AN ANALYSIS OF CONTRACEPTIVE USE THROUGH PRIVATE SOURCES: A STUDY OF KERALA BASED ON NFHS DATA

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

MASTER OF PHILOSOPHY

DILIP T.R.

CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEWDELHI

1997

जवाहरलाल नेहरू विश्वविद्यालय
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110 067

Centre for the Study on Regional Development
School of Social Sciences

CERTIFICATE

This is to certify that the dissertation entitled "AN ANALYSIS OF CONTRACEPTIVE USE THROUGH PRIVATE SOURCES: A STUDY OF KERALA BASED ON NFHS DATA" submitted by Mr. DILIP T.R. in partial fulfilment of six credits out of total requirements of twenty four credits for the degree of Master of Philosophy of the University is to the best of my knowledge a bonafide work and may be placed before examiners for evaluation.

PROF. SUDESH NANGIA
CHAIRPERSON

CHAIRPERSON
Centre for the Study of Regional Development
School of Social Sciences
Jawaharlal Nehru University
New Delhi-110067

DR. MURALIDHAR VEMURI
SUPERVISOR

GRAM : JAYENU TEL. : 6107676, 6167557 TELEX : 031-73167 JNU IN FAX : 91-011-6865886

ACKNOWLEDGEMENTS

This research work could not have been completed without cooperation and support from various sources. Although it is not possible to individually acknowledge everyone, several persons deserve special mention.

It is my pleasure and gratitude to acknowledge the inspiring guidance of my supervisor Dr. M.D. Vemuri. His criticisms and suggestions proved vital during the conduct of the study.

I am thankful to Dr. Aravind Pandey of International Institute for Population Sciences (IIPS), Mumbai. For providing computer facilities for data analysis.

I also had some discussions with Dr. Rajaram of Population Foundation of India (PFI), New Delhi at various stages and I thank him.

I am greatful to the helpful staff of, IIPS library and Documentation units of PFI, Voluntary Health association of India, New Delhi and CSRD, JNU, from where I did most of my reference work.

The help provided by my dear friend V. Jaychandran of IIPS cannot be acknowledged in words alone. He helped me at the crucial moment of data analysis.

Thanks are due to my friends Muralai and Akhilesh who helped in computer work. I thank Srinivasan Pradeep, Tapash and Sebastien for proofreading the drafts. I also remember with gratitude IIPS scholars, Ashraf, Jaychandran and Shaji, who made my stay easier at IIPS Mumbai. Thanks are due to my other friends, Sanil, Sajeev, Prakash, Sabu and Muarlai for their encouragement during this work.

I thank Mr. Om Parkash who helped me in the work by putting this material on the computer.

I am obliged to my parents for their constant inspiration through out the period of my studies.

Dilip T.R.

New Delhi
July, 1997

CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The National Family Planning Programme was launched in India in 1951 with the objective of reducing the population growth. The programme is carried out by Ministry of Health and Family Welfare under Government of India, and is executed by respective ministries at state levels according to the guidelines prescribed and funds allocated by the Government of India. These services are delivered free of cost to the public through hospitals and family welfare centres in urban areas, and through subcentres, primary health centres, and community health centres in rural areas. Besides this, family planning camps are conducted periodically to provide sterilisation services to the couples.

Since the inception of National Family Planning programme in 1951, there have been changes in programme like shifting from clinical approach to extension approach during the Third Five Year Plan, a separate Department of Family Planning in 1966, integration of family planning services with MCH care services and renaming the programme as Health and Family Welfare at Central and State levels during Fifth Five Year Plan in 1977. At present, following the recommendation of programme of action of ICPD in Cairo in 1994 there has been a tendency for the family planning

programme to shift to reproductive health approach and as a first step from April 1996, Government has made family planning programme free from methodwise targets.

During this period the birth rate had fallen from 39.9 in 1951 to 28.3 in 1995 and average family size from above 6 to 3.4 in 1995. This decline in birth rate and average family size is to a large extent attributed to family planning efforts than to socio-economic development (Visaria and Visaria, 1995). Bongaarts (1993) estimated that in late 1980s average annual births averted by India's family planning programme were about 73 lakhs and that programme contributed to 72 per cent of the fertility decline in total fertility rates from early 1960s to the late 1980s. As a result of the programme, upto 1st March 1993, 156 million births have been averted and CPR has increased from 10.4 per cent in 1970 - 71 to 42.3 in 1992 - 93. Apart from this the national family planning programme was able to spread the message of family planning across the country and thereby develop a desire among them to limit their family size. The major criticisms against the programme are that it is a female oriented sterilisation programme, bureaucratic target approach[1] (Banerjee 1984; Bose 1988) and centralised family planning promotional strategy (Bose 1988; Shariff 1990).

[1]From 1 March 1996, family planning programme in the country has become target free but data used in study is for 1992-93 period.

According to National Family Health Survey (NFHS) 1992 - 93, for 79 per cent of current users of contraceptive methods, public sector is the source of supply of contraception. The remaining 21.0 per cent are obtaining contraceptives from private sector, which includes private medical sector (15 per cent) and other sources (6 per cent) shop, husband friend/relative or other. Although the governmental family planning programme caters to the needs of contraceptive users through government channels, it also encourages involvement of private sector. The private medical institutions/doctors are providing family planning services to their clients. The non-governmental organisations are also involved in providing family planning services. As in the case of the health care sector where there is a growing influence of private sector in providing health care services in India (Bhat 1993; Kulkarni and Chitanand 1994; Berman 1996), the private sector is also playing a sizeable role, in delivery of family planning services (Ramesh et. al. 1996).

It is important to note the difference in role of contraceptives being supplied from commercial sector in developed and developing countries. In developed countries contraceptives were offered through commercial sector long before their government played any role in family planning sector while in developing countries use of contraception have often followed government endorsements (Lande and Geller 1991). The improvement in the role of private sector is recomended on an assumption that private sector offers a

high quality alternative to public sector, and that, it in a way increases overall resources in the area of health care including family welfare (Griffin 1989; Kulkarni and Chitanand 1994; Lande and Geller 1991). This reduces the burden of family welfare from the government.

In this study an attempt will be made to analyse the use of contraceptives through private sources by employing data collected through National Family Health Survey (NFHS). The study materialised only because, of availability of high quality NFHS data. This survey was initiated by Ministry of Health and Family Welfare and conducted by International Institute for Population Sciences, Mumbai between April 1992 and September 1993. The NFHS is the largest demographic and health survey conducted in India that covered over 89,000 ever married women of reproductive age group 13 - 49, from 24 states and union territory of Delhi. NFHS provides us national and state level data on fertility, infant and child mortality, family planning, mortality and maternal and child health. For this study we are using NFHS data on current users of contraceptive methods.

Table 1.1 gives the level of current use of different modern methods of contraception and its source of supply. Female sterilisation, the most popular method of contraception in India is currently used by 27.3 per cent of eligible women. About 14.0 per cent of these women had accepted this method from private sources. Only 4.3 per cent of male sterilisation acceptors have obtained it from private sources. The use of temporary

methods was found to be very low with 2.4 per cent reporting use of condoms, 1.9 per cent using IUD/Copper T and 1.2 per cent using oral pills.

Table 1.1
Percentage distribution of current users of modern contraceptive methods by most recent source of supply, India, 1992-93

METHODS	Percntage currently using the method	Source of Suppy		
		Public	Private	Total
Oral pill	1.2	31.0	69.0	100.0
IUD/Copper T	1.9	62.6	35.8	100.0
Condom	2.4	15.2	84.8	100.0
Male Sterilisation	3.5	93.4	6.6	100.0
Female Sterilisation	27.5	86.1	13.9	100.0
All modern methods	36.3	79.0	21.0	100.0

Source: National Family Health Survey 1992-93, All India Report, International Institute of Population Sciences (IIPS), Mumbai.

Note: Private source includes private medical sector and other source (shop, husband, friend/relative and other).

Level of private sector use varied for clinical and nonclinical methods. Majority of condom users (89.5 per cent) and oral pill users (69.0 per cent) are found to be depending on private providers of contraceptives. For clinical method IUD, 35.8 per cent of insertions were carried out from private sector.

Table 1.2 presents the percentage of women currently using modern contraceptive methods and percentage whose most recent source of supply of method was private sector. As in the case of all India, in the states also the percentage age currently using female sterilisation is very high. The

highest level of acceptance of female sterilisation from private sources was observed in Kerala (23.2 per cent) followed by Maharashtra, Andhra Pradesh Guarat and Tamil Nadu, all above the all India average. The level of acceptance of female sterilisation from private sources was very low in the states of Haryana, Himachal Pradesh, Orissa, Punjab and Rajasthan, all are below 5 per cent level. The proportion of users who had obtained male sterilisation, a method which has become unpopular in India, from private sources was found to be the lowest in majority of the states. Except in the states of Bihar, Andhra Pradesh, Gujarat and Kerala, the proportion of current users who had accepted male sterilisation from private source was negligible (less than 10 per cent).

Table 1.2

The percentage distribution of current users of different methods of contraception and private sector as most recent source of supply for16 major states in India, 1992-93.

States	Oral Pills		IOD/ Copper- T		Condum		Male Sterilisation		female Sterilisation		Any modern Method	
1.0	Current use(%)	Private Supply(%)	Current use(%)	Private Supply(%)	Current use(%)	Private Supply(%)	Current use(%)	Private Supply(%)	Current use(%)	Private Supply(%)	Current use(%)	Private Supply(%)
Andhra pradesh	0.5	-	0.6	-	0.7	(69.0)	6.6	11.7	38.1	22.0	46.5	21.9
Assam	2.8	77.8	0.9	(10.6)	1.7	84.4	2.3	9.2	12.1	13.4	19.8	28.0
Bihar	1.1	85.7	0.5	(69.4)	1.3	90.3	1.3	17.2	17.3	14.2	21.6	24.9
Gujarat	1.0	(56.8)	3.0	46.8	1.8	93.8	3.5	11.6	37.5	19.6	46.9	25.5
Harayana	1.2	56.7)	3.2	32.1	5.2	82.8	5.0	1.4	29.7	4.7	44.3	16.9
Himachal	0.5	-	2.5	15.7	5.3	64.7	13.2	4.0	32.6	1.6	54.4	9.4
Karnataka	0.4	-	3.2	37.7	1.2	(85.4)	1.5	5.9	41.0	13.1	47.3	16.6
Kerala	0.5	-	2.7	25.0	2.9	79.2	6.5	10.0	41.8	23.2	54.4	25.1
Madhya Pradesh	0.7	(59.8)	1.1	23.4	2.2	74.1	5.1	3.1	26.4	5.3	35.5	10.8
Maharastra	1.4	63.5	2.5	52.1	2.5	78.1	6.2	2.6	40.0	22.3	52.5	25.2
Orissa	0.9	(57.2)	1.5	8.4	0.6	(77.1)	3.4	5.9	28.2	3.5	34.6	6.6
Punjab	2.2	69.4	6.3	24.9	8.9	84.8	2.5	1.4	31.5	3.5	51.3	22.9
Rajasthan	0.5	52.0	1.2	19.0	1.5	71.6	2.4	2.5	25.3	3.0	30.9	7.7
Tamilnadu	0.6	-	3.5	51.9	1.6	94.7	2.0	8.5	37.5	16.4	45.2	22.0
Uttar Pradesh	1.0	53.3	1.1	41.4	3.2	88.2	1.4	4.6	11.7	6.6	18.5	25.5
West Bengal	3.5	83.8	1.3	(17.7)	1.9	89.7	4.3	6.1	26.3	9.3	37.3	20.4
All India	1.2	69.0	1.9	35.8	2.4	84.8	3.5	6.6	27.3	14.0	36.3	21.0

Source: National Family Health Survey, All India and State-wise Reports, IIPS, Mumbai.

Note: Private sector includes private medical sector and other source (Shop, husband, friend/relative and other).

( ) Based on 25-49 cases; - Less than 0.05 per cent

The table also reveals the low level of use of temporary methods in all the 16 major states in India. In the states which are having sizeable number of oral pill users, majority of them were found to obtain this method from private sources. Majority of condom users in all the states, were availing condoms from private sources. The level of use of condoms from private sources of supply in the states of Bihar, Gujarat, Punjab, Tamil Nadu and Uttar Pradesh was above the all India average. For the states of Andhra Pradesh, Assam, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra and Rajasthan, the level of use of the method from private sources was below the all India average. For IUD, private sector was the major source of supply only in the states of Maharashtra (52.1 per cent) and Tamil Nadu (51.9 per cent). Apart from these two states, for Gujarat, Karnataka and Uttar Pradesh the proportion of women using Copper T from private sources was above the national average.

If we consider the current use of any modern method, table 1.2 shows that the overall level of contraceptive use from private sources was highest for Assam 28.0 per cent followed by Uttar Pradesh (25.5 per cent), Maharashtra (25.2 per cent), Kerala (25.1 per cent), Bihar (24.9 per cent), Gujarat (24 per cent), Punjab (22.9 per cent) and Tamil Nadu (22.0 per cent) respectively.

The above table is useful for selecting the most suitable state for stuyding contraceptive use through private sources. Since the use of temporary methods were very low, they were not considered separately during selection procedure. The four states which are having the highest level of contraceptive use through private sources are Assam, Kerala, Maharashtra and Uttar Pradesh. Since the overall level of use of any modern method was very much below the national average for Assam (19.8 per cent) and Uttar Pradesh (18.5 per cent), these states were not considered. So Kerala and Maharashtra were found to be suitable for this study. But Kerala (54.4 per cent) was found to be having a higher level of use of any modern method of contraceptive than Maharashtra (51.3 per cent). Also for the popular method female sterilisation, the level of use of that method along with the level of use of private sources for that method was highest for Kerala. So the state of Kerala was selected for studying the use of contraceptive services from private sector.

