

Sexual behavior of adolescent students in Chandigarh and their perceptions regarding family life education

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ABSTRACT

Background: With rapidly changing lifestyle and exposure to the Internet and mass media, lifestyle and sexual behavior of adolescent students are also changing rapidly. **Objectives:** To investigate the sexual behavior of adolescent students and to study misconceptions prevailing among them. **Methods:** A cross-sectional survey of 1022 adolescent students aged 14–19 years as a part of an Indian Council of Medical Research sponsored survey. Sexual behavior explored by interview method. Logistic regression analysis for finding correlates. **Results:** Intimate friendship was reported by 19.2% respondents. The sexual behavior included 89% exposure to sex-related material, 74.7% were aware of sexual intercourse. Awareness regarding at least one contraceptive was found among 95.5% (94.5% of condoms and 67.2% of emergency contraception). About 6% respondents reported some sex-related problems and 2.5% of all respondents consulted some doctors for these problems. Awareness of HIV/AIDS was quite high (about 99%), and 96.4% of them were of the opinion that it is spread through sexual intercourse. Knowledge regarding transmission of sexually transmitted infections (STIs) through sexual contact was found among 89.2% respondents. Avoidance/abstinence from sex (84.7%), faithful to one partner (81.7), and use of barrier methods (90.3%) was main reported preventive measures for STIs. About 33% want that the discussion about sex should be open and frank, and 69.4% showed the need of sex education in the schools mostly by doctors. **Conclusions:** Sexual behavior of adolescent students is changing, and awareness about sex acts is also increasing. There is likelihood of indulging in risky behavior by adolescents. Family life education was felt necessary mainly by qualified medical staff.

Keywords: Adolescent, family life education, school, sexual behavior

Introduction

The World Health Organization defines adolescence as the period of life between the ages 10 and 19. Adolescence is characterized by conflicts of values, emotional stress, and readiness to extreme attitudes, which invariably leads to several psychosocial problems of adolescents. Adolescents include more than one-third of the whole Indian population. More than 1 in 10 children in India are teenagers or currently undergoing puberty.^[1–5] During this transition, adolescents experience rapidly changing lifestyle,

behavior, growth, and development; and exposure to Internet and mass media. With rapidly changing lifestyle and exposure to internet and mass media, sexual behavior of adolescent students is also changing. These factors may have considerable effect on lifestyle and sexual behavior of adolescent students. Risky sexual behaviors and lack of knowledge on sexuality-related topics are among the leading problems most associated with mortality, morbidity, and social ailments in adolescents.^[2–6] The online world offers information, entertainment and platform for social interaction, also with potential dangers of online addiction, cyber-bullying, misinformation, sexual solicitation, pornography, and identity threats, which are real and parents should educate

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children and adolescents about how to manage and avoid its hazards.^[7-12] Family life education (FLE) or sex education refers to a broad program designed to impart knowledge regarding values, attitudes, and practices affecting family relationships.^[13-18] Compared to India, youth in many developing countries has greater knowledge of contraception, birth control, and lesser prevalence of teen pregnancy. Greater knowledge about sexuality is one possible solution for this unmet reproductive health need of adolescents in India.

According to the National Family Health Survey (NFHS-3) findings, only 14.1% (14.7% urban vs. 13.9% rural) of unmarried sexually active adolescent's females used a contraceptive. The unmarried female adolescent is highly vulnerable to unwanted pregnancy. NFHS-3 survey reported the prevalence of teenage pregnancy to be about 16%. Television was the main source of information on HIV/AIDS for adolescents and youth followed by radio and information from friends and relatives. Condom use at first sexual intercourse by youth (15–24 years) who ever had sex shows that only 3% of women and 15% of men used condoms at the first time they had sex. NFHS-3 shows that adolescents (26%) are least likely to visit public health facilities or camps as compared to women of older age groups. A cross-sectional study of 2325 persons including adolescents, parents, and teachers reports that the adolescents of the state had very scanty and patchy knowledge about sexual and reproductive health.^[19] Keeping in mind the above facts, the present study was done with the objectives to investigate the sexual behavior of adolescent students and to study misconceptions prevailing among them.

