

## Current Practice and Determinants of Family Planning Methods among Married Females in the Reproductive Age Group (15-49yrs) in a Rural Setting, Kerala

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### Abstract

**Background and objectives:** Contraceptive prevalence rate is an indicator of health, population, development and women's empowerment. Contraceptive choice and use will vary according to the socio-cultural factors of that geographical area. This study was done to find out the percentage of married females who is currently using contraceptives as well as various factors associated with its use and along with that, assessed their current knowledge regarding various contraceptive methods.

**Methods:** A community based cross sectional study done in Mulamkunnathukavu panchayat of Thrissur district in Kerala among 203 married females in the 15-49 age group using a pre-tested questionnaire.

**Results:** The prevalence of current use of family planning methods was 48.8% with 95% CI was (47.8 - 49.8). In various contraceptives 16.7% were using Female sterilization, followed by IUD (14.8%) and rhythm method (7.9%). Mean age (SD) at marriage is 21.67(5.67) years. Contraceptive prevalence was shown statistically significant association with age of female (p=0.036) number of child (p=0.03), male preference (p=0.031), age of last child (0.013). Age of the female (p=0.005), spouse education (0.046) and spouse occupation (p=0.04) number of child (p=0.0001), male preference (p=0.001) were the statistically significant factors associated with pattern of use of contraceptive. Majority of study participants were aware about Copper T (80.8%), followed by Condom (73.9%), Rhythm method (72.9%) and female Sterilization (71.9%) Health workers played a big role in disseminating information regarding family planning (68%).

**Conclusion:** Current use of family planning method and female sterilization was started to decline but knowledge and acceptance of Intra Uterine Device increased. Male participation in family planning method was very poor. So we have to think about the new initiatives to improve the male involvement in family planning practice. Intensify the measures to improve permanent methods.

**Key words:** Current use, Contraceptives knowledge, Family planning method, Married females

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### Introduction

Increasing population growth is a worldwide problem today. India, which accounts for world's 17.5 percent population, is the second most populous country in the world next only to China (19.4%)[1]. Family planning services have the potential to improve the quality of lives of people and also their economic welfare. The couple protection rate is an indicator of the prevalence of the contraceptive practice in the community, and defined as the percentage of eligible couples effectively protected against child birth by one or other approved methods of family planning[2]. In India there are 40% of effectively protected couples, and during 2010-2011 the total number of family planning acceptors by different methods were; 5 million

sterilization, 0.219 million vasectomy, 4.78 million tubectomy, 16 million intra uterine device (IUD) insertion and 8.3 million oral contraceptive pill users[1].

In Kerala scenario, with high female literacy and low crude birth rate of population the family planning practices were fairly good. As per the NFHS data (2006) the Couple protection rate of Kerala is 68.6% .It is 68.5% and 68.9% in rural area and urban area respectively. From this it showed that, not of much difference in couple protection rate exist between rural and urban areas in Kerala. Majority (48.7%) of eligible couples were protected by female sterilization. Only 1% are protected by male sterilization. The most commonly used modern spacing method is the condom, which is used by 6 percent of currently married couple. Only 2 percent of currently married women used IUD and less than 1 percent uses the pill[3].

The choice of family planning method will vary from place to place based on the socio-cultural factors and economic status of the population those residing there. Even the knowledge about contraceptive methods would vary among persons.

In this study we tried to find out the prevalence, pattern and determinants of current use of family

planning methods among married females in the reproductive age group (15-49years) in a Panchyat area of Thrissur district. Along with that we also assessed their knowledge regarding different family planning methods.

### Materials and Methods

A cross-sectional study was done in Mulamkunnathukavu Panchyat of Thrissur district among married females of reproductive age group (15-49) during the year 2015 and we excluded widowed, divorced and separated females. Sample size was calculated based on the formula  $4pq/d^2$ . Reference Prevalence of contraceptive use for calculation was taken 68% as per the NFHS-3 data<sup>2</sup>. Allowable error has taken 10% of Prevalence of contraceptive use. Considering 10% dropout rate a total sample size got was 206. We selected 206 study participants from the eligible couple register available under primary health centre of Mulamkunnathukavu panchyat using simple random technique. Finally a sample of 203 was included in our study.

