CHAPTER II
REVIEW OF LITERATURE

Introduction

The high growth rate of population has necessitated the study of the factors influencing contraceptive behaviour. Many studies in India as well as in other countries have identified a variety of socio-economic, demographic, cultural, health and other input variables which are responsible for the adoption of contraception. Studies relating to the factors influencing family planning will be more meaningful only when these factors are simultaneously considered with their impact on fertility. Most of the studies on various aspects of family planning and fertility have proved that these two variables are inter-linked.

A good number of these studies have identified that one of the important social factors which influences family planning and fertility behaviour of couples, is education, especially that of females. In this chapter, therefore, an attempt is made to review the existing literature on education and other important socio-economic, demographic and cultural factors influencing fertility and which are responsible for the adoption of contraception.

A. Studies on Education and Family Planning

Several studies conducted around the world have reported a positive association between the educational status and the
Adoption of family planning. The studies of Rainwater, Whelpton et al., Barbara et al., and Oni and Mc Carthy have reported the existence of such a positive relationship. The United Nations' study of population and family planning in Iran in the 1960s concluded that educational backwardness was the single most potential barrier to the prevalence and popularisation of family planning programme in the rural areas. Another UN study about Knowledge, Attitude and Practice (KAP) of contraception of women in twelve countries of Asia, Africa and Latin America observed that wife's education was an important determinant of the practice of contraception in most of the developing countries. The findings indicated that in developed countries, high socio-economic development and the level of family planning practised by women with relatively little education is much closer to the degree of use apparent among highly educated women.

The studies carried out by Whelpton and Rainwater about fertility and family planning indicated the association of education with family planning and inferred that while some form of fertility limitation is nearly universal in the United States, wives with little formal education are less likely to use contraceptives, especially in the early stage of family formation. The study undertaken by Ameen and Faruquee in Bangladesh showed that couples' educational level has a significant positive effect on the number of contraceptive types known, used and intention to use, with no variation on husbands' education. Based on the analysis of World Fertility Survey data for 28 countries, Sathar and Chidambaram concluded that the higher the number of years of schooling, the greater is the prevalence of contraceptive use. Of the 28 countries, Fiji is the only exception where the level of use is not found to vary with the length of period of schooling.

A recent study carried out in China by Feng Wang in Hebei Province found that there is a greater likelihood of using more effective contraceptive methods in the case of well educated women as compared to illiterate and less educated women and the effect of education on current contraceptive use

is positive and statistically significant. That is, for rural women aged 25 to 34, the difference in the probability of adopting contraception between an illiterate woman and a woman with primary school education is only 1.5 percentage and the difference between this and 12 years of education is only 1.35 per cent and for women aged 35 to 44, the difference is 6 and 5.25 per cent respectively. May et al., studied the status and prospects of family planning in Rwanda and judged that the major constraint to modern contraception was, among others, the higher rates of illiteracy prevailing in the country.

An important variable associated with the decline of fertility in modern times is the use of different methods of family planning, both permanent and temporary, among the couples in the reproductive age groups. Presser and Bumpass infer that education definitely appears to influence the preference for a particular method of contraception. Vasectomy is positively related to the level of wives' education. The more educated she is, the more it is likely that her husband has had a Vasectomy.

Conception et al., observe that the level of educational attainment increases the knowledge of family planning.

methods; education apparently helps to foster positive attitudes. Swee Hock infers that educational attainment of the wives reveal positive correlation with the extent of birth control knowledge. Not more than 29 per cent of the wives who had no formal education know how to use at least one birth control method and among the wives who had 1 to 5 years of education, the proportion reached 54 per cent, and for those with at least 6 years of schooling, the proportion went up to 71 per cent.

However, Hollerbach's study about the acceptance of sterilization in Colombia and Costa Rica between 1978 and 1986 showed different trends. In Colombia, women with four to six years of schooling were the most likely to be sterilized as per the data for 1978. But the data for 1986 showed that sterilization was more freely and frequently accepted by women with no education. On the other hand, in Costa Rica, an inverse relationship existed between female education and the prevalence of sterilization in all the years.

In India also, several studies have reported a positive association between educational status and the adoption of family planning. The pioneering Mysore Population Study

highlighted that the use of family limitation methods increased with educational status. Muleitha and Kaur confirmed from the findings of their study in Chetla Urban Health Centre that education of husband has a profound positive impact on family planning adoption. For example, among illiterate husbands, the practice of family planning was only 19 per cent as against 34 per cent among those with secondary and higher education. Sarupriya found that in a district town near Jaipur, the percentage in favour of family planning among the illiterate was 38, while it was 62 among those with primary education and among those who had secondary and college education, the corresponding percentages were 57 and 70, respectively.

