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To know the level of awareness regarding reproductive knowledge and sexually transmitted diseases, HIV/AIDS among adolescent students (boys and girls) in the rural area, Chandragiri, Chittoor district. A.P.

R Altaf Hussain
(Department Of Community Medicine, Sri Venkateswara Medical College, Tirupati, Andhra Pradesh, India)

Abstract:
Back ground: *Adolescent form the important part of our population. But still their health needs remain ill served. They need health awareness in many areas such as malnutrition anemia, menstrual hygiene, STD and HIV/AIDS. Lack of sufficient knowledge makes them vulnerable to many undesirable social problems.*
Objectives: *To know the level of awareness regarding reproductive knowledge and awareness regarding STD and HIV/AIDS*
Setting design: *A study was carried in rural village Chandragiri near Tirupati town A.P as cross sectional study. The stud was conducted in four government institutions among 300 boys and 300 girls of 14-17 years age group of adolescent.*
Material Methods: *A pre designed and pre-tested questionnaire regarding the awareness of reproductive knowledge, STD and HIV/ AIDS was administered.*
Statistical Analysis: *The data was analyzed by using statistical test like x^2 and t- test were used.*
Results: *Level of Awareness regarding sexuality, marriage, family size, family planning, abortion, STD and HIV/AIDS is relatively inadequate than desired levels among both sexes. Girls are less aware of the reproductive related knowledge. Conclusion: Lots of health educational sessions should be conducted in schools and colleges in order to improve quality of life so that they can lead better life as adults.*
Keywords: *sexuality, marriage, family size, family planning, abortion, STD and HIV/AIDS*

I. Introduction:

The word "adolescence" comes from Latin meaning "to grow to maturity". Adolescent period extends from onset of puberty to the time of complete sexual maturation. WHO includes the period in life aged between 10-19 years as adolescence. For the sake of research purposes, the period is further divided into early (10-13 years), middle (14-17 years) and late (18-20 years) adolescence, depending upon both physical and psychological maturity.

Adolescence is crucial, stressful but yet fascinating period in an individual's life span. This is the formative period of life when profound physical, psychological and behavioural changes take place. Intelligence is at its peak, setting the permanent personality traits. The adolescent tries to cope with his own emerging sexuality against the social norms and parental expectations. It is also a period of transformation from dependence to independence. Curiosity, exploration, adventure and' impulsive behaviour are some of the cardinal manifestations of this period. Barker's hypothesis now gaining momentum, states that by correcting undernutrition of adolescent girls, we can reduce early malnutrition and consequently development of adulthood diseases of childhood origin. It was in the year 1985 which was designated "International Year of Youth" by WHO that people began to pay attention to the health problems of youth[1].

Globally the number of adolescents is expected to reach 1.13 billion by 2025. i.e. an increase of 219 million or 24% rise. In the developing world, as a whole, the adolescent population is estimated at 914 million, about one fifth of all ages as per the study[2]. The proportions of adolescents are high in Africa (23 percent) and in Asia (19.1 percent). Adolescents represent about 21.8 percent of India's population. There are about 207 million adolescents in our country whose reproductive health needs remain ill served. Age specific mortality rate in the 15-19 years age is 2.2/1000 for males and 3.4/1000 for females in rural areas and 1.3 and 1.7 respectively in urban areas. (IIPS,1995)

Adolescents are generally considered to be healthier than the other age groups, and hence their health problems were not given much prominence. Only 17 percent of adolescents utilize health services. Their perception of health is different from that of adults. Acne is more concern than HIV for them. Most of the adulthood problems do have their origin during adolescence. The five major preventable risk factors of cardiovascular diseases such as hypertension, diabetes, dyslipidemia, obesity and rheumatic fever take roots during either childhood or adolescence.

Inspite of vast technical advances, the enrolment in secondary schools in developing countries for boys is 41 percent and for girls is a meagre 28 percent. In India, 64 percent of girls in the age of 10-14 years and 56 percent of girls of 15-19 are literate compared to 81 percent boys of same age group (IIPS,1995). The problems specific to adolescence have to be emphasized. The social problems perceived by them are religious and cultural restrictions, gender discrimination, limited freedom of expression, peer pressures, illogical parental expectations and intergenerational conflicts. Substance abuse is on the rise. Sexual abuse has risen to alarming levels. 25 percent of rape victims are young adolescents under 16 years.

