

# Correlates of sexual behaviour of rural college youth in Maharashtra, India

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**Abstract.** Although premarital sex relationships are widely discouraged in India, some youth do form such relationships. It is important to understand the nature and extent of youth sexual behaviour and examine the relationship between individual characteristics, knowledge and attitude towards reproductive health issues and sexual behaviour. In order to study the sexual behaviour of rural youth, quantitative data have been collected among 1500 students (800 male and 700 female) and qualitative data through 4 focus group discussions & 4 in-depth interviews, in the age group 15-24 years in Thane district of Maharashtra during 2005. Chi-square test and regression analysis was performed using the sexual experience (penetrative and non-penetrative sex) as the dependent variable to find out the association and relationship with individual characteristics (age, education, working status, peer interaction, erotic exposure, and habits), knowledge and attitude towards reproductive health issues. Boys and girls lacked scientific information and misconceptions are widespread on various reproductive health issues. Boys had more liberal attitudes towards premarital sex as compared to the girls. Proportion of students with any sexual experience (penetrative and non-penetrative sex) was much higher in boys (29.8%) compared to girls (4.9%). Around 11 percent boys and 1 percent girls who reported penetrative sex (vaginal, /oral / anal), around half of them did not use condom. Homosexual experience was reported by 11 percent boys and 3 percent girls. AIDS awareness was observed high (89% & 87 % respectively among boys and girls). However the knowledge of sexually transmitted diseases was limited. Exposure to alcohol, drugs, pornographic films, having more frequent interaction with peers and working status of the students were positively related with penetrative and non-penetrative sex relationships for both boys and girls. Over 83 percent youth expressed a need for interactive communication on reproductive health issues be available in their colleges. The rural youth engaged in penetrative sex and use condom inconsistently are at risk of STIs and HIV transmission to their partners. Findings underscore the need for sexual and reproductive health interventions to target not only young people but also their peers.

Key words: Sexual behaviour, rural youth, reproductive health, youth sexuality, sexual health

## 1. Introduction

Adolescent all over the world are sexually active, but the age at which they start having sexual intercourse varies between regions and within a country, females and males and by other socio-cultural factors as education, rural-urban residence. Evidence from a growing body of research indicates that between one in seven and one in three young men and fewer than one in ten young women had ever engaged in pre-marital sex (1-13). Internationally, young peoples' sexual

health is a major concern both because of an urgent need to reduce the high level of unwanted pregnancies and sexually transmitted diseases and because of a desire to improve less tangible aspects of health such as psychological wellbeing. Further, young peoples' vulnerability caused by their young age, coupled with lack of and/or poor knowledge on matters related to sexuality, reproductive health, and their inability or unwillingness to use family planning and health services exposes them to a significant risk of experiencing pregnancy, sexually transmitted disease (STDs) including HIV/AIDS (4, 14-15).

Reddy (1-2) studies of college students, teachers and parents indicated that at least half the respondents had their first sexual experience between the ages of 15 and 24 years, at least 38 percent reported occasional masturbation and larger proportion of women than men reported that their first sexual activity had been with a

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partner of the same sex. Condom use was inconsistent and almost never occurred in the first few instances of commercial sex. AIDS awareness although widespread among the students, they did not use condom regularly. According to the National Family Health Survey (NFHS-3) findings indicate that 4 percent of young women and 15 percent of young men had ever experienced sex before marriage, only 14.1 percent (14.7% urban versus 13.9% rural) of unmarried sexually active adolescent females used a contraceptive (9). Even though condom awareness among youth is as high as 83.8 percent on an all-India level, actual condom usage is reported to be less (16). In a study, only four in ten students from Delhi University reported occasional condom use during sexual intercourse (17). More alarming is the reported condom use rate of 7 percent by sexually active youth in a town in Assam state (18). Although adolescents are aware of contraception, they do not know how to use contraceptives effectively. Sexual encounters in pre- and extra-marital contexts are frequently unplanned and adolescents find it difficult to procure contraceptives (19).

Although premarital sexual relationship is generally considered as immoral in contemporary India, a substantial proportion of young men and women did not find it objectionable under all circumstances (1,13). Most of the studies refer to heterosexual activity. Premarital and extramarital sexual activity is prevalent in both urban and rural areas, despite being socially frowned upon, and despite the majority of adolescent girls and boys saying that they believe that sexual activity should begin only after marriage. An important finding of these studies is the age at which sexual activity is initiated, ranges between 16-18 years among males and females. Thus, it appears from these studies that sexual activity among adolescents is much higher and begins at an earlier age than what is commonly believed.

