



## Cross-Sectional Analyses of Social Determinants of Contraceptive Use among Eligible Couples, Rural Ujjain, Madhya Pradesh

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## ABSTRACT

**Objectives:** The present study was conducted to estimate point prevalence of contraceptive use among eligible couples & find out its association with social determinants of eligible couples of rural Ujjain.

**Methods:** Descriptive cross-sectional study conducted from September 2013 to October 2015 on all the eligible couples from 3 selected blocks under Demographic Survey Site of rural field practice area of R.D. Gardi Medical College. **Inclusion & exclusion criteria were** all consenting eligible couples and couples who were not available at time of interview & sterilized couples.

**Results:** Out of the 263 eligible couples, 136 (52%) couples (male 61% and female 39%) were found to be contraceptive users. Socio-demographic factors significantly associated with current contraceptive use were age (21-25 years) ( $\chi^2=8.228$ , p-value=0.042), sex (males) ( $\chi^2=8.925$ , p-value= 0.003), education (literate) ( $\chi^2= 9.226$ , p-value= 0.026), family planning knowledge ( $\chi^2= 5.069$ , p-value=0.024) and no male child preference ( $\chi^2= 7.912$ , p-value= 0.005). On further regression analysis, sex (p-value= 0.047) and male child preference (p-value= 0.035) were found to be significantly associated.

**Conclusion:** The point prevalence of contraceptive was 52% and determinants of contraceptive use were male gender (O.R. 0.650, C.I. 0.424-0.995) and no male child preference (O.R. 2.074, C.I. 1.054-4.082).

**Keywords:** Contraceptive use, Eligible couples

## INTRODUCTION

International conference on population and development in 1994 defined reproductive health as: - "reproductive health..... implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Bearing in mind the above definition, reproductive rights embrace certain human rights that are already recognized in national laws, international human right document and other consensus documents.

These rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly on the number, spacing and timing of their children and to have the information and means to do so, and the right to attain highest standard of sexual and reproductive health. It also includes their right to make decision concerning reproduction free of discrimination, coercion and violence."<sup>1</sup>

It is being observed that a complex interplay of demographic, social, cultural, and economic factors contribute to a woman's failure to use modern contraception. Factors known to affect contraceptive

use extend from the attributes of the individual, through resources of the household and community in which person lives, to socio-cultural traditions and institutions that affect autonomy, behavior and lifestyle, and access to healthcare services.<sup>2</sup> Women in developing countries face multifaceted and challenging barriers to modern contraceptive use. Woman does not enjoy autonomy of decision making regarding her own reproductive health and family planning needs. One of the important facet being influence of the male partner on a women's reproductive health decisions, which has been proved by many previous studies in developing countries relating to husband's influence on a women's decision to use contraceptives<sup>2</sup>.

Considering the fact that a huge gap in knowledge exist in terms of availability of family planning services and their utilization and knowledge<sup>3</sup>, the situation being worse in central provinces of the country, the present study tried to unwind the role of the village and its socio-cultural practices in explaining various demographic indicators focusing family planning practice.

## METHODS

A cross-sectional study was conducted in DSS (Demographic Surveillance Site) of RD Gardi Medical College under the department of Community Medicine which covers 60 villages of three blocks namely Mahidpur, Ghatiya and Tarana of the Ujjain district. Study duration along with data collection extended from September 2013 to October 2015.

Study included all the consenting eligible couples from six selected villages. Eligible couples denote: a currently married couple wherein the wife is in the reproductive age, which is generally assumed to lie between the ages of 15 and 45 years<sup>21</sup>. **Exclusion** was done of couples not available at the time of interview from study villages and sterilized couples (couples who had used permanent contraception methods of either tubectomy or vasectomy) from the same area.

Independent variables namely age, sex, education, category, below poverty line (BPL) card holder, number of family members, male child preference were studied. . May 2014 modified B. G. Prasad's classification was used to assess the socio-economic status<sup>4</sup>. Knowledge about family planning was assessed by asking the participants if they had ever heard/ or seen in media/ or read about the different methods of contraception, their advantage and benefits. The data collection tool was a pre-designed semi-structured questionnaire.

The questions were asked in the local "malavi" language of the residents; questions were asked clearly, one at a time and following a proper sequencing pattern.

Both the partners were interviewed as the variables like knowledge about family planning methods, their inclination towards a particular method, male child preference etc. may vary individual to individual.

Data were analyzed using Percentage and proportions. Mean and Standard Deviation was calculated for continuous variables. Chi-square test was applied to know the association between dependent and independent factors and then Multinomial logistic regression analysis (MLR) was applied on the factors showing significant association.