Before examining the usage of contraceptives through private sector in Kerala, a brief review of Kerala's Demographic experience is presented. The decline in fertility and mortality in Kerala has been a `paradox' which is widely discussed and quoted all over the world. Zachariah (1984) argues that from the experiences of other countries if we consider higher per capita income and economic growth, urbanisation and industrialisation, higher

levels of nutritional intake as essential pre-requisites for fertility decline, the Kerala's fertility would not have declined.

The health transition (i.e. change from high mortality to low mortality) also occurred at a faster pace. In fact health and demographic transition occurred at a shorter period in Kerala (Krishnan 1991). Researchers attribute this transition to low fertility and low mortality to several factors like increased cost of bringing up children, increase in standard of living of the poor, mass literacy, equity in health and education rather than income and assets, greater female autonomy as a result of their better level of education and role in decision making in the family, settlement pattern high density and `rural-urban continum', higher density of health care facilities and political consciousness.

Nag (1989), Kannan et. al. (1991), and Ramachandran (1995) point out that in areas where literacy and political consciousness are high people demand more health facilities and utilise the existing health facilities in a better way. Also the successful implementation of immunisation programme has brought Kerala women closer to health and family welfare services (Khan 1990). The well connected road system is also responsible for high level of utilisation of health and family welfare services (Bose 1988; Nag 1989). Apart from all these, Kerala spends a higher percentage of state government expenditure on health and education sectors and also its family

planning programme is better organised, and offer higher quality of services than elsewhere in the country (Srinivasan 1995).

Findings of a large scale survey based on three districts of Kerala (Zachariah et. al. 1994) showed that 30 per cent women who are currently using female sterilisation, had obtained it from private hospitals and suggests that their role could be expanded with consequent saving for the government. The authors are suggesting to entrust the job of distribution of temporary family planning methods to NGO's where governments track record have been a failure. Raman Kutty (1989) using the data from an all Kerala Health Survey shows that private medical care in the state is primarily determined by `money prices' as `travel time' and `waiting time' are lower in private sector in the state.

Table 1.3
Percentage distribution of current user's of modern contraceptive methods by most recent source of supply, Kerala, 1992-93

Method used	Source of Supply		Total no
	Public	Private	of cases
Oral Pill	38.9	61.1	18
IUD/Copper-T	75.0	25.0	108
Condom	19.8	80.2	116
Female sterilisation	76.8	23.2	1662
Male sterilisation	90	10	259
All modern methods	74.9	25.1	2163

Source: National Family Health Survey, 1992-93, Kerala Report, IIPS, Mumbai, p.91.
Note: Private sector includes private medical sector and other sources.

Table 1.3 shows that 25.1 per cent of current users of any modern method of contraception in Kerala are depending on private sources of supply. About 23.2 per cent of acceptors of female sterilisation and 10.0 per cent of acceptors of male sterilisation relied on private sector for contraceptive services. For temporary methods though the number of cases were less, we can see 80.2 per cent of condom users and 61.1 per cent of oral pill users depending on private sector for these services. Only 25.0 per cent (all India 35.8 per cent) of Copper T users had obtained it from private sources. This study examines in detail the factors which influence the use of contraceptives from private sources. The objectives of the study are framed as follows:

(1) To study the influence of socio-economic and demographic factors on use of contraceptives through private sources;

(2) To ascertain the extent to which user's perception of quality of care provided determines the use of contraceptive services from private sources.

The details of the study are discussed in the following chapters. In the next chapter we present a review of literature related to this study. Chapter III develops a conceptual framework for analysis and describes data used and methodology adopted in the analysis. In chapter IV the detailed analysis of factors influencing contraceptive use through private sources is presented. The conclusion and policy implications are presented in Chater V.

CHAPTER II

REVIEW OF LITERATURE

The utilisation of contraceptives from private sources is a new area of interest for population scientists. But little is known about the demand and utilization of contraceptives provided in private sector, in developing countries. In the developed countries, as contraceptive services are mostly provided in the private sector, there is limited literature on preference for utilisation of contraceptives from either private or public sector. A handful of recently conducted studies, however, have discussed variables like place of residence, educational level, religion, caste, work status, standard of living, age, children ever born and quality of care elements, to determine the level of utilisation of family welfare services from public/private sources. These variables can be grouped as social, economic, demographic and quality of care variables. In this chapter we briefly review the findings of the studies in respect of these variables. The review has been supported by using literature related to general health care utilization studies, where ever necessary under the assumption of similarities in utilization of these two services from public/private sectors.

SOCIAL VARIABLES

Place of Residence

In developing countries, the general level of utilisation of family planning services from private sources is higher in urban areas than in rural areas (Berman and Rose 1996). This pattern was observed in India also. ORG (1983) reports that dependence on government hospitals for

condoms was more in rural areas than in urban areas. Ramesh et. al. (1996) show that rural and urban areas differ considerably in their reliance on different sources for contraceptive supply.

In India even though PHCs (family planning services are delivered through PHCs in rural areas) are located all over the country, there have been a number of small studies (Chutani 1976, Duggal 1994, Kulkarni and Chitanand 1994, Rağarethnem 1996) which points out the under utilization of PHCs due to dissatisfaction with services provided in those public health care delivery units. Prakasam and Thatte (1994) in a study conducted in rural district of Andhra Pradesh finds that, 77.1 per cent of female sterilisation acceptors had obtained the method from private sources.

But the situation is different in Kerala, where high density of population has virtually eliminated rural-urban classification of population (Visaria and Visaria 1995). An important reason cited for high level of utilisation of family planning services under family planning programme in the state is its high density and typical settlement pattern resulting in smaller catchment area of health facilities (Bose 1988, Nag 1989). On the basis of analysis of data from a large scale health survey in the state, Kannan et. al. (1991) report that private sector institutions serve a substantial share of inpatient requirements for health care in rural areas and that they compete effectively with government institutions and provide positive contribution to health sector in the state.

Level of Education

The studies covering preferences in utilisation of health care services (Rosenthal 1965, Pathak et. al. 1981, Garg and Singh 1985,

Yesudian 1988) often demonstrate the positive relationship between educational level and utilisation of health care facilities. This is because of education's influence on perception of health needs and knowledge and judgement of health care facilities.

Pol and Thomas (1992) while observing a higher level of use of alternative sources of medical care among population with higher educational level in United States, mentions that level of education is probably one of the best predictors of health behaviour and utilisation of health care services. But they find that the relationship between education and health resembles that of income, and argues that utilisational differences linked to income actually reflect educational differences. Such an observation was observed in a study conducted in Bombay (Khandekar 1971) where it was found that there is a positive correlation between utilisation of maternal and child health service and education within each income group. These observations are contradicted by Duncan (1996) who finds that beneficial effects of income persisted even while controlling variables such as completed schooling.

Sholapurkar et. al. (1982) observes that a relatively higher proportion of respondents who are educated in rural Karnataka utilize private hospital than uneducated respondents. They mention that educated persons look for extra care or they may not like to wait in a queue in government hospital. In another study, Ghosh and Mukherjee (1989) show that family welfare services from PHCs were accepted only by 20.4 per cent of university educated groups compared to 46.3 per cent from illiterate groups.

Whether due to income effect or due to their health care consciousness, the available studies consider educational level of women to be an important factor which influences utilisation of family planning services from private sector. Berman and Rose (1996), based on DHS data, report the positive association of mothers education with probability of use of family planning services from private sector. The ORG (1991) study also indicates that the users of private nursing homes for family planning services were characterised by higher level of education. About 80 per cent of acceptors of female sterilisation were educated upto high school and above. Among male sterilisation acceptors 62 per cent had higher secondary and above education and 30 per cent had high school education.

Religion

Religion is on of the important determinants of acceptance and choice of contraceptive method (Bhende et. al. 1993). The higher adoption rate of contraception among Hindus than Muslims is well documented (IIPS 1995, Jolly 1978, Kanitkar and Murthy 1983). Shariff (1995) argues that in-spite of socio-economic backwardness of Muslims, the rate of increase in use of contraception is higher among Muslims than among Hindus in the period 1980-88.

Religious distribution of 1991 census in Kerala showed that 57.3 per cent are Hindus, 23.3 per cent are Muslims and 19.32 per cent are Christians. Bhat and Rajan (1989) mention about the positive influence of high proportion of Christian population on the process of demographic transition in the state. Zachariah et. al. (1994) while explaining the women's fertility behaviour among religious groups points out that a district

in which a woman lives is more important. According to him being a Muslim is relevant in Malappuram (a Muslim majority district) but not in Ernakulam where being a Christian makes a difference. But PRC (1995) on the basis of NFHS conducted in Kerala, showed significant differentials between Hindus (63.6 per cent), Christians (58.6 per cent), and Muslims (32.0 per cent) in current use of modern methods of contraception.

Khan and Patel (1997) while analysing data collected from 4 districts in Uttar Pradesh find that the dependence on private sector, for clinical methods of contraception was higher among Hindus than Muslims while for non-clinical methods a higher proportion among Muslims utilised private sources than Hindus. In another study (Sholapurkar et. al. 1982) in rural Karnataka, it was found that a slightly higher proportion of males and females among Muslims availed private health care facilities than Hindus.

Caste

According to caste system prevailing in India, the scheduled castes and scheduled tribes (SCs and STs) form the most disadvantaged group of population. The impact of development and modernisation was least on these communities which resulted in general backwardness of these castes. Ravindran (1996) finds that the important factors leading to differential in health status even among SC population are, land lessness, exclusive dependence on daily wage labour and to a lesser extend illiteracy. She reports that use of private medical sector (private sector 38 per cent and NGOs 23 per cent) among Scheduled Castes is much higher than use of public medical sector. Another study by National Tuberculosis Institute (1988) showed that when 41.9 per cent non-SC/STs preferred private practitoners, only 16.9 per cent SC/STs preferred the same.

Visaria and Gumber (1992) report that SCs and STs of Gujarat and Maharashtra are relying exclusively on government agencies for immunisation of their children. The SC's and ST's had a lower level of utilisation of private hospitals for delivery purposes than other communities in both rural and urban areas of these states.

ECONOMIC VARIABLES

Work Status of Women

The work status of a woman is an indicator of woman status and her economic independence in her household. The working women have a higher opportunity to interact with the outside world which exposes her to new ideas which could bring a change in their attitude towards utilisation of health services. Berman and Rose (1996) while analysing the Demographic Health Survey data from 11 developing countries observe a positive association between private sector use of family planning and mothers work status.

Standard of Living

The standard of living of the household is a good indicator of economic condition of respondents. Generally a high standard of living means a higher level of income as well as favourable disposition towards a better quality of life and low standard of living need not mean low income but incapability to lead a better quality of life (Roy and Jayachandran 1995). The level of utlisation of private health care is determined by ability or capacity to pay for services. Coe et. al. (1965) have shown that the proportion of household income spent for health care is higher for lower class households than upper class households. Muntaner and Parson (1996) in another study in Baltimore showed that the odds of going for

private health care services for a persons having annual income of $25,000 and above was seven times more than those having less than $25,000 annual income. Similarly high level of utilisation of private sector by high income people have been reported in numerous studies (Herbert et. al. 1958, Heller 1982, Pol and Richard 1992, Aljunid 1994, Duncan 1996 etc.).

Unlike in many other countries, the private sector health care in India is not subsidised or is not under any insurance scheme. The income level is reported to influence the use of health care services (Yesudian, 1988 and Ramankutty 1989, Visaria and Gumber 1996), through private sector. There are studies which show that private health facilities are used by all classes, but the level of use was lesser for major illness which requires hospitalisation (Bhatt 1993, Nanda and Baru 1994, Yesudin 1990), which is expensive. But Duggal and Amin (1989) and Kannan et. al. (1991) argue that economic considerations like income or pricing need not be a differentiating factor in utilisation of private facilities by the poor. From the experiences of developing countries Standing (1997), views that private sector with all its diversity has always been an important provider of health services to poorer households, as well as, as first resort to wealthiest section of the society.

Lande and Geller (1991) suggests that when family planning services in commercial sector serves those who can pay full prices, while subsidised services can go for those who cannot pay. Orr et.al. (1985) doubts whether the poor and very poor in United States who wish to obtain sterilisation have access to private medical care and to high quality care. Another study by Frost and Bolzan (1997) on publicly funded family

planning agencies in US brings out that 57 per cent of clients of these family planning agencies are below the federal poverty level.

The ORG (1988) study report on the role of private medical practitioners in family welfare programme, on the basis of survey conducted in three towns each of Maharashtra, Tamil Nadu and Andhra Pradesh showed that two-thirds of acceptors of family planning services from private sources belonged to the higher income brackets. The major reasons cited for not using public family planning services are: (1) better rapport with private medical practitioners (62 per cent), (2) impression of better treatment (41 per cent) and private nursing homes nearer than public sources (31.0 per cent). The study concludes on the note that the acceptors who received family planning services from private sources would like to have better facilities and better environment and hence, were prepared to pay for the charges imposed. This cannot be contradicted as complaints of poor care provided in public sectior are common which is sufficient reason for upper class clients who have capacity to pay, to prefer private sources for contraceptive supply. Ravindran (1995) observed that despite substandard service, the government clinics continues to be utilized for family planning services because of minimal monetary cost for availing these services.

