



## REPRODUCTIVE HEALTH AWARENESS, PERCEIVED NEEDS AND ADVICE SEEKING BEHAVIOUR OF UNMARRIED ADOLESCENT AND YOUTH STUDENTS IN CHANDIGARH

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### ABSTRACT

**Background:** Reproductive health awareness of unmarried boys and girls is vital for their growth and development for their future parenthood. Little is known about their knowledge, attitude, and advice seeking behaviour of adolescents and youths for reproductive health matters. **Objectives:** to investigate reproductive and sexual awareness of adolescents and youths and to explore their opinions regarding advice seeking for reproductive health needs. **Methods:** A cross sectional survey was conducted among unmarried students studying in schools/colleges in four Government and Private schools/Colleges of Chandigarh. A stratified two-stage random sampling design was adopted. Data variables included background information reproductive and sexual health reproductive behavior and needs. **Results:** A total of 297 adolescents and youths including 176 (59.3%) males and 121(40.7%) females were included and 58(19.5%) respondents including 41(23.3%) boys and 17(14.0%) girls reported having intimate friends. There were 167(56.2%) including 95 (54.0%) boys and only 72 (59.5%) girls respondents of the opinion that teenage pregnancy was very risky and 23(7.7%) adolescents had sexual encounters. Only 12.5% participants including 15.3% boys and 8.3% girls reported pre-marital sex to be wrong. The most common known contraceptive was condom reported by 122(50.2%) followed by oral contraceptive 99(40.7%) participants. There were 84(28.3%) respondents who were aware of sexting. According to 241(81.1%) respondents, sex education was necessary and 106(44.0%) respondents preferred schools as the best place for sex education. **Conclusions:** Adolescents and youths had several reproductive and sexual health issues and misconceptions. Adolescent Health Programs should be extended beyond health institutions. They should be provided age appropriate family life education (FLE).

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### INTRODUCTION

Adolescents and youths are prone to various reproductive health problems. The fertility behaviour of adolescents is a potential determining factor for future population growth in a country. The WHO defines 'adolescence' as the age group of 10-19 years and 'youth' as the age group of 15-24 years. According to NFHS-4 survey report, 28.5% of the population is of young people (10-24 years).<sup>1</sup>

Reproductive health knowledge of unmarried boys and girls is vital for their growth and development for their future parenthood. They are prone to various reproductive health related problems like sexual exposures, high risk sex behavior/ indulging in unprotected sexual activities, misconceptions regarding sexual activities, wet dreams, menstrual complaints, lack of knowledge regarding contraception etc. However, they often lack basic RSH information. Significant proportion of adolescents and young adults, who are the precious resource of our country, involve in risky sexual behavior, lack a complete knowledge about safe sex practices.<sup>2</sup> Adolescents and youths are exposed to risky behavior including premarital sex and sexual abuse, exposing them to sexually transmitted diseases,

unwanted pregnancy/abortion and psychological problems.<sup>3</sup> Mean age at sexual intercourse of medical students was found to be 17.5 years and their risky sexual behavior was found while studying sexual behavior and their need of sexual education in Delhi.<sup>4</sup> Sex education for adolescents and youths has been a challenge. Adolescent sexual and reproductive health education is still a neglected issue in many countries. The topic of sex is considered taboo and there is reluctance on part of the parents to discuss these issues at home. There are very few dedicated adolescent health clinics and health professionals may be ill-equipped to address their sex education needs. In a recent study, sex behavior, attitudes and education needs of college students has been studied.<sup>5</sup> Also, a recent study discussed need of family life education (FLE) among adolescents.<sup>6</sup>

Adolescents and youths are prone to various health related problems. Their problems have not yet received proper attention in our country. Little is known about their knowledge, attitude, and advice seeking behavior of adolescents and youths for reproductive health matters. Present study is an attempt to investigate reproductive and

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sexual awareness of adolescents and youths and to explore their opinions regarding advice seeking for reproductive health needs.

