

## RESEARCH ARTICLE



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## Awareness and attitude towards reproductive and sexual health rights and practices among college students: An empirical study

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### Abstract

**Objectives:** To assess the knowledge, awareness and attitudes among college going students towards reproductive and sexual health rights, issues and practices. **Methods/Statistical analysis:** A cross-sectional study was conducted across colleges of Guwahati city among the first year students over the months of January and February 2020. The method of systematic random sampling was used. Sample size amounted to 306 students. Age group of the sample ranged between 18-19 years. The basic inclusion criteria was that the target population needs to be first year students enrolled in either science or arts stream. Self-administered questionnaires were the primary method of data collection. Analysis of data was done using Microsoft excel and open EPI software. Chi square test of independence was performed to test linkages between crucial variables. **Findings :** A total of 306 students were enrolled for the study. With respect to knowledge about legal statutes relating to reproductive rights issues like abortion, duration of maternity leave, 52% of the respondents had correct knowledge and information. 49% of the students were aware about the legality of homosexuality in India. Knowledge questions on sexual health and menstrual hygiene generated correct responses from 44% of students. 87% of the students favoured inclusion of sex education in at the institutional levels and free supply of implements for maintenance of menstrual hygiene at schools and colleges. **Application:** The findings of this study can supplement and assist further health policy research in the field of adolescent sexual health rights and needs especially, in the Northeastern Indian region.

**Keywords:** Sexual health; reproductive rights; homosexuality; menstrual hygiene; sex education

### 1 Introduction

Sexual and reproductive healthcare and rights are ideas that are staggeringly discounted and overlooked in the Indian policy discourse and South Asia, in general. India has one of the largest proportions of population in the younger age groups in the world<sup>(1)</sup>.

As a country which prides itself on its youth dominated demographic dividend, the issues connected with the youth like sexuality, sexual and reproductive health awareness, knowledge of contraception, menstrual hygiene etc, regrettably, are thoroughly marginalised not only in the policy discourse but also in the process of socialisation and social learning. Young girls and women face even graver concerns due to the cultural and patriarchy induced restrictions and subjugation around their sexuality and procreative biological functions. In India, 14 per cent of pregnancies amongst women aged under 20 are unplanned. Over 34 per cent of adolescent married girls admitted to being physically, emotionally, or sexually assaulted. Fifty percent of maternal deaths among girls from 15-19 year age occur due to unsafe abortion practices<sup>(2,3)</sup>. Against this backdrop, popularisation and promotion of sexual and reproductive health awareness is an imperative. In the context of Northeast India and more specifically Assam, the health indicators do not reveal a rosy picture. Assam's scores the highest in the tally of Maternal Mortality Rate (MMR) in India<sup>(4)</sup>. A report by NACO confirms that the HIV epidemic is very high in Meghalaya (0.76%), which is the third highest in the country after Mizoram (1.19%) and Nagaland (0.82%)<sup>(5)</sup>. All of these states belong to the northeast Indian region. Such statistics strongly prompt research efforts towards assessing sexual and reproductive health awareness in this region.

## 2 Aim and objectives

The objectives of this study are threefold.

Firstly, it aims to assess the extent of knowledge and awareness among college students about reproductive and sexual health along with the legal rights and statutes concerning reproductive and sexual health rights in India.

Secondly, to gauge students' attitudes and orientations towards various aspects and issues of reproductive and sexual health.

Thirdly, to examine possible interconnections between gender and educational stream with knowledge and attitudes towards sexual health and reproductive rights and laws.

## 3 Materials and Methods

A cross-sectional study was conducted across colleges of Guwahati city among the first year students over the months of January and February 2020. The rationale for choosing the urban centre of Guwahati as the locus of study is based on the higher levels of literacy and higher number of colleges situated here. The reason for deciding on the first year students as the targeted study population is based on the nature of their age-group i.e. matured or late adolescent age ranging from 18-19 years which seems opportune for assessing their awareness on sexual and reproductive health.

