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To assess the knowledge and attitude of college students in Hamirpur district of Himachal Pradesh towards HIV/AIDS, sexually transmitted diseases and sexuality

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Abstract

Acquired immunodeficiency syndrome (AIDS) caused by Human immunodeficiency Virus (HIV) is a major public health problem in India. It affects young people of sexually active age group. A number of Knowledge, Attitude and practice studies conducted in different parts of India revealed widespread ignorance and mis-concepts about the disease among young people. Young students are the budding professionals and future of India who have just entered the temples of learning. Thus there is a need to assess the existing knowledge and attitude towards HIV/ AIDS among students of Hamirpur district of Himachal Pradesh.

Aims and Objectives of the study: To Assess the knowledge and attitude about the spread, prevention and control of HIV/AIDS, sexually transmitted diseases and sexuality. To assess the impact of gender and place of residence of the students on the knowledge and attitude.

Material and Methods: This was a descriptive, cross sectional, survey based, community education study of one-year duration among 2000 students of randomly selected 15 colleges of Hamirpur District of Himachal Pradesh. After taking informed consent, students were given predesigned and pretested questionnaire to provide information on Knowledge and attitude regarding HIV and AIDS.

Results: The results of 2000 students who voluntarily participated in the study there were 1345 (67.25 %) girls and 655 (32.75%) boys. Over all awareness among boys and girls was very high (70.6 %) on Knowledge of and attitude towards HIV/AIDS.

Conclusion: Though general level of students about HIV/AIDS is quite high and it is not poor but they have some mis-concepts about it. More education is required.

Keywords: HIV/AIDS, college students, knowledge and attitude

Introduction

The acquired immunodeficiency syndrome (AIDS) is a major emerging public health problem in India. According to an estimate made by the regional office of the World Health Organization for Southeast Asia, India accounts for over two-thirds of all human immunodeficiency virus (HIV)-infected individuals in the region. The projections of the WHO indicate that by AD 2010, half of the AIDS patients in the world will be from India ^[1]. The total annual economic loss due to HIV/AIDS in India is estimated to be Rs 3447 billion." These figures emphasize the societal burden posed by HIV infection in India ^[2].

Heterosexual intercourse is the principal mode of transmission of HIV infection in India, accounting for nearly 75% of all HIV infections ^[3]. Sexually active youth have been identified as a group at high risk of HIV infection. "There is substantial evidence that sexually transmitted diseases (STDs) enhance the transmission and acquisition of HIV infection, and that control of STDs is helpful in preventing HIV/AIDS ^[4]. The social system in Himachal is such that stigma is attached to the word 'sex', and anything connected with sex is neither spoken loudly, nor discussed in public. Sex education has not yet been included in the formal educational curriculum in schools. First case of HIV was reported in the year 1992 in Himachal Pradesh and ever since the numbers of HIV cases has been increasing. The high-risk behavior among youth and the societal lack of communication about sexual matters is likely to be conducive to the spread of HIV infection in society.

The spread of HIV in any community is in part determined by the knowledge of and attitudes towards sexuality of its members, and by their actual sexual practices. Before formulating public health policies for the prevention of HIV, Preventive strategy, targeting the population during the early stages of an epidemic is more cost effective than at later stages. Prevention is also much cheaper to implement than curative means [5]. New York Times, 1996. It is critical to obtain information about the prevalent knowledge, attitude and practice (KAP) regarding HIV/AIDS, STDs and sexuality in the target community. Several studies on KAP regarding HIV/AIDS have been reported from different parts of India. Even though Himachal has a reputation for good health at affordable cost and accounts for low prevalence state for HIV but there is evidence that new cases are reported from different parts of Himachal. There is an urgent need to make people aware of the problem of HIV/AIDS and problems associated with it. There is a paucity of information regarding awareness of HIV/AIDS Searching through the net we found there is only one study from Shimla about knowledge and attitude of Dental students towards HIV/AIDS patients [6].

Globally, 78 million (69.5 million-87.6 million) people are living with HIV since the start of the epidemic and 35 million (29.6 million-40.8 million) people have died from AIDS related illnesses at the end of 2015 since the start of the epidemic. Worldwide, 2.1 million (1.8 million-2.4 million) new HIV infections occurred in 2015 and 1.1 million (940 000-1.3 million) people died from AIDS-related illnesses by the end of 2015 [7].

HIV can be suppressed by combination ART consisting of 3 or more ARV drugs. ART does not cure HIV infection but controls viral replication within a person's body and allows an individual's immune system to strengthen and regain the capacity to fight off infections. Education is a very important measure in preventing the spread of HIV. Even if education is completely successful, it should still have to be an ongoing process. In each generation, a new generation of people becomes adult and they need to know how to protect themselves from the HIV infection. The older generations, who have probably already been educated, may need the education reinforced, and need to be kept updated, so that they are able to protect themselves and inform the younger generation. Education plays a crucial role in fight against HIV and AIDS [8].

Some important aspects of HIV and AIDS program in education include workforce program to mitigate the impact of HIV and AIDS on educational systems, provision of HIV and AIDS prevention education for students and teachers, as well as activities to minimize the impact on children affected by HIV and AIDS. Precautionary measures and treatment of HIV/AIDS is included in many schools [9].

