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A STATISTICAL APPROACH AND STUDY OF KNOWLEDGE, ATTITUDE AND BELIEFS AND BEHAVIOUR AMONG ADOLESCENTS REGARDING 'HIV/AIDS' IN VISAKHAPATNAM CITY, A CASE STUDY

Y. JAGANNADHAPURI[1],Dr.R.SUBBARAO[2], N.LAXMAN RAO[3], Dr.GANAPATHI SWAMY CHINTHADA[4]

[1]Part time Research Scholar, Dept of Statistics,Achraya Nagarjuna University,Guntur,A.P.
Email:Jagannadh_puri@rediffmail.com

[2]Professor Dept of Engg.Mathematics & Humanities, S.R.K.R.Enginnering College (Autonomous), Bhimavaram, Andhra Pradesh, 534204.
Email:Jrsubbarao9@gmail.com

[3]Associative Professor,Bio-statistics, MIMS,Nellimarla,Vizinagaram Distirct.

[4]Associative Professor, GSL Medical College, Rajamundry, Andhra Pradesh.

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ABSTRACT

In India adolescents (10-19) constitute 21.4% of population, comprising one fifth of the total population. Growth monitoring by anthropometric measurement during this period is not only a health indicator but also a predictor of various morbidity in the community. Visakhapatnam is confronted with an increasing incidence of HIV/AIDS among adolescents and young adults. A priority of nurses and other health professionals in Visakhapatnam is the prevention of the spread of HIV infection. The first step in prevention is assessing the HIV/AIDS knowledge, attitudes and beliefs of adolescents. While there are no universally accepted definitions of adolescence and youth, the United Nations understands adolescents to include persons aged 10-19 years and youth as those between 15- 24 years for statistical purposes without prejudice to other definitions by Member States.1 Together, adolescents and youth are referred to as young people, encompassing the ages of 10-24 years. Due to data limitations, these terms can refer to varying age groups that are separately defined as required. This paper reports an exploration of adolescents' knowledge, attitudes and

beliefs of HIV/AIDS in Govt and private schools in Visakhapatnam A cross-sectional correlation design was carried out in 2017-2018 in a govt, private schools, junior/degree College, vocational and Polytechnic College's total of 500 adolescents participated in the study. Two instruments were used: a demographic questionnaire and the Youth Survey, which included questions on knowledge, attitudes and beliefs.The majority of the adolescents had a moderate level of overall HIV/AIDS knowledge, but lacked knowledge in the areas of mode of transmission and prevention of HIV/AIDS. Female students(72%) have more positive attitude towards HIV infected persons when compared to male students(55%) regarding visit to friend home if she/he had HIV,78% to take care of friend or relative he had HIV(67%) allowing HIV children to go school with normal children Regarding attitude toward HIV infected persons there is no significant difference($p>0.05$) among (47%) male and (49%) female students about persons with HIV/AIDs working as teacher and by items(41%) male and (47%) female from a shopkeeper who is HIV positive. The study findings reveal that though a considerable percentage of adolescents had correct knowledge about HIV/AIDS, yet they lacked in dept knowledge about the disease. This result emphasizes the need of school adolescent education programmes in the country so that this high-risk group is property informed about this disease and they would act accordingly.Both males and females have misconception on modes of transmission like drinking from same glass casual contact with infected persons like hand shake, kissing and hugging.

Introduction

HIV/AIDS has emerged as the single most formidable challenge to public health, human rights and development in the new millennium. AIDS is a pandemic disease without borders. Adolescent age group is an important segment of population and potential resource for prevention of HIV/AIDS transmission. On 5th June 1981,the U.S.Centrers for Disease Control and Prevention(CDC) reported the identification of a new clinical entity called"Acquired Immunodeficiency Syndrome" among men having sex with men in New York and California. These men presented with rare Opportunistic infections (OI), Pneumocystis (carinii) Jioveci pneumonia and Kaposi's sarcoma-a rare skin cancer that is usually seen only in immune-compromised persons. The causative agent of AIDS was identified two years later. In 1986, the international Committee on Taxonomy of Viruses recommended a separate name for the virus isolated from AIDS patients, the Human Immunodeficiency Virus (HIV).HIV is transmitted from one infected person to another through penetrative sexual acts both heterosexual and homosexual, though a contaminated blood transfusion or the sharing of needles and syringes, and from mother to child. Due to these restricted routes of transmission, the HIV epidemic was initially concentrated among high-risk groups. These 'high-risk groups 'the population most vulnerable to HIV, are comprised of sex workers (male and female), men having sex with men,Trans Genders,and injecting drug users.