### 3.1 Sampling

Based on India Today ratings, top three government colleges in Guwahati were selected. Information about the intake capacity of undergraduate courses from the respective college prospectuses was collected. Total population of study amounted to 1500 students.

The sample size (n) is calculated according to the formula:

$$n = \left[ z^2 * p * (1 - p) / e^2 \right] / \left[ 1 + \left( z^2 * p * (1 - p) / (e^2 * N) \right) \right]$$

Where:  $z = 1.96$  for a confidence level ( $\alpha$ ) of 95%,  $p$  = proportion (expressed as a decimal),  $N$  = population size,  $e$  = margin of error.

$$\begin{aligned} z &= 1.96, p = 0.5, N = 1500, e = 0.05 \\ n &= \left[ 1.96^2 * 0.5 * (1 - 0.5) / 0.05^2 \right] / \left[ 1 + \left( 1.96^2 * 0.5 * (1 - 0.5) / (0.05^2 * 1500) \right) \right] \\ n &= 384.16 / 1.2561 = 305.834 \\ n &\approx 306 \end{aligned}$$

The sample size (with finite population correction) is equal to 306. From the selected colleges, a total of 306 students were selected using the method of systematic random sampling.

Proper permission was taken from the principals of the colleges and study was done on the basis of voluntary participation and consent of the respondents.

### 3.2 Data Collection and Analysis

Data collection was done through the questionnaire method. Semi-structured questionnaires with close-ended questions were self-administered. Data analysis was chiefly done with the help of Microsoft Excel. The data was entered in excel spreadsheets

and analysed using an open EPI software. Descriptive statistics was used for data analysis and determined by percentages and proportions. Chi square test of independence was also performed to assess linkages between the following, gender and awareness towards reproductive and sexual health; educational or disciplinary backgrounds and awareness towards reproductive and sexual health.

## 4 Results

**Table 1.** Distribution of study Sample on the basis of gender and educational stream

| Variables          | N(%)                                       |
|--------------------|--|
| Educational Stream | Arts Stream 145(47) Science Stream 161(53) |
| Gender             | Male 178(58) Female 128(42)                |

**Table 2.** Distribution of students in educational stream in terms of gender

| Educational Stream | Male | Female |
|--------------------|------|--------|
| Science Stream     | 101  | 60     |
| Arts Stream        | 77   | 68     |

The study sample comprised of 306 students out of which 47% are from the Arts stream and 53% from the science stream, 58% of the study sample is male while 42% is female. A distribution of the study sample on the basis of gender and educational stream is depicted in Table 1. Table 2 shows the distribution of students in the educational streams on the basis of gender. 63% of students of the science stream were males and 37% females. 53% of the students from the arts stream were males, 46% were females.

**Table 3.** Study population based on Knowledge and awareness on the legal framework of reproductive rights, sexual health and menstrual hygiene, family planning and pregnancy.

| Category of knowledge  | Questions  | Correct Answers                            | Students (N=306) |            |
|--|--|--|------------------|------------|
|  |  |  | Number           | Percentage |
| Knowledge about the legal framework of sexual health and reproductive rights | Is abortion legal in India?  | Yes  | 267              | 87.25%     |
|  | The statute that deals with abortion in India is-                                | Medical Termination of Pregnancy Act, 1971 | 176              | 57.51%     |
|  | Does a woman above 18 years need consent of spouse for abortion?                 | No   | 143              | 46.73%     |
|  | What is the legal age of marriage in India?                                      | 18 years, girls; 21 years; boys            | 292              | 95.44%     |
|  | Is Child Marriage still prevalent in India or has it been completely eradicated? | Yes, it is still prevalent.                | 212              | 69.28%     |
|  | The duration of maternity leave as provided by the Maternity Benefits Act is-    | 26 Weeks/6 months                          | 166              | 54.24%     |
|  | Is homosexuality legal in India?   | Yes  | 150              | 49.01%     |
|  | Menstruation is periodic discharge of the inner line of uterus.                  | True                                       | 114              | 37.25%     |