However, it can be conjectured that increased age at marriage, gradual openness about sex in Indian cinema, video music, television, popular magazines and other entertainment media during the last two or three decades is increasingly influencing the unmarried youth to be more adventures about premarital sex than ever before. As a result, the extent of premarital sex with multiple partners, particularly by unmarried men, may be considerably higher than what is commonly perceived. Increasing sexual activity, especially among adolescent/youth in the light of HIV/AIDS pandemic is an alarming situation. While existing studies have documented the

prevalence of pre-marital sexual experiences among young people in India, little work has been done to explore the factors that hasten young people's transition to sexual life before marriage. Understanding youth sexual behaviour is incomplete unless one gives a careful insight into the determinants of youth sexual behaviour.

### *1.1. Objectives*

The objective of the study was to understand the nature and extent of youth sexual behaviour and examine the relationship between individual characteristics, knowledge and attitude towards reproductive health issues and sexual behaviour.

## **2. Materials and methods**

Selection of the district and colleges was done by using purposive sampling. In all these selected Talukas (blocks), there is only one college for higher education. The students were recruited faculty wise (Arts, Science and Commerce stream) divisions by random sampling. The sample consisted of 1500 students (800 male and 700 female) in the age group 15-24 years college going youth from 8 colleges of Shahapur, Jawhar, Wada and Murbad in Thane District of Maharashtra, India. The qualitative data was collected through 4 focus group discussions {(FGDs), (8-10 male students, aged 16-21 years)} & 4 in-depth interviews (IDIs among male students). The purposes of the study were explained to the students and were told that the questionnaire did not contain name and address, thereby assuring them a complete anonymity and strict confidentiality. Students below 18 years of age were asked to produce written consent of their parent and remaining students (18 years above) gave written consent on their own (either in English, Hindi or Marathi). Around 5 percent (49 male and 34 female) students either refused to give information or did not complete the schedule, were not included in the study.

The study employed a self-administered questionnaire, which contained questions on sexual behaviour such as types of sexual activity, frequency of sexual intercourse, types of sexual partners, information on condom use and reasons for remaining sexually abstinent. Questionnaires were provided in Marathi (local State language) and in English. The survey was conducted in the months of January-March 2005. Distributions of students are given according to the three major types of sexual behaviour i.e. sexually abstainer, non-penetrative and penetrative sex experience.

Table 1. Percentage distribution of boys and girls by type of sexual contacts

Type of sexual experience	Boys %	Girls %
Experience of any penetrative & non-penetrative sex	(n=800)	(n=700)
Yes	29.8	5.0
Type of sexual experience		
Non-penetrative	29.4	5.0
Penetrative	11.4	1.1
Type of sexual contacts *		
Non-penetrative*	(n=238)	(n=35)
Hugging/Kissing	73.5	94.3
Masturbation	32.4	14.3
Caressing breast	70.7	71.4
Sex between thighs	5.9	...
Fondling partner's genitals	23.1	45.7
Penetrative*		
Sexual intercourse	36.1	20.0
Oral sex	4.2	8.6
Anal sex	0.8	---

\* Multiple responses

Bivariate and multivariate analysis was carried out to study significant association/relationship between individual characteristics, knowledge and attitude towards reproductive health issues and non-penetrative and penetrative sexual experiences.

### 3. Results

#### 3.1. Characteristics of respondents

The mean age of the study population was around 18 years. Of the total students, around 74 percent belonged to Arts faculty (subjects areas are grouped into disciplines such as Humanities, Social Sciences, Languages, and Fine and Performing Arts) and remaining 36 percent belonged to Science (primary emphasis in the sciences (Biology, Chemistry, Computing, Physics or Mathematics) and Commerce (undergraduate degree which provides a solid foundation for careers in business, accounting, finance and public administration) faculty. Vast majority (91.5 %) of the students was Hindus, and 8.5 percent had other religious affiliations such as Muslim, Christian, Boudh and Jain. Around three-fifth (59 %) belonged to Scheduled caste, Scheduled tribe and Nomadic tribe and others (Scheduled Castes and Scheduled Tribes are communities were considered 'outcastes' and were excluded from the Chaturvarna system that was the descriptive social superstructure of Hindu society in the Indian subcontinent for thousands of years. These communities had traditionally

been relegated to the most menial labour with no possibility of upward mobility, and subject to extensive social disadvantage and exclusion, in comparison to the wider community. SCs/STs together comprise over 24 percent of India's population, with SC at over 16 percent and ST over 8 per cent as per 2001 census) (20). Nearly 20 percent boys and 6.6 percent girls were working for an income. The total personal income per month varied from Rs.50/- to Rs. 5,000 (US\$ 1 to 110). About 11 percent boys reported that they are habitual to Gutaka, tobacco chewing, smoking and alcohol consumption. About 60 percent (53 % boys and 69 % girls) students reported to have had cable connection and watched television daily up to 2 hours. Overall, there was higher proportion of student's fathers (32.9 %) with educational level higher secondary and above compared with student's mothers (6.8 %). Mother's occupational status was lower than father's and around 91 percent students reported that their mothers were housewives. About 67 percent students belonged to families with an income up to Rs. 5000/- per month (US\$ 110).