This has to be given a serious thought, especially in India where a wide gap exists in the curriculum of HIV/AIDS and the actual education imparted to the students.Today,around25 per cent of the world's AIDS cases are in their twenties and it is assumed that these people might have been

infected with HIV/AIDS during their adolescent period. Adolescent stage is generally inquisitive. School children of today are exposed to the risk being victims of HIV/AIDS which quite unknown to their predecessors a few decades ago. The epidemic of HIV/AIDS is now progressing at a rapid pace among young people. Studies have reported that young people form a significant segment of those attending sexually transmitted infection (STI) clinics and those infected by HIV.Adolescents comprises about 22% of the population of India. Adolescents are defined by the World Health Organization (WHO) as persons between 10 and 19 years of age (WHO) 1998.Many adolescents around the world are sexually active and because many sexual contacts among them are unprotected, they are at risk of contracting sexually transmitted diseases (STDs) including HIV/AIDS. Most parents do not discuss topics related to sexual issues and hence many teens turn to peers and to the media and get inaccurate iformation.The risk of becoming infected with human immunodeficiency virus(HIV) during unprotected sex is two to four times greater for a woman (even higher in adolescent women) than for a man.

Adolescents in World

Today's generation of young people is absolutely massive: Some 1.8 billion people are between ages 10 and 24. Most of them live in developing countries, often comprising a huge proportion of the population. How well they navigate adolescence will determine not only the course of their own lives, but that of the world. Yet too many youth are unable to participate fully in society. Around 175 million young people in low-income countries cannot read a full sentence. UNFPA partners with young people, helping them participate in decisions affecting them, and strengthening their ability to advance human rights and development issues such as health, education and employment.

World Population(medium Variant)		
Age Group	2010(thousands)	2050(thousands)
10-14	602,054	632,965
15-19	606,144	627,881
20-24	606,816	624,050
Total	1,815,014	1,884,896

Adolescents in India Major states:

States in terms of the total size of youth population is presented in Statement 2.5. As in the case of adolescent population, Uttar Pradesh occupies the first rank in both the years, while Bihar ranks at 4 in 2011, one rank up from 2001. Uttar Pradesh has also increased its share of the total youth population of the country by 2 percentage points (15.4 in 2001 to 17.5 in 2011). Maharashtra and West Bengal rank second and third respectively, with no change in the ranking from 2001 Census. The top two states (Uttar Pradesh and Maharashtra) together account for 27 per cent of the entire youth population of the country in 2011, while the top five states (Uttar Pradesh, Maharashtra, West Bengal, Bihar and Andhra Pradesh) together are home to nearly half of the countries youth population (49%). Madhya Pradesh and Rajasthan are the other big states which have gained rank in 2011 as compared to 2001

Sl.No.	Name of the State	Total Adolescents as per 2001	Percent to total adolescent of India 2001	Total Adolescents as per 2011	Percent to total adolescent of India 2011
1	Uttar Pradesh	3,83,55,275	17.4	4,89,10,661	19.31
2	Bihar	2,09,55,275	9.29	2,33,92,577	9.24
3	Maharashtra	2,09,08,090	8.11	2,13,61,802	8.44
4	West Bengal	1,82,53,965	7.63	1,82,14,554	7.19
5	Andhra Pradesh	1,71,72,414	7.25	1,62,95,342	6.43
6	**India**	**22,50,62,748**		**25,32,35,661**	