The All India Study undertaken by ORG, Baroda concluded that the effect of education on family planning practice was significant at 1 per cent level. More or less similar relationship between education and adoption of family planning was also noticed in rural and urban areas of Haryana and Tamil Nadu by Mukherjee, in two industrial units of Faridabad,


near Delhi, by Kaur, in Kanpur city by Khan and in Greater Bombay by Rele and Kanitkar.

David and Bhas found that though variables like age, religion and caste were related to family planning, compared to these variables, the correlation between education and family planning acceptance was highly significant. Agarwals's study carried out in Delhi found that education has a significant correlation with family planning practice. The literacy rate among women acceptors was 88.90 per cent and among men 99 per cent. The practice of contraception was significant when correlated with education of wife, husband and family income. Shastri found that though the level of income had a positive effect on knowledge of family planning (but not on its practice), it was the educational level which influenced the adoption and use of family planning methods.


association of education and family planning. More recently, Sumathy found that among those who are educated up to primary level, the percentage of adoptors is significantly lower (40 per cent) and it increased to 56 per cent among those who are educated up to secondary level and above.

Regarding the adoption of family planning methods, Nambiar's study in Madras City found that abstinence and sterilization are the two methods used by those who are illiterate (or literate without educational qualifications). There is also an indication among those well-up in education to adopt family planning practice other than sterilization. The two Calcutta Fertility Surveys of 1970 and 1974 found female education as a factor which could influence couples to control fertility through practice of family planning methods. The practice of using conventional contraceptives increased with the rise in educational levels of wives. The acceptance rate was found higher when the level of education increased beyond primary stage of education.

The data collected by the ORG about family planning practice found that the per cent distribution of condom users

---

35. P.V. Nambiar, Family Attitude in Madras City, (Madras: Census of India, 1966) Vol.9, Part.11 (F) pp.34-47.
and users of terminal methods (Sterilization) differ substantially. Among the users of terminal methods, 66 per cent were illiterate, 16 per cent had primary education and 17 per cent had secondary education, while just one per cent had college education. On the contrary, the condom users were comprised of 40 per cent illiterates, 19 per cent with primary education, 35 per cent with secondary education and the rest 6 per cent with college education or more.

39 Jain and Sharma, in their paper on some explanatory factors for differential use of family planning methods between States in India, pointed out that wife's education is the only factor which stands out and significantly increases the use of specific methods as well as all methods together.

40 Singh and Gupta in their case study of Patna observed that education is significantly related to sterilization. The percentage of adoptors were more (79 per cent) among those who were educated up to matriculation and above as compared to those educated below matriculation level (21 per cent).

41 A recent study conducted by Subbaraju in Proddattur town of Cuddapah District in Andhra Pradesh State found that cent


per cent of the educated and the less educated were aware of
tubectomy and vasectomy. Among all temporary methods of
family planning, Nirodh (Condom) was very popular among the
groups of educated (90.08 per cent) and less educated (72.67
per cent) women as compared to other methods and rhythm (safe
period) method was known to only 10 per cent among the less
educated women.

42 43
Some other KAP studies undertaken by Kivlin, Naidu,
44 45 46 47 48 49
Kulahari et.al., Das, Sarupriya, Balakrishnan, Mileti, Nayar,

42. J.E. Kivlin, Correlates of Family Planning in Eight
Indian Villages, (Hyderabad: Indian Institute of
43. N.Y. Naidu, "Knowledge and Approval of Family Planning as
Correlated to some Characteristics of Rural Respondents",
44. V.S. Kulahari, P.N. Jha and G.S. Shaktavant,
"Socio-personal Variables Associated with Peoples' 
Attitude towards Family Planning", Journal of Family 
45. Narayan Das, "Factors Related to knowledge, Family Size 
Preference and Practice of Family Planning in India", The 
47. T.R. Balakrishnan, Ross Shaw, D.J. Allingham and J.J. 
Kanther, "Attitude towards Abortion of Married Women in 
147-198.
and their Relationship to Attitudes towards Abortion 
49. P.S. Nayar, A. Govindachari and B.N. Sekhar, "Induced 
Abortion and M.T.P. Act in Tamil Nadu: A Community Study",
Bulletin of the Gandhiagram Institute of Rural Health and 
Family Planning, 12(1) (1977) pp.64-84.
Bharadwaj et al., Fatima, Subramaniam and Bhatia have also emphasized the role of education on adoption of different methods of family planning.

