Chapter I

Introduction
1. Introduction

The family planning programme in India started with the objective of addressing the reproductive needs of families, and to reduce the growth of population. Contraceptives and reproductive health services have enhanced couples' choices and opportunities to time and space the births and to limit family size at their desired level. Family planning is the single most important component that could depress the fecundity of women and exert maximum impact in fertility (Visaria, 1999; Khan et al., 1999). The health and economic benefits of family planning constitute good reasons for making it the central focus of national programmes. Through the promotion and effective implementation of family planning, we can achieve many other reproductive health goals also. Helping women and their partners to use family planning methods to avoid risky and unintended pregnancies may save the life of many mothers and children (Miller et al., 1998).

Family planning programmes have actively been contributing to fertility reduction by legitimising small families and by promoting the use of modern contraceptive methods (Robey et al, 1992). With the expansion of the family planning programme and due to the continuing wide gap between the anticipated and actual achievement of the family planning programme, there has been considerable interest in understanding the factors that influence couples' decision to use contraception (Ullah and Chakraborty, 1993). The difference in the practise of family welfare measures can be attributed to a complex set of inter-related factors. These include the couple's socio-economic, demographic, geographical and cultural features, which in turn is reflected in their contraceptive behaviour.


Researchers often argue that the important determinant of declining fertility in developing countries is the contraceptive use, which could explain almost ninety percent of the variations in the performance of fertility among 50 developing countries (Westoff et al, 1989). The modern contraceptives are the most reliable and effective method for birth control, a proximate determinant of fertility and which play an important role in reducing fertility.

Family planning methods can be divided into two types – modern and traditional. The modern methods can again be classified into permanent and temporary methods. The permanent method includes male and female sterilisation, while the temporary (reversible) method comprises of intrauterine devices (IUDs), pills, injections, Copper-T and condoms. The traditional method consists of withdrawal, periodical abstinence and rhythm methods. As Henshaw and Kost (1996; 144) pointed out, each contraceptive method entails a different probability of becoming pregnant, and the choice of methods often differs by their socio-economic and demographic characteristics.

2. Benefits of Family Welfare Programmes

It is found that the adoption of family planning methods helps individual families as well as the countries in many ways. The following aspect of family welfare programme has made it the central point in all development policies in developing countries like India. The most important contributions of these programmes are:

1. Most Effective and Reliable. The modern family planning methods are most effective for timing the first birth, the spacing between births, and for limiting the number of pregnancies.

2. Saving women's lives. Avoiding unintended pregnancies could prevent about one-fourth of all maternal deaths in developing countries. Using contraception helps avoiding unsafe abortions and spacing and limiting childbearing.

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3. Saving children's lives. Spacing pregnancies helps in reducing the infant mortality almost by half. Women could regain their health and could deliver healthy babies.

4. More choices to women. Controlling the childbearing practice will enable women to opt for more education, employment and community involvement. Couples with fewer children are more likely to send all their children to school.

5. Safer sexual practices. The use of condoms will help preventing sexually transmitted diseases.

Even though India officially started its family planning programme as early as in 1952, the level of achievement it brought about is not satisfactory. The excessive emphasis on sterilisation has proven its shortcomings by creating a high need for spacing methods which is not solved till now. During the pre-independence period, till 1920, India was in the first phase of demographic transition, with very high birth and death rates. After 1920, India entered into the second phase, when the death rates started declining due to improvements in services by British rulers in the fields of medicine, hygiene, nutrition and education, which helped in controlling infectious and tropical diseases. Only in the 1980s, did the country entered into the third phase of the transition, with decline in birth rates and a further decline in death rates, though with the exception of a few states. The trend in sterilisation acceptors among couples with two surviving children, irrespective of their sex composition, can be seen in many states India in the recent years (Family Welfare Yearbook, 1996; 114).  

While assessing the impact of contraceptive acceptance on fertility rates, Dasgupta and Ghosh (1987) found that the acceptance of IUDs reduced the total fertility rate by almost 90 percent. It is usually assumed that, if contraceptive methods were to be made easily available to them, many women with unmet needs for contraception would adopt those methods. In reality, however, this does not always happen. The socio-economic and demographic environments of couples influence their decision to accept family planning in all societies. In fact, the variations in contraceptive use, despite widespread knowledge and availability of contraceptive

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methods, necessitate a detailed examination of the factors that determines its acceptance.

The present study is therefore, concerned with the identification of the socio-economic and demographic determinants of the use of contraceptives in India. States like Goa, Himachal Pradesh, Karnataka, Kerala and Tamil Nadu have reached the below 'replacement level'\(^9\) of fertility in recent years. These states have a 'total fertility rate' (TFR)\(^{10}\) below 2.2. These states have shown relatively higher levels of contraceptive acceptance, consistently over a period. As a result these states have been able to bring down their total fertility rate considerably when compared with other states of India. The contraceptive use rates in these states are and were steady and relatively higher than other states of India, while proceeding towards the replacement level of fertility.

