



## Determinants of Contraceptive Awareness among Reproductive Women in Mangaluru

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## ABSTRACT

**Introduction:** Contraception is a huge matter of concern in India- a developing country with very high and rapid growing population. Thus it is essential to promote contraceptive knowledge and ensure its uptake. The present study's aim was to evaluate level of awareness of contraception among participants, and assess the factors that influence women's awareness and choice of contraception.

**Methodology:** The cross sectional study was conducted among premenopausal married females aged 21-45 from Government Lady Goschen Hospital, Mangaluru. A semi structured questionnaire was used to collect information. Data was analyzed using SPSS20.

**Results:** The awareness of contraceptive methods was as follows: condom (90.9%), oral contraception pill (51.5%), tubal ligation (60.63%), intrauterine device (55.85%), natural method (22.87%) and hormonal IUD (24.3%). The most important factor affecting the choice of contraception was Health Care Professionals Advice (51.58%) followed by Partner's Opinion (43.61%). Among intrinsic factors, the choice of contraception was most influenced by Convenience (30.85%), followed by Side Effects (26.59%), Duration of Action (21.8%), Non Contraceptive Benefits (11.17%), Reversibility (5.31%) and Cost (4.25%).

**Conclusion:** A reassuring trend was noticed in the factors affecting choice of contraception. More than half the study population was aware of the contraceptive methods widely prescribed in Mangaluru.

**Keywords:** Contraceptives, Awareness, Knowledge, Mangaluru

## INTRODUCTION

Family planning aids "families in achieving the number of children desired with appropriate spacing and timing, ensuring optimal growth and development of each family member"<sup>1</sup>. Family planning aims at reducing maternal, perinatal, and neonatal mortality, decreasing unwanted pregnancies and abortions, preventing sexually transmitted diseases and meeting the needs of people regarding sexuality and reproduction<sup>2</sup>. These aims are achieved by implementing contraceptive methods. Behavioral changes and improved participation in family planning can be brought about by educating

the public about contraception. Gap in reproductive health care and family planning accounts for almost one fifth of the worldwide burden of illness and pre-mature death and one-third of illness and death among women of reproductive age<sup>1</sup>. Multiple pregnancies in a short period of time causes the health risk to rise<sup>1</sup>. Increased use of contraceptives can improve maternal and child health, reduce growth and ensure better availability of resources<sup>2</sup>. A wide range of contraceptives should be available to women of reproductive age so that they can make an informed decision regarding choice of contraception. Choice of contraceptive

method is also influenced by health care policy, organization of relevant services and socio-economic and cultural factors. Thus proper policies should be implemented and family planning facilities should be available to all levels of society. Contraceptive methods is a huge matter of concern in country like India; a developing country with very high and rapid growing population. As per the UN World Population Prospects 2019, The population of India is expected to surpass that of China to become the most populous nation by 2027<sup>3</sup>. Such an increment in population is bound to create scarcity of resources. Hence, control of population becomes a necessity. While the family planning services are available in Mangalore, a little is known about the uptake and use of contraceptive methods among reproductive woman. This study aimed to evaluate level of awareness of contraception among participants, and assess the factors that influence women's awareness and choice of contraception.

## METHODOLOGY

The present study was across-sectional survey carried in Government Lady Goschen Hospital, Mangalore. The study population was married female patients, aged 21-45 years, who had not attained menopause, who presented to the Obstetrics and Gynecology Department of Government Lady Goschen Hospital, Mangalore, between December 2016 - July 2017. Ethics approval was obtained from the Institutional Ethics Committee.

A semi-structured questionnaire including socio-demographic variables and questions to assess the awareness and knowledge of the contraceptive use among the women being interviewed. A participation information sheet was provided to the participants explaining them the entire nature, purpose and importance of the study. Written informed consent was obtained from all the participants before conducting the survey. The participants were interviewed on the basis of questionnaire to assess their knowledge, use of contraceptives and factors determining the same. The information collected was kept confidential.

An original questionnaire was prepared for the study. The questions were styled and ordered to extract information about women's contraceptive preferences, knowledge and attitudes. It was evaluated in five parts- 1. Backgrounds and Characteristics of Participants, 2. Knowledge about Contraceptive Methods- namely Withdrawal method, Safe Period, Breastfeeding, Condom, Vaginal Ring, Oral Contraceptive Pills (OCPs), Implants, Patch, Intrauterine Contraceptive devices (IUCD), Levonorgestrel releasing Intrauterine Device (LNG-IUD or hormonal IUD), Injectable contraceptive, Tubal

ligation. For each of the above mentioned methods, we assessed the participant's level of awareness by asking her if she had heard of the method before. Subsequently we asked her four true/false questions pertaining to the method she was aware of, to assess the basic knowledge and myths on the method. Participants were considered to have good knowledge about the method if they gave atleast 2 out of 4 correct answers, were considered to have poor knowledge if they gave less than 2 answers.