QUALITY OF CARE

The quality of care provided by a family planning programme, is considered to be basic to individual women's overall reproductive needs and thereby improving the level of utilisation of contraceptive services. According to Jain (1989) the quality of care is important at three stages: (1)

at pre-acceptance councelling and clinical check up, (2) quality of care during acceptance, and (3) post acceptance follow up.

There have been several arguments regarding the assessment of quality of care being provided by family planning programmes. Jain (1989) and Bruce (1990) have defined quality in terms of the way individual couples are treated by system providing services. Giridhar and Seema (1995) are of the view that quality is not what the provider assumes, while it is the one perceived by client who is availing family welfare services. It has been argued that while assessing quality of care, the clients perception should form the focal point of view (Roy and Verma 1995).

Mavalankar (1996) while reviewing quality of care in family planning programme in public sector and private in India, finds that quality of care in public sector and private sector is not upto the mark, but report that the quality of care in private sector is slightly better than that in public sector. ORG (1988) study of private sector use of contraception finds that better rapport with private medical practitioners and impression of better treatment in private sector are major reasons for using private sources of supply. Orr et. al. (1985) and Landry and Forrest (1996) mentions about the possibility of higher quality of family planning services in private sector, in United States.

There are several studies which gives us an idea about the quality of services provided in public family planning outlets in India. Though choice of contraceptive is a fundamental element (Bruce 1990) of quality of services, there are doubts regarding this element of quality provided in national family planning programme in India. The ICMR (1989) of all India

study showed that more than 50 per cent of subcentres were not having IUDs and more than a quarter of subcentres were not having oral pills or condoms. Instances of clients being not able to exercise choice were also reported by Ravindran (1993). Apart from this, lack of adequate counselling and guidance were reported in many studies (Khan and Prasad 1988, Khan 1990, Bhat and Halli 1995, Nair et. al. 1996). Another ICMR report (1991) on basis on evaluation of selected family planning camps in 19 states covering 199 districts points out the following major deficiencies in camps arranged in pre-sterlisation check up, in providing life saving drugs and transportation facilities in case of emergency and in maintenance of asceptic conditions.

Kerala is known for better organised family planning programme which offers higher quality of services (Bose 1988, Srinivasan 1995). In a comparative study, even though Khan (1988) finds a low level of follow up services, non-availability of doctors and medicines and poor reception by PHC staff, he feels that the overall environment for execution of family welfare programme was more conductive in Kerala than in Bihar. Poor follow up observed in other parts of country is also reported in Kerala (Nair et. al. 1996). Ramanathan, Dilip and Padmadas (1995) observes that though quality of services in sterilisation camps are better than anywhere in India there are violations in guidelines prescribed by Ministry of Health and Family Welfare with respect to councelling and check up before surgery, maintaining asceptic conditions and insufficient requirement to support women's needs after sterilisation. This was repoted by ICMR (1991) also.

Ram et. al. (1997) using NFHS data show that sterilisation acceptors from private sources are less likely to report problems than acceptors from public sources. The proportion who reported pain/backache and weakness/inability to work was 15.2 per cent and 10.2 per cent respectively in public sector, while only 8.8 per cent and 5.6 per cent respectively reported the same in private sector. This was found to be true for all states, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Uttar Pradesh which were included in the study. John and Nair (1994) find that all sterilisation acceptors foum PHCs had reported that, they received proper care at the time of operation and argues that complaints reported by acceptors such as weakness or backpain cannot be attributed to the method adopted.

Foo (1996) observes that our national programme is characterised by limitations in areas such as choice of method, councelling, provider-client relationship and continuity of care. According to her, the overall clients perception on quality of care shows that, in general, clients perceive that the quality of family planning services in private sector as superior to those offered by government. Majority of women were satisfied over the services they had received from public clinics. At the same time these women themselves had reported the quality of service in the public clinics to be indifferent, in various dimensions of quality of services. Foo states that the above unexpected relationship is a function of low expectation they hold of family planning services from the government.

In the next chapter a conceptual framework for analysing factors influencing contraceptive use through private source is discussed. This framework is based on review of literature presented above.

CHAPTER III

CONCEPTUAL FRAMEWORK

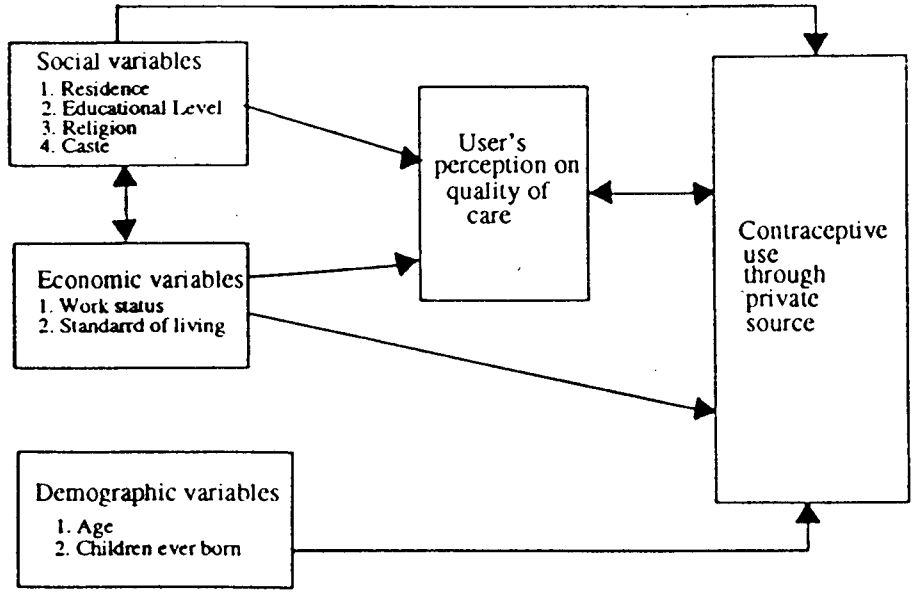
In this chapter we develop a conceptual framework for analysis of contraceptive use through private sources. A conceptual framework is a useful tool for analysis because it helps in understanding relationship between key concepts, which are to be empirically examined.

Figure (a) below gives the conceptual framework used in the study for the analysis of factors influencing the current use of contraception through private sources. As shown in the figure the dependent variable is use of contraception from private source, and there are several independent variables which influence this dependent variable. They are broadly classified into social, economic, demographic and quality of care variables. Included among social variables are: (i) place of residence, (ii) educational level of women, (iii) religion of women, (iv) caste of women. The economic variables included are: (v) work status of women, and (vi) standard of living household of women. The demographic variables considered in framework are: (vii) age of women and (viii) children ever born to the women. The other independent variable is user's perception on quality of care provided. The relationship between independent and dependent variables is described below.

The social, economic and demographic variables directly influence use of contraception from private sources. The use of contraception from private sources is directly influenced by users' perception of quality of care

Fig. 2

A Frame Work for Analysis of Contraceptive Use Through Private Sources



provided. The social and economic variables indirectly influences use of contraception from private sources through users' perception of quality of care. Even though we realise the presence of bidirectional relationships (for e.g., the relationship between users' perception of quality of care and use of contraceptives from private sources) in the framework we are restricting our study to unidirectional relationships. The nature of relationship between the dependent (response) variable and independent (or predictor) variables is explained below.

SOCIAL VARIABLES

(i) Place of Residence

As described in review of literature the geographical distribution of health care facilities is having a significant influence on access, and thereby in utilisation of these facilities. Research studies conducted reveal a high level of use of contraceptives from private sector in urban areas than in rural areas (Berman and Rose 1996, ORG 1983, Ramesh et. al. 1996). The urban areas are characterised by higher quantity of private health care facilities. Moreover the women in urban areas are presumably more sophisticated, more exposed to newer ideas through mass media and through non-familial contact as compared to women in rural areas. All these contribute to a higher level of utilisation of private family planning services in urban areas.

(ii) Education of Women

An educated woman is found to enjoy a better status in society and also in her family. Female schooling is considered as one of the key determinants of her autonomy in reproductive decisions (Rajan, et. al. 1996). Whether due to income effect or not, the use of contraception from

private sources is found to increase with increase in level of education (Berman and Rose 1996, Jensen 1996, ORG 1988). The awareness, needs and consciousness about health care facilities increases with educational level. Likewise an educated woman who possess greater autonomy, if possible will be preferring private sector, if she is not satisfied with family planning services provision in public sector.

(iii) Religion

Religion is one of the important factors which influences use of contraception (Jolly 1978, Bhende et. al. 1993). There is substantial differentials in socio-economic and demographic profiles of major religious communities in India (Shariff 1995). These socio-economic differentials by religion are sufficient enough to create a religionwise differentials in use of contraception from private sources.

(iv) Caste

In the socio-economic stratification, the scheduled caste and scheduled tribes are found to be the most disadvantaged population. They are mostly settled in rural and other similar inaccessible areas. Landlessness, exclusive dependence on daily wage labour and illiteracy are reported to be major factors leading to differentials in health status within the scheduled castes (Ravindran 1996). Thus lower economic status is bound to be a handicap while paying for family planning services in private sector and this disadvantage may influence them while obtaining contraceptives from private sources.

ECONOMIC VARIABLES

(v) Work Status of Women

A woman who is working is considered to enjoy a better status in her society than a non-working woman. Along with economic independency she will be having exposure and contacts outside her household. She will be earning according to her potential also. The income obtained through work enhances her capacity to pay for family planning services. Such women are more likely to use contraception from private sources.

(vi) Standard of Living

Indicators of standard of living of respondent are often used in demographic analysis (Kanithkar and Murthy 1978, Roy and Jayachandran 1995) because of practical problems in ascertaining the level of income, whereas information on household amenities, type of house etc. can be easily be reliably collected. The economic conditon of household will be an important variable in any study on utilisation of health care services from private sector, which collects user changes. There are some studies (Orr et. al. 1985, ORG 1988, Frost and Bolzan 1997) which indicate that family planning services are extensively utilized by high income families. Thus higher standard of living which generally implies a higher level of income as well as favourable disposition towards better quality of care will have a positive influence on use of contraceptives from private sources.

DEMOGRAPHIC VARIABLES

(viii) Age of Women:

In population studies age is an important characteristic. In this framework also age has an important role. Those women who are in older age groups have not had as much opportunity to use contraception from

private sources as younger women. Rapid expansion of private sources of contraceptive supply is a recent phenomenon.

Children Ever Born

Children ever born is associated with social and economic condition of women. The women who have fewer children are motivated to regulate their fertility. Such woman may use contraception for spacing or limiting. As the government family planning programme concentrates on permanent methods the women who want to space their children may obtain contraceptives from private sources. Thus we can expect women with fewer children to have higher level of contraceptive use through private sources.

USER'S PERCEPTION OF QUALITY OF CARE

The quality of care provided by family planning programme in developing countries is an important determinant of whether couples adopt contraception and continue as contraceptive users or whether these programmes are underutilized by population, they are designed to serve (Foo 1996). Though there are no studies on quality of services in private sector, studies point out that perception of better quality of service is one of the major reasons suggested by clients while selecting private source of supply.

The Department of Family Welfare, Government of India (1991) has been trying to bring out improvements in quality of family planning services under the family welfare programme services under the family welfare programme and have set up standards for providing family welfare services. The few studies available (Khan and Prasad 1988, ICMR 1991)

mentions about pitfalls in quality of services provided in public sector. Mavalankar (1996) explains that quality of care in public and private sector in India is not upto the mark. But still he observes a slightly improved quality of service in private sector than in public sector. The higher level of quality of services in any way influences the client while choosing the source of supply.

HYPOTHESES

Based on the relationship between variables as explained above, the following hypotheses have been framed which will be empirically tested during analysis.

(1) Use of contraception from private sources is higher in urban areas as compared to rural areas.

(2) The higher the educational level of women, higher will be the use of contraceptive methods from private sources.

(3) The religion and caste of women will influence the level of use of contraceptive services from private sources.

(4) Working women have higher level of use of contraceptives from private sources as compared to nonworking women.

(5) Higher the standard of living of user higher will be the chances of seeking contraceptive services from private sources.

(6) Perception of higher quality of service provided in private sector is influencing the use of private sources for contraceptive supply.

DATA

The information gathered through the National Family Health Survey (NFHS) in 1992-93 for Kerala state, as a part of national level data gathering excercise was used for this study. The NFHS collected data from all the 14 districts in Kerala from a statewise representative sample of 4332 ever married women from 4387 households. The survey used three types of questionnires - Household Questionnaire, Women's Questionnaire and Village Questionnaire.

For our purpose we are using information based on women's questionnaire. The questionnaire collected information from all ever married women in 13-49 age group (including visitors and usual residents) who were present in the household on the date of survey. The women's questionnaire has seven sections: (1) Respondent background, (2) Reproduction, (3) Contraception, (4) Health of children, (5) Fertility preferences, (6) Husband's background characteristics and women's work and (7) Height and weight of children.

In the study we are considering only women who are currently using any modern method of contraception. Information on the following variables were collected from the three sections of questionnaire and are used in the analysis.

Respondents' background section: Religion, caste, educational level and total children ever born. Household facilities, kitchen, toilet, light, type of household, drinking water, livestock and ownership of household goods.

Contraception section: Method currently used, and its most recent source of supply, rating of care received during or immediately after sterilisation operation, consulting medical/health personnel to discuss about the experience with the use of the method, and problems as a result of using the method.

Husbands' background and women's work section: Woman's work status.