#### 3.2. Sexual experience

Any pleasurable sexual experience (non-penetrative) is sufficient enough to motivate for further sexual involvement. In this context non-penetrative sexual experiences (kissing, genital fondling, mutual masturbation etc) are most likely to influence the participation in subsequent penetrative sexual activity. Broadly there were

Table 2. Percentage distribution of boys and girls by type of sexual partner, place and reasons for sexual contacts

Type of sexual experience	Boys % (n=238)	Girls % (n=35)
Persons with whom had sexual contacts*		
Stranger	8.4	.....
Commercial Sex Workers	1.3	.....
Known female partner from village or community	21.4	.....
Close friends	66.4	.....
Servant	0.8	.....
Other than above	7.6	.....
Friend	.....	57.1
Neighbour	.....	2.9
Relative	.....	25.7
Other than above	.....	20.0
Place of sexual contacts *		
Own/Partner's residence	40.8	51.4
Friend's residence	21.8	28.4
Hostel/Lodge	10.1	11.4
Brothel	0.4	----
Park	18.1	5.7
Picnic/camp	13.4	22.8
Reasons for sexual contacts*		
Love	50.8	77.1
Sexual desire	46.2	8.6
Curiosity	29.0	11.4
Pressure of partner	13.4	20.0
Desire to be like everyone	3.4	.....
Friends doing it	4.2	.....
Chance it just happened	10.9	20.0
Pleasure/fun/enjoyment	22.7	8.6
To prove that I am a potent man	5.0	.....

\* Multiple responses

three categories of students according to their sexual behaviour, which included sexual abstainers (who had no sexual experience-not even kissing); non-penetrative sexual experienced (kissing and stimulation of sexual organs), and those who had penetrative sex.

Table 1 and 2 present the percent distribution of students with type of sexual contacts. About 30 percent (238) of boys and 5 per cent (35) of girls have reported the involvement in sexual behaviour ranging from kissing to anal sex. The average age of the respondents who had any sex experience or had indulged in it were 18 years and above. Major non-penetrative sexual activity

reported was hugging/ kissing (73.5 % boys and 94.3 % girls) and caressing breasts (70.7 % boys and 71.4 % of girls). Qualitative data showed that hugging and kissing are common in 'time pass' relationship (transitory and sexual 'time pass' relationships). Kissing and touching are also reported with casual acquaintances among those who travel by bus/Jeep.

Around 32 percent of boys and 14 percent of girls reported to have experienced masturbation with girls and boys respectively, while 23 percent of boys and 46 percent of girls have reported 'touching' sex organs of a girl or boys or being 'touched' by the girl or boys respectively. The

finding of the (FGDs) and in-depth interviews (IDIs) among boys showed that they consider this behaviour quite normal. *'Touching girls is not bad. Majority of the boys in our college feel that kissing, hugging, shaking hand is not a sexual activity. The sexual activities are touching genitals and sexual intercourse'* (IDI-male 16 years).

Among the boys and girls, the proportion of students engaged in penetrative sex was 11.4 percent and 1.2 percent respectively. Frequency and type of sex acts are important aspects of sexual behaviour for having a bearing on the transmission and spread of STDs and HIV. Operationally sexual intercourse is defined as penile-vaginal (includes anal sex or oral sex intercourse). Of the total students, that had any sex experience about 36 percent of boys and 20 percent girls reported to have had sexual intercourse, 4.2 percent boys and 8.6 percent girls reported to have experienced oral sex and around one percent boys reported to have experienced anal sex. FGD participant's perception of what constitutes sex was in general, *'Sreechya shariracha upbhog ghene'* (taking pleasure from a female body), *'Vasanapurti'* (satisfy sexual feelings). Around 46 percent of boys and girls reported that they were not happy at the first time of sexual contact. Of the boys and girls who ever reported masturbating, over one third of boys and two-third of girls reacted that they got mental tension, felt offended and had fear of side effects.