## MATERIAL AND METHODS

Present cross-sectional study was conducted among unmarried students studying in schools/colleges in four Government and Private schools/Colleges of Chandigarh. Chandigarh is the most economically advanced Union Territory (UT) of India and also capital of two states: Punjab and Haryana. It is characterized by high population growth due to increasing migratory population and rapidly changing life style. Chandigarh is a highly urbanized city and western culture is adopted by a large proportion of adolescents and youths in this modern city called "City Beautiful of India". Health of adolescent and youths is likely to be influenced by their rapidly changing life style, ignorance, peer pressure, academic pressures, misconceptions, and inability to cope with adverse situations in Chandigarh.

Unmarried adolescents and youths within the age group of 15-24 years were selected provided they gave willingness to take part in the study. Confidentiality and secrecy was assured to participating respondents. A stratified two-stage random sampling design was adopted. A sample of students as second stage units within selected first stage units were selected at random giving adequate representation to male and female respondents. The whole of Chandigarh was divided into four quadrants /cluster. Within each cluster, list of schools/colleges imparting education in Hindi, English, and Punjabi mediums was prepared along with their respective sanctioned strength of students studying in classes 9<sup>th</sup> standard and above. Sampling frame of sampling units at each stage of selection was prepared. From each cluster, a sample with proportional allocation was selected.

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

$$n_{opt} = \frac{Z^2_{1-\alpha/2} (1-P)}{\epsilon^2 P},$$

Where,

P = Anticipated population proportion

1 -  $\alpha$  = Confidence Coefficient

$\epsilon$  = Relative precision, and

Z = value of standard normal variate.

On the basis of 40 % percentage of adolescents/youths reproductive and sexual problem as the most important outcome parameter anticipated on the basis of preliminary survey findings and assuming 90 % confidence coefficient and 5% relative precision, the optimum sample size came out to be 260 adolescents and young youths aged 15-24 years.

Data variables included background information: socio-demographic characteristics: age, gender, literacy status of students as well as of their parents, religion, type of family, family environment, occupation of parents, socio-economic status etc and reproductive and sexual health awareness perceptions and needs: sexual aspects, reproductive health awareness and perceptions regarding sexually transmitted infections, HIV/AIDS, reproductive behavior, sexual aspects of health, treatment seeking behavior, high-risk behaviors like involvement in sexual activities.

Information was collected through interviews conducted among students using pretested semi-structured survey schedule specifically designed for this purpose. Survey schedule was divided into two parts: one part of survey schedule is planned to be filled by questionnaire method distributing among literate respondents/students. However, second set of questions was filled directly by interview technique as those questions could not be explored indirectly in the form of questionnaire to be filled by respondents in this qualitative survey. Interviewers were trained to ask the questions and conducting the interview and were monitored to the extent possible. It was ensured to have a vigil watch on overall project activities. In case of girls, interview was conducted in presence/ collaboration with female teachers / female investigators. Data were described using frequency tables. Summary measures were presented separately for males and females. Data analysis was done by using IBM SPSS-25.0 Software.

## RESULTS

Present study is an attempt to address reproductive and psycho-sexual health related problems of adolescents and youths and to explore their opinions regarding reproductive health needs. A total of 297 adolescents and youths including 176 (59.3%) males and 121(40.7%) females were included all studying in selected schools/colleges. Among surveyed 173(58.2%) adolescents /youths were from age group of 17-19 years comprising 115(65.3%) males and 58 (47.9%) females. Medium of education of 226(76.1%) respondents was English and 71(23.9%) were studying in Hindi medium respectively. reportedly. Comparative more respondents were studying in Government schools 259(87.2%) than those studying in private schools 38(12.8%). Table-1 presents detailed information regarding reproductive health related issues. About 72% Respondents (72.2% boys and 72.8% girls) were of the view that ideal age for getting married should be above legal age 215(72.4%). About 70 % boys and 54% girls physically attracted to opposite sex sometimes as they reported and 58(19.5%) respondents including 41(23.3%) boys and 17(14.0%) girls were having intimate friends. Opinion about discussion on sex should be open and frank as reported by 160(53.9%) respondents (61.4% boys and 43.0% girls while 19(6.4%) shared that discussion on sex should be prohibited. About 46% boys and 40% girls were exposed to sex related material. About 9% boys and 6% girls reported sexual encounters. There were 40(13.5%) respondents who had experience of nocturnal emission/ wet drops and 23(7.7%) adolescents had sexual encounters. Respondents shared their views on teenage pregnancy and 167(56.2%) respondents were of the opinion that teenage pregnancy was very risky including 95 (54.0%) boys and only 72 (59.5%) girls and 28(9.8%) had a opinion of using routine contraceptives for protection. There were 197(66.3%) respondents who had nothing to say regarding premarital sex contrary to this 26(8.8%) had opinion that it was right before marriage. Surprisingly only 12.5% including 15.3% boys and 8.3% girls reported pre-marital sex to be wrong. Knowledge regarding contraceptives was found among 431 (81.8%) respondents including 162 (92.0%) boys and 81(66.9%) girls. The most known contraceptive was condom by 122(50.2%) followed by oral contraceptive 99(40.7%), Tubectomy /Vasectomy 96(39.5%). Among all those who were aware of contraceptives, 23(7.7%) respondents had used contraceptives as well. About 49 % (58.0% boys and 35.5% girls) claimed awareness of emergency contraceptives.

