Research Article

Contraceptive needs and practices among married women of reproductive age in rural Maharashtra

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Received: February 07, 2017; **Accepted:** February 28, 2017

ABSTRACT

Background: Control of population is a major concern for the health administrators today. Despite significant advances in contraception, contraceptive use is low. It is essential to know the factors contributing to utilization of contraception. This contraceptive survey aimed at providing the feedback necessary to improve contraceptive use. **Objectives:** (1) To determine the risk of pregnancy among married women of reproductive age (MWRA), (2) to reveal the extent of contraceptive use, and (3) to compare the use of contraceptive methods among women of different age group, educational, and occupational status. **Materials and Methods**: A total of 400 MWRA living in rural area of Sangli district of Maharashtra state interviewed. Information regarding reproductive family history sought. Furthermore, factors related to use of contraceptives were studied. Descriptive analysis of data performed using tests of significance. **Results**: About 276 (69.0% of total MWRA) women are practically at risk of pregnancy referred to as "exposed women." Contraceptive use rate was 43.25%. Most widely used methods were intra-uterine device and female sterilization. **Conclusion:** The method of contraceptive was associated with the different level of education. Influence of working status was not significant in use and non-use of contraceptives. Use of spacing method was more in employed group. Terminal methods preferred more by women having a lower education while spacing method more preferred in better-educated women. Women after age 30 years are more likely to use sterilization while younger women are more likely to use spacing methods.

KEY WORDS: Contraceptive Need; Contraceptive Survey; Reproductive Age; Pregnancy Risk; Contraceptive Use; Intra-uterine Device; Oral Contraceptive Pill; Condom

INTRODUCTION

The rampant population growth has been viewed as the greatest obstacle to the socioeconomic development of country. India's population is projected to reach 1.53 billion by the year 2050, surpassing China. This alarming increase in population is slowing down the socioeconomic development, lowering the quality of life, degrading our environment and putting a further strain on our already overloaded resources.

Access this article online	
Website: http://www.ijmsph.com	**Quick** Response code
DOI: 10.5455/ijmsph.2017.0204228022017	

According to National Family Health Survey-3, in India the prevalence of modern method of contraceptive use is 48.5%, and for all methods, it is 56%, and in urban areas, the prevalence of modern methods of contraceptive use is 55.8%, which is still below the expected rate of 60% to have stable population.[1] Control of population growth is a major concern for the health planner and administrator today. Family planning is recognized as a key intervention for population control. Over the 50 years, there have been significant advances in contraceptive methods; its approaches and services. However, contraceptive practices are no longer in wide use. Sociodemographic factors play an important role in use and non-use of contraceptives.[2] Comparing the use of different contraceptive methods called the "method mix" over a period in different areas and among woman of different sociodemographic background to know

the problem of underutilization of contraception is urgently needed.[3,4] The problem of underutilization of contraception is complicated by deep-rooted religious and other beliefs and attitude and prevailing practices in families. Ideally, a child should be born because it is wanted, not because it cannot be prevented and this can be made possible by the constructive use of contraceptive methods. The old idea of prevention of conception is replace by control of conception.

Although population data at national and international level are available, data at the local level are incomplete and inadequate due to a lack of surveys at these levels. This descriptive cross-sectional study initiated in 2004 to address the answers to research question regarding fertility and contraception among married women of reproductive age (MWRA) group in Tasgaon (Tehsil in Sangli district of Maharashtra state). Keeping in view the above points, this study was designed to determine the risk of pregnancy among MWRA, to reveal the extent of contraceptive use and identifying the different variables which affect the contraceptive use.

MATERIALS AND METHODS

The descriptive cross-sectional study was planned for this study to provide insight into the dynamics of contraception. Data obtained from the primary source based on a representative sample survey. As the issue of contraception is linked to fertility, subgroup of the population practically concern with the fertility process, i.e., MWRA group of 15-44 years, comprise the target population for this study. The sample size for the proposed study was determined in terms of the basic sampling units, i.e., MWRA group (15-44 years). Contraceptive prevalence rate among MWRA group utilized to estimate the sample size. For this study 395 sample size was worked out with an expected prevalence of contraceptive use of 49.3% with a relative precision of 10% at a level of 5% significance. We proposed to study 400 MWRA group.

