one medical officer have happen to receive training of integrated management of neo-natal and childhood illness during last five years. And there is no CHC recognized as integrated counselling testing centre (ICTC). Same goes for the pHC's existing in this region out of 19 pHC's according to DLHS-3, only 9 of them have residential quarter for medical officer, 8 have separate labour room, 5 have personal

computer, 7 are equipped with normal delivery kit, just 4 of them have large deep freezer, 17 of them have regular water supply, and apparently pHC's equipped with neonatal warmer (incubator) are just 3 in number, 2 are having operation theatre with boyles apparatus, and 4 of them have them with anaesthetic medicine. Furthermore only there are only 11 pHC with lady medical officer (LMO), 12 of them have laboratory technician, there are 7 such pHC's which have at least one medical officer who have received integrated skill development training for twelve days during the last five years, similarly, the condition of sub centre (sc) are pretty much similar out of 21 sub centre according to DLHS-3 only 7 of them are located in government building, but none of them have any communication facilities and only 5 such sub centre's are there whereby ANM stays in the same village and only one sub centre has the facility of a staff quarter for ANM and only 6 ANM have attended the training for skilled birth attending. The most bizarre fact still remains that not all pHC's, chc's as well as sub centres' have regular water supply. Many such health centres' in Patna are run in rented buildings and those existing as we can see from these data leave a lot to be desired for, the region of Patna only has 54 general doctors, 10 general surgeon, 7 gynaecologist, 1 aesthetician, 13 dentists, 5 E.N.T and 16 other doctors with not a single paediatrician, for total number of 65,547 patients (December 2007-january 2008)[50].

The following table just reinstates this fact that even though policies are being made in order to improve the health condition of the people of Bihar especially reproductive and child health, the implementation of these policies are still far behind though there have been improvements, it is still far from the desired or even required condition:

[50] http://www.mohfw.nic.in/NRHM/State%20Files/bihar.htm

Villages that have implemented Janani Suraksha Yojana (JSY)	20
villages with Health & Sanitation Committee	2
Villages with Rogi Kalyan Samiti (RKS)	2
Villages where PRI aware of untied fund by Government	0
Health facility within village-ICDS (Anganwadi)	26
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-ICDS (Anganwadi	2
Health facility within village- Sub-Centre	14
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-Sub-Centre	12
Health facility within village- PHC	4
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-PHC	20
Health facility within village- Block PHC	1
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-Block PHC	21
Health facility within village- Govt. Dispensary	1
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-Government. Dispensary	19
Health facility within village- Private Clinic	5
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-Private Clinic	21
Health facility within village- AYUSH Health Facility	3
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-AYUSH Health Facility	20

* AYUSH: Ayurveda, yoga and naturopathy, Unani, siddha and homeopathy system.

Source: (DLHS-3); district fact sheet Patna.2007-2008[51].

[51] District level household and facility survey under reproductive and child health care project; by government of health and family welfare of India. (Survey conducted in 29 villages).

Thus, from these data it's apparent that the Healthcare scenario in Patna district is far from satisfactory, as also stated in the report of the District Health Action Plan (DHAP), 2010-11, prepared by National Rural Health Mission (NRHM), Bihar.

In its state wise report, Strength Weakness Opportunity Threat (SWOT) analysis of each district was done, assessing the achievements and constraints in every district surveyed. The major weaknesses pointed out in the report concerning Patna district included lack of co-ordination between different agencies in urban areas, non-availability of specialists at block level, inadequate number of auxiliary mid wives (ANMs) right from primary health centers (PHCs) to health sub-centers (HSCs) and apathy towards work amongst grass root workers.

The report refers to urban areas having poor health infrastructure due to lack of manpower, lack of specialists at PHCs and block level which forces people to go to private clinics, and inadequate number of ANMs at PHCs and HSCs. It was found that even after repeated training, desired results were not achieved. Most of the paramedical and other health workers, along with the Medical Officers (MO) who are supposed to monitor the daily activities of workers, do not take interest in their work. Due to lack of monitoring and supervision, it was found that many programmes failed in their objective. The other weaknesses pointed out in the report were lack of proper transport facility in rural areas and high rate of illiteracy, which was reflected in their reluctance to go for institutionalized delivery and immunization.

However, the report talks about active participation of civil surgeons in every health programme support from district administration including district magistrates and deputy development commissioners, who take interest in all health programmes.

The report also refers to support from panchayati raj institutions, including members of zila parishad and panchayats, to various health programmes. It said effective

communication with the help of internet facility at block level and landline and mobile phone penetration in remote areas also proved very effective[52].