MEASUREMENT OF VARIABLES:

The measurement of response and predictor variables and the notations used to represent each of these variables is given below.

Response Variable

The response variable (or dependent variables) in the study is `current use of conceptive methods from private source of supply'. It is denoted by Y_1 and is categorized as:

Y_1 = 1 - Yes

= 0 - No

Predictor Variables

The various predictor variables considered in the study and their measurement are as follows:

1. Place of Residence (X_1): The place of residence of women is classified into rural and urban areas

X_1 = 1 - Urban

= 0 - Rural

2. Educational level of Women (X_2): On the basis of their educational level attained, the women were categorized as illiterates, literate but not middle school complete, middle school complete but not high school complete, high school complete and above. The illiterates were taken as reference category for the other three levels.

X_{2a} = 1 - literate but not middle school complete

= 0 - illiterate

X_{2b} = 1 - middle school complete but not high school complete

= 0 - illiterate

X_{2c} = 1 - high school complete and above

= 0 - illiterate.

3. Religion of Women (X_3): Here we have taken Hindus as reference category for Muslims and Christians.

X_{3a} = 1 - Muslims

= 0 - Hindus

X_{3b} = 1 - Christians

= 0 - Hindus.

4. Caste of Women (X_4): Using caste status, women were categorized into two

X_4 = 1 - Non-Scheduled caste or scheduled tribe women

= 0 - Scheduled caste or scheduled tribe women.

5. Work Status of Women (X_5): According to the survey, work includes, any kind of job for which woman is paid in cash or in kind as well as unpaid work on a family farm on in business. Women are classifed as working and non-working

X_5 = 1 - Working

= 0 - Non-working.

6. Standard of Living (X_6): A standard of living index is calculated to know the living standard of household of women respondents. The index is explained in appendix-I. Based on the index the standard of living of the women were categorised as low, medium and high:

X_{6a} = 1 - Medium Standard of living

= 0 - Low Standard of living

X_{6b} = 1 - High standard of living

= 0 - Low standard of living.

7. Age of Women (X_7): Age of women is categorised as

X_{7a} = 1 - 25 - 35 years

= 0 - less than 25 years

X_{7b} = 1 - 35 years and above

= 0 - less than 25 years

8. Number of Children Ever Born (X_8): Based on the number of children ever born to them, the women were classified as

X_8 = 1 - less than or equal to two children

= 0 - greater than two children.

9. Users' Perceptions on Quality of Care Provided to Women at the Time of Acceptance (X_9): The client's (current user's) perception based on her rating of care received during or immediately after sterilisation operation is taken to represent quality of care provided. The rating is categorized as

`excellent' (if `excellent' or `very good') or `average or bad' (average if `average' or `not so good'); and bad (if `bad' or `don't know')

$X_9 = 1$ — -Excellent

$= 0$ — -Average or Bad.

10. Users' Perceptions on Quality of Care After Acceptance (X_{10}): Indicated by two variables - problems after use of a method (X_{10a}) and consulting doctor after use of a method to discuss about the experiences with use of the method (X_{10b}). The variables X_{10a} and X_{10b} are taken to represent the after effect of quality of care provided and after care service provided by each sector from users' point of view.

X_{10a} = 1 - Yes

= 0 - No

X_{10b} = 1 - Yes

= 0 - No

METHODOLOGY

The set of hypothesis developed and presented, above in this chapter is empirically tested using statistical techniques. Before this, we provide the results of cross-tabulation between source of supply for current use of contraception and socio-eonomic demographic and quality of care variables selected for the study. This gives an overall relationship between response variable and predictor variables.

We are interested in calculating the co-relation co-efficients among different variables used in the study. However we could not perform a corelation analysis since most of the variables used in this study were not continuous variables. Furthermore for our multivariate analysis we have

not used stepwise regression for the same reasons. The response variable, the use of contraception from private sources is a dichotomous variable and the distribution of the response variable is skewed. Because of these reasons we have to use linear probability model or logit regression to find out relationship between response variable and predictor variables. We preferred to use logit regression model instead of linear probability model, as it is easy to interpret.

Logit Regression

In logit regression model a sigmoid curve is used to fit the observed points. Since the tails of sigmoid curve level off before reaching p = 0 or p = 1, the probability of impossible value for p (response variable) observed in probit model is avoided. The basic form of a logistic function is

$$p = \frac{1}{1+e^{-z}} \qquad \ldots\ldots\ldots \text{(i)}$$

where p is estimated prob (here use of contraception from private sources) z is the predictor variable and e is the base of natural logarithm (e = 2.7183). The predictor variable has its largest effect on p when p = 0.5 and, p becomes smaller in absolute magnitude as p approaches 0 or 1.

The quantity P/(1-P) is called the odds and the quantity log P/(I-P)] is called logit of p. Simplyfying eqn (1) we get

$$\log Z = \frac{p}{1-p} \qquad \ldots\ldots\ldots \text{(ii)}$$

or $$\text{logit } p = Z \qquad \ldots\ldots\ldots \text{(iii)}$$

The multivariate logistic function involving k predictor variables (X_1, X_2, ...X_k) is given by

$$p = \frac{1}{1+e^{-(b_o+b_1x_1+b_2x_2+...+b_kx_k)}} \quad \text{(iv)}$$

and $$\text{logit } p = b_o+b_1x_1+b_2x_2+...+b_kx_k \quad \text{(v)}$$

The coefficient b_i represents the additive effect of one unit change in predictor variable X_i on log odds of using contraception from private sources.

The quantity e^{bi} is called odds ratio which represents the multiplicative effect of one unit change in predictor variable X_i on the odds of using contraception from private sources. e^b [$\exp^{(b)}$]is more readily understandable than b as a measure of effect.

In the model we are including the interaction effect of predictor variables. Here interaction between predictor variables X_1 and X_2 means that the effect of X_1 on Y_1 (the response variable) depends on the level of X_2 or the effect of X_2 on Y_1 depends on level of X_1.

Having described the framework used for analysis, we move on to next chapter where a detailed analysis of contraceptive use through private source is presented.

CHAPTER IV

ANALYSIS OF CONTRACEPTIVE USE THROUGH PRIVATE SOURCE

In the present chapter, the source of supply for current users of different methods of contraception is examined. We first present cross-tabulation of the source of supply of contraceptives with some background characteristics of the respondent and also with certain quality of care indicators. The background characteristics of current users' considered in the study are age, residence, educational level, religion, caste, work status, standard of living of the household and number of children ever born. The quality of care indicators (based on current users' perceptions) considered in the study are rating of sterilisation care, problems after use of a method and consulting medical/health person to discuss about the experiences with use of a method. The analysis of factors influencing contraceptive use from private sources, which is based on conceptual framework explained in Chapter III, is carried out using multivariate logistic regression model.

Source of Supply of Contraception:

As mentioned in Chapter I (Table 1.3) although public sector emerged as an important source of supply of contraceptives, the private sector also served as a significant source for supply of contraceptives.

In Table 4.1 we give a detailed breakdown for public and private sectors as source of contraception by different methods. 22.9 per cent of females and 4.6 per cent of males had obtained sterilisation from private hospitals. For the method IUD 20.4 per cent of insertions have been from

Table 4.1:

Percentage distribution of Current users of modern contraceptive method by most recent sourceof supply, according to specific method, Kerala, 1992-93

Source of supply	Oral Pill	IUD/Copper-t	Condum	Female Ster.	Male Ster.
Public sector					
Govt/ Muncipal hosp	27.8	38.9	7.8	61.3	47.9
PHC/ Sub-Centre	11.2	35.2	12.1	9.4	17.4
Public Mobile/ F.P. Clinic	-	0.9	-	0.4	1.2
F.P. Camp	-	-	-	5.7	23.6
Total	38.9	75	19.8	76.8	90
	(7)	(81)	(23)	(1276)	(233)
Private sector					
Private Hospital	5.6	20.4	0.9	22.9	4.6
Pharmacy /Drugstore	11.1	3.7	8.6	-	-
Private Doctor	5.6	-	-	0.2	-
Shop	38.9	-	44	-	-
Husband	-	-	16.4	-	-
Others		0.9	10.4	0.1	5.4
Total	61.1	25	80.2	23.2	10
	(11)	(27)	(93)	(386)	(26)
Grand Total					
Percentage	100	100	100	100	100
No. of Cases	16	108	116	1162	259

Source: National Family Health Survey, 1992-93, PRC Thiruvanthapuram and IIPS, Mumbai.
Note: Private Sector includes private medical sector and other (non-public) sources.
- Less than 0.05 per cent
Figures in bracket denote total number of cases.

private hospitals. Private sector appears to be the major supplier of condoms and oral pills. For condoms and oral pills shops and drugstores/pharmacies are a major source of supply. Pharmacies/ drugstones and shops together cater to the needs of 50.0 per cent of oral pills users and 52.6 per cent of condom users. Thus the table clearly shows that, in the private sector, private hospitals were preferred for female sterilisation and IUD/CoppterT, but for condoms and oral pills pharmacies/drugstones and shops are preferred. However, the number of

women using oral pills is too small (only 18 cases) and therefore they are not considered in the analysis that follows.

Socio-economic and Demographic Background of Contraceptive Users'

The source of supply of contraception by selected background characteristics of the respondent are given in table 4.2. This table will be helpful in understanding the differences that are present in background characteristics of users of public and private

In the case of different methods of contraception, its source of supply does not vary much with age of the user, except in the case of female sterilisation. The percentage of women who are using contraceptives from private sources increases with age. For users of female sterilisation, the proportion who had obtained it from private sources had been 19.5 per cent, for <25 years age group 25.4 per cent, for 25-35 age group and 32.6 per cent, for 35 years and above category.

The proportion of respondents who are currently using contraceptives from private sources, as can be expected was higher in urban areas than in rural areas. The rural-urban differential was least in the case of female sterilisation where, for 24.4 per cent of urban acceptors and 22.7 per cent of rural acceptors, the source of supply was private sector. The proportion who accepted male-sterilisation from private sector in rural and urban areas were 13.8 per cent and 8.1 per cent respectively. Among the current users of IUD, 34.6 per cent in urban areas had obtained the method from private sources while only 22.0 per cent of rural area users had obtained it from private sources. Among acceptors of condom,

86.4 per cent in urban areas and 76.4 per cent in rural areas had obtained the method from private sources.

If we compare the educational level of current users with source of supply we find that, higher the level of education, higher the level of use of contraceptives from private sources. The data shows that 52.6 per cent of women who have completed high school education have accepted female sterilisation from private sources while

Table 4.2:

Percentage distribution of current users of modern contraceptive method by most recent source of supply, according to specific method and selected background characteristics of the respondent, Kerala: 1992-93.

Users Characteristics	IOD/ Copper -T			Condom			Female Sterilisation			Male Sterlisation		
	Source of supply		Total No. of Cases	Source of supply		Total No. of Cases	Source of supply		Total No. of Cases	Source of supply		Total No. of Cases
	Public	Private		Public	Private		Public	Private		Public	Private	
AGE IN YEARS	1	2	3	4	5	6	7	8	9	10	11	12
less than 25	74.3	25.7	35	27.8	72.2	36	80.8	19.2	73	50.0	50.0	2
25 to 35	71.2	28.8	52	14.5	85.5	55	74.6	25.4	761	91.9	8.1	37
35 Plus	72.7	27.3	11	20.0	80.0	25	67.4	32.6	828	90.0	10.0	220
RESIDENCE												
Urban	65.4	34.6	26	13.6	86.4	44	75.6	24.4	475	86.2	13.8	87
Rural	78.0	22.0	82	23.6	76.4	72	77.3	22.7	1187	91.9	8.1	172
EDUCATION												
Illiterate	100.0		1	75.0	25.0	4	90.8	9.2	293	93.8	6.2	64
Literate, not M.S. Comp	94.7	5.3	19	26.7	73.3	5	82.8	17.2	680	993.4	6.6	138
M.S. comp., not H.S. comp.	70.6	29.4	34	5.9	94.1	34	75.7	24.3	484	83.3	16.7	42
H.S. comp. and above	70.4	29.6	54	22.2	77.8	63	48.4	52.6	275	64.7	35.3	17
RELIGION												
Hindu	76.2	23.8	63	17.9	82.1	67	80.4	19.6	1048	90.3	9.7	186
Muslim	60.0	40.0	15	17.4	82.6	23	68.4	31.6	263	87.5	12.5	24
Christian	79.3	20.7	29	28.0	72.0	25	72.0	28.0	346	89.6	10.4	48
CASTE												
SC / ST	100.0		2	25.0	75.0	4	91.9	8.1	13	100.0		26
Others	74.5	25.5	106	19.6	80.4	112	75.4	24.6	1523	88.9	11.1	332

Users Characteristics	IOD/ Copper -T			Condom			Female Sterilisation			Male Sterlisation		
	Source of supply		Total No. of Cases	Source of supply		Total No. of Cases	Source of supply		Total No. of Cases	Source of supply		Total No. of Cases
	Public	Private		Public	Private		Public	Private		Public	Private	
	1	2	3	4	5	6	7	8	9	10	11	12
WORKSTATUS												
Working	80.0	20.0	30	32.0	68.0	25	84.6	15.4	513	94.5	5.5	108
Non- working	73.1	26.9	78	16.5	83.5	91	73.3	26.7	1149	86.8	13.2	151
STANDARD INDEX LIVING (SLI)												
Low SLI	92.6	7.4	27	27.3	72.7	11	90.2	9.8	654	92.9	7.1	112
Medium SLI	76.6	23.4	47	25.4	74.6	59	77.5	22.5	738	90.4	9.6	114
Hgh SLI	58.8	41.2	34	10.9	89.1	46	42.2	57.8	270	78.8	21.2	33
CHILDREN EVER BORN (CEB)												
≤ 2 CEB	73.3	26.7	101	18.6	81.4	102	74.6	25.4	650	84.9	15.1	109
> 2 CEB	100.0	-	7	28.6	71.4	14	78.2	21.8	1012	93.2	6.8	147
Total	75.0	25.0	108	19.8	80.2	116	76.8	23.2	1162	90.0	10.0	259

Source: National Family Health Survey 1992-93, PRC Thiruvananthapuram and IIPS, Mumbai.
Note: Private Sector includes private medical sector and other (non- public) sources.

only 24.3 per cent among middle school complete but not high school complete category users had obtained the method from private sources. Only 17.2 per cent among literates but not middle school complete category users and 9.1 per cent among the .illiterate users have accepted female sterilisation from private sources. For male sterilisation also, a similar pattern exists. Such an observation could not be made for temporary methods due to lack of sufficient number of cases.