In Andhra Pradesh Estimated HIV cases as per 2019, shows very high

Andhra Pradesh District wise HIV Estimations as per 2019					
District Name	Prevalence	PLHIV	New Infection(15+)	ARD(15+)	District Priority
Ananthapur	0.519	19206	167	688	High
Chitoor	0.484	18234	203	646	High
East Godavari	0.95	45743	335	1621	High
Guntur	0.932	42108	238	1501	High
Krishna	0.888	37753	347	1355	High
Kurnool	0.448	16488	215	591	High
Prakasam	0.826	25247	90	897	High
Srikakulam	0.501	12257	105	439	High
Nellore	0.571	15710	136	563	High
Viskhapatnam	0.615	25077	357	888	High
Viziaangaram	0.501	10713	134	384	High
West Godavari	0.906	33332	268	1194	High
YSR(kadapa)	0.457	11857	76	425	High

Review of Literature

Pratibha Gupta et al a cross-sectional study was conducted between July and October 2011 in two randomly selected co-educational schools of Luck now District, India students from tenth to

twelth grade were included in the study. A total of 215 students both boys and girls, were enrolled. In this study for majority of the students (85%), the source of information about HIV/AIDS was the television. Regarding knowledge about modes of transmission of HIV/AIDS was the television. Regarding knowledge about modes of transmission of HIV/AIDS among girl studens, 95.1% of them told that it is through unprotected sex.A total of 75.8% students said that it was transmitted from mother to child. It was observed that the knowledge of the school students was quite satisfactory for most of the variables like modes of transmission, including mother-to-child transmission of the disease.However; schools should come forward to design awareness campaigns. The finding of the present study was satisfactory and consistent with previous research findings. In the present study, the source of information about HIV/AIDS was the television (85%) followed by the newspaper, and friends and relatives (39.5%).Similarly in a study conducted by **Singh et al**,in a district of northern India,for90% women of reproductive age group, the source of information was the television.

In the present study, significant proportion had adequate knowledge regarding modes of transmission of HIV/AIDS, that it was transmitted through unprotected sex(92.1% students) and from mother to child (75.8%) amongst girls,95.1% said that it was through unprotected sex followed by sharing injections(88.2%),blood transfusion(84.3%),and sex with multiple partners(69.6%),similar finding were observed amongst boy; about 92% said that it was transmitted through sharing injections followed by unprotected sex(89.4) and blood transfusions(86.7%).In a study by Singh et al,in a district northern India, the most common mode of transmission was heterosexual intercourse(79.1%),where as according to the women of rural areas of the district, it was homosexual intercourse(74.1%),which was the mode most responsible for the transmission of HIV/AIDS. In the present study,however,knowledge of students about high-risk groups and curability(39.1%) of HIV/AIDS was not satisfactory.Similarly,in a study by Singh et al about availability of cure of HIV/AIDS in rural areas..11.6% women told that cure was avaible for the disease. The response was the same by 32.6% women in urban areas about availability of a cure for the disease.

Pankaj Kumar et al 63% students were aware about HIV/AIDS.TV was the main source of information. A significant decrease in knowledge about misconceptions and significant increase in knowledge occurred about various modes of transmission of disease, prevention of HIV/AIDS in post testing. Family as a source of information was mentioned by very less students revelling probably less knowledge amongst parents or stigma about the disease to talk with the children about HIV/AIDS. School or teacher as a source of information was not revealed by any student indicating no or very less activity of school AIDS education programme. Regarding various modes of transmission of HIV/AIDS 61.7% students were aware about unsafe sex as a mode of transmission which was signgicantly increased to 84.31% after viewing film. Infected blood as a mode of transmission of HIV/AIDS was revealed by 66.66% students in pre test which significantly increased to 82.3% in post test. Mode of transmission by sharing infected needle of a HIV/AIDS infected person was opened by 61.76% student in pre-test and was significantly improved to 79.41% after the file.Lowerie 35.6% students of Chandigarh were aware about this mode of transmission in pre-test, and was significantly increased by 51.1% after discussion. One of the various modes of transmission ie infected by 51.1% after discussion. One of the various modes of transmission ie infected mother to her baby,65.68% student had knowledge about this mode of transmission before viewing the film and which was further improved to 80.39%.There are lots of misconceptions about modes of transmission of HIV/AIDS amongst the students.