The condition of infrastructure in Madhubani is no better if not worse as due to extreme poverty especially of *grass widows* (term used for those women whose husbands especially of lower caste, who do not hold any land have migrated to other places in search of employment leaving their wives to work on the lands for a short period)[53] and unhygienic condition there are many diseases prevalent in this region. According to DLHS-3, for the district of Madhubani for a total of 35, 75,281 populations (34, 50,736 rural population and 1, 24, 545 urban population), 21 numbers of blocks, 399 gram panchayat and 1072 villages. There are just 18 pHC's, 57 APHC's, 429 HSC's, just 1 sub- divisional hospital, 2 referral hospital, 122 doctors, 480 ANM's, 95 paramedical, and 24 grade A nurse. But on paper these numbers are much better than they actually are. Many doctors who have been appointed never show up from December 2007-january 2008 in Madhubani for a total number of 3046 patients there are about 31 total doctors out of whom 29 were general doctors, 1 general surgeon and 1 other surgeon with no availability of a gynaecologists, anaesthesia, orthopaedic, paediatrician or dentist and E.N.T[54]. And the medicines are never available at PHC's in many of the villages of this district and this gap is generally filled by either quacks, ojha's or shamans. Kala Azar a disease which has turned epidemic in this region, is not much looked after as the PHC's in this region generally do not have sodium antimony glucose, medicine for treating kala Azar, and in most of the villages in this region due to the absence of medical care both public or private generally the quacks turn the situation into their advantage, here quacks take contract to treat kala Azar and the money ranges from 10,000 to 15,000 rupees depending upon the nature of the case. Those who can afford to pay they get the treatment or else others do not have a choice but to live with the disease[55]. The condition of CHC's in Madhubani is more according to DLHS-3 out of 2 CHC studied none of

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[52] Nishant Sinha; 'Healthcare scene bleak in Patna district'; Times of India, Apr 23, 2011.

[53] Jha. K. Dhirendra; 'grass widows of Bihar'; from the book 'the unheard screams' reproductive health and women's lives in India; edited by Mohan Rao, zubaan publication 2004

[54] http://www.mohfw.nic.in/NRHM/State%20Files/bihar.htm

[55] ibid

them had personal computer or blood storage facility a fact existing even in Patna, though both had operation theatre, labour room as well as ambulance on the road just one of them had a deep freezer and even 24 hours water supply. And only had one general surgeon, 1 gynaecologist or obstetrician and a medical officer trained in non scalpel vasectomy in the last five years. But there weren't any medical officer trained for prevention, care and support for HIV/AIDS during last five years or a medical officer trained in basic emergency obstetric care or a medical officer for that matter trained in integrated management of neo natal and childhood illness. Same goes for the pHC's existing in this region out of 21 pHC's surveyed according to DLHS-3, 17 of them have residential quarter for medical officer, 11 have separate labour room, 2 have personal computer, 10 are equipped with normal delivery kit, just 2 of them have large deep freezer, 18 of them have regular water supply, and only 1 pHC's in all of the region is equipped with neonatal warmer (incubator) , and only 1 are having operation theatre with boyles apparatus, and 2 of them have them with anaesthetic medicine. Furthermore only there are only 05 pHC with lady medical officer (LMO), 13 of them have laboratory technician, there are 5 such pHC's which have at least one medical officer who have received integrated skill development training for twelve days during the last five years, similarly, the condition of sub centre (sc) are pretty much similar out of 27 surveyed sub centre according to DLHS-3 16 of them are located in government building, but none of them have any communication facilities or a separate labour room and only 8 such sub centre's are there whereby ANM stays in the same village and 6 sub centre has the facility of a staff quarter for ANM and only 5 ANM have attended the training for skilled birth attending. Here as well the fact still remains that not all pHC's, chc's as well as sub centres' have regular water supply. Thus despite the fact that this region suffers from the existence of various diseases among its people such as diarrhoea, anaemia, and worming, skin diseases and anaemia among children, and problems related to uterus is very common among the SC and OBC community. The main causes of such diseases are impure drinking water, mal nutrition, unhygienic living conditions, and infection from outside and also due to migration. And to top it all, as we saw the government health system is inefficient and poorly equipped to serve the thick population of this area. RMPs, compounder, quacks exploit the poor people by providing poor quality of services

on very high cost. The poor rural people are always in debts. A significant portion of their earnings goes for medical treatment only. Women of SCs and poor OBCs are the main victims of the vicious circle of poverty, malnutrition-poor health-moneylenders.

The table hereby shows just the basic condition of health infrastructure in Madhubani district[56]:

Villages that have implemented Janani Suraksha Yojana (JSY)	34
Villages with Health & Sanitation Committee	0
Villages with Rogi Kalyan Samiti (RKS	10
Villages where PRI aware of untied fund by Government	2
Health facility within village-ICDS (Anganwadi)	43
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-ICDS (Anganwadi)	4
Health facility within village- Sub-Centre	23
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-Sub-Centre	10
Health facility within village- PHC	3
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-PHC	25
Health facility within village- Block PHC	1
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-Block PHC	27
Health facility within village- Govt. Dispensary	1
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-Government. Dispensary	19
Health facility within village- Private Clinic	7
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-Private Clinic	28
Health facility within village- AYUSH Health Facility	8
If health facility is not in the village, whether accessible to the nearest health facility throughout the year-AYUSH health facility	15

Source: (DLHS-3); district fact sheet Madhubani .2007-2008.

