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A STUDY ON SEXUAL BEHAVIOUR AND SEXUAL KNOWLEDGE AMONG STUDENTS OF A PRIVATE UNIVERSITY OF DELHI, NCR



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ABSTRACT

Background: Sexual intercourse among university students is gradually becoming a common occurrence. Preventing risky sexual behaviours among them would contribute to the prevention of Sexually transmitted diseases and unwanted pregnancies.

Objective: To study the Sexual behaviour and Sexual knowledge among students of a private university of Delhi, NCR, India.

Methods: A cross-sectional study using a self-administered, pre-tested questionnaire containing three sections of total 30 questions was conducted among 502 students of a private university of Delhi, NCR, India. Descriptive analysis was done with frequencies and summary statistics. Chi-square test was applied and p-value <0.05 was considered statistically significant.

Results: 53% of females and 47% of males responded to the survey. 27.3% of participants were sexually active. During first sexual intercourse, 18.2% were less than 18 years of age and 29.2% did not use a condom. During the last sexual intercourse, 12.4% were in a situation of non-consensual sex. 22.6% responded that stress caused them to get involved in risky sexual behaviour. In the knowledge section, 82.3% responded that condoms prevent STDs and 23.5% participants were of the opinion that AIDS can be cured. Course level(p<0.001), Age(p<0.001), Field of study(p=0.036) and Relationship with parents (p=0.032) were significantly associated with sexual intercourse. The age of first sexual intercourse was also significantly associated with condom use (p=0.003) and number of sexual partners in the last 12 months(p=0.004).

Conclusion: Continuous education about sexual health is necessary to increase awareness among young adults. Health intervention programs targeted to university students are important to prevent STDs.

KEYWORDS

sexual attitude, sexual practices, sexual behaviour, risky sexual behaviour, sexual knowledge

INTRODUCTION

World Health Organization reported in 2011 that unsafe sex is second among the top ten risk factors in the global burden of all diseases. In 2017 India reported 0.2% adults living with HIV and only 26.17% youth correctly identified ways of preventing the sexual transmission of HIV. [11] The present youth of India is following lifestyle of their counterparts in the western culture. There is a competitive behaviour among young college-going youth to prove themselves as more modern, impressive and so-called high-cultured people. [2]

Currently, in many societies, unmarried, single youths are sexually more active than what is commonly realized. Adolescents also maintain sexual relationships, even though cultural values in countries like India do not permit this. These youths who indulge in pre-marital, unprotected sex are at a higher risk of HIV/AIDS or other Sexually Transmitted Diseases and unwanted pregnancy too. [3] For some, college represents independence, an opportunity to form new friendships, and for several, an opportunity to experience romantic and/or sexual relationships. Many students, begin to reside independently, away from their families; others living with their families may be less supervised by parents. [4] Private university students may be easily influenced by their peers as they are likely to be from a high-income family, and may be capable of buying and using substances. Majority of university students are adolescents who are associated with sexual experimentation which may put them at risk of unsafe sexual practices. [5] As there is a dearth of literature regarding the prevalence of sexual debut, multiple sex partnership, condom use, or other risky sexual behaviour among Indian students, the present study was done to find the prevalence of risky sexual behaviour, it's associated correlates and sexual knowledge among students of a private university of Delhi, NCR.

METHODOLOGY

A cross-sectional study was conducted among 502 students of a private university in Delhi, NCR, between October 2019 and January 2020. A self-administered, pre-tested questionnaire consisting of 3 sections was formulated with variables addressing the objectives of the study. The first section consisted of socio-demographic variables. The second section consisted of 17 questions related to sexual behaviour and were only to be answered by respondents who had ever experienced sexual activity. The third section consisting of 13 questions related to sexual knowledge were to be answered by all respondents. The data was collected by distribution of questionnaire in a classroom setting where the students were introduced about the objectives of the study and reassured that personal information would be kept confidential. Informed consent was taken from the participants. The researcher stayed in the classroom itself while the students filled in the questionnaire and motivated students to seek help/clarifications if needed. Institutional ethical approval was taken.

Data was analysed using statistical software SPSS version 26. Data findings were described using frequency tables and descriptive statistics. Crosstabs of independent variables with outcome variables were performed. Chi-Square test was applied to analyse statistical associations, where p-value<0.05 was considered as statistically significant.