Sources of family planning information were assessed such as- Health care centers, Media (TV, Newspaper), Husband, Friends and Neighbors. The women were also asked whether they would like to obtain more information about contraceptive methods. 3. Current Contraceptive Use 4. Factors affecting current use- Intrinsic factors (i.e duration of action, efficacy, side effects, non-contraceptive benefits, cost, reversibility, convenience of usage) and extrinsic factors (i.e. socio-cultural influences) that could affect contraceptive choice were studied. Participants were asked to select the factors that influenced their choice of contraception. 5. Participation of spouse in family planning.

The sample size was calculated based on previous study where in 70%<sup>4</sup> of the women in reproductive age group had awareness regarding contraception. Taking 10% relative precision and 95% confidence level, the sample size was found to be 171. Adding 10% as non-response error, final sample size was calculated to Mangaluu.

## RESULT

A total of 188 women participated in the study. Table 1 shows the demographic details of the study population. Table 2 shows obstetric details and fertility intention of patient. Table 3 shows the association between awareness of contraceptive methods and selected characteristics. Women <25 years had less awareness about family planning (35.89%); having heard of >3 methods of contraception whereas the percentage of women aware of >3 contraceptives increases in the age group of 25-35 years (42.7%) and more than 35 years age group (66.67%) progressively. Our survey population included 87.2% Hindu, 11.2% Muslim and 1.6% Christian. Most of the participants in the study are educated only up to secondary school.

The most important factors affecting the choice of contraception was Health Care Professionals Advice (51.58%). The second most important factor was Partner's Opinion (43.61%). Therefore education of partner regarding the choice of contraception is essential.

**Table 1: Sociodemographic characteristics of the participants (N=188)**

Sociodemographic Characteristics	Participants (%)
<b>Age of Participant (In Years)</b>	
<25	53 (28.2)
25-35	117 (62.2)
>35	18 (9.6)
<b>Place of Origin</b>	
Dakshina Kannada	129 (68.6)
Outside Dakshina Kannada	59 (31.4)
<b>Religion</b>	
Hindu	164 (87.2)
Muslim	21 (11.2)
Christian	3 (1.6)
<b>Occupation of Participants</b>	
Unemployed	142 (75.5)
Unskilled	15 (8.0)
Semiskilled	11 (5.9)
Skilled	10 (5.3)
Clerical, Shopkeeper, Farmer	7 (3.7)
Semi Professional	3 (1.6)
<b>Age at Marriage (In Years)</b>	
<25	135 (72)
25-35	50 (26)
>35	3 (3)
<b>Educational Status of Participant</b>	
Upto Secondary School	118 (62.7)
Above Secondary School	70 (37.3)

**Table 2: Obstetric details and fertility intention of participants (N = 188)**

Obstetric details & fertility intention	Participants(%)
<b>Number of live births</b>	
None	89 (47.3)
≥1	99 (52.6)
<b>Abortions</b>	
None	139 (73.9)
≥1	49 (26.1)
<b>Fertility Intention</b>	
Delayers	10 (5.31)
Spacers	120 (63.82)
Stoppers	56 (29.78)
No Response	2 (1.06)

Religious Practices (2.12%) and Peer Influences (2.65%) have a very less contribution in choice of contraceptives. Among the intrinsic factors, the choice of contraception was most influenced by Convenience (30.85%), followed by Side Effects (26.59%), Duration of Action (21.8%), Non Contraceptive Benefits (11.17%), Reversibility (5.31%) and Cost (4.25%).

The practice of contraceptive methods was very poor among the women of Mangaluru with only 10.1% of them using a contraceptive method. In the western world the most commonly used method is OCP whereas the most commonly adopted method in the current study is Tubal Ligation (55.5%), followed by condom (22.2%). This is likely because the current study was conducted in a government

hospital where the surgery is done free of cost. Only 15.43% of the women said that they require more information regarding contraceptive methods. The most common sources of information regarding contraceptives are media followed by health centre. Family and friends were found to be least important source of information.

As shown in Table 4, the maximum awareness is for condoms, second maximum awareness for Tubal Ligation, and third being IUD.

