A study on knowledge about various aspects related to reproductive health among school going adolescent boys

Yadeepsinh M Jadeja, Jwalant B Joshi, Jaykumar H Nimavat, Pratik K Jasani, Hetal T Koringa, Komal P Thekdi, Shyamal K Purani, Girija P Kartha, Harsh A Mehta

Department of Community Medicine, C.U. Shah Medical College, Surendranagar, Gujarat, India.
Correspondence to: Yadeepsinh M Jadeja, E-mail: yadeepsinh922@gmail.com

Abstract

Background: World Health Organization defines adolescence as the period of life between 10 - 19 years of age. In India they represent over 1/5th of total population. A large number of them aren't aware about the knowledge regarding reproductive health, contraception, HIV/AIDS etc. These factors have serious social, economic & public health implications. According to study conducted by UNESCO, Sexually Transmitted Diseases are a major health problem among adolescence, especially in Asia. The risk increases if they lack the knowledge & are unaware about different aspects of reproductive health. Hence it was decided to conduct a study in this issue, to assess the knowledge about various aspects related to reproductive health among school going adolescents in Surendranagar city.

Objectives: To determine the level of knowledge regarding various aspects of reproductive health among school going adolescent boys & to correlate the findings with their various socio-demographic factors.

Materials & Methods: After enlisting all the schools of Surendranagar city, 2 govt. & 2 non govt. schools were selected by simple random sampling. All the boys of standard 10th & 11th of selected schools present on the day of study were included. Final sample size was 268. The information was gathered by using a pre tested, semi-structured self-administered questionnaire.

Results: Majority (62%) knew the changes occurring during puberty, 67% knew about family planning methods, 77% knew about STDs and its transmission. There was a significant difference in awareness regarding family planning & STDs amongst the students of govt. (77.34% & 80.47%) & non-govt. (55.71% & 71.43%) school respectively. The study showed lack of awareness regarding Adolescent Friendly Clinic (25%) & only 13% had visited among the study group. Friends (64.34%) & teachers (58.19%) appeared as a leading source of information regarding reproductive health awareness. Most of the students (70.02%) knew that treatment of HIV/AIDS is possible.

Conclusion: Awareness about adolescent friendly clinic needs to be improved through various means. There is a need for appropriate information, education and communication strategies for increasing awareness about family planning and STDs among the students of non-govt. schools.

Introduction

World Health Organization (WHO) defines adolescence as the period of life between 10-19 years of age. In India they represent over 1/5th of total population. A large number of them are not aware about the knowledge regarding reproductive health, contraception, HIV/AIDS etc. These factors have serious social, economic and public health

implications.[1] According to study conducted by UNESCO, Sexually Transmitted Diseases (STD) is a major health problem among youth, especially in Asia. The risk increases if they lack the knowledge and are unaware about different aspects of reproductive health. A variety of factors place adolescents at the center of HIV vulnerability. These include lack of HIV information, education, services and the risks that accompany adolescent experimentation and curiosity.[2] Hence it was decided to conduct a study in this issue, to assess the knowledge about various aspects related to reproductive health among school going adolescents in Surendranagar district. Study objectives were To determine the level of knowledge regarding various aspect of reproductive health among school going adolescent boys and to correlate the findings with their various socio-demographic factors.

MATERIALS AND METHODS

It was a cross-sectional study, carried out in four randomly selected schools of Surendranagar city among school going adolescent boys of standard 10th and 11th. After enlisting all the schools of Surendranagar city, 2 government & 2 non-government schools were selected by simple random sampling. All the boys of standard 10th & 11th of selected schools present on the day of study were included. Final sample size was 268. The information was gathered by using a pre tested, semi-structured, self-administered questionnaire.

Statistical Analysis
Data were analyzed using Microsoft Excel 2007 and SPSS software version 20.