Whereas, there were 61(20.5%) respondents of the view that emergency contraceptives was same as that of contraceptives. Emergency contraception was reportedly used sometimes by about 14% respondents who were aware of it. Several misconceptions were reported regarding emergency contraceptives. Even 19.5% were of the view that it was same as IUD. Awareness about sexually transmitted diseases was not found satisfactory.

Awareness regarding HIV/AIDS was found maximum only among 123(41.4%) respondents, gonorrhoea 115(38.7%) and Syphilis 79(26.5%) respectively. Knowledge regarding methods of prevention of HIV/AIDS was also reported by respondents in which by using condoms 129(43.4%) and 99(33.3%) by using sterilized syringe and needles was most common. Awareness regarding sexual assault was not correct as reported by most of respondents. There were 84(28.3%) respondents who were aware of sexting and had explained its meaning as sending sexy messages to someone else as reported by 62(74.0%). Boys were more aware of sexting as compared to girls.

**Table 1** Reproductive health related issues of respondents by gender

Reproductive Health Aspect	Male		Female		Total	
	No.	%	No.	%	No.	%
You are developing as a pretty / handsome much like Anyone talked to you about what to expect as your body develops	100	56.8	63	52.1	163	54.9
According to you, the ideal age of marriage should be	N=176		N=12		N=2	
Below legal age	9	5.1	8	6.6	17	5.7
Legal age	19	10.8	14	11.6	33	11.1
Above legal age	127	72.2	88	72.7	215	72.4
You are physically attracted to opposite sex	N=176		N=12		N=2	
Never	22	12.5	23	19.0	45	15.2
Sometimes	62	35.2	34	28.1	96	32.3
Often	62	35.2	31	25.6	93	31.3
Not sure	13	7.4	10	8.3	23	7.7
Any intimate friends	41	23.3	17	14.0	58	19.5
In your opinion discussion on sex should be	N=176		N=12		N=2	
Open and frank	108	61.4	52	43.0	160	53.9
Restricted /Confidential	23	13.1	24	19.8	47	15.6
Prohibited	11	6.3	8	6.6	19	6.4
Nothing to say	27	15.3	31	25.6	58	19.5
Ever had exposure to sex related material	81	46.0	49	40.5	130	43.8
Ever experienced nocturnal emission/ wet drops	36	20.5	4	3.3	40	13.5
Have you had any sexual encounter	16	9.1	7	5.8	23	7.7
Your views about teenage pregnancy	N=176		N=12		N=2	
It is risky	95	54.0	72	59.5	167	56.2
Ruins girls future/health	11	6.3	2	1.7	13	4.4
Use contraceptives	15	8.5	14	11.6	29	9.8
It is wrong/no emotional maturity/avoid	24	13.6	12	9.9	36	12.1
Not good for the health of baby as well as mother	18	10.2	7	5.8	25	8.4
One's own wish	7	4	1	0.8	8	2.7
Opinion regarding premarital sex	N=176		N=12		N=2	
Always wrong	27	15.3	10	8.3	37	12.5
Right	22	12.5	4	3.3	26	8.8
Sometime permissible	26	14.8	11	9.1	37	12.5
Nothing to say	101	57.4	96	79.3	197	66.3
Ever suffered from any sexual health issue/problem	2	1.1	0	0	2	0.7
Knowledge regarding contraceptive	162	92.0	81	66.9	243	81.8
If yes, type	N=162		N=81		N=2	
Condom	95	58.6	27	33.3	122	50.2
Oral contraceptive pills	80	49.3	19	23.4	99	40.7
Copper-T	77	47.5	19	23.4	96	39.5
Tubectomy/Vasectomy	72	44.4	18	22.2	90	37.0
Any other	22	13.5	6	7.4	28	11.5