Methods

The present study has been conducted in Government and Private Schools of Chandigarh. A cross-sectional survey among 1022 adolescent students aged 14–19 years as a part of an Indian Council of Medical Research (ICMR) sponsored survey was conducted.

There are more than 250 schools and colleges in union territory Chandigarh. There are 190 schools including 106 government, 7 government aided, 6 Kendriya/Navodaya schools, and 71 private schools imparting education up to 12th level. There are total 11,314 boys, and 10,280 girls enrolled in senior secondary level in Chandigarh as on September 30, 2012.

A stratified multistage random sampling was adopted. For conducting a baseline survey, stratification was done on the basis of type of schools imparting education up to 12th standard. Information on sexual aspects of health; awareness and perceptions regarding sexually transmitted infections (STI), HIV/AIDS, reproductive behavior, involvement in sexual activities, etc., were collected. Sexual behavior was explored by interview method.

Power analysis was done to calculate optimum sample size for the proposed study. Sample size was calculated using the following formula with approximation for large population:

$$n \text{ optimum} = \frac{Z^2_{1-\alpha/2}(1-P)}{\epsilon^2 P}$$

Where, α

P = Anticipated population proportion

$1 - \alpha$ = Confidence coefficient

ϵ = Relative precision

$Z (\cdot)$ is the value of standard normal variate.

A group of 1022 adolescent students were included based on the assumption of 50% overall reproductive health awareness among adolescents, 90% confidence coefficient and 5% relative precision.

A cross-sectional survey among 1022 adolescent students aged 14–19 years as a part of an ICMR sponsored project.

Requisite ethical clearance was taken, and the project was approved by the Institutional Ethics Committee. Consent of the parents and students were taken before administration of the questionnaire. The authors clarified, if any, doubts to adolescent. The identity of the students was kept confidential.

Results

There were 57.2% males and 42.9% females students selected from eight government schools and four private schools. The percentage of representation from government school was 72.6% out of total surveyed students. Table 1 shows distribution of participants according to their sociodemographic profile. Majority of surveyed students were of English medium (84.7%). It was found that 5.2% of students indulged in smoking and 9.3% of students indulged in drinking. More than a quarter of students (29.0%) students had sex-related queries. Majority of students (90.4%) had faith in God. It was found that 28.4% of students had 'Significant person' in life and 66.3% have role models in life. Nearly, half of the students (46.8%) felt need of mentors in their life. Most of the students (46.3%) were of the opinion that family members should be their mentors and only 14.1% were of the opinion that teachers should act as mentors. In actual practice, only 137 (7.6%) were having mentors in their life, mostly for career/academic guidance and emotional sharing. Majority of students (69.1%) responded that their mentor is helpful for them in their real life. Few of students (15.4%) did practice of yoga regularly. It was also found in the study that many students are facing lifestyle problems such as misuse of mobiles/internet, excessive viewing of TV from close range and movies, unsafe and fast driving, lack of physical activities, improper sleeping habits, too much consumption of fast food, and apprehensions regarding changing fashion trends. Table 2 shows the distribution of participants according to their sexual behavior, sexual awareness, methods of prevention of STIs, source of knowledge regarding STI, and needs of sex

Table 1: Distribution of participants according to their sociodemographic profile (n=1022)

Demographic characteristics	n (%)
Age in years	
14-17	989 (96.8)
18-19	33 (3.2)
Gender	
Male	601 (58.8)
Female	421 (41.2)
Type of school	
Government	622 (60.9)
Private	400 (39.1)
Type of school	
Coeducational	897 (87.8)
Girls	125 (12.2)
Medium of education	
Hindi	189 (18.5)
English	817 (79.9)
Punjabi	16 (1.6)
Type of family	
Joint	222 (21.7)
Nuclear	790 (77.3)
Extended	10 (1.0)

education. Psychosexual problems faced by students included worries regarding career, academic pressures, substance abuse, sexual offenses, indulging in unprotected sexual activities, misconceptions regarding sexual activities, lack of knowledge regarding contraception, anxieties regarding menarche and menstrual problems, high expectations of parents, violent behavior, stress, depression, anxiety, lack of attention, feeling of being hurt, feeling guilty, etc., In the present study, major source of knowledge regarding STI was teachers (44.9%), mass media (55.1%), friends (50%), and Internet (28.6%). Early and unprotected sex with no previous experiences or knowledge of consequences leads to unwanted pregnancies and unsafe abortions. We found that the awareness of students regarding condoms was maximum, i.e. 83.4%, followed by oral contraceptive (67.1%) and emergency contraceptive (65.3%) methods. It was found that 85.6% of adolescent students aged 14–19 years were aware of STI, and 93.8% were aware of HIV/AIDS while 11.3% of them had misconceptions regarding HIV/AIDS.