A complete list of married woman of age group 15-44 years obtained from a family survey register recently completed in June 2003 by the staff of health unit at Tasgaon. The list was serially numbered. A total 5350 women listed in the sampling frame. Of these 5350 women, 400 women selected by simple random sampling method. Data collection based on women's own response to survey questions in questionnaire schedule containing information about family, fertility profile, sociocultural data, and contraceptive use. Predictor variables were predefined. Four female investigators trained in data collection completed the survey within 4 months. The response rate was 100%. Accuracy and completeness of the survey assured by timely monitoring of the whole survey process by chief investigator. Descriptive and inferential analysis of data performed by the use of qualitative and quantitative methods with hypothesis testing using suitable tests of significance. All the outcome variables were predefined.

RESULTS

All 400 respondents categorized into different subgroups depending on the need for contraception as shown in Figure 1. Of all 400 MWRA, 383 (95.8%) are sexually active while 17 (4.2%) are sexually inactive. Of 383 sexually active women, 86 (21.5% of total MWRA) are either pregnant or having lactational amenorrhea and thus currently having no risk of pregnancy. Out of 297 non-pregnant and non-lactating women, 21 (5.2% of total MWRA) are infecund and are not at risk of pregnancy. Thus, only 276 (69.0% of total MWRA) women are practically at risk of pregnancy referred to as "exposed women" while 124 (31.0%) are considered to be currently at no risk of pregnancy.

Table 1 shows that contraceptive use rate can be described as a percentage of various groups among married women age 15-44 years depending on the risk of pregnancy. If all married women age 15-44 years comprise the denominator, then only 43.2% are current users. If denominator is restricted to sexually active women a higher percentage (46.2%) are using contraception. Also if denominator is further limited to only currently sexually active non-pregnant and non-lactating women, the contraceptive use rate increased to 58.2% and it is found much higher (62.7%) when denominator is "exposed women" only who are currently really at risk of pregnancy. Thus larger the denominator in calculation of contraceptive use rate, smaller the percentage of contraceptive users.

Current contraceptive practices as expressed by 400 MWRA presented in Table 2. In this study, 173 (43.2%) of MWRA are currently using some method of contraception. Of the total 400 MWRA, 105 (26.3%) are using terminal methods,

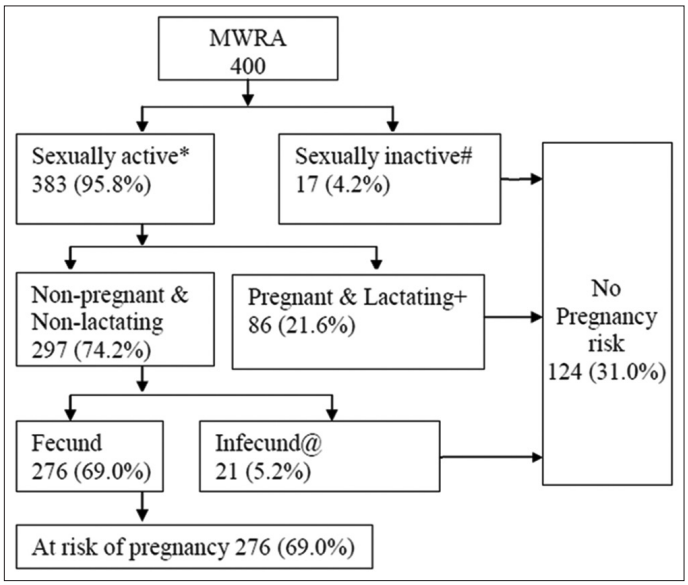

Figure 1: Pregnancy risk among 400 married women of reproductive age (MWRA) in Tasgaon, 2004 (All percentages are among 400 MWRA), reproductive age: 15-44 years; *currently married women living in union; #either widow, divorced or separated; +lactational amenorrhea; @Non contraceptive sterile due to any cause

and 68 (17.0%) are using spacing methods. This difference is statistically significant ($P < 0.01$). Intra-uterine devices (IUD) (6.7%) are the most preferred spacing method followed by condom (5.7%) and oral contraceptives (4.5%). No case of voluntary male sterilization found.

The distribution of various contraceptive methods among users classified by their occupational status is shown in Table 3. Among contraceptive users who reported themselves employed (working productively in-house or outside) are preferring spacing methods more (46.7%) as compared to women doing housework only (37.8%), terminal methods seem to be a better option (62.2%) for women doing housework as compared to working women (53.3%). This difference in contraceptive method use among working and nonworking women group is not statistically significant ($P > 0.05$).

Contraceptive use is influenced by education of the user. Education profile of 173 contraceptive users according to method used is presented in Table 4. 122 (70.5%) of contraceptive users are having better education (secondary school and above) as compared to 51 (29.5%) who are having lower educational status (illiterate and primary educated women). Terminal methods are more preferred (80.4%) by women having lower educational status as compared to (52.5%) women having better education; while more use (47.5%) of spacing methods was observed in better-educated women as compared to low-educated women (19.6%). A significant association ($P < 0.001$) was found between contraption used and education of the women.