RESULT

Questions were asked regarding various socio-demographic factors and various aspects of reproductive health like various changes at the time of puberty among male and female, knowledge about family planning and various family planning methods, knowledge about STDs and route of transmission of STDs, knowledge regarding adolescent friendly clinic, various sources of information regarding reproductive health awareness etc. In the present study majority of the students (47.76%) belonged to the age group of 15-16 years (Table 1). Most of the students (84.96%) responded that increase in height was the most common change occurring at the time of puberty followed by beard/moustache growth

Table 1: Age wise distribution of students (n=268)

Age group (Years)	No.	Percentage (%)
14 to <15	13	4.85
≥15 to <16	128	47.76
≥16 to <17	75	27.99
≥17 to 18	52	19.40

Table 2: Knowledge regarding various changes at the time of puberty among male (n = 268)

Various changes*	No.	Percentage (%)
Increase in height	227	84.96
Increase in weight	198	74.30
Change in voice	210	78.01
Beard/moustache growth	240	89.43
Hair on chest	200	74.54
Armpits/pubic hair growth	229	85.37
Increase in part of hip and waist	135	50.46
Muscular growth	150	56.18
Erection/ejaculation	128	47.86
Other**	60	22.57

*Multiple choice response, **other include hair growth on hands, leg, ear and in nose, increase in size of palm and foot etc.

Table 3: Knowledge regarding various changes at the time of puberty among female (n = 268)

Various changes*	No.	Percentage (%)
Increase in height	188	70.42
Increase in weight	173	65.03
Starting of menstruation	158	59.17
Armpits/pubic hair growth	185	68.92
Breast growth	162	60.47
Other**	72	26.85

*Multiple choice response, **other include hair growth on hands, leg and in nose, increase in size of palm and foot etc.

(89.43%) and armpit/pubic hair growth (85.37%) among the male (Table 2). Around 70.42% students responded that increase in height was the most frequent change occurring at the time of the puberty among female (Table 3). About 67% participants had knowledge about family planning, and majority (65.42%) were aware of condom as a family planning method (Figure 1 & 2). Comparison between govt. and non-govt. school regarding awareness about family planning shows that there was more awareness in govt. schools (77.34%) than non-govt. schools (55.71%) and the difference was found statistically significant (Chi square = 16.13, DF = 2, P value = 0.0003) (Figure 3). Around 76% of the students were aware about STDs and majority of the students (73.87%) knew HIV/AIDS as most common STDs (Figure 4 & 5). We have done comparison between govt. and non-govt. schools regarding awareness about STDs and the difference was found statistically significant (Chi square = 6.44, DF = 2, P value = 0.039), there was more awareness in govt. school (80.47%) than non-govt. school (71.43%) (Figure-6). Majority of the students (72.79%) responded unprotected sex as most common route of transmission of STDs followed by kissing, coughing and sneezing (63.10%) (Table 4). Only 24.71% of the students had knowledge about Adolescent Friendly Clinic (AFC) and out of them only 12.12% had visited AFC (Table 5).
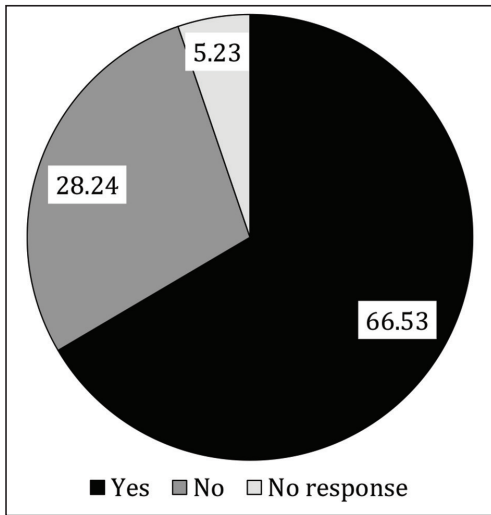
Figure 1: Knowledge about family planning (n = 268)