The awareness of contraceptive methods was more among women who had at least 1 live birth (51.5%) as compared to those without any children (28.08%). The knowledge about various contraceptive methods is as shown in table 5.

Of the 97 people who were aware of OCPs only, 24 (25%) knew that if a single pill is missed, the pill should be taken immediately on remembering and the second day's pill continued as usual. Only 9 out of 97 people knew that if 2 OCPs are missed, an alternative method of contraception should be used.

Of the 17 participants who were aware of exclusive breastfeeding period being a period of contraception, 10 said that exclusive breastfeeding acted as a contraceptive method for 6 months, 2 said it acted as contraception for 1 year and 5 said it acted as contraceptive for 2 years.

## DISCUSSION

India being the second most populous country in the world, contraceptive awareness and usage is of prime importance. A number of small scale studies conducted in parts of India have shown that insufficient knowledge about family planning methods was a major cause of the poor practice of family planning in the country<sup>5,6</sup>. All the women in this study were aware of atleast 1 contraceptive method, however the knowledge about the usage, pros and cons was lacking among most women.

This study showed that the awareness and knowledge about condoms was maximum among the participants, similar to the findings of studies conducted on Singaporean, European and American women<sup>4,7</sup>. This is because of the widespread condom awareness and promotion campaigns initiated by government of Karnataka under Karnataka State AIDS Prevention Society. The second maximum awareness is for Tubal Ligation (60.6%), this could be because of the counseling done by the doctors. This pattern is similar to that seen in another study conducted in Patna<sup>8</sup> where awareness was maximum for condoms and female sterilization (96.67% for each) followed by IUCD (87.33%).

**Table 3: Association between the awareness of contraceptive methods and selected characteristics (N =188)**

Characteristic	Respondents aware of ≤ 3 methods	Respondents aware of > 3 methods	P Value
<b>Age of Participants</b>			
<25	39 (73.5)	14 (26.5)	0.008
25 – 35	67 (57.2)	50 (42.8)	
>35	6 (33.33)	12 (66.67)	
<b>Live Births</b>			
None	64 (71.91)	25 (28.09)	0.001
≥ 1	48 (48.48)	51 (51.52)	
<b>Abortions</b>			
None	87 (62.14)	53 (37.86)	0.22
≥ 1	25 (52.08)	23 (47.92)	
<b>Education Status</b>			
Upto Secondary	77 (65.2)	41 (34.8)	0.03
Above Secondary	35 (50.0)	35 (50.0)	
<b>Fertility Intention*</b>			
Spacing	80 (66.6)	40 (33.4)	0.009
Delaying	7 (70.0)	3 (30.0)	
Stopping	24 (42.8)	32 (57.2)	

\*Only 186 out of 188 respondents answered this question.

**Table 4: Awareness and knowledge of contraceptive methods among the participants**

Contraceptive Method	Awareness (N=188)	Good Knowledge*
Condom	171 (90.9)	82 (47.9)
IUCD	105 (55.85)	21 (20.0)
OCP	97 (51.5)	14 (14.4)
Tubal Ligation	114 (60.63)	45 (39.4)
Natural Method	43 (22.87)	13 (30.2)

\*Participants who answered ≥ 2 out of 4 questions correctly were considered to have good knowledge of the contraceptive method (Condom, IUCD, Tubal Ligation, Natural Method). People who answered 1 out of 3 questions were considered to have good knowledge about OCPs.

Varied factors affected the choice of contraception among women. Healthcare professional’s advice was found to be the most important determinant (51.5%) followed by partner’s opinion (43.6%). This is a step in the right direction as the choice is not affected by religious influences, as seen in other studies<sup>9,10</sup>. Religious influence was a determinant among only 2.127% of the women. However these results cannot be extended to the general population of Mangaluru because of the unequal representation of the religious communities. The significant role of Partner’s opinion implies that the education of both husband and wife, regarding contraceptive choice is essential. 53.2% of the participants said that their husbands were in favour of family planning. This is a slightly better result than that of Karachi where only 41% of the husbands supported family planning<sup>11</sup>. The most important intrinsic factors affecting choice of contraception were convenience (30.8%) and side effects (26.5%) whereas cost was found to be the least important determinant (4.2%), which is reassuring. The con-

sideration of side effects as an intrinsic factor in choosing a contraceptive method was also seen in many studies<sup>12,13,14</sup>, thus it is essential to provide couples detailed knowledge about the pros and cons of each contraceptive method, in order to dispel any irrational concerns/myths they may be harboring.