Sample & Methodology

This study conducted oral from various students from Visakhapatnam area, A total of 500 students of Class X, Inter, Vocational, Polytechnic, Degree college were selected randomly, from different Government Higher secondary schools and colleges of Visakhapatnam city. Out of 500 students in which there were 2 Government co-educational school, 2 Private junior and Degree college(one for co-education & one for Mahila), 2 vocational and one Government polytechnic college. A total of 39 Students belonging to Class X,186 students from Inter mediate,76 students from Vocational,119 students from Polytechnic,80 students from Degree participated in the study, both boys and girls in that 362 Boys and 138 girls were enrolled between the age group of 14-19 years. The questions were explained to them, and they were asked to write answers of the questions on their own. Questionnaire includes questions related to general aspect,causativeagent,modes of transmission, high risk population, source of awareness, modes of prevention,attitutude and beliefs about people living with HIV/AIDS(PLWHA).The response rate of students was 100%.The students were administered a pre-designed proforma,which included multiple choice questions. They were asked to fill a pre-structred,pre-tested questionnaire within the school and college premises. Care was taken to minimize consolation utmost the school children. Written consent was obtained from the adolescents after explaining the purpose of the study to them.

Data Analysis

A master chart was prepared with all the data that was collected MS Excel was used to summarize the data and SPSS version 19 software was used for analysis of data Z test (2Tailed) was done at 5% significance by means of simple comparison of proportions' value and P value were obtained by above test if Z value is <1.96 the P value will >0.05 that indicates there is no significant difference between two components. The results are then compared with other studies.

Appendix:

Table-1 Age Distribution of study Subject of HIV/AIDS

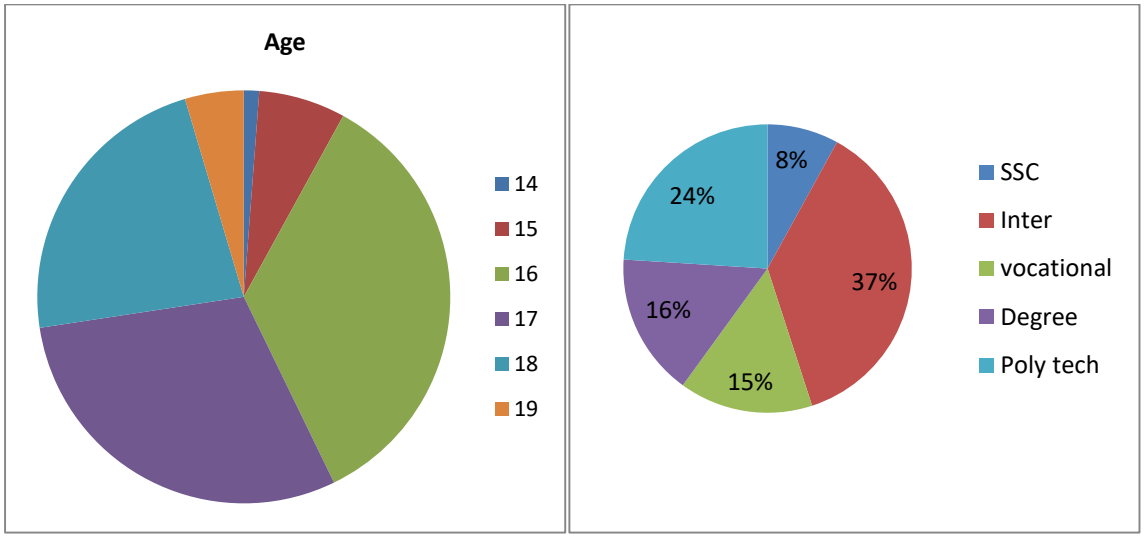
Age Distribution of study subjects		
Age	N	Percentage
14	6	1.20%
15	34	6.80%
16	174	34.80%
17	149	29.80%
18	114	22.80%
19	23	4.60%

The Study group consisted of 500 Adolescents from 14 years to 19 years, of whome, majority were between 16 to 18 years. The Modal Age was 16.