Since its first recognition in 1981, HIV/AIDS infection has become a major health concern worldwide [10].

Need of the study

- Hamirpur is a smallest District of HP but densely populated.
- It is an educational Hub with number of degree colleges, National Institute of Technology and large number of students.
- They are easy target to HIV/AIDS.
- There is no curative drug for the HIV/AIDS.
- Awareness is the only answer to protect the young students from this infection/disease

- Benefits of the study to society
- Study will encourage students to get tested and know their status through ICTC Centers.
- They would become aware of the levels of care and treatment.
- It would educate them to pass down the knowledge to their community members.
- It would help them to understand how to work together with HIV infected people
- It would prevent discrimination against HIV affected individuals

Aims and objectives of the study

The aim of study is to assess the

- Knowledge about the spread of HIV and safe sexual practices.
- To assess the Attitude towards AIDS, sexually transmitted diseases (STDs) and sexuality among college students in Hamirpur district.
- To assess the impact of gender and place of residence of the students on the knowledge and attitude.

Materials and Methods

Study was planned after the approval from the institutional Ethics committee.

It was a cross sectional Community Education study of one-year study from April 2019 – April 2020. Study was conducted at Dr. Radhakrishnan Government Medical College Hamirpur.

Study area

Colleges of Hamirpur District Himachal Pradesh

Study population

Two thousand students from 15 randomly selected Colleges out of 20 colleges.

Inclusion criteria

Those students who willingly and voluntarily wanted to be part of the studying the age group of 18-25 years age.

Exclusion criteria

Those students who did not like to take part in the study. Survey forms had questions on knowledge and attitude on the transmission and prevention of HIV/AIDS, sexually Transmitted diseases, sex and sexuality.

Data collection method

After a brief introduction about the scope of the study, predesigned questionnaire having general demographic data and questions on knowledge and attitude on the transmission prevention and control of HIV/AIDS, STDs and sexuality was handed over to them. Students were assured of total confidentiality of the data. Written informed consent will be obtained. Restructured questionnaire was used to collect data.

Instrument to be used

Structured questionnaires on knowledge and attitude on HIV/AIDS.

Quality control

Questionnaire was pretested for quality.

Data analysis

Data analysis/Statistical tools- Appropriate Statistical tools were used.

Results

Out of the 2000 college students of Hamirpur District of Himachal Pradesh who took part in the study revealed that girls outnumbered the boys 1345 (67.75%), while the boys were 655 (32.25%). Majority of the students 1313 (65.6 %) were in the age group of 18-20 years followed by 21-22 yrs were 614 (20.7%), 177 (8.8%) were in the age group of 23-25 yrs and only 96 (4.8%) in the age group above 25 yrs. Largely it was found that 1961 (98.5 %) of the students belonged to Hindu community while only 34 (1.7 %) were Muslims. Only 5 students were Christians.

Looking at the place of living of students majority 1343 (67.15%) belonged to rural back ground and 657 (32.85%) were from the urban area. (Table 1)

Information sources about HIV/AIDS

The main source of information about HIV/AIDS was from Mass media. Internet was the first choice of Students 1910 (95%) followed by Radio 1620 (92.1%) Newspapers and magazines. Friend and teachers were a moderate choice to get information on HIV/ AIDS 1631 (74.6%). A good number 1489 (75%) of students discussed about HIV/AIDS with their parents. (Table 2).

Field of study

Predominately the girl students 430 (21.5%) chose the field of study as Education. They joined to do their graduation and post-graduation in Education to become future teachers and educationists. It was followed by studying arts 344 (17%). Almost equal number 337 (16.8 %) chose to study Agricultural and Forestry. Students see a bright future in the field of Agriculture and Forestry since Himachal being an Agriculture and Forest dominated state. Technical education, Science and Law were chosen by students as 215 (13.2 %), 240 (12.0 %) and 215 (10.8 %) respectively. Hotel Management was the last choice of students 173 (8.7 %). Probably the number of Hotel management colleges are limited, cost of studying Hotel management is very high and they are available in big cities. (Table 3).

Student's knowledge about HIV/AIDS transmission, prevention and control

The percentage of those who gave correct answers to each of the 12 questions was high (70.6%). Almost same number of students had correct knowledge on the severity of AIDS. Majority of the students 1540 (77%) had a correct knowledge that mosquito does not transfer HIV infection and they knew correctly that sharing a meal with HIV infected person does not transfer HIV infection 1576 (78.8%).

Eighty percent of the students had correct knowledge about the proper use of condom that it reduces chances of transmission and having sex with only one uninfected partner. Almost similar number of students responded to that infection can be transferred from infected mother to her baby. Most of the students had correct knowledge that HIV/AIDS does not get transferred by hugging or using the same swimming pool (88.6 and 94%) respectively.

Half of the students answered wrongly that watching pornographic material can contribute to risky sexual practices and there is a cure for HIV/AIDS (54.3 and 55.3% respectively).