Ever used contraceptives	9	5.1	14	11.6	23	7.7
Knowledge regarding emergency contraception	102	58.0	43	35.5	145	48.8
Knowledge/types of emergency contraception	N=176		N=12		N=2	
i-pills, mala-D	20	11.4	6	5	26	8.8
Same as routine contraceptives	33	18.8	28	23.1	61	20.5
May lead to serious side effects	25	14.2	9	7.4	34	11.4
Instead of taking EC, one should not indulge into sex	29	16.5	9	7.4	38	12.8
Good source to prevent unwanted pregnancy	30	17	25	20.7	55	18.5
Use to control population	7	4	3	2.5	10	3.4
You/your friend ever used emergency contraception	26	14.8	15	4.4	41	13.8
Type of emergency contraceptive used	N=26		N=15		N=4	
Saheli	2	7.6	2	13.3	4	9.7
Oral pills	23	88.4	7	47.0	30	73.1
IUD	5	19.2	3	20	8	19.5
Condoms	8	30.7	3	20	11	26.8
Unwanted 72/i-pills	20	77.0	10	66.6	30	73.1
MTP pills	7	27.0	4	26.6	11	26.8
Awareness regarding sexually transmitted infections	N=176		N=12		N=2	
No response	135	77.7	102	84.3	237	79.8
Teacher	41	23.3	19	15.7	60	20.2
Perceptions regarding sexually transmitted infections	N=176		N=12		N=2	
No response			1		97	
Govt. should provide formal education	11	6.3	1	0.8	12	4
Communicable disease	10	5.7	7	5.8	17	5.7
Need to prevent	4	2.3	2	1.7	6	2.0
Awareness of programs on STI	4	2.3	2	1.7	6	2.0
Awareness regarding these disease	N=176		N=12		N=2	
HIV/AIDS	92	52.2	31	35.6	123	41.4
Gonorrhoea	86	48.8	29	23.9	115	38.7
Syphilis	55	31.2	24	19.8	79	26.5
Leucorrhoea	0					
Diseases/infections spread from one person to another	N=176		N=12		N=2	
Sexual contact	104	59	33	27.2	137	46.1
Injection	41	23.2	9	7.4	50	16.8
Touching	5	2	3	2.4	8	2.6
Others	4	2	1	0.8	5	1.6
Don't know	4	2	1	0.8	5	1.6
Please tell me all the ways in which you have heard or learnt a person can get HIV / AIDS	N=176		N=12		N=2	
Sexual intercourse	98	55.7	31	25.6	129	43.4
Unclean medical equipments	59	33.5	19	15.7	78	26.3
Sharing needles	87	49.5	25	20.7	112	37.7
Blood transfusions	80	45.5	26	21.5	106	35.7
Mother to child during pregnancy or childbirth	83	47.2	26	21.5	109	36.7
Mother to child through breast milk	33	18.8	12	9.9	45	15.2
Others, specify	2	1.1	2	1.7	4	1.3
Modes for prevention of sexually transmitted infections	N=176		N=12		N=2	
Avoid sex/abstinence	65	36.9	29	24	194	65.3
Stay faithful to one partner	62	35.2	28	23.1	90	30.3
Encourage partner to stay faithful	40	22.7	13	10.7	53	17.8
Use Condom	107	25.0	41	33.9	148	49.8
Avoid commercial sex workers	44	13.6	17	14	61	20.5
Avoid sharing clothes ,undergarments, towel	24	60.8	11	9.1	38	12.8
Others	4	2.3	12	9.9	16	5.4
HIV/AIDS be prevented	N=176		N=12		N=2	
Use of condom	99	56.3	30	24.8	129	43.4
Use of sterilized syringe and needles	73	41.5	26	21.5	99	33.3
Screening of blood for AIDS	62	35.2	23	19.0	85	28.6
Avoid sexual contact						
Any other	7	4	2	1.7	9	3.0
Meaning of sexual assault	N=176		N=12		N=2	
Rendering dirty jokes	21	11.9	23	19.0	44	14.8
Singing sexually explicit songs	22	12.5	21	17.4	43	14.5
Fantasy about having sex with	21	11.9	19	15.7	40	13.5