Use of contraceptive methods (called as "Method mix") varies with age as shown in Figure 2. Among all users, two peaks observed in the use of sterilization, i.e., at age 20-24 years and after the age 30. Data shows that older women after age 30 years are more likely to use sterilization than other methods while younger women are more likely to use spacing methods (condom, oral contraceptive pill [OCP], and IUD). Use of hormonal methods (i.e., OCP) is major choice in the newly married couples (i.e., in the age group of 15-19 years) while IUD becomes a major choice in the age group of 25-29 years.

DISCUSSION

For the purpose of program evaluation, the entire population of married women of age 15-44 years is taken into account even though this may underestimate the contraceptive prevalence rate. In this study, 276 (69.0% of total MWRA) women are practically at risk of pregnancy referred to as "exposed women." The contraceptive use rate was found to be 43.2%. Most widely used methods were IUD and female sterilization. The method of contraceptive was associated with the different level of education. Use of spacing method was more in employed group. Terminal methods preferred more by women having a lower education while spacing method more preferred in better-educated women. Women after age 30 years are more likely to use sterilization while younger women are more likely to use spacing methods.

Table 1: Contraceptive use rate among 400 married women of reproductive age group by marital status and exposure to risk of pregnancy in Tasgaon, 2004 (n=173)

Marital status and risk of pregnancy	Total	Contraceptive use rate (%)
All married women of age 15-44 years	400	43.2
Sexually active*	383	45.2
Non-pregnant and non-lactating	297	58.2
Exposed women#	276	62.7

*Currently married women living in union, #Sexually active non-amenorrheic fecund woman

Table 2: Current contraceptive use among 400 married women of reproductive age group in Tasgaon, 2004

Contraceptive methods	*n*=400 (%*)
1. Spacing methods	
a. Condom and other barrier methods	23 (5.8)
b. IUDs	27 (6.8)
c. Oral contraceptives	18 (4.5)
2. Terminal methods	
a. Male sterilization	0 (0.0)
b. Female sterilization	105 (26.2)
Total contraceptive use	173 (43.2)

*Percentage among 400 total married women of reproductive age group, IUDs: Intra-uterine devices

Table 3: Method of contraception among 173 users by occupation

Occupation	Contraceptive methods *n* (%)		Total *n* (%)
	Spacing	Terminal	
House work	54 (37.8)	89 (62.2)	143 (100.0)
Working productively	14 (46.7)	16 (53.3)	30 (100.0)

χ^2=0.82, d.f.=1 (Condom, OCP, and IUD grouped into "Spacing method"), P=0.36, IUD: Intra-uterine devices, OCP: oral contraceptive pill

Table 4: Method of contraception among 173 users by education

Educational group	Contraceptive methods *n* (%)		Total *n* (%)
	Spacing methods	Terminal methods	
Lower educational	10 (19.6)	41 (80.4)	51 (100.0)
Higher educational	58 (47.5)	64 (52.5)	122 (100.0)

χ^2=11.76, d.f.=1, P<0.0001

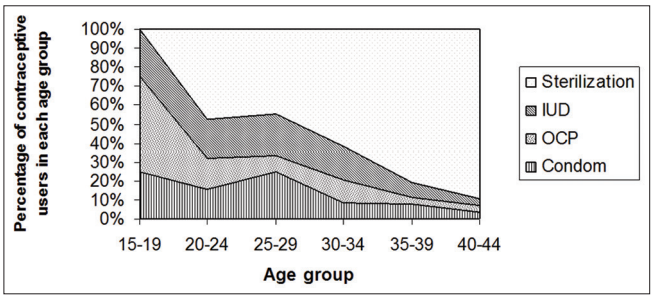

Figure 2: Method of contraception as a percentage of total contraceptive users, by age group