Figure 2: Knowledge regarding various family planning methods (n = 268)*
*Multiple choice response, **other include subcutaneous and intra-dermal implants, other natural methods etc.
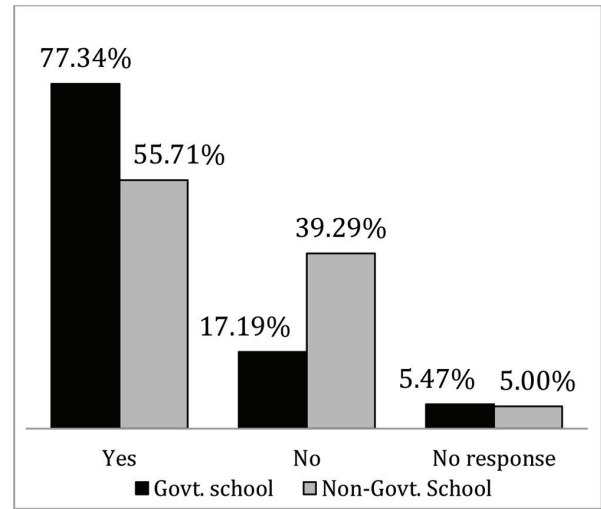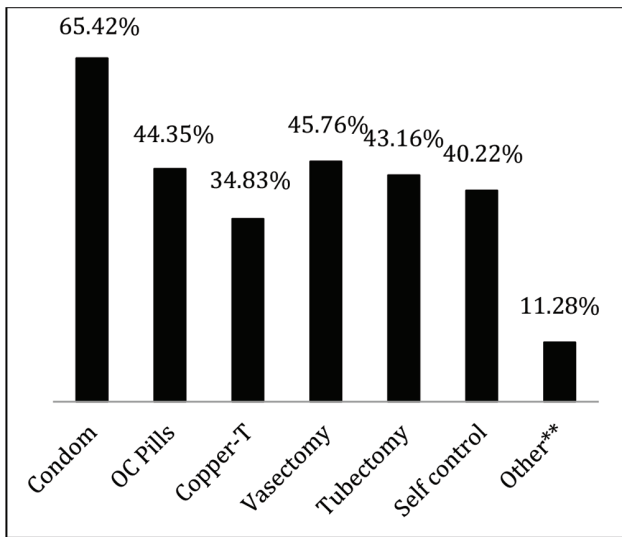

Figure 3: Awareness about family planning in both Govt. (n = 128) and Non Govt. (n = 140) schools
Chi square = 16.13, DF = 2, P value = 0.0003c

Figure 4: Awareness regarding STDs (n = 268)

Figure 5: Knowledge about various STDs (n = 268)*
*Multiple choice response, **other include typhoid, dengue, common cold, fever etc.