opposite sex						
Rape	16	9.1	15	12.4	31	10.4
Ever heard of the term 'sexting'	58	33	26	21.5	84	28.3
If Yes, kind of experience you have	N=58		N=26		N=84	
Sending sexy messages to someone	43	74.1	19	73.0	62	74.0
Sending of sexy pictures/videos	33	57.0	17	65.3	50	59.5
Posting sexy pictures/videos of oneself	25	43.1	15	58.0	40	47.6
Sharing sexy messages	25	43.1	13	50.0	38	45.2

According to 241(81.1%) respondents, sex education was necessary out of which 106(44.0%) respondents told that schools are the best place where sex education can be imparted. However, parents 71(29.4%) followed by doctors (26.1%) and teachers as well as friends (each 24.0%) were the preferred persons for imparting sex education. Out of total 297 respondents, 135(45.5%) respondents were aware of the concept of mentoring out of which 35(25.6%) respondents reported that meaning of mentoring was guiding and 32(24.0%) had a opinion that mentoring was sharing their problems at times of difficulties with anyone who understands them as shown in Table-2.

**Table 2** Perceived Reproductive Health Needs by gender

Perceived Needs	Male		Female		Total	
	No.	%	No.	%	No.	%
Any worries or questions about sex	N=176		N=121		N=297	
Yes	10	5.7	11	9.1	21	7.1
No response	166	94.3	110	90.9	276	92.9
Views on sex education is necessary for adolescents or not	150	85.2	91	75.2	241	81.1
Any need of getting information on sex related issues	68	38.6	22	18.2	90	30.3
Right place to impart sexual education	N=150		N=91		N=241	
Schools	77	51.3	29	31.8	106	44.0
Mass media	40	26.6	16	17.5	56	23.2
Any other	3	2.0	6	6.5	9	3.7
Best person for giving sex education to students	N=150		N=91		N=241	
Parents	49	33.0	22	24.1	71	29.4
Teachers	39	20.0	18	20.0	57	24.0
Friends	43	29.0	14	15.3	57	24.0
Doctors	44	29.3	19	21.0	63	26.1
Health staff	25	16.6	6	6.5	31	13.0
Other	4	2.6	1	1.2	5	2.1
Awareness of mentoring	85	48.3	50	41.3	135	45.5
If yes, meaning of mentoring	N=85		N=50		N=135	
Guides/in problems trouble/difficulties about right and wrong	25	29.4	10	20.0	35	25.6
Sharing/problem/solution/understand	25	29.4	7	14.0	32	24.0
Suggestion for support/advice	12	14.1	5	10.0	17	12.6
Important role in judging person	10	11.8	8	16.0	18	13.3
Helping	8	9.4	7	14.0	15	11.1
Others	5	2.8	13	10.7	18	6.0
Any mentor	114	64.8	51	42.1	165	55.6
Ever consulted a Teacher for your problems	21	11.9	2	1.7	23	7.7
You would like to go to counsellor	21	11.9	9	7.4	30	10.1
Preferred source of counselling	N=176		N=121		N=297	
Mentor	50	28.4	10	8.3	60	20.2
Teacher	5	2.8	11	9.1	16	5.4
Friend	65	36.9	31	25.6	96	32.3
Family members	26	14.8	25	20.7	51	17.2
Any other	6	3.4	7	5.8	13	4.4

## DISCUSSION

This study was carried out with the purpose of investigating awareness of adolescents and youths and exploring their perceived needs for advice seeking. Study included 297 adolescents and youths aged 15-24 years including 176 (59.2%) males and 121(40.8%) females were included all studying in selected schools/colleges. About 70 % boys and 54% girls in the present study felt physically attracted to opposite sex sometimes and 58(19.5%) respondents including 23.3% boys and 14.0% girls were having intimate friends. Chatting through internet or phones was quite common practice in the present study. Their contraceptive awareness

was good but practice in case of a sexual indulgence/ sexual encounter was poor. Teenage pregnancy was considered to be very risky by 56.2% respondents including 95 54.0% boys and 59.5% girls. Awareness regarding contraceptive was found among 81.8% respondents including 92.0 % boys and 66.9% girls.