The boys who had reported sex experience, 66.4 percent reported that their partner was a school/college friend, followed by known female partner from village or community (21 %). Whereas among the girls, about 57 and 26 percent reported friend and relative respectively. FGD participants had mixed opinions about premarital sex with commercial sex workers (CSWs) *'If I get an opportunity, definitely I will take chance but not with CSWs, only with girl friend. AIDS is the greatest fear. I don't mind a married woman too. Pregnancy is not a major factor'* (FGD- male 18 years). The place where the penetrative sex activity occurred, was their own or partners' house (40.8% boys and 51.4% girls) and friend's residence (21.8% boys and 28.4% girls). About 10 percent boys and girls reported sexual activity at hotels/lodges, showed this as a planned activity. About 31 percent of boys and 29 percent of girls reported park/field, picnic/camp for sex activity. Among the students, who had any sex experience, major reasons reported were love (50.8% boys and 77.1% girls), sexual desire (46.2% boys and 8.6% girls), and curiosity (29% boys and 11.4% girls). It is interesting that peer

influence was somewhat important for the young men. About 13 percent boys and 20 percent girls reported pressure by partner for having sexual intercourse. A few students reported reasons such as "desire to be like anyone", "friends doing it"; "by chance it just happened" and to prove that "I am a potent man".

About one-fifth of boys and 77 percent girls reported that their partner for sex activity was older than them, whereas 56 percent boys reported that their partner was younger than them. About 47 percent boys and 86 percent girls reported that they were either upset/unhappy after first sexual contact (non-penetrative and penetrative sex). Of the total 91 boys and 8 girls who ever had penetrative sex experience, around half of the boys and girls reported having used condom. Among the students who ever used condom, 59 percent boys and all the girls reported for the purpose of preventing pregnancy and STDs/HIV/AIDS (38.6% boys). Of the total 99 boys and girls who had sexual intercourse, none reported that they ever had suffered from STDs. Of the total, 51.6 percent boys who never used condom, gave multiple reasons such as sex suddenly happened, condoms were not readily available at the time of encounter and partner insisted not to use (60%), not aware of condom or had no proper knowledge (36 %), condom reduces sexual pleasure (17%) and feel shy to buy it (17%). A few boys mentioned that partner was married so it was her responsibility (6.4%) (*Table not provided*).

Homosexual activities are reported in few studies in Indian settings, where young men sleep together in workplaces such as hotels, or in during temporary situations, like festivals. In this study, of the total students, 110 students (89 boys and 21 girls) reported one or the other homosexual activities such as fondling genitals and mutual masturbation. It is however true that the risk of HIV infection is greater for persons who practice anal intercourse and this type of intercourse is more common between homosexual partners than between heterosexual partners (21). Of the total boys, who had experienced sexual activity with male partner, half of them felt that it is necessary to use condom with male partner, while remaining felt it is not necessary.

Table 3 presents the students, who reported multiple reasons for never indulging into sexual activity. Over three-fifth responded more in terms of sex and their value towards sex. These students thought that sex is proper only after marriage (I want to wait until I am older or married). The second firm reason for not having sex was related to influence of institutions such

Table 3. Percentage distribution of boys and girls who never indulged in sexual activity by reasons for remaining sexually abstinent

Reasons for remaining sexually abstinent*	Boys % (n=562)	Girls % (n=665)
I want to wait until I am older or married	61.1	70.7
My religious values are against it	6.9	5.9
Fear of pregnancy or disease	11.0	5.3
Non availability of place	2.5	0.1
Non availability of partner	6.4	1.0
My parents values are against it	13.6	14.0
Lack of money	2.9	0.6
Fear of family/religion /Community	12.6	16.0

\* Multiple responses

Table 4. Percent distribution of boys and girls by types of sexual behaviour according to individual characteristics

Characteristics	Boys (n=800)				Girls (n=700)			
	Abstainer (N=562)	Non-Penetrative (N=235)	Penetrative (N=91)	No.	Abstainer (N=665)	Non-Penetrative (N=35)	Penetrative (N=8)	No.
<b>Age (Years)</b>								
Up to 16	77.8	11.1	11.1	108	96.3	3.7	--	135
17-18	73.6	17.4	9.0	368	94.4	4.4	1.1	270
Above 19	63.9	21.9	14.2	324	94.9	3.4	1.7	295
<b><math>p \leq 01</math></b>								
<b>Faculty</b>								
Arts	68.5	20.4	11.1	530	95.3	3.5	1.2	575
Commerce	67.7	16.6	15.1	155	91.8	8.2	--	61
Science	81.7	11.3	5.5	115	95.3	3.1	1.6	64
<b><math>p \leq 05</math></b>								
<b>Caste</b>								
General	72.2	17.2	10.6	302	95.2	2.9	1.9	310
SC	63.2	22.6	14.2	261	92.5	7.0	.5	187
OBC	76.0	14.7	9.2	217	97.6	1.8	.6	164
ST/NT	70.0	20.0	10.0	20	94.9	5.1	--	39
<b>Habits</b>								
Never	73.6	17.2	9.2	717				
Ever tried	41.0	28.9	30.1	83				
<b><math>p \leq 001</math></b>								
<b>Self religiosity</b>								
Highly religious	72.1	16.4	11.4	298	96.3	3.4	1.3	297
Some what religious	68.9	20.0	11.1	450	96.4	3.6	1.0	390
Not at all religious	71.2	15.4	13.5	52	76.9	23.1	---	13

as family, religion and community (33% boys and 36% girls), followed by fear of unwanted pregnancy or sexually transmitted diseases (11% boys and 5.3% girls). Around 12 percent boys