Table-2: Course wise students Data

Course wise students data		
Class	N	Percentage
SSC	39	8%
Inter	186	37%
vocational	76	15%
Degree	80	16%
Poly tech	119	24%
Total	500	100%

In the above mentioned various classes the Intermediate constituted 37% in this study group, this age group of people had very high risk so that the data highest taken from in these group.

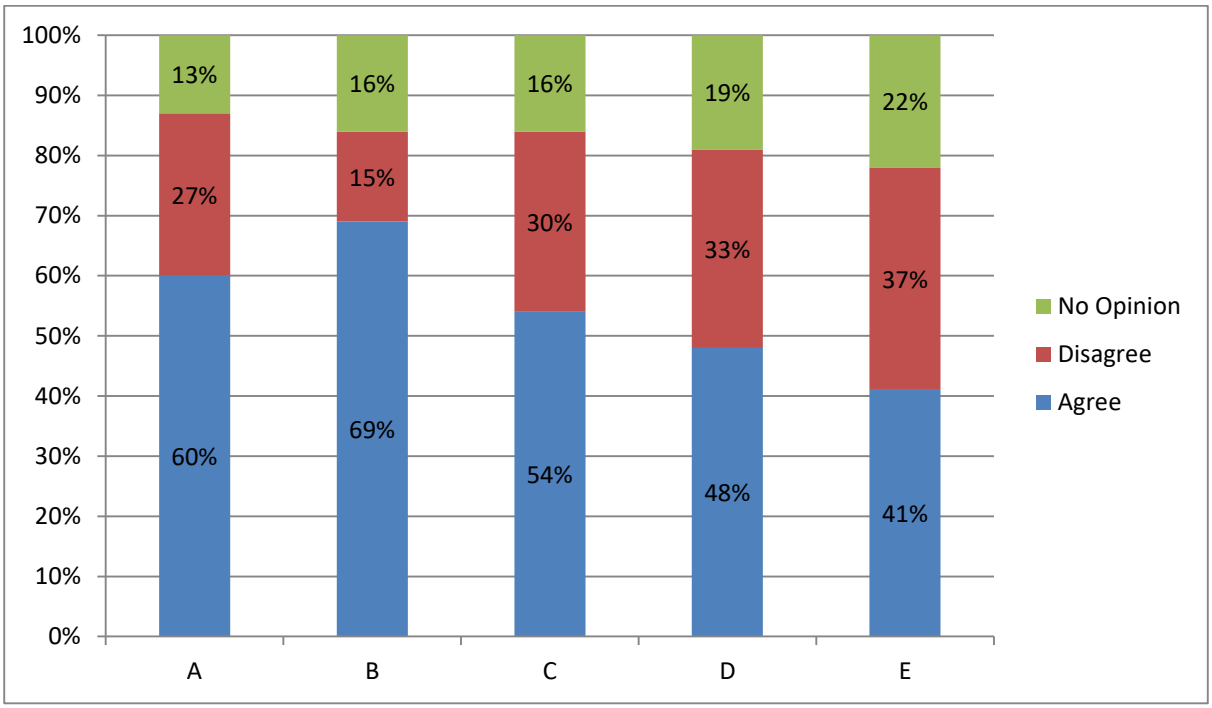


The age and their qualification are prepared pie chart mentioned above, shows that majority of age in intermediate and in these data Private College 53% where as Govt 47%.