Data was collected using a pretested semi-structured questionnaire. It contained 3 parts, first part is related to baseline characteristics of the subject, 2nd part related to current practise of the family planning methods, it included type and use of contraceptives, socioeconomic factors and marriage and fertility related factors, and 3rd part contains questions about knowledge of family planning method. Data was collected with the help of ASHA workers. Training session was arranged to introduce the questionnaire for them. Supervisory visit was also conducted. Operational definition used for Contraceptive

prevalence was the percentage of women who are currently using, or whose sexual partner is currently using, at least one method of contraception, regardless of the method used. It is usually reported for married or in-union women aged 15 to 49[4]. Study was carried out after obtaining clearance from the institutional research committee and ethical Committee. Informed consent was taken from each participant. Data was analysed using the statistical software SPSS version 16. Pattern of use and knowledge regarding family planning method was analysed by proportions and associated factors was analysed by chi-square test.

### Results

The mean age(SD) of study participants were 28.75(5.67). Hindus (62.6%) were the majority of study participants and minority were Muslims(3.9%). In the study participants all were literate, in that 67.5% are education up to plus two and 30.5% were degree holders. 72.4% were house wives and 55.7% were living in nuclear family.

Among the 203 study participants 99 were currently using contraceptives. The prevalence of current use of family planning method was 48.8% with 95% CI is (47.8 - 49.8). In our study it was found that prevalence of ever use of family planning methods were 52.7% with 95% CI is (51.7% - 53.7%). Among the 99 family planning users 5 (5.3%) had complication. Mean age (SD) at marriage is 21.67(3.16) years. Median age was 21 year. Minimum age of marriage among the study participants is 16 and maximum age at marriage is 37 years. Mean age at pregnancy (SD) is 22.68 (3.39) years.

**Table 1: Contraceptive pattern of use among the study participants**

Contraceptive methods	Number	Percent
Not using Family planning methods	104	51.2
Rhythm method	16	7.9
Oral contraceptive pill	2	1.0
Withdrawal	4	2.0
Condom	11	5.4
female sterilization	34	16.7
Emergency contraception	2	1.0
IUD	30	14.8
Total	203	100.0

Table 1 has showed accepters of Female sterilization were 16.7%, IUD were 14.8%, rhythm method were 7.9% and condom were 5.4%.

**Table 2: Socio-demographic factors associated with contraceptive prevalence**

Variable	Contraceptive user (%)	Not user (%)	Total (%)	p value from chi-square test
<b>Age</b>				
15-29	53(44.5)	66(55.5)	119(100)	0.036
30-39	36(50)	36(50)	72(100)	
40-49	10(83.3)	2(16.7)	12(100)	
<b>Religion</b>				
Hindu	61(48)	66(52)	127(100)	
Muslim	4(50)	4(50)	8(100)	0.649
Christian	34(50)	34(50)	68(100)	
<b>Type of family</b>				
joint family	46(51.9)	44(48.9%)	90(100)	0.551
nuclear family	53(46.9%)	60(53.1)	113(100)	
<b>Income</b>				
Up to 2800	56(48)	46(52)	102(100)	0.106
above2800	43(42.6)	58(57.4)	101(100)	
<b>Education</b>				
up to plus two	70(49.6)	71(50.4)	141(100)	0.706
degree and above	29(46.8)	33(53.2)	62(100)	
<b>Occupation</b>				
going for work	28(50)	28(50)	56(100)	0.828
house wife	71(48.3)	76(51.7)	147(100)	
<b>Spouse education</b>				
up to lower primary	10(38.5)	16(61.5)	26(100)	
up to plus two	75(38.5)	77(61.5)	152(100)	0.439
degree and above	14(56)	11(44)	25(100)	
<b>Spouse occupation</b>				
manual labour	52(51.5)	49(48.5)	101(100)	
office work	9(40.9)	13(59.1)	22(100)	0.64
Other type of work	38(47.5)	42(52.5)	80(100)	