Sixty two percent of the students expressed wrongly that there is no cure for STDs Eighty six percent of students answered correctly that there is a need for academic institutions to discuss regarding prevention of STDs. A

similar percentage of students had correct knowledge that a healthy looking person can have HIV infection. (Table 4).

Student responses to attitude on HIV transmission, prevention and control of HIV/AIDS

Of the 2000 respondents 1775 (88.7%) indicated that they would be able to live and take care of the individual with HIV in the same house or community. Most of the students 1799 (89.9%) would study in the same class if their classmate is infected with HIV and their class mate should be allowed to continue study in the same class. Almost similar percent of students reported that if their teacher is tested positive he or she should be allowed to continue teaching them.

However only 816(40.8%) responded that people with HIV should stay at home or in hospital. Half of the respondents 952(47.6%) expressed that there is no harm in having sex before marriage. A good number 1586 (79.2%) were willing to do voluntary work within HIV positive individuals and they should not be hatred. There was a positive attitude towards sexually transmitted diseases. 1271 (88.5%) responded correctly that masturbation does not cause STDs.

Discussion

The vast majority of students in this study got their information on HIV/AIDS from mass media specially internet. Moderate amount of communication regarding HIV/AIDS occurred between them and their parents or teachers. This suggests the need of involving parents, teachers and students in AIDS education programmes. The stimulation of interest in parents and teachers concerning HIV/AIDS may help them and their children/Students^[11], and may counter unnecessary fear and/or discrimination against people with HIV/AIDS.

The severity of AIDS was well reported by 71% of them agreed that it is a life threatening disease and ultimately it would kill the person who is infected with HIV/AIDS. It appears that mass media have succeeded in raising AIDS awareness, but have being successful in producing a little effect in changing students attitude towards those with HIV/AIDS. Although attitude may not change at once, it could be effective to initiate a campaign through the mass media, aimed at attitude modification.

Majority of the participants in this study were the girls (67 %) in the age group of 18-20 years belonging to Hindu community coming from rural background. Most of them have chosen a field of their study as Education to become future teachers. Education on HIV/AIDS would help in the modification of their attitude towards people living with HIV/AIDS and the students they teach in future.

Two thousand students who participated in the study had heard about HIV/AIDS and were aware of it. Majority of the students knew that HIV is transmitted by having unprotected sex with an infected person. An infected mother can transmit the infection to her baby. Similar results have been shown by the study conducted among medical students in Bijapur^[12] among nursing students of Kolkata^[13] and among college student of Kerala^[14]. Good knowledge was positively associated with living in the same house with people having AIDS without worry. It appears that people with good knowledge concerning AIDS do become more tolerant of people with HIV/AIDS. A report from the Philippines demonstrated that a positive change in attitude among nurses and midwives after receiving accurate information and interactive role-play concerning HIV/AIDS^[15].

Present study reveals some mis-concepts about HIV/AIDS among students. Twenty three percent of the students expressed that HIV can be transmitted by the mosquito bite. Whereas a study from Nagasaki Japan showed much lower results as 11% [16]. But this is compatible with a study from South India [17]. Twenty percent of the students thought that the use of condom and having sex with a one uninfected person does not prevent infection.

Fifty five percent of the students revealed that HIV/AIDS can be cured and sixty two percent of the students expressed wrongly that there is no cure for sexually Transmitted Diseases. Eighty six percent of the students answered correctly that there is a need for academic institutions to discuss regarding prevention of STDs. Similar percent of students expressed correct knowledge that a healthy looking person can have HIV. There is a misconception among 12% of the students that hugging can transfer HIV and 21% of the students revealed wrongly that HIV can be transferred by using the same swimming pool.

Statistical methods

The statistical methods were used in the evaluation of the results of this survey study. The descriptive statistical methods were employed to analyze the data received. The majority of the responses received were binary. So, the methods applied were mainly focused on bivariate values. The mean (SD) age of the participants in the survey was 18-20 years which amount to the 65% of the total survey samples. Then the 35% were the 20-22 age group students. To evaluate the data, the scores were assigned to every correct answer we received. And for every incorrect answer, we have assigned the 0. The attitudes were categorized as favourable and unfavourable. Favourable attitude were those which helps in preventing the spread of HIV in community and helps the HIV positive patients with their life in community. Unfavourable attitude were opposite to the favourable attitude. So, the score of 1 was assigned to every answer which signifies the favourable attitude and 0 was assigned to every unfavourable attitude.

In the end, all the scores for the given question whether it was Attitude based or Knowledge based, we summed them up. Next step was to apply the data plotting and histogram creation. The graphs were plotted on the scores value we received in the previous steps. For every question of the knowledge and attitude regarding AIDS we have analyzed their relationship with the students corresponding their geographical area. The scores which we received from the methods applied helped in analyzing the outcome. To better explain the results, the corresponding percentage of the

score values were created and then histograms were plotted. We even studied the results with the area under the curve (AUC) methods which further verified our statistical results. The predictor variables in the study were gender (male or female), residence area/geographical location (rural or urban). On the basis of these to predictor variables, the dependency of the knowledge and attitude were analyzed.