Table 5. Percent distribution of boys and girls by types of sexual behaviour according to individual characteristics

	Boys (n=800)				Girls (n=700)			
	Abstainer (n=562)	Non- Penetrative (n=235)	Penetra tive (n=9)	No.	Abstainer (n=665)	Non- Penetrative (n=35)	Penetrative (n=8)	No
Working status								
No	73.6	18.1	8.3	641	95.1	4.0	.9	65
Yes	56.6	19.5	23.9	159	93.5	2.2	4.3	4
								46
	<i>p</i> ≤001							
Peer interaction								
No	84.1	10.7	5.2	181	96.6	3.1	.3	293
Yes	59.8	24.2	16.0	619	93.9	4.4	1.7	407
	<i>p</i> ≤001							
Erotic exposure								
No	76.6	15.6	7.9	138	95.3	3.6	1.1	102
Yes	53.0	26.0	20.9	662	92.4	6.1	1.5	598
	<i>p</i> ≤.001							
RH knowledge								
Low	82.5	12.5	2.3	112	98.2	1.8	.8	95
Moderate	72.4	17.9	9.7	524	94.7	4.4	5.5	522
High	57.2	22.5	20.3	164	88.1	5.1	17.1	83
	<i>p</i> ≤001							
Total Attitude								
Conservative	90.5	6.0	3.6	84	97.5	2.5	---	160
Moderate	76.9	15.1	8.0	437	95.4	3.6	1.1	475
Liberal	53.8	27.2	19.0	279	86.2	9.2	4.6	65
	<i>p</i> ≤001							
Place of stay								
Family	70.4	18.3	11.3	699	95.5	3.4	1.1	643
Relatives/Other	69.3	18.8	11.9	101	89.5	8.8	1.8	57
Religion								
Hindu	70.6	18.4	11.0	734	95.8	3.1	1.1	639
Muslim	66.7	16.7	16.7	24	100	--	--	18
Boudh/Jain/Sikh	66.7	19.0	14.3	42	81.4	16.3	2.3	43
	<i>p</i> ≤001							
Self religiosity								
Highly religious	71.1	17.0	11.4	466	82.4	10.8	6.8	371
Somewhat religious	68.3	20.4	11.4	334	81.0	12.6	6.4	323
Not at all religious	---	--	---	---	83.3	16.7	---	6
Family income								
Up to Rs. 2500	74.5	14.8	10.6	330	95.1	3.9	1.0	305
Rs.2501-5000	64.9	20.8	14.4	202	94.9	4.5	.6	176
Rs. 5001 –7500	71.4	21.4	7.1	140	97.2	2.8	--	107
Rs 7501 & above	66.4	20.3	13.3	128	92.9	3.6	3.6	112

and 2 percent girls expressed reasons such as non-availability of place/partner and lack of money, which showed that as and when opportunity arises, they are more likely to indulge in sexual activity.

FGD participants expressed conservative thoughts over premarital sex 'One should not keep premarital sex because 'Sambhogache vyasan lagel (will get addicted).

This would also affect career and sexual relationship with wife' (IDI-male, 19 years). 'I will avoid having sexual intercourse before marriage. I am afraid of STDs. I don't believe in temporary satisfaction' (FGD-male, 17 years).

### 3.3. Differentials of sexual behaviour

Table 4 presents distribution of students by sexual experience and individual characteristics. Responsible sexual behaviour (abstinence or safe sex) is influenced largely by age of the individual. A larger proportion of older boys have experienced both penetrative and non-penetrative sex compared to their younger counterparts. Arts faculty boys reported more non-penetrative sex experience whereas boys and girls of commerce stream reported more non-penetrative and penetrative sex experience.

In general, drugs and alcohol consumption are directly correlated with sexual activity (22-25). Students who had either tried cigarette, alcohol consumption is more likely to indulge into sexual activity due to the peer pressure and extent of the relationship with friends. In this sample, boys who had reported such habits had higher non-penetrative and penetrative experience (29 and 30 percent respectively), showed significant association with sexual experience. FGD participants reported that blue films (pornography material) and friends are the source of information on sexual intercourse including oral and anal sex, but students have little or no exposure to correct information on sex, which indicates association between information and sexual activity. *'If breast size of the girl is big, it means the girl is sexually active (had penetrative sex). Till we get scientific information from reliable sources we will trust friends only'* (IDI-male, 17 years).