The study was started after obtaining ethical approval from the Institutional Ethic Committee, R.D. Gardi Medical College, Ujjain, M.P. All the study subjects were explained in detail about the purpose and methodology of the study, potential risk and benefits. A written informed consent was obtained in the predesigned institutional format.

## RESULTS

Of the total study subjects (n=526) 12.4% belonged to the age group 15-20 years, 36.8% within 21-25 years, 32.7% within 26-30 years, 13.6% in age group of >30 years. Nearly 31% of the study participants were illiterate, 46.4% were of the general category and 17.1%, 4.9%, 31.6% were from SC, ST and OBC respectively. BPL card possessed by 51% and nearly 50% belonged to the socio-economic class V. 84.4% of the participants had family planning knowledge and 83.5% opposed to the occurrence of male child preference in their families.

Out of the total study population, contraceptive users were 52% (either male or female partner were currently using any method of contraception).

Knowledge regarding IUD, pills, injectable and barrier method i.e. condom was reported by 84%, 96%, 83%, and 95% persons respectively. As much as 78%, 59%, 42% and 39% had known about female condoms, emergency contraception, rhythm and withdrawal (traditional methods) methods of contraception respectively.

The socio-demographic factors significantly associated with the current contraceptive use were age ( $\chi^2=8.228$ , p-value=0.042), sex ( $\chi^2=8.925$ , p-value=0.003), education ( $\chi^2=9.226$ , p-value=0.026), family planning knowledge ( $\chi^2=5.069$ , p-value=0.024) and male child preference ( $\chi^2=7.912$ , p-value=0.005).

**Table 1: Association of social determinants with contraceptive practice**

| Social determinants         | Currently using |                |       | χ <sup>2</sup> value | df | p-value |
|-----------------------------|-----------------|----------------|-------|----------------------|----|---------|
|                             | Yes (n=136) (%) | No (n=390) (%) | Total |                      |    |         |
| Sex                         |                 |                |       |                      |    |         |
| Male                        | 83(61.0)        | 180(46.1)      | 263   | 8.92                 | 1  | 0.003*  |
| Female                      | 53(38.9)        | 210(54.8)      | 263   |                      |    |         |
| Age                         |                 |                |       |                      |    |         |
| 15-20                       | 8(5.8)          | 57(14.6)       | 65    | 8.22                 | 3  | 0.042*  |
| 21-25                       | 52(38.2)        | 151(38.7)      | 203   |                      |    |         |
| 26-30                       | 49(36.0)        | 123(31.5)      | 172   |                      |    |         |
| >30                         | 27(19.8)        | 59(15.1)       | 86    |                      |    |         |
| Education                   |                 |                |       |                      |    |         |
| Primary school              | 21(15.4)        | 108(27.6)      | 129   | 9.22                 | 3  | 0.026*  |
| Secondary school            | 50(36.7)        | 111(28.4)      | 161   |                      |    |         |
| Higher secondary/college    | 23(16.9)        | 53(13.5)       | 76    |                      |    |         |
| Illiterate                  | 42(30.8)        | 118(30.2)      | 160   |                      |    |         |
| Category                    |                 |                |       |                      |    |         |
| General                     | 72(52.9)        | 172(44.1)      | 244   | 3.85                 | 3  | 0.278   |
| SC                          | 23(16.9)        | 66(16.9)       | 89    |                      |    |         |
| ST                          | 6(4.4)          | 21(5.3)        | 27    |                      |    |         |
| OBC                         | 35(25.7)        | 131(33.5)      | 166   |                      |    |         |
| BPL card status             |                 |                |       |                      |    |         |
| Yes                         | 73(53.6)        | 195(50)        | 268   | 0.54                 | 1  | 0.460   |
| No                          | 63(46.3)        | 195(50)        | 258   |                      |    |         |
| Number of family members    |                 |                |       |                      |    |         |
| 2                           | 2(1.4)          | 14(3.5)        | 16    | 16.38                | 4  | 0.003*  |
| 3                           | 14(10.2)        | 60(15.3)       | 74    |                      |    |         |
| 4                           | 30(22.0)        | 62(15.8)       | 92    |                      |    |         |
| 5                           | 63(46.3)        | 127(32.5)      | 190   |                      |    |         |
| More than 5                 | 27(19.8)        | 127(32.5)      | 154   |                      |    |         |
| House type                  |                 |                |       |                      |    |         |
| Kutcha                      | 58(42.6)        | 176(45.1)      | 234   | 2.824                | 2  | 0.244   |
| Pucca                       | 60(44.1)        | 144(36.9)      | 204   |                      |    |         |
| Semipucca                   | 18(13.2)        | 70(17.9)       | 88    |                      |    |         |
| Socio-economic status (SES) |                 |                |       |                      |    |         |
| Class II                    | 10(7.3)         | 20(5.1)        | 30    | 3.98                 | 3  | 0.263   |
| Class III                   | 30(22.0)        | 62(15.8)       | 92    |                      |    |         |
| Class IV                    | 33(24.2)        | 105(26.9)      | 138   |                      |    |         |
| Class V                     | 63(46.3)        | 203(52.0)      | 266   |                      |    |         |
| Family planning knowledge   |                 |                |       |                      |    |         |
| Yes                         | 123(90.4)       | 321(82.3)      | 444   | 5.06                 | 1  | 0.024*  |
| No                          | 13(9.5)         | 69(17.6)       | 82    |                      |    |         |
| Male child preference       |                 |                |       |                      |    |         |
| Yes                         | 12(8.8)         | 75(19.2)       | 87    | 7.91                 | 1  | 0.005*  |
| No                          | 124(91.1)       | 315(80.7)      | 439   |                      |    |         |