Table-3 Attitude of Adolescent towards HIV infected persons

Category		Male N=362			Female N=138			Total N=500			Z value	P value
		Agree	Disagree	No Opinion	Agree	Disagree	No Opinion	Agree	Disagree	No Opinion		
Would visit my friend home if she/he had HIV	Number	200	113	49	100	23	15	300	236	64	3.51	<0.05
	Percentage	55%	31%	14%	72%	17%	11%	60%	27%	13%		
Would take care of my friend or relative if she/he had HIV	Number	240	62	60	107	12	19	347	74	79	2.44	<0.05
	Percentage	66%	17%	17%	78%	9%	14%	69%	15%	16%		
Children with HIV should be allowed to go school with normal children	Number	177	128	57	92	23	23	269	151	80	3.56	<0.05
	Percentage	49%	35%	16%	67%	17%	17%	54%	30%	16%		
Persons with HIV/AIDS can work as teacher	Number	171	131	60	68	35	35	239	166	95	0.41	>0.05
	Percentage	47%	36%	17%	49%	25%	25%	48%	33%	19%		
Shopkeeper/food selleris HIV positive, would like to buy	Number	150	140	72	57	44	37	207	184	109	0.03	>0.05
	Percentage	41%	39%	20%	41%	32%	27%	41%	37%	22%		

Female students(72%) have more positive attitude towards HIV infected person, when compared to male students(5%),regarding visit to friend home if she/he had HIV,78% to take care of friend or relative if she/he had HIV and 67% allowing HIV children to go school with normal children



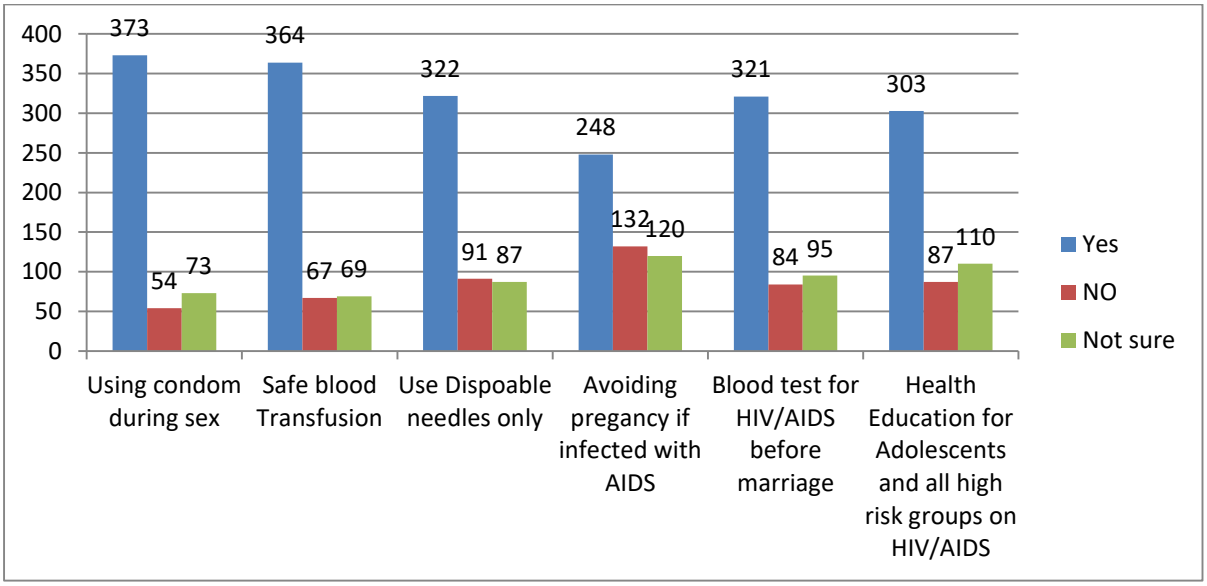
Regarding attitude towards HIV infected person there is no significant difference(p>0.05) among 57% male and 49% female students about persons with HIV/AIDS working as teacher any buy items41% male and 41% females from a shop keeper/food seller whose is HIV positive.