Even though the transition to 'below replacement level' fertility of each of these states is a unique experience, the process is influenced by a set of consistent socio-economic conditions prevailing in those states. The experience of these successful states will be useful to enhance the contraceptive acceptance in other states too, by making appropriate changes in their programme implementation process. The identification of the determinants of contraceptive use would be much more effective if the analysis is restricted to the successful states, which can be termed as, the 'demographically advanced' states. This study therefore, tries to understand the socio-economic and demographic characteristics of the eligible couples in the states, which determine the use of modern contraceptive methods. An attempt has been made to combine and relate the socio-economic and demographic variables with the use of contraceptives to understand the nature and direction of the causal relationship in contraceptive acceptance in the demographically advanced states of India. An understanding of the existing theories on fertility and contraceptive use, as discussed below, will be useful while proceeding towards the analysis.

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\(^9\) The 'Replacement Level' of fertility means the flow of births sufficient to maintain the population. That is, complete parent replacement by children.

\(^{10}\) Total Fertility Rate (TFR) refers to the number of children a woman will have, if she is subjected to a fecundity schedule described by the age-specific fertility rates during her reproductive span.
3. Theories on Fertility and Contraceptive Use

The theories on fertility, mortality and migration in the field of demography are derived from the careful observation of experiences that followed over the years in many countries in the world. Although fertility rates have begun to fall all over the world, the transition to replacement level fertility is occurring much more gradually and disproportionately in the developing world. The levels of socio-economic development, urbanisation and industrialisation have all played and are playing a vital role in determining the contraceptive acceptance and lowering the fertility levels. The linkage between contraceptive acceptance and socio-economic and demographic factors have paved the way for many theories.

3.1 Demographic Theories

Malthus believed that once people got married, the frequency of their sexual intercourse was determined by biological drives, that the society and culture could not change. The human potential to reproduce is greater than earth’s ability to provide subsistence. The only way to lower birth rates according to Malthus is the preventive check on population growth—preventing people from getting married. The ‘moral restraint’, according to him is, in the form of premarital chastity and delayed marriage. The preventive check includes economic requirements that force people to save a certain amount of money before marrying, or religious and cultural practices that forbid marriage by people in certain groups. At his time, Malthus was not aware of artificial birth control methods, rather the concept and its mechanism were least developed, and hence he was more concerned about the moral values to curb the population growth.

According to Kingsley Davis (1963; 345)\textsuperscript{11}, the process of demographic change and response is not only continuous but also reflexive and behavioural. The changes in one component will eventually be altered by the change it has induced in other components, and the process involves human decisions in the pursuit of goals with varying means and conditions. But the demographic transition theories are not explaining the idea that large proportions of women wanted to avoid further births but

were not practising contraception (Mauldin, 1965)\(^\text{12}\). He pointed out that a set of mutually interactive socio-economic and demographic mechanisms act as a barrier to the use of birth control measures, which might be the reason for the low levels of contraceptive prevalence in the poor countries of Asia, Africa, and Latin America.

A majority of the demographic theorists of marital fertility decline pointed out the role and importance of contraception. According to Cleland and Wilson (1987)\(^\text{13}\), the natural fertility persisted solely because most families had few surviving children because children were forever considered as an economic asset. Fertility is governed by many different factors and its decline in different societies was initiated due to a differing combination of factors. The social and demographic changes have progressed far more rapidly than economic development. A large majority of the world’s population is demographically “modern” by any definition (Wilson, 2001; \(^\text{14}\)).

The interpretations of the historical European fertility decline also stressed the causal impact of changes in the knowledge and means of practising contraception (Knodel and van de Walle, 1979; Cleland and Wilson, 1987)\(^\text{15}\). It is the improvements in access to contraception that led to the increase in contraceptive prevalence. Freedman (1979)\(^\text{16}\) noted that the consensus in both demand-side and supply-side factors of family planning services varies across socio-economic settings.

Pritchett (1994)\(^\text{17}\) argued that the decline in fertility in the past has been almost entirely due to the decline in desired fertility. He pointed out that, the development in the form of increased levels of education leads to a decrease in the desired family size preference, which in turn would lead to an increased contraceptive use. According to


Rustein (1998; 1) family planning programmes are mainly passive; satisfying the demand for contraception created by development, but they would not lead to the increased use of contraception. This is true in the case of India also, as the family welfare services are being provided free of cost, but almost half of all the eligible couples in the country are still not using any of the services. Woods (1987; 309) pointed out that, fertility decline is a result of the increase in the levels of education, especially the female literacy, modernisation and secularisation of the society, and the positive attitudes of the public towards family planning. Gaisie (1996; 364) observed that modern contraceptives act as a facilitating agent; but they are not the structural agents of social change, which helps in reducing fertility. The means of contraception and ways of delivery are secondary issues in fertility reduction programmes. The motivation to use contraceptives is determined mainly by the extent to which the advantages of large family size are eroded by the transformation in the socio-economic structures. The prevailing socio-economic structure influences the reproductive behaviour in many ways.