*Continued on next page*

Table 3 continued

| Category of knowledge  | Questions   | Correct Answers  | Students (N=306) |            |
|--|---|--|------------------|------------|
|  |   |  | Number           | Percentage |
| Knowledge about sexual health and menstrual hygiene          | How many times should the absorbent used by the menstruating girl be changed? | At least twice daily                                   | 176              | 57.51%     |
|  | Lack of menstrual hygiene leads to-   | Urinary and reproductive tract infection               | 193              | 63.07%     |
|  | What is PCOS or Polycystic Ovary Syndrome?                                    | It is a condition that impairs women's hormonal levels | 53               | 17.32%     |
|  | Sexually Transmitted Diseases(STDs) can affect-                               | Both men and women                                     | 162              | 52.94%     |
|  | Safe sex means the use of condoms in sexual intercourse                       | True   | 171              | 55.88%     |
|  | Can an HIV infected mother breastfeed her child?                              | No   | 135              | 44.11%     |
|  | HIV is spread by saliva   | False  | 97               | 31.69%     |
| Knowledge about family planning, contraception and pregnancy | Does India have a Family Planning Programme?                                  | Yes  | 223              | 72.87%     |
|  | The most common method of population control in India-                        | Female Sterilisation                                   | 99               | 32.35%     |
|  | The most common complication in pregnancy in India                            | Iron deficiency/Anaemia                                | 203              | 66.33%     |
|  | WHO prescribed birth spacing  | 33 months  | 73               | 23.85%     |
|  | Are iron and calcium supplements extremely necessary for pregnant women?      | Yes  | 203              | 66.33%     |

Table 3 reveals that the students possess significant amount of knowledge regarding the legality of abortion and marriage age in India as questions pertaining to them were answered correctly by more than 85% of the respondents. However, an insufficient awareness regarding the technicalities of legal statutes and provisions for termination of pregnancy or duration of maternity leave was clearly discernible. A striking feature in the findings is the visible ignorance of the youth about the legal status of homosexuality in India. The findings indicate that more than 50% of the respondents were not aware of the fact that homosexuality had been decriminalised in India. With respect to the levels of knowledge regarding sexual health and menstrual hygiene, it has been observed that there is an abysmally low level of knowledge among students with respect to menstrual biology and associated diseases. More than 50% of the students were uninformed about the basic idea behind the biological process of menstruation. The findings show a significantly low awareness of polycystic ovarian syndrome (PCOS), a disease that has become very common among women of the reproductive age. Only a meagre 17% of students had any awareness about the disease. Knowledge concerning sexually transmitted disease(STD) as well as modes of HIV transmission was also not very impressive. Table 3 also exhibits decent levels of awareness regarding the family planning programme in India, the nutritional supplements required and complications during pregnancy. However, in two categories the students performed poorly. Firstly, less than 60% respondents knew about the most common method of population control used in India. Secondly, more than 70% of the respondents did not know the appropriate duration that needs to be kept between two successive pregnancies.

Table 4 exhibits the trends of attitudes and orientations of the students towards sexual health education, menstruation and orientation towards family planning and use of contraceptives. It is interesting to note that a whopping majority of the students hugely favoured dissemination of knowledge about sexual health and hygiene and good practices at the institutional level. Over

91% of students agreed that sex education should be a part of school and college curriculum. While a majority of the students acknowledged the stigma around menstruation in Indian society, a striking trend in the research findings is that a significant majority (more than 80%) of students advocated for free supply of implements for maintenance of menstrual hygiene and agreed that better sanitation facilities should be provided in educational institutions. Overall, the attitudinal survey exhibited optimistic trends except for the opinion regarding provision of sexual health rights to the sexual minorities, which almost 50% students disagreed with.