When compared to Hindus and Christians a higher proportion among Muslims were found to be using contraceptives from private sources. Hindus were found to be having the lowest level of utilisation of contraceptive methods from private sources. For female sterilisation, 31.6 per cent of Muslim users have obtained it from private sources followed by Christians (28.0 per cent) and Hindus (19.6 per cent) respectively. Similarly for male sterilisation, 12.5 per cent of Muslims acceptors, 10.4 per cent of Christian acceptors and 9.7 per cent of Hindu acceptors had obtained the method from private sources. Among copperT users and condom users, a slightly higher proportion of Hindus (23.8 per cent for copperT and 82.1 per cent for condom) were depending on private source of supply than Christians (20.7 per cent for copperT and 72.0 per cent for condom). The highest proportion of IUD/copperT (40.0 per cent) and condom (82.6 per cent) use from private sources were also among Muslims.

The table clearly shows that the scheduled castes (SCs) and scheduled tribes (STs) are rarely using contraceptives from private sources. Among all the categories given in the table the level of utilisation of contraceptives from private sources for SC/STs were the lowest. For female sterilisation only 8.1 per cent of SC/STs used private sources.

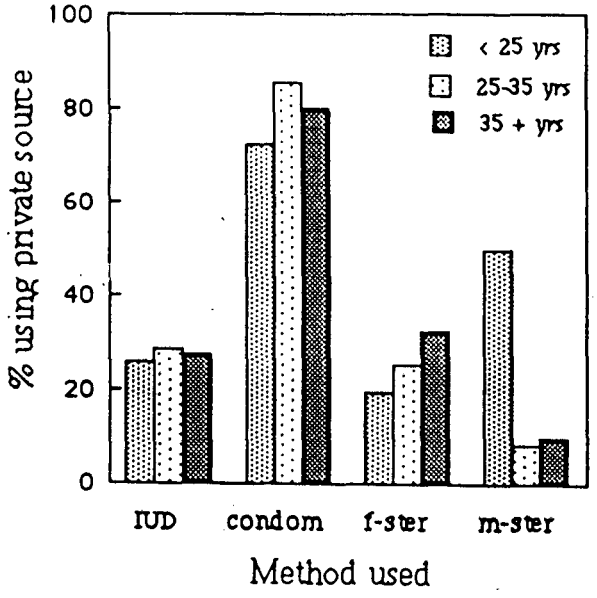


Fig.1. Contraceptive use through private source by age:Kerala,92-93.

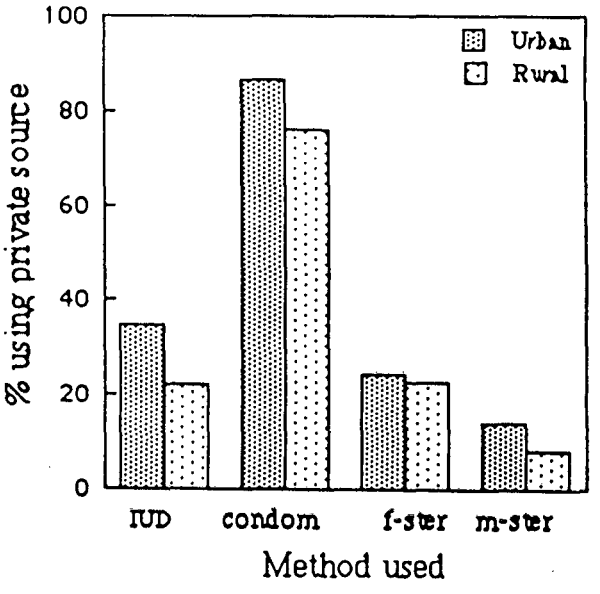


Fig.2. Contraceptive use through private source by place of residance:Kerala ,1992-93.

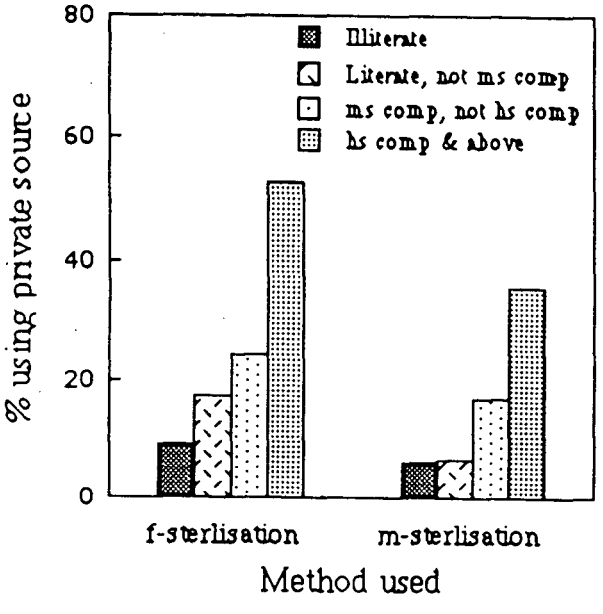


Fig.3. Contraceptive use through private source by educational level:Kerala,92-93.

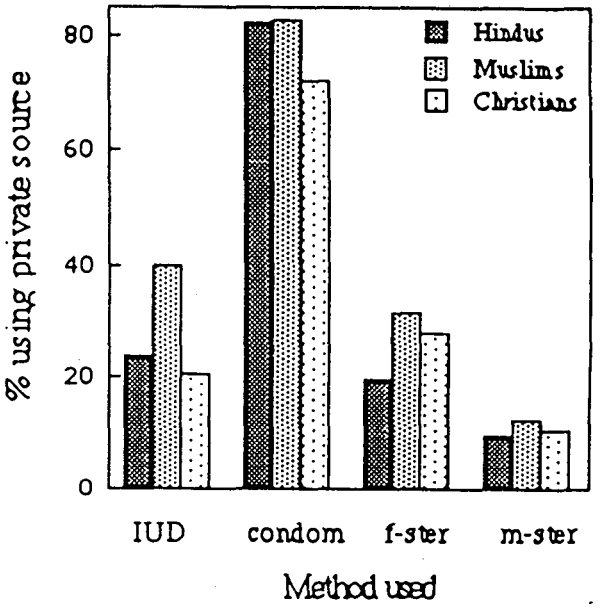


Fig.4. Contraceptive use through private source by religion:Kerala,92-93.

Among non SC/STs 24.6 per cent had female sterilisation from private sources. All the SC/ST acceptors of male sterilisation had public sector as source of supply.

For all methods, the work status of respondent was found to be having a negative influence on utilisation of contraceptives from private sources, i.e. the percentage of women who use contraceptives from private sources is higher among women who are not working compared to the working women. This is rather a surprising finding. Among non-working women, 26.4 per cent obtained female sterilisation from private sources while only 15.4 per cent among working women obtained it from private sources. Among non-working women, 83.5 per cent of condom users and 26.9 per cent of IUD/copperT users had obtained these methods from private sources, while among working women 68.0 per cent of condom users and 20 per cent of IUD/copperT users had availed these methods from private sources.

The standard of living index (SLI) had been calculated on the basis of indices of toilet facilities, lighting, separate kitchen, fuel used, drinking water and household amenities to know the living standard of women who are currently using contraceptive methods. The relationship between standard of living of the users and utilisation of contraceptives from private sector is clearly brought out from the table. We can see that with every increase in the level of SLI, there is a subsequent increase in utilisation of contraceptives from private source of supply. The respondents with high standard of living was far ahead of those with medium and low standard of living. About 57.8 per cent of respondents with high SLI had undergone female sterilisation from private sector, while only 9.8 per cent with low SLI

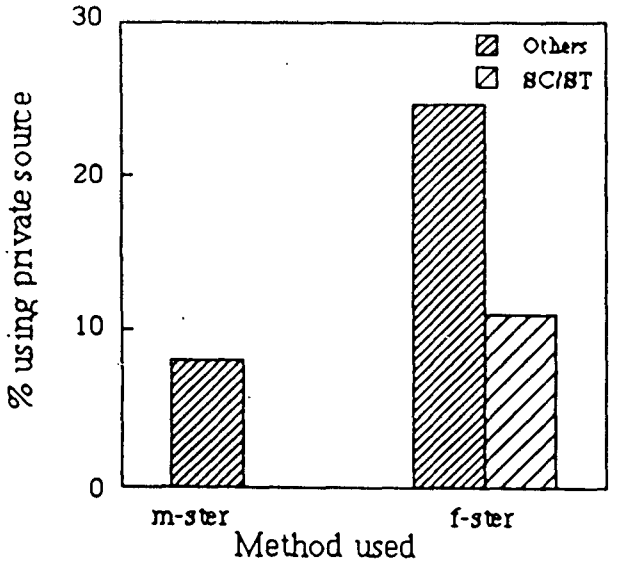


Fig.5.Contraceptive use through private source by caste:Kerala,92-93.

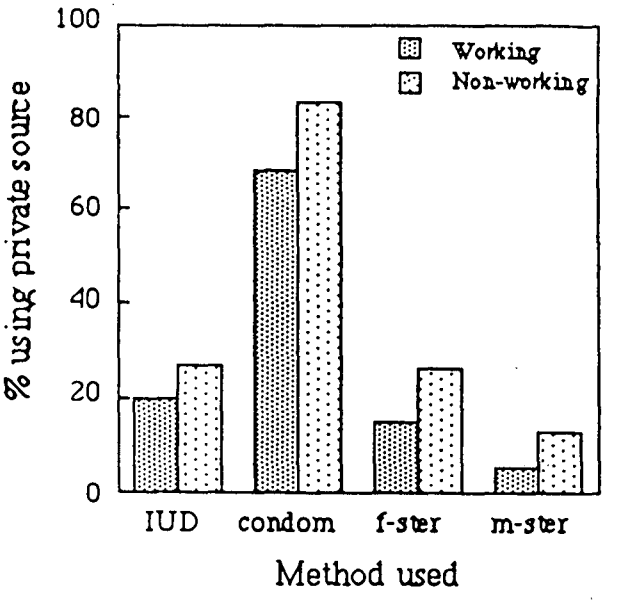


Fig.6.Contraceptive use through private source by work status:Kerala,92-93.

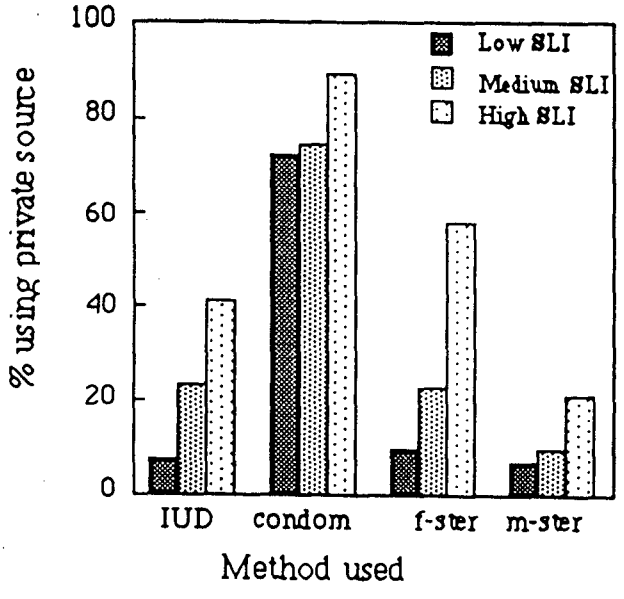


Fig.7.Contraceptive use through private source by standard of living :Kerala,92-93.

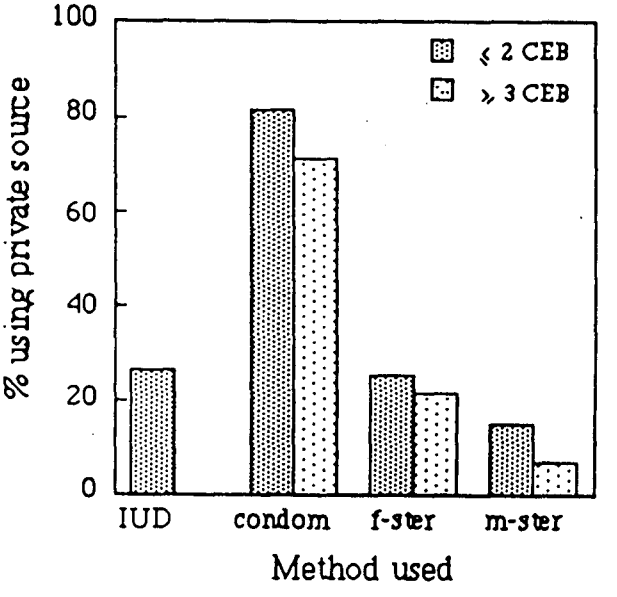


Fig.8.Contraceptive use through private source by children ever born:Kerala,92-93.

and 22.5 per cent with medium SLI had obtained the same from private sector. Similar relationship was observed for users of IUD/copperT and male sterilisation. These differentials were not much in the case of condoms, which can be cheaply obtained through private sources.