Bongaarts' (1978) 'proximate determinants' of fertility hypothesis is comprised of four determinants: age at marriage, postpartum infecundability, induced abortion and contraception. He tried to explain the fertility inhibiting effect of contraceptives quantitatively. According to him the biological variables affects the childbearing practices than the social variables. Bongaarts (1992) had analysed the demographic health survey (DHS) data collected in the late 1980s in 18 countries and observed that the implementation of fertility preferences through contraception varies by level of fertility, and from this he inferred that, the fertility decline can be attributed in part to increased implementation of preferences. In another empirical

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exercise, Bongaarts (1993)\textsuperscript{23} decomposes fertility decline during the 1980s in 12 developing countries and calculates that on an average, the increased implementation of family planning services accounts for two-third variations in the observed fertility decline.

The essence of the theory of demographic transition is that the demographic parameters of a country or geographical region follow a set pattern of trend as a consequence of social and economic changes, during its transformation from higher birth and death rates to a lower one. The theories emphasising the importance of socio-economic variables focus on the changing costs and benefits of children as the major cause of fertility decline. The traditional demographic transition theory can be viewed as one variant of these socio-economic explanations (Friedlander and Okun, 1996; 2)\textsuperscript{24}. The fertility declines are in large part the result of a new medical and contraceptive technology.

3.2 The Economic School of Thought

The economic school assume that fertility preferences are fixed and thus the fertility differentials can be explained by the differences in the opportunities (Becker, 1981)\textsuperscript{25}. They also argue that the utility maximising decisions in the extent of fertility are determined by prices and income. According to financial circumstances, couples may try for an optional family size.

The quality-cum-quantity of children hypothesis states that as the real income that a couple receive increases as they invest more resources into increasing the quality of the children they have acquired instead of allocating these resources to acquiring more children. The economists perceive children in terms of costs like the actual expenses and foregone opportunities (Zafar, 1996; 146)\textsuperscript{26}. The children have become more expensive because they are spending more years at school and are economically dependent on their parents. Thus the idea of limiting child bearing have

gained wider acceptance among couples in all nations (Visaria and Visaria, 1995; 8)\textsuperscript{27}. The negative relationship between total fertility rate and appropriate measures of real income is tested true in several countries like China, India and Africa (Alan Martina, 1996)\textsuperscript{28}.

There are two aspects- 'supply-side' and 'demand-side' factors in the use of contraceptives. The former refers to the supply of contraceptives available to individuals, determined by the geographical accessibility of family planning services and the cost and quality of those services. The primary focus of public and private family planning programmes is the configuration of these factors. The demand-side encompasses all factors that affect the demand for contraception. First and foremost among the demand factor is the desire to avoid pregnancy - either temporarily or permanently. The demand for birth control also includes social, psychic, and cultural variables that either encourage or discourage contraceptive use, which in the Easterlin synthesis model are termed the 'non-access costs of fertility regulation' (Easterlin and Crimmins, 1985)\textsuperscript{29}.

3.3 The Social School of Thought

Many social scientists have questioned the statements made by the economic school of thought that, structural development is a precondition for fertility transition in developing countries. The theory of cost-benefit analysis is based on European experiences and it will not be applicable to the countries in the contemporary world, as there is a fast pace of economic development, modern communications, contraceptive technologies and international assistance are available to assist demographic transition (World Bank, 1991)\textsuperscript{30}.


Researchers like (Chamratrithirong et al., 1992; 52)\textsuperscript{31} argued that it is the social context that provides the normative basis for fertility decisions. Two mutually reinforcing changes are taking place during the process of development. At the individual level, changes in life chances for both individuals and their families make them more likely to accept and to desire to regulate fertility. At the societal level, the normative structure undergoes changes that legitimise the acceptance of fertility regulation. Tietelbaum (1975)\textsuperscript{32} pointed out that cultural development in terms of aspirations, attitudes and a new code of behaviour rather than structural development, which appeared to be a precondition for fertility decline in developing countries.

The theories have stressed that the socio-economic variations in a region is influencing their reproductive and contraceptive behaviour. There are a large number of studies conducted on the different aspects of contraceptive use, all over the world. A review of the major studies in this area will give a better understanding on different socio-economic variables and how they are influencing contraceptive use. The next section gives the review of selected studies conducted all over the world, India and in many of Indian states.

4 Review of Literature

Contraception has been practised within the family unit for thousands of years. Various civilisations and cultures have used a variety of plant extracts, herbs and mechanical devices to control fertility. As the world experienced a “population explosion” during the second half of the twentieth century, the need for fertility control extended beyond the family to societal levels as a means of limiting the population growth to a level within their socio-economic capabilities. In the modern epoch, the family planning programme managers are beginning to identify the need to increase couples’ support and participation for good reproductive health care for their partners and themselves. The knowledge, attitude and practice (KAP) surveys and studies on family planning conducted all over the world provide a better view on the factors and mechanisms that determines the practise of fertility control methods. In


\textsuperscript{32} M.S. Tietelbaum (1975). “Relevance of Demographic Transition Theory for Developing Countries”, \textit{American Association for Advancement of Science and Population}, 174-179.
this section a review of some of the important studies that had been conducted all over
the world and in India in particular, has been given.