Table 2 showed the socio demographic factors associated with current use of family planning methods. The contraceptive prevalence was associated with age ( $p < 0.05$ ). Among 12 persons in the 40-49 age group, 10 persons (83.3%) were using family planning method. In this study no other socioeconomic factors were having statistically significant role in the adoption of family planning methods.

**Table 3: Marriage and fertility related factors associated with contraceptive prevalence**

Variable	Contraceptive user (%)	Not user (%)	Total (%)	p value from chi-square test
<b>Age at marriage</b>				
16-21years	55(49.5)	56(50.5)	111(100)	0.807
Above21years	44(47.8)	48(52.2)	92(100)	
<b>Number of children</b>				
No children	3(27.3)	8(72.7)	11(100)	
1 children	31(40.3)	46(59.7)	77(100)	<b>0.03</b>
2ormorechild	65(56.5)	50(43.5)	115(100)	
<b>Male preference</b>				
No male child	32(45.7)	38(54.3)	70(100)	
1malechild	44(44)	56(56)	100(100)	<b>0.031</b>
More than one male child	23(69.7)	10(30.3)	33(100)	
<b>Female preference</b>				
No female child	38(47.5)	42(52.5)	80(100)	
1female child	48(50.5)	47(49.5)	95(100)	0.891
More than one female child	13(46.4)	15(53.6)	28(100)	

<b>H/o of Abortion</b>				
No	78(47.3)	87(52.7)	165(100)	
Yes	21(55.3)	17(44.7)	38(100)	0.374
<b>Age of last child</b>				
Up to 2 years	36(40)	54(60)	90(100)	
2 to 5 year	36(60)	24(40)	60(100)	<b>0.013</b>
More than 5 year	23(63.9)	13(36.1)	36(100)	

Table no 3 depicts that number of children was having an important role in the use of contraceptives ( $p=0.03$ ). Family planning nonusers proportion were more among females married above the 21 years. But it was not statistically significant. Another major factor related with contraceptive prevalence was male child preference. Majority of study participants with more than one male child (69.7%) were using family planning methods. But this preference is not seen in case of female child. Male preference and contraceptive use were found to be statistically significant association ( $p=0.03$ ). History of abortion has found no role in current use of family planning. In our study it has found that age of last child was more the chance of use of family planning method was high ( $p=0.013$ ).