Fertility behaviour of women in Madhubani and Patna:

Women are the first educator, bearer and nurtures of the next generation. The health and nutritional problems of different communities at various stages of development are full of obscurities and very little scientific information on dietary habits and nutrition status is available due to lack of systematic and comprehensive research. Nutritional anemia is a major problem for women. In our country it is estimated that at least half of the non-pregnant and two thirds of the pregnant women are anemic. Urban and rural women face heavy workload in addition to childbearing responsibilities, family-care, maintenance of the household, preparing and cooking food related task. Most households in Bihar (83 percent) go to costly private doctors or private hospitals or clinics for treatments that they cannot afford. Most of the Muslim population does not have access to any health care. The situation is proportionally more severe for the lower-income groups. For example, among the lowest group 24 percent of the ill or injured does not seek medical care "due to expense or distance factors"[57].

Out of the total population of 47, 185, 92 Patna has 21, 94,902 number of females and respectively Madhubani has 1,734,284 females out of 35, 75, 281 total population. Above we saw the poor condition of health services and infrastructure that exist in both these districts, in urban agglomeration of Bihar. Though the condition of health in urban areas is better than rural areas but this is mostly due to the upsurge of many private clinics rather than government initiation. Current status of key process indicators for MMR, IMR, and TFR reflect the overall poor status of Reproductive and child health services in these districts. A close examination of process indicators for Maternal Health suggests that for a majority of women in these districts, particularly those in living in rural areas, adequate maternal health services was not available. For example, according to DLHS - 3 data, total of only 20.7 percent in Patna and 35.6 percent of pregnant women in Madhubani received three or more antenatal check-ups it is astonishing to see better figures in Madhubani than in Patna, whereas the corresponding figure for rural women in these districts are even lower at 16.6 percent in Patna but figures in rural Madhubani is slightly better with 36.3 percent pregnant women receiving at least 3 ANC visits. But still

[57] http://www.wwsp.in/patnawomenclub.html

the figures are far lower than they should be at more than 60 percent women still don't get any ANC visits. The percentage of pregnant women receiving two doses of Tetanus Toxoid (TT) injections is just 38.2 percent in Patna and 32.3 percent in rural areas of this district, here also Madhubani stands above Patna with a total 75.2 percent of receiving at least one TT injection during pregnancy and a whopping 76.1 percent in rural areas, one of the few relatively better indicators for maternal health in this district. However, the average data in whole state is still pretty low. The percentage of institutional delivery in Patna total is 58.8 percent and for the rural community the figure is 53.3 percent, though it shows better figures than previous surveys still it is clear that still almost half of the pregnant women still do not have institutional deliveries in this district. The figures for Madhubani district though is alarmingly low at 16.0 percent and 16.6 percent respectively for total and rural areas. It is this reason that of the overall institutional delivery, public health facilities accounted for only 4 percent for the whole of state. RCH I envisaged that given the fact that institutional deliveries will continue to be low, non-institutional deliveries should be conducted under the supervision of a skilled birth attendant. However, this figure too is abysmally low at only 3.7 percent of total population and 5.3 percent of the rural population opting for it in Patna district, correspondingly even in the district of Madhubani only 4.o percent of the total women population opted for it and 4.1 percent of rural women population accepted it. Similarly, the percentage of mothers who received post natal care (PNC) within two days or 48 hours of their delivery of last birth is at 33.7 and 24.5 percent of total and rural population for Patna and only 10.4 and 10.7 percent in the district of Madhubani. Both Patna and Madhubani boasts of pretty high decadal growth which is 30.1 and 26.1 percent respectively, owing to this huge number, it is not difficult to figure out still that a large number of women in these region still do not get proper maternal care institutionally our by skilled professionals. It is due to this factor that Bihar has such high level of maternal mortality rate as due to lack of institutional care, extreme poverty, socio-cultural phenomena of harsh treatment of women they generally suffer from anemia or other diseases which aggravates if child is reproduced at short duration. It is due to this reason that state is putting so much importance on adopting various family planning methods, not only for stopping the upsurge of

population but also for the betterment of women health as child after child only aggravates a women's health problems.

Both Patna and Madhubani constitute 15.47 and 13.48 percent of population of Bihar, but what both also constitute is the high average household size, whereas Patna has average household size of 6 Madhubani's average household size is 5. Much higher than the country (2.7) even than the state (4.41). It is thus important for active campaign of various family planning methods in these regions. Though RCH emphasizes the target-free promotion of contraceptive use among eligible couples, the provision to couples of a choice of various contraceptive methods (including condoms, oral pills, IUDs and male and female sterilization), and the assurance of high quality care and encourages the spacing of births with at least three years between births, fertility in Bihar continues to decline at much lower rates than the national average. And the acceptability of family planning is still much below the anticipated goals. If we look at the data of these two districts as well, despite of the fact that the knowledge of family planning is 'universal' in the state of Bihar[58], only 43.7 percent of total and 40 percent of rural women married between the age of 15-49 years use any family planning method in the Patna district, in Madhubani this rate is 34.9 and 35.1 correspondingly. Somewhat 40.2 total percent and 36.2 rural percent in Patna use any modern method of family planning, the rate for Madhubani in slightly lower with 40.2 percent of women and 30.9 percent of rural women opting for any modern method of family planning. Here again female sterilization is commonly practiced with 33.6 percent of total and 32.3 percent of rural women opting for it. In Madhubani this rate is 28.2 and 28.6 percent respectively. But male sterilization adoption still remain as low as 0.2 percent total in Patna and no one in rural sector of Patna or in whole of Madhubani opting for it. Intra uterine device (IUD) is used by total of o.5 percent women in Patna and 0.4 percent in rural regions. In Madhubani 0.6 percent women in total as well as rural use IUD. Pills are still at a better place with 2.2 percent of total and 1.1 percent in rural women in Patna district opt for it whereas, in Madhubani 1percent of women in total as well as rural use pills as a means of family planning. Condoms are another such means used by 3 and 2 percent correspondingly in Patna district and 2 percent and 0.4 percent in Madhubani. But the persistently high fertility

