

## Evaluating the Knowledge, Attitude, and Perception of Medical Interns Regarding Contraception in a Tertiary Care Centre

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### Abstract

Maternal mortality is one of the significant burdens requiring appropriate measures including family planning methods to control post-partum morbidity and mortality. The early age of marriage among women is accompanied by early pregnancies also contributes to maternal mortality. Knowledge about contraceptive usage could prevent such incidences. This study aimed to evaluate the knowledge, attitude, and perception regarding contraceptives among medical interns in our college. This cross-sectional questionnaire study was done on 60 house surgeons (interns), at MVJ Medical College and Research Hospital, Hoskote, using a validated questionnaire that consisted of 22 questions, including MCQs and case scenarios to assess their knowledge, perception, and attitude about contraceptive methods. Data were analyzed in the form of percentages. Among 60 interns, 36 were females, and the majority of students were from urban backgrounds. About 73.3% of interns had adequate knowledge about various contraceptive methods and their usage. The interns have a perception that illiteracy, lack of awareness and social, and religious values are major hurdles for contraceptive usage and have an attitude that doctors are most suitable to give information regarding contraceptive methods. Considering medical interns as future physicians and their responsible role in counseling about contraceptive usage in effective family planning, they need to have a positive attitude with fair knowledge and perception about the contraceptive methods which can be achieved by educating them early in their academic carrier

**Keywords:** Maternal mortality, Contraception, Family Planning, Interns

## Introduction

Contraception is the act of preventing pregnancy intentionally by using various medications, devices, sexual practices, and surgical procedures. Contraception gives a woman control over her reproductive health and the capacity to plan her family.<sup>1</sup> India is one of the most highly populated countries, maternal mortality is a remarkable problem for decades hence there is always an unmet need for family planning. Maternal mortality refers to deaths that occur as a result of problems during pregnancy or childbirth. According to United Nations' inter-agency estimates, the global maternal mortality ratio fell by 38% from 2000 to 2017 — from 342 to 211 deaths per 100,000 live births.<sup>2</sup>

According to the recently issued Sample Registration System (SRS), 2015-2017 bulletin for MMR, India's MMR has fallen from 130 per 1 lakh live births in 2014-2016 to 122 per 1 lakh live births in 2015-2017.<sup>3</sup> Unsafe abortion is one of the primary causes of death among women who become pregnant unintentionally due to a lack of contraceptive knowledge which can be prevented by comprehensive sex education.<sup>2</sup>

“Every woman has a right to have a planned parenthood.” Contraception is used not just to prevent unexpected births, but also to improve their own and their families' health.<sup>4</sup> Increased access to contraception is associated with a reduction in mother and infant mortality, however, the greatest barrier for women to acquire appropriate and safe contraception is a lack of qualified healthcare practitioners and personnel.<sup>5</sup>

In India today women have access to the latest safe and affordable methods of contraception which are available in all public health sectors. To give women credible information, healthcare personnel must have adequate

knowledge of contraceptive methods and counseling training skills.<sup>6</sup> In addition, research conducted in India found that only 58% of young women use contraceptive methods.<sup>7</sup> The competence of healthcare professionals in contraceptive methods is one of the major barriers that need to be addressed to increase the adoption of contraceptive methods.<sup>6</sup>

The medical interns are future physicians and considering their role as contraceptive counselors, limited information is available about their opinion on contraceptive methods, use, and counseling. The present study may enable curriculum designers some new ideas for improving medical education courses in contraceptive counseling to lower maternal mortality. Our study aims to evaluate the knowledge, attitude, and perceptions about contraceptive methods and counseling techniques among medical interns in our college.

## Methods

The cross-sectional questionnaire study was carried out among 60 interns, at MVJ Medical College and Research Hospital, Hoskote, Karnataka, India after obtaining Institutional ethical committee clearance (Approval no: MVJMC&RH/Adm/ECM/2019-20) and informed consent. The content and relevance of the questionnaire were evaluated by topic specialists before the study. The final questionnaire contained 22 questions which included multiple choice questions (MCQs) to assess the knowledge regarding different contraceptive methods and case scenarios to assess their perception and attitude about contraceptive methods.

This questionnaire was distributed among the interns and the responses were collected during the study period between August 2019 and February 2020. All the medical interns during the study period were eligible for inclusion

into the study. The interns who rejected the consent were excluded from the study.

Informed consent was obtained from the interns, to utilize their data for research purposes and they were asked to complete the questionnaire anonymously. Students' sociodemographic features, their awareness about modern contraceptives, their attitudes toward the use of modern contraceptives, and contraception behavior were all gathered. The descriptive data collected was collected and analyzed in the form of percentages.