Discussion

The present study was an attempt, which was made to assess the sexual behavior of adolescent students in Chandigarh and their perceptions regarding FLE, along with its related factors. In the present study, more than a quarter of students (29.0%) students had sex-related queries. A study done in 7 private coeducational schools to understand the adolescent attitudes toward issues of sex and sexuality in India showed wide gap in the knowledge on the topic among adolescents.^[20] A survey conducted in Mumbai, 1979, found that 88% of the boys and 58% of the girls among college students had received no sex education from parents,

Table 2: Distribution of participants according to their awareness regarding sexual behavior, sexual awareness, methods of prevention of sexually transmitted infections, source of knowledge regarding sexually transmitted infection, and needs of sex education

Sexual behavior	n (%)
Sometimes physically feel attracted toward opposite sex	696 (68.1)
Have intimate friends	192 (18.8)
Discussion with somebody regarding	
Exposure to sex-related material	890 (87.1)
Sexual intercourse	704 (68.9)
Sexual abuse	670 (65.5)
Teenage pregnancy	652 (63.8)
Contraceptives	887 (88.7)
Emergency contraceptives	597 (86.8)
Premarital sex	495 (48.4)
Nightfall wet drop	205 (20.1)
Sexual problem consultation	176 (17.2)
Sexual awareness	
Aware of condoms	852 (83.4)
Aware of oral contraceptives	686 (67.1)
Aware of EC	667 (65.3)
Aware of STI	875 (85.6)
Aware of HIV/AIDS	959 (93.8)
Misconceptions regarding HIV/AIDS among aware	108 (11.3)
Methods of prevention of STI's	
Avoid sex/abstinence	536 (52.4)
Stay faithful to one partner	487 (47.6)
Encourage partner to stay faithful	327 (32.0)
Use condoms	692 (67.7)
Avoid commercial sex workers	347 (33.9)
Source of knowledge regarding STI (n=875)	
Teachers	393 (44.9)
Mass media	482 (55.1)
Friends	438 (50.0)
Internet	250 (28.6)
School curriculum	196 (22.4)
Relatives/family members	74 (8.4)
Others	55 (6.3)
Needs of sex education	
Have sex-related worries	420 (41.1)
Want frank discussion on sex-related issues	353 (34.5)
Felt need of sex education to be imparted to adolescents	709 (69.4)
Desire sex education to be imparted in school curriculum	471 (46.1)
Desire sexual education through teachers	188 (18.4)
Desire sexual education through doctors	344 (33.6)

STI's: Sexually transmitted infections; EC: Elite controllers

and their source of information were books, magazines, and youth counselors.^[21] The notion underlying anticipatory family education is that, if adolescents are prepared for their potential future family roles, then their adult life experiences in these roles will be more successful.

Early and unprotected sex with no previous experiences or knowledge of consequences leads to unwanted pregnancies and

unsafe abortions. In the present study, 63.8% of participants were aware of teenage pregnancy. According to national estimates, women in the age group of 15-19 years report almost one in six pregnancies in India. Some studies in India have estimated that teenage or early pregnancy to be in the range of 5% to more than 30%.^[19,22,23] In a study conducted in 2009 by Dixit *et al.* in Nagpur done among college students found that their knowledge about teenage pregnancy was poor, with less than half of the respondents (43.90%) saying that it could be a risk to the mother.^[24] Pregnancies in adolescent females are aborted or not reported due to stigma attached to it.^[25,26] There are considerable public arguments and controversies on sexuality education, leading to neglected issues such as teenage pregnancy.