The respondents who have adopted small family norm were slightly more likely to adopt sterilisation from private sources than respondents with higher parity. Among female sterilisation acceptors, 25.4 per cent of women who were having less than or equal to 2 children (2 CEB) had obtained the method from private source while 21.8 per cent of women who were having more than 2 CEB obtained the method from private sector. This observation was true in the case of male sterilisation also.

To sum up from the above cross-tabulation we find that the standard of living of users and educational level of the respondent affects the use of contraceptives from private sources. Muslims had the highest level of utilisation of contraceptives from private sources followed by Christians and Hindus respectively. The lowest level of use of contraceptives from private sources recorded in the study was for SC/STs. Higher proportion of respondents from urban areas were using contraceptives from private sources than in rural areas, but this differential was not much for female sterilisation. Age of the respondent was more relevant for female sterilisation with higher proportion of private sector use reported by women in older age groups. The working women were found to use private sources of contraception to a lesser extent than non-working women, which was rather surprising. Also respondents who have adopted small family norm were slightly more likely to accept permanent method from private sources.

Users' Perception on Quality of Service in Public and Private Sector

Rating of sterilisation care received:

The rating of quality of care received during sterilisation will be useful to study about the quality of care provided by providers, from client's point of view. The respondent who had undergone female sterilisation were asked to rate the services they received as excellent, very good, alright, not so good very bad and do not know. They were were reclassified into three categories `Excellent' (excellent and very good), `Average' (all right and not so good) and `Bad' (very bad and do not know) to simplify the analysis.

Table 4.3

Percentage distribution of rating of care received during or immediately after operation as reported by currently married women who had undergone sterilisation by source of supply, Kerala, 1992-93.

Rating Sterilisation Care	source of supply		
	Public	Private	combined
Excellent	46.3	62.4	50.1
Average	48.1	36.6	45.3
Bad	5.6	1.0	4.6
Total	100.0	100.0	100.0
No. of Cases	1276	386	1662

Source: National Family Health Survey, 1992-93, PRC Thiruvananthapuram and IIPS Mumbai.
Note: Private Sector includes private medical sector and other (non-public) sources.

The rating of sterilisation care (table 4.3) varied widely between public and private sector with 62.4 per cent of clients from private sector rating the services they received to be `excellent' while only 46.3 per cent of clients from public sector have given `excellent' rating for the care they had received. When compared to public sector (5.6 per cent), the

proportion reporting the care received as `bad' was lesser in private sector (1.0 per cent).

Problems due to Use of a Method

Though rare, there are chances of problem due to use of a contraceptive method, which is referred to as contraceptive morbidity. The common problems reported after IUD use are irregular period, backache, excess bleeding and physical weakness; and for sterilisation acceptors it is fever, pain/backache, sepsis, physical weakness, failure of method and loss of sexual vigour.

Table 4.4:

Percentage distribution of current users who have reported problems due to use of the method by method used and source of supply, Kerala, 1992-93

Method Currently used	problem after use of a method					
	Public source		No Of Cases	Private source		No Of Cases
	yes(%)	no(%)		yes(%)	no(%)	
IUD/Copper T	23.5	76.5	81	22.2	77.8	27
Female sterilisation	19.4	80.6	1029	14.5	85.5	386
Male sterilisation	13.3	86.7	233		100.0	26

Source: National Family Health Survey, 1992-93, PRC,Thiruvananthapuram and IIPS,Mumbai.
Note: Private Sector includes private medical sources and other (non-public) sources.

The table 4.4 shows that, for both female and male sterilisation, the proportion who reported problems in private sector was lower than in public sector. Among female sterilisation acceptors, 14.5 per cent from private sector and 19.4 per cent from public sector had reported problems after the operation. The male sterilisation acceptors from private sector did not any problems after operation. For IUD/copper T there is not much difference in reporting of problems after using the method use in public and private sector.

Consulting Medical/Health Person After Use

The current users of contraceptives were asked to report whether they had consulted medical or health person to discuss about the experiences with use of a method. The results of this question indicate the care, the contraceptive users were able to obtain after acceptance of a method.

The sector wise differentials in consulting a medical or health person is given in table 4.5. In private sector, out of all women who have accepted female sterilisation from private sources 40.1 per cent consulted a medical/health personnel to discuss about the experience with use of a method while only 30.4 per cent of acceptors of female sterilisation from sector had done the same. Similar type of differentials were observed for acceptors of IUD and male sterilisation.

Table No: 4.5

Percentage distribution of current users consulting a medical or health person to discuss about experience with use of the method, by method used and source of supply, Kerala 1992-93

Method		Consulting	Medical	/	Health	Personnel
	Public	source	No Of	Private	source	No Of
	yes(%)	no(%)	Cases	yes(%)	no(%)	Cases
Oral Pills	57.1	42.9	7	27.3	72.7	11
IUD/Copper -T	32.1	67.9	81	44.4	55.6	27
Female Ster.	23.2	76.8	233	33.3	66.7	24
Male Ster	30.4	69.6	1276	40.1	59.1	384

Source: National Family Health Survey, PRC Thiruvananthapuram and IIPS Mumbai.
Note: Private sector includes private medical sector and other (non-public) sources.
Don't know cases have been included in 'no' category.

In sum, the tables regarding the users' perception on these quality of care variables give an indication that the overall performance of private sector is better than that of public sector. This can be seen from high

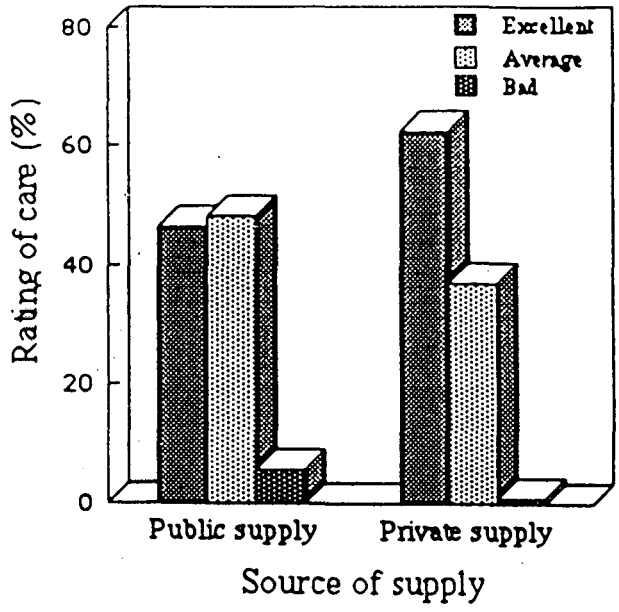


Fig.9.Percentage distribution of rating of sterilisation (female) care by source of supply:Kerala,92-93.

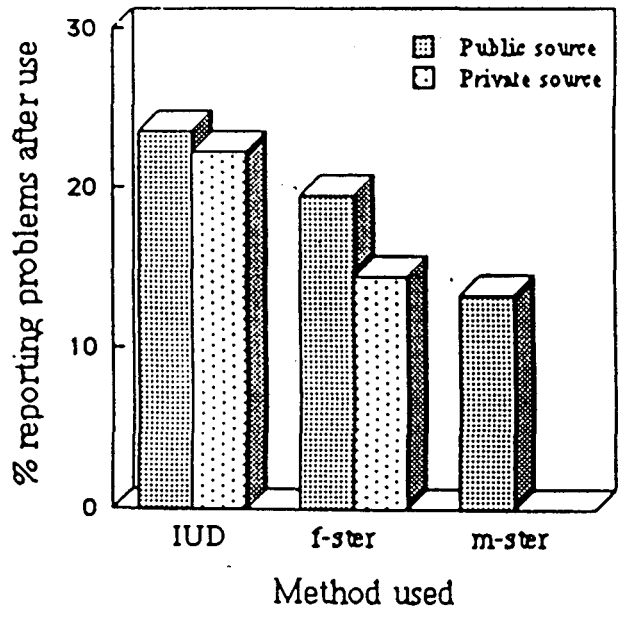


Fig.10.Proportion of users reporting problems after use of a method by source of supply: Kerala.92-93.

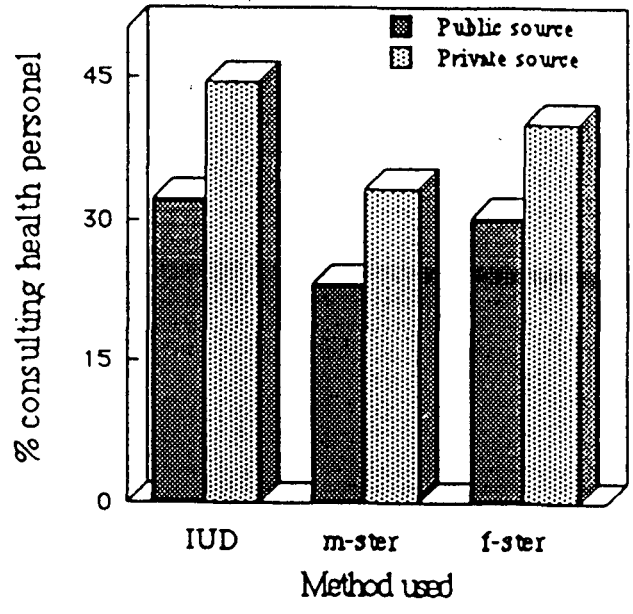


Fig.11.Proportion of users consulting a medical or health personel to discuss about experiences with use of the method by source of supply: Kerala,92-93.

rating of sterilisation care reported by those using contraception from private sector. Also fewer problems were reported after use of a method obtained from private sector. Higher proportion of users in private sector were consulting medical/health personnel to discuss about the experiences with use of the method obtained. Having analyzed the cross tabulation, we now present multivariate analysis for contraceptive usage through private sources.

Multivariate Analysis

This section covers the results of logistic regression analysis performed to find out the factors which determine contraceptive use through private sources, using the framework described in Chapter III. The analysis involves the use of the following predictors variables:

1. Place of Residence (X_1)
2. Educational level of women (X_2)
3. Religion of women (X_3)
4. Caste of women (X_4)
5. Work status of women (X_5)
6. Standard of living of the women (X_6)
7. Age of women (X_7)
8. Number of children ever born to the women (X_8)
9. Users' percpetion on Quality of care provided at the time of acceptance (X_9)
10. Users' perception on Quality of care after acceptance (X_{10})[1].

For multivariate analysis we are using only female sterilisation for describing contraceptive use through private sources due to the following

[1] Measurement of all the above mentioned variables are given in Cahpter III

reasons: The preference for female sterilisation among contraceptive users is observed not only in Kerala, but also in other parts of the country. For female sterilisation, logit analysis can be used as there are sufficient number of cases for performing multivariate analysis. In the case of other methods of contraception, the number of users of private sources as well as total number of cases using these methods are too small to be considered for analysis. Also female sterilisation being a clinical method is closely associated with quality of care variables.

Logit Analysis

The results of logistic regression analysis for current use of contraception from private sources is given in Table 4.6. The exponential parameter in the table, exp(b) are odds ratios (see Chapter III). They represent proportional increase (if greater than 1.0) or decrease (if less than 1.0) for odds of events occurring (here it is use of contraception from private sources) for unit change in corresponding predictor variable.

The Table No. 4.6 shows that, when other respondents characteristics are controlled, the contraceptive users in urban areas were less likely to use contraception from private sources than their counterparts in rural areas as the odds ratio 0.75 (X_1) observed for them was significant (at less than 5 per cent level).

Table 4.6:

Results of Logistic Regression Analysis for Contraceptive Use through Private Source in Kerala, 1992-93.

Variable	b	S.E.	Wald	df	Sig	R	Exp(b)
X_1	-0.2905	0.1497	3.8584	1	0.0495	-0.0321	0.7479
X_{2a}	0.4533	0.2414	3.5258	1	0.0604	0.0291	1.5735
X_{2b}	0.7206	0.2638	7.4607	1	0.0063	0.0551	2.0557
X_{2c}	1.5439	0.2804	30.3246	1	0.0000	0.1254	4.6828
X_{3a}	0.7175	0.1870	14.7300	1	0.0001	0.0841	2.0493
X_{3b}	0.3101	0.1614	3.5711	1	0.0588	0.0295	1.3636
X_4	0.3772	0.3457	1.1909	1	0.2751	0.0000	1.4582
X_5	-0.3329	0.1615	40.6720	1	0.0437	-0.0339	0.7169
X_{6a}	0.7092	0.1729	16.8346	1	0.0000	0.0907	2.0324
X_{6b}	1.9464	0.2185	79.3654	1	0.0000	0.2072	7.0035
X_{7a}	0.1187	0.3315	0.1283	1	0.7203	0.0000	1.1261
X_{7b}	-0.295	0.3433	0.7380	1	0.3903	0.0000	0.7446
X_8	0.1694	0.1506	1.2644	1	0.2608	0.0000	1.1846
X_9	0.3954	0.1335	8.7802	1	0.0030	0.0613	1.4854
X_{10a}	-0.1416	0.1854	0.5827	1	0.4453	0.0000	0.8680
X_{10b}	0.2403	0.1404	2.9305	1	0.0869	0.0227	1.2717

The current users with higher level of education were in a better position to use contraceptives from private sources than those with lower level of education. This relationship was highly significant for middle school completed (X_{2b}) and high school completed (X_{2c}) categories. The odds ratio for literate but not middle school complete users (X_{2a}) is 1.57, for middle school complete but not high school complete users (X_{2b}) is 2.06 and high school complete and above users (X_{2c}) is 4.68.