### Results and Discussion

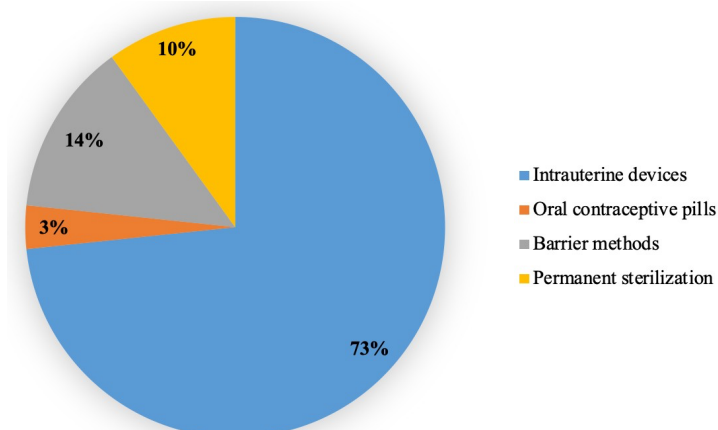
This study included 60 medical interns to evaluate the knowledge, attitude, and perceptions about contraceptive methods and counseling techniques in a tertiary care hospital and teaching center. Among them 40% were males and 60 % were females. All the respondents were unmarried, and the majority of participants were from urban (73%) backgrounds, belonging to the Hindu (88%) religion. Homogeneity among study participants' demographics was also observed in a previously reported similar study.<sup>6</sup> Table 1 shows the demographic data from the study participant.

The majority of the medical interns reported that sexual and reproductive health was included in their curriculum (86.7%) and were educated about contraceptive methods (93.3%) as well. Most of the interns had adequate knowledge regarding contraceptive usage, effectiveness, and limitations. About 73.3% of interns had proper knowledge about different contraceptive methods and their application based on various clinical conditions. Case scenarios were used to assess how they applied their knowledge in clinical practice. (Figure 1)

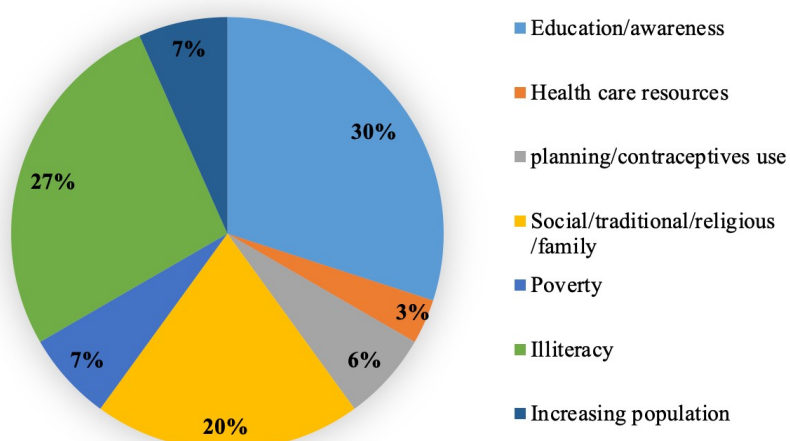
Figure 2 shows the study respondents have a perception that illiteracy (26.7%), lack of awareness (30%) and social, and religious values (20%) are major hurdles for contraceptive usage. Interns believe that traditional values are a major hurdle for sex education (70%) and old contraceptive methods are not safe (70%), although contraceptives are easily accessible (90%). Furthermore, they have an attitude that doctors are most suitable (73.3%) to give information regarding contraceptive methods (Figure 3) and they had an opinion that contraceptives should be made available to all age groups irrespective of marital status (Table 2).

**Table 1. Demographic Data of the Study Participant**

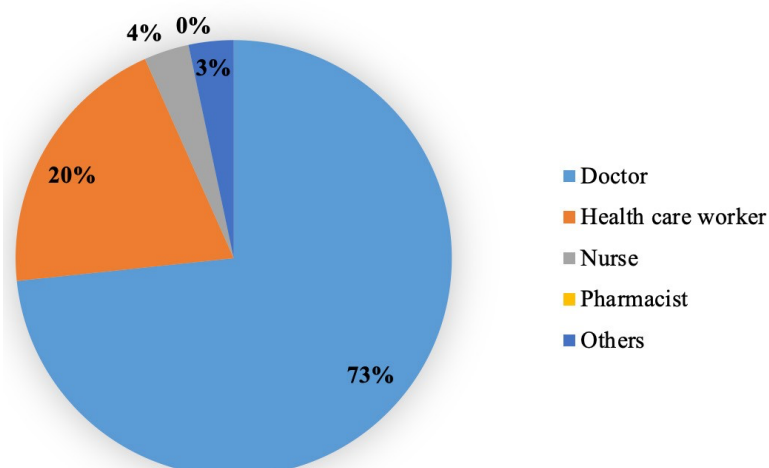
Demographic characteristics	Number (n=60)	Percentage (%)
Gender		
Male	24	40
Female	36	60
Religion		
Hindu	53	88
Muslim	3	5
Christian	2	4
Sikh	0	0
Others	2	3
Place of upbringing		
Urban	44	73
Rural	16	27