RESULTS

236(47%) were males and 266(53%) were females. Majority of them were 19-23 years of age 264(52.6%). 332(66.1%) participants were from undergraduate courses and 170(33.9%) from postgraduate courses. The field of study of majority of the participants was

engineering 207(41.2%). The social demographic variables are shown (Table no. 01)

Table no. 01 – Distribution of sociodemographic variables of study participants (N=502)

VARIABLES	NO. OF PEOPLE	PERCENTAGE (%)
GENDER		(70)
Male	236	47%
Female	266	53%
AGE	200	3370
18 years or less	113	22.5%
19-23 years	264	52.6%
24 years or more	125	24.9%
RELIGION	123	21.570
Hindu	446	88.8%
Others	56	11.2%
COURSE LEVEL	30	11.270
Undergraduate	332	66.1%
Postgraduate	170	33.9%
FIELD OF STUDY		12.270
Engineering	207	41.2%
Law	36	7.2%
Medical	92	18.3%
Others	167	33.3%
NATIVE STATE		
Delhi	232	46.2%
Outside Delhi	270	53.8%
EDUCATION OF FATHER		
Graduate	272	545.2%
Post graduate	230	45.8%
EDUCATION OF MOTHER		
Graduate	314	62.5%
Post graduate	188	37.5%
RESIDENCE		
With parents	276	55%
Others	226	45%
RELATIONSHIP WITH PARENTS		
Good	456	90.8%
Poor	46	9.2%
RELATIONSHIP WITH FRIENDS		
Good	447	89%
Poor	55	11%

Out of the total participants, 137 (27.3%) of students were sexually active, that means they have at least had sex one time (shown below in Fig.1). There is a constant race of urbanization among university students which makes them feel that being sexually active might improve their status among peers.

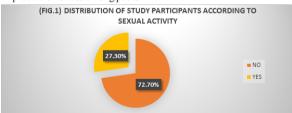


Fig 1 depicts the distribution of study participants according to sexual activity

Out of 137 sexually active participants, majority 100(73%) were more than 18 years of age and 88(64.2%) had practised protected vaginal sex. This study finding showed that out of total sexually active participants, about 62(45.2%), 21(15.4%) of the participants reported they had sexual intercourse at least once after drinking alcohol and taking drugs respectively. 31(26.6%) participants also said that stress caused them to get involved in a risky sexual behaviour. 17(12.4%) participants also responded that they were once in a situation where sex was forced when they did not consent. (shown in Table no. 02)

Table no.02- Distribution of Sexual behaviour profile of study participants (n=137)

S. no.	VARIABLES	RESPONSES	NO. OF PEOPLE	
1	First sexual	Boyfriend/girlfrie		. ,
	intercourse with?	nd	114	(83.2%)
	Interestance within	Stranger	18	(13.1%)
		Relatives	2	(1.5%)
		Sex worker	3	(2.2%)
2	D C 1 '			
2	Reason for having	Fell in love	91	(66.4%)
	first sex?	Personal desire	30	(21.9%)
		Forced Sex	7	(5.1%)
		Others	9	(6.6%)
3	Age during first	>18	100	(73%)
	sexual	<18	25	(18.2%)
	intercourse?	Don't remember	12	(8.8%)
4	Age of your		81	(59.1%)
4		Same age	_	
	sexual partner	Younger	14	(10.2%)
	during first sex?	Older	37	(27%)
		Don't remember	5	(3.6%)
5	Use of condom	Yes	97	(70.8%)
	during first sex?	No	40	(29.2%)
6	Frequency of	Always	62	(45.3%)
J	condom use?	Sometimes	33	(24.1%)
	condom use?			(24.1%)
_		Most of the times	42	(30.7%)
7	Sexual partners in	0-1	110	(80.3%)
	last 12 months?	≥2	27	(19.7%)
8	Alcohol	Always	8	(5.8%)
-	consumption	Sometimes	54	(39.4%)
	before sex?	Never	75	(54.7%)
0				
9	Sexual	Yes	16	(11.7%)
	intercourse under	No	116	(84.7%)
	the influence of	Don't know	5	(3.6%)
	drugs?			
10	Sexual	Yes	39	(28.5%)
	intercourse when	No	90	(65.7%)
		Don't know	8	(5.8%)
	the partner was	Don't know	0	(5.8%)
	under the			
	influence of			
	alcohol?			
11	Stress causes you	Yes	31	(22.6%)
	to get involved in	No	98	(71.5%)
	risky sexual	Don't know	8	(5.8%)
	behaviour?	2 on thirty	"	(5.070)
12		I Imarine to 1		
12	Kind of sexual	Unprotected		(40 ====
	intercourse you	vaginal	27	(19.7%)
	had last?	sex	88	(64.2%)
		Protected vaginal		·
		sex	6	(4.4%)
		Unprotected anal		(, 0)
		sex	7	(5.1%)
		Protected anal sex		(6.6%)
			,	(0.070)
		Oral sex		
13	Have you had or	Yes	5	(3.6%)
	ever been treated	No	127	(92.7%)
	for an STD?	Don't know	5	(3.6%)
4	Ever faced a	Yes	17	(12.4%)
4				
	situation where	No	114	(83.2%)
	sex was forced	Don't know	6	(4.4%)
	and without your			
	consent?			
15	Appropriate	Yes	121	(88.3%)
	safety measures	No	13	(9.5%)
	taken before	Don't know	3	(2.2%)
		DOU FRIIOM	٠	(2.2%)
	getting sexually			
_	involved?			
16	Do you examine	Yes	16	(44.5%)
-	your partner for	No	59	(43.1%)
	sores, cuts,	Don't know	17	(12.4%)
		DOIL KHOW	1/	(14.7/0)
	abrasions in the			
	genital area?			