Statistical analysis

All the methods applied in this study provided us with the significant results. As we analyzed the results of these statistical methods, this results in major findings based in the variables like geographical (rural/urban) location, gender corresponds to their knowledge and attitude. From the results it is clear that the knowledge of candidate regarding the HIV and positive/favorable attitude of the person toward the HIV positive patient depends on the area of residency upto some extend. It has been found that the knowledge and attitude of persons were better for the urban residents compared to the rural residents.

We categorized the results on the basis of two major categories using gender variable (boys and /girls). We found from the results that, in case of boy's attitude, the urban boys have overall positive attitude than the boys of rural areas. For questions like Q6, Q11 and Q12 we found that boys had positive attitude. Similar trend was seen in case of knowledge of boys while comparing the results of urban area with rural. The most significant difference in knowledge has been found for the questions Q3 and Q6.

Similarly, we have some significant findings for the female participants. While comparing the positive attitude of rural girls with the urban girl, it has been found that the urban girls had favorable attitude for the HIV patients as compared to the rural girls. The most noticeable difference was found in the questions Q6 and Q12. As for the knowledge base of urban and rural girls regarding HIV, the results showed that the knowledge of urban female residents is vast and in-depth as compared to the rural female participants. The significant deviation which we noticed was in the questions Q6, Q10, Q11 and Q12.

So, from these results we can easily conclude that the overall knowledge of HIV and attitude of participants regarding HIV patients is better in case of urban residents (male and female). Thus, there is a need to educate people more and there is a bigger need to make people more aware in the rural areas.

Representation of survey data

Table 1: Depicts social and demographic data of 2000 college students of Hamirpur, Himachal Pradesh

S. No.	Characteristics	No	Percentage
Age group (Years)			
1	18-20	1313	65.6
2	21-22	414	20.7
3	23-25	177	08.8
4	Above 25	96	04.8
Religion			
5	Hindu	1961	98.05
6	Muslim	34	01.7
7	Christian	05	0.25
Gender			
8	Male	655	32.75
9	Female	1345	67.25
Living place			
10	Rural	1343	67.15

Table 2: Shows sources of information on HIV/AIDS among 2000 college students of Hamirpur (HP)

Sr. No.	Source	Number	Percentage
1.	Internet	1914	95.7
2	Television	1883	94.1
3	Health Professional	1842	92.1
4	Radio	1820	91.0
5	Newspaper/Magazine	1792	89.6
6	Friends	1699	84.9
7	High School Teacher	1677	83.8
8	Primary school Teacher	1516	75.8
9	Family members	1489	74.6