Studies conducted in Kerala have also corroborated the association between education and family planning. The study conducted by the University of Kerala identified education as an important factor for the acceptance of contraception and found that information about family planning reached the educated faster and more effectively than the uneducated. Zacharia has shown that the overall relationship between education and both family planning knowledge and use is positive. According to the educational level of the respondents, he found that among young women with ten or more years of schooling, 76 per cent practised contraception; but among illiterate women only 37 per cent did so. Further, his data indicated that sterilization was the most popular and prevalent method among women with one to four years of schooling, but not among those with more than 10 years of schooling.

54. University of Kerala, Family Growth Designs, Ideals and Achievement, (Trivandrum: University of Kerala, Department of statistics,1965) pp.87-123.
Jayasree in her study in Travancore region of Kerala found that higher education alone constitutes the single most powerful factor to make the couples accept family planning in large proportions. The acceptance rate is reported to have increased from 69.2 per cent among illiterate to 100 per cent among the college educated. The study conducted by Mahadevan in Kerala also found a positive association between education and family planning practice. The preference for permanent method of family planning is more among the illiterate and less educated compared to educated females.

B. Studies on Education and Fertility Behaviour

In addition to the specific family planning studies, a good number of fertility studies have shown that education plays a major role in the fertility behaviour of couples. These studies have indicated that there is a relatively high correlation between high literacy rates and lower birth rates. Lin's study on the analysis of the impact of education on fertility infers that a country with high education causes low population growth because of the acceptance of family planning and the reduction in unwanted births. Another study by Stycos on education and fertility trends in Puerto Rico

established a positive association between education and family planning and negative association with fertility. That is, "women with no education have had 3.3 times as many births as those with one or more years of college education. If this progress were distributed, evenly, over the approximately 14 years of education, it would mean that each additional year of schooling produced 0.4 fewer live births or well over one birth for every three years of schooling.

The effects of education on fertility behaviour are more far reaching. As Freedman has rightly pointed out: "with increased education and literacy, the population becomes involved with the ideas and institutions of a larger modern culture which envisages a non-familial system. If the individual is, or believes he is part of a larger non familial system, he begins to find rewards in social relationships for which a large number of children becomes irrelevant". Education can thus promote a change of values and adaptibility to a new environment conducive to fertility reduction.

Berelson concluded that "educational attainment has a consistently inverse relationship to fertility in almost all instances, and is moreover one of the strongest relationships between a stratification variable and fertility. Similarly, the inverse relationship of education to completed family size is one of the most clear-cut correlations found in the

literature. Measuring the impact of education on family size on children ever born to White and Negro women aged 35-44, by using the U.S. census data, Janowitz found that education has a statistically significant effect on family size and the impact of education on family size is negative. The relationship between education and fertility is also established by a number of other studies at the cross-national and sub-national levels. Studies by Adelman, Friedlander and Silver, Heer, Collver et al., Schultz, Drakatos, Cain and Weininger and Janowitz have found negative correlations between education and fertility for countries like Taiwan, Puerto Rico, Greece, United States, etc.

Moreover, at low educational levels, the education-fertility relationship with surviving children may be positive because at this level, the major impact of education may be on improvement in health and nutritional condition of women. It may be only after attainment of a higher level of education that families are able to overcome the traditional social and cultural preference for higher fertility and accept modern fertility values. The substantial differences in fertility caused by education has been empirically documented by researchers in many countries. The World Fertility Survey data from 22 developing countries also revealed that the desired family size is generally negatively related to the educational level and women in the highest educational category desired about one child less than those desired by uneducated women.

In India, the Mysore Population Study shows that women with high school or college education have a smaller family than those with lower educational attainment. The study indicates that the average number of children born to ever married illiterate woman at the age of 45 and above was 5.4 and woman with high school or college education had on an average 3.9 children only.

Nair's study about the factors influencing the desired family size in a community in South India found age and education to be significantly related with family size and

that younger women (20-24 years) desired two to three children. 95 per cent of the respondents with college education desired small family. The study of differential fertility by the Government of India showed that the standardised general marital fertility rates for the illiterate, literate below matriculation and literate above matriculation were 196.2, 185.1 and 145 respectively.