[58] National family health survey 3; published by government of India.

levels and low level of acceptability of family planning only point towards the inherent weakness of the state's family planning programme. This failure is reflected in a dismal picture of women in Bihar marrying early, having their first child soon after marriage, and having two or three more children in close succession by the time they reach their late-20s. As 34 percent of total women and 37.8 percent of rural women in Patna districts marry before even completing the age of 18 years. Similarly in Madhubani as well 39.5 percent of total and 39.9 percent in rural areas marry before completing 18 years. And the percentage of women reporting birth of order two and above at the age of 20-24 years is 70.5 percent of total and 73.2 percent of rural women and 73.2 percent of total women and 72.8 percent of rural women in Madhubani birth of order two and above at the age of 20-24 years. And at that point, about one-third of women get sterilized. Very few women use modern spacing methods that could help them delay their first births and increase intervals between pregnancies.

It is important that the government step-up its pace to propagate various family planning methods as family planning does more than just enable women and men to limit family size. It safeguards individual healths especially that of women as women in India suffer from lot of reproductive health problems and rights, preserves our planet's resources, and improves the quality of life for individual women, their partners, and their children. In all the blocks of Patna and Madhubani district the achievement with respect to target in case of Family Planning is not quite satisfactory. The sterilization services are largely limited to district and Referral hospitals. There is unmet need exits in the state for limiting the family, which is around 10 %. To increase access to sterilisation services, it is planned that at least one facility in each of the 16 blocks will be developed for regular sterilisation services. This facility will provide complete range of family planning services like conventional vasectomy, traditional tubectomy, laparoscopic sterilisation, non scalpel vasectomy and safe abortion services along with IUD, Oral pills Emergency contraception pills, and non clinical contraceptives. These services will be made available on all days as per the clients need. But still a large percentage of couples report an unmet need for contraception in both these districts. Only 30% of couples who want to delay or space child bearing in rural areas, get it. The district wise data for unmet needs for family planning currently married women age 15-49 years in Bihar shows that in Patna itself

there is an unmet need of 28.6 percent total out of which 9.8 percent is for the purpose of spacing between children and 18.8 percent unmet need is with respect to limiting the number of children. Similarly Madhubani has total unmet need of 38.4 percent, 16.8 percent for spacing and 28.6 percent for limiting[59].

But apart from the lack of widespread availability of birth-control methods (unmet needs), there are other socio-cultural reason for India not achieving the desired success in the rate of acceptability of family planning methods among its population one such reason is the low female literacy level which is also hampering the use of contraception in India and especially in Bihar. There is a wide gender disparity in the literacy rate in India, effective literacy rates (age 7 and above) in 2001 in Patna district were 62.92 percent, 73.8 percent for men and 52.2 percent for women and as for Madhubani the literacy rate is much lower with total of only 42.33 percent of population being literate and effective literacy rates (age 7 and above) being 57.3 percent for males and only 26.6 percent for females. The low female literacy rate has had a dramatically negative impact on family planning and population stabilization efforts in India. Comparative studies have indicated that increased female literacy is correlated strongly with a decline in fertility. Studies have indicated that female literacy levels are an independent strong predictor of the use of contraception, even when women do not otherwise have economic independence. Female literacy levels in India may be the primary factor that helps in population stabilization, as we can see from the data available for Bihar in NFHS-3[60], though the knowledge of contraceptive methods is almost universal to everyone, its usage varies to great decrees in relation to the educational level of women as we saw in chapter 2 of our dissertation. Another important factor is the lower age at marriage, higher percentage of girls marrying below 18 years of age depicts the promotive impact on fertility and inhibitive impact on usage of contraception. Furthermore, districts depicting higher usage of antenatal and delivery care depict strong linkages with fertility, contraception, and age at marriage. It is interesting to see that factorial

[59] http://www.rchiips.org/pdf/rch3/report/BH.pdf

[60] Table 21; " current use of contraceptive methods by background characteristics" National family Health Survey-3, India for state of Bihar 2005-2006; pg 48

investigations do not presume any cause and effect relationship though It is possible that a higher utilization of antenatal and delivery care may lead to a lower infant and maternal mortality and which in turn motivates couples to go for higher usage of contraception to control fertility because of the sense of confidence about the survivability of children and mothers. Thus, the districts with higher factor scores based on the elicited factor structure or factor loadings depict a better performance on the RCH care utilization front and demographic advancement. Alternatively, districts with higher factor scores depict a better status compared with districts with a lower scores and thus lower RCH-status. Efforts to lower fertility might be useful if it is focused on groups within the population that have higher fertility than average. As we saw that in Bihar, rural women, illiterate women, poor women, and Muslim women have much higher fertility than other women.