Present study reported maximum awareness of condom among 50.2% respondents including 58.6% boys and 33.3% girls. They were not amply aware of emergency contraceptives and only 48.8% respondents reported awareness of emergency contraceptives mainly i-Pills. About 49 % (58.0% boys and 35.5% girls) claimed awareness of emergency contraceptives. Whereas, there were 20.5% respondents who were of the opinion that emergency contraceptives was same as that of traditional contraceptives. Practice of emergency contraceptives was also reported by about 14 % of aware respondents but there was doubt whether they were correct regarding type of EC used or not. Whereas, an earlier study reported a significantly higher proportion of boys (85.1%) than girls (47.3%) aware of condoms, but more girls (87.3%) than boys (78.5%) knew about oral contraceptive pills.<sup>7</sup> According to the National Family Health Survey (NFHS-3) findings, only 14.1% (14.7% urban versus 13.9% rural) of unmarried sexually active adolescent females used a contraceptive. That survey also reported prevalence of teenage pregnancy to be about 16%. Condom use at first sexual intercourse by youths (15-24 years) who ever had sex shows that only 3% of women and 15% of men used condoms the first time they had sex.<sup>8</sup> Awareness among medical students regarding sexual intercourse, masturbation, contraception, and sexually transmitted diseases was reported among 70%, 74.8%, and 92.6% respectively.<sup>4</sup> In a study, only 40% students from Delhi University reported occasional condom use during sexual intercourse.<sup>9</sup> Reported condom use in our study was quite higher than rate of 7% by sexually active youth in a town in Assam state.<sup>10</sup>

In the present study, about 9% boys and 6% girls reported sexual encounters sometimes in the past. Surprisingly, only 12.5% respondents (15.3% boys and 8.3% girls) in the present study were of the opinion that pre-marital sex was wrong. Almost 8% boys reported use of a contraceptive method indicating existence of pre-marital sexual activity. Studies indicate that while adolescents' attitude towards premarital sex is becoming more liberal, their awareness of contraceptives remains poor.<sup>11</sup> The majority of young people become sexually active in their teens. These trends coincide with increasing urbanization, poverty, exposure to conflicting ideas about sexual values and behaviour, and breakdown of traditional channels of information about sexuality and reproduction.

According to NFHS-4 data forty-three percent of women age 15-24 have ever had sex, compared with 22 percent of young men age 15-24. Three percent of young women and 1 percent of young men reported having sex before the age of 15 years.<sup>1</sup> Overall, the percentage of young people age 15-24 who have had sex before age 15 decreased considerably between NFHS-3 and NFHS-4 for women (from 10% to 3%) and men (from 2% to 1%).<sup>1,8</sup> The prevalence of sexual activity was found to be 20% (28.5% among males and 18.8% among females) in a study conducted among 11<sup>th</sup> class students of Chandigarh. Sexual intercourse was reported to be 4% among males and 1% among females in that study. Among college students in Mumbai some 47% of male participants and 13% of female

respondents had had any sexual experience with a member of opposite sex; 26% and 3%, respectively, had had intercourse.<sup>12</sup> According to NFHS-4 data for India, the median age at first sexual intercourse is 19.0 years for women age 25-49. Eleven percent of women age 25-49 had sex before age 15, and 39 percent before age 18. By age 20, 59 percent of women age 25-49 have had sexual intercourse.<sup>1</sup> About 46% boys and 40% girls were exposed to sex related material in the present study. Discussions regarding sex related topics emergency contraceptives sexual abuse, contraceptives, sexual intercourse among, teenage pregnancy, pre-marital sex night fall/ wet dreams were also reported by respondents. Friends also came out to be the main discussant about such discussions. Majority of students were silent on sensitive issues like teenage pregnancy sexual indulgence/sexual encounters, pre-marital sex and use of EC.

