

# Epidemiological Correlates of Contraceptive Prevalence in Rural Area of Haryana

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## Abstract

**Objective:** 1. To study the prevalence of contraceptive utilization with its socio-demographic variables in a rural area of Haryana. **Study Design:** Cross-sectional. **Setting:** Agroha village **Participants:** 260 eligible couples **Methodology:** The minimum sample size to be covered was derived on the basis of current contraceptive prevalence rate of rural Haryana ie. 62% (as per National Family Health Survey III – 2005-06). For the purpose of the study, 260 eligible couples were selected by simple random sampling. Complete data was collected in a pre-designed, pre-tested questionnaire. **Statistical Analysis:** The data collected were analyzed by using percentages and chi-square test. **Result:** Out of 260 couples selected for the study, 10 couples were non willing. Out of 250 eligible couples, 59.2% were current users of contraception (terminal methods users 46% & spacing method users 13.2%). Contraceptive prevalence increased significantly ( $p < 0.001$ ) with increasing age and also with the literacy status of the women (38.5% in illiterate women to 65.0% in women educated to high school & above). Caste-wise, the highest current contraceptive prevalence was found among the Other castes (74.6%) followed by OBCs (46.5%) and SCs (46.0%) ( $p < 0.001$ ). Current contraceptive prevalence among women of nuclear families was higher (87.0%) than women in joint families (40.7%) & the difference was statistically significant ( $p < 0.001$ ). Current contraceptive prevalence was found to decrease with the increase of socio-economic status as the prevalence was 72.6% in class V (Lower Class) and progressively declined to 47.6% in the class I (Upper Class) ( $p < 0.05$ ). **Conclusion:** Preference of terminal sterilization methods over spacing methods observed in the present study as a family planning approach needs special attention and there is a need to shift women centric approach to couple centric approach for family planning. Extensive mass awareness campaign at regional level about types, advantages, availability and use of spacing methods is required and locally field workers need to apply Behavior Change Communication (BCC) methods to motivate the couples to accept the spacing methods for better maternal and child health.

## INTRODUCTION

India was the first country in the world to formulate the national family planning program in the year 1952 with the objective of “reducing the birth rate of the extent necessary to stabilize the population at a level consistent with requirement of National economy”<sup>1</sup>. India is undergoing a fertility transition and an important feature of this transition is the fact that contraceptive use has spread to uneducated women also<sup>2</sup>. This augurs well for the country in the long run. Another advantage with the rising prevalence of contraceptive usage is the fact that abortion incidence has declined<sup>3</sup>. Despite the fact that contraceptive usage has increased over a period of time, there exists a gap between the knowledge, attitude and practices (KAP) regarding contraception<sup>4,5</sup>. 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 roots in the socio-economic and cultural milieu of Indian Society<sup>6</sup>.

With the above facts in consideration, we aimed to find the prevalence of contraceptive usage amongst eligible couples in Rural area of district Hisar and the association between contraceptive usage and socio-economic factors like literacy, caste, income etc.

## MATERIALS AND METHODS

The present cross-sectional study was carried out from Nov 2008 to Feb 2009 in Agroha village, which is the Rural Field Training Area attached to the Department of Community Medicine, Maharaja Agrasen Medical Institute of Education

and Research, Agroha, Hisar (Haryana). The total population of Agroha village & no. of eligible couples is 7914 & 1340 respectively. The above data was collected from Primary Health Centre (PHC), Agroha. The minimum sample size to be covered was derived on the basis of current contraceptive prevalence rate of rural Haryana which is 62% as per National Family Health Survey III – 2005-06 To cover the desired sample size, 260 eligible couples were selected by simple random sampling. The social class of the sample group was determined by modified BG Prasad's classification<sup>7</sup> (2008).

For the purpose of the study, the head of the family and the couples were explained in detail the purpose and methodology of study and then detailed information was collected on a pre-designed and pre-tested questionnaire. The data was collected by the Interns who were extensively trained for data collection and the survey was conducted under the guidance of the authors. The data collected were analyzed by using percentages and chi-square test (epi Info).

## RESULTS

The current usage of contraception among the study population was 59.2%. Contraceptive prevalence increased significantly ( $p < 0.001$ ) with increasing age of women (Table 1).