**Figure 1. Knowledge about Choosing the Contraceptive Method**



**Figure 2. Special Problems within Reproductive Health**



**Figure 3. . Source of Information about Contraceptive**

**Table 2. Knowledge, Attitude, and Perception regarding Contraceptive Methods among Interns (1)**

KNOWLEDGE ABOUT CONTRACEPTION AMONG MEDICAL INTERNS		Number (n)	Percentage (%)
1.	Was sexual and reproductive health included in your curriculum?		
	Yes	52	86.7
	No	8	13.3
2	Contraceptive methods have been taught in your teaching curriculum?		
	Yes	56	93.3
	No	4	6.7
3	Have you had clinical practice in abortion care services during your training?		
	Yes	22	36.7
	No	38	63.3
4	Contraceptive pill might cause cancer		
	Agree	24	40
	Disagree	28	46.7
	Neither agree nor disagree	8	13.3
5	Contraceptive pill can cause infertility		
	Agree	12	20
	Disagree	38	63.3
	Neither agree nor disagree	10	16.7
6	Condoms protect against STD/HIV		
	Agree	60	100
	Disagree	0	0
	Neither agree nor disagree	0	0
7	Do you know about methods of emergency contraception?		
	Yes	52	86.7
	No	8	13.3
8	Situations in which EC pills to be taken to prevent unwanted pregnancy?		
	Forceful intercourse	2	3.3
	Condom damage	2	3.3
	Missed OCP	0	0
	Unsafe intercourse	0	0
	All	52	86.7
	Don't know	2	3.3
9	Emergency contraceptive pill can be used several times a month		
	Agree	8	13.4
	Disagree	48	80
	Neither agree nor disagree	4	6.7

n total=60

**Table 2. Knowledge, Attitude, and Perception regarding Contraceptive Methods among Interns (2)**

KNOWLEDGE ABOUT CONTRACEPTION AMONG MEDICAL INTERNS		Number (n)	Percentage (%)
10	When should EC pill be taken?		
	Anytime	0	0
	During intercourse	0	0
	Within 24hrs of intercourse	14	23.3
	Within 72hrs of intercourse	44	73.3
	I don't know	2	3.3
11	Does the EC pill also protect against some sexually transmitted diseases?		
	Yes	6	10
	No	46	76.7
	I don't know	8	13.3
12	Menstrual irregularity is common side effect of EC.		
	Yes	58	96.7
	No	2	3.3
13	A 31-year-old mother of 5mths old baby is not interested in having another child for at least several years. She is frightened of injections and her husband does not like to use condoms. She has heard that contraceptive pills are easy to use and effective; she'd like to give them a try. You conduct some basic screening and obtain the following information: BP 140/90; she smokes 6–8 cigarettes a day, you observe mild varicosities on both lower legs. Which contraceptive method do your advice to her?		
	Intrauterine devices	44	73.3
	Oral contraceptive pills	2	3.3
	Barrier methods	8	13.3
	Permanent sterilization	6	10
14	A young lady 25yrs old who was regularly taking oral contraceptives, was diagnosed with Pulmonary Tuberculosis and is advised to take Anti-tubercular regimen including Rifampicin. What do you suggest for this patient?		
	Continue same oral contraceptive pills	6	10
	Stop Anti-tubercular therapy	0	0
	Alternative methods of contraception	44	73.3
	Reduce the dose of OCPs	10	16.7