Fertility and acceptance of family planning methods among Muslim women of these districts:

Not much can be said about the said about the Muslims of these two regions for the only reason that not much data is available regarding Muslims of both Patna and Madhubani district. As we saw that the fertility among Muslim of women in Bihar is high and there is low usage of contraceptives among them. But we also saw a large percent of unmet need.

The total population of Muslims in Patna is 36, 61, 64 people which constitute about 15.1 percent of its total population. With a literacy of 56.3 percent in general among Muslims, of Patna 69.1percent males are literate and whereas the literacy among Muslim woman is 49.1 percent. And Madhubani with a total Muslim population of about 64, 15, 79 people, constitute about 16.9 percent of its total population[61]. The literacy rate of Muslims in Madhubani is 33.6 percent, among whom 48.5 percent are male and only 16.7 percent females are literate.

Due to lack education Muslim women are leading a miserable life. As evident from the above figures, the rate of literacy among Muslim in general and Muslim women in particular is quite alarming. The safety and security of Muslim women is possible only by

[61] http://wwsp.in/education.html

making their educationally and economically strong. And as a result their fertility rate is also high (as fertility is invariably related to the education of women. There is dearth of data regarding use of family planning methods among Muslims women of these regions. As apparent from the belief and practices of family planning methods held by Muslim women in India and Bihar, it is not difficult to imagine the rate of contraceptive use in this region. Especially since the government health services of these districts are also not something to boast about. A future research on this area is much needed.

Chanakya, the author of, Arthashastra (an ancient Hindu treatise on statecraft, economic policy and military strategy in the 4th Century BC). in one of his teachings on 'Neetishastra' says "***Sukhasya moolam dharma, Dharmasya moolam artha***" meaning there by 'that happiness lies in ethical deeds, but ethical deeds can be expected only if there is enough resources'. This saying of early Pataliputra which now Patna still holds true for the people of Bihar.

The aforementioned data clearly show how the health infrastructure of Bihar and especially these two major districts of Patna and Madhubani are in shambles, with lack of enough resource be it in the form of manpower or facilities, And even if there are health facilities available the attitude of staff lives a lot to be desired for as one such women who went for a delivery was narrated about the condition of health care in Patna district that "*We were under the impression that services in the government hospital are available free of cost; but they are not. We spent Rs. 750 on medicines alone. I had not brought any money from home and so the nurses took away my earrings and anklets in lieu of cash and they returned it back to me, only when I got money and had paid them Rs. 1000". She received the JSY cash after a month and said "We did get the cash but there is no happiness in receiving it, because we had to spend so much of money during the delivery in the government hospital. We might as well have gone to a private nursing home. The facilities that are provided by the government do not reach us. The staffs of the hospital are corrupt and they take away everything for themselves*[62]". Another women

[62] Women's experience of Institutional Delivery in 2 Blocks of Patna District Bihar; April 2009, IIC, New Delhi

Mahila Bal Jyoti Kendra;Shaktivardhini,Centre for f Health and Social Justice

narrated that "*Because government hospitals lack facilities, we have had had to face a lot of problems. We don't have much money at home and we had to borrow money to go to a private nursing home. The accumulated capital that we had kept aside for the purpose of cultivation had to be utilized. My experiences in government hospitals have been bad. I witnessed how the health personnel were treating a pregnant woman; they were using such abusive language and cursing her and they sent her away without treating her. Because of a lack of facilities one of women in the bed next to me died during delivery. She had come unaccompanied and God knows to which place she belonged. But both she and the baby died. After all these experiences I don't feel like going to government hospitals anymore*".

This lack of resources affect the fertility of women of these areas inadvertently, as lack for a place for knowledge as well as availability of family planning facilities and its benefits for health of a women as whole make women unaware of the ways to which unwanted pregnancies can be stopped. And many of the extreme rural and poverty ridden places have to go far to avail these basic facilities even, as they cannot afford to travel to these places. The plight of people can only be just glimpsed into these narrations of women, and as a result the health of people are suffering and women who are considered as the lowest stature of in our society, a clearly suffer the most an as a result their reproductive health suffer, and people are unable to avail various family planning method and the usage of contraceptives resulting in high unmet needs. And this result in high fertility rate of these regions. So, the goal of a TFR of 2.1 by 2010 in NPP2000 was certainly unrealistic, given the fact that in many northern states and especially Bihar there has been little improvement in the decentralizing of health care to the district and village level. And the very rural nature of much of the population in Bihar this is, in fact, this goal is very difficult to attain. Furthermore, it is imperative to see that literacy of women plays a very important role in higher acceptance of family planning method and contraceptive use and hence lowering down the fertility rate And large body of Indian and international evidence points to the role of rising female education in lowering fertility (Sen 1994, Jejeebhoy 1995, Visaria, 2000, Dreze 1999 et all). Since the literacy level of women is the lowest in Bihar, it inadvertently result in high fertility and as we saw the literacy rate is even lower among Muslim women hence they have higher fertility