**Figure 1**

Table – 1: Current Usage of Contraception by Age of Women

Age Group (years)	Terminal Methods			Spacing Methods				Any modern Contraception	Non-Users	Base
	All Terminal Methods	Female Sterilisation	Male Sterilisation	All Spacing Methods	Oral Pills	IUCDs	Condoms			
15 – 24 yrs.	3 (5.0)	3 (5.0)	0 (0)	4 (6.7)	1 (1.7)	1 (1.7)	2 (3.3)	7 (11.7)	53 (88.3)	60 (100)
25 – 34 yrs.	57 (51.8)	57 (51.8)	0 (0)	19 (17.3)	2 (1.8)	10 (9.1)	7 (6.4)	76 (69.1)	34 (30.9)	110 (100)
35 – 44 yrs.	55 (68.7)	55 (68.7)	0 (0)	10 (12.5)	1 (1.2)	4 (5.0)	5 (6.3)	65 (81.2)	15 (18.8)	80 (100)
Total	115 (46.0)	115 (46.0)	0 (0)	33 (13.2)	4 (1.6)	15 (6.0)	14 (5.6)	148 (59.2)	102 (40.8)	250 (100)

Note – Figures in parenthesis indicate percentages

Contraceptive prevalence by Age –  $\chi^2 = 76.69$ ,  $df = 2$ ,  $p < 0.001$

Contraceptive prevalence was found to increase significantly with increase in literacy status of the women as the prevalence increased from 38.5% with illiterate women to 65.0% with women educated to high school & above ( $p <$

0.001). A similar trend in adoption of terminal and spacing methods was observed which increased progressively from (32.3% & 6.2% respectively) in couples with illiterate women to (42.5% & 22.5% respectively) in couples with women educated up to high school and above. The difference in use of terminal and spacing methods in different literacy status was not significant ( $p > 0.05$ ). (Table 2)

**Figure 2**

Table – 2: Current usage of Contraception by Literacy status of Women

Literacy status of women	Terminal Methods			Spacing Methods				Any method	Base
	All Terminal Methods	Female Sterilisation	Male Sterilisation	All Spacing Methods	Oral Pills	IUCDs	Condoms		
Illiterate	21 (32.3)	21 (32.3)	0 (0)	4 (6.2)	0 (0.0)	2 (3.1)	2 (3.1)	25 (38.5)	65 (100.0)
Literate	78 (42.2)	78 (42.2)	0 (0)	29 (15.7)	4 (2.2)	13 (7.0)	12 (6.5)	107 (57.9)	185 (100.0)
> Primary School Complete	25 (41.7)	25 (41.7)	0 (0)	9 (15.0)	0 (0.0)	5 (8.3)	4 (6.7)	34 (56.7)	60 (100.0)
> Middle School Complete	52 (61.2)	52 (61.2)	0 (0)	11 (12.9)	2 (2.4)	4 (4.7)	5 (5.8)	63 (74.1)	85 (100.0)
> High School Complete & above	17 (42.5)	17 (42.5)	0 (0)	9 (22.5)	2 (5.0)	4 (10.0)	3 (7.5)	26 (65.0)	40 (100.0)
Total	115 (46.0)	115 (46.0)	0 (0)	33 (13.2)	4 (1.6)	15 (6.0)	14 (5.6)	148 (59.2)	250

Note – Figures in parenthesis indicate percentages.

Contraceptive prevalence by literacy status –  $\chi^2 = 20.12$ ,  $df = 3$ ,  $p < 0.001$

Terminal & Spacing methods by literacy status –  $\chi^2 = 4.04$ ,  $df = 3$ ,  $p > 0.05$

Caste-wise, the highest current contraceptive prevalence was found among the Other castes (74.6%) followed by OBCs (46.5%) and SCs (46.0%). The difference of contraceptive prevalence by caste was found to be statistically significant ( $p < 0.001$ ). The adoption of terminal methods was maximum in other castes (61.4%) followed by OBCs (33.7%) and SCs (32.0%). On the reverse, use of spacing methods was maximum in SCs (14.0%), followed by Other castes (13.2%) and minimum by OBCs (12.8%). The difference in adoption of terminal methods and use of spacing methods in different caste groups was non-significant ( $p > 0.05$ ). (Table 3)