Bivariate analysis was done to study the association between sociodemographic variables and the sexual activity. (shown in Table no.03) More number of students belonging to age 24 years and above were sexually active(48.8%) when compared to students below 24 years and this association was highly statistically significant. (p<0.001) Similarly more number of students pursuing post graduate courses were sexually active (51.9%) when compared to students pursuing undergraduate courses and this association was highly statistically significant. (p<0.001) Field of study (p=0.036) and Relationship with parents (p=0.032) were found to be significantly associated with sexual activity.

Table no. 03 Distribution Sociodemographic variables with sexual activity (N=502)

Sender Yes No Number (Percent TAGE)	activity (N=502)						
Male 236(47%) 74(54.0%) 162(44.4%) 0.054 Female 266(53%) 63(46.0%) 203(55.8%) AGE 113(22.5%) 14(12.4%) 99((87.6%) 128 years or less 125(24.9%) 61(48.8%) 64(51.2%) Others 56(11.2%) 16(11.7%) 40(11.0%) Others 56(11.2%) 66(48.2%) 266(72.9%) Postgraduate 170(33.9%) 71(51.9%) 99(27.1%) 40.001* FIELD OF STUDY Engineering 207(41.2%) 43(31.4%) 164(44.9%) Law 36(7.2%) 9(6.6%) 27(7.4%) 0.036 Medical 92(18.3%) 30(21.9%) 62(17.0%) Others 167(33.3%) 55(40.1%) 112(30.7%) NATIVE STATE Delhi 232(46.2%) 57(47.9%) 175(41.6%) 0.204 Outside Delhi 270(53.8%) 80(58.4%) 190(52.1%) EDUCATIO N(FATHER) Graduate 272(545.2%) 75(54.7%) 197(54.0%) Post graduate 272(545.2%) 75(54.7%) 197(54.0%) Post graduate 272(545.2%) 75(54.7%) 197(54.0%) Post graduate 188(37.5%) 50(36.5%) 138(37.8%) 0.787 EDUCATIO N(MOTHER) Graduate 188(37.5%) 155(42.5%) 0.066 RELATIONS HIP WITH FRENDS Good 447(89%) 134 364(99.7%) 0.032 Good 447(89%) 134 363(99.5%) 0.095	VARIABLES	NUMBER(%) (TOTAL)	SEXUAL ACTIVITY		P- VALUE		
Male 236(47%) 74(54.0%) 162(44.4%) 0.054			YES	NO			
Female 266(53%) 63(46.0%) 203(55.8%) AGE 18 years or 113(22.5%) 14(12.4%) 99((87.6%) less 19-23 years 264(52.6%) 62(23.5%) 202(76.5%) < 0.001 24 years or 125(24.9%) 61(48.8%) 64(51.2%)	GENDER		(PERCEN TAGE)	(PERCENTAGE)			
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Others 56(11.2%) 16(11.7%) 40(11.0%)							
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HIP WITH PARENTS	Others	226(45%)	71(51.9%)	155(42.5%)	0.060		
Good 456(90.8%) 134 364(99.7%) 0.032 Poor 46(9.2%) 3(2.2%) 1(0.3%) RELATIONS HIP WITH FRIENDS Good 447(89%) 134 363(99.5%) 0.099	HIP WITH						
Poor 46(9.2%) 3(2.2%) 1(0.3%) RELATIONS HIP WITH FRIENDS Good 447(89%) 134 363(99.5%) 0.099		456(90.8%)	1	364(99.7%)	0.032*		
RELATIONS HIP WITH FRIENDS Good 447(89%) 134 363(99.5%) 0.099	Poor	46(9.2%)		1(0.3%)			
Good 447(89%) 134 363(99.5%) 0.099	RELATIONS HIP WITH						
		447(89%)		363(99.5%)	0.099		
Poor 55(11%) 3(2.2%) 2(0.5%)	Poor	55(11%)	3(2.2%)	2(0.5%)			

