

Original Research Article

A community-based study to estimate the contraceptive prevalence rate among the women of reproductive age group in rural North India

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ABSTRACT

Background: The utilization of family planning services has improved over the decade, but still the SDG's health target to ensure universal access to sexual and reproductive health care services is yet to be achieved.

Methods: A cross-sectional study was undertaken in the rural field practice area of Department of Community Medicine, Indira Gandhi Medical College, Shimla, Himachal Pradesh, India, from September to December 2019, with sample size of 316. The eligible participants were administered a predesigned, pretested, semi-structured and anonymous interview schedule after taking consent.

Results: The mean age of the participants was 30.2 ± 6.1 years. The modern contraceptive prevalence rate (mCPR) was found to be 67.7% among women of reproductive age group 15-49 years. Male condom 36%, followed by female sterilization 30% were the most common methods preferred.

Conclusions: Besides male condoms and female sterilisation, other methods of contraception were adopted by meagre number of women. Though, the unmet need for family planning was lesser in this study, still, efforts are needed to plunge it, for ameliorating the contraceptive prevalence rate. Also, the availability of basket of contraceptive choices in government sector need sheer assiduity.

Keywords: Contraceptive, Prevalence, Community based

INTRODUCTION

Expanding access to contraception and ensuring that demand for family planning is satisfied using effective contraceptive methods are essential for achieving universal access to reproductive health care services, as called for in the 2030 agenda for sustainable development.¹ Living up to the commitment of the international community to achieve universal access to reproductive health by 2030 requires well understanding and monitoring of key family planning indicators. Contraceptive use and unmet need for family planning are key to understanding profound changes in fertility and to improving reproductive health worldwide. In 2017, 58 % of married or in-union women of reproductive age used a modern method of family planning worldwide, constituting 92 % of contraceptive users.² Among the 1.9

billion women of reproductive age 15-49 years living in the world in 2019, 1.1 billion have a need for family planning.¹

Family planning (FP) programmes impact women's health by providing universal access to sexual and reproductive healthcare services and counselling information. FP also has far-reaching benefits which go beyond health, impacting all 17 sustainable development goals (SDGs).³ During the past few decades, family planning has emerged from whisper in private quarters to the focus of international concern as a basic human right, and a component of family health and social welfare.⁴

India was the first country in the world to have launched a national programme for family planning in 1952. Over the years, the programme has undergone transformation

in terms of policy and implementation. In India according to NFHS-4 the prevalence of contraceptive use among women in the reproductive age is 53.5 %.⁵

An array of factors like individual attributes, resources of household and community in which person lives, socio-cultural mores, behaviour and lifestyle and finally access to health-care services are known to clout the contraceptive use.⁶ But there is dearth of data regarding contraceptive prevalence rate among eligible couples residing in hilly terrain of Northern India. In view of this, the present study was planned to see contemporary trends of contraceptive use and its determinants amongst the rural eligible couples.

METHODS

Study design

A community based descriptive cross-sectional study.

Study population and area

Eligible couples in the rural field practise area of Department of Community Medicine, Indira Gandhi Medical College and Hospital, Shimla.

Study period

4 months (September to December 2019).

Sample size

In a population of 3030, nearly 500 will be eligible couples. Considering contraceptive prevalence rate of 54% (NFHS-4), with 5% margin of error and 99% confidence limits, and a non-response rate of 10% a sample of 313 was calculated. Total sample taken is 316.

Study tool

A predesigned, pretested, semi-structured and anonymous interview schedule was used for the study purpose.

Sampling strategy

The representative sample was selected randomly from the eligible couple register maintained at rural training health centre. The selected subjects were then approached for data collection.

Statistical analysis

Data was collected and entered in microsoft excel spread sheet, cleaned for errors and analysed using Epi info version 7.2.1.0 software. Descriptive statistics were used to summarize the demographic data. Frequencies, percentages and their 95% confidence intervals were used to describe categorical variables. For continuous

variables, mean and standard deviations were calculated. Pearson Chi-square and Fischer exact test was used for univariate association analysis. A two-sided p value of <0.05 was considered as statistically significant.

Ethical considerations

Necessary prior permission was taken from Institute Ethical Committee before the study was conducted.

Exposure variables

Socio-demographic variables like age, type of family, education of participants and their spouse, occupation, socio-economic status, obstetric history and awareness regarding family planning

Outcome variables

Current use of any family planning method. Contraceptive prevalence rate was the percent of eligible couples protected against childbirth by any method of family planning modern or traditional method.⁷

RESULTS

The mean age of 316 participants interviewed was 30.2±6.1 years ranging from 19-48 years. Nearly all participants 99.5% were Hindu by religion, 54.1% were home-maker. Majority of the participants 70.2% were aged less than 30 years and 77.5% of them had middle or higher education. Most 46.2% of the participants belonged to upper middle class and only 4.9% of the families belonged to lower socioeconomic class, according to modified BG Prasad Scale based on consumer price index of July 2018 (Table 1 and 2).