Table-4 Knowledge about the method of prevention of HIV/AIDS

Knowledge about method of prevention of HIV/AIDS												
	Number	Male N=362			Female N=138			total N=500				
Category	Percentage	Yes	No	Not sure	Yes	No	Not sure	Yes	No	Not sure	Z value	P value
Using condom during sex	Number	284	40	38	89	14	35	373	54	73		
	Percentage	78%	11%	10%	64%	10%	25%	75%	11%	15%	3.21	<0.05
Safe Blood transfusion	Number	263	51	48	101	16	21	364	67	69		
	Percentage	73%	14%	13%	73%	12%	15%	73%	13%	14%	0.12	>0.05
Use disposable needles only	Number	235	66	61	87	25	26	322	91	87		
	Percentage	65%	18%	17%	63%	18%	19%	64%	18%	17%	0.39	>0.05
Avoiding pregnancy if infected with AIDs	Number	176	107	79	72	25	41	248	132	120		
	Percentage	49%	30%	22%	52%	18%	30%	50%	26%	24%	0.71	>0.05
Blood test for HIV/AIDs	Number	233	64	65	88	20	30	321	84	95		
	Percentage	64%	18%	18%	64%	14%	22%	64%	17%	19%	0.12	>0.05

before marriage												
Health education for adolescents and all high risk groups on HIV/AIDS	Number	227	66	69	76	21	41	303	87	110		
	Percentage	63%	18%	19%	55%	15%	30%	61%	17%	22%	1.56	>0.05

There is signifant (P<0.05) among male and female students about method of prevention by using condom during sex,In this regard male students (78%) have more awareness when compared to female (64)



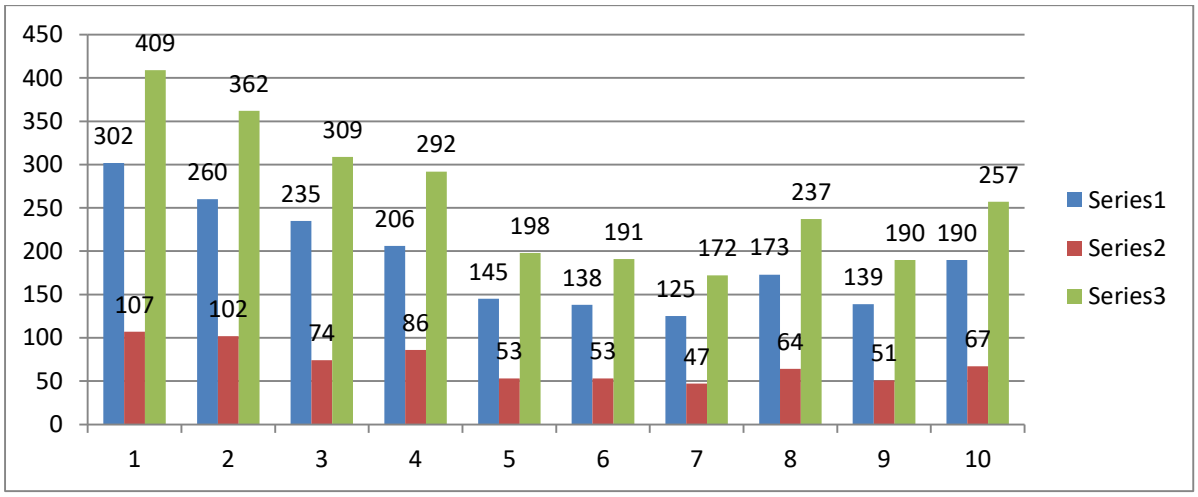
There is no significant difference (p>0.05) among male and female students about other methods of prevention clarealy shows above diagram.