Rao also, in Karnataka State, found an inverse relationship between education and family size. His results indicated that irrespective of the method, educated persons had on an average lower family size at the time of adoption. That is, those with less than three children constituted 32 per cent of the matriculation and above category, while the corresponding figures were 17 per cent and 13 per cent among those with primary and less than primary education respectively. Goyal and Kathuria also have shown that education is an important factor affecting fertility reduction and the educational level of wife is more negatively associated with couples' fertility than the educational level of husband. The study carried out by Kurup et. al., in Madurai and Coimbatore Districts of Tamil Nadu State found an

inverse relationship between education and parity. They observed that the mean age parity of primary educated females were lower compared to those who were illiterate or with no schooling. Another fertility study by Singh among the rural communities in Punjab and Haryana found that educational level of the wives and their husbands were negatively related to the number of live births and that the number of births was comparatively less among educated and gainfully employed women when compared with less educated and agricultural workers.

A recent study carried out by Patnaik in some of the selected localities of Patna established an inverse relationship between education and fertility. It was observed that as the level of education of husband changes from the category of 'illiterate' to the educational categories of 'literate', 'matriculate', 'intermediate', 'graduate' and 'postgraduate', the declines in mean fertility have been of the order of 16 per cent, 27 per cent, 39 per cent, 23 per cent and 44 per cent, respectively. Similarly, the respective declines in mean fertility due to wife's education have been of the order of 30 per cent, 34 per cent, 42 per cent and 54 per cent, respectively. Thus, educational background of wife was found more influential in reducing fertility than that of


husband. Jain and Moni Nag found that women with some education, particularly if they do not complete primary school, may have marital fertility that is higher than those who have no schooling. That is, education, unless it is completed to a level higher than the primary, is not effective in reducing fertility rates.

Most of the studies conducted in Kerala also reached the same conclusion as that of the earlier studies that education, particularly female education, is negatively associated with fertility rates. The study conducted by Mehrotra et al., regarding the effect of education on fertility revealed the existence of fertility differentials by education, the differentials being more marked in respect of women's education. Investigating on the relationship between educational level and fertility, Rao and Namboodiri found a negative relationship between educational level and fertility and the mean number of children ever born was found to be significant. Nearly 3 per cent of the total variations in fertility could be associated with the differences in educational level and the analysis of variance between (a) illiterate and literate (b) illiterate, matric and above


liter, matric and above showed significant relationships for groups (b) and (c) and 15 per cent and 8 per cent of the variations in groups (b) and (c), respectively, could be attributed to the educational level.

Moni Nag, in his comparative study about the fertility differentials between Kerala and West Bengal observed that the decline in fertility in Kerala is associated with greater equity in education and educational facilities and that increased female education results in raising the age at marriage of women and increasing the use of contraceptives, leading to reduced fertility. The study conducted by Zacharia established a positive relationship between education of females and adoption of family planning and negative relationship with fertility. He found "the degree of effort to avoid undesired pregnancies was much greater among the more educated".

The study by Mahadevan on fertility trends in Kerala found that the fertility rate is negatively associated with women's education. That is, for illiterates, the mean fertility for women was 3.7 and for men 3.6 as compared to mean fertility of 3.1 for men and 3.2 for women who were educated up to middle school. In the case of those educated

up to secondary level, the mean fertility was even lower at 3.1 and 2.9 for men and women respectively. The study conducted by Nair\textsuperscript{86} has convincingly shown that it is the high female literacy in Kerala that has been responsible for the declining birth and death rates in the State. Some other studies like those undertaken by Krishna\textsuperscript{87}, Zacharia, Jayasree,\textsuperscript{88} 89 Ayyappan et.\textsuperscript{al.}, and Balakrishnan also examined the impact of education on fertility behaviour of the couples in Kerala state and found it negative.

Thus, almost all the aforesaid studies have revealed that there exists a positive relationship between educational status and contraceptive behaviour and a negative relationship between education and fertility behaviour. In the present study also, education has been considered as the major socio-economic status variable to examine its influence on the contraceptive and fertility behaviour of couples in Kerala.