The contraceptive use rate is less as compared to 48.3% in India and 51% in Maharashtra.[5] Terminal methods account for over 70% of effectively protected couples.[5] Use of terminal method in our study was less (60.7%) as compared to 74.7% in India.[5] Although trends in contraceptive method use suggest rising trend from 38.4% in 1993 to 48.3% in 2000, in India <7% of currently MWRA group use the spacing methods (OCP, IUD, and condom). In our study, we reported 17% use of these methods among 400 MWRA. Chattopadhyay[6] reported 12.6% users of spacing method while in a study. In a study conducted in rural area of Tamil Nadu,[7] the use of the three modern spacing methods together accounts for 18% of contraceptive use rate while in another study of Delhi,[8] spacing method accounts for the 45.4% of the use of contraception. Contraceptive method mix compares the use of different contraceptive methods (called 'method mix') among women of different age group, education, and occupation. It is observed in many studies[9,10] that fertility declining with an increase in per capita income in household. Families, where woman are employed receiving income either doing service or self-employment, are more likely to have higher per capita income. However, in this study, the findings are mixed. We observed that the use of spacing method is more in non-employed group. Although the reason for this is not clear, this may be due to other confounders such as education, family structure, and economic status. Furthermore, women who work outside have a greater tendency to use contraceptive than those who work at home. It is not clear whether, on the one hand, women use contraceptive because they are working and so do not want children now or, on the other hand, they work because they are using contraceptives, have fewer children, and so are better able to hold jobs. There is an inverse association between fertility and educational status, as many studies have shown, better-educated women are more likely to use contraception.[7] In our study, we found 70.5% (122 women out of total 173) of contraceptive users having education at and above secondary school. In these better-educated woman use of spacing method was higher (47.5%) while in less educated woman use of terminal method was higher (80.4%). It is obvious that for the use of spacing methods better awareness, skills, and personal responsibility is more required which is possible in better-educated women. On the other hand, terminal method as one time procedure without requiring any skills and responsibility is preferred by less educated women. But due to such differences although fertility may be controlled in less educated women but the spacing between children is not maintained which may affect the child survival and safe motherhood. Furthermore, better-education is beneficial in better utilization of health-care facilities, which are important in uplifting the socioeconomic status of woman, which is supposed to be the best contraceptive method. Comparing the use of different contraceptive methods called the "method mix" among woman of different age group suggest that older women after age 30 years are more likely to use sterilization than other methods while younger women are more likely to use spacing methods (condom, OCP, and IUD).[3] This is not surprising since voluntary sterilization is an irreversible method for couples whose families are complete, whereas spacing methods are the most effective reversible method for a younger woman. Two peaks observed in the use of sterilization, i.e., at age 20-24 years and after the age 30. This may be because of the different prevailing pattern of age at marriage at rural areas. In rural areas one cohort of women of the low education get married at an early age of 18-19 years and complete their families (i.e., 2 children) before the age of 25 years without having adequate spacing and undergo sterilization while another cohort of the higher education women who get married at later age of 22-24 years and complete their families around the age of 30 years. Furthermore, these women prefer to have adequate spacing between children and use spacing method and undergo sterilization at a later age of 30 years. The findings are consistent with the findings of Chattopadhyay et al.[6] who observed the highest use of contraceptive in the age group 25-30 years. In the higher age group due to less perceived risk of pregnancy, woman rely on either using a miscellaneous method or no method at all or some unauthorized ways like Medical Termination of Pregnancy (MTP), thus decreasing the contraceptive use rate after the age 35 years.

As per our Indian culture, women in childbearing age are at risk of pregnancy after her marriage. Many MWRA are in fact not at risk of pregnancy. Some are not sexually active, and others are either pregnant/lactating or in fecund. Thus, measuring contraceptive use as a percentage of currently married woman or women in all forms of marital union can be misleading. In assessing contraceptive use, as a guide to family planning program evaluation, the question arises: Who are the women considered at risk of pregnancy? In addition, it is clear that those women who are at risk of becoming pregnant are the most likely to be using contraceptives. Identification of such women and motivating them to use contraception is the prime challenge of effective contraceptive services.

CONCLUSION

This contraceptive use rate is lagging behind the proposed goals of 5 years plan which aimed at 60% contraceptive

prevalence rate. This contraceptive survey shows that IUD and female sterilization are most widely used methods while the use of condom and OCP is less preferred methods. Furthermore, the issue of male sterilization needs serious attention. Use of contraceptives is independent of working status of woman. In better-educated woman use of spacing method was higher while in less educated woman use of terminal method was higher. Older women after age 30 years are more likely to use sterilization than other methods while younger women are more likely to use spacing methods (condom, OCP, and IUD).

ACKNOWLEDGMENT

Authors express sincere thanks to Dr. Bharati K. Dalvi who helped in collection and compilation of data. Also, authors wish to thank staff of Rural Health Training Center, Tasgaon for their cooperation. Finally, authors will always remain grateful to all respondents for providing the needful information for this research.

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How to cite this article: Tapare VS, Parande MA, Borle PS. Contraceptive needs and practices among married women of reproductive age in rural Maharashtra. Int J Med Sci Public Health 2017;6(6):1090-1094.

Source of Support: Nil, **Conflict of Interest:** None declared.