In our study, friends (64.34%) were most common source of information regarding reproductive health knowledge followed by teachers (58.19%), doctors (55.96%), TV, internet and other media (54.23%) (Table 6). Around 70.02% of the students knew that treatment of HIV/AIDS is possible and out of them 40.22% of the students believed that complete cure of the patient of HIV/AIDS is possible if patient treated on time, most shocking part was that around 65.90% of the students had misbelieve that people living with HIV/AIDS (PLWHA) should be kept separated from the healthy person (Table 7). We had correlate reproductive health knowledge with various
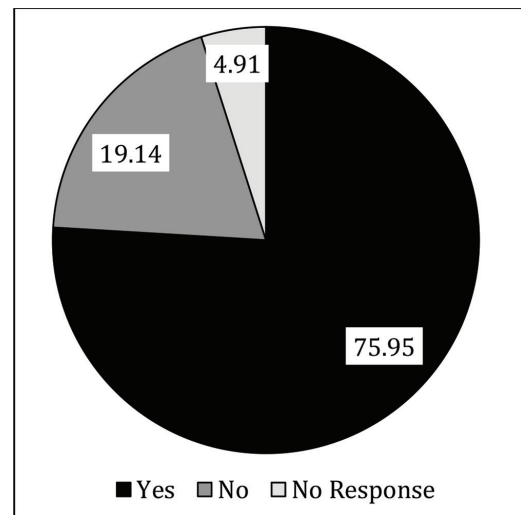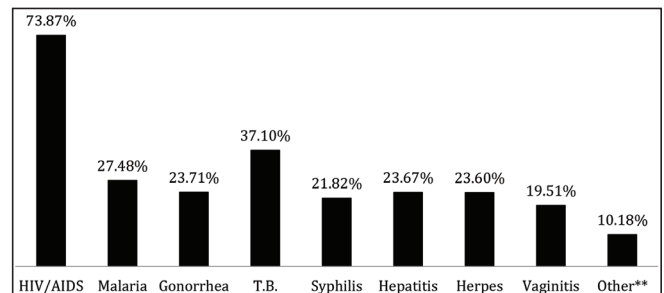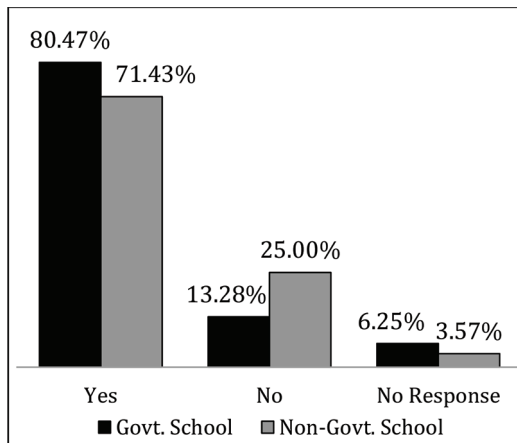
Figure 6: Awareness regarding STDs in both Govt. (n = 128) and Non Govt. (n = 140) schools
Chi square = 6.44, DF = 2, P value = 0.039

Table 4: Knowledge regarding various routes of transmission for STDs (n = 268)

Various routes*	No.	Percentage (%)
Unprotected sex	195	72.79
Infected blood transfusion	151	56.67
Trans-placental infection	124	46.60
Homosexual activity	113	42.13
Use of infected syringe/needle	150	56.38
Insect/mosquito bite	84	31.31
Handshake or taking meal together with infected person	111	41.72
Tattoo activity	62	23.08
Using utensils of infected person	119	44.78
Contact of saliva, urine, stool of infected person	97	36.52
Kissing, coughing, sneezing	169	63.10
Other**	32	11.86

*Multiple choice response, **other include playing, taking bath and sleeping together with infected person, hair cutting in un-hygienic hair saloon etc.

Table 5: Knowledge about Adolescent Friendly Clinic (AFC)

	Response	No.	Percentage (%)
Response regarding knowledge of AFC (n = 268)	Yes	66	24.71
	No	164	61.05
	No response	38	14.24
Response regarding visit to AFC (n = 66)	Yes	8	12.12
	No	38	57.58
	No response	20	30.30

Table 6: Various sources of information regarding reproductive health knowledge (n = 268)

Sources of information*	No.	Percentage (%)
Parents	145	27.03
Siblings	58	21.69
Friends	172	64.34
Teachers	156	58.19
Doctors	149	55.96
Relatives	73	27.34
TV, internet and other media	145	54.23
Other**	59	21.98

*Multiple choice response, **other include various magazines, local road-side hoardings and advertisements etc.

Table 7: Knowledge regarding HIV/AIDS (n=268)

Questions		No.	%
What is AIDS?*			
Infection		124	46.43
Disease		158	59.07
What will be the prognosis of HIV/AIDS if treated on time? *			
Complete cure of patient		107	40.22
Make no difference		61	23.02
Healthy and long life of patient is possible		103	38.19
Whether is it possible to treat HIV/AIDS?	Yes	188	70.02
	No	42	15.87
	No response	38	14.11
Whether person with HIV/AIDS should be kept separated from healthy person?	Yes	176	65.90
	No	42	15.67
	No response	50	18.43

*Multiple choice response

socio-demographic factors and the difference was found statistically significant (Chi square = 15.72, DF = 4, P = 0.0034) between religion and awareness regarding family planning (Table 8).

