

# Understanding Attitude towards Gender, Sexuality, Sexual Health Needs and Information Seeking Behaviour amongst First Year Medical Students: An Observational Study

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## ABSTRACT

**Introduction:** The topics related to sexual attitude and reproductive health are not commonly and openly discussed. The scarcity of having open discussions especially with parents results in lack of awareness among adolescents about contraception, sexual values, beliefs and behaviour. First year medical students are usually in their last years of adolescence. In future, they are going to communicate with their patients on sexual health matters. Hence, it becomes essential to understand their own perspective regarding this.

**Aim:** To understand the attitude of first year medical students towards gender, sexuality, sexual health needs and their information seeking behaviour.

**Materials and Methods:** A cross-sectional survey was conducted, using a self-administered questionnaire. The study population comprised of 314, first year medical students aged between 17 to 20 years at Smt. Kashibai Navale Medical College and General Hospital, Pune, Maharashtra, India. The questionnaire included sections on communication within family and friends, personal attitude towards sexuality and gender and information seeking behaviour. Statistical analysis was done by Chi-square test using Statistical Package for the Social Sciences (SPSS) software.

**Results:** Total 314 first year Bachelor of Medicine, Bachelor of Surgery (MBBS) students (135 males, 179 females with mean age of 18.35 years) participated in the study. More than 90% of students were interested to socialise with opposite sex, yet more than 50% of them did not want to be involved in premarital sex as it was against their religious beliefs. More number of boys (65.93%), as compared to girls (38.55%), agreed that it's ok to have sex before marriage with proper contraceptive measures. Maintenance of virginity until marriage was important for girls (56.98%) as compared to boys (37.04%) which was statistically significant ( $p < 0.001$ ). Students lacked communication with their parents on the topics of sexuality. A 95.86% used internet to seek information on sexual health matters. Sexual problems (72.61%) and genital hygiene (73.89%) were the maximally searched topics on internet. Total 64.33% of students were interested in attending a formal course regarding sexual/reproductive health.

**Conclusion:** Adolescent's attitude about sexual matters is guided by their religious beliefs. There is a dearth of communication between the adolescents and their parents on sexual health matters. Majority preferred seeking information from friends and/or via internet which can be unreliable at times.

**Keywords:** Adolescents, Communication with parents, Medical students, Reproductive health

## INTRODUCTION

Reproductive health is an important component of general health which eventually contributes towards social health as well. From 10-19 years (as per World Health Organisation (WHO) standards), a teen's body changes drastically [1]. It enters puberty and experiences many physical as well as emotional changes. This may be attributed to menarche in girls and other bodily changes in both genders, leading to awareness about sexuality as well as increase in hormones that affect the mood [2]. Moreover, it also introduces the adolescent to new vulnerabilities such as human rights abuses, particularly in the arenas of sexuality, marriage, and child bearing. According to United Nations Population Fund (UNFPA), millions of girls are coerced into unwanted sex or marriage, putting them at risk of unwanted pregnancies, unsafe abortions, Sexually Transmitted Infections (STIs) including Human Immunodeficiency Syndrome (HIV), and dangerous childbirth. Adolescent boys are at risk, as well. Young people both boys and girls are disproportionately affected by HIV. Yet too many young people face barriers to reproductive health information and care [3].

The level of knowledge is closely related to the source from which they obtain the information [4,5]. Parents have a unique opportunity to instill knowledge of sexual risk as well as confidence and comfort around sexuality in their adolescents. Unfortunately, in many instances,

"sex talks" between parents and their children are less than optimal. Parents tend to exclude positive topics associated with sexuality, such as pleasure, love and healthy relationships, in favour of negative topics and warnings such as unwanted pregnancy, STIs, abuse and exploitation [6,7]. The source of information such as peers and the mass media highly influence the sexual behaviour of the adolescents [8]. Therefore, to improve their sexual and reproductive health it is important to understand their attitudes towards sexuality, gender, as well as their needs and information seeking behaviour in this field.

First year medical students are of suitable age group to study adolescent's attitudes and level of understanding towards sexuality because usually they are in their last years of adolescence and beginning years of youth [9]. Being future doctors, it becomes furthermore important to assess their awareness towards reproductive health and sexual behaviours, as, while practicing they will have to take a meaningful sexual history and give effective sexual counseling with a supportive, non judgmental attitude toward patients [10].