The Muslims (X_{3a}) were 2.05 times more likely to use contraception from private sources than Hindus. The Christians (X_{3b}) are 1.36 times more likely to use contraception from private sources than Hindus. The odd ratio observed for Muslims is highly significant.

As expected, the non-SC/STs (X_4) were more likely to use contraception from private sources than SC/STs. But the odds ratio of 1.46 observed for non-SC/STs is not significant. It is interesting to find a significant inverse relationship between work-status (X_5) of female user and use of contraception from private sources. The working women are 0.72 times less likely to use private source than non-working women.

With every increase in the level of standard of living of current users we can see significant corresponding increase in the level of use of contraception from private sources. This once again underlines that economic condition of household of current user is crucial while identifying the source for contraceptive supply. The current users from medium SLI (X_{6a}) were 2.03 times more likely to use private sources than their counterparts from low SLI households. Similarly users from high SLI

household were 7.00 times more likely to use contraceptives from private sources than users from low SLI households.

The odd ratios observed for demographic variables - age and children ever born are insignificant. A far as age of user is concerned, the users in age group 25-35 (X_{8a}) is 1.13 times more likely to use private sources than the younger category (<25 years) users, while women aged over 35 years (X_{8b}) were 0.74 times less likely to use contraception from private sources than younger women. The users with less than or equal to two children (X_8) were only moderately more likely (odds ratio 1.18) to accept this permanent method from private source than users with higher parity.

The users' perceptions quality of care provided at the time of acceptance-rating of sterilisation care received during or immediately after operation (X_9) is found to be important as the chance of reporting care received to be `excellent' was 1.49 times more in private sector than in public sector. This proxy variable strengthens our hypothesis that utilisation of family planning services from private sources is also because of perception of better quality of services provided in this sector.

The variable related to quality of care provided after acceptance of the method (X_{10}) were statistically insignificant. The odds ratio for problem reported after use (X_{10a}) in private sector was 0.87 and odds ratio for user of method from private source to consult doctor to discuss the experiences with use of method is 1.27.

Summary

To summarise, among the variables used in analysis, the standard of living of household of user emerged as the most important factor which influences the utilisation of contraceptive services from private sources. This shows that the capacity to pay undoubtfully determines the use of contraception from private sources. The second major factor which influences use of contraception from private sources turned out to be educational level of users. The level of use of contraceptive from private sources increases for every increase in the level of education. These two findings are similar to findings of related studies conducted on utilisation of health-care services from private sector.

Religious differentials are quite significant with Muslims and Christians having higher level of contraceptive use from private sources than Hindus. The unexpectedly high level of contraceptive use from private sources among Muslim users could be due to two reasons: (1) only 33 per cent of eligible women among Muslims were found to be currently using contraceptives and there are chances that higher proportion among them may be from high income/educational background resulting in higher preference from private sources of contraception. (2) If we hypothesise that however Muslims in the state are socially and economically poorer than other communities in the state, then current users of contraceptives among Muslim community choose private sources either due to privacy or preference for a female doctor. Among SC/ST who have highest level of contraceptive use (71.6 per cent of SCs, 68.6 per cent of STs and 58.6 per cent of others are using modern contraceptive methods in Kerala) in the state, but the lowest level of private sector use, the effect of caste becomes nullified, while controlling for other variables used in logit analysis.

The lowest level of private sector use is among working women rather than among non-working women was unexpected. But this result will be due to definition of work used in NFHS where work includes any kind of job for which woman is paid in cash or in kind or unpaid work on a family farm or in a family business. The reasons could be clearly established if we analyse the occupational status of women. The other unusual result is that in rural areas there is a slightly higher level of use of contraceptives from private sources. This is only because of Kerala's unique pattern of urbanisation and distribution of public and private health care facilities.

The private sector acceptors of contraception rate quality of care received during and immediately after operation is higher in the private sector than in public sector. This influences the use of contraceptives from private sources as high level of client satisfaction among current users would create a better impression of quality care provided in private sector. At the same time we are not finding any differentials by public and private sector in problems reported after use of a method and consulting a doctor to discuss about experiences with use of method. So we cannot conclude that quality of service in private sector is better than in public sector.

Limitations of the Study

There are two major limitations in this study. First, in order to determine whether a potential user adopts contraception from a private or a public source, it is important to have knowledge about the users' perception about quality of care in the respective sectors. Since we do not have such data we have used current users' experiences during acceptance of a method. The underlying assumption here is that

perception after the use are similar to perception before use. This assumption may not be valid in the case of some users. We do not have data on before adopting a contraceptive and therefore we have used the mentioned variable as a proxy.

Second, due to data problems, the physical accessibility of clinics in public and private sectors is not included in the framework used for analysis. Physical accessibility of a clinic is a function of client's residence, transportation facilities and clinical timings. Utilisation of services in either public or private sector is dependent on physical accessibility of the clinic.

Despite these two and other limitations, the study has provided us with a good understanding of contraceptive usage through the private sector.

CHAPTER V

CONCLUSION

The Provision for family planning services through private sources,in developing countries is often viewed with great interest. A small but, substantial proportion of demand for contraceptive in India is met by private providers of contraception. The growth of this private providers of contraception has been in an unplanned manner. In a situation where public sector provides family planning services at free cost, it will be interesting to know the factors which influence the use of family planning methods from private sources, which mostly collects user charges.

The findings of this study summarised in the previous chapter, showed that standard of living of the user is one of the best predictors of contraceptive use from private sources. Also higher level of education influences private sector use. Though private sources of contraceptive services are used by persons from all socio-economic and demographic background, the level of utilisation of these services is much higher for those having high standard of living and those who have completed high school. Even though there is an interaction between these two variables (result not

shown),they were insignificant (may be due to peculiarity of Kerala where education is universal). The quality of care has been found to be another variable which influences private sector use. We discuss the implications of these findings in the context of arguments in favour of and against policies to improve and sterngthen the private provisions of these services.

It is to be noted that the provision of family planning services through private sources, form a part of larger issue of provision of health care services through private sector. As the scope of this study is limited to contraceptive services we are discussing it in this context. The major reasons suggested for improvement in role of private sector providers is that it increases resources in family planning services delivery reducing the burden of this care from the government, and on ground that they provide better Quality services. On the other hand, those who oppose policies that suggest strengthening of health care provisions from private sources, stress the need for provision of health care services free of cost to all on grounds of equity in distribution of health care services.

The improvement in role of private sector which collects user charges, will increases the availability family planning services.The increase observed in role of these profit motivated private providers is only because of demand

for services provided by them. The question is whether to encourage this trend or not? If encouraged as Lande and Geller (1991) suggests the government and voluntary agencies can devote more of their resources to the poor. If discouraged, the government will have to take over the additional responsibility of the family planning needs of the users of private sources too. This does not seem to be feasible owing to the 'structural adjustment ' policies adopted by the government does not favour a sizable improvement in expenditures in social sectors.

The second most important argument which favours private sector participation is that it can provide more efficient and better quality services than the public sector. Even though there are no empirically valid reasons to claim private sector is providing better family planning services than public sector, the perception of better quality of service is reported to be a reason for preferring this source(ORG 1988). Mavalankar (1996) criticises the quality of service in both public and private sectors and calls for improvement in quality of family planning services in both these sectors.

In this study we observe that users are having a better perception of quality of care provided in private sector as compared to public sector. At the same time, we do not see any significant sector-wise differentials in

prevalence of contraceptive morbidity and in after-care services in these two sectors. What will be the possible reasons for this unexpected relationship? Is it due to differentials in perceptions about quality of care among users? Verma et.al (1994) have shown that even poor and illiterate can differentiate between a good quality and poor quality services. So the expectation of higher quality of care is also driving users who can meet the demands (in terms of user charges)of private providers.

As far as policy considerations, the study points out a serious situation whether the users have right to demand better quality service from public sector as the government services is seen as a charity as its provided free of cost. Foo (1996) finds that even though Indian women are not provided quality family planning services, they seemed to be satisfied with the services, due to their low expectations they hold of services from government. All the users will not be willing to take these things so lightly and those who have potential to try alternative sources of supply prefer private sources. It should be noted that, private sector is not foolproof in terms of quality of services provided as in some cases in our study have shown that user satisfaction is less.This shows that clients are not able to exercise her or his rights over quality of services even after paying for these services. Though very little is known about family planning services in private sector,

there are small scale studies on health care services (Bhat 1993, Yesudian 1993) which brings out the negative consequences of unregulated, for profit , private providers bring more harm than benefits. This issue has to be given serious consideration while, promoting family planning services in private sector, which is grossly unregulated and in a situation where clients are seeking family planning services regardless of whether government recognises them or not (ORG 1988).

The opposition for private participation in delivery of health care services is mainly on grounds of equity in distribution of health care services. This seems to be true in a country like India, which is characterised by a high proportion of population below poverty line and extreme inequality between. In fact the private sources without doubt reduces the pressure on public sources of contraceptive supply,which at present seems ill equipped (ICMR 1991) to meet the existing demand of its target population. The public sources of supply can improve its services by rationing of its services for users identified as having potential to pay for these services. By this they can generate resources to provide higher quality services to 'free users' who don't have capacity to pay for family planning services. But there should not be a situation where a user in the country is not able to adopt contraception

because of his/her poor economic status, which creates unmet need for contraception, which is already high in India.

The findings of this study suggests some recommendations on utilisation of family planning services from private sources. There is a high demand for family planning services in India and this demand is expected to increase rapidly in future. As more and more people use contraceptives there is a tendency to opt for private sources of supply. In Kerala where government family programme has been in operation for a long there is a shift from government to private sector. In fact the governmental family planning programme can be directed to those who cannot afford the charges of private clinics. By doing so some of the resources that were spent on government family planning programme can be utilised for other purposes.

There are other advantages of private sector participation in the delivery of family planning services. The private sector which offers, a greater flexibility and non-bureaucratic organisation, increases the availability of contraceptive supplies and services. Their role has to be recognised and they should be made to be involved in policy formulation. These private providers of family planning services can serve more clients if

controlled/regulated properly resulting in direct positive influence on contraceptive use in the country.

APPENDIX-I

STANDARD OF LIVING INDEX

The Standard of Living Index (Roy and Jayachandran 1995) has been calculated to understand the living standard of households of the contraceptive users. Calculation procedure is given below.

Appendix Table: Scores for the variables used in the computation of Standard of Living Index (SLI)

	Variable	Scores
1.	Separate room for cooking	Yes = 1 No = 0
2.	Type of house	Pucca = 2 Semi-pucca = 1 Kachha = 0
3.	Source of lighting	Electricity = 2 Kerosine or gas or oil = 1 Other = 0
4.	Fuel for cooking	Electricity or gas or bio-gas = 2 Coal or charcoal or kerosine = 1 Other = 0
5.	Source of drinking water	Well or pipe or hand-pump, (Own) = 2 Well or pipe or hand-pump, (Public) = 1 Other = 0
6.	Toilet facility	Own flush toilet = 3 Flush toilet (Public or shared) or own pit toilet = 2 Shared pit toilet or public pit toilet = 1 Other = 0
7.	Ownership of live stock	Bullock = 2 Cow or = 2 Buffalo = 2 Goat = 1 Sheep = 1 Camel = 1
8.	Ownership of goods	Sewing Machine = 2 Clock/Watch = 1 Sofa set = 2 Fan = 2 Radio/Transistor = 2 Refrigerator = 3 Television = 3 VCR/VCP = 3 Bicycle = 2 Motorcycle/Scooter = 3 Car = 4
	Standard of Living Index (SLI)	Score Range 00 to 48
	Categories of SLI Low SLI Medium SLI High SLI	Range 00 to 09 10 to 19 20 and above

Select Bibliography

Aljunid, S. 1995. "The Role of Private Medical Practitioners and their Interaction with Public Health Services." *Health Policy and Planning* 8: 334-349.

Banerjee, D. 1985. *Health and Family Planning Services in India*. New Delhi: Lok Prakash Publishers. pp174-249.

Berman, P. and L. Rose. 1996."The Role of Private Providers in Maternal and Child Health Services In Developing Countries." *Health Policy and Planning* 11,2:42-155.

Berman, Peter. 1996. " Health Care Expenditure in India."pp331-359 in *Health Poverty and Development in India*, edited by Monica Das Gupta et al. Delhi: Oxford University Press.

Bhat, Mari. and I.S. Rajan. 1990."Demographic Transition in Kerala Revisited. "*The Economic and Political Weekly* 26:1957-1980.

Bhat, Ramesh. 1993."The Public/Private mix in Health Care in India." *Health Policy and Planning* 8,1:43-56.

Bhat, Ramesh. 1994. "The Private Health Care in India." *Health for Millions* 2,1:1-5.

Bhende, Asha. A.,C.M. Kim, J.R. Rele and J. Palmore. 1991. "Determinants of Contraceptive Method Choice in an Industrial City in India." *Asia Pacafic Population Journal* 6,3:41-66.