The issues related to sexuality are not only a cause for concern during adolescence but also cause immeasurable damage in adult life. The common issues for both sexes are-urge for sex, curiosity about opposite sex and explorative behavior. Issues in relation to boys are-nocturnal emissions, premature ejaculation, masturbation and erectile dysfunction; for girls-breast size, hymen and virginity, love affairs, dating, contraception, pregnancy and child birth. Unprotected sex may lead to unwanted pregnancy, illegal abortions, sexually transmitted diseases and HIV/AIDS.

However, systematic attempts to study the issues affecting our youth are not many; some of the studies giving quantitative information are handicapped by deficiency of adequate sample size.

This study in an attempt to understand the level of knowledge of reproduction, STD and HIV/AIDS among adolescent in a systematic manner in order to provide the data which will be useful for planning health interventions as well as providing a basis for future analytical studies.

II. Objectives:

1. To know the level of awareness regarding reproductive knowledge.
2. To know the level of awareness regarding STD and HIV/AIDS.

III. Materials and Methodology:

The cross sectional and descriptive study was conducted in the village Chandragiri, a revenue village with a population of 10,500 located 15 km from Tirupati, Chittoor District in Andhra Pradesh. It is a historical place having monuments of archaeological importance. The climate is tropical in nature. Rainfall is contributed by both southwest and northeast monsoons, more by the latter. Most of the villagers in the area are landless agricultural labourers and are socio-economically backward.

The study was carried in four government institutions i.e. Junior College for Boys, Junior College for Girls, High School for Boys and High School for Girls, located at Chandragiri. These institutes cater to students from Chandragiri and surrounding 10-15 villages. The study was conducted from July 2001 to January 2002 . The sample consisted of 600 students of both sexes, 300 boys and 300 girls of the adolescent age group i.e. 14-18years studying tenth and intermediate classes in the above mentioned institutions.

As the objective of this study is focused on awareness level regarding reproductive health, sexually transmitted diseases and HIV/AIDS, the middle age group of adolescence i.e. 14 - 17 years was chosen. The sample size was determined using the formula $n = 4PQ / L^2$. The assumed level of awareness among adolescents was 40 percent; and the acceptable error was 10% of assumed awareness. Thus P=40; Q=100-P i.e. 100-40=60.L=10% of 40=4. Hence sample size = (4x40x60) I (4x4) = 600.

As the required number of students in the age group of 14-17years were not available in Tenth and Intermediate classes, some students in the age group of 18 years of Intermediate classes had to be included in the study to make up the sample size of 600.

Necessary permission was obtained from heads of the educational institutions after explaining the objectives of the study. Plan of action was prepared in advance in consultation with teaching staff to minimise the dislocation to academic schedule.

Sociodemographic data was collected by using pretested proforma. Socioeconomic status was classified based on the Udaiparek's classification

To assess the level of knowledge regarding the reproductive knowledge, sexually transmitted diseases and HIV/AIDS, a pretested questionnaire was used. The questionnaire was administered in local language (Telugu). The data was analyzed partly manually and partly by computer. Statistical tests, like X2 and t, were used wherever appropriate. Intra study comparisons as well as comparison with findings of other relevant studies were made and the results discussed.

IV. Results:

The age and sex distribution of adolescent students studied is given below in Table – 1.

Table – 1: Age and Sex Distribution of Children Studied

Age (In years)	Boys		Girls		Total	
	No	%	No	%	No	%
14	38	12.7	25	8.3	63	10.5
15	71	23.7	78	26.0	149	24.8
16	78	26.0	115	38.3	193	32.2
17	78	26.0	62	20.7	140	23.3
18	35	11.7	20	6.7	55	9.2
Total	**300**	**100.0**	**300**	**100.0**	**600**	**100.0**

The Socio-economic status of the students as per modified Udai Pareek's scale based on social classification is presented in Table – 2.

Table – 2: Socio-economic status of the families of adolescents

Socio-economic status	Boys		Girls		Total	
	No	%	No	%	No	%
Upper	11	3.7	19	6.3	30	5.0
Middle	104	34.7	162	54.0	266	44.3
Lower	185	61.6	119	39.7	304	50.7
Total	**300**	**100.0**	**300**	**100.0**	**600**	**100.0**

It is observed that just more than 50% of students belong to lower socio-economic status.

