

## The Socio-demographic Determinants of Contraceptive Use among Rural Women in Reproductive Age Group

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### Abstract

**Background:** Use of family planning methods are influenced by a variety of interrelated factors such as age at marriage, education, economic status, religion, number of living children etc. An endeavour has been made to assess these factors for acceptance of various contraceptive methods among women, in a rural area of Maharashtra.

**Objective:** To assess the socio-demographic determinants of contraceptive acceptance in rural women.

**Methods:** A cross-sectional survey was conducted in 37 villages of Karla PHC in Pune, Maharashtra during Jan 2012 to Dec 2012. 378 women in reproductive age group were surveyed with proportionate sampling method and pre-designed questionnaire with prior informed consent.

**Results:** Out of 378, 57% were contraceptive users. Contraceptive use was more in ever married women in 25-34 years age, women married at 15-19 years age and also having 1<sup>st</sup> pregnancy at 15-19 years age and women studied up to primary education. Age of women, Age at marriage, Age at 1<sup>st</sup> child, Number of children, Number of male children, literacy status of women, literacy status of spouse and type of family have shown influence on contraceptive use and this influence was consistent with the type of contraceptive method being used except literacy status of spouse. Socio-economic status and religion of women does not show any influence on the use of contraceptives.

**Keywords:** Contraceptive prevalence; Women in reproductive age group; Literacy status; Socio-economic status

### Introduction

India is the second most populous country in the world, contributing about 20% of births worldwide & having 1.21 billion people. With only 2.4% of world's land area, India is supporting 17.56% of world's population [1].

India adds about 10 lakh persons to its population every fortnight and adds about one Australia every eight month. By 2045 or earlier, India would overtake China as the world's most populous Nation [2].

India was the first country in the world to formulate the National Family Planning Programme in the year 1952 with the objective of 'reducing the birth rate to the extent necessary to stabilize the population at a level consistent with requirement of national economy' [3].

The extent of acceptance of contraceptive methods still varies within societies and also among different castes and religious groups. The factors responsible for such varied picture operate at the individual, family and community level with their root in the socioeconomic and cultural milieu of Indian society [1]. In spite of availability of a wide range of contraceptives and mass media campaigns and information, education and communication programmes, the population control remains a distant dream to achieve. It is pertinent to identify the

factors responsible for poor acceptance of family planning programme in different socio-cultural and socioeconomic groups [2].

Women need the ability to decide when to start and finish childbearing, how long to wait after the birth of one child before becoming pregnant with the next and how many children to have [3].

In recent years, the need of such kind of studies was very important, because more specific knowledge can be acquired about factor determining fertility and acceptance. From wide experience, it is observed that the beneficiary is not aware of new technology and improvement in the existing program. Despite various studies and extensive work in this field, above phenomenon is observed, considering this present study is planned with the objective of Assessment of socio-demographic determinants among contraceptive acceptors in rural women.

### Materials and Methods

Written approval from ethical committee, at the institute level was obtained.

Informed consent was taken from the study subjects before conducting an interview.

**Type of study:** Cross-sectional

**Period of study:** From January 2012 to December 2012

**Study area:** Villages under Primary Health Centre (PHC) Karla, Tal. Mawal, Dist. Pune, Maharashtra. Karla PHC is having 7 sub centres and 35 villages.

According to the census 2011, total population of Karla PHC was 36760.

**Sample size:** With the reference to National Family Health Survey-3 (NFHS-3), the prevalence of contraceptive methods was taken to be 56% for the any contraceptive methods. Using Epi Info Software Sample size for Population Survey was calculated with the Confidence limit of 5%. The Sample Size calculated for the survey was 378.

A cross-sectional study conducted in PHC Karla, under rural field practice area of medical college in Maharashtra. PHC Karla has 35 villages. The data on population of these villages was obtained from PHC Karla. The calculated sample size is divided proportionately into 35 villages.

**Sampling unit:** The women in reproductive age group (15-49 years)

**Sampling techniques:**

Sampling technique for selection of household:

Assuming at least one woman in the reproductive age group, sampling technique used for the selection of household was systematic random sampling method in each village.

Sampling technique for selection of study subject in the household:

In the selected household if more than one eligible subject (more than one female in the reproductive age-group) were available, all subjects were included.