\textsuperscript{86} P.R. Gopinadhan Nair, \textit{Education and Economic Change in Kerala}, (Trivandrum: Centre for Development Studies, 1987) pp. 13-47.
\textsuperscript{88} K.C. Zacharia, \textit{op. cit.}, 1981, pp. 82-94.
\textsuperscript{89} R. Jayasree, \textit{op. cit.}, 1989, pp. 80-86.
\textsuperscript{91} V. Balakrishnan, \textit{op. cit.}, 1987, pp. 220-248.
C. Age at Marriage, Fertility and Contraceptive Behaviour

Age at marriage of females is a starting point in the reproductive process. This subject has been widely covered in demographic literature indicating negative association with fertility (U.N.). It also varies among the different socio-economic, cultural, religious and caste groups. Malthus was the first person to recognise age at marriage as an important factor for population growth and suggested late marriage as a 'preventive check' for the growth of population (Leasure). The relationship of age at marriage with fertility and family planning is explained by Freedman and Leasure. By using the stable population models, Coale and Tye have demonstrated that postponement of marriage can contribute substantially to reduction in birth rates and the population growth. India is one of the developing countries having the lowest mean age at marriage, with a slow increase during the present century. The female age at marriage has increased by only 4 points over a period of 80 years i.e., from 13.1 years in 1901 to 17.63 in 1981.

97. Indian University Association for Continuing Education, Age at Marriage, (New Delhi: University of Delhi, 1990) pp. 78 and 86.
The influence of age at marriage, according to Agarwala acts in two ways; "first through a shortening of the reproductive span by about five years, and secondly, through the shifts in fertility patterns towards fewer children in a woman's later years, partly attributable to factors like education and modernisation. Calculations show that the shortening of reproductive span alone will result in a 10 to 14 per cent decline in birth rate".

In India, Wyon and Gordon, Bhatia, Audinarayanan, Sivaraju, Bhuyan and Bhuyan have also conclusively proved that there exists a significant positive association between the wife's age at marriage and adoption of family planning. Considering the educational level, Goyal observed that the better educated females, (secondary and above) marry at later

ages than the less educated. Bhatia (1979), Arora and Audinarayanan (1981) have noticed a significant positive association between the female age at marriage and overall couple protection rates pertaining to different States in India. Rajaratnam found that the ever users of contraception was 37 per cent among those married at the age of 17 or below and it was above 40 per cent for those who married at the age of 18 or above. The study conducted in a Tamil Nadu village by Shakilarani has concluded that age at marriage of females will have a significant positive influence on the current use of contraception.

Blake has pointed out that if contraception is not widely and expertly practised, marriage postponement may contribute


substantially to lowering birth rates. Morrison, in his study in a village in Maharashtra State, found that age at marriage was directly related to favourable attitude to family planning and a positive curvilinear relationship was noticed between the rise in age at marriage and positive attitude to family planning. This type of variation was found only in males but not in females. Chandrasekharan et al., found that the estimate of overall fertility rate would be reduced by roughly 15 per cent if no women married before 18 years of age and if the fertility pattern after 18 did not change further. The study of Sadasivaiah found an increase in the mean age at marriage by three years during the period 1891-1901 to 1951-61 in India resulted in a three to four per cent decline in birth rate and the study observed that there exists a positive relationship between age at marriage and adoption of contraception.

Age at marriage is traditionally low in many developing countries and consistently high in developed countries. Almost all women in developing countries usually marry and most of them begin their married life earlier than the women

in developed countries. The Mysore Population Study found that females marrying between 14 and 17 years gave birth to 5.9 children, while those marrying between 18 and 21 years eventually gave birth to only 4.7 children. The differences in the average number of children ever born between these age groups ranged from 0.5 to 1.0 or more. In India, some other studies by Jain, Majumdar and Driver have shown the strong negative relationship between age at marriage and fertility. With regard to the studies made in various parts of India, a broad generalisation could be made that women marrying later than 19 years of age had approximately one child less than those marrying between the ages of 15 and 19 years.

Inferring on the reduction in birth rates in Kerala State, the studies of Zacharia, Mahadevan, Balakrishnan, Jayasree and Kurup observed that both factors, effect of family planning and change in the age of marriage may be important in reducing the birth rates in Kerala.

Kerala, where the age at marriage is highest among all the Indian States, shows fertility rates which are much lower than the all India rates. The average number of children born to women in Kerala is 3.3 whereas the corresponding figure for India is around 5. Thus, according to this evidence, age at marriage, particularly female age at marriage constitutes one of the principal demographic variables which could explain the low and differential fertility in different regions of Kerala. Therefore, age at marriage is an important factor which has significant positive influence on the current use of contraception and negative influence on fertility. Though age at marriage is recognised as a major demographic variable, only a few studies have included it as an independent variable to explain the variations in family planning and fertility behaviour. Hence, it is very appropriate that this factor has been considered in the present study.