4.1 International Experience

The analysis of the Demographic and Health Survey data of Sri Lanka for 1982 and
1987 by Malhotra and Thapa (1991) found that the important determinants of
contraceptive use are, marital duration, the age at marriage, the number of living
children, the place of residence, and both spouses’ education. But this study has not
given sufficient importance to the familial and societal level variables such as the type
of family, religion, economic variables such as occupation and living standards.

A study on the trends and determinants of modern contraceptive used in
Kenya based on Kenya Fertility Surveys for the years 1977-78 and 1989 has been
done by Njogu (1991) using multivariate logit models. The covariates in the model
included age, desire for additional children, the type of residence, the place of
residence, education and the future intention to use contraceptives. It is found that the
differential contraceptive use by age, the desire for additional children, urban
residence and the years of education positively, whereas infant mortality was
negatively associated with contraceptive use over the two time periods.

De Silva (1992) analysed the longitudinal Sri Lankan Contraceptive survey
data for 1982-85 and found that woman with larger family size, cash incentives,
religion especially Christianity and desire for additional children has been affecting
family planning. It is also found that education, occupation, place of residence has not
much influence on the performance. The effect of child loss is not taken into account
in this study.

The multivariate analysis based on 1989 Bangladesh Fertility Survey data
(Ullah et. al., 1993) on the factors affecting the contraceptive use found significant

36 Md. Shahid Ullah and Nitai Chakraborty (1993). “Factors Affecting the Use of Contraception in
variations in contraceptive use among women with different socio-economic and demographic characteristics. The use rate was found to be directly associated with the respondents' age, number of living children, duration of marriage and place of residence. The levels of education of both the respondents and their husbands had a positive effect on the current use of contraception. The experience of child loss showed a negative effect on contraceptive use. Those who do not desire additional children were more likely to use contraceptives than those who desire additional children. Husband-wife communication also has a positive effect, showing the highest use rates among those women who took a decision about family size jointly with their husbands. Non-Muslims have higher current use rates than Muslim women did. The effect of infant and child loss and the effect of parental family size on contraceptive use are mentioned in this study.

An analysis of survey data collected from seven provinces in People's Republic of Lao in 1993 on the socio-cultural and economic determinants of contraceptive use by (Phimmasone, et al., 1994) found that urban residents, especially women more than 35 years, who have more than three children, 8 or more years of schooling, not poor, and possession of household items such as radio, television etc. were more among the acceptors of family planning. But it is also found that economic status and year of schooling is not much affecting the current use. But this study is not covering the effect of employment status on contraception.

A study has been done on the determinants of contraceptive usage by Sarah (1994) using data from the 1988 Ghana Demographic and Health Survey in Ghana. The logistic regression analysis found that, the ideal family size reported the desire for additional children; urban residence, the wife's attitude towards family planning and the discussion of family planning between spouses have significant independent effects on current contraceptive use. Dang (1995) analysed the data from the 1988

Vietnam Demographic and Health Survey. It is found that the higher the age and education, especially the husband's education level, the number of sons and number of children shows higher odds ratio for using a contraceptive method.

The analyses of data from the 1989 Kenya Demographic and Health Survey (Westoff and Rodriguez, 1995)\(^4\) demonstrate a strong statistical association between women's reports of having heard or seen messages about family planning through various media outlets and their use of contraceptives and their reproductive preferences. It is also found that religion, husband's occupation, income status of the household, age and number of children affects the access to mass media and subsequently the acceptance to family welfare measures in the country.

An analysis has been done on Bangladesh Contraceptive Prevalence Survey data for 1983, 1989 and 1991 by using multinomial logistic regression among women using modern contraceptive methods by considering economic development, women's status, and family planning variables as predictor variables. It is found that, woman with higher levels of education, urban residence, employed women, desire for additional child, religion, visit to a health centre, were the important determinants of the acceptance of modern contraceptives (Hoque and Murdock, 1995)\(^4\).

The data for the four-year period separating the 1987 and 1991-1992 rounds of an independent national probability sample survey known as the Epidemiology and Family Health Survey (EFHS) on the factors contributing the use of traditional contraceptives were analysed (Hubacher, Suazo, Terrell and Pinel, 1996)\(^4\). The logistic regression analysis on the acceptors of modern and traditional contraceptives found that age, education, place of residence, number of living children, possession of household items such as television, desire for additional child and mass-media are related to the use of both modern and traditional family planning methods.

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The analysis of the 1991 Contraceptive Prevalence Survey in Bangladesh (Kamal and Sloggett, 1996)\textsuperscript{43} using logit regression technique found that the visit of female family planning workers and economic status measured in terms of assets were important determinants of the use of modern reversible as well as permanent methods. This study does not give much importance on the social variables that affects the usage of family planning methods.