**Table 4.** Attitude towards sexual health education, menstruation and orientation towards family planning and use of contraceptives.

| Attitude and Orientation  | Students in agreement with the opinion N= 306 | Percentage |
|---|---|------------|
| Knowledge on sexual health and reproductive rights should be imparted in schools and colleges   | 280   | 91.50%     |
| Menstruation is still a taboo in our society  | 263   | 85.94%     |
| Committed to contraceptive use and family planning in the future  | 225   | 73.52%     |
| Implements for maintaining menstrual hygiene (absorbent material, running water, soap) should be provided for free in schools and colleges        | 256   | 83.66%     |
| The government should frame a potent policy framework for protection and promotion of sexual health rights of sexual minorities (LGBTQ community) | 155   | 50.65%     |

The findings of the chi square test suggested that the relation between gender and awareness of menstrual hygiene was statistically significant ( $X^2 = 12.2829$ ,  $p = .006474$ ). For the category of knowledge on menstrual hygiene, the gap between male and female respondents in terms of correct responses was the highest (male- 18%, female-83%). Female students were better equipped with knowledge and information concerning menstruation and menstrual hygiene. However, a chi square test of independence between the two genders with reference to knowledge and awareness about other aspects of sexual health and sexually transmitted diseases was not statistically significant ( $X^2 = 2.8233$ ,  $p = .41968$ ). In the category of knowledge about family planning, contraception and pregnancy, no significant gap of awareness between the two genders was recorded ( $X^2 = 4.2596$ ,  $p = .372008$ ). Similarly, in the domain of knowledge about the legal framework of sexual health and reproductive rights, statistical variation between the genders was not significant either.

Another important statistically significant linkage was established between academic or disciplinary background and the level of knowledge regarding sexual and reproductive health ( $X^2 = 19.6228$ ,  $p = .0055$ ). With respect to knowledge of biological process of menstruation and information about sexually transmitted diseases (STDs), the arts stream performed poorly as compared to the science stream. While only 40% of arts students could respond correctly to factual information of menstruation and STDs, more than 75% of the students in the science stream registered correct responses.

## 5 Discussion

Research on the general level of awareness towards reproductive rights, sexual health, family planning, contraception among the youth has been really scanty in the north eastern region. It is against the backdrop of this paucity that the present research was undertaken. It has been found through this study that there is a low level of awareness regarding various provisions of maternity leave and other legal statutes concerning sexual and reproductive rights. The World Health Organization (WHO) confirms that reproductive rights rest on the recognition of the basic rights of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to sexual and reproductive health. They also include the right of all to make decisions concerning reproduction free of discrimination, coercion and violence<sup>(6)</sup>. The cause of it can be imputed the fact that in India, more importance has been paid to publicising reproductive healthcare services for women than popularising the idea of reproductive rights as human rights of women. There is a larger propensity that people are well-versed with governmental schemes for expecting mothers than knowing that right to