rate than the people of other religion. As low female literacy rate has had a dramatically negative impact on family planning and population stabilization efforts in India. Comparative studies have indicated that increased female literacy is correlated strongly with a decline in fertility. Studies have indicated that female literacy levels are an independent strong predictor of the use of contraception, even when women do not otherwise have economic independence (ibid) and Patel 1994. And as Muslim community are deeply entrenched with low literacy rate, low economical status as according to a survey conducted by Patna-based Asian Development Research Institute (ADRI) and sponsored by Bihar State Minorities Commission. The 273-page, yet-to-be released, report bares the fact that about 49.5 percent of rural Muslim families and 44.8 percent of the urban Muslim households fall below the poverty line, 19.9 percent among them are acutely poor, and 28.04 percent Muslims in rural areas are landless labourers. So it is imperative that focus should be given to the upliftment of Muslims through the medium of education and development.

Focused studies should be done on these groups in order to improve their socio-economic condition which in result will bring improvement in all aspects of their life even turning down the fertility rate.

Conclusion

The aim of this study was to examine the representation of different socio-cultural, economic variables especially that of religion on the attitude of Muslim women towards various family planning methods and usage of contraceptive methods. To achieve this purpose, since it is secondary source, my focal line of argument relies heavily on the arguments of Jeejabhoy (1991, 1995, and 2000).

The intent of the investigation was to undertake analysis of the effect of education and economic status of women as well as culture and religion on the acceptability of family planning and usage of contraceptive methods. Effort was also made to determine the relationship of these variables with the fertility of Muslim women of Bihar in general and the districts of Madhubani and Patna districts in particular. As Bihar continued to demonstrate highest fertility rate in the whole of country, marked with one of the lowest rate of contraceptive methods usage. This dissertation was an attempt at studying the role of religion specifically per se on Muslim women's contraceptive choice. Other important variable for the success of family planning programme is the health infrastructure of the region, present study has also attempted to focus on the health infrastructure India and Bihar in general and two districts under my study in particular through the NFHS and DLHS data available by the government of India. And to analyze the relationship of all these variables on the attitude of Muslim women towards contraceptive usage and, to determine as to how far the religiosity of these women are the reason for their high fertility rate?

Aside from the intrinsic importance of understanding these patterns of fertility decline, the diversity of the Indian experience is a valuable opportunity to re-examine various interpretations of the fertility transition. It is therefore, I have discussed India's population and policies in my first chapter, as it is important to analyze its history in order to understand the present better. India was one of the first country countries in the world to introduce a national family planning programme, in the 1950s.

In the early days, 'population control' (as it was then called) appeared to assume some urgency, with world authorities such as Paul Ehrlich (1968) warning of the impending

'population bomb', and the spectre of famine hovering over India itself. As India's population grew rapidly since the 1951 from a steady growth i.e. from progressive growth rate of 5.75 percent in 1901-1911 to 51.47 percent in 1941-1951 (1951census) and the earlier profounder of population policy just focused on controlling the population growth making population programmes target oriented; this just showed a narrow minded approach by these policy makers. Furthermore, this target oriented approach became highly coercive during the Emergency Period (1975–77) as the National Population Policy 1976 called for a "frontal attack on the problems of population" and inspired state governments to "pass suitable legislation to make family planning compulsory for citizens" and to stop childbearing after three children, if the "state so desires". But this approach was received with lots of criticism and backlash from the people of India who were interwoven in its tradition and culture as a result the congress government lost the subsequent election. This backlash on the coercive approach compelled subsequent governments to stress the voluntary nature of family planning acceptance. The Population Policy 1977 clearly underscored that "compulsion in the area of family welfare must be ruled out for all times to come", and emphasised the need for an educational and motivational approach to make acceptance of family planning completely. Thus, Then came a more gentle approach, stressing that 'development is the best contraceptive'. Initially his was taken to mean that economic growth would automatically reduce poverty and slow down the growth of population. The notion of 'development', however, itself underwent some revision as awareness grew that economic growth per se did not mean a rapid improvement in the quality of life. Over time, the focus shifted from economic growth to 'social development', with the latter calling for economic growth to be supplemented with, direct action in fields such as public health, elementary education and social security. The emphasis on social development gained acceptance as a growing body of empirical research substantiated the view that public action in these fields had much to contribute both to better living conditions and to reducing population growth. And so family planning took a route towards welfare orientation and Family Welfare Programme was launched in India with the objective of reducing birth rates to the extent necessary to stabilise population at a level consistent with the requirements of the national economy. The programme has since evolved through a number of stages, and