Table 5 presents the percentage distribution of students with their family characteristics and by sexual experience. Currently employed young men were more likely to engage in commercial sexual relationship than those who never worked (1, 25-26). The results revealed that a large number of boys who were working had experienced non-penetrative and penetrative sex whereas among the girls, more number of girls who were working reported experience of penetrative sex. Likewise, higher level of peer interaction and erotic exposure also showed association with sex experience among boys but not among the girls. It is argued that the relationship between the knowledge about sexuality issues and sex experience is complex and it appears to be two way interactive

processes, whereby sex information leads to sexual permissiveness and increased permissiveness leads to increased acquisition of sex information (27). The present study results showed a significant association between sexuality knowledge and sex experience. Involvement in non-penetrative and penetrative sex was highest among boys and girls who had high reproductive health knowledge.

Sex attitude was found to have significant association with the sexual involvement in case of both boys and girls. A very large majority of boys (90.5%) and girls (97.5%) with conservative attitudes were sex abstainers compared to those with liberal attitudes (53.8% boys and 86.2% girls). This could be because behaviour changed sex attitudes of students and because they were sexually active, they had more knowledge.

It is assumed that hostel (dormitory) students do not have parental control and at the same time have access to opportunities for sexual experimentation. Kiragu and Zabin (27) reported that more numbers of students who stayed in hostels were sexually active than those who stayed with parents. In this study, it was found that more number of girls, who stayed in hostel/boarding, had more non-penetrative experience compared to girls who stayed with their family. However the association between place of stay and sexual behaviour was found insignificant. Thornton and Camburn (28) reported that religious attendance and importance of belief were strongly correlated with adolescence sexuality. It was found that both boys and girls who belonged to Hindu religion were more sexual abstainers (70.6% boys and 95.5% girls), compared to other religious categories showed insignificant association. The association between family characteristics such as education, occupation and income status of student's father and mother, type of family, self religiosity of the respondents and sexual experience was not statistically significant.

### 4.4. Determinants of sexual experience (non-penetrative and penetrative)

Table 6 presents the relationship between various characteristics of the respondents and their penetrative and non-penetrative sexual experiences. Peer interaction, habits, erotic exposure, knowledge about RH issues and attitude towards sex has an effect in any sexual experience and penetrative sex experience among the boys. The log odds (Odds ratio is the ratio of number of subjects with the event in a group to the number of subjects without the event. Log-



odds ratio is the natural log of the odds ratio) of those boys having high peer interaction, ever tried alcohol/smoking, higher exposure to erotic material, high levels of reproductive health knowledge and liberal attitude towards sex, engaging in any sexual experience (penetrative and non-penetrative) is almost one and half to two times higher for those having low peer

interaction, never tried alcohol/smoking, not exposed to erotic material, low levels of reproductive health knowledge and conservative attitude towards sexuality. A liberal sexuality attitude may be due to higher peer influence, and this together may influence the risky sexual behaviour.

Table 6. Penetrative & non-penetrative sex experience among boys and girls and penetrative sex experience among boys: Results of logistic regression analysis.

Variables	Non-penetrative sex experience		Penetrative sex experience
	Boys (N=238) Exp (B)	Girls (N=35) Exp (B)	Boys (N=91) Exp (B)
Age (completed years)	1.03	.77	.95
Faculty			
Arts (reference)	.96	1.69	1.33
Science/Commerce			
Caste			
General (reference)	.97	4.96***	1.34
SC/ST/OBC			
Religion			
Hindu (reference)	1.01	.86	1.04
Muslim/Boudh/Jain/Christian			
Peer Interaction			
Low (reference)	2.15***	1.76	1.91*
High			
Erotic exposure			
No (reference)	1.75**	1.01	1.59*
Yes			
Habits			
No (reference)	2.01**	---	1.96*
Yes			
Working status			
No (reference)	.58**	.72	.32***
Yes			
Knowledge about RH issues (score)			
Low (reference)	1.48*	1.81	2.70**
High			
Attitude towards sexuality issues (score)			
Low (reference)	2.35***	3.31***	2.12**
High			
Constant	-2.1045	-4.0157	-3.2156

\*\*\*p≤.001 \*\*p≤.01 \*p≤.05

Sexual experience was positively related with working status of the boys. Logistic regression showed that the odds of having non-penetrative sex experience among working students were 0.60 times the corresponding odds for boys who were not in employment. Among the predictors of

non-penetrative/penetrative sex experience peer interaction, erotic exposure, habits, working status of the respondents, knowledge about reproductive health issues and attitude towards sex were found to be significant. Logistic regression showed that the odds of having any

sexual experience among girls who belonged to Schedule Caste, Scheduled Tribe, Nomadic Tribe and Other Backward Class, were five times the corresponding odds for general caste. Similarly the log odds of those girls having liberal attitude towards sex, engaging in any sexual experience is almost three times higher for those having conservative attitude.