Total 378 households with women in reproductive age group were planned to be surveyed at the start of the study (assuming one woman in the age group of 15-49 years per household).

In case the sampled household did not have a woman in the reproductive age group then subsequent house was taken. The household where desired sample size is achieved was the last household surveyed in the study.

**Study tool:** The study was conducted by using a Questionnaire. The questionnaire was based on NFHS-3 Questionnaire. Semi structured, Pre-tested Questionnaire was used.

**Data analysis:** Epi Info 3.5.3, Primer of Biostatistics 6.0

**Results**

In the present study, results show that out of total users, all women are ever married women whereas never married women are not using any contraceptive method. In our study, the contraceptive prevalence rate is 57%.

The most commonly used method was female sterilization (99%) among the permanent method followed by condoms (45%) among the temporary methods (Tables 1 and 2).

Socio-demographic Variables		Contraceptive Users (n=217)	Contraceptive users (n=161)	Non-	Chi-square Value (d.f)	P-value
Age Group	15-19	1 (1%)	57 (35%)		157.88 (5)	<0.001 HS
	20-24	34 (16%)	63 (39%)			
	25-29	57 (26%)	27 (17%)			
	30-34	50 (23%)	7 (5%)			
	35-39	33 (15%)	4 (2%)			
	40-44	30 (14%)	3 (2%)			
	45-49	12 (5%)	0			
*Age at Marriage (n=319; Non users-102)	11-14	25 (11%)	6 (6%)		16.817	<0.001 HS
	15-19	156 (72%)	59 (58%)			
	20-24	34 (16%)	33 (32%)			
	25-29	2 (1%)	3 (3%)			
	>30	0	1 (1%)			
**Age at 1 <sup>st</sup> Pregnancy (n=297; Users-216 and Non Users-81)	15-19	135 (63%)	38 (47%)		6.125 (3)	0.047 S
	20-24	69 (32%)	35 (43%)			
	25-29	11 (5%)	7 (9%)			
	>30	1 (0.5%)	1 (1%)			
Literacy status of Women	Illiterate	55 (25%)	14 (9%)		40.691 (5)	<0.001 HS
	Primary up to 4 <sup>th</sup> std.	99 (46%)	51 (32%)			

	Secondary up to 10 <sup>th</sup> std.	35 (16%)	56 (35%)		
	Higher Secondary	16 (7%)	28 (17%)		
	Graduate	10 (5%)	9 (6%)		
	Post Graduate	2 (1%)	3 (1%)		
	2 and more	78 (36%)	4 (4%)		

**Table 1:** Association of Socio-demographic variables and contraceptive users.

Socio-demographic Variables		Contraceptive Users (n=217)	Contraceptive Non-users (n=161)	Chi-square Value (d.f)	P-value
***Literacy status of Spouses (n=303; Users-203 and Non users-100)	Illiterate	24 (12%)	5 (5%)	8.976 (5)	0.038 S
	Primary up to 4th std.	73 (36%)	35 (35%)		
	Secondary up to 10th std.	51 (25%)	33 (33%)		
	Higher Secondary	35 (17%)	17 (17%)		
	Graduate	17 (8%)	5 (5%)		
	Post Graduate	3 (2%)	5 (5%)		
Socio-Economic Status	Class I	6 (3%)	6 (4%)	4.57 (4)	0.33 NS
	Class II	51 (24%)	38 (24%)		
	Class III	59 (27%)	45 (28%)		
	Class IV	74 (34%)	42 (26%)		
	Class V	27 (12%)	30 (18%)		
Type of Family	Nuclear	137 (63%)	68 (42%)	21.039 (2)	<0.001 HS
	Joint	45 (21%)	67 (42%)		
	Three Generation	35 (16%)	26 (16%)		
Religion	Hindu	201 (93%)	153 (95%)	0.54 (1)	0.46 NS
	Other	16 (7%)	8 (5%)		
*Number of Children (n=319; Non users-102)	Less than 2 and 2	134 (62%)	93 (91%)	27.858 (1)	<0.001 HS
	More than 2	83 (38%)	9 (9%)		
*Number of Male Child (n=319; Non users-102)	Less than 2	139 (64%)	98 (96%)	35.6 (1)	<0.001 HS
	2 and more	78 (36%)	4 (4%)		

**Table 2:** Association of Socio-demographic variables and contraceptive users [\* Here, n=319, because 59 are unmarried women; \*\* Here, n=297, because 59 women are unmarried and 29 women are not having children and out of these 29 women, 7 women are currently pregnant; \*\*\*Here, n=303, because married women are 303 in the study].