make decisions regarding reproduction without any force or under any duress is a basic principle of reproductive rights scheme. Such low levels awareness is in fact, responsible for various prevalent gender based violence related to women's reproductive health like reproductive coercion, marital rape, intimate partner violence (IPV) etc. Therefore, it is imperative that steps are taken towards raising awareness regarding reproductive rights among the youth. There is a strong need for a proper framework of adolescent sexual health guidelines. Low levels of awareness about contraceptive methods as recorded in this study confirms the conclusions made in another study conducted among college students in the northeast Indian state of Sikkim<sup>(7)</sup>. The study also reveals a significant level of ignorance about sexual minorities, their legal and health status and needs. Moreover, it was found that very less number of students were ready to acknowledge the need for a proper healthcare framework for sexual minorities. Such ignorance is a natural corollary of the social stigmatisation and negative attitude towards homosexuality in Indian society. Misconceptions and vilification of sexual minorities is a crucial part of Indian societal response to homosexuality. The LGBTQ community may have received legal recognition, its access to quality healthcare remains alarmingly scarce. And, there are hardly any anti-discrimination laws in place to safeguard equality in healthcare access<sup>(8,9)</sup>. Therefore, sexual minorities are at receiving end of inadequate healthcare and additionally, social exclusion which dramatically increases their vulnerability to mental ill-health, depression and suicidal thoughts. The call of the day is to implement a three-pronged approach towards arresting the social stigma, increase sensitisation about the LGBTQ way of life and ensure proper healthcare to the community. Furthermore, the study has pointed out that students are ill-informed of the basic biology of the process of menstruation and other aspects of sexual health and diseases. This trend has been corroborated by similar research studies<sup>(10-13)</sup>. Such uniform findings indicate a strong need of adolescent health programmes or inclusion of sex education in school and college curriculum. The study also found a majority of students acknowledging the perception of menstruation as a taboo in Indian society. This finding is aptly supplemented and corroborated by a particular study on girls' experience of menstruation in middle and low income countries which found ample amount of cultural, religious restrictions placed on menstruating girls, like seclusion from community, perception of impure touch etc<sup>(12)</sup>. An optimistic finding of this study is the extremely positive attitude exhibited by the respondents towards inculcation of sex education at the institutional level. The need for adolescent sex education is grossly undermined by educational and healthcare system in India. Sex education at school level has attracted strong objections and apprehension from all areas of the society, including parents, teachers, and politicians, with its provision banned in six states which include Maharashtra, Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, and Karnataka<sup>(14)</sup>. Sex education in India is met, most often than not, with fury especially, from the older generation on the ground that it corrupts the youth and it is antithetical to Indian tradition and values. A similar acknowledgement of the need of sexual and reproductive health education was also recorded in a study conducted in Meghalaya where the respondents admitted that the minimal sex-education received in school was inadequate and majority of indigenous students expressed the need for non-judgmental fora for discussions on sexual health and for sexuality education<sup>(15)</sup>. Another cross-sectional study conducted in Haryana, India recorded the same overwhelming support towards the need and importance of sex education. The study showed 93.5% of adolescents favouring sex education<sup>(16)</sup>. Corresponding appropriately to the ground reality of poor menstrual hygiene management in schools and colleges rife with lack of water, sanitation, disposal facility, especially in the rural areas, the findings recorded an overwhelming support for free supply of implements for maintenance of menstrual hygiene.

The significant interdependence between the variables of academic background and awareness of sexual and reproductive health, recorded by this study is consistent with the findings of a similar study conducted in Bangalore city<sup>(17)</sup>. The findings tally with the general impression that science students know more about biological conceptions of menstruation, contraception etc. due to the fact that they are extensively covered in the science textbooks as opposed to the arts students who have hardly had any curriculum based learning on these topics. The study also found greater levels of knowledge among girls regarding menstrual hygiene and health issues as compared to boys. The considerable paucity of knowledge among adolescent boys regarding various aspects of menstrual hygiene and health is again a direct offshoot of the societal perception of menstruation as taboo in India. While girls learn about this biological phenomenon as a part of their lived experience, boys do not come across many avenues to know about it considering the hush-hush tone associated with it. Furthermore, cultural norms and rituals in most parts of India require males to maintain not just physical distancing from menstruating women but also discourage any motivation to learn about the biology of menstruation further, alienating them from the concept. However, the overwhelming support for free supply of implements for maintenance of menstrual hygiene show that even males can be potential advocates of women-centric issues. Such a stance has been aptly affirmed by a study in this field conducted in the states of Maharashtra, Tamil Nadu and Chhattisgarh<sup>(18)</sup>.

## 6 Limitation of the study

The study was conducted in select government colleges, no private college in Guwahati was included. Moreover, besides gender and educational background, other socio-cultural factors like religious and cultural backgrounds of students were not evaluated



for discerning possible impact on knowledge and attitudes towards sexual health and reproductive rights.

## 7 Conclusion

The outcome of this empirical study has pointed out the pressing need for governmental and societal efforts towards promoting and popularising a non-judgemental, informative platform for discussing about sexual health and issues. This study posits that greater sensitisation towards good sexual health practices, contraceptive use, promotion and protection of reproductive rights and de-stigmatisation of homosexuality and other natural processes like menstruation will lead to a positive change and accelerate India's pace to achieve a holistic framework of healthcare. Further, it is suggested that sex-education among adolescents be made a part and parcel of study curriculum to inculcate, among the youth, a positive, healthy and informed approach towards sexual and reproductive health. Conclusively, the study has found that more research needs to be initiated in the northeast Indian region on reproductive and sexual health notions and concerns among the youth.

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