Table 3: Reveals field of study of students

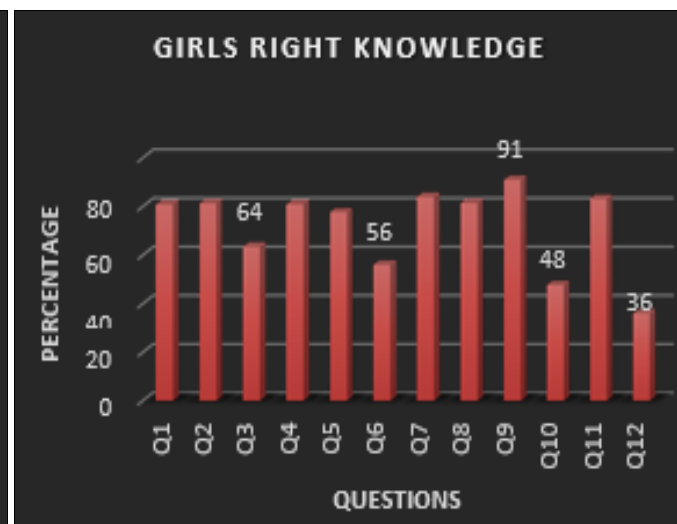
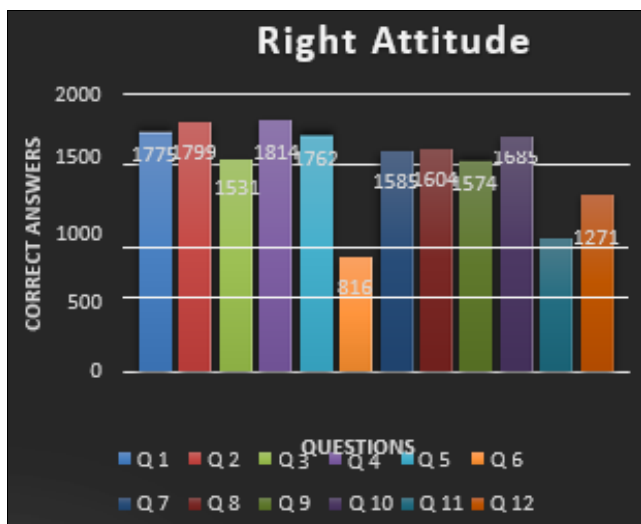
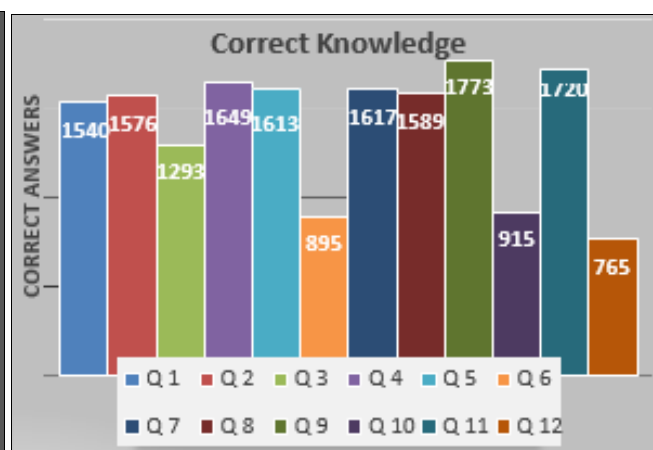
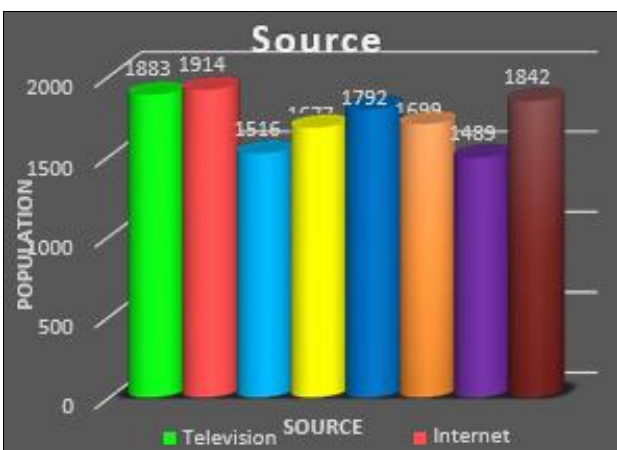
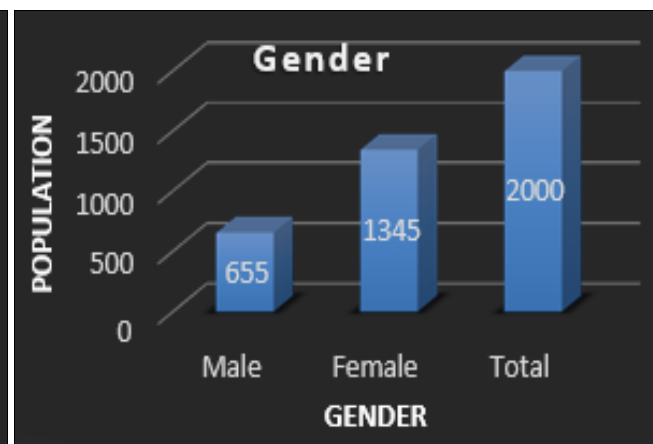
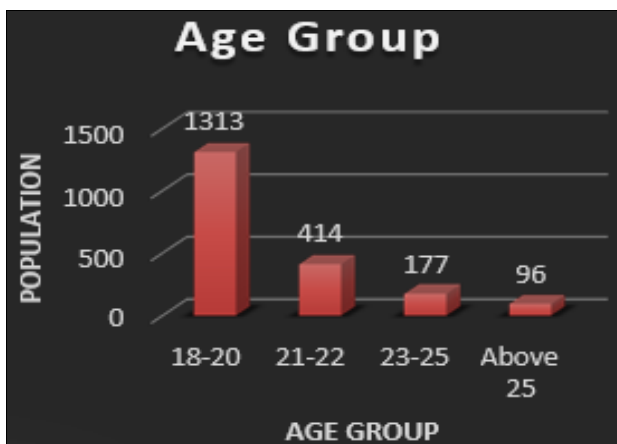
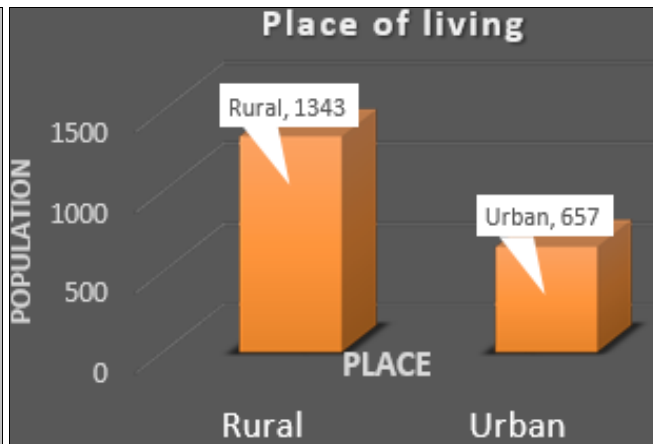
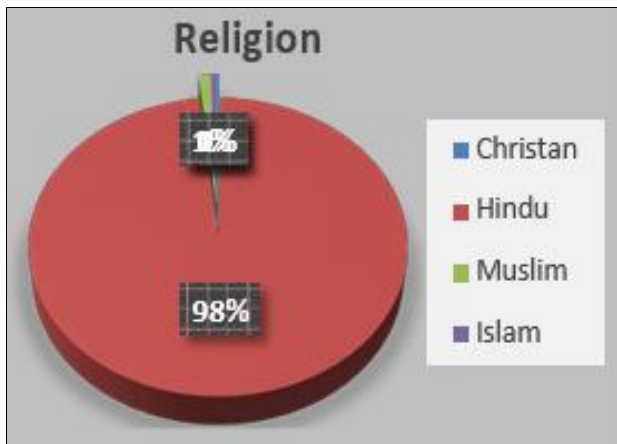
S. No.	Field of study	Number	% age
1.	Education	430	21.5
2	Arts	340	17.0
3	Agriculture and Forestry	337	16.8
4	Technical	265	13.2
5	Science	240	12.0
6	Law	215	10.8
7.	Hotel Management	173	08.7