The sources of knowledge in respect of sex and the perceived need for sex education are shown in Table – 3.

Table – 3: Source of knowledge regarding sex and the perceived need for Sex Education

S. No.	Aspects of awareness / attitude	Boys (n=300)		Girls (n=300)		Total (n=600)		Statistical signature
		No.	%	No.	%	No.	%	
1.	Source of knowledge regarding sex							
	Friends	60	20.0	56	18.7	116	19.3	χ^2=106.4 df=5 p<0.001
	Relatives	18	6.0	12	4.0	30	5.0	
	Cinema	108	36.0	47	15.7	155	25.8	
	Television	17	5.7	42	14.0	59	9.8	
	Magazines	62	20.7	20	6.7	82	13.7	
	Others	35	11.7	123	41.0	158	26.3	
2.	Need to include sex education in regular curriculum							
	Yes	160	53.3	103	34.3	263	43.8	χ^2=22.0 df=1 p<0.001

Cinema (25.8%) was the main source of knowledge followed by friends (19.3%) and magazines (13.6%) among adolescents. Among girls, friends was the main source (18.6%) followed by cinema (15.6%) and television (14.0%) while among boys, cinema (36.1%) was main source followed by magazines (20.6%) and friends (20.0%) and the differences was statistically significant (χ^2=106.4, df=5, p<0.001). Among all adolescents, 43.8% favoured inclusion of sex education in regular curriculum. More boys (53.3%) preferred it compared to girls (34.3%) and the difference is also statistically significant (χ^2=22.0, df=1, p<0.001).

The awareness and attitudes towards marriage, family size, etc are shown in Table 4.

Table – 4: General awareness and attitudes of the subjects

S. No.	Aspects of awareness / attitude	Boys (n=300)		Girls (n=300)		Total (n=600)		Statistical signature
		No.	%	No.	%	No.	%	
1.	Arranged marriage better	198	66.0	194	64.7	392	65.3	χ^2=0.12 df=1 p<0.05
2.	Desirable age gap between husband and wife							
	Less than 3 yrs	89	29.7	68	22.7	157	26.2	
	3-5 years	87	29.0	62	20.7	149	24.8	
	More than 5 yrs	31	10.3	26	8.7	57	9.5	χ^2=101.1 df=4
	Not necessary	64	21.3	15	5.0	79	13.2	

	Dont know	29	9.7	129	43.0	158	26.3	p<0.001
3.	Desired time interval between marriage and first child							
	1 year	69	23.0	38	12.7	107	17.9	χ^2=17.6
	2 years	63	21.0	50	16.7	113	18.8	df=4
	3 years	37	12.3	43	14.3	80	13.3	p<0.001
	>3 years	23	7.7	20	6.7	43	7.2	
	No opinion	108	36.0	149	49.7	257	42.8	
4.	No. of children desirable							
	One child	66	22.0	52	17.3	118	19.7	
	Two children	216	72.0	211	70.3	427	71.2	χ^2=8.28
	Three or more	18	6.0	37	12.3	55	9.2	df=2
								p<0.05
5.	Male child compulsory	187	62.3	189	63.0	376	62.7	χ^2=0.03 df=1 p<0.05
6.	Consanguineous marriage							
	Good	62	20.7	25	8.3	87	14.5	
	Bad	135	45.0	143	47.7	278	46.3	χ^2=32.0
	No difference	25	8.3	10	3.3	35	5.9	df=3
	Don't know	78	26.0	122	40.7	200	33.33	p<0.001

Regarding the ideal age at marriage, the modal age preferred by adolescents was 21 years for boys ranging from 20-25 years and 18 years for girls ranging from 18-25 years. 65.3% adolescents preferred arranged marriages.

Regarding the desired age gap between prospective husband and wife, most of the adolescents preferred that it should be less than 3 years (26.2%) followed by 3-5 years (24.8%). The difference in preferences of both sexes was found to be statistically significant (x^2=101.1; df=4; p<0.001).