^{*&}lt;0.05, **<0.001

Bivariate analysis was done to study the association between age of first sexual intercourse and sexual behaviour variables. (Table no. 04)

83.5% of sexually active study participants who used a condom during first sexual intercourse were ≥ 18 years of age and only 16.5% students < 18 years of age used a condom. Age during first sexual intercourse was significantly associated with the use of condom during first sexual intercourse(p=0.003)

Similarly, students \geq 18 years and above had more number of sexual partners in the last 12 months (55.6%) than students <18 years of age (44.4%) and this association was statistically significant (p=0.004) (Table 4).

Table no.04- Bivariate analysis of sexual behaviour with age during first sexual activity of study participants.

VARIABLES	NUMBER	AGE DURING FIRST		P-
	(%)	SEXUAL ACTIVITY		VALUE
	(TOTAL)	≥18 YEARS	<18 YEARS	
Use of condom during first sexual intercourse?			NUMBER(PE RCENTAGE)	
YES	97(70.8%)	81(83.5%)	16(16.5%)	0.003
NO	40(29.2%)	24(60.0%)	16(40.0%)	
Sexual partners in the last 12 months?				
0-1	110(80.3%)	90(81.8%)	20(18.2%)	0.004
≥2	27(19.7%)	15(55.6%)	12(44.4%)	

Sexual knowledge is important for the university students as it marks the practice of right or wrong sexual behaviour by them. The third section contained questions about sexual knowledge, which were answered by all. 413(82.3%) participants responded that yes condoms prevent STDs. 337(67.1%) participants think that they have no chance at all of contracting with HIV/AIDS.118(23.5%) participants responded that it is possible to cure AIDS. (Table no. 05)

Table no. 05- Distribution of Sexual knowledge variables of study participants (N=502)

S NO.	VARIABLES	RESPONSES	NO. OF PEOPLE	PERCENTAGE
1	Do condoms prevent STD?	Yes No Don't know	413 18 71	82.3% 3.6% 14.1%
2	AIDS is a serious threat to the community?	Yes No Don't know	435 42 25	86.7% 8.4% 5%
3	Your chance of contracting with HIV/AIDS?	High Low No chance at all others	11 134 337 20	2.2% 26.7% 67.1% 4%
4	Having more sexual experience with different sexual partners leads to a better understanding of sexual health?	Yes No Sometimes Don't know	94 186 80 142	18.7% 37.1% 15.9% 28.3%
5	Would you refuse to have sex if the person is not willing to use protection?	Yes No Sometimes Don't know	285 81 45 91	56.8% 16.1% 9% 18.1%
6	Have you heard of HIV/AIDS?	Yes No Don't know	476 14 12	94.8% 2.8% 2.4%
7	Is it possible to cure AIDS?	Yes No Don't know	118 235 149	23.5% 46.8% 29.7%
8	Are Condoms an effective way of protecting against HIV/AIDS?	Yes No Sometimes Don't know	335 28 93 46	66.7% 5.6% 18.5% 9.2%

^{**(}p<0.001) high statistical significance of association. *(p<0.05) statistical significance of association.

_				
9	Condoms reduce sexual	Yes	94	18.7%
	pleasure?	No	96	19.1%
	_	Sometimes	66	13.1%
		Don't know	246	49%
10	Have you ever received	Yes	276	55%
	sex education in school?	No	199	39.6%
		Don't know	27	5.4%
11	Is one-night stand normal?	Yes	155	30.9%
	_	No	160	31.9%
		Sometimes	84	16.7%
		Don't know	103	20.5%
12	All contraceptives are	Yes	281	56%
	100% effective?	No	64	12.7%
		Sometimes	91	18.1%
		Don't know	66	13.1%
13	Can we buy condoms and	Yes	439	87.5%
	contraceptives in a drug	No	17	3.4%
	store?	Don't know	46	9.2%

Based on quartiles generated, Knowledge level was calculated and It was found that about 51% of study participants had inadequate sexual knowledge whereas 49% of participants had adequate sexual knowledge. (shown in Fig 2).

More than half of the study participants were seen to have lack of sexual knowledge considering 18.3% participants were from medical background and 55% study participants had received sex education in school.