With this background, this questionnaire-based survey was conducted in two consecutive batches of first year medical students, at the beginning of their course. The objectives of the study was to understand their attitudes towards opposite gender and sexuality, how they communicate with their parents on this topic, what their needs are

and how they expect to be informed about the same. The study might offer direction for solution proposals aiming to improve adolescent's reproductive health and subsequently the society's as well.

## MATERIALS AND METHODS

The present study was an observational, cross-sectional study conducted with the help of a self-administered questionnaire. The study was conducted on 314 first year MBBS students of Smt. Kashibai Navale Medical College and General Hospital, Pune, Maharashtra, India, between August 2015 (2015-16 batch) to August 2016 (2016-17 batch). The study was conducted for 2 consecutive years (August 2015 to August 2017). As it was an exploratory study, convenient or purposive sampling was done. The study was approved by the Institutional Ethics Committee (IEC Letter No: Ref.SKNMC/Ethics/App/2015/42, Dated: 24/02/2015).

**Inclusion criteria:** All first year medical students, willing to participate in the study were included. This avoided any selection or data recording bias.

**Exclusion criteria:** Students who were not willing to participate were excluded from the study.

### Design of the Survey Questionnaire

A systematic search of the literature was conducted to identify relevant published papers. The questionnaire which was used, was largely adopted from a core WHO questionnaire designed by Cleland J et al., and a study questionnaire developed by researchers in a published protocol study in Saudi women [11,12]. Some modifications were done in the questionnaire to make it suitable for the study population and validated by experts (two senior faculty from the Department of Obstetrics and Gynaecology and two from Community Medicine within the institute).

The questionnaire included different sections (in English language), containing questions about communication within the family and with friends, their personal attitudes towards sexuality and gender and their information seeking behaviour. A sub-section for understanding their attitudes towards opposite gender and sexuality included questions regarding their acceptance in socialising with opposite gender, having premarital sex and their religious beliefs about it. A separate section of questionnaire was aimed to understand and assess their information seeking behaviour and their needs to remain informative through discussions. The instrument was first pilot tested on a group of students (n=20, excluded from the sample). Necessary revision was done for better understanding of the questions.

Questionnaire filling was done in small batches of 50 students, after their college hours. All the students participated willingly in the study.

They were first briefed about the overall objective of the study as well as details of the questionnaire to be filled by them anonymously. Written informed consent of the students was taken and they were assured that all the information provided by them will be kept strictly confidential. A 20-30 minutes time was given to fill up the questionnaire. All the questions were close-ended, based on Likert scale, where students had to mark their responses. Questionnaire coding was done beforehand to grade student's responses.

## STATISTICAL ANALYSIS

Data was represented as frequency in percentage and numbers. Associations between educational parameters and communication parameters were analysed by Chi-square test. Statistical significance was set at 0.05. Analysis was done using Statistical Package for the Social Science (SPSS) 20.0 (IBM SPSS Inc).

## RESULTS

The study population included 314 first year MBBS professionals. There were 135 males and 179 females, with age ranging between 17-20 years (mean age=18.35 years). [Table/Fig-1] shows that 90.4% of the fathers, and 82.5% of the mothers of these students belonged to the graduate and above category; 86.62% (n=272) of the student population perceived their families to be traditional in values, while 13.38% (n=42) reported that their families were not at all traditional.

|        | Postgraduate | University graduate | Literate   | Illiterate |
|--------|--------------|---------------------|------------|------------|
| Father | 167 (53.18)  | 117 (37.26)         | 26 (8.28)  | 4 (1.27)   |
| Mother | 124 (39.49)  | 135 (42.99)         | 49 (15.61) | 6 (1.91)   |

[Table/Fig-1]: Frequency distribution of educational status of parents (N=314).