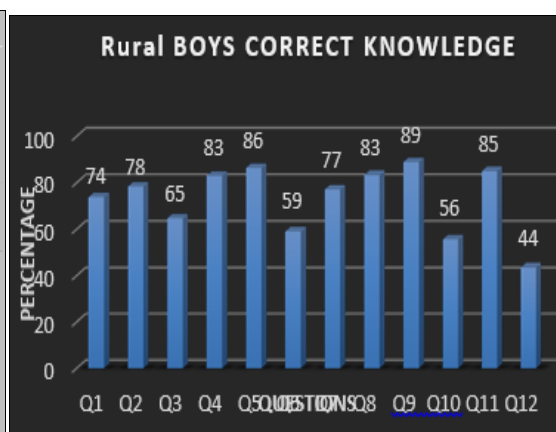
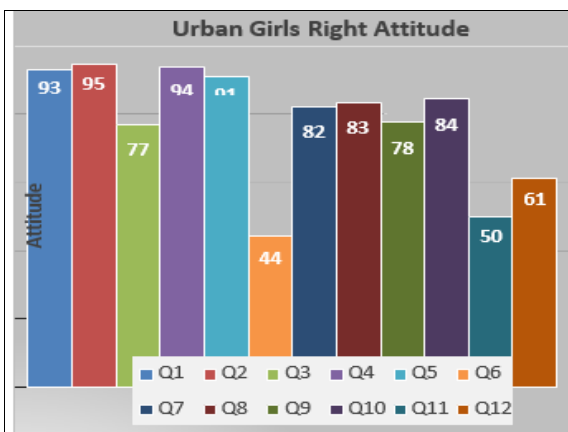
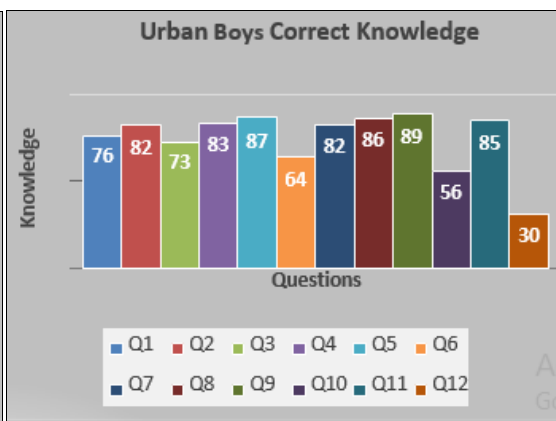
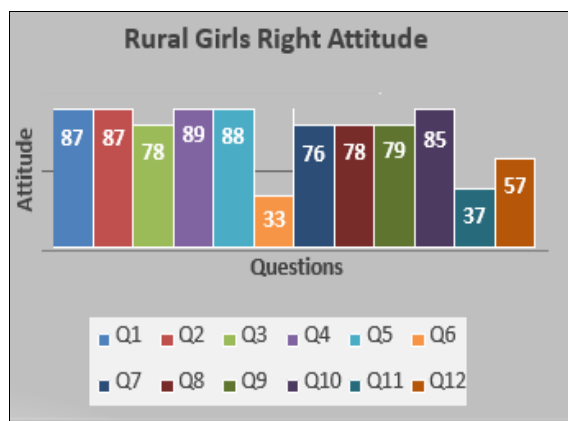
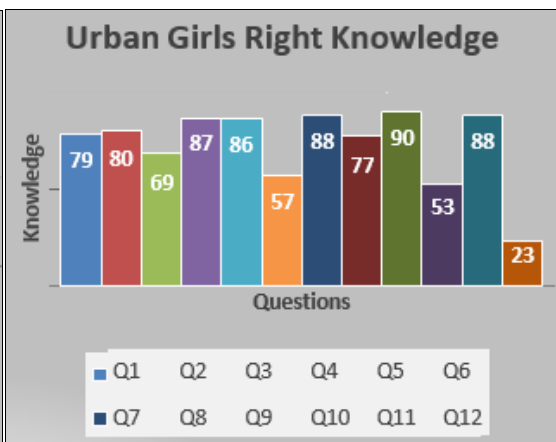
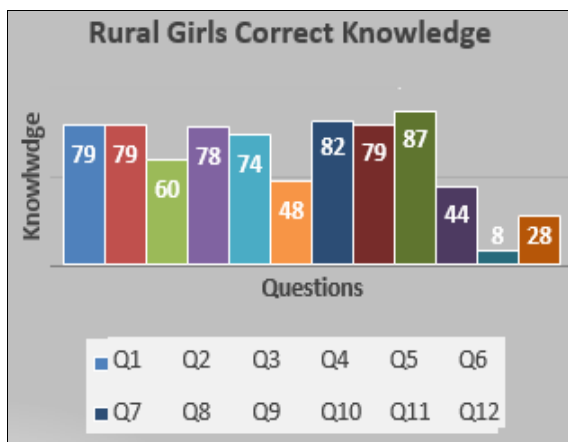
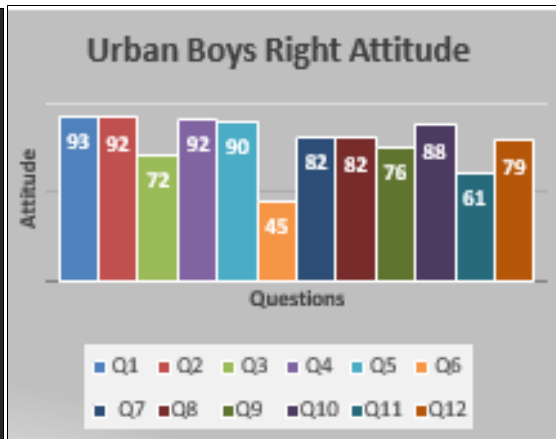
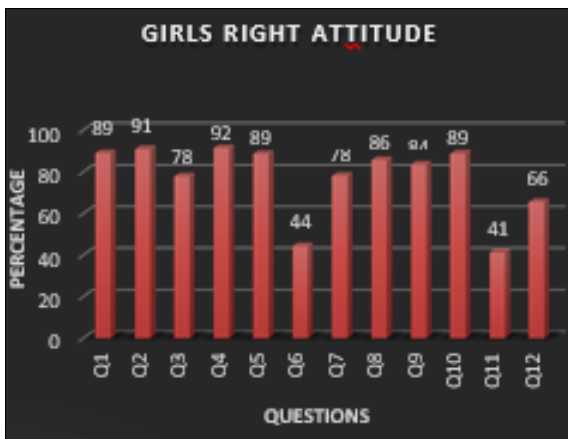
Table 4: Knowledge on HIV/AIDS transmission, prevention and control

