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Knowledge and Adoption of Reversible Contraception Methods in Gujarat: A Situational Analysis

Dr. Shivani Valia, Dr. H. B. Saini

Abstract: ***Aim: In the condition of socio-economical deprivation and limited access to Information, Education and Communication (IEC) tools, there remains risk of unintended pregnancy in rural population. Secondly, despite of research, there is limited knowledge about urban perspective regarding contraception. The present study aimed to assess extent of adoption of reversible contraceptive measures. Methods: 300 women from rural area attending obstetrics and gynaecology clinic of a tertiary care hospital were interviewed after ascertaining their match with inclusion criteria. Patients who had undergone surgical intervention for permanent contraception (tubal ligation or vasectomy) were excluded. Information regarding natural contraceptive methods, male condom, IUDs and the use of oral contraceptive pills was gathered along with reasons for their under/non utilization. Results: Despite 87% overall awareness regarding reversible contraception options, only 37% of participants reported practice of the same. The common reason for no use of natural method (withdrawal method) and condom was lesser physical satisfaction. Social taboos, side effects and compliance issues were the common causes of abstinence from oral contraceptive pills and IUCD. Conclusion: Increased engagement of Frontline Health Workers is needed for convincing the eligible couples for accepting the reversible contraceptive methods. Moreover, advocacy programmes with focus on facts about effectiveness and removal of social taboos are recommended.***

Keywords: Contraception, Gujarat

1. Introduction and Background

Rapid population growth in developing countries like India has become priority policy interest due to its serious consequences related to health, education, economy and societal development. As per recent report by UN Department of Economic and Social Affairs, Population Division, India-the nation with second largest population (1.34 billions)-is projected to have the rise of 1.44 million by 2024 and 1.66 millions in subsequent decades(1). Since independence, India with 30% young age subjects has shown a rapid population rise because of improved healthcare and sanitation facilities, compromised education opportunities(2). Moreover, insufficient knowledge about sex, lack of sex education, negative messages from media leads to unplanned pregnancy through unprotected sex by young adolescent population(3). This not only results in population rise, but also has risk of transmission of STI including AIDS (4).

Cafeteria Approach with "GATHER" as basic steps of counseling is yet to come out from the textbooks and form a part of the clinical practice. Not to talk of CHC, PHC, and the civil hospitals, this scenario is same even at medical colleges.

The whole programme in absence of GATHER approach tends to become a futile exercise even if the contraceptives are supplied free of cost.

Present study aimed to assess the general awareness about reversible contraceptive measures and also to evaluate the extent of their adoption in a tertiary care medical institute.

2. Material and Methods

After approval from the departmental committee of OBGY dept. , SBKSMI&RC, Sumandeep Vidyapeeth Institutional Ethics Committee (SVIEC), Human Research Review Panel (HRRP), a hospital based cross-sectional study was conducted from Jan 2018 to June 2018 at Dept. of Obstetrics and Gynaecology, Dhiraj Hospital, Pipariya. All the women of reproductive age group attending the Outpatient Dept. (OPD) of Obstetrics and Gynaecology at Dhiraj Hospital were taken up for the study after informed consent. Subjects with refusal to consent and those who were identified with permanent surgery for contraception (tubal ligation or vasectomy) were excluded from this study. Being a population study, sample size was not calculated. Reporting quality was maintained with use of recommended STROBE checklist for cross-sectional studies.

Data Collection

The study data was collected using pre-validated questionnaire with multiple choice answers. Translation of study proforma to local dialect was done by interns wherever required. Along with demographic information, basic awareness about contraception related information was captured. Subject specific details on various contraceptive methods' awareness, extent of usage, level of success and reasons for underutilization were captured, which included all four methods: natural, barrier method, oral pills and IUCDs. The collected data was entered by third party data entry operator in MS-EXCEL version 2010.

Data Analysis

After cleaning and two-level verification of the entered data, statistical analysis was performed using EPI INFO version 7.0. Level of adoption and awareness were presented in form of proportion of total population. Association between awareness of contraceptive methods and their adoption with education, socio-economic class, type of locality (settings) and religion was assessed using Chi-Square method. $P<0.05$ was considered to be statistically significant criteria.

3. Results

300 female subjects, who attended the outpatient department of Obstetrics and Gynaecology were considered for the cross-sectional survey. The baseline characteristics for the study subjects were as follows (Table 1):

Table 1: Baseline Characteristics

Baseline Characteristics (n=300)		
Age Group(in years)	**Frequency**	**Percentage**
<21	43	14.33%
21-35	236	78.67%
>35	21	7.00%
Education Level-Mother		
Uneducated	66	22.00%
Primary	162	54.00%
Secondary	72	24.00%
Socio-Economic Class		
Lower	101	33.67%
Upper Middle	143	47.67%
Lower Middle	56	18.67%
Religion		
Hindu	286	95.33%
Others	14	4.67%
Settings		
Urban	73	24.33%
Rural	227	75.67%

Awareness and Adoption about Various Reversible Contraceptive Methods

The most commonly known methods for contraception in the study population were condom (n=255) and IUCD (n=201). (Fig 1).