42.8% adolescents did not express any opinion about desired time interval between marriage and first child. Among others, many (18.8%) preferred the gap of 2 years. 23.0% boys however preferred one year gap followed by 2 years gap (21.0%), whereas 16.6% girls preferred 2 years gap followed by one year gap (12.6%). Regarding number of children that a couple should have, 71.2% of adolescents preferred two child norm. The differences between the sexes were also found to be statistically significant (X2 = 8.28; df=2 ; p<0.05).

62.7% adolescents felt that having a male child was a must for every couple. Nearly half of the adolescents (46.3%) were against the consanguineous marriage with significant difference of opinion between the sexes (x2=32.0; df=3 ; p<0.001).

Awareness and attitudes towards contraception and abortion are shown in Table – 5.

Table – 5: Awareness / Attitudes of adolescents towards contraception and abortion

Sl. No.	Aspects of Awareness attitude	Boys (n=300)		Girls (n = 300)		Total (n = 600)		Statistical significance
		No	%	No	%	No	%	
1.	Unwanted pregnancy is preventable-yes	154	51.3	132	44.0	286	47.7	x^2 = 3.23 df = 1 p<0.05
2.	If 'Yes' Contraception of choice							
	Condom	83	53.9	18	13.6	101	35.3	
	Oral pills	23	14.9	68	51.5	91	31.8	* x^2 = 71.8
	IUD	8	5.2	19	14.4	27	9.4	df = 4
	Tubectomy	6	3.9	5	3.8	11	3.8	p < 0.001
	Vasectomy	7	4.5	-	-	7	2.4	
	Don't know	26	16.9	22	16.7	48	16.8	
3.	Aware about abortion	99	33.0	56	18.7	155	25.8	x^2 = 16.1 df = 1 p<0.01
4.	Ideal method of preventing births							
	Contraceptives							
	Abortion	102	34.0	72	24.0	174	29.0	x^2 = 16.1
	Don't know	29	9.7	16	5.3	45	7.5	df = 2
		169	56.3	212	70.7	381	63.5	p<0.01

* For calculation, tubectomy and vasectomy figures were combined.

While assessing the level of awareness regarding contraception, it was found that 47.7% were aware that an undesired pregnancy could be preventable. In this aspect, boys (51.3%) had better awareness than girls (44.0%) and the difference is however not found to be statistically significant ($x^2 = 3.23$; df = 1; $p > 0.05$).

Out of those students who were aware that unwanted pregnancy is preventable, majority preferred the condom (35.3%) and oral pills (31.8%) as contraceptives of choice. While boys mentioned condom (53.9%) as preferred choice, girls preferred oral pills (51.5%). The differences between sexes were also statistically significant ($x^2 = 71.8$; df = 4; $p < 0.001$).

Regarding abortion, overall level of awareness was poor (25.8%). Significantly higher level of awareness was found in boys than in girls ($x^2 = 16.1$; df = 1; $p < 0.001$).

Twenty nine percent and 7% of respondents mentioned contraception and abortion respectively as preferred methods of avoiding unwanted pregnancy. About 63.5% did not express any opinion and the differences between sexes were also statistically significant ($x^2 = 16.1$; df = 2; $p<0.001$).

The awareness and attitudes towards STDs are shown in Table-6.

Table – 6: Awareness and attitudes towards STD in adolescents

Sl. No.	Aspects of Awareness/ attitude	Boys		Girls		Total		Statistical signature
		No	%	No	%	No	%	
1.	Some diseases spread through sex – Yes	178	59.3	86	28.7	264	44.0	$x^2 = 57.3$ df = 1 $p < 0.001$
2.a.	If, 'Yes' STD are preventable	175	98.3	73	84.9	248	93.9	$x^2 = 16.0$ df = 1 $p < 0.001$
b.	STD are curable	118	66.3	49	57.0	167	63.2	$x^2 = 4.92$ df = 1 $p < 0.005$
c.	STD and AIDS may be found in same person	146	82.0	54	62.8	200	75.8	$x^2 = 11.7$ df = 1 $p < 0.001$
d.	If wife suffering from STD treat Wire only Husband only Both	 13 7 158	 7.3 3.9 88.8	 39 4 43	 45.3 4.7 50.0	 52 11 201	 19.7 4.2 76.1	** $x^2 = 47.9$ df = 1 $p < 0.001$
e.	If husband suffering from STD treat Husband Wife Both	 38 15 125	 21.3 8.4 70.2	 19 18 49	 22.1 20.9 57.0	 57 33 174	 21.6 12.5 66.0	$x^2 = 8.89$ df = 2 $p < 0.05$

