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Original Research Article

## A study of knowledge, awareness, and acceptance of contraception among reproductive age women at tertiary care hospital, Ahmedabad

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### ABSTRACT

**Background:** India is projected to be the most populous country according to United Nations' report; therefore, the knowledge and awareness of contraceptive methods is of utmost important for small family norms and to increase inter-pregnancy interval, so that we can achieve optimum maternal and child outcomes. This study was conducted to assess knowledge, awareness, and acceptance of contraceptive methods among reproductive-age women during Corona pandemic.

**Methods:** A prospective observational questionnaire-based study involving 513 women belonging to the 15-49 years of age group were interviewed with consent. This was a knowledge, attitude and practice (KAP) study regarding socio-demographic profile, knowledge, awareness, and acceptance of the contraceptive method.

**Results:** Statistical analysis of data was done by using chi-square and percentage. Out of 513 participants, 63 participants were not using any method of contraception. Barrier method is the most commonly preferred method of contraception. There was significant association of education of women and husband, occupation with usage of contraception ( $p < 0.001$ ,  $p = 0.016$  and  $p < 0.001$ ). During corona pandemic acceptance of tubal ligation had taken a hit.

**Conclusions:** During corona pandemic barrier method and oral contraceptive pills were preferred methods. In comparison with pre-COVID era data, tubal ligation was least preferred method. Acceptance of IUCD and Injectable contraception remained same. Higher education level and better financial status had correlation with increased awareness and acceptance of contraceptive methods.

**Keywords:** Contraception, Corona pandemic, Family planning

### INTRODUCTION

Family planning is promoted to address the reproductive health needs of men and women, as well as the crucial challenge of rapid population increase.<sup>1</sup> Family planning is essential for promoting the wellbeing and autonomy of women, their families, and their communities.

Among the 1.9 billion women of the reproductive age group (15-49 years) worldwide in 2019, 1.1 billion require family planning.<sup>2</sup>

Family planning and contraception enable people to make informed choices about their sexual and reproductive health and create an opportunity for women for enhanced education and participation in society, including paid employment.<sup>3</sup>

India had more than 30.9 million cases of COVID-19. Research conducted by the United Nations sexual and reproductive health agency (UNFPA) projects that more than 47 million women could lose access to contraception leading to 7 million unintended pregnancies as a result of the COVID-19 crisis.<sup>4</sup>

Rationale of our study was to find out knowledge, awareness, as well as acceptance of contraception among the reproductive age women amidst the COVID-19 pandemic.

We had three main objectives for this study: To assess the knowledge, awareness, and acceptance of temporary and permanent contraceptive methods among reproductive-age women (15-49) years, to find out the significant association between knowledge, awareness, and acceptance with selected demographic variables and was there any change in the contraceptive practices during Corona pandemic due to change in acceptance as per past records available.

## METHODS

The study proposal was approved by institutional ethical committee.

The study was conducted at GCS medical college hospital and research center. Participants were recruited from the outpatient clinic of the department of obstetrics and gynaecology. A sample of 531 participants was taken in the study belonging to 15-49 years of age. Computer generated randomisation was done to select the subjects. The study was carried out from November 2020 to April 2021.

Inclusion criteria were patients who are in the reproductive age group (15-49 years) and were willing to participate. Exclusion criteria were patients who were not willing to participate and patients with history of psychiatric illness. We adopted an interview-based study. The questionnaire was administered among those who provided informed consent. Data was collected using a semi-structured interview schedule.

Data on knowledge, attitude, and contraceptive practices were collected using a modified version of a questionnaire

used in national family health survey. Statistical analysis was done by IBM SPSS 20 software.

## RESULTS

Household income of 60% of participants above ten thousand rupees per month (Table 1).

Most of the participants were primipara (57.8%) (Table 2).

Out of all participants (n=22, 4.1%) had undergone medical termination of pregnancy. Around 10 patients were not having Contraceptive knowledge, in 7 patients lack of accessibility to contraceptive devices was the reason. Five patients had financial reasons (Table 3).

Results indicate that a good number of participants had awareness towards family planning methods. More than half of the participants said that the benefits of contraception outweigh the negative effects (70.5%).