D. Occupation, Fertility and Contraceptive Behaviour

Occupation of a person is one of the good indicators to measure the socio-economic status. Generally, higher occupational status is associated with higher education and income, which in turn leads to lower fertility and higher rate of adoption of family planning. Studies in different parts of the world found that occupation of a person is an important factor for adopting family planning and the rate of adoption

123. Indian University Association for Continuing Education, \textit{op.cit.}, 1990, p 76.
is more among the working as against the non-working, among non-agricultural workers and among the white collared higher professionals as compared to lower professional workers. The studies of Knodel et al., Abdulla et al., and Oni and McCarthy have proved this relationship.

Occupation of wife is an important variable that influences the contraceptive behaviour. Whelpton et al., found that female labour force participation influence contraceptive behaviour and according to him, "although families with less education, lower employment status, rural origins and lower income generally have larger families, women at these levels are similar to more advantaged women in terms of the number of children they say they would like to have". Fisck et al., in their study found that 64 per cent of women who were currently earning wages expressed interest in family planning in contrast to 40 to 44 per cent of the self-employed women and house-wives. According to Weller, female

participation in labour force tends to increase the degree of authority exercised by women in family decision making, including in matters of child bearing. He found that the negative correlation between the wives' employment and their cumulative family size is stronger among Whites and non-Whites.

From the World Fertility Survey data of Bangladesh, Korea and Mexico, Tsui et al., observed that there exists a strong positive association between social class (occupation) and contraceptive use. For instance, the rates of contraceptive use were lowest for the wives of the farmer class (8.6, 42.7 and 15.1 in respective countries), whereas the corresponding rates were much higher for the wives of non-farm workers (21.1, 61.6 and 55.3 respectively). But the study of Sathar and Chidambaram in 28 developing countries did not find any consistent pattern between working status of women and contraceptive use. Interestingly, looking at the differentials in contraceptive use by occupation of the husbands, they arrived at the following conclusion: "invariably, the use of contraception is the highest among the wives of men engaged in professional and clerical occupation. At the other end of the spectrum, women whose husbands report no work are less likely to use contraception than those who engaged in work, but there are many exceptions to this viz., Malaysia, Thailand, Haiti, Syria, Kenya, Bangladesh, Sudan, Pakistan and Nepal".

The empirical evidence does not provide uniform support to the hypothesis of women's role in labour force and fertility. The studies of Stycos and Weller and Zarrate showed that female labour force participation does not have any impact on their fertility levels. But many studies like those by Freedman, Johnson, Heer, Kiser et.al., Ridley et.al., have found a negative association between female participation in the labour force and fertility. In almost all the 20 developing countries where the 1980 World Fertility Survey was conducted, statistically significant and often substantial relationships were found between current fertility and women's work, even after controlling several other socio-economic factors. Women employed outside the household had the lowest fertility; family employed or self employed women had an intermediate level and women who had never worked had the highest level of fertility.

Many other studies in India have pointed out the significance of occupational status for adoption of family planning. The studies of Goyal, Sengupta and Roy, Sivaraju, Kanitkar and Murthy, Singh and Gupta, Danda and Shakilarani have observed a definite relationship between occupation and adoption of contraception.

Jacob Paul, in his study in Hoogly district of West Bengal, found that among those who are engaged in skilled and technical works, the percentage of acceptance of family planning was 7, whereas among the unskilled and manual workers it was 28 and among those who are in trade or business, the acceptance rate was only 5 per cent, but among the cultivators this percentage was much higher (43 per cent). The All India Study by ORG, Baroda showed that the practice of family planning was lowest among the skilled or unskilled manual

workers, whereas it was highest among the professionals. However, a further two-way analysis of variance considering the educational level of husband and occupation simultaneously, showed that the effect of occupation was not statistically significant. More or less similar pattern was also noticed by Mukherjee, Kaur and Khan in their respective studies. Rele and Kanitkar, in their study in Greater Bombay, noticed the higher use of contraception among wives working in administrative, professional and technical cadres (53 per cent) followed by clerical (38 per cent) and sales professionals (38 per cent), whereas the lowest rates were observed among the housewives (23 per cent) and also among those women who were engaged in other skilled or unskilled work and in the primary sector.