**Table 4: Socio-demographic factors associated with pattern of contraceptive use.**

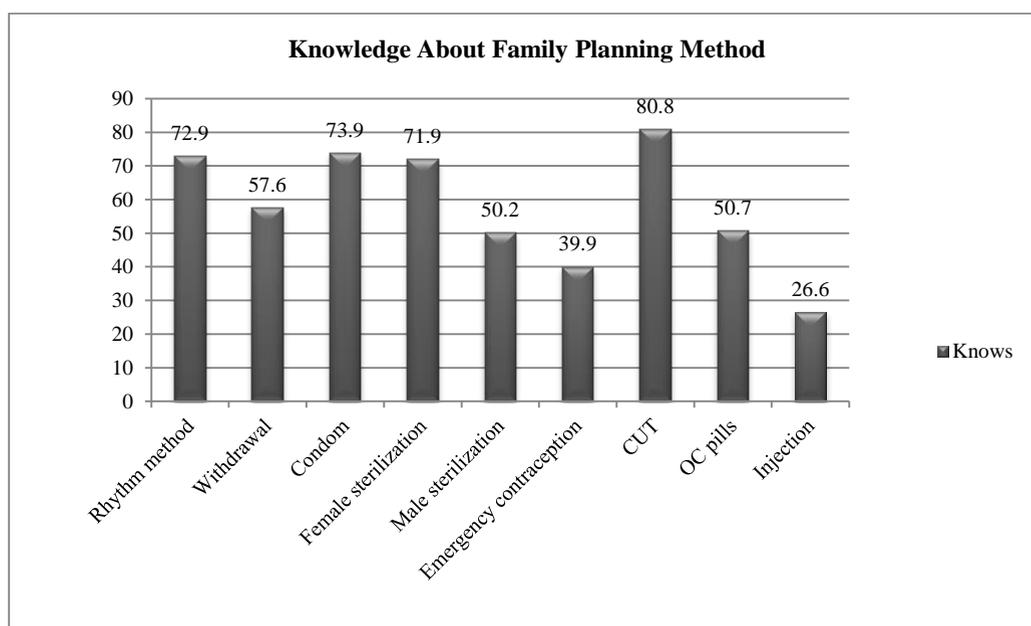
<b>Variable</b>	<b>Traditional method(%)</b>	<b>Spacing method(%)</b>	<b>Permanent method(%)</b>	<b>Total (%)</b>	<b>p value from chi-square test</b>
<b>Age</b>					
15-34 years	17(21.3)	41(51.3)	22(27.5)	80(100)	<b>0.01</b>
Above 34 years	3(15.8)	4(21.1)	12(63.2)	19(100)	
<b>Religion</b>					
Hindu	15(24.6)	25(41)	21(34.4)	61(100)	0.331
others	5(13.2)	20(52.6)	13(34.2)	38(100)	
<b>Type of family</b>					
joint family	12(26.1)	19(41.3)	15(32.6)	46(100)	0.39
nuclear family	8(15.1)	26(49.1)	19(35.8)	53(100)	
<b>Income</b>					
Up to 2800	14(25)	21(37.5)	21(37.5)	56(100)	0.16
Above 2800	6(20.2)	24(45.5)	13(34.3)	43(100)	
<b>Education</b>					
up to plus two	13(18.6)	28(40)	29(41.4)	70(100)	<b>0.06</b>
degree and above	7(24.1)	17(58.6)	5(17.2)	29(100)	
<b>Occupation</b>					
going for work	7(25)	13(46.4)	8(26.4)	28(100)	0.6
house wife	13(18.3)	32(45.1)	26(36.6)	71(100)	
<b>Spouse education</b>					
up to lower primary	5(50)	3(30)	2(20)	10(100)	<b>0.046</b>
above primary	15(16.9)	42(47.2)	32(36)	89(100)	
<b>Spouse occupation</b>					
manual labour	10(19.2)	18(34.6)	24(46.2)	52(100)	<b>0.02</b>
other type of work	10(21.3)	27(57.4)	10(21.3)	47(100)	

As per table 4 age of the female, education of spouse and occupation of spouse were the statistically significant factors associated with pattern of use of contraceptives. As age advances females prefer the permanent method. Regarding education of spouse, those with lower education, the natural methods were more while the spouses with education more than primary, the common method were spacing and permanent methods. Spouse education was another determining factor for the pattern of use ( $p=0.046$ ). Spouse occupation was other determinant for contraceptive pattern ( $p=0.02$ ). Manual labourers (46.2) were more likely to adopt permanent method for fertility control than those going for another type of work.