n total=60

**Table 2. Knowledge, Attitude, and Perception regarding Contraceptive Methods among Interns (3)**

PERCEPTION ABOUT CONTRACEPTION AMONG MEDICAL INTERNS		Number (n)	Percentage (%)
15	What do you think are the special problems within reproductive health today in India?		
	Education/ awareness	18	30
	Health care resources	2	3.3
	Planning/ contraceptive use	4	6.7
	Social/traditional/religious/family	12	20
	Poverty	4	6.7
	Illiteracy	16	26.7
	Increasing population	4	6.7
16	Contraceptive pills are inconvenient to use		
	Agree	12	20
	Disagree	20	33.3
	Neither agree nor disagree	28	46.7
17	Traditional values are barriers for sex education in India		
	Agree	42	70
	Disagree	8	13.3
	Neither agree nor disagree	10	16.7
18	Traditional contraceptive methods (safe periods, withdrawal) are the best methods		
	Agree	8	13.3
	Disagree	42	70
	Neither agree nor disagree	10	16.7
19	Contraceptives are easily accessible?		
	Yes	54	90
	No	6	10
ATTITUDE ABOUT CONTRACEPTION AMONG MEDICAL INTERNS		Number (n)	Percentage (%)
20	Contraceptive information should be only for married couples		
	Agree	60	100
	Disagree	0	0
	Neither agree nor disagree	0	0
21	Who do you think is most suitable to give information on contraceptive methods?		
	Doctor	44	73.3
	Health worker	12	20
	Nurse	2	3.3
	Pharmacist	0	0
	Other	2	3.3
22	Should it be available to women over 18yrs only?		
	Yes	24	40
	No	36	60

n total=60



In 1952, India became the first country in the developing world to initiate the National Family Planning Programme. Although we have a long history of promoting family planning, the number of women with an unmet need for contraceptive methods is higher than anywhere else in the world due to our rich cultural and traditional values. These are incorporated in all aspects of our practices, which is also reflected in our family planning methods, where still female sterilization is a preferred mode of family planning.<sup>8</sup>

The majority of participants in our study remembered that they have received basic education about contraception, still few interns (20%) believe contraceptive usage can lead to infertility and the findings are similar to a study done on medical students about contraception.<sup>6</sup> Although abortion is legalized in our country under the medical termination of pregnancy Act 1971, the incidence of unsafe abortions has increased. Many respondents (63.3%) have less clinical expertise in abortion care services, which is particularly needed to deliver healthcare to rural populations.

Interns were asked questions about emergency contraceptives in this study. Many components of emergency contraceptives were observed to be familiar among 85% of interns when compared to a similar study done by Patni MM et al. in which 40-70% of medical students were unfamiliar with the same and about 43.3% of interns knew about it in a study by Giri et al.<sup>9,10</sup> In our study, 73.3% of students had good awareness about emergency contraceptives to be taken within 72 hours of intercourse, in comparison with Giri et al. who found that 88.3% of medical students knew the proper time to use emergency contraception, 11.3% in Baiden et al. and 5.7% in a Kongnyuy et al. in university students.<sup>10-12</sup>

About 86.7% of interns were aware of indications for emergency contraceptive use

like forceful intercourse, condom damage, missed oral contraceptive pills (OCP), and unsafe intercourse and 76.7% of them knew that emergency contraception (EC) doesn't protect against sexually transmitted diseases (STD's) which are significantly high compared to other studies (63.4%) done on medical undergraduates.<sup>13</sup> A large proportion of the interns (96.7%) believed that the use of EC will cause irregular menses. Similarly, to this, Shiferaw et al. also showed that EC will affect the periods. But in contrast, Tajure et al. observed that according to the majority of the participants (50.2%), EC didn't have any effect on the next menstrual cycle.<sup>13-15</sup>

In this context, other studies revealed that depending on whether the EC was administered well before, close to, or well after the anticipated ovulation for that cycle, incident intermenstrual bleeding, as well as substantial changes in menstrual cycle duration, menstrual period length, and menstrual appearance, varied. The preponderance of these alterations vanished over the cycle that followed. In a considerable number of users, emergency contraception is linked to severe but temporary changes in menstrual cycles.<sup>16,17</sup>

Based on the case scenarios given to assess their knowledge about contraceptive methods, 73.3% of interns were able to analyze and select an apt contraceptive method for the given cases. The problems faced in reproductive healthcare in India according to the respondents are lack of education, a lack of understanding regarding contraceptive techniques (30%), and illiteracy (26.7%), these findings are consistent with prior research that has indicated that a higher level of education among women is linked to increased contraceptive use.<sup>18</sup>

The Indian traditions contribute to the perception of sex-related matters as taboo, preventing young people from seeking



counseling on sexual health and the use of contraceptive techniques, as evidenced by interns' responses and other studies.<sup>19,20</sup>

The majority of the participants in our study had an opinion that details of contraceptive methods should be conveyed to only married couples, whereas in a similar study by Hogmark et al., only a few students had the same perception.<sup>6</sup> Doctors, health workers, nurses, and pharmacists play a role in providing contraceptive information and awareness in society, but 73.3% of respondents think only doctors are more suitable for it.

### Conclusion

India, the 2nd populous country in the world, demands effective family planning strategies to reduce MMR and improve the reproductive health of females. In our study, interns have a positive attitude with fair knowledge and perception about contraceptives, which is very important for their future practice as they play a major role in the healthcare sector. Hence interns should be trained and timely updated about new contraceptive methods for the benefit of the community.

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### Conflict of Interest

None declared

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