Brightman, Jay. et al. 1958. "Knowledge and Utilisation of Health Resources Assistance to Recipients of Public Health and Preventive Medical Resources." *American Journal of Public Health and the Nations Health* 48:188-199.

Bose, Ashish. 1988. *From the Population to People*. Vol.1, Delhi: B.R. Publishing Corporation.

Bongaarts, John. 1993. "The Fertility Impact of Family Planning Programs." *Research Division Working Paper* 47. New York: The Population Council.

Bruce, Judith. 1990. "Fundamental Elements of Quality of Care." *Studies in Family Planning* 21,2: 61-91

Chuttani, et al. 1976. "Factors Responsible For Under Utilisation of Primary Health Care Centers - A Community Survey in Three States in India." *3396* 9,3: 229–237.

Coe, R. and A.F. Wessen. 1965. "Social and Psychological Factors Influencing Use of Community Health Resources." *American Journal of Public Health and the Nations Health* 55: 1024-1031.

Duggal, Ravi. 1994. "Health Care Utilisation in India." *Health for Millions* 2,1: 10-12.

Frost, J. and M. Bolzan. 1997. "The Provision of Public-Sector Services by Family Planning Agencies in 1995." *Family Planning Perspectives* 29,1: 6-14

Foo, Gillian. H.C. 1996. A Synthesis of Research Findings on Quality of Services in Indian Family Welfare Programme, Proceedings from the National Workshop on Operation Research and Quality of Services in Bangalore,24-26 May 1996. New Delhi: The Population Council.

Garg, B.S. and J.V. Singh. 1985. "Belief About Causation of Diseases Preference of Utilisation of Health Services by Elderly Persons in Urban Community." *Health and Population Perspectives* 8,1: 226-30.

Ghosh, B.N. and A.B. Mukherjee. 1991. "An Analysis of Health Services Coverage of a Primary Health Centre in West Bengal." *Indian Journal of Public Health* 33,1: 33-3

Giridhar, P. and S. Paharia. 1995. "Improving the Quality of Family Welfare Services" in *The Family Welfare Programme in India* edited by H.M. Mathur, New Delhi: Vikas Publishing House.

Griffin, C. 1992. Health Care in Asia: A Comparative Study of Cost and Financing. Washington. DC.: *The World Bank*.

Hardee, Karen et al. 1995. "Assessing Family Planning Service Delivery Practices: The Case of Private Physicians in Jamaica." *Studies in Family Planning* 26,6: 338-348.

Heller, P.S. 1982. "A Model for Demand for Medical and Health Services in Peninsular Malasyia." *Social Science and Medicine* 16,3: 267-284.

Indian Council for Medical Research(ICMR). 1989. *Evaluation of Quality of Maternal and Child Health and Family Planning Services at Primary Health Centers and Suggested Strategies for Improvement*. New Delhi: ICMR

Indian Council For Medical Research(ICMR). 1991. *Evaluation of Quality of Family Welfare Services at PHC Level; An ICMR Task Force Study*. New Delhi: ICMR.

International Institute for Population Sciences(IIPS). 1995. *National Family Health Survey(MCH and Family Planning), All India 1992-93*. Bombay: IPPS.

Jain, A.,J. Bruce, and B. Mench. 1993. "Setting Standards of Quality in Family Planning Programs." *Studies in Family Planning* 23,6: 392-395.

Jensen, E.R. 1996. "The Fertility Impact of Alternative Family Planning Distribution Channels in Indonesia." *Demography* 33, 2:153-165.

John, C. and P.S. Nair. 1994. "Family Planning Services Delivery in Trivandrum District: An Acceptor Oriented Evaluation." *Report Series* 94-1. Thiruvananthapuram: Population Research Centre.

Jolly, K.G. 1978. Relationship of Family Planning Acceptors with Selected Socio-Economic Characteristics at District Level." *Demography India* 7,1&2: 62-80.

Kannan, K.P., K.R. Thankappan, V. Ramankutty. and K.P. Aravindan. 1991. *Health and Development in Rural Kerala- A Study of Linkages Socio Economic Status and Health Status*. Trivandrum: Kerala Shasthra Sahithya Parishad.

Khandekar, Mandakini. 1971. "Utilization of Social and Welfare Services in Greater Bombay." Series no 34. Bombay: *Tata Institute of Social Sciences*.

Khan, M.E. and C.V.S. Prasad. 1988. "Functioning of Health and Family Welfare Programme- A Comparative Study of Bihar and Kerala."pp1-39 in *Performance of Health and Family Welfare Programme in India*, edited by Khan et al. Delhi: Himalaya Publishing House.

Khan, M.E., B.C. Patel. R. Chandrasekhar. 1990." Contraceptive Use Dynamics Couples Availing Services of Government Family Planning Clinics a Case Study of Orissa." *Journal of Family Welfare* 36,3: 18-38.

Khan, M.E. and C.P. Bella. 1997. Reprodutve Behavior Among Muslims in Uttar Pradesh. New Delhi: The Population Council.

Krishnan, T.N. 1991. *Kerala's Health Transition Facts and Factors*. Thiruvananthapuram: Centre for Development Studies.

Kulkarni, S. and R. Chitanand. 1994. "Health Seeking Behavior and Health Expenditure in Rural Households." *Report Series no 8*. Mumbai: IIPS.

Landry, D.J. and J.D. Forrest. 1996. "Private Physicians Provision of Contraceptive Services." *Family Planning Perspectives* 28, 5: 203-209.

Mavalankar, D. 1996. Quality of Family Planning Programme in India: A Review of Public and Private Sector. New Delhi: The Population Council.

Ministry of Health and Family Welfare (MOHFW). 1991. *Standards for Male and Female Sterilisation* New Delhi: MOHFW.

Ministry of Health and Family Welfare(MOHFW). 1994. *Family Welfare Programme in India Year Book 92-93* New Delhi: Dept of Family Welfare, MOHFW.

Muntaner, C. and E. Parson. 1997. "Income, Social Stratification, Class and Private Health Insurance: A Study of Baltimore, Metropolitan Area." *International Journal of Health Services* 20,4: 665-672.

Nag, Moni. 1989. "Political Awareness as a Factor in Accessibility of Health Services: A Case Study of Rural Kerala and West Bengal." *Economic and Political Weekly* 24,8:417-426

Nag, Moni. 1993. "Impact of Population Growth." *Seminar* 410: 18-23.

Nair, P.S. et al. Operational Researchn Spacing in Kerala. Report 96-1. Thiruvananthapuram: Population Research Centre.

Nanda, Priya. and R. Baru. 1994. "Private Nursing Homes and Their Utilisation-A Case Study of Delhi." *Health for Millions* 20,1: 6-9.

National Tuberculosis Institute(NTI). 1988. "Report on Baseline Survey on Danida Health Care Project: Volume 1: Household Survey and Program Implication." NTI

Nittayaramphong, S. and Tangcharoensathien. 1994. "Thailand: Private Health Care out of Control?." *Health Policy and Planning* 9,1: 31-40.

Operational Research Group. 1988. *Role of Private Practitioners in Family Welfare Programme - A Case Study of Andhra Pradesh, Maharashtra and Tami lNadu*. New Delhi: Ministry of Health and Family Welfare.

Operations Research Group. 1983. *Family Planning in India - Second All India Survey*. New Delhi: Ministry of Health and Family Welfare.

Orr, M.T. and J.D. Forrest. 1985. "The Availability of Reproductive Health Services from U S Private Physicians." *Family Planning Perspectives* 17: 63-69.

Pachauri,Saroj. "A Shift from Family Planning to Reproductive Health: New Challenges." in pp 244-266, *Population Policy and Reproductive Health*. edited by K. Srinivasan, New Delhi: Hindustan Publishing Corporation.

Prakasam. C.P and S.M. Thatte. 1994. "Factors Influencing Health Resource Utilisation in Rural Andhra Pradesh." *Report Series* No:14. Mumbai: International Institute of Population Sciences.

Patkar, M et.al. 1981. " Perceived Morbidity, Utilisation of Health Services and factors Influencing it in Rural Areas." *Health and Population Perspectives and Issues* 4,1: 79-85

Pol, M.L. and K.R. Thomas. 1991. *The Demography of Health and Health Care*. Newyork: Plenun Press. pp317-371.

Population Research Centre(PRC) University of Kerala. and International Institute of Population Sciences(IIPS). 1995. *National Family Health Survey, Kerala* 1992-93. Bombay: PRC Thiruvananthapuram and IIPS.

Rajarethnam, J., R. Abel et. al. 1996. "Morbidity Pattern, Health Care Utilisation and Percapita Health Care Expenditure in a Rural Population of Tamil Nadu." *The National Medical Journal of India* 9,6: 3-9.

Rajan, S.I., M. Ramanathan, and U.S. Mishra. 1996. "Female Autonomy and Reproductive Behaviour in Kerala: New Evidence from the Recent Kerala Fertility Survey." pp.269-287, in *Girls' Schooling Womens Autonomy and Fertility Change in South Asia*, edited by R. Jeffery. and A.M. Basu, New Delhi: Sage Publications.

Ram, F., G. Rangaiyan and V. Jayachandran. 1997. "Contraceptive Morbidity in India: Some Evidences from NFHS." Paper Presented at Indian Association for Study of Population XX Annual Conference, Bharatiyar University, Coimbatore, Feb12-14.

Ramachandran, V. K. 1995. *Kerala's Development Acheievements*: A Review, Bombay: Indira Gandhi Institute of Development Research.

Ramanathan, M., T.R. Dilip. and S.S. Padmadas. 1995. Quality of Care in Laproscopic Sterilisation Camps: Observations from Kerala,India." *Reproductive Health Matters* 6: 84-93.

Ramankutty, V. 1989. " Rationing of Medical Care in Kerala - Price and Nonprice Mechanisms." *Economic and Political Weekly* 9:1992-1993.

Ramesh, B.M., S.C. Gulati, and R.D. Rutherford. 1996. "Contraceptive Use in India 1992-93. *NFHS Subject Reports* No. 2, Mumbai: International Institute of Population Sciences.

Ravindran, T.K.S. 1993. "Users' Perspectives in Fertility Regulation Methods." *The Economic and Political Weekly* 28, 46&47: 2508- 2512.

Ravindran, T.K.S. 1996. "Social Inequality and Child Health Status-A Study of Scheduled Caste Population." in *Health Poverty and Development* edited by Monica Dasgupt et. al. Delhi: Oxford University Press.

Retherford, R.D. and M.K. Choe. 1993. *Statastical Models for Causal Analysis*. New York: John Willey and Sons, Inc.

Roy, T.K. and Jayachandran. 1996. "Is Living Condition important in determining Fertility and Child Loss Experiences - An Empirical Study Based on NFHS." Paper Presented at XIX Annual Conference of IASP at M.S. University, Baroda Feb 26-28 to be Published in Economic and Political Weekly in forthcoming issue.

Roy, T.K. and R, Verma. 1995. "Quality of Family Welfare Services in Four Indian States: Experiences and Perceptions of Eligible Women." Paper Presented at National Workshop on Operation Research for Improving Quality of Services at Bangalore 24-26 May.

Shariff,A. 1990. " Societial Determinant of Regional Differentials in Indias' Family Planning Programme Performance." *Demography India* 18, 1&2: 78-91.

Shariff, A. 1995. "Socio- economic and Demographic Differences between Hindus and Muslims in India." *Economic and Political Weekly* 30,46: 2947-2953.

Sholapurkar, M.V., A,S, Chandramouli and Y.S. Gopal. 1982. "Utilisation of Institutional Care Facilities by the Target Couples in Rural Karnataka." *Health and Population Perspectives and Issues* 5,1: 182-197.

Simmons, R. and E. Christopher. 1994. "The Study of Client Provider Interaction: A Review of Methodolgical Issues." *Studies in Family Planning* 25,1: 1-17.

Srinivasan,K. 1995. *Regulating Reproduction in Indias' Population - Efforts Results and Recommendations*. New Delhi. pp 220-263.

Standing, H. 1997. "Gender Vulnerability and Equity in Health Sector Reform Programmes: A Review." *Health Policy and Planning* 12,1: 1-18

Verma, R., T.K. Roy and P.C. Saxena. 1994. *Quality of Family Planning Services in Selected Indian States*. Bombay: International Institute for Population Sciences.

Visaria,L. and P. Visaria. 1995. "Indias Population in Transition." *Population Bulletin* 50,3: 38 -43.

Visaria, P., and A. Gumber. 1992. "Utilisation of Primary Health Care Services in Western India 1980-81 to 1986-87." *Working Paper* No. 45. Ahmedabad: Gujarat Institute of Development Research.

Visaria, P. and A Gumber. 1996. "Socio-economic Differentials in Pattern of Health Care Utilisation."pp. 50-84 in *Health Poverty and Development in India*, edited by Monica Dasgupta et. al. New Delhi: Oxford University Press.

Yesudian, C.A.K. 1988. Health Services Utilisation in Urban India. New Delhi: Mittal Publication. pp. 229-247. // Yesudian, C.A.K. 1994. "Behavior of Private Sector in Health Market of Bombay." *Health Policy and Planning* 9,1: 72- 80.

Zachariah, K.C. 1984. The Annomaly of Fertility Decline in Indias' Kerala State. World Bank Staff Working Paper No: 700. Washington, DC: The World Bank.

Zachariah, K.C., S.I. Rajan., P.S. Sarma, C. Navaneetham, P.G. Nair and U.S. Mishra. 1994. *Demographic Transition in Kerala in the 1980s'*. Thiruvananthapuram: Centre for Development Studies.