



Original Research Article

A cross-sectional study on knowledge, attitude and practice towards contraception among medical students in a tertiary care center of coastal Karnataka, India

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ABSTRACT

Background: High rates of unplanned pregnancies are due to continued gaps in awareness and access to contraception. An exemplary health care infrastructure would play a major role in resolving this issue.

Aim: To investigate knowledge, attitude and practice towards contraception among medical students in a tertiary care center of Karnataka.

Materials and Methods: A cross-sectional study was conducted including 100 undergraduate medical students during September 2018 to February 2019 using predesigned questionnaire on contraception and analyzed using percentages.

Results: Nearly 93% of students chose condom as best way to prevent sexually transmitted infections and 47% chose emergency contraceptive pills as risk factor for ectopic pregnancy. Failure rates of natural methods was 20-25% according to 33% of the students. Majority of participants believed that both sexes have equal responsibility for contraception and chose intrauterine contraceptive devices as best contraception for nulliparous women. Oral contraceptive pills had least failure rates as per 70% of the subjects compared to diaphragm, condom or natural methods. Irregular bleeding was considered as most common side effect of oral contraceptives by half of participants while 91% thought condoms were best for couples who were not regularly sexually active. Around 84% of undergraduates preferred to consult a doctor for contraceptive advice and were comfortable discussing contraception with partner.

Conclusion: Overall, students had reasonably good knowledge on contraception. Similar studies in future would pave the way for upgrading current health curriculum to strengthen knowledge base of future clinicians.

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1. Introduction

In 2015–19, there were 121 million unintended pregnancies annually, corresponding to a global rate of 64 unintended pregnancies per 1000 women aged 15–49 years. This is majorly due to the documented continued gaps in contraceptive services and family planning, including those related to knowledge and care delivery.¹

The proportion of pregnancies that are unintended is highest among adolescents (82%) and varies considerably by age. The percentage of pregnancies that are unintended is lowest among women aged 30–34 years (33%) and rises again among older women to 38% among women 40 years of age and older. Hence early training and education about contraception right from adolescence should be our utmost priority.² Approximately half of the women (56%) approach doctors for contraceptive advice.³

Due to increasing branching out of the various specialties in medical field, different health care providers are less updated with the knowledge and training needed for

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contraceptive care. During graduation, the training obtained by the medical graduates may be suboptimal to care for the raising demands of patient care. This lacuna needs to be addressed emergently as every clinician interacts with women of reproductive age group irrespective of their subspecialty.⁴

This gap has been recognized and universal and basic contraceptive training has been incorporated into the medical education system. However there is lack of uniformity in the knowledge dissipation across the country which still needs to be tackled. Around 96% medical schools had a compulsory contraceptive training program in the curriculum according to a survey but the syllabus did not make up for all the required fields within the subject with major focus (96%) on the oral contraceptive pills (OCP) with a minimal coverage of other modalities like intrauterine devices(IUDs).⁵

Present questionnaire based survey is an attempt at assessing the adequacy of knowledge among the medical students and bring out the knowledge deficiencies with an intent to introduce measures through future research that can strengthen the basic contraceptive knowledge among various health care subspecialists that would care for those women in need for contraceptive care in future.

2. Materials and Methods

A cross-sectional study was conducted at tertiary care center of coastal Karnataka, India for a duration of 6 months from September 2018 to February 2019 after obtaining the Institutional ethical committee clearance. Hundred (100) medical undergraduates who attended clinical gynecology postings were invited to participate in the study. Students who were present during the days of survey were provided with the details of the study and those who were willing to participate were included after taking a written informed consent. The data was collected using a predesigned, self-administered questionnaire which included 10 questions out of which 7 focused on knowledge and 3 focused on attitude and practice. Data was collected and entered in Microsoft Excel, descriptive statistics were analyzed and presented in the form of frequencies and proportions.

3. Results

Out of the 100 students that participated in the study, 56% were females and 44% were males. The participants belonged to an age group of 20.4 ± 0.56 years. The best contraceptive method that prevents sexually transmitted infections (STI) was condoms as per 93% students, intrauterine contraceptive devices (IUCD) as per 4% students and Oral Contraceptives (OCP) as per 3% students. Nearly half of the study participants (47%) opined that use of emergency contraceptive pills (ECP) is a risk factor for ectopic pregnancy while 31% said that it could cause

anovulation and 21% said that vaginal discharge is the primary side effect whereas 1% chose oliguria. Around two thirds of the students (58%) felt that the failure rates of natural methods of contraception was around 60% and only 33% of them were correctly aware of the failure rates as 20-25%. The best choice of contraception for nulliparous women was IUCD according to 75% of students, while it was OCP as per 15% students and a minority chose spermicidal jelly (7%) and cervical caps (3%) as the best option. These findings are summarized in Table 1.