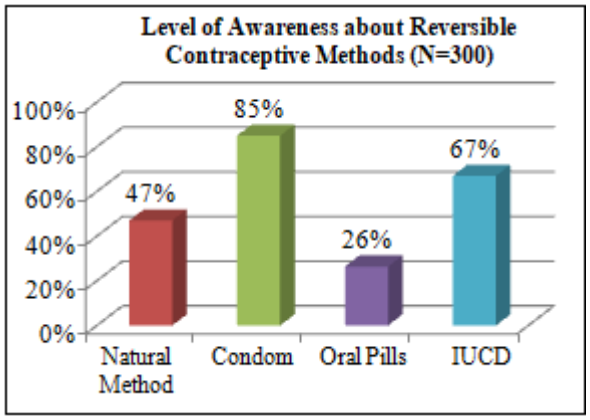


Figure 1: Level of Awareness about Reversible Contraceptive Methods

Despites good level of overall awareness (N=261; 87%), the adoption rate was found to be very minimal (N=111; 37%) for the reversible contraceptive methods of interest. Thirty-two percent population (n=189; 63%) were found not to practise any method for contraception (Fig 2). Individual adoption of the contraceptive methods was as follows:

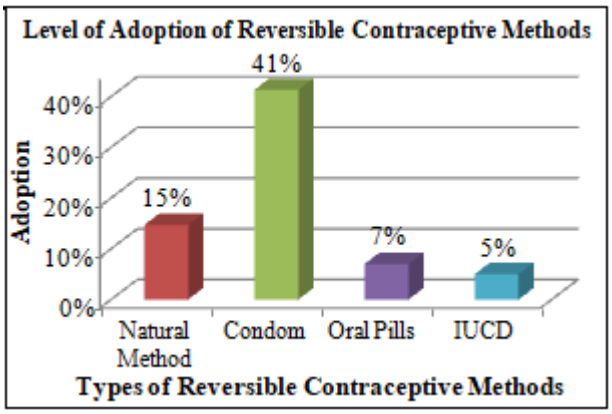


Figure 2: Levels of Adoption of Various Reversible Contraceptive Methods

Influence of Demographic Factors on Awareness regarding Reversible Contraception Methods and their adoption:

Table 2: Association of Awareness about Reversible Contraception Methods and Demographic Factors

	Not Awareness	**Aware**	**P value**
Age			
<21	4	39	0.5481
21-35	31	205	
>35	4	17	
Education			
Uneducated	6	60	0.4173
Primary	21	141	
Secondary	12	60	
SE Class			
Lower	16	85	0.2878
Upper lower	14	129	
Middle Lower	9	47	
Religion			
Hindu	37	249	0.4168
Others	2	12	
Settings			
Rural	7	66	0.1645
Urban	32	195	

Table 3: Association of Adoption of Reversible Contraception Methods and Demographic Factors

	Adoption		
	No	**Yes**	**P value**
Age			
<21	33	10	0.1936
21-35	151	85	
>35	12	9	
Education			
Uneducated	48	18	0.3556
Primary	103	59	
Secondary	45	27	
SE Class			
Lower	67	34	0.8252
Upper Lower	91	52	
Lower Middle	38	18	
Religion			
Hindu	190	96	***0.0435***
Others	6	8	
Settings			
Rural	54	19	***0.0371***
Urban	142	85	

It was found that there was no statistically significant association (P>0.05) of awareness with any of demographic factors (Age, Education level, Socio-economic class, Religion and stay category i.e. rural or urban community (Table 2). However, religion (P=0.0435) and type of setting that the study population belonged to (P=0.0371) were found to be influential factors that significantly affected the level of adoption of either or combination of reversible contraceptive methods (Table 3).

User Reported Reasons for Under Utilization of Reversible Contraception Methods:

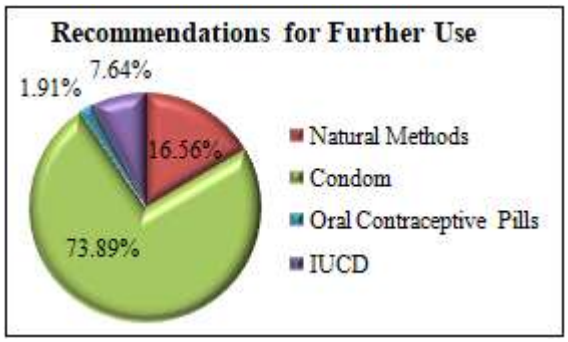
Table 4: User Reported Reasons for Underutilization of Particular Contraception Method