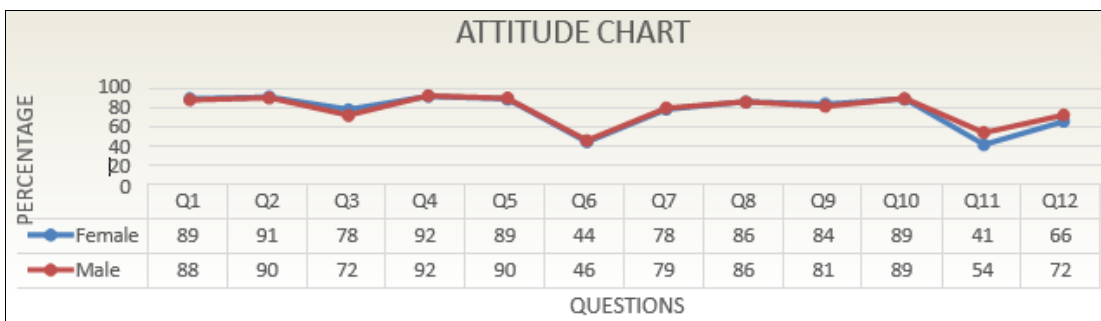
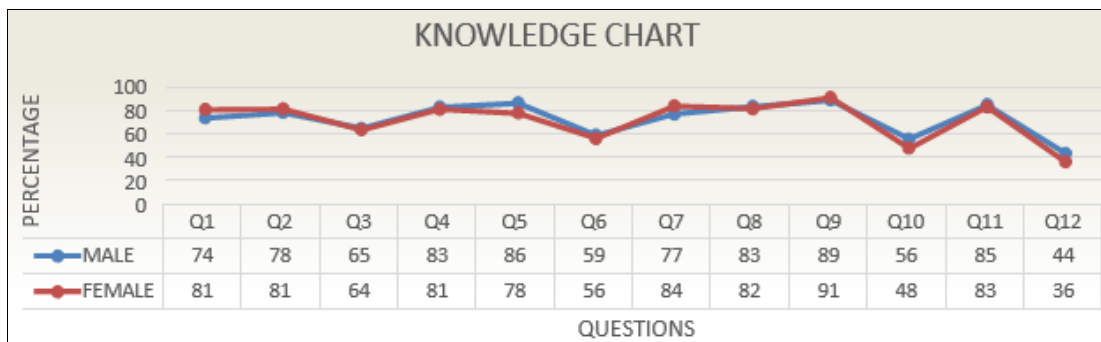
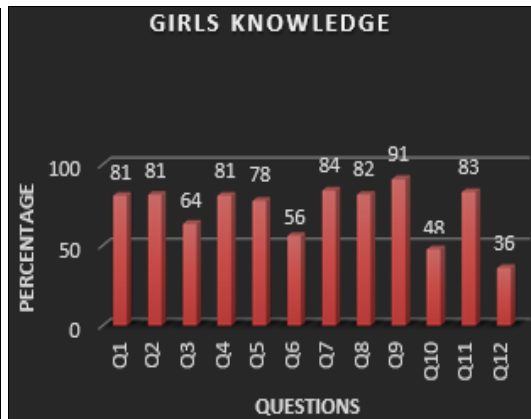
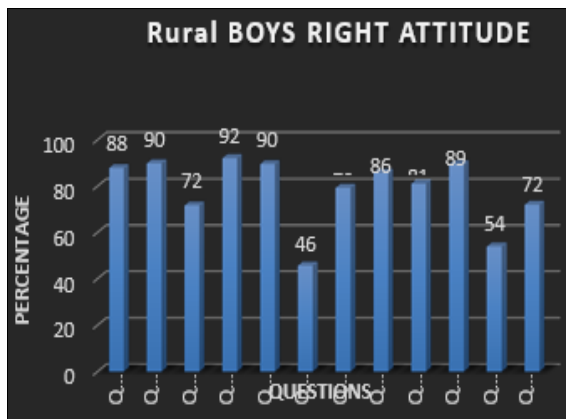
S. No.	Question	Correct knowledge	%	% Wrong knowledge
1	Can a person get HIV Infection from mosquito bites?	1540	77	23.0
2	Can a person get HIV infection by Sharing a meal with someone who is infected?	1576	78.8	21.2
3	Can the risk of HIV transmission be reduced by having sex with only one uninfected partner?	1293	64.6	35.4
4	Can a healthy looking person have HIV?	1649	82.4	17.6
5	Does condom use reduce risk of HIV transmission?	1613	80.6	19.4
6	Is there a cure for HIV/AIDS?	895	44.7	55.3
7	Can HIV be transmitted from mother to fetus?	1617	80.6	19.4
8	Can HIV be transmitted through swimming pools or toilet seats?	1589	79.4	20.6
9	Can AIDS be transmitted through hugging an infected person?	1773	88.6	11.4
10	Can Watching or reading pornographic materials can contribute to risky sexual practices?	915	45.7	54.3
11	Is it necessary for academic institutions to discuss issues regarding prevention of STDs?	1720	86.0	14.0
12	Is there a cure for STDS?	765	38.2	61.9