DISCUSSION

In the present study majority of the students (47.6%) belonged to the age group of 15-16 years, which are quite similar to study done by Lal P et al.[3] Most of the students (84.96%) responded that increase in height was the most common change occurring at the time of puberty followed by beard/moustache growth (89.43%) and armpit/pubic hair growth (85.37%) among the male and increase in height (70.42%) was the most frequent change occurring at the time of the puberty followed by Armpits/pubic hair growth (68.92%) among female. Quite similar results have also been recorded in study done by Kotecha et al.[4] Around 67% students heard

Table 8: Correlation between reproductive health awareness and various socio-demographic factors (n = 268)

Socio-demographic Factors		Awareness regarding family planning			Awareness regarding STDs		
		Yes N (%)	No N (%)	No response N (%)	Yes N (%)	No N (%)	No response N (%)
Religion	Hindu	138(61.33)	71(31.56)	16(7.11)	163(72.44)	49(21.78)	13(5.78)
	Muslim	23(62.16)	6(16.22)	8(21.62)	25(67.57)	8(21.62)	4(10.81)
	Christian	1(16.67)	3(50)	2(33.33)	1(16.67)	4(66.67)	1(16.67)
Type of family	Joint	62(72.09)	20(23.26)	4(4.65)	68(79.07)	11(12.79)	7(8.14)
	Nuclear	78(63.41)	42(34.15)	3(2.44)	95(77.24)	24(19.51)	4(3.25)
	Three generation	37(62.71)	17(28.81)	5(8.47)	36(61.02)	17(28.81)	6(10.17)
Occupation of parents	Skilled	45(50.56)	35(39.33)	9(10.11)	66(74.16)	19(21.35)	4(4.49)
	Semi-skilled	37(69.81)	12(22.64)	4(7.55)	36(67.92)	13(24.53)	4(7.55)
	Unskilled	95(75.40)	27(21.43)	4(3.17)	101(80.16)	21(16.67)	4(3.17)
Socio-economic class	Class I	30(66.67)	13(28.89)	2(4.44)	37(82.22)	5(11.11)	3(6.67)
	Class II	42(70)	12(20)	6(10)	32(53.33)	23(38.33)	5(8.33)
	Class III	26(61.90)	9(21.43)	7(16.67)	29(69.05)	10(23.81)	3(7.14)
	Class IV	40(61.54)	16(24.62)	9(13.85)	45(69.23)	15(23.08)	5(7.69)
	Class V	37(66.07)	15(26.79)	4(7.14)	42(75)	10(17.86)	4(7.14)

about family planning and about 65.2% knew condom as a family planning method. While in kotecha et al study, there is only 31% of students heard about family planning and only 2.5% knew condom as a family planning method.[4] In our study around 76% of the students were aware about STDs and majority of the students (73.87%) knew HIV/AIDS as most common STDs. While study done by Anees Ahmad et al shows very low level of knowledge about STDs and HIV/AIDS compared to our study, that was around 9.2% and 51.2% of students had knowledge about STDs and HIV/AIDS respectively.[5] There was statistically significant difference between govt. and non-govt. schools regarding awareness about family planning (P value = 0.0003) and STDs (P value = 0.039). There was more awareness in govt. schools than non-govt. schools and this was due to awareness related programmes were regularly conducted in govt. schools as compared to non-govt. schools, and also the students of the non-govt. schools were under strict control of their parents as they were restricted to go outside so they lack the knowledge. Majority of the students (72.79%) responded unprotected sex as most common route of transmission of STDs, low level of knowledge regarding transmission of STDs have also been observed amongst secondary school students in Calcutta.[6] Studies conducted in other countries have reported higher levels of knowledge regarding transmission routes.[7, 8] Our study says that only 24.71% had knowledge about Adolescent Friendly Clinic (AFC) and out of them only 12.12% had visited AFC. Friends (64.34%) were most common source of information regarding reproductive health knowledge followed by teachers (58.19%), doctors (55.96%), TV, internet and other media (54.23%). Public literature indicates that peer education has a significant impact in decreasing risk behaviour among adolescents [9]. According to Lal P et al, around 72% students were aware about HIV/AIDS as being preventable.[3] In our