**Table 5: Marriage and fertility related factors associated with pattern of contraceptive Use**

Variable	Traditional method (%)	Spacing method (%)	Permanent method (%)	Total (%)	p value from chi-square test
<b>Age at marriage</b>					
16-21years	10(18.2)	26(47.3)	19(34.5)	55(100)	0.843
Above 21years	10(22.7)	19(43.2)	15(34.1)	44(100)	
<b>Male preference</b>					
no male children	12(37.5)	17(53.1)	3(9.4)	32(100)	
One male child	7(15.9)	24(54.5)	13(29.5)	44(100)	<b>0.0001</b>
More than one male child	1(4.3)	4(17.4)	18(78.3)	23(100)	
<b>Female preference</b>					
No female children	7(18.4)	16(42.1)	15(39.5)	38(100)	
1female child	10(20.8)	22(45.8)	16(33.3)	48(100)	0.877
More than one female child	3(23.1)	7(53.8)	3(23.1)	13(100)	
<b>H/of Abortion</b>					
Absent	14(17.9)	37(47.4)	27(34.6)	78(100)	
Present	6(28.6)	8(38.1)	7(33.3)	21(100)	0.535
<b>Age of last child</b>					
Up to 2 years	7(19.4)	22(61.1)	7(19.4)	36(100)	
2 to 5 year	6(16.4)	15(41.7)	15(41.7)	36(100)	0.06
More than 5 year	5(21.7)	6(26.1)	12(52.2)	23(100)	

Table no 5 depicts the association of marriage and fertility related factors, with pattern of use of contraceptives. Age at marriage has found to have no role with pattern of use in our study. The statistically significant factor associated with pattern of use is number of male children (p-0.0001), if the couple was having more than 2 male children then chance of use of permanent method was very high(78.3). But this association was not seen with female children. In our study it has found that 53.8% of those who were having 2 or more female children were using temporary family planning methods. Age of last child, history of abortion and pattern of use of contraceptive were not having statistically significant association. As we all know the number of child is an important determining factor for pattern of use of contraceptives. We also got the same finding. According to our study none having a single child or no children at all, using permanent method.

**Fig. 1: Distribution of study participants based on their knowledge about Family Planning Methods**

### Planning methods

Fig. 1 shows the distribution of study participants based on their knowledge about family planning methods. It has been found that majority of study participants were aware about CUT (80.8%). Even though the condom usage was very low, 72.9% of the population were aware of it. 72.9% of participants had knowledge about rhythm method. This finding may be due to female literacy rate being very high here. Majority (73.4%) was not knowing about injectable family planning method.

When we were analysing the sources of information, health workers played a big role in disseminating information regarding family planning.

68% of them got information from health worker. Distribution of study participants based on other sources of information were 50.2% from books, 49.3% from doctors, 30% from friends 25% from friends and 22.7% from Media. Media didn't have a major role in giving information regarding family planning.

### Discussion

Current use of family planning method in Kerala as per the study done by Benny et al in Thiruvananthapuram in 2013 was 71.1% (95% CI 63-78.5)[5]. The study done by Alina et al(2015)[6] and Pawar Anant (2014)[7] got the similar results. But it was interesting, in our study it has found that prevalence of current use of family planning methods was 48.8% with 95% CI is (47.8 to 49.8). According to our result current use of family planning is started to decline. This may be due to socio-cultural difference of the population where we studied. Along with that we should think about if there is any change in perception of people about family planning methods. Any way the result we got is comparable with NFHS-3 India report[3]. The study done by Bhatteerji et al in 2013[8] and Nazish Mohammed et al in 2015[9] show comparatively low prevalence than our study. There was also a change in the pattern of contraceptives use compared with national family health survey 3 report of Kerala. According to NFHS- 3 data 49% underwent female sterilization but in our study it was only 16.7%. The studies done by Benny et al(2013), Alina et al (2015) Pawar Anant et. al (2014)[5,6,7] shows a higher rate of female sterilization users. Our study shows that the IUD users have increased (14.8%), almost similar result were got by Allina et al[6]. But the studies of Benny et al, Pawar Anant et. al[5,7] shows IUD users are very low. Analysing the other methods rhythm method users were 7.9% in our study but in NFHS- 3(Kerala) it was 5. A slight decline in condom users(5.4%) in our study compared with NFHS-3 (Kerala) data (6%), but condom usage is very high in a study done by Nazish Rasheed et al[9].