Most of the studies conducted in Kerala also observed the relationship between occupational status and family planning. The studies of Zacharia, Mahadevan, Jayasree, Balakrishnan Bhat and Rajan observed the positive association of occupational status with family planning status in Kerala.

E. Religion, Fertility and Contraceptive Behaviour

Religion is one of the important cultural factors that determines the contraceptive and fertility behaviour of couples. Religion can influence reproduction in two ways viz., through stimulation of behaviour which augments reproduction and through restraint of behaviour which inhibits reproduction.

Substantial religious differentials in fertility have been empirically documented in a large number of countries such as Yaukey for Lebanon, Rizk for Germany, Mazur for USSR, Kirk for U.S.A. and Matras for Israel. In the West also, religious affiliation has been found to have a significant effect on fertility. The religious differences in fertility behaviour were first identified through Kiser's 'Indianapolis study'.

In India, religion is a frequently mentioned factor in the investigation into the differences in fertility and contraceptive behaviour. In many Indian studies, recent as

well as earlier, the existence of differential fertility and contraceptive behaviour between Hindus, Christians and Muslims is noticed. The studies of Davis, Sinha, Stoeckel and Choudhary, United Nations, Driver, Rele, Agarwala, Badry, Dandekar and ORG have observed that religion is associated with fertility and Muslims have on an average more children than the Hindus.

Regarding the practice of family planning in India, Som and Sengupta, Sarupriya, Mukherjee, Siddh, Rele and Kanitkar Kanitkar and Murthy, Danda, Bhave and Audinarayanan have observed that religion is associated with fertility and Muslims have on an average more children than the Hindus.

conclusively proved that Christians in general were more favourable and used one or the other methods of family planning, followed by Hindus and Muslims. The study conducted recently by the Government of India in sixteen States reported that the percentage of family planning acceptors were higher among the Christians (80 per cent) followed by Hindus (62 per cent) and Muslims (60 per cent).

Some of the studies conducted in Kerala also found religion as an important factor affecting fertility and family planning. The study conducted by Kurup and George in Kerala revealed that the average number of children born to Hindu and Muslim wives who had completed their fertility, was 7 and 6.4 respectively. Zacharia found that the average parity of Muslim women was 4.1 while that of Hindus was only 2.9. The completed fertility of these two groups differs by 2.5 children per woman. A recent study by Balakrishnan also found higher fertility among Muslims (3.4) compared to Christians (3.07) and Hindus (2.78). Jayasree confirmed that religion is an important factor influencing family planning and the fertility rate is higher for Muslims followed by Christians and Hindus.

The preceding evidence shows that religion is an important cultural variable which accounts for the variations in contraceptive and fertility behaviour. Therefore, in the present study, religion is considered as an independent variable influencing fertility and the family planning practice of couples.

F. Economic Status, Fertility and Contraceptive Behaviour

Economic Status is a significant factor influencing fertility behaviour and adoption of contraception. As higher income has generally been associated with a better occupation which needs higher education and training, it delays marriage and ultimately reduces fertility rates. Several studies conducted in India and abroad have shown that there exists a positive association between the economic status of a person and the use of contraceptives.

behaviour. Carvajal and Gaithman found that "not only does the use of contraception tend to increase with the level of income but also adoption of more sophisticated contraceptive techniques is more likely to occur among higher income couples". Srivastava inferred that the influence of per capita income on contraceptive acceptance is highlighted by the potential role of monetary incentives in the strategy of programme implementation in a situation where people with lower income are more likely to accept birth control methods.

In India, the United Nations Study found that the economic status is positively related to the practice of family planning. Muleitha and Kaur noticed that among the higher income groups, 57 per cent of the wives were practising family planning, while this percentage was very less (20 per cent) among lower income groups. Another well established positive association between family income and the practice of family planning was found in one of the studies conducted by Operation Research Group in All India Survey. For example, over 50 per cent of the couples with family income of over Rs.1000/- per month had ever practised family planning as

against 13 per cent in the lowest income group of Rs. 100/- per month or below. Mukherjee also made more or less the same observation of income with fertility. Driver, for instance, in the Central India study indicated the absence of any direct or indirect association between fertility and income among the lowest and highest income groups. Another study of a rural area in Tamil Nadu by Mahadevan found the positive association of economic status with fertility. The study undertaken by Rele and Kanitkar established a very strong relationship between the economic status of the family and fertility.