Despite a positive attitude towards contraception, the practice of contraception is limited by the attitude of husband and family practices.

As compared to data of pre-COVID era from same hospital acceptance of tubal ligation has decreased during study period. Among all the participant's Barrier contraception (39.7%) was most commonly used, followed by oral contraceptive pills (33.7%) and IUCD (30%). IUCD insertion rate has remained same over period of time (Table 4).

There appeared to be correlations between education level and occupation with knowledge ( $p \leq 0.001$  and  $p \leq 0.001$  respectively). Apart from education and occupation level, parity was also correlated with the usage of contraception ( $p \leq 0.001$ ).

**Table 1: Sociodemographic profile of study participants, (n=531).**

Variables	Frequency	Percentage (%)
Age of patients (Years)	15-20	2.4
	21-25	41.6
	26-30	49.5
	31-35	6.4
Education of women	Primary	8.1
	Secondary	55.9
	College	36
Education of spouse	Primary	2.6
	Secondary	49
	College	48.4
Occupation of women	Unemployed	73.8
	Employed	26.2
Religion	Hindu	91
	Muslim	9

**Table 2: Distribution of participants on basis of obstetric history, (n=531).**

Variables		Frequency	Percentage (%)
<b>Parity</b>	1	307	57.8
	2	196	36.9
	>2	21	3.9
<b>Abortion</b>	0	509	95.9
	1	22	4.1

**Table 3: Co-relation of knowledge and acceptance of various methods, (n=531).**

Out of 531 for each method	Knowledge of particular method frequency (%)	Ready to accept a particular method frequency (%)
<b>Barrier</b>	473 (89.1)	211 (39.7)
<b>Oral contraceptive pills (OCP)</b>	313 (58.9)	179 (33.7)
<b>Intra uterine contraceptive device (IUCD)</b>	380 (71.6)	159 (30)
<b>Lactational amenorrhoea method</b>	232 (43.7)	0
<b>Injectable progesterone</b>	174 (32.8)	17 (3.2)
<b>Tubal ligation (TL)</b>	236 (44.4)	74 (13.9)
		Not ready to accept any method=63 (11.9%)

**Table 4: Co-relation of socio-demographic profile of subjects based on usage of contraception, (n=531).**

Variables	Usage of contraception		$\chi^2$	P	Significance/ Non significance
	Yes	No			
<b>Age (years)</b>					
15-20	11	2	Yate's $\chi^2=0.165$	0.983	NS
21-25	196	25			
26-30	230	33			
31-35	31	3			
<b>Education of women</b>					
Primary	43	0	Fisher's exact=17.176	<0.001	S
Secondary	248	49			
College	177	14			
<b>Education of spouse</b>					
Primary	14	0	Fisher's exact=7.694	0.016	S
Secondary	219	41			
College	235	22			
<b>Occupation of women</b>					
Working	329	63	Fisher's exact=23.346	<0.001	S
Not working	139	0			
<b>Religion</b>					
Hindu	424	59	Yate's $\chi^2=0.313$	0.575	NS
Muslim	44	4			
<b>Parity</b>					
0	0	7	Fisher's exact=61.032	<0.001	S
1	275	32			
2	182	14			
>2	11	10			
<b>Live birth</b>					
0	0	7	Fisher's exact=44.419	<0.001	S
1	291	32			
2	154	14			
>2	23	10			

Around 20% of participants were unaware of benefits of contraception and approximately 9.5% of participants cited adverse side effects with using contraceptive measures

## DISCUSSION

World health organization has defined family planning as, 'a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, to promote the health and welfare of family groups and thus contribute effectively to the social development of a country'.

The present study aimed to assess the knowledge, attitude, and practice of contraceptive methods during Corona pandemic, in the local population and changed contraceptive practices during COVID era. As compared to data of pre-covid era from same hospital acceptance of tubal ligation has decreased during study period. Among all the participant's Barrier contraception (39.7%) was most commonly used, followed by Oral contraceptive pills (33.7%) and IUCD (30%). IUCD insertion rate has remained same over period of time. Despite a positive attitude towards contraception, the practice of contraception is limited by the attitude of husband and family practices. There was a significant association between contraceptive use and education status.