The analysis of a 1994-1995 survey in United States conducted among 9,985 abortion patients (Henshaw and Kost, 1996)\textsuperscript{44} shown that women using any method are only about 15 percent as likely to have an abortion as are women using no method. Also the determinants of the users of contraceptives found that, women with employment, a higher level of economic and educational status has frequently used a family planning method than their counterparts. Since this study mainly focussed on the contraceptive practices of the abortion patients, it could not provide a clear idea about general population and their reproductive behaviour.

A study conducted in Kinshasa in 1990 among 2,400 women aged 13-49 using multivariate analysis found that the explanatory variables such as age, years of schooling, employment status, religion, number of children and women in formal occupation were found to be significantly related to modern contraceptive use. The increased schooling found to be more associated with use of both modern and traditional methods of contraception (Shapiro et al, 1997)\textsuperscript{45}.

The data from the 1989 Kenya DHS was analysed by Lasee and Becker (1997)\textsuperscript{46}. It found that the knowledge of the source of contraceptives, husband and wife approval of family planning, husband-wife discussion about family planning, and in families where only wife is earning, are likely to affect the use of contraceptives. Here other determinants like infant mortality, educational status are not studied in detail.


The study on the characteristics of the limiters and spacers in Matlab (Razzaque et al., 1998)\textsuperscript{47}, in Bangladesh on the four demographic surveys conducted during 1984 to 1993 using logistic regression found that the variables such as age, number of living sons and literacy found to be positively associated with the acceptance of contraceptives, both spacing and limiting methods. The contraceptive use increased with an increase in the women’s age; however, at higher ages contraceptive use decreased. This study also lacks the information on the effect of infant and child mortality and abortion on the contraceptive use.

The study from the 1988 and 1995 National Surveys of Family Growth data is examined (Bankole, Darroch and Singh, 1999)\textsuperscript{48} to evaluate trends in condom use, found that education, income and religion is influencing the condom use. But this study does not cover occupation and age at marriage aspects in this study.

The determinants of contraceptives in Canada was studied by Martin and Wu (2000)\textsuperscript{49} from the data collected from 5,315 women in the 1984 Canadian Fertility Survey, and from 3,220 women and 3,449 men in the 1995 General Social Survey. It found that contraceptive use increased with parity, desires of no additional children, educational attainment, income, men’s employment status and religious affiliation. The study did not mention the work status as well as infant and child mortality.

The trends in contraceptive use and fertility levels in Bangladesh has been analysed (Khuda and Roy, 2000)\textsuperscript{50} from 1975 to 1997 from Bangladesh Demographic Health Survey data. It is found that the use of contraceptives increased with inter-spousal communication, the number of children, access to mass media and levels of education.

The potential barriers to family planning among 311 Missouri women who said their potential pregnancy was unintended, who were seeking pregnancy tests in public health department clinics in 1997 were studied (Sable, Libbus and Chiu.


The factors affected were, access to services and condom-specific issues to cost-related concerns, social norms, pregnancy denial, embarrassment over discussing or obtaining birth control and worry about side effects.

An analysis on the trends in contraceptive use between 1978 and 1998 has been done (Bertrand, Seiber and Escudero, 2001) on four national-level surveys in Guatemala. The variables such as age, employment outside the home, education, urban-rural residence, ethnicity, and ownership of radio and television. A private source of supply of contraceptives is widely accepted among the users in the study.

A survey conducted in squatter settlements in Karachi, Pakistan, with Muslim women 30 years old or younger, their husbands and their mothers-in-law to explore factors that influence couples' contraceptive use (Fikree et al., 2001). The multivariate logistic regression analysis shows that the characteristics such as education, urban place of residence, five or more live births, higher economic status, discussion about family planning in the household and mass-media interventions positively affects the use of contraceptives. This study is not attempting an analysis on the effect of type of family, infant and child mortality experiences on contraceptive use.

Bairagi (2001) analysed the Matlab Demographic Surveillance System data 1997 to investigate the effects of son preference on contraceptive use in Matlab, Bangladesh. He found that the method use increased with the number of sons and the experience of abortions affect family planning usage. He is not mentioning the effect of number of children or number of sons on the prevalence of contraception.

The influence of various socio-economic and demographic variables in the adoption of family welfare services in India is researched by various demographers over time, from its commencement. Similar to the studies conducted other countries,

there are studies conducted in India and its states on different aspects of contraceptive use. A brief description of those important studies along with their findings and drawbacks are given in the following section. The large-scale surveys conducted in India recently paved way for a number of such studies.

4.2 Studies on India

There are a number of studies conducted all over India on different aspects of family planning. These studies have mainly considered the use of contraceptives as a single object, and not much attention has been given to the use of modern contraceptives in particular. In this section, the important studies conducted in this field in India and its states are given in brief.