The most important source of contraceptive information was media, followed by health centres. This is a favourable trend from prior studies which showed social circle to be the major source of information<sup>13, 15</sup>, as mass media plays a significant role in encouraging the acceptance of contraception<sup>16</sup>. As per our study only 53% of the participants said that their husbands were in favour of family planning.

The practice of contraceptive methods was very poor among the women of Mangaluru with only 10.1% of them using a contraceptive method- a poor figure as compared to a study conducted in Bangalore<sup>14</sup> wherein 52% of the women used any method of family planning. The most commonly availed contraceptive method in the present study was Tubal ligation, followed by condoms. As per NFHS IV Survey 36% of women had undergone female sterilization, while 5.6% of the women used condoms<sup>17</sup>. The usage pattern observed in our study was similar to that seen in studies performed in various parts of the country<sup>14, 18</sup>.

The fertility intention of 64.5% of the participants is spacing as per our study. Therefore, counselling of inter conceptional methods of contraception methods is essential. In addition, counselling regarding sterilisation should also be done after completion of family. The present study had limitations. This study showed that out of the 188 participants, only 19 (10.1%) used any form of contraception. This is despite Mangalore being a fairly educated population. This could be because of the reserved nature of the women regarding contraception.

The population of India is expected to cross that of China soon. Thus efforts are needed to educate the rural as well as urban population regarding contraceptive methods and reproductive health. Considering the low usage of contraceptive among the study population, it is essential to not only make people aware of the various contraceptive methods, but also educate them about the side effects, duration and efficacy of the various contraceptive methods so that they can make an informed decision about choice of contraception. During the course of the study it was found that there are many misconceptions regarding contraceptive methods such as vasectomies and condoms- reduce sexual pleasure/masculinity, or IUCDs increasing risk of abortion.

**Table 5: Knowledge about Condom (N=171)**

Question	Participants' response (Percentage)		
	Yes	No	Don't Know
Knowledge about Condom (n=171)			
Protects against STD	71(41.5)	81 (47.3)	83 (48.5)
Protects against HIV	83 (48.5)	16 (9.3)	72 (42.1)
Condoms can be used more than once	16 (9.3)	60 (35.08)	95 (55.5)
Condoms can tear during intercourse	72 (42.1)	10 (5.8)	89 (52.04)
Knowledge about Tubal Ligation (n=105)			
Can be done in males as well as females	61 (58.09)	17 (16.19)	37 (35.23)
Is it irreversible	33 (31.42)	41 (39.04)	40 (38.09)
Protects against STD	21 (20.0)	21 (20.0)	72 (68.57)
Can decrease sexual desire	12 (11.42)	36 (34.28)	66 (68.57)
Knowledge about Intrauterine Device (n=105)			
Protects against STD	35 (33.33)	18 (17.14)	52 (49.52)
Can be self inserted	9 (8.5)	73 (69.50)	23 (21.9)
Intrauterine device can fall out	9 (8.5)	36 (34.28)	60 (57.14)
Protects against HIV	21 (20.0)	13 (12.38)	71 (67.61)
Knowledge about OCP (n=97)			
Can be used as emergency contraception	23 (23.7)	48 (49.48)	26 (26.80)
Any use other than contraception	10 (10.30)	54 (55.67)	33 (34.02)
Protection against STD	19 (19.5)	13 (13.40)	65 (67.01)
Knowledge about Natural Methods of Contraception (N=43)			
Are there any side effects	5 (11.62)	26 (60.46)	12 (27.90)
Is this the least effective method	25 (58.13)	9 ((20.93)	9 (20.93)
Does it provide protection against STD	9 (20.9)	17 (39.53)	17 (39.53)
Is breastfeeding a method of contraception?	17 (39.53)	13 (30.23)	13 (30.23)

These have to be dispelled by counseling of both partners. Not only married couples, but adolescent children should also be taught about the menstrual rhythm (natural contraceptive method) and other methods of contraception, so that they can lead a healthy sexual life and avoid late abortions.

## CONCLUSION

This study showed fairly good awareness about contraceptive methods among the participants. Mass media plays a significant role in moulding the society's lifestyle, by making them aware of the health and social issues around them. The role of social media was observed in our study as well. Thus mass media programs aimed at spreading awareness regarding family planning among all strata of society, should be given an impetus. The attitude of the women towards family planning was found to be favorable. However factors like concern about side effects, inconvenience of usage are associated with reduced uptake of contraceptive methods. Thus it is essential for health care providers to counsel both husband and wife regarding the various contraceptive methods available to them, as per their fertility intention. This will not only help in improving the awareness, but also the knowledge of couples regarding the various contraceptive options available to them.

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