**Figure 3**

Table – 3: Current usage of Contraception by Caste of Women

Caste	Terminal Methods			Spacing Methods					Base
	All Terminal Methods	Female Sterilisation	Male Sterilisation	All Spacing Methods	Oral Pills	IUCDs	Condoms	Any modern Contraception	
SC	16 (32.0)	16 (32.0)	0 (0)	7 (14.0)	0 (0.0)	4 (8.0)	3 (6.0)	23 (46.0)	50 (100.0)
OBC	29 (33.7)	29 (33.7)	0 (0)	11 (12.8)	2 (2.3)	5 (5.8)	4 (4.7)	40 (46.5)	86 (100.0)
Others	70 (61.4)	70 (61.4)	0 (0)	15 (13.2)	2 (1.8)	6 (5.3)	7 (6.1)	85 (74.6)	114 (100.0)
Total	115 (46.0)	115 (46.0)	0 (0)	33 (13.2)	4 (1.6)	15 (6.0)	14 (5.6)	148 (59.2)	250

Note – 1. Figures in parenthesis indicate percentages.

Contraceptive prevalence by Caste –  $\chi^2 = 20.48$ , df = 2,  $p < 0.001$

Terminal and Spacing methods by Caste –  $\chi^2 = 2.56$ , df = 2,  $p > 0.05$

Table 4 shows the number and percentage of current contraceptive usage by eligible couples according to the Type of Family. Current contraceptive prevalence among women of nuclear families was higher (87.0%) than women in joint families (40.7%) & the difference was statistically significant ( $p < 0.001$ ). Adoption of terminal methods as well as spacing methods was more in nuclear families (70.0% & 17% respectively) than joint families (30.0% & 10.7% respectively). This difference in the use of terminal and spacing methods according to the type of family in which the couples live was not found to be significant ( $p > 0.05$ ).

**Figure 4**

Table – 4: Current usage of Contraception by Type of Family

Type of Family	Terminal Methods			Spacing Methods					Base
	All Terminal Methods	Female Sterilisation	Male Sterilisation	All Spacing Methods	Oral Pills	IUCDs	Condoms	Any modern Contraception	
Nuclear	70 (70.0)	70 (70.0)	0 (0)	17 (17.0)	3 (3.0)	8 (8.0)	6 (6.0)	87 (87.0)	100 (100.0)
Joint	45 (30.0)	45 (30.0)	0 (0)	16 (10.7)	1 (0.7)	7 (4.7)	8 (5.3)	61 (40.7)	150 (100.0)
Total	115 (46.0)	115 (46.0)	0 (0)	33 (13.2)	4 (1.6)	15 (6.0)	14 (5.6)	148 (59.2)	250

Note – 1. Figures in parenthesis indicate percentages.

Contraceptive prevalence by Type of Family –  $\chi^2 = 53.33$ , df = 1,  $p < 0.001$

Terminal & Spacing methods by Type of family –  $\chi^2 = 0.93$ , df = 1,  $p > 0.05$

Table 5 shows the number and percentage of current contraceptive usage by eligible couples according to the Social Class. Current contraceptive prevalence was found to decrease with the increase of socio-economic status as the prevalence was 72.6% in class V (Lower Class) and progressively declined to 47.6% in the class I (Upper Class) and the difference in current contraceptive prevalence according to social class was found to be significant ( $p < 0.05$ ). The lower social classes were inclined towards adoption of terminal methods which progressively increased from 35.7% in the class I to 53.8% in the class V, but the difference in adoption of terminal and spacing methods according to social class was not found to be significant ( $p > 0.05$ ).