Name of Methods	Reasons for Under/non utilization	Frequency	Percent
Natural (Withdrawal)	Less Satisfaction	194	64.67%
	Stress about possible chances of pregnancy	72	24.00%
	Desire of Parenthood	22	7.33%
	Lack of knowledge	12	4.00%
Condom	Not available at the time of sexual activity	14	4.67%
	Desire to have child	27	9.00%
	Lack of Physical Gratification	224	74.67%
	Fear of failure	35	11.67%
Oral Contraceptives	Compliance issues	227	75.67%
	Desire of motherhood	9	3.00%
	Social taboos (Peer Pressure)	35	11.67%
	Side Effects	16	5.33%
	Previous use led to pregnancy (failure)	13	4.33%
IUCD	Side Effects	120	26.67%
	Requirement of Regular Follow-up visit	115	46.67%
	Desire of motherhood	58	6.67%
	Fear of displacement of Cu-T (as heard from others)	7	20.00%

As reported by study participants, the major reason for not using withdrawal method and condom was lack of physical gratification. Another major reason for under/non utilization of other contraception methods i.e. OCP and IUCD was realized in terms of compliance issues. Psychological factors like fear of failure, past bad experiences with use were found to be attributable to decline in use in about a quarter population. It was also found that the patients had a notion that IUCD was more likely to cause side effects than oral pills (Table 4).

Recommendations for further use

Use of condom was found to be most recommended method with 73.89% users willing to recommend it's use to others, followed by natural methods with 16.56%, IUCD with 7.64% and oral contraceptive pills at 1.91%. (Fig 3).



4. Discussion

Awareness and adoption play major role in ascertaining the effectiveness of any contraceptive method. We interviewed 300 females to study their level of awareness and bottlenecks against optimal utilization of reversible contraception methods. Around half of the total study population (n=162; 54%) was found to have education up to primary level. Jiang and Hardee(8) in their study showed that the level of education is inversely proportional to the the level of fertility.

Inspite of enormous efforts from government, medical and paramedical professionals(9) the fact remains that the adoption rate for the various contraceptive methods is far less compared to the awareness. Present study showed percentage of pooled adoption of only 37% compared to awareness of 87%.

A study by Jahan U et al.(10) reported 93.1% awareness and 65.1% adoption respectively. Another study by Gore S et al. presented more than 50% of adoption of contraceptive practices in both rural and urban areas. The adoption level in our study was found similar to that observed in the study by Upadhye J J et al., which was 42.56%(11). This fact corroborated universal trend of higher knowledge and least adoption of family planning methods. The non-user group reported by Jahan U et al. was adolescent age group, whereas half of the population belonging to non-user category (50.33%) of present study was comprised of young adults (21-35 years).The dominance of rural community with 227 participants out of 300 (74.67%) was observed as compared to urban community (73 out 300 ; 24.33%).

Four contraception options were considered for analysis: 1. Natural Methods 2. Use of Condom 3. Oral Contraceptive pills and 4. IUCD. We found that highest level of awareness was observed regarding condoms(85%) followed by IUCD(67%) , natural methods(47%) and Oral Contraceptive Pills(23%).A similar study by Sahu B et al(12). found that the except natural methods(6.1%), awareness about condom, OCP and IUCD ranged from 75-80% , thereby implying good level of awareness. State fact sheet of Gujarat from National Family Household Survery-4 for 2015-16(13) showed quite different findings with adoption of condom, OCP and IUD about 5%,1.5% and 3% respectively, which indicates even stronger need of advocacy. It was noticed that there was no statistical association between any of demographic factors and awareness. A study by Gayathry D et al.(14) showed, however, significant difference between knowledge scores regarding family planning in rural and

urban population. Moreover, the adoption of birth control methods was found to be influenced by religion and stay, which was in line with the fact of religion's impact on family planning established through study by Rasheed et al.(15). A study by Shaikh S and Dwivedi S (16) presented age of women also to have positive effect on effective use of family planning method, which was different than our study.

Lack of physical gratification was found to be commonly reported by more than two-third study population as reason for not using or under utilization of natural methods and condom. Similar reason was reported for under/non utilization of condom in a review article by Donta et al.(17).

81% of total participants of our study had the reason of non-compliance or side effects for under/non utilization of oc pills which matched the results by Egarter et al. (18). Another study by Westhoff CL et al. also supported potential of oral contraceptives to cause side effects with 60% prevalence(19). In our study, the prevalence of side effects associated with use of oral pills was very less (5.33%). Personal, family, social and peer pressure to have a male child especially in under privileged and less educated subjects may be the reason for not adopting family planning methods.

Our study had a major limitation i.e use of Close Ended Questionnaire: As the information solicited had structured format with pre-determined multiple choices due to methodological constraints. Thus, it did not allow to have comprehensive information regarding perspectives about reversible contraception with in-depth knowledge unlike qualitative approach. Nevertheless, this study provided useful insight in terms of awareness and extent of adoption of reversible methods for contraception.

5. Conclusion

Adequate knowledge with less adoption is a serious policy paradox reflecting from this study. With behavioral counseling, rigorous knowledge dissemination events and increased involvement of frontline public health workers, the adoption scenario of family planning methods could be improved.

The gap between the awareness and adoption can only be reduced if the "GATHER" approach which at present seems to be limited to the textbooks is allowed to come out and be a part of clinical practice with each frontline health workers.

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