More than 90% of the individuals (96.09% girls and 94.07% boys) expressed that they would be comfortable being into a relationship with opposite gender for socialisation, although 57.96% of individuals expressed that their religious beliefs are against premarital sex. A statistically significant difference in the opinion was observed as number of girls agreeing to the statement on religious beliefs against pre-marital sex, was more (67.60%) as compared to boys (45.19%). A 50.32% of individuals agreed that it's alright for boys and girls to have sex before marriage if they use proper methods to prevent pregnancy. Number of girls (38.55%) agreeing to the above statement, was less than the number of boys (65.93%) and the difference was found to be statistically significant (p<0.001). Total 48.41 of the students (56.98% girls and 37.04% boys) believed that girls should maintain their virginity until marriage. This difference in the opinion between the genders was found to be statistically significant (p<0.001) [Table/Fig-2].

| Sr. No. | Statement   | Response | Girls (n=179) | Boys (n=135) | Total (n=314) | p-value |
|---------|---|----------|---------------|--------------|---------------|---------|
|         |   |          | n (%)         | n (%)        | n (%)         |         |
| 1       | It is acceptable to socialise with opposite sex   | Agree    | 172 (96.09)   | 127 (94.07)  | 299 (95.22)   | p=0.407 |
|         |   | Disagree | 7 (3.91)      | 8 (5.93)     | 15 (4.78)     |         |
| 2       | It is alright for an unmarried boy to have girlfriend   | Agree    | 163 (91.06)   | 125 (92.59)  | 288 (91.72)   | p=0.626 |
|         |   | Disagree | 16 (8.94)     | 10 (7.41)    | 26 (8.28)     |         |
| 3       | It is alright for an unmarried girl to have boyfriend   | Agree    | 162 (90.50)   | 122 (90.37)  | 284 (90.44)   | p=0.968 |
|         |   | Disagree | 17 (9.50)     | 13 (9.63)    | 30 (9.56)     |         |
| 4       | It's not alright for boys and girls to have physical intimacy such as hugging, kissing, and touching the opposite sex | Agree    | 76 (42.46)    | 46 (34.07)   | 122 (38.85)   | p=0.131 |
|         |   | Disagree | 103 (57.54)   | 89 (65.93)   | 192 (61.15)   |         |
| 5       | It's alright for boys and girls to have sex before marriage if they use methods to prevent the pregnancy              | Agree    | 69 (38.55)    | 89 (65.93)   | 158 (50.32)   | p<0.001 |
|         |   | Disagree | 110 (61.45)   | 46 (34.07)   | 156 (49.68)   |         |
| 6       | Girls should remain virgins until they marry  | Agree    | 102 (56.98)   | 50 (37.04)   | 152 (48.41)   | p<0.001 |
|         |   | Disagree | 77 (43.02)    | 85 (62.96)   | 162 (51.59)   |         |
| 7       | My religious beliefs are against premarital sex   | Agree    | 121 (67.60)   | 61 (45.19)   | 182 (57.96)   | p<0.001 |
|         |   | Disagree | 58 (32.40)    | 74 (54.81)   | 132 (42.04)   |         |

[Table/Fig-2]: Comparison of responses regarding the personal attitudes towards sexuality and gender. p value <0.001=Significant

Furthermore, the gender association with this behaviour was also observed. Total 81.53% (n=256) of students stated that they had the tendency to discuss sexual and reproductive health matters with someone. A 18.47% (n=58) stated that they did not discuss with anyone. Female students were more open to talk to their mothers (57.5%) as compared to their fathers (8.4%) showing a significant gender difference with p-value of <0.001 whereas male students were more open to talk to their fathers (17%, n=23) [Table/Fig-3]. The total percentage of males talking to both their parents was much less than that for females. The most comfortable source of seeking information for both genders was found to be their friends with whom 70-80% of individuals could talk on sexual matters. Gender association was not observed in such pattern of students' source of information.

| Open to talk to | Males<br>(Total=135) n (%) | Females<br>(Total=179) n (%) | p-value |
|-----------------|----------------------------|------------------------------|---------|
| Mother          | 23 (17)                    | 103 (57.5)                   | <0.001  |
| Father          | 23 (17)                    | 15 (8.4)                     | 0.02    |
| Siblings        | 32 (27.1)                  | 61 (34.1)                    | 0.046   |
| Teacher         | 13 (9.6)                   | 11 (6.1)                     | 0.25    |
| Friends         | 107 (79.3)                 | 125 (69.8)                   | 0.06    |
| Relatives       | 8 (5.4)                    | 8 (4.5)                      | 0.561   |
| Physician       | 24 (17.8)                  | 24 (13.4)                    | 0.287   |

**[Table/Fig-3]:** Frequency distribution of male and female students according to their source of information (multiple response).  
p-value <0.001=Significant

[Table/Fig-4] shows that the common topics discussed with the parents were pubertal changes, menstruation, reproductive systems whereas masturbation was the least likely discussed topic.