A study conducted in three states of India, namely, Kerala, Andhra Pradesh and Uttar Pradesh among the 6500 ever-married mothers showed that the majority of the couples rely on their first son for social security. It is also found that in Kerala about 10 percent of the parents rely on daughters for their old age security, which may indicate the low son preference in Kerala (Mahadevan and Jayasree, 1989)\(^5\). Patnaik (1989)\(^6\) found that in Bihar, especially in nuclear families, infant mortality exerts considerable influence on the family planning choices and practice of couples. Infant and child mortality may reduce the acceptance of temporary as well as permanent family planning methods. Similar results were found by the analysis of NFHS 1992-93 data in Goa state (Rao et al, 1997)\(^7\).

A study conducted by Bhende et. al (1991)\(^8\) on the determinants of contraceptive practices of 2,376 currently married women in the age group 15-44 in Jamshedpur in 1984 considering the variables such as age and duration of marriage, infant or child mortality, religion, education and occupation highly affected the choice

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of methods. Even though the place of employment had a significant effect, husband’s occupation does not have any effect on the acceptance. But this study has been done in an industrial town of Jamshedpur and it did not consider the rural-urban differentials in the usage. The housing conditions and other economic characteristics are not much dealt with in this study.

Dwivedi (1992) studied the effect of socio-economic variables in explaining the level of adoption of various family planning services in India based on family welfare programme reports in 1987. An analysis by using path analysis techniques revealed that literacy and per capita income played a dominant role in motivating couples for accepting sterilisation. The per capita income exerted maximum direct effect on the use of conventional contraceptives.

The important correlates of family planning acceptance in Maharashtra based on National Fertility and Mortality Survey of 1989 among 8,000 women were analysed by using logistic regression model (Srikantan et al, 1992). The explanatory variables used were the education of women, number of living children and sons. It is found that both in rural and urban areas, the number of sons and living children, caste and education contributed substantially towards the variation in the acceptance of contraception.

Analyses were done in Karnataka, on four cross-sectional surveys that were conducted between 1985 and 1990 and from eight evaluation surveys of sterilisation and IUD acceptors that were conducted between 1982 and 1989 by Rajaretanm and Deshpande (1994). At least one son in the family increases the couples’ likelihood of accepting contraceptives, especially the sterilisation in Karnataka. In this study the emphasis is given only on the aspect of son-preference and no attention has been given to the socio-economic and demographic determinants.

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A study on the acceptors and non-acceptors of family planning methods among 399 couples in three tribal communities in Karnataka found that current age, mean number of living children, literacy rate and use of government health institutions found to be positively influencing the adoption of contraceptives (Mutharayappa, 1995)\textsuperscript{62}. A majority in the sample were tubectomy and vasectomy acceptors. Son preference, desire for additional child and the lack of knowledge about family planning services were found to be inversely affecting the adoption of contraceptives.

A study in Karnataka during 1987-90 in four districts among 2,717 women to investigate the effect of family size desire, sex preference and various cultural and socio-economic factors on contraceptive use, using logistic regression techniques found that contraceptive usage increases with the family size. Younger women tend to use contraception if they achieved their desired family size and sex composition of children. It is also found that caste-Hindus and Muslims are twice as likely to use contraception as scheduled castes and scheduled tribes. Similarly nuclear family set-up encourages family planning acceptance than joint family (Rajarethnam, 1995)\textsuperscript{63}. A qualitative study conducted in the urban areas of UP found that sex preference among Muslims and Christians is less compared to that among Hindus (Sharma, 1994)\textsuperscript{64}.

A study on quantitative information collected between June and October 1987 through structured and unstructured questions, participant observation and indepth probing in Tirunelveli district of Tamil Nadu was done by Dharmalingam (1995)\textsuperscript{65}. It is found that size of land holdings, increase in education, mass-media exposure, number of living children and occupational status of women, are influencing the use of contraceptives.


\textsuperscript{63} T. Rajarethnam (1995). "Family Size Desire, Sex Prefer Contraceptive Use in Rural Karnataka, India", \textit{Demogr}


The factors influencing contraceptive use in two districts of Gujarat was analysed among 5,419 women aged 15-49 (Visaria et al, 1995). It was found that the number of living children and sons, living conditions and infant mortality were closely related to the use or non-use of contraceptives. A study conducted in Shimoga district of Karnataka during 1989-90 found that compared to rural area, urban residents accepted the IUD after having more living children (Rajeswari and Hasalkar, 1996).

An evaluation of the impact of incentives on contraceptive use has been done based on a survey in 1994 among 1,600 eligible women in Tamil Nadu (Sunil et al, 1999). Statistical analysis such as contingency table analysis and multivariate logit analysis were used to determine the variations in explaining the use of contraceptives with the help of explanatory variables such as religion, education, monthly income, age at marriage and children ever born. It is found that the independent effects of incentives on contraceptive use were significant. Similarly, religion (Hindus) and literacy were positively related to current use whereas monthly income and age at marriage does not have significant net association with the likelihood of current contraceptive use.