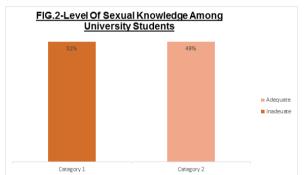


Fig 2 depicts the level of sexual knowledge among university students

DISCUSSION

The cross-sectional study was suggestive of 27.3% of study participants being sexually active and majority were above 18 years of age while getting involved into risky sexual activities. A study conducted in South India among adolescents and young adults showed that 46.5% males ^[6] and 53% females were involved in sexual activity and majority among them were 20-24years.

A study conducted among undergraduate students of Enugu, Nigeria^[7] showed 65.7% of female students were more than 18 years of age which is consistent to our study where 73% students were above 18 years of age during their first sexual activity.

On comparing our study findings with a study conducted among university students of Ethiopia^[8], it was observed that the prevalence of risky sexual behaviour ranged from 23.3% to 60.9%. A study conducted in Jimma University students^[9] the prevalence of risky sexual behaviour among campus regular undergraduate students was 30.2% which again shows similarity with our results.

A study conducted by Menon et.al^[10] among university students showed that majority of participants, 83.3% females and 61.8% males had 0-1 partners in last the 12 months. Similar findings were seen in our study wherein 80.3% participants had 0-1 sexual partner in the last 12 months. Likewise, comparing residence of participants it was observed that in a study done by Bruna da Silva, Thelma^[11], 76.67% of young people lived with their parents which is contrary to our study wherein 51.9% were not living with parents.

The study conducted by Michele Staton et al^[12] revealed that majority of male participants in their study were involved into risky sexual practises under influence of drugs which is contrary to our results

wherein only 11.7% were under the influence of drugs before sexual intercourse. In study by Bloom et.al^[13], 50% of the respondents who are engaging in premarital sex answered that a condom was not used during last intercourse whereas in our study 45.3% university students had knowledge about using a condom before engaging in sexual activity. As per our study 56.8% participants refused to have sex if their partners didn't use protective measure. Contrary result has been seen in a study done in ASEAN countries by Siyan Yi^[14] in which among the unmarried students, 54.2% did not use condoms during last sexual intercourse and as per their study there was a large country variation in terms of unprotected sex with highest rate found in Philippines (83.0%), followed by Indonesia (61.3%) and Laos (62.3%). Our study showed that only 3.6% participants have been treated for STDs while a study conducted among College students in East Coast University showed that 16% study participants had been treated for STDs^[15].

Our study result showed that 82.3% had good knowledge that using a condom can prevent STDs. Similar finding has been reported from a study in Karnataka, India among college students^[16]. According to our results, 67.1% study participants believed that they had no chance of getting infected by HIV/AIDS. Similar findings have been seen in another study done by Adedeji et.al^[17] wherein 57.9%, 48.1% and 54.0% in the age group of 0-19 years, 20-29 years and 30 & above respectively had the same belief. A study conducted among Portuguese University students^[18] revealed 55% had sex education in school which is consistent with our findings that showed that 56.2% received sex education in school.

Evidence^[19] suggests that after intervention, young people are less likely to involve into risky sexual behaviour and harmful binge alcohol drinking as this has been a cause of concern based on the result of our study wherein 39.4% agreed to have consumed alcohol before sexual activity.

There is a need for research to be conducted for studying the association between sexual behaviour of university students and sexual activity.

Limitations

One of the limitations of this cross-sectional study could be the underreporting of risky sexual behaviour by participants as study topic itself asses sensitive issues related to sexuality. In addition, our use of multiple-choice questions, that by design provide respondents with correct answers (versus open-ended formats), may have led to an overestimate rate of student's true knowledge.

Conclusion & Recommendations

Our study showed that 27.3% university students were sexually active engaging themselves in risky sexual behaviour activities, 19.7% had unprotected vaginal sex. This outlines the need for behavioural change intervention that not only provides access to sexual health services but also empowers students who receive inadequate family support. [20] Provision should be made to provide counselling services at college campus. Parents should be encouraged to communicate on sexual matters while their children are still in early teenage years before they become sexually active. [21] Innovative mobile application for sex health education can be useful for the young adults for receiving information and communication regarding sexual health. [22] This becomes essential as students are exposed to sexual content at a very young age through pornography and also through social media platforms which can affect their attitudes, beliefs, values and behaviour. [23]

Also, students should be encouraged to attend sexual and reproductive health centres, to gain awareness regarding the consequences of risky sexual behaviour and such centres should be strengthened. [24]

CONFLICT OF INTEREST- There are no conflicts of interest.

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