Literate women had higher contraceptive usage. In this study, with increasing age, educational status and family income, contraceptive acceptance was higher. A study done by Medina et al had similar results (33%).<sup>5</sup>

Health care professionals were the major source of information for opting contraceptive methods among participants (64.4%) followed by social media and family members. Nansseu et al had similar views in their study, in which primary health care physicians were cited as the main sources of information.<sup>6</sup> Contrarily, friends or media-both printed and electronic, were the main sources of information reported by other authors. This finding percentage was lower than a study conducted in Jimma zone, Southwest Ethiopia, and another study done in Rohtak district, India.<sup>7,8</sup> However, the findings were higher than a study conducted in Northwest Ethiopia in 2018.<sup>9</sup>

Furthermore, during pandemic most subjects cited primary health centres (91.44%) as places to access contraceptive services. Therefore, our primary health care providers have a key role in improving women's knowledge of family planning and can give correct advice about contraception.

In our study, participants had positive attitude towards contraception, 70.5% of subjects agreed that the use of contraception is beneficial. Also, 74.41% of them told that contraception can be used for birth spacing. This result was similar to the study conducted by Sreytouch, which stated

that women had a better understanding of the relationship between family planning and their health, children's health, and overall quality of life.<sup>10</sup>

A qualitative study conducted in Phnom Penh city, Cambodia, confirmed that if one reduces fertility, there will be fewer children and it would be easier to earn a living.<sup>11</sup> Another positive attitude was seen in subjects who mentioned that they would like to use contraception after delivery. This would motivate women to practice family planning using contraceptive methods. An analysis from Odimegwu showed that women who approved of family planning were twice as likely to be using contraceptives compared with those who disapproved of contraceptive use.<sup>12</sup>

Educational level and occupation were correlated with both knowledge and attitude scores. Srivastav et al mentioned that as education increased, awareness of contraception also increased.<sup>13</sup> Hence, the government needs to emphasize education to support a successful family planning program; in fact, knowledge of family planning programs must be incorporated into the study curriculum. Meanwhile, the number of parity paralleled with attitude and practice scores. World health organization recommends that countries should develop innovative strategies for ensuring easy accessibility of information and contraception methods by as many eligible people as possible, during this period by increasing the use of mobile phones and digital technologies.<sup>14</sup>

As per the study by Jasmine et al data suggests that even prior to the COVID-19 crisis, a high rate of women had unmet need for contraception. With the additional strain imposed by COVID-19, populations within an already burdened healthcare system were more vulnerable.<sup>15</sup>

A study by Wood et al showed that contraceptive use among women in need increased significantly during pandemic time.<sup>16</sup> Though our study had not covered pre-covid time, but data from our health centre showed that demand of contraceptive measures increased during pandemic. Comparison with pre-COVID data showed that tubal ligation procedures reduced drastically during pandemic.

During Corona pandemic barrier method and oral contraceptive pills had higher penetration as preferred method. In comparison with pre-COVID era tubal ligation was least preferred method. Acceptance of IUCD and injectable contraception remained same. Government should promote and make temporary contraceptive measures available easily during Corona pandemic.

Due to fear of COVID infection, there is reluctance for tubal ligation so there should be a greater emphasis on spacing methods: Interval and post-partum IUCD training, Strengthening fixed day IUCD services. By addressing social determinants such as education, delay age at

marriage, etc. through communication and by advertisement campaign awareness and acceptance can be increased. There is a need for counselling about family planning among pregnant women to improve the knowledge, which will subsequently develop a better attitude and practice toward the use of contraception.

### Limitations

We believe that data from the pre-COVID era about participants' perception was not available so it could be limitation of the study.

### CONCLUSION

During Corona pandemic barrier method and oral contraceptive pills were preferred methods. In comparison with Pre COVID era data, tubal ligation was least preferred method. Acceptance of IUCD and Injectable contraception remained same. Higher education level and better financial status had correlation with increased awareness and acceptance of contraceptive methods. More motivation and awareness by healthcare providers should be provided to promote acceptance of contraception in eligible couples.

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