**Table 2: Multiple Regression analysis of factors predicting current contraceptive use**

| Category of Contraceptive# user | B      | Sig.   | Adjusted O.R. | 95% confidence interval |             |
|---------------------------------|--------|--------|---------------|-------------------------|-------------|
|                                 |        |        |               | Lower bound             | Upper bound |
| Sex                             | -0.431 | 0.047* | 0.650         | 0.424                   | 0.995       |
| Age                             | 0.169  | 0.159  | 1.184         | 0.936                   | 1.498       |
| Education                       | 0.107  | 0.231  | 1.113         | 0.934                   | 1.325       |
| Number of members               | 0.009  | 0.925  | 1.009         | 0.839                   | 1.213       |
| Family planning knowledge       | -0.418 | 0.227  | 0.658         | 0.334                   | 1.297       |
| Male child preference           | 0.729  | 0.035* | 2.074         | 1.054                   | 4.082       |

# reference category is no, male sex, age category 15-20 years, education- illiterate, family members- 2, family planning knowledge -yes and male child preference-yes; \*p-value <0.05 is significant

Multinomial regression analysis of socio-demographic factors which appears to play significant role (age, sex, education, number of family members, family planning knowledge and male child preference) was done and it was observed

that sex (p-value= 0.047, O.R. 0.650) [the OR implies that the odds of using contraceptives will be 35% less likely by female sex as compared to males] and male child preference (p-value= 0.035, O.R. 2.074) [OR implies that the odds of using contra-

ceptives by the families not having male child preferences is 100% more likely compared to those with male child preferences] were found to be significantly associated.

## DISCUSSION

Nearly all of the study participants had knowledge about different types of contraceptive methods. Nearly 98% and 95% participants had knowledge about female and male sterilization respectively. Out of the total study population, only 52% were currently using contraceptive methods. DLHS-3 data supports the finding as according to it among the currently married women, the proportion using any modern (IUCD, pills, injectables etc.) method is 54.8 percent.<sup>5</sup> Similar findings were seen in the study by Endriyas et al<sup>27</sup> where contraceptive utilization was 53.3% and Ghike et al<sup>6</sup> who studied contraceptive awareness among married women of rural India and concluded that though knowledge of at least one contraceptive method was wide (almost 100%) among women but still actual practice was very low (35.7%). In a cross-sectional study by Bhasinet al<sup>7</sup> 59.8% study subjects were currently using any contraceptive method. Findings of the study by Saluja et al<sup>8</sup> suggested that 59.2% of total participants were practicing contraception. The proportion of eligible couples practicing family planning methods were 42% and 58% had not adopted any methods according to the study by Vincent et al<sup>28</sup>

Among male and female participants, more number of males used contraceptive method (61%-condom) as compare to females (49%). This might be because condoms are more preferred by people as they are considered to be more safe, free from side effects and easy to use as compared to pills and IUDs. Maximum users (38%) were in the age category of 21-25 years. Modern contraceptive use was more among participants who were literate (69%) as compared to illiterate who preferred traditional methods. Use was seen to be more in persons living in family with more number of family members the possible reason may be more communication and more sharing of knowledge about family planning methods coinciding with study by Bisoi et al (2012)<sup>9</sup>. Presence of family planning knowledge and no male child preference were associated with contraceptive use. The findings of the study by Bhattacharjya et al<sup>10</sup> suggested family panning knowledge and male child wantedness was associated with contraceptive use. Further when multinomial logistic regression was done it was seen that factors like sex and male child preference were found to be significantly (p-value <0.05) associated.

## RECOMMENDATIONS

It is evident from this study that high knowledge on contraception is not matched with the high contraceptive use. Therefore, family planning interventions should pay particular attention to both wives' and husbands' participation in family planning. Further research approaching qualitative method like face to face interview, in-depth interview etc must be used to immerse in depth of women's feeling about the reasons for not using the contraceptive methods.

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