Table 5: Attitude on HIV transmission, prevention and control

S. No.	Question	Right attitude	%	% Wrong attitude
1	if one of your relative, who is HIV positive, becomes ill, would you be willing to care for her/him in house Or community?	1775	88.7	11.3
2	If your friend is HIV positive, would you continue your friendship with him/her?	1799	89.9	10.1
3	If a shopkeeper or food seller is HIV positive, would you buy items from him/her?	1531	76.5	23.5
4	. If a student is HIV positive, she/he should be allowed to continue his/her study in school?	1814	90.7	9.3
5	If a teacher is HIV positive, she/he should be allowed to Continue his/her teaching?	1762	88.1	11.9
6	People with HIV should stay at home or in hospital?	816	40.8	59.2
7	People should do volunteer work with AIDS patients?	1585	79.2	21.8
8	People with HIV should be hatred or not?	1604	80.2	19.8
9	If a family member contracts HIV he/she should move out?	1574	78.7	21.3
10	One should end his or her friendship if their friend has AIDS?	1685	84.2	15.8
11	Do you agree there is no harm in having sex Before marriage?	952	47.6	52.4
12	Can masturbation cause Sexually transmitted diseases?	1271	88.5	15.5







Limitations of study

This study has some limitations as study administered self – administered questionnaire. It is difficult to validate the student’s answers. Students may over report socially desirable answers and under report socially undesirable answers. We did not ask many questions on sex and sexual behavior and condom use. Mainly because of ethical and cultural norms in Himachal. Since sexual behavior and condom use are considered to be the major avenues of HIV/AIDS transmission. These omissions are unfortunate. Inclusion would have provided useful information on the activities and condom use among students.

Further studies including sexual behavior and condom use are needed to plan comprehensive educational program in Himachal.

Finally, the results may not be extrapolated to other population groups who may differ substantially in age, sex, education level and economic status. Still, the students surveyed represent an important subgroup of the population and the information generated will be useful in the planning of future AIDS education program in Colleges in Hamirpur and Himachal Pradesh.

Conclusion and Recommendations

In our study of 2000 college students of Hamirpur District

of Himachal Pradesh, awareness of HIV/AIDS and its modes of transmission was high. In comparison to sexually transmitted diseases and their transmission was not very good. There were gender and Rural Urban differences in knowledge about AIDS. Boys from Urban areas showed better knowledge and boys from urban area also showed better attitude towards AIDS. There is need to focus on girls from rural areas to disseminate information regarding HIV/AIDS, STD and sexuality. There is also need to clear mis-concepts t about HIV/AIDS among students through health education in educational institutions. There is also a need to stress upon attitude issues about sensitive diseases like HIV/AIDS among the young population in colleges. Role modeling by teachers may improve the knowledge and attitude of the students towards HIV/AIDS affected individuals.

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