has changed direction, emphasis and strategies. And the most important changed outlook towards family planning came with the advent of National Population Policy (NPP) of 2000 in which the policy guided important considerations of human development, equity and human rights. And this policy also sees a remarkable shift from other Indian population policy from demographically driven and target oriented to be focusing more on reproductive health of a women and so after NPP 2000 the service delivery points have significantly expanded. Services administered through the programme have been broadened to include immunization, pregnancy, delivery and postpartum care, and preventive and curative health care. The range of contraceptive products delivered through the programme has also widened. Multiple stakeholders, including the private sector and non-governmental sector, have been engaged in providing contraceptive services. Of late, the programme has been integrated with the broader Reproductive and Child Health Programme and the health infrastructure became decentralized by making provisions for PHC, CHC, state level hospitals etc. And these explicit and elaborate efforts have yielded results as The couple protection rate has quadrupled from 10 per cent in 1971 to 44 per cent in 1999 (MOHFW 2000). But articulation of rights by the state does not necessarily lead to its enjoyment by the citizen, and so despite these achievements; the efforts of the government are still not showing the desired result as several issues continue to daunt the programme and many goals remain under-achieved; a significant proportion of pregnancies continue to be unplanned, and the contraceptive needs of millions of women remain unmet; several sub-population groups including adolescents and men continue to be neglected and under-served; and contraceptive choice remains conspicuous by its absence, as is quality of care within the programme especially in some of the states like Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Orissa etc.

The fertility rate of India is yet to realise the replacement value total fertility rate of 2.1, but the condition of Bihar is much more pathetic. Bihar is one of those state which is still reeling under acute poverty, high rate of illiteracy and lower health index; and especially lack in the field of population control; since the state has the highest increase in decadal growth in 1991-2001 of 28.43 from 23.38 in 1981-1991; making it the third most populous state in India (census 2001) from fifth position (census1991); with an average of more than four children per household (NFHS 3). As Fertility rate in Bihar is the

highest (3.9) of any state in India; thus, women in Bihar have 1.3 children more in their lifetime than women in India as a whole (TFR of 2.7). Among births in Bihar in the three years preceding the survey, 36 percent were of birth order four or higher. But it should not be overlooked that Bihar is striving hard to achieve population stabilization in order to promote the quality of life of the people, reduce poverty, improve the status of women and accelerate the process of sustainable development. The Aim is to achieve Millennium Development Goals (MDGs) but due to its meagre economic growth during the past, its social sector performance in education, health and gender indicators which also has been quite dismal creates a hurdle in all forms of development in Bihar. It is documented that education of parents, particularly of mothers, has a close association with mortality and fertility levels. And since Bihar has the lowest female literacy continuous to have a high population growth rate, high fertility rate, high infant mortality rate (70 infant deaths per thousand live births) and under five years child mortality rate (105 deaths per thousand live births) and very high maternal mortality ratio (430 per hundred thousand live births) and low contraceptive prevalence rate (34 percent). The unmet need for contraception is substantial (23 percent) is one of the highest in the country and Currently, only 60 percent of the demand for family planning is being satisfied in Bihar, compared with the national average of 82 percent. Also in Bihar, only 49 percent of women and 53 percent of men age 15-49 consider the ideal family size to be two children or less, compared with the national average of about two-thirds of adults. The mean ideal family size among currently married women is 2.7; the ideal family size in NFHS-3 is more than half a child lower than it was at the time of NFHS-2 (3.3). thus, is apparent that the education of women, economy of women, autonomy of social choice are all pretty low among the women of Bihar, and thus result in high fertility rate as these variables of education, economy and autonomy of women are all interwoven with the fertility behaviour of women. Also disheartening is the pathetic condition of the health infrastructure of Bihar which leaves a lot to be desired for. Since these clinics help women especially of villages to gain knowledge about these contraceptive methods. And also evidence from Bangladesh proves that a better health infrastructure and way of imparting knowledge i.e. informed choice among women can bring about decline in the fertility rate even if the literacy rate or the development index are not much high of women. And as shown in my

studies what is the condition of the health infrastructure and medical personnel are in Bihar and especially in the Madhubani and Patna.

On average, the number of children born to a Muslim woman was 4.1 while a Hindu woman gave birth to only 2.9 children. Religious customs and marriage practices were cited as some of the reasons behind the high Muslim birth rate. According to Paul Apart from these variables culture, tradition and most importantly religion is also considered to be a determinant in women's attitude towards the family planning methods and contraceptive use. And thus, it is seen that the fertility is much higher among one community than the other, as well the usage of contraceptive is lower, and one such community is the Muslim community, as many sociologists believe that religious factor can explain high Muslim birth-rates as surveys indicate that Muslims in India have been relatively less willing to adopt family planning measures and Muslim women have a larger fertility period since they get married at a much younger age compared to Hindu women. A study conducted by K.C. Zacharia in Kerala in 1983 Kurtz, Muslims in India are much more resistant to modern contraception than are Hindus and, as a consequence, the decline in fertility rate among Hindu women is much higher compared to that of Muslim women. The National Family and Health survey (NFHS) conducted in 1998-99 highlighted that Indian Muslim couples consider a substantially higher number of children to be ideal for a family as compared to Hindu couples in India. Whereas many sociologist and recent study debunk this notion and put forward several other socio-cultural factors responsible behind high birth rates among Muslims in India than the religious factor like Roger and Patricia Jeffery (1997), who consider socio-economic conditions rather than religious determinism as the main reason for higher Muslim birth rates, as Muslims in India are poorer and less educated compared to their Hindu counterparts. And so have less opportunity to realize their capabilities. They are less educated, and due to strict purdah system is not much into work force as a result these women lack autonomy to make their own decisions even regarding their own health. And on top of it the health infrastructure condition and the behaviour of whatever little existing staff clearly do not show these women a way out of their present predicament.