* 'Yates' correction was applied in calculation

** For calculation; first two groups were combined to makeup a minimum of 5 in each cell.

More than half (56.0%) of adolescents were ignorant of possibility of disease transmission through sex. In this aspect, boys (59.3%) were significantly better aware than girls (28.7%). Out of those aware, majority (94%) of adolescents were aware regarding STD prevention. Only less than half (63.2%) were aware that STD are curable, boys were significantly better aware than girls. About 75.8% adolescents knew that STD and AIDs may coexist in the same person. Majority of the adolescents (71.0%) were aware that both wife and husband have to be treated when only one of them was found to be suffering from STD. Higher proportion of boys (79.5%) knew correctly that both of them have to be treated than girls (53.5%) and the difference is also statistically significant ($x^2 = 19.3$; df = 2; $p < 0.001$.)

Awareness and attitudes towards certain aspects of AIDS are shown in Table-7.

Table – 7: Awareness and attitudes towards HIV/AIDS

Sl. No.	Aspects of Awareness attitude	Boys (n = 300)		Girls (n = 300)		Total (n = 600)		Statistical significance
		No	%	No	%	No	%	
1.	AIDS spread through							
	Blood transfusion	194	64.7	85	28.3	279	46.5	$x^2 = 79.6$ df = 1 $p < 0.001$
	Sex	109	36.3	77	25.7	186	31.0	$x^2 = 7.97$ df = 1

								$p < 0.01$
	Mother to child	108	36.0	96	32.0	204	34.0	$x^2 = 1.06$ df = 1 $p < 0.05$
	Needles and blades	95	31.7	29	9.7	124	20.7	$x^2 = 44.2$ df = 1 $p < 0.001$
	Fomites	28	9.3	48	16.0	76	12.7	$x^2 = 6.02$ df = 1 $p < 0.05$
	Airborne	22	7.3	33	11.0	55	9.2	$x^2 = 2.42$ df = 1 $p < 0.05$
	Working together	5	1.7	12	4.0	17	2.8	$x^2 = 2.96$ df = 1 $p < 0.05$
	Hand shaking	4	1.3	1	0.3	5	0.8	$x^2 = 0.80$ df = 1 $p < 0.05$
	Mosquito born	3	1.0	12	4.0	15	2.5	$x^2 = 5.27$ df = 1 $p < 0.05$
	Eating together	2	0.7	68	22.7	70	11.7	$x^2 = 68.3$ df = 1 $p < 0.001$
2.	Probability of having AIDS in apparently health person	165	55.0	116	38.7	281	46.8	$x^2 = 16.1$ df = 1 $p < 0.001$
3.	AIDS can be cured	95	31.7	56	18.7	151	25.2	$x^2 = 13.5$ df = 1 $p < 0.001$
4.	Vaccine against AIDS available	103	34.3	83	27.7	186	31.0	$x^2 = 3.11$ df = 1 $p < 0.05$
5.	A student with HIV +ve can be allowed to continue in college	235	78.3	153	51.0	388	64.7	$x^2 = 49.0$ df = 1 $p < 0.001$

***** 'Yates' correction was applied in the calculation.

Regarding the awareness of AIDS, majority of adolescents (46.5%) mentioned that blood transfusion was the main route of spread of AIDS followed by mother to child transmission (34.0%) and through sex (31.0%).

Boys were under impression that blood transfusion (64.7%) was the important route of spread of AIDS followed by sex (36.3%), mother to child (36.0%) and needles & blades (31.6%). Regarding the level of awareness in girls, 14% were not aware of any method of spread. Out of those who were aware, mother to child transmission (32.0%) was given high consideration followed by blood transfusion (28.3%) and sex (25.7%). The differences between sexes were also statistically significant.

More than half (53.2%) of adolescents were unaware of probability of AIDS in a apparently healthy person. This ignorance is significantly more in girls (61.3%) than in boys (45.0%). About 25.2% of adolescents were of the opinion that AIDS was curable. About 31.0% of adolescents were under impression that vaccine was available against AIDS.