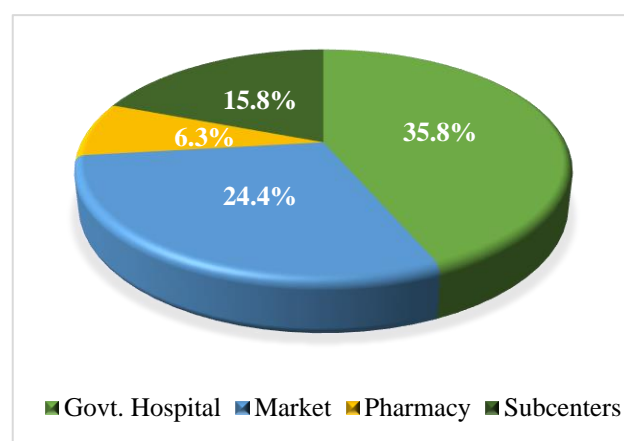


Figure 1: Source of obtaining contraceptive methods.

Of all the participants, 90% have heard about one or the other available family planning methods. However, the modern contraceptive prevalence rate (mCPR) was found to be 67.7% among women of reproductive age group.

The most common method of contraception used was male condom 36%, followed by female sterilization 30%.

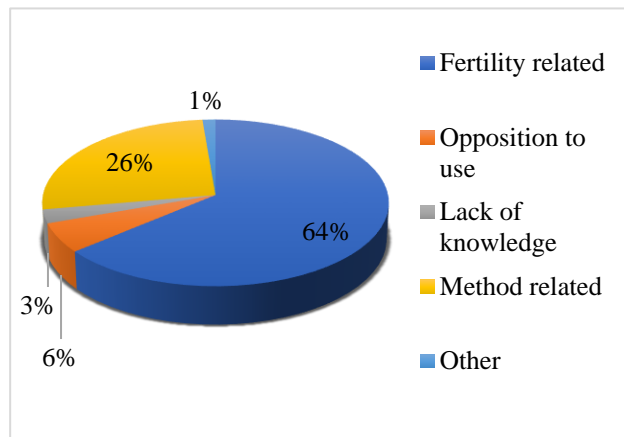


Figure 2: Reasons for not utilising any family planning methods.

Table 1: Distribution of study participants according to socio-demographic characteristics (n=316).

Socio demographic variables	N (%)
Age groups (years)	
15-25	70 (22.2)
26-35	190 (60.1)
36-49	56 (17.7)
Educational status	
Illiterate	12 (3.8)
≤High school	188 (59.5)
>High school	116 (36.7)
Occupation	
Working	82 (25.9)
Agricultural worker	63 (19.9)
Home-maker	171 (54.1)
*Socio-economic class	
Upper class	121 (38.3)
Upper middle class	146 (46.2)
Middle class	29 (9.2)
Lower middle class	11 (3.5)
Lower class	9 (2.8)

*Socio-economic class: as per BG Prasad classification.

Table 2: Distribution of contraceptive use among non-pregnant (n=316).

FP Method used	N (%)
Male condom	115 (36.4)
Female condom	0
Female sterilization	96 (30.4)
IUD	15 (4.8)
Lactational amenorrhea	13 (4.1)
Injectables	5 (1.6)
Pill	3(1)

Table 3: Reasons for not using any contraceptive method among non-pregnant (n=316).

Reasons	N (%)
Fertility related	
Wants more children	43 (13.6)
Hysterectomy done	3 (1)
Opposition to use	
Husband opposed	4 (1.3)
Lack of knowledge	
Knows no method	20 (6.3)
Knows no source	1 (0.3)
Method related	
Fear of side-effects	17 (5.4)
Inconvenient to use	1 (0.3)
Lack of access (too far)	1 (0.32)
Other	
Husband working at different place due to work	1 (0.32)

Table 4: Association of socio-demographic variables and utilization of family planning services (n=316).