Table-5 Knowledge about source of Awareness:

Category		No. of Students getting awareness from the given source Male N=362	No. of Students getting awareness from the given source Female N=138	No. of Students getting awareness from the given source N=500	Z value	p value
Electronic Media	Number	302	107	409		
	Percentage	83%	78%	82%	1.53	>0.05

Category		No. of Students getting awareness from the given source Male N=362	No. of Students getting awareness from the given source Female N=138	No. of Students getting awareness from the given source N=500	Z value	p value
Print Media	Number	260	102	362	0.47	>0.05
	Percentage	72%	74%	72%		
Friends	Number	235	74	309	2.32	<0.05
	Percentage	65%	54%	62%		
Teacher	Number	206	86	292	1.1	>0.05
	Percentage	57%	62%	58%		
Father	Number	145	53	198	0.34	>0.05
	Percentage	40%	38%	39%		
Mother	Number	138	53	191	0.06	>0.05
	Percentage	38%	38%	38%		
Siblings	Number	125	47	172	0.1	>0.05
	Percentage	35%	34%	34%		
Pamphlets	Number	173	64	237	0.28	>0.05
	Percentage	48%	46%	47%		
NGOs	Number	139	51	190	0.3	>0.05
	Percentage	38%	37%	38%		
Radio	Number	190	67	257	0.79	>0.05
	Percentage	52%	49%	51%		

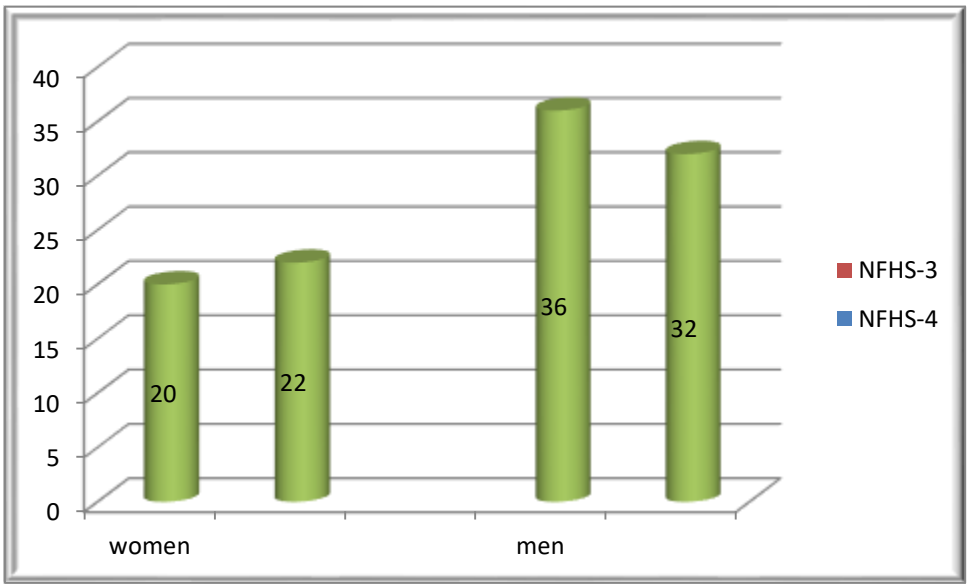
Electronic media was the source of awareness (82%) in majority of the students. There is no significant difference ($p>0.05$) among male and female students about source of awareness



The number of students getting awareness from the above source is mentioned above diargaram.In addition, women and men were requested to provide a few drops of blood from a finger prick for laboratory testing for HIV if necessary yearly once a time.

Comparison of NFHS data

Comprehensive knowledge of HIV/AIDS among youth: Twenty-two percent of young women and 32 percent of young men age 15-24 have comprehensive knowledge of HIV. x Premarital sex among youth: Three percent of never-married women and 11 percent of never-married men age 15-24 have ever had sexual intercourse. x Higher-risk sex among youth: Thirty-five percent of men age 15-24 have had higher-risk intercourse (sex with a non-marital, non-cohabitating partner) in the 12 months preceding the survey, compared with 2 percent of women 15-24



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

Trends: The percentage of young women with comprehensive knowledge about HIV has increased only marginally from 20 percent in NFHS-3 to 22 percent in NFHS-4 and the proportion of young men with comprehensive knowledge has declined in the same period, from 36 percent to 32 percent.

Acknowledgement: I sincer thanks to Dr.suri Babu garu , Prinicapal invistagotor and his Team members

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