#### 4. Discussion

The present study provides baseline information regarding the sexual behaviors of rural college youth of Maharashtra. The fact that around 30 percent boys and 5 percent girls had engaged in non-penetrative sex and one out of every ten boys and one percent girls had had sex with opposite sex partner, suggests increase in sexual behaviour of rural youth (13,29). Qualitative data reported that non-penetrative sexual acts were considered normal during 'growing up' stage. However significant gender differences remain in sex attitudes and behaviour. This finding is consistent with the national survey of Family Planning Association of India (30), which found that females were far less likely to endorse sexual standards favouring them than were males (penetrative sex experience among boys 11% versus girls 1%). A good proportion of students had non-penetrative and penetrative sex experience before marriage and there is incidence of same sex sexual interaction in the population studied. In this context, strategies should be designed to address the distinct needs of subgroups of youth such as i) abstainers ii) non-penetrative sex experience iii) penetrative sex experience. A number of youth reported of having had penetrative sex experience, did not use condom showed higher prevalence of risk-taking behaviour, increases risk for HIV, STIs and unwanted pregnancy among rural youth. The reasons for risk behaviour need to be studied further so as to evolve effective interventions to reduce them. Such programs should help youth to develop the skills, make informed decisions about engaging in sexual intercourse and using contraceptives to avoid HIV, STIs and unwanted pregnancy.

Study results showed that sex education among rural youth occurred largely through their peers, sex manuals and pornographic literature. This means that these students were less and less under the influence of their parents and more responsive to peer and sex magazines. Since the peer interaction was found very strong and thereby exposure to pornographic material among

this group, it would be useful to involve students at all stages of planning and implementation in intervention programme. Many of the students felt confused and guilty about certain aspects of their sexual behaviour (including masturbation, non-penetrative and penetrative sexual acts, and homosexual relationship). Literature on sexuality issues, which is presently available, needs to deal with these subjects in a sensitive manner.

Students who participated in the focus group discussions, in-depth interviews and the survey expressed the need to introduce sex education in schools and colleges. The significance of these findings underscores the need for sex education to dismiss myths and misconceptions that are often the source of sexual problems. The implications for those involved in providing reproductive health services to youth is that there is a necessity for directing communication to unmarried youth, since it is among these groups that the first sexual experience occurs. Since heterosexual and homosexual sexual relationship was observed among both boys and girls, there is need to emphasis safe sex practices among boys and girls.

#### 4.1. Limitations of the study

Generalization of its findings to college students in the general population is not possible. India is as diverse as it is vast and sexual standards vary considerably between regions, rural and urban areas, cities depending upon the level of modernization and socio-economic classes. Similarly representation of the students from tribal area, sample is likely to introduce a conservative bias in the study. Because of smaller and infrequent exposure to sexual anatomy and sex related matters, these students are more likely to be inhibited in sexual attitudes as compared to urban students. This study covered only college going youth. The real educational needs of youth cannot be determined unless the needs of those who are neither in school nor in college are also considered.