study around 70.02% of the students knew that treatment of HIV/AIDS is possible. In our study around 65.90% of the students believed that people living with HIV/AIDS(PLWHA) should be kept separated from the healthy person, this unfavorable attitude have observed also in study done in Maharashtra, AIDS awareness among students.[10] There was a statistically significant difference (P = 0.0034) between religion and awareness regarding family planning.

CONCLUSION

Knowledge regarding various changes occurring at the time of puberty in males and females was 66.37% and 58.48% respectively. There was a significant difference in awareness regarding family planning and STDs amongst the students of govt. (77.34% and 80.47%) and non-govt. (55.71% and 71.43%) school respectively. Most of the students knew condom (65.42%) as family planning method, HIV/AIDS (73.87%) as STD and unprotected sex (72.79%) as route of transmission for STDs. The study showed lack of awareness regarding Adolescent Friendly Clinic among the study group. Friends (64.34%) and teachers (58.19%) appeared as a leading source of information regarding reproductive health awareness. Most of the students (70.02%) knew that treatment of HIV/AIDS is possible.

Recommendation: Awareness about adolescent friendly clinic needs to be improved through various means. There is a need for appropriate information, education and communication strategies for increasing awareness about family planning and STDs among the students of non-govt. schools. As peers appear to be an important source of information, peer educators would be a useful strategy for communication in this age group.

REFERENCES

1. National Rural Health Mission, Orientation Programme for Medical Officers to provide Adolescent-Friendly Reproductive & Sexual Health Services; (IEC Division, Ministry of Health and Family Welfare, Government of India).

2. UNAIDS. Report on the global AIDS epidemic. Focus – HIV and Young people: the threat for today's youth. 4th global report. 2004; 93-98.

3. Lal P, et al. Awareness about HIV/AIDS among school children, Indian Journal of Community Medicine, Vol. 33, Issue-3, July 2008.

4. Kotecha, et al. Adolescents' reproductive awareness. Indian J Sex Transm Dis & AIDS 2009; Vol.30, No.2. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3168066/

5. Anees Ahmad et al. Knowledge regarding STD, AIDs and reproductive health among male adolescent. Indian J. Prev. Soc. Med Vol. 38 No. 3 & 4.

6. Chatterjee C, Baur B, Ram R, Dhar G, Sandhukhan S, Dan A. A study on awareness of AIDS among school students and teachers of higher secondary schools in north Calcutta. Indian J Public Health 2001; 45:27-30.

7. Yazdi CA, Aschbacher K, Arvantaj A, Naser HM, Abdollahi E, Asadi A, et al. Knowledge, attitudes and sources of information regarding HIV/AIDS in Iranian adolescents. AIDS Care 2006;18:1004-10.

8. Wagbatsoma VA, Okojie OH. Knowledge of HIV/AIDS and sexual practices among adolescents in Benin City, Nigeria. Afr J Reprod Health 2006; 10:76-83.

9. Peer Education and HIV/AIDS: Past Experience, Future directions. Population Council. Available from: URL//: www. popcouncil.org/pdfs/peer_edu.pdf. [Last Accessed on 2007 November 14].

10. Ganguli SK, Rekha PP, Gupte N, Charan UA. AIDS awareness among undergraduate students, Maharashtra. Indian J Public Health 2002; 46:8-12.