Awareness about sexually transmitted diseases, HIV/AIDS was found poor. Friends came out to be main source of awareness. According to NFHS-3 survey television was the main source of information on HIV/AIDS for adolescents and youth followed by radio and information from friends and relatives.<sup>8</sup> Awareness regarding prevention was also not found satisfactory in the present study. It is generally acknowledged that significant proportions of young people experience risky or unwanted sexual activity, do not receive prompt or appropriate care, and experience adverse reproductive health outcomes. According to NFHS-4 data for India, the percentage of women who know about HIV or AIDS was 99 percent in Chandigarh. For men, knowledge 99-100 percent awareness was found in Chandigarh and Punjab.<sup>1</sup> Knowledge of HIV or AIDS increases sharply with schooling for both women and men, from 52 percent among women and 70 percent among men with no schooling to 97-98 percent among women and men with 12 or more years of schooling. In India, 22 percent of young women and 32 percent of young men age 15-24 have comprehensive knowledge of HIV, which includes knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting two common misconceptions about HIV transmission. Boys were more aware of sexting as compared to girls. About 54% respondents were of the opinion that discussion on sex should be open and frank. Boys were more likely to have opinion of frank and open discussion about sex.

The literature shows that adolescents often lack basic RH information, knowledge, experience, and are less comfortable accessing reproductive and sexual health services than adults. This could be attributed to parents, health care workers, and educators who are frequently unwilling or unable to provide age-appropriate RH information to young people.<sup>13</sup> They were having lot of misconceptions about reproductive health aspects. According to 81.1% respondents, sex education was necessary for them and schools came out to be the most preferred place where sex education can be imparted. Parents came out to be the most preferred choice somehow indicating their openness with parent also in the modern era. A cross sectional study on reproductive and sexual behavior and unmet reproductive health needs among persons including adolescents, parents and teachers of Rajasthan reported that the adolescents of the state had very scanty and patchy knowledge about sexual and reproductive health.<sup>14</sup> The need of AFHS and some improvements in the quality of AFHS have been

suggested.<sup>15</sup> A comparative study on utilization of adolescent health services found that school based services were better utilized than health facility based services.<sup>16</sup> The main barrier for the adolescents is the unavailability of reproductive health (RH) services.<sup>17</sup>

Efforts to improve adolescent reproductive and sexual health (SRH) will yield dividends not only in terms of desired reproductive health outcomes like delaying age at marriage, meeting unmet contraception needs, reduction in high risk behavior, reducing incidence of non-consensual sex, teenage pregnancy and unwanted pregnancy, reducing the maternal mortality, sexually transmitted infections and HIV prevalence etc. but also economic and other benefits due to improved productive life and planned parenthood. Addressing the needs of adolescents and youths is a challenge that goes well beyond the role of health services alone.

Findings of present project may be applicable in adoption of some new strategies with involvement of school/ college teachers and introduction of reproductive/family health education in school curriculums coping with current needs of adolescents and youths exploring possibility of incorporating interventions to be suggested at school/college/community levels. Findings of the study may be helpful in suggesting a holistic approach for addressing sexual and reproductive health needs of adolescents /youths of Chandigarh

#### Limitations of Study

In spite of several merits to its credit, present study also suffers some drawbacks arising mainly due to high degree of non response rates. Non response may be higher due to sensitive nature of questions concerning sexuality and high risk behavior. Throughout the study large proportion of respondents opted not to disclose their responses to most of sensitive questions in spite of several efforts. In their personal matters, they preferred to be silent in spite of all assurances of confidentiality. It reflects lot of barriers at all levels in getting responses to such issues may be due to fear or confidentiality/secretcy desired. Efforts were made to reduce non response rate.

#### CONCLUSIONS AND SUGGESTIONS

Adolescents and youths have several reproductive and sexual health issues like sexual exposures, high risk sex behavior/ indulging in unprotected sexual activities, misconceptions regarding sexual activities, lack of knowledge regarding contraception. Addressing their needs is a challenge that goes well beyond the role of health services alone. Adolescent Health Programs should be extended beyond health institutions. Family life education should be given to adolescents and youths by medical experts at school level. They should be provided age appropriate family life education (FLE).

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