We found that the awareness of students regarding condoms was maximum, i.e., 83.4%, followed by oral contraceptive (67.1%) and emergency contraceptive (65.3%) methods. In a study conducted by Dixit *et al.* in Nagpur during 2009 including college students found that general knowledge about contraceptives among students was found to be low.^[24] The result of the Nigeria Demographic and Health Survey, 2008, indicated that only 28.2% of adolescent females and 36.2% of adolescent males who were involved in sexual intercourse during last 1-year preceding the survey had used condom.^[27] The WHO estimates that approximately one in five adolescents contract a curable STI annually,^[28] while almost half of the new cases of HIV occur among adolescents.^[29,30] Reasons that have been suggested for low adolescent condom uses include poor sexual and reproductive health knowledge, inadequate access to contraceptive products and services, dislike for condom, and low self-efficacy for condom use.^[31,32] It was found in the present study that 85.6% of adolescent students aged 14–19 years were aware of STI and 93.8% were aware of HIV/AIDS while 11.3% of them had misconceptions regarding HIV/AIDS. In a study conducted in 2009 by Dixit *et al.* in Nagpur done among college students (age group 16–20 years) found that their knowledge about HIV, was not complete at large, with majority (74.63%) of the students responding that fever was a symptom of the disease while 58.04% of them also recognized weight loss and 68.78% recognized diarrhea as a symptom of the disease.^[24] Regarding their knowledge about STI in the same study conducted in Nagpur found that 80% of the students said that discharge is present in syphilis while 296 (72.19%) said that an ulcer is also present.

In the present study, major source of knowledge regarding STI were teachers (44.9%), mass media (55.1%), friends (50%) and the internet (28.6%). In our study, we found that awareness/discussion regarding nocturnal emission was there among 205 (20.1%) of respondents. In a study conducted in Pune by Alexander *et al.* done among unmarried youth during 2007 found that 69.6% of males in urban area and 64.4% males in rural area were aware of menstruation/nocturnal emission, whereas 6.7% females in urban area and 6.9% females in rural area knew about the same topic.^[33]

It was found that 5.2% of students indulged in smoking and 9.3% of students indulged in drinking in the present study. In another study conducted by Gupta *et al.* in Chandigarh about the prevalence, pattern, and familial effects of substance use among the 256 college students, 57.4% indulged in substance use. The most common substances that were used were alcohol (53.5%) and tobacco (27.3%).^[34] It has been found in many studies that adolescents' alcohol use was highly correlated with adolescents' multiple sexual partners and was a cofactor for HIV, it is important to improve strategies to abate such risk.^[35,36] In a study conducted by Alexander *et al.* done in Pune among unmarried youth during 2007 shows that 57% of urban males and 41% of rural males reported having used alcohol or drugs, or having been exposed to a pornographic film, compared with 2% and 1% of females, respectively.^[33]

It was found that 28.4% of students had 'Significant person' in life and 66.3% have role models in life. Nearly, half of the students (46.8%) felt need of mentors in their life. Most of the students (46.3%) were of the opinion that family members should be their mentors and only 14.1% were of the opinion that teachers should act as mentors. Studies have shown that majority of parents do not accept the accountability for providing sex education to their children.^[37] Another study states that 68% of the parents believe that they should be the primary sex educators of their children, followed by schools.^[38] It was also found in the study that many students are facing lifestyle problems such as misuse of internet, lack of physical activities, improper sleeping habits, improper eating habits, etc., Preventing access to pornographic movies or erratic contents on television shows is not prudent, but adding a single chapter to the school curriculum is relatively simple and practical.^[39] A study in India revealed that majority of school teachers were in favor of imparting sex education to school children.^[40]

Limitations

Potential limitations of our study are that adolescent students may have underreported their romantic, physical, and sexual experiences. In the traditional Indian norms, which inhibit premarital relationship with the opposite sex, adolescent students may be unwilling to disclose them, thus leading to underreporting and possible measurement error.

Conclusions

We found in our study that adolescent students in Chandigarh are facing many reproductive health problems such as sexual worries, unprotected sexual activities, lack of knowledge regarding contraception, etc., They feel need of imparting FLE as a part of school curriculum through health staff. Sexual education should be included as a part of school curriculum health facilities should be made more adolescent friendly.

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Conflicts of interest

There are no conflicts of interest.

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