| S. No. | Topic                                       | Gender (n)    | Mother        |                      | Father        |                      |
|--------|---|---------------|---------------|----------------------|---------------|----------------------|
|        |   |               | Nothing n (%) | To some extent n (%) | Nothing n (%) | To some extent n (%) |
| 1      | Pubertal changes                            | Males (135)   | 45 (33.33)    | 90 (66.67)           | 57 (42.22)    | 78 (57.78)           |
|        |   | Females (179) | 11 (6.15)     | 168 (93.85)          | 103 (57.54)   | 76 (42.46)           |
| 2      | Menstruation                                | Males (135)   | 81 (60)       | 54 (40)              | 101 (74.81)   | 34 (25.19)           |
|        |   | Females (179) | 7 (3.91)      | 172 (96.09)          | 138 (77.09)   | 41 (22.91)           |
| 3      | Masturbation                                | Males (135)   | 115 (85.19)   | 20 (14.81)           | 106 (78.52)   | 29 (21.48)           |
|        |   | Females (179) | 135 (75.42)   | 44 (24.58)           | 163 (91.06)   | 16 (8.94)            |
| 4      | Reproductive system of men and women        | Males (135)   | 60 (44.44)    | 75 (55.56)           | 62 (45.93)    | 73 (54.07)           |
|        |   | Females (179) | 43 (24.02)    | 136 (75.98)          | 122 (68.16)   | 57 (31.84)           |
| 5      | Sexual relationship between male and female | Males (135)   | 65 (48.15%)   | 70 (51.85%)          | 64 (47.41)    | 71 (52.59)           |
|        |   | Females (179) | 66 (36.87%)   | 113 (63.13%)         | 124 (69.27)   | 55 (30.73)           |
| 6      | Contraception                               | Males (135)   | 72 (53.33)    | 63 (46.67)           | 81 (60)       | 54 (40)              |
|        |   | Females (179) | 75 (41.90)    | 104 (58.10)          | 135 (75.41)   | 44 (32.59)           |

**[Table/Fig-4]:** Frequency distribution of male and female students discussing various topics with their parents.

For seeking information, 95.86% of students used the internet and majority of them used their mobile internet. Sexual problems (72.61%) and genital hygiene (73.89%) were the topics that were searched maximum on the internet followed by the topics related to pregnancy and delivery (64%), contraception (29.62%) and sexually transmitted diseases (15.29%). The least searched topics were sexual intercourse (11.78%) and virginity (5.1%). Though 47.13% of the study population considered the information available on the internet as reliable, 64.33% of student population expressed interest in attending a formal course based on sexual and reproductive health.

## DISCUSSION

This was an observational study to explore adolescent's attitude, sexual needs and information seeking behaviour. The findings of this study shows similarity with previously published studies.

**Attitude towards gender and sexuality:** In the present study, 86.62% of the study subjects perceived themselves belonging to traditional families. More than 90% of the students had no apprehension of being

in a relationship with opposite gender, yet more than 50% of them did not want to be involved in premarital sex as their religious beliefs were against it. No gender disparity was found regarding this opinion. Similar findings were obtained by Jaya J and Hindin M, where large majority of respondents have shown their interest in having sex only after getting married. In their study, 92% males and 96% females believed that one should have sexual relationship only after marriage [13]. They found a significant difference between the genders towards this conservative approach if the couple is in true love relationship.

Overall, 50.32% of the study subjects were liberal in their thoughts that it is ok for boys or girls to have sex before marriage, provided they take proper contraceptive precautions. But there was a statistically significant gender difference in the opinion amongst girls and boys with a smaller number of girls opting for premarital sex. Such abstinence until marriage was expressed by the male and female participants of a study in African population, where abstinence was viewed more positively among young women than among young men [14].