A study based on NFHS 1992-93 on the son preference in India found that only in Kerala, women who reached ideal family size irrespective of sons used contraception. The desire for additional children is found to be a major variable affecting contraceptive use in major states in India (Irudaya Rajan et al, 1996).

An analysis of NFHS 1992-93 data indicated that general exposure to radio, television and cinema has a strong positive effect upon current contraceptive use and the intended future use of contraception. Specific exposure to family planning messages has a significant positive effect upon contraceptive behaviour beyond the

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general effect of media exposure (Retherford and Mishra, 1997). Adoption of family planning methods is positively related to the acceptance of natal care provided through various agencies.

In the analysis of NFHS-1 data by Raju (1997) found that female literacy, age at marriage and consanguinity are the important predictor variables and could explain about 68 per cent of the total variations. Substantial differences were noted regarding the knowledge about contraceptive methods and its use by religion from the analysis of NFHS 1992-93 data (Moulasha et al, 1999). Hindus comprised majority of the acceptors, except for modern temporary methods.

A study on the unwanted fertility in eight states in India using NFHS 1992-93 data showed that Uttar Pradesh is having highest unwanted marital fertility. Unwanted childbearing was highest in the states that lagged behind in contraceptive use (Kulkarni and Choe, 1997).

An analysis of the NFHS data 1992-93 showed that son preference is particularly strong in Punjab, Rajasthan, Uttar Pradesh, Bihar and Gujarat. Women in all states were more likely to practice family planning if they had two sons than they had two daughters (Mutharayappa et al., 1997).

It is found from NFHS 1992-93 data that female literacy is extremely important and that family planning services, especially the maternal and child health services must be strengthened and broadened to increase the acceptance of these methods (Raju, 1997). A study of the NFHS 1992-93 data in Tamil Nadu, Andhra Pradesh and Uttar Pradesh found that the percentage of women receiving antenatal care and percentage of girls aged 6-14 years who attend school are the most important.
predictors of total fertility and contraceptive prevalence (Retherford and Ramesh, 1996)\textsuperscript{76}.

An analysis based on NFHS 1992-93 data in Himachal Pradesh, Punjab and Maharashtra found that, if both the ideal family size and ideal number of sons were achieved, 80 percent of the couples used contraception. Education and occupation of the women and her husband increases women’s autonomy as well standards of living in families. The improvement in the standard of living also changes the family planning behaviour of the families (Kulkarni, Kumar and Saikia, 1997)\textsuperscript{77}. The effectiveness of the use of a modern contraceptive method in fertility reduction is analysed by using NFHS 1992-93 data. It is found that the desire for a larger family and son preference is inversely affecting the contraceptive usage. The median age at acceptance of sterilisation in high fertility states in India is higher than that of low-fertility states (Talwar, 1997)\textsuperscript{78}.

James (1999)\textsuperscript{79} in his analysis of the NFHS 1992-93 data for the state Andhra Pradesh found that the variables such as age, male children born and died, female children born and died show a significant relationship with the use of modern contraception. Surprisingly, the literacy of mother or father does not show any significant relationship with family planning acceptance in the coastal Andhra region. Instead the mass media exposure and asset holdings become two important variables that determine family planning acceptance in this region. Scheduled caste and scheduled tribe population seem to have lesser contraceptive use. Religion (belonging to Islam) has significant impact on the contraceptive use.

The effect of gender preference on contraceptive acceptance and subsequent effect on the fertility in all states in India has been done by Kulkarni (1999)\textsuperscript{80}. He found that the effects of gender preference on the contraceptive prevalence found that

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though such a preference is observed in all the states, there are notable inter-state variations in its degree. Further, gender preference has adversely affected the contraceptive prevalence in all the states though this influence varies across the states. He has given importance mainly to the aspect of son preference and not all the socio-economic and demographic variables in his study.

Mapping of the NFHS 1992-93 data on contraceptive use in different regions shows that a higher contraceptive use in four distinct blocks in India: the whole west coast of India, the adjoining hilly tracts, and Saurashtra form one block. The coastal regions of Andhra Pradesh and Tamil Nadu form another block, the Northwestern region comprising of Punjab, Himachal Pradesh, east Jammu and Haryana form the third block, and West Bengal, Tripura, and Mizoram form the fourth block (Bhat and Zavier, 1999, 3019).81

Multivariate logistic regression analysis of NFHS 1992-93 on the use of spacing method in Kerala found that women who were older than 30 years were 25 percent less likely to use a reversible method before sterilisation than younger women. It is also observed that the Muslim women had low use of a reversible family planning method than Hindus and Christians. Women who have experienced an induced abortion are less likely to use or continue the use of contraceptive methods (Francis and Padmadas, 2000).82

The review of these studies shows that, the age, age at marriage, religion, ethnicity, place of residence, education of women and her husband, occupation, type of family, husband-wife communication, approval of family planning methods by the couple, exposure to media, desire for additional children, total number of living children, child mortality and their gender composition, duration of marriage, women with larger family size, visit to health centres, social norms, cost-related concerns, psychological embarrassment and worry about side-effects, and economic standard are found to be influencing the use of contraceptives within the family unit. According to the variations in many socio-economic, demographic and political

settings, one or many of the combination of these factors may influence the couple’s decision to use or not to use contraceptives.