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#### References

1. Abraham L. Kumar KA. Sexual experiences and their correlates among college students in Mumbai

- city, India. *International Family Planning Perspectives* 1999; 25: 139-146.
2. Awasthi S, Nichter M, Pande VK. Developing an interactive STD-prevention program for youth: lessons from a north Indian slum. *Stud Fam Plann* 2000; 31: 138-150.
  3. Collumbien M, Das B, Bohidar N. Male sexual debut in orissa, India: context, partners and differentials. *Asia-Pacific Population Journal* 2001; 16: 211-224.
  4. Jejeebhoy SJ, Sebastian MP. Young people's sexual and reproductive health, in looking Back, Looking Forward: A Profile of Sexual and Reproductive Health in India, ed. S.J. Jejeebhoy. New Delhi: Population Council 2004; pp. 138-168.
  5. Brahme RG, Sahay S, Malhotra-Kohli R, et al. High-risk behaviour in young men attending sexually transmitted disease clinics in Pune, India. *AIDS Care* 2005; 17: 377-385.
  6. Potdar R, Koenig MA. Does Audio-CASI improve reports of risky behavior? Evidence from a randomized field trial among young urban men in India. *Stud Fam Plann* 2005; 36: 107-116.
  7. Ram U, Bhat R, Dwivedi LK. Tourism and sexual behaviour. Experiences of youth in Goa. *Journal of Family Welfare* 2007; 52: 59-72.
  8. Alexander M, Garda L, Kanade S, Jejeebhoy S, Ganatra B. Romance and sex: pre-marital partnership formation among young women and men, Pune district, India. *Reprod Health Matters* 2006; 14: 144-155.
  9. International Institute for Population Sciences (IIPS) and Macro International. *National Family Health Survey (NFHS-3), 2005-06: India, Volume 1*. Mumbai: IIPS, 2007.
  10. Pradhan MR, Ram U. 2007. Identifying context and vulnerability of the urban youth towards premarital sex: Evidences from Puri, Orissa. *Indian Journal of Youth Affairs* 2007; 11: 105-114.
  11. Jaya, Hindin MJ, Ahmed S. Differences in young people's reports of sexual behaviors according to interview methodology: a randomized trial in India. *Am J Public Health* 2008; 98: 169-174.
  12. National Institute of Medical Statistics and National AIDS Control Organisation (NACO). 2008. *National Behavioural Surveillance Survey (BSS), 2006; Youth (15-24 Years)* New Delhi: NACO, Ministry of Health and Family Welfare, Government of India. Accessed 5 January 2009 at [http://www.nacoonline.org/Quick\\_Links/Publication/ME\\_and\\_Research\\_Surveillance/Reports\\_and\\_Surveys/National\\_BSS\\_20062/](http://www.nacoonline.org/Quick_Links/Publication/ME_and_Research_Surveillance/Reports_and_Surveys/National_BSS_20062/)
  13. Ghule Mohan: 'Sexual and Reproductive Health of Youth: A study of male students in Maharashtra, India, Ph D. Dissertation (unpublished), International Institute for Population Sciences, Mumbai, 2004.
  14. Mamdani M. 1999. 'Adolescent reproductive health: experience of community based programmes', in S. Pachauri (ed.), *Implementing a Reproductive Health Agenda in India: The Beginning*. New Delhi: Population Council 1999; pp. 261-311.
  15. Singh S. Men, Misinformation and HIV/AIDS in India. *Toward a new partnership: Encouraging the positive involvement of men as supportive partners in reproductive health*, New York: Population Council 1997.
  16. Youth: National Behavioral Surveillance study 2006. National AIDS Control Organization. Ministry of Health and Family Welfare 2006.
  17. Sachdev P. AIDS/HIV and university students in Delhi, India: knowledge, beliefs, attitudes and behaviors. *Soc Work Health Care* 1998; 26: 37-57.
  18. Sen J. Awareness of AIDS control and Sexual Behaviour of Youth in a town of Assam state. *J Hum Ecol* 2007; 22: 187-200.
  19. GAO EX-Sheng; ZHAO Shang-ling & T U Xiaowon: 'Study on attitude towards premarital sex behaviour and the predictors of attitude among subjects participating in required premarital physical examinations', *Chinese Journal of Health Statistics (in Chinese)*: 16(4): 206 Cited in *Reproduction and contraception*, Vol. 12, 2001.
  20. Wikipedia, the free encyclopedia- Website Wikipedia.org
  21. Nag M. 1996. *Sexual Behaviour and AIDS in India*, New Delhi: Vikas Publishing House Private Limited.
  22. Jha Saroj: 'Lifestyle Related Problems of Youth', *The Indian Journal of Social Work*, Vol. LV. No.1, Jan. 1994.
  23. Alexander M, Garda L, Kanade S, Jejeebhoy S, Ganatra B. Correlates of premarital relationships among unmarried youth in Pune district, Maharashtra, India. *Int Fam Plan Perspect* 2007; 33: 150-159.
  24. Devries KM, Free CJ, Morison L, Saewyc E. Factors associated with the sexual behavior of Canadian Aboriginal young people and their implications for health promotion. *Am J Public Health* 2009; 99: 855-862.
  25. Kayembe KP, Mapatano MA, Busangu FA, et al. Correlates of ever had sex and of recent sex among teenagers and young unmarried adults in the Democratic Republic of Congo. *AIDS Behav* 2008; 12: 585-593.
  26. Isarabhakadi Pimonpan: 'Sexual attitudes and experiences of rural Thai youth', Institute for Population and Social research, Mahidol University, 2000, ISBN No. 974-663-670-7, IPSR Pub. No. 249.
  27. Kiragu Karungari and Zabin, Lauries: 'The Correlates of Pre Marital Sexual Activity Among School Age Adolescents in Kenya', *International Family Planning Perspectives*, 1993, Vol. 19, No.3, pp 92-97.
  28. Thornton A, Camburn D: 'Religious Participation and Adolescent Sexual Behaviour and Attitudes', *Journal of Marriage & the Family*, 51, pp 641 Cited in *Family Planning Perspectives*, Vol. 22 Jan/Feb 1990.
  29. Mutatkar RK, Apte Hemant: 'Sexual Behaviour amongst Adolescents in Rural Western Maharashtra', *AIDS Research & Review*, 1999; pp. 89-94.
  30. Family Planning Association of India (FPAI): 'Youth Sexuality: A study of Knowledge Attitudes Beliefs and Practices among Urban Educated Indian Youth', 1993-1994, Bombay, Sex Education Counselling Research Training/Therapy Department, 1995.