About 64.7% adolescents reacted positively to allow a HIV positive student to continue in their educational institution. Thin acceptance was more in boys (78.3%) than in girls (51.0%) which was also statistically significant ($x^2 = 49.0$; df = 1; $p<0.001$).

V. Discussion:

Regarding the knowledge about Sexuality Cinema (25.8%) was the main source of knowledge about sex in the present study, followed by friends (19.3%) and magazines (13.7%). In a study[3] reported that cinema & TV (81.7%) were main source followed by news papers (76.1%) and friends (56.3%) among the girls of slums in Delhi. In another study[4] in urban students of Amritsar, Agarwal and Kumar (1996) among rural students of Ambala (Dt) Haryana, Among students of rural Delhi reported that books were the main source of knowledge of sex followed by friends and audiovisual media[6]. Studies[7,8] done among urban students in Surat, among rural boys in Lucknow reported friends as the main source followed by books and andiovisual media.

In the present study 43.8% favoured inclusion of sex education in regular curriculum with more boys (53.3%) preferring it compared to girls (34.3%). In another study[7] reported that 97.2% boys and 96.3% girls of Surat perceived the need for sex education. Regarding Marriage And Family Size in the present study, the modal

age at marriage preferred by adolescents was 21 years for boys (ranging from 20-25 years) and 18 years for girls (ranging from 18-25 years). In a study[4] reported that the urban children of Amritsar preferred the age at marriage for boys as 24 and that for girls as 23 years. In a study done at Himachal Pradesh, in another study[9] reported that the rural adolescents preferred the age for marriage for boys as 20 years and for girls as 18 years. Study[10] reported that 68.7% urban girls in Pune mentioned the ideal age of marriage for girls as between 21 to 24 years. A study[11] reported that urban students in Ludhiana preferred the age at marriage for boys in the range of 20-25 and for girls in the range of 18-22 years.

In the present study, 65.3% students preferred "arranged marriage" as socially accepted. Regarding the desired age gap between prospective husband and wife, majority (26.2%) preferred less than 3 years followed by 3-5 years (24.8%).

Regarding desired time interval between marriage and first child 18.8% preferred a minimum interval of 2 years. Similarly study[11] reported that 96.8% of urban students in Ludhiana preferred 1-2 years gap between marriage and first child.

In the present study 71.2% of students preferred two child norm in study[4] found that 84.4% of boys and 93.8% of girls in Amritsar preferred less than 3 children. Preference for two children was reported by studies[9,11,10] in rural Himachal Pradesh and in urban area of Ludhiana. reported in Pune that 46.8% of them preferred "one child norm" and 52.8% preferred "two child norm".

Regarding contraception in the present study, 47.7% of students were aware of the knowledge of contraception. In this respect, boys (51.3%) had better awareness than girls (44.0%). In a study[12] reported in South Indian study that 24.2% of rural children had knowledge of contraception. In another study[7] reported that' 43.5% of boys and 38.3% of girls had awareness of contraception. About 19.3% of urban girls in Pune had knowledge of contraception as reported[10].

In the present study the contraception of choice was condom (35.3%) followed by oral pills (31.8%). While boys preferred condom (53.9%), girls preferred oral pills (51.6%). Similar study[11] reported that 85% boys and 47.3% girls preferred condom and 78.5% boys and 87.3% girls preferred oral pills as contraception of choice.

Regarding Sexually Transmitted Diseases In the present study, 56.0% of students were ignorant of the fact that some diseases spread through sex. In this respect boys (59.3%) were better aware than girls (28.7%). In a study[13] reported that only 13.6% of urban boys in Pune were aware of the sexual route of disease transmission. Other study[10] reported that majority of the urban girls of Pune were ignorant of sexually transmitted diseases. In another study[7] reported that 90% of urban students were well aware of STD. Thus there appears to be wide variation in respect of awareness about STD.

In the present study out of those who were aware of diseases spread though sex, 94% were aware of the methods of prevention of STD. Similar study[7] reported that 74% of boys and 17.3% of girls of Surat were aware of prevention of STD. while study[14] reported that 31 % of urban children of Rohtak were aware of STD prevention.