Even though there are many studies conducted all over the world and in India on many aspects of contraceptive use, majority of these studies are covering only the selected aspects of contraception. There were no studies connecting the socio-economic and demographic features of the demographically better off states in India to contraceptive acceptance. These demographically better off states have shown consistent improvement not only in contraceptive use, but also in many social and economic indicators, which has shaped their present situation. An understanding of the factors that determine the use of contraceptives will be useful in replicating the results to other states of India to improve the use of contraceptives and thereby the overall development. So this study sets the following objectives.

5. Objectives

The present study sets the following objectives.

1. To compare and contrast the socio-economic and demographic characteristics of the users and non-users of contraceptives at the macro level in India.

2. To identify the important socio-economic and demographic correlates of use of modern contraceptives, and the inter-state variations in it.

3. To identify the effects of socio-economic and demographic determinants on the users of modern contraceptives in Kollam district of Kerala.

6. Hypotheses

In the light of the above objectives the following hypotheses are also formulated for validation.

1) Number of surviving sons is positively related to the use of modern contraceptive methods.

Rationale: there are social and religious norms that may give preference of having at least one son. Once the couples achieved their desired number and sex composition of surviving children, they may be ready to accept family planning methods.

2) Women in nuclear families are more likely to practise modern contraceptives.
Rationale: nuclear family set-up provides more space for inter-spousal communication and encourages family planning than that in joint family. The studies show that nuclear families prefer to have less number of children and hence acceptance of contraceptive methods may be high in nuclear families than that of joint families.

3) Even among couples with lower levels of education, better standard of living positively affect the use of modern family planning methods.

Rationale: education imparts knowledge about modern methods of family planning. Couples with better standards of living may have better access to mass media messages and awareness about contraception than others, and hence, even the couples with lower levels of education have better awareness about family welfare services. In other way, the awareness itself may not promote contraceptive use, if the couples do not have the means to avail the services.

4) The work participation status of the women is positively associated with the use of modern family planning methods.

Rationale: women's work participation is an index of her autonomy and gives her economic independence. It will help to express her opinion in the house and to choose family planning methods at the individual level.

5) At the lower levels of education, the choice of methods of contraceptives is governed by religion. However, as the level of education becomes higher, religion loses its significance.

Rationale: at lower levels of education, people are more influenced by religious morale and practices. The practice such as son preference, objection to artificial family planning methods is resisted with the help of education.

6) Exposure to mass media has a positive role in promoting the modern family planning methods in India.

Rationale: mass media such as radio, television, newspapers and magazines and films gives much information on the need and effectiveness of family planning methods. Couples who have exposure to one or more of these mass media can have knowledge about different types of contraceptives and from where they will get these services, which will promote the acceptance of contraceptives.
7) The utilisation of reproductive health services is more amongst couples with better standard of living.

Rationale: even though public sector is providing reproductive health services free of cost or subsidised cost, majority of the acceptors are economically better off. The poor sections of the population still either do not have the access or information about them, and hence the utilisation is less among them.

7. Chapterisation

This study comprises of six chapters. The chapters and its contents are given below. The first chapter gives an overview of the problem, its importance, and the theories on fertility, which is related to contraception. An extensive review of earlier studies on the socio-economic and demographic characteristics and correlates of the acceptors of contraceptive methods, conducted in various countries and in different states of India is given, along with the statement of the objectives and hypotheses tested during the course of this study.

The second chapter narrates the area, data and methodology used in this study. The study area and its peculiarities are given along with data used for the study. It also narrates the methodology adopted in the selection of sample respondents for primary data collection. The description and rationale for adopting different statistical techniques in the study for higher-level analysis also have been included in this chapter.

The third chapter analyses the interstate variations in the socio-economic and demographic characteristics of users other than that of non-users of family planning methods in India. The background characteristics of current users of family planning in the states in India based on the NFHS first and second round reports is analysed.

In the fourth chapter, an attempt has been made to analyse the socio-economic and demographic specialities in demographically advanced states in India that has already reached the below replacement level of fertility of total fertility rate 2.2 with the help of logistic regression equations. The states considering for this analysis are Himachal Pradesh, Goa, Karnataka, Kerala and Tamil Nadu, which had a total fertility rate less than 2.2. The National Family Health Survey is used for the analysis in this chapter.
The fifth chapter deals with the findings of the primary survey. The rationale of selecting the area of study, the background characteristics of the acceptors of modern contraceptives described in other important studies and a detailed analysis of the primary data collected for this study is included.

The sixth and final chapter summarises the findings and discusses the results. The conclusions derived from the analysis of the study along with the policy implications and suggestions were also included in this chapter.