A 48.41% of the study subjects (56.98% girls and 37.04% boys) believed that girls should maintain their virginity until marriage. This difference in the opinion between the genders was found to be statistically significant. Probably one of the major reasons why more females are of such opinion is fear of getting pregnant. Present study findings go with the ones reported by Ojedokun AO and Balogun SK, where they reported that the context of early sexual experience is often very different for young men and for young women, especially in developing regions and women but not men are commonly expected to be sexually inexperienced at the time of marriage. Like present study findings, they reported that male

students showed more favourable attitudes toward premarital sexual permissiveness than female students [15]. Saraçoğlu GV et al., assessed the knowledge, attitude, and behaviour towards sexual health among undergraduate students in Turkey; 83.2% of the student population was in relationship with opposite gender. Out of those, 32% had experienced sexual intercourse at least once, with statistically significant difference between genders (16.9% females v/s 83.1% males) [16]. Wong L qualitatively assessed the premarital sexual behaviours exclusively in senior school going girls and undergraduate females. He performed this study on three ethnic groups in which 35% were Malay, 34% were Chinese and 31% were Indians. Regarding the permissiveness about premarital sex, the Indian and Malay girls had shown restrictive attitude as the inference of cultural, religious, and social prohibitions [17].

**Information-seeking behaviour:** In the present study, it was observed that 95.86% of students used 'internet' and majority of them used their mobile internet for seeking information on sexual health. Their major sources of information regarding sexual and reproductive



health issues were internet and discussion with peers. This finding was consistent with other studies where they have reported that for 80.5% of adolescents, the preferred source of sexual health information was the internet [18]. Quite a similar report has been published by WHO where it is mentioned that adolescents prefer internet, friends and TV to acquire sexual knowledge in developing countries [19]. In a Nigerian study, Asekun-Olarinmoye OS et al., observed the effect of mass media and internet on sexual behaviour of undergraduates. Almost 74.5% of the students were accessing internet to watch explicit sexual material. More than half of the total study population had the opinion that uncontrolled use of internet had negative impacts on sexual behaviour. Higher frequency of using internet to search the sexual material has been marked as predictor of having multiple sexual partners [20].

Regarding communication on sexual health matters, the present study shows that girls are more likely to communicate with their parents as compared to boys and the difference was found to be statistically significant. The less comfortable sources of information for the students were siblings, physicians, teachers, and other relatives in decreasing order. It has been reported in the studies that privacy is the main concern for opting internet over discussing the issues with experts [21].

Madeni F et al., evaluated the effectiveness of reproductive health awareness program in adolescents. They found that the adolescent girls who often communicate with their parents had significantly higher knowledge about reproductive health than those who did not communicate [22]. Another study had shown the higher efficacy of parent-child communication in terms of their sexual behaviour and decision making [23]. This study was also consistent with the present finding that daughters are communicated well and earlier on various topic related to sexuality as compared to the sons.

In the medical profession, communication skill of a doctor plays a significant role in patient's treatment. It becomes more important especially when the doctor deals with patient's sexual issues. Ariffin F et al., assessed the skills and attitudes among medical undergraduates to take patient's sexual history confidently. They reported only half of the students felt comfortable in taking patients' sexual history. A 54% of them felt that the training they receive was not adequate to prepare them for such important tasks [24]. In a Brazilian study, Facio Jr FN et al., evaluated the effect of one day course regarding sexual education delivered during last two years of medical undergraduates. They observed that students' confidence level had improved to deal with patients' sexual issues [25]. Coleman E et al., reported and recommended that inclusion of integrated sexual health curriculum throughout the medical course has its multi beneficiary effects from the inter-personal to professional fronts [26]. A study by Aggarwal O et al., reported that 85% of medical students favoured the introduction of sex education at the school level [27]. Similarly in present study, though the majority were dependent on internet as their main source of sexual health information, 64.33% expressed the need for introducing some formal and well-structured course based on sexual and reproductive health topics.

The topics related to sexuality and reproductive health are not commonly discussed with adolescents by their elders. This study was an attempt to understand the awareness, attitude towards sexuality and the need to be informed by a formal sex education program among urban adolescent's population.

### Limitation(s)

Small sample size and study population from only one institute was one of the limitations and authors wish to extend it further to other medical institutes. Being children's first educator, the parents' perspective regarding the above discussed issues is equally important to be understood. That would be yet another area for further exploration.

## CONCLUSION(S)

The results of this study indicated that there is a dearth of communication between the adolescents (even though they are into medical profession) and their parents regarding sexual and reproductive health matters. Adolescent's attitude about sexual matters is guided by their religious beliefs. Majority of the adolescents preferred discussion with their peers and acquiring information through internet which can be unreliable at times. Hence, in order to develop positive sexual attitudes and maintain their reproductive health, this study recommends the inclusion of formal sexual education program in the early years of adolescence.

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