In the present study, regarding the awareness of AIDS, majority of the adolescents (46.5%) mentioned that blood transmission was the main route of spread of AIDS followed by mother to child transmission (34.0%) and through sex (31.0%). Girls were mainly aware of mother to child transmission (32.0%). In a study[6] reported that boys of Delhi had better awareness than girls with the latter considering sexual route, needles & syringes to play an equal role. Other study[5] reported that 50% of rural children of Haryana considered sex followed by needles & syringes (31%) and mosquito (29.0%) as the main modes of transmission. Study[3] have reported that the adolescent girls of Delhi considered blood transfusion (86.1%) as the main route of transmission followed by transplacental transmission (83%). 80% of girls were well aware that AIDS can not be transmitted by living together, fomites, or vectors. 85.6% of girls in Pune considered sex as the major route of spread followed by mother to child transmission as reported by In another study[10].

In the present study about 25.2%, of adolescents were of the opinion that AIDS was curable. Study[5] reported that 52.0% of rural children in Haryana expressed that AIDS was curable. Another study[3] reported that 85% of girls in Delhi were aware of non-availability of cure for AIDS.

In the present study, about 31.0% of students were under impression that vaccine was available against AIDS. Similarly study[3] reported that 90.3% of girls were aware of the non availability of the vaccine.

In the present study, about 64.7% students reacted positively for allowing HIV positive student to continue in their educational institution. In study[15] reported that 50% of urban students of Puna had favourable attitude towards HIV positive person in Pune. Study[10] also reported that 62.1 % of girls were sympathetic towards AIDS victims and 31.7% were unwilling to allow them to move socially.

VI. Conclusions:

1. Cinema (25.8%) and friends (19.3%) were the main sources of knowledge in respect of matters of sex.
2. The modal age at marriage preferred by students was 21 years for boys and 18 years for girls. 65.0% students preferred system of arranged marriages. Most of the students opined that the desired age gap between wife and husband should be less than 3 years (26.2%). Most of the students (18.8%) prefer 2 years gap between marriage and first child. Regarding number of children to be desired by couple, 71.2% students preferred 2 child norm; 62.7% of adolecents felt that a male child is compulsory and about 46.3% were against consanguineous marriages.
3. While assessing the level of awareness regarding contraception, it was revealed that 47.7% were aware that an undesired pregnancy was preventable. Majority preferred the condom (35.3%) and oral pills (31.8%) as contraceptives of choice. The level of awareness regarding abortion was poor (25.8%).
4. More than half (56.0%) of ado1escents were ignorant of possibility of diseases spreading through sex. Out of those aware, majority (94%) were aware of prevention of STD. Only 63.2% were aware that STD were curable. About 75.8% knew that STD and AIDS may coexist in the same person. Regarding treatment of STD, majority 71.0% expressed that both wife and husband have to be treated, though only either of them was found to be suffering from STD.
5. Regarding spread of AIDS, most of them mentioned that blood transfusion (46.5%) was the major route of spread followed by mother to child transmission (34.0%) and sex (31.0%). More than half (53.2%) of adolescents were unaware of probability of AIDS in an apparently healthy person. About 25.2% were of the opinion that AIDS was curable. About 31.0% of them were under impression that vaccine was available against AIDS. About 64.7% students reacted positively to allow a HIV positive student to continue in their educational institution.

VII. Recommendations:

1. It is essential that present system of annual health check up by medical officer which is very perfunctory in nature is to be reorganized by systematic school/college health programmes, Separate clinics may be run for girls providing services of a gynaecologist.
2. Intensive health education programmes should be undertaken by involving health and education personnel. There could be either special programmes or integrated with educational curriculum. These programme should focus on family life education (including sexuality and reproductive health), etc.

VIII. Limitations:

1. The medical examination is done by the investigator who is a generalist. This might have resulted in underestimation of certain conditions which could have been detected by specialists.
2. Similarly by involving a female doctor, there could have been higher probability of detecting gynaecological and breast disorders.
3. As the study on awareness involved sensitive issues like sexuality, sexually transmitted diseases and AIDS, all the students might not be in position to understand and respond to them in the proper manner. The utilization of services of a female health/social worker in case of girls might have helped in improving the study.
4. As the study is not community based, the problems of out-of-school adolescents are not reflected in the study.

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