**Figure 5**

Table – 5: Current usage of Contraception by Social Class

Social Class (Modified B.G Prasad's classification)	Terminal Methods			Spacing Methods				Any modern Contraception	Base
	All Terminal Methods	Female Sterilisation	Vute Sterilisation	All Spacing Methods	Oral Pills	IUCDs	Condoms		
I	15 (35.7)	25 (59.5)	0 (0)	5 (11.9)	0 (0)	2 (4.8)	3 (7.1)	20 (47.6)	42 (100.0)
II	18 (37.5)	23 (47.9)	0 (0)	6 (12.5)	1 (2.1)	5 (10.4)	0 (0.0)	24 (50.0)	48 (100.0)
III <sup>a1</sup>	17 (44.7)	26 (68.4)	0 (0)	1 (2.6)	0 (0.0)	1 (2.6)	0 (0.0)	18 (47.3)	38 (100.0)
IV <sup>a2</sup>	22 (52.4)	19 (45.2)	0 (0)	6 (14.3)	2 (4.8)	2 (4.8)	2 (4.8)	28 (66.7)	42 (100.0)
V	43 (53.8)	22 (27.5)	0 (0)	15 (18.8)	1 (1.3)	5 (6.3)	9 (11.2)	58 (72.6)	80 (100)
Total	115 (46.0)	115 (46.0)	0 (0)	33 (13.2)	4 (1.6)	15 (6.0)	14 (5.6)	148 (59.2)	250 (100)

Note – 1. Figures in parenthesis indicate percentages.

2. For statistical analysis, a1 & a2 have been pooled together.

Contraceptive prevalence by Social Class –  $\chi^2 = 9.97$ ,  $df = 3$ ,  $p < 0.05$

Terminal & Spacing methods by Social Class –  $\chi^2 = 1.94$ ,  $df = 3$ ,  $p > 0.05$

## DISCUSSION

In this study, 59.2% of the couples were current users of contraception (terminal methods users 46% & spacing method users 13.2%). NFHS-3 has documented a couple protection rate of 62% in rural areas of Haryana which is considerably higher than that of India as a whole (56%)<sup>8</sup>. Our findings of 59.2% contraceptive usage is quite similar to a study by Bhasin et al<sup>9</sup>. In contrast the prevalence of contraceptive use was found to be very low (34.9%) in a study by Gaur et al<sup>10</sup> in rural muslim area of Haryana. The reason for high prevalence in our study as compared to the study by Gaur et al<sup>10</sup> may be the high literacy status of women in our area. In our study terminal method (tubectomy) was the commonest method used (46%) which is similar to the findings of Bhasin et al<sup>9</sup>, Kansal et al<sup>11</sup> and Girdhar et al<sup>12</sup>. In our study it was found that spacing and terminal method users were higher in older age group. Similar finding was reported by Kansal et al<sup>11</sup> in rural area of Dehradun where the older females preferred to adopt spacing (except for IUDs) & terminal methods of contraception. In a study done in rural areas of Bihar by Kumari C<sup>13</sup>, the incidence of sterilization increased significantly from 11.6 % in 21-30 yrs of age to 51% in women aged 31-40yrs. In this study prevalence of contraception was found to be very low in younger (15-24 yrs) age group and the reason for not

using contraceptives by this age group was found to be the desire for more children. Literacy was seen to influence the acceptance of contraceptive method in this study. The acceptance of spacing and methods was more by subjects who were literate. In a study done by Shah et al<sup>14</sup>, Girdhar et al<sup>12</sup> and Gaur et al<sup>10</sup> a statistical significant association was found between the use of contraception and the educational status of couple. Current use of contraceptives was 46.0%, 46.5%, and 74.6% among SC, OBC, and others respectively and the difference was statistically significant ( $p < 0.001$ ). The difference in adoption of terminal methods and use of spacing methods in different caste groups was found to be non-significant ( $p > 0.05$ ) in the study. The family structure i.e. joint or nuclear family is another significant variable. In the present study, it was observed that the acceptance of contraceptive methods was more in subjects residing in nuclear family which is similar to the findings of Girdhar et al<sup>12</sup>. Current contraceptive prevalence was found to decrease with increasing socio-economic status (72.6% in Class V to 47.6% in Class I) and the difference in current contraceptive prevalence according to social class was found to be significant ( $p < 0.05$ ). The prevalence of terminal methods was apparently more in lower classes however the difference in adoption of terminal and spacing methods according to social class was not found to be significant ( $p > 0.05$ ).

## CONCLUSION

Preference of terminal sterilization methods over spacing methods observed in the present study as a family planning approach needs special attention and there is a need to shift women centric approach to couple centric approach for family planning. Extensive mass awareness campaign at regional level about types, advantages, availability and use of spacing methods is required and locally field workers need to apply Behavior Change Communication (BCC) methods to motivate the couples to accept the spacing methods for better maternal and child health.

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