Considering the determinants of current use of family planning methods it has been seen that age, number of children, number of male children and age of

last child were associated with current use of family planning methods. Our study shown that as age increases, there is increased chance for use of contraceptives ( $p < 0.05$ ). The study done by Benny et al, Alina et al, Pawar Anant et al, Padmaja et al, Rajarentam[5,6,7,10,11] all shows the same result as in our study. Religion, education, income, type of family, occupation, spouse education, spouse occupation were not having a statistically significant association with contraceptive use. The study done by Alina et al[6] got a statistically significant association of current use of contraceptives with religion, educational status of married mother, occupation. In Pawar Anant et. al study[7] in addition to age, religion also showed significant association, another study done by Nazish Rasheed et al also shows religion had an important role in contraceptive prevalence. Padmaja et al shows that nuclear family associated with contraceptive prevalence. Coming to the marriage and fertility related factors it has been seen that number of children ( $p < 0.05$ ), number of male children ( $p < 0.0001$ ), were statistically significant factors with current use in our study. Number of children were a determinant for the use of family planning method according to the studies done by Benny et al(2013), Pawar Anant et.al (2014), Padmaja et al(2012) and Rajarentam (2000)[5,7,10,11]. The conclusion that can be drawn from the study by Asari Gopalakrishnan et al.[12] is that gender preference does not determine contraceptive practices but as per Family Welfare statistic report those who are having more number of male children will adopt family planning methods more than those having female child[1]. When we looked into socio demographic factors associated with pattern of use of contraceptives it has been found out that age of married women, spouse education, spouse occupation are statistically significant factors associated with pattern of use. As the age advances the use of spacing methods and traditional methods declined the same result were got in a study done by Rajarentam[11]. In our study it has been found that educational status of couple having an important role in adoption of family planning method. Couples with good educational status were having more chance of using modern spacing methods than others. This study reveals that spouse occupation is an important determining factor for the adoption of various family planning methods. The manual labourers were the one who adopt permanent method than others. The study done by Sanjith Srkar[13] found that women's age, education, religion, living children, sex preference, wealth index, significantly affect methods of choice among currently married women of India. According to the studies done by Asari Gopalakrishnan et al, Aalok Ranjan et al, Rajarentam[12,14,11] the number of children were a predictor for the pattern of choice of family planning methods. The same result we also got. Traditional methods are commonly adopted by the family with no children and the couples with more than

2 children adopted permanent methods. In our study it has been shown that among the couple with more than one male child 78.3% had undergone permanent method and this type of preference was not shown in case of female child.

Female sterilization was the most widely known contraceptive method, as per Benny et al[5] 97.8%, and as per Lavanya Kumari et al 96.8%[15] had the knowledge about it. But in our study it was 71.9% and knowledge about CUT was 80.8%. IUD was getting more popularity here. May be because of this IUD users are more in this study compared with that of Benny et al, Pawar Anant et. al, Bhattacharjee et al[5,7,8]. The least known contraceptive method in our study was injectable contraceptives (26.6%) comparative result were got to Kanchan et al[16].

### Conclusion

The prevalence of current use of family planning methods is 48.8% with 95% CI is (47.8 to 49.8). Female sterilization (16.7%) and Intrauterine device (14.8%) were the popular family planning methods. Usage of condom was 5.4% only even though social marketing technique is available for it.

Male participation in permanent family planning method was zero. Age of married female; number of children, number of male children, age of last child are the statistically significant factors associated with current use of contraceptive method. The factors associated with pattern of use of contraceptives were age of the female, spouse education, spouse occupation, number of children and number of male children. Education of married females, income and occupation didn't have a role in the current use as well as pattern of use of family planning methods as per our study but education of spouse and occupation had a role in determining adoption of a type of contraceptive. According to our study the knowledge and acceptance of Intrauterine devices were increasing. It has shown the changing trend in that area that the IUDs were started to replace permanent family planning methods.

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