Upon questioning about the contraception method that has lowest failure rates majority students chose OCP (70%) over condoms (23%), natural methods (5%) and diaphragm (2%). Regarding the side effects of modern contraceptive pills, nearly half of them thought that they would cause irregular cycles and one fourth of them thought that they would cause weight gain. Only few students reported none of the side effects mentioned (15%) or acne (8%) as the possible answers. A majority of the responders (91%) thought that condoms were the contraceptive of choice for couples who are not regularly sexually active, while only few students chose other alternate options like OCP (4%), IUCD (4%) and coitus interruptus (1%) as shown in Table 2.

Majority of the undergraduates (98%) believed that both sexes were equally responsible for contraception while 2% answered that men should be responsible. When needed 84% of the undergraduates preferred to consult a health care professional for contraceptive advice while 11% opted to take guidance from internet and a few chose parents (3%) and friends (2%) over other choices. Around 84% of the students were comfortable talking about contraception to their partner and 13% were unsure while 3% were not comfortable discussing contraception with their partner as shown in Table 3.

4. Discussion

The objective of Family Planning(FP) 2020 program was to broaden the dimensions of contraceptive coverage in India with an aim of expanding services to an additional 48 million women.⁶ A survey conducted to evaluate the quality of contraceptive care provided to the women showed a suboptimal contraceptive counselling with nearly half of women not being explained about the side effects that could occur from a particular method and almost 61% of those educated about side effects with only half of the women instructed about the alternative methods.⁷ Improving the quality of contraceptive care would enhance better compliance by the patients and thereby bring down the unwanted pregnancies.⁸ This emphasizes on the need to ameliorate health care system to fulfil the unmet contraceptive demands.

We intended to explore the KAP (Knowledge, Attitude and Practice) on contraception among medical students in our institute at Karnataka, India to investigate the

Table 1: Knowledge about contraception among medical students

Knowledge about contraception	Frequency (n=100)	Percentage (%)
Best for preventing STI		
Condoms	93	93
OCP	4	4
IUCDs	3	3
Side effects of Emergency contraceptive pills		
Ectopic pregnancy	47	47
Anovulation	31	31
Vaginal discharge	21	21
Oliguria	1	1
Failure rates of natural methods of contraception in %		
55-60	58	58
20-25	33	33
10-15	7	7
5-10	2	2
Best choice of contraception for nulliparous women		
Copper T	75	75
OCP	15	15
Spermicidal jellies	7	7
Cervical caps	3	3

Table 2: Knowledge about contraception among medical students

Knowledge about contraception	Frequency (n =100)	Percentage (%)
Contraception having lowest failure rates		
OCP	70	70
Condoms	23	23
Natural method	5	5
Diaphragm	2	2
Side effects of Modern Contraceptive pills		
Irregular cycles	52	52
Weight gain	25	25
None of the above	15	15
Acne	8	8
Contraceptive advice to couples not regularly sexually active		
Condoms	91	91
OCP	4	4
Copper T	4	4
Coitus interruptus	1	1

Table 3: Attitude and practices about contraception among medical students

Attitude and Practice about contraception	Frequency(n=100)	Percentage (%)
Who is responsible for contraception		
Both sexes have equal responsibility	98	98
Men	2	2
Medical students take contraceptive advice from		
Doctors	84	84
Internet	11	11
Parents	3	3
Friends	2	2
Students who are comfortable discussing contraception with their partner		
Yes	84	84
Don't know	13	13
No	3	3

knowledge deficits that exist among future health care providers at the grass root level. This would help in making amendments to the existing education system and lay a better foundation in order to make every health professional approachable for basic contraceptive care, irrespective of their future subspecialty as they interact with women of reproductive age.

A large number of students in this study had a reasonable knowledge about contraception. Olugbenga et al. noted that condoms represent one of the most effective methods of protection against STI.⁹ Majority of the students correctly chose condoms as the best method to protect from STI. As per WHO(World health Organization) side effects of ECP are similar to those of OCPs, such as nausea and vomiting, slight irregular vaginal bleeding, and fatigue. Side effects are mild, uncommon and will normally resolve spontaneously.¹⁰ However in our study 31% of the students thought that ECP can cause anovulation. There have been case reports of ectopic pregnancy following ingestion of Levonorgestrel containing ECPs (LNG-ECP). Although the data is limited, it has been suggested that patients who have used LNG after unprotected intercourse and have a positive pregnancy test should be monitored closely in order to rule out a possible ectopic pregnancy.¹¹ Though not a common event, students were aware of occurrence of such a complication.