The present cross-sectional study was carried out in 35 villages of PHC Karla.

There were total 378 women in reproductive age group irrespective of their marital status enrolled in the present study. Majorities (80%) of them were married, 16% were unmarried, 3% were widow and 1% was separated or divorced. The age distribution of study population shows that majority (47.88%) of the women were in the age group of 20-29 years). Mean age of the study population was found out to be 27.79 years with a standard deviation of 8.07 years. When the literacy status

of the women studied; it revealed that the majority of the women in reproductive age group have studied up to primary education accounting 39.7% followed by secondary education (24.1%) and 18.3% of the study population were illiterate.

Then, the literacy status of spouses which also showed the similar finding; this showed that the majorities (35.64%) of the study population's spouses are studied up to Primary education followed by Secondary education (27.72%). 9.57% of the study population's spouses were illiterate. Socio-economic status of the study population was

calculated as per the modified B.G. Prasad's classification which showed that majority (30.69%) of the study population belongs to the Class IV i.e. Upper lower class followed by lower middle class accounting 27.51%. 15.08% study population belongs to the Class V i.e. Lower class whereas 3.18% study population belongs to the Class I i.e. Upper class. Majority (54.24%) of the study population belonged to the nuclear families followed by Joint families (29.63%). When the religion was studied we found out that 94% of the study population was Hindu. The present study also found out that the early marriages and early childbearing is still prevalent in rural areas. Majority (67.40%) of the study population married at the age of 15-19 years. Mean age at marriage was found to be 17.89 years and standard deviation is 2.83 years. Majority (58.25%) of the women became pregnant at the age of 15-19 years. The duration of marriage of 29.70% of the women was less than 5 years. The maximum study population is having 2 children and maximum women in the study were having at least one male child.

In the present study (Tables 1 and 2) Age of women, Age at marriage, Age at 1st child birth, Number of children, Number of male children, Literacy status of women, Literacy status of spouse and type of family have shown the statistically significant influence on contraceptive use and this influence was consistent with the type of contraceptive method being used except for literacy status of spouse; while Socio-economic status & religion of women does not show any statistically significant influence on the use of contraceptives.

## Discussion

The contraceptive prevalence rate for currently married women in India is 56%, during NFHS-3 [4] in the year 2005-2006, which is similar to our study finding. This shows that even after 6 years from the NFHS-3, the contraceptive prevalence rate is same suggesting need to make the people aware about it and practice it. The study conducted by Sharma V, Mohan U, Das V [28] in the year 2008-2009, in the rural area of Lucknow, Uttar Pradesh, India, concluded that the contraceptive prevalence was 55.87%. This shows that the situation all over India is similar.

Similar findings were shown in various studies [5-11] conducted all over India.

The study conducted by Banerjee [5] in west Bengal to see the Socio-economic & cultural determinant on acceptance of permanent method also found out the prevalence of contraception is low in rural west Bengal.

But, the study conducted by Patro [6] in resettlement colony of Delhi found out that majority of the contraceptive users were having more than two children and socio-economic status was significantly associated with contraceptive use.

The study conducted by Joshi [7] in Mumbai also shows that as the literacy status increases the use of contraceptive method also increases and the maximum users were from nuclear families.

Murarkar S [8] in their study also concludes the similar findings related to literacy status and socio-economic status.

Manna [9] and Walvekar [10] conducted the studies in rural part of India the findings were similar to the present study as the present study is also conducted in rural area.

## Conclusion

Creating awareness regarding proper use of contraceptive methods and various services available by the government to promote use of contraceptive methods at their doorsteps is the need of an hour to increase the contraceptive prevalence.

Early marriage and early childbearing below 18 years of age is still prevalent. This shows that emphasis should be made on sensitizing general population with regards to legal age at marriage for the girls.

As the early marriages are prevalent, early pregnancies are also prevalent in the study area accounting 58%; that means every second married girl becomes pregnant in adolescent period in a study population. Adequate measure should be imparted in community that minimum age at first pregnancy should not be before 20 years of age and sensitizing population regarding adverse consequences of adolescent pregnancies on women's health.

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