The Kerala study by Kurup found that the low income and occupational groups who have adopted the method of sterilization for family limitation are comparatively more than the higher income and occupational groups and their proportion is increasing over the years. Ratcliffe pointed out that one of the reasons for the more rapid decline in fertility in Kerala was associated with increasing equality in income and assets and this is cited as the best example of

the role played by distributional factors in the reduction of fertility. Some other studies in Kerala by Zacharia, Balakrishnan, Jayasree and Mahadevan emphasized the role of income on adoption of family planning and reduction in fertility.

G. Differential Performance in Family Planning Programme And Fertility

Though most of the studies conducted in various parts of the world revealed a significant association between contraceptive behaviour and fertility behaviour, wide variations in the performance of family planning is noticed among different regions. These differences may be due to the differential influence of various socio-economic, demographic, cultural, ecological, health and other input factors. The studies conducted by Mauldin and Berelson found that countries with both significant family planning effort and high social setting had an average crude birth rate decline of about 30 per cent, those with high social setting alone had a drop of 5 per cent and those with neither had a zero change. Stycos postualted that decline in marital fertility in these countries could be attributed to the use widespread use of family planning.

209. Mauldin and Berelson, op.cit., 1981, pp. 149-188.
In India, studies by Das, Agarwala, Pathak and Prasad and Sivaraju, have reported the numerous factors responsible for the variations in family planning performance. Mishra states that "the variations among the different States in India regarding performance of family planning can be the result of (a) the administrative and organisational machinery which can deliver the goods, (b) a composition of different client population and (c) a combination of these two factors". Pisharoti found that neither socio-economic variables nor administrative resources variables individually account for the major differentials of family planning performance among different States in India and their combined effect has been found statistically significant at the State level. Moreover, he observed that in Andhra Pradesh, a statistically significant correlation exists between sterilization and double crops, density, roads, factory workers and roads.


and literacy. Amonker observed a strong positive association between the level of development and family planning performance in India. While studying the two sets of district in Karnataka State showing extreme performances in family planning, Yadav and Shah observed that demographic factors like percentage of urban population, density of population, sex ratio and literacy rates, socio-economic and other developmental variables like educational development, communication and recreational development, mechanisation of agriculture, banking development, electrification and agricultural development and programme input variables like the number of medical and family planning service centres, staff position at Primary Health Centre level and staff position at the district level have all shown close association with family planning acceptance rate.

Conclusion

From the preceding paragraphs, it is evident that the Family Planning Programme plays a vital role in reducing the fertility among couples in the reproductive age group through adoption of various methods of birth control. The acceptance of family planning, in turn, depends on various socio-economic factors mentioned earlier. The effectiveness of the programme in lowering the birth rates has been widely acknowledged in


certain States in India such as Kerala, Punjab, Haryana, Tamil Nadu and Maharashra. The effective practice of family planning can prevent most unwanted pregnancies and it minimises the need for women to subject themselves to the dangerous alternative method of limiting family size through illegal abortion.

Thus, an examination of the important studies on family planning and fertility reveals that:

(i) education, age at marriage, religion, economic status and occupational status are the crucial determinants of family planning adoption. These factors also determine the fertility behaviour of women;

(ii) most of the studies have not systematically examined the link between education, fertility and family planning;

(iii) most of the studies have not attempted to examine the differential impact of the above determinants in two different regions which are markedly different in terms of socio-economic development. In other words, most of the earlier studies have viewed the impact of the above determinants on family planning and fertility behaviour in a single State or region or district. The inter-regional variations in the impact of education and other factors on family planning and fertility behaviour have not been explicitly brought out in the earlier studies;
iv) while education has been identified as a significant factor influencing family planning, the role of education, especially female education has not been explicity brought out in any earlier study. Moreover, education influences family planning and fertility behaviour through a variety of ways and processes, directly as well as indirectly. The socio-economic processes through which education influences family planning and fertility behaviour have not received the attention it deserved in the earlier studies;

(v) most of the earlier studies have not sought to explain the causality and inter-dependence among various determinants of family planning and fertility behaviour.

The present study is an attempt to fill the gap that exists in the literature. The present study, as pointed out in chapter I, seeks to assess the differential impact of women's education and other determinants on family planning and fertility behaviour in Kottayam and Wynad districts. The study seeks to assess the direct as well as indirect impact of education and the socio-economic processes through which education influences family planning and fertility behaviour in the above two districts.