Characteristics	Family planning utilization		P value
	Present	Absent	
Age group (years)			
15-25	36 (51.4)	34 (48.6)	* <0.001
26-35	171 (90)	19 (10)	
36-49	49 (87.5)	7 (12.5)	
Education			
Illiterate	6 (50)	6 (50)	* <0.001
≤High school	142 (75.5)	46 (24.5)	
>High school	108 (93.1)	8 (6.9)	
Occupation			
Employed	62 (75.6)	20 (24.4)	*0.033
Agricultural worker	58 (92.1)	5 (7.9)	
Home-maker	136 (79.5)	35 (20.5)	
Education of spouse			
Illiterate	0	5 (100)	* <0.001
≤High school	120 (79.5)	31 (20.5)	
>High school	136 (85)	24 (15)	
Socio-economic status			
Upper class	108 (89.3)	13 (10.7)	*0.005
Upper middle class	107 (73.3)	39 (26.7)	
Middle class	26 (89.7)	3 (10.3)	
Lower middle class	7 (63.6)	4 (36.4)	
Lower class	8 (88.9)	1 (11.1)	

None of them preferred female condoms and traditional method of contraception (abstinence, calendar method or rhythm method, cervical mucus method) (Table 2).

Modern contraceptive utilization was more 57.3% among females aged more than 30 years. Almost two-fifth 41.1% of the modern method contraceptive users obtained their method from public health sector (Figure 1).

The most common reason for not using any contraceptive method was that the woman wanted to conceive 14% (Figure 2 and Table 3).

Family planning methods use among the currently married females was found to increase with the education status of both the participants and their spouses (p value of <0.001). Other socio-demographic variables were also found to be significantly associated with family planning method use (Table 4).

Majority 94.1% of the contraceptive users were those who had two or more children, with prevalence ratio of 0.73 (95% CI: 0.65-0.81 and p value <0.001). The reproductive tract infections were present in nearly 40% of the contraceptive users, but was not significant (Table 5).

Table 5: Association of family planning utilization with the reproductive health variables (n=256).**

Variables	Family planning	
	N (%)	P value
Parity		
<2	112 (68.7)	* <0.001
≥ 2	144 (94.1)	
Reproductive tract infections (RTIs)		
Present	103 (40.2)	0.184
Absent	153 (59.7)	

**Family planning method users were 256 out of 316; *P<0.05 considered statistically significant.

DISCUSSION

The current use of any method of contraception was found in 67.7% of the participants. The most common method of contraception was male condom 37%, followed by female sterilization 30%. 40% of the modern contraceptives were obtained from government health institutes.

Our findings corroborated with that of study of contraceptive use and preferences of young married women of Kerala, where overall, 58% women were currently using any type of contraceptive method, of which 27 (22.8%) women had opted for female sterilization.⁸ Intrauterine device (IUD) was used by only 2% of women and no other modern methods were reported by women.

A study done in rural Madhya Pradesh, found that 70.9% were using contraceptives.⁹ Among currently married women age 15-49, 36% use female sterilization, followed by male condoms 6% and pills 4%.

NFHS 4 survey found that 99% of currently married women age 15-49 knew at least one method of contraception.³ Overall, the contraceptive prevalence rate (CPR) is 54%. Among currently married women, 36% use female sterilization, followed by male condoms 6% and pills 4%. These national level survey findings were in contrast to our study results, where male condom was the most frequently preferred method of contraception. Almost seven in 10 (69%) modern method contraceptive users obtained their method from the public health sector.

The variables found to be significantly associated with the use of any modern contraceptive method were higher education of females and their spouses. 90% of the women utilizing family planning methods were found in the age group of 26 to 35 years.

In contrast, a study in Gorakhpur on determinants of contraceptive use among eligible couples, revealed that the maximum 36% contraception use was seen in the women of age group 35-39 years of age and minimum 7.1% use was seen in 45-49 years.¹⁰ Pal et al in their study on urban slums of Lucknow found that maximum use 75.0% of contraception was seen in the age group 40-44 years.¹¹ The difference in the finding with present study is because of starting use of contraceptives in early age. This may be because of higher literacy status and more awareness about contraceptive use for spacing.

The contraceptive use was found to be significantly associated with the education of the participant, education of their spouses and those belonging to middle class. Further, our study found that 67.7% women used any contraceptive method and 30.2% had reported reproductive tract infection. A study by Wang LY in China, found that 95.2% women used contraceptive methods and 59.8% women had at least one RTI.¹² Comparatively less infections in the participants using any modern contraceptive methods, is because the most of the participants preferred barrier method of contraception. Majority of the infections is reported in IUD users, which were only 4.8% in our study.

Limitations

The questions pertaining to the family planning practices by male partner were not included in the study.

CONCLUSION

The contraceptive prevalence rate was found to 67.7%, higher as reported by NFHS-4 survey. The male condoms and female sterilization were the preferred methods of contraception. Other methods of contraception were adopted by meager number of women. Higher education among participants and their spouse and good socioeconomic status were found to be associated with high contraceptive use. The IEC activity and the cafeteria approach under the national programme may be upsurged, so that the available basket of contraceptives

i.e. the newer methods of contraception and emergency contraception methods reaches the community by and large.

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Conflict of interest: None declared

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