Natural methods of contraception is known to have the highest failure rates among all approaching 20-25% nearly.¹² Almost 60% of the students chose 55-60% as the failure rates while 33% correctly chose 20-25% in our study. Though the students did not know the exact numerical of failure rates, they were aware that the natural methods were least effective choice.

National Survey of Men (NSM) studied the perception of roles and responsibilities regarding contraception among men aged 20-39 years which showed that more than three-quarters (78%) believe that men and women share equal responsibility for decisions about contraception while 15% perceive that men have a greater responsibility and 7% of men thought that women are more responsible for contraceptive decision making. Our study included 56% females and 44% males out of which 98% participants felt that both the sexes have equal responsibility for contraception while only 2% felt that it is the male partner's responsibility.^{13,14}

Intrauterine contraception is convenient, safe and highly efficacious, and is recommended as a first-line option for all women, including adolescent and nulliparous women.¹⁵ Despite the recent guidelines, clinicians are still reluctant to promote use of IUCDs in nulliparous women with only 67% considering it an option for this subset of individuals and only 43% considering it the first-line options for adolescents.¹⁶ The medical undergraduates in our study were on par with the current guidelines in this aspect as

almost three fourth of them opined that IUCDs are the best choice for nulliparous women. Although OCPs were widely promoted as a contraceptive of choice for nulliparous women previously, and picked as the best choice by 15% of the participants in our study, the rates of unintended pregnancies due to noncompliance and the risks associated with prolonged usage have made it a less suitable choice compared to IUCDs which overcome these drawbacks in this group of patients.

The students in our study opined that OCP had the least failure rates compared to condoms, diaphragms and natural methods. This outcome is similar to the study done by Sarah E.K. Bradley.¹⁷ The most common adverse effect of combined oral contraceptive pills is irregular bleeding which was also correctly reported by 52% of the medical students.¹⁸ Nearly 25% of the students incorrectly chose weight gain as a significant side effect of OCP.

There has been a long lasting debate on the effect of OCP on weight gain. The researchers in a study concluded that it seems very unlikely that hormonal contraceptives cause major weight gain. If there were a strong effect, it would have been noticed in the studies. But this doesn't rule out the possibility that individual women could in fact gain weight. Hence making this side effect a less well established one.¹⁹

As correctly pointed out by the students, condoms would be the best option for those who are not regularly sexually active as compared to the other modes. According to a study done by Afolabi BM et al educational institutions were the major source of contraceptive advice in single women(26.9%) while health facilities were the major sources of such information among married (53.3%) women. Married women reach out to a health care professional six times more often and single women are more likely to consult educational institutions regarding contraception, about thrice more likely to approach traditional birth attendants; and about twice more likely to source it from friends and colleagues.²⁰ Similar findings were noted in our study where majority (84%) of the undergraduates preferred to consult a health care professional for contraceptive advice while 11% opted to take guidance from internet and a few chose parents (3%) and friends(2%) over other choices.

In a similar cross sectional study done on medical students about awareness of contraception at Vietnam majority of participants (83%) did not consider discussing contraception with a partner to be embarrassing which was identical to the findings noted in our study (84%).²¹

Our questionnaire included 10 questions out of which 7 were knowledge based questions and remaining 3 were attitude and practice based. The students performed better in the area of attitude and practice with an average percentage of 88.6% while in the section of knowledge based questions they showed an overall lesser average score of 63.5%. It was noted from the above results that they

possess a better practical knowledge as compared to the theoretical knowledge. Small sample size of this study makes its applicability to medical students of other regions questionable.

5. Conclusion

Current study was intended to appraise the shortcomings in the medical education system in addressing the basic contraceptive training that is essential to medical students in providing unbiased information and comprehensive counselling to the patients in need of expert advice.

A contraception counselling workshop for healthcare professionals was conducted where the pre and post workshop assessment showed a positive trend in the knowledge improvement.²² Incorporating similar workshops and hands-on contraceptive training programs in medical curriculum and other allied health profession programs would improve the student physician knowledge, approach on contraception and counselling thereby improve the health infrastructure and bring down the unplanned pregnancies and other complications associated with unmet contraception needs.

6. Source of Funding

None.

7. Conflict of Interest

None.

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