Thus, my topic "family planning among Muslim women of Bihar"; focusing on mainly two districts of Bihar namely Patna and Madhubani try to analyze and study this trend of

high fertility among Muslims of Bihar and its relationship of socio-cultural factors on family planning mainly contraceptive use by women in general and especially Muslim women of these areas as they are poorer and less educated than other religious groups (sachar committee report 2006) characteristics which are often associated with higher fertility rates. I focus my study on just two districts of Bihar namely Madhubani and Patna, as studying a wide and diverse state like Bihar is a little difficult. Both of these districts form the urban agglomeration of Bihar and are very important for the state for one being the capital and other for its world famous 'Madhubani paintings'; but still both have many similarities with respect to the health scenario as well as social conditions and have more than ten percent of Muslim population. this dissertation hereby mainly focuses on studying the attitude of women especially Muslim women towards the family planning methods in India and Bihar in general and the districts of Madhubani and Patna in particular; and also attempts to study how characteristics of modernity such as higher literacy, and a economical independence etc effect and influence a women's acceptability of family planning, through the analysis of various secondary sources also the fact that comes out quiet importantly that other important factor that does influence a women's acceptance of family planning in a traditional society like India and especially Bihar, where religion, tradition and customs is an important part of every humans life, is the governments provision of health infrastructure and medical personnel or rather citizen's accessibility of these health infrastructure and medical personnel in that district as it was clear from various analysis of data (NFHS,DLHS,RCH etc) that there is a huge gap between the demand and supply of health facilities, health centres' doctors, nurses, medicines and even contraceptive methods. In other words, I try to disconnect the Muslim identity with the fertility behaviour of Muslim women and focus mainly on social cultural aspect of economical and literacy as factors responsible for the fertility behaviour of these women. As the study conducted by Weigl (2007), in the Nizammuddin Basti of Delhi a predominantly Muslim locality clearly stated that even though the religion may play an important role in people life in India, it is not one of the determining factors for women's attitude towards family planning methods. Which clearly states that, religiosity of these Muslim women is not the dominant variable resulting in increased fertility rate. And thus, proper government initiation could help in

overcoming this difficulty of high fertility rate among Muslim by improving their socio-cultural, economic condition, and also by improving the health infrastructure in order to grant Muslim women autonomy and social choice to realize their full capabilities. Thus, health can be conditioned by accessibility (Banerji, 1971). In sum, this study examines the underlying reasons for lower contraceptive use and higher fertility among Muslims, and, in particular, the degree to which lower contraceptive use and higher fertility among Muslims are due to their socioeconomic characteristics, culture as well as health infrastructure.

Though my study was mainly based on secondary sources(books, articles, journals, surveys etc) and the topic of women health and reproductive, fertility behaviour have been studied extensively still there are many aspects of women' reproductive and fertility behaviour still seem to be unexplored entirely or very scarcely, thus giving ample room for further researches as it was difficult for me to find much in-depth study about Muslim women of Bihar or any of its districts and their contraceptive use or health scenario though one can relate to the study done in other districts of other states, owing to the cultural difference of every state it is important that study be done of these districts of Bihar as well.

Firstly, the main problem that needs to be addressed is that, apart from data from Reproductive and Child Health-2 and a few small-scale studies, detailed insights into the impact of new initiatives are scarce. Qualitative studies are needed to assess the perspectives of primary and secondary stakeholders regarding the changes in the programme, it is important to study the changing family planning scenario of India, though work of K.G.Santhya 2003 is an effort in this direction more study needs to be done in this aspect.

Secondly, a research in order to discuss whether women's work on family farm and home-based assistance in income generating activities in rural society has any bearing on women's fertility behaviour or not? As in the study of Jha.K.Dhirendra (2004) on grass widows as well as in Tulsi Patel (1994) study of women in the Mogra district of Rajasthan show that the social value of these women in such traditional social milieu doesn't change much, it would be interesting to see a similar study on Muslim women. As many Muslim women are into artisans, especially in Madhubani district of Bihar. A

further research is needed on focused groups such as that of these Muslim women. And the role that Muslim woman's occupation and social interaction play in their acceptance of family planning and various contraceptive methods. Furthermore, in-depth research to understand the behaviour pattern and the effect of socio-cultural factors on contraceptive use is primarily missing in Bihar in view of present trend of Bihar's inadequacy in implementing the programmes made by the government an in-depth analysis of such a problem may be of much use not only to sociological studies but also to the policy makers.

Lastly, rather than focusing one or the other aspect like either religion, economical or literacy and their effect on fertility a study with amalgamation of all the aspect would be interesting and is much needed.

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