

KNOWLEDGE ON TRANSMISSION AND
PREVENTION OF STDs AND HIV INFECTION
AMONG HIGH SCHOOL/ COLLEGE GIRLS OF
DHARAN

NHRC Library
Accession No. 253
Call No.



दर्ता नं .. 183 ..
विषय .. N.H.R.C. ..
मिति 30.01.2001 ..

Investigators
Reeta Rijal
Sójani Dhungel
B.Sc.Nursing Final Year



Teachers/Advisors

Dr. Aparna Bhasuri, Professor, College of Nursing, MAHC, Manipal, India.
Ms. Shiva Das Gupta, Professor, Department of Nursing
Ms. Chitra Poudel, Assistant Professor, Department of Community Health Nursing
Dr. Arjun Kr. Sharma, Associate Professor, Department of Community Medicine

B.P.Koirala Institute of Health Sciences, Dharan

Submitted in partial fulfillment of the course requirements
of the Degree of Bachelor of Science in Nursing 4th year

ACKNOWLEDGEMENTS

This research study has been completed with suggestions, guidance and help from many individuals. We are deeply indebted to those who have contributed in this research study and made it possible.

First of all, we wish to express our sincere gratitude to B.P. Koirala Institute of Health Sciences for providing opportunity to us to carry out this research work as a partial fulfillment of B.Sc. Nursing course.

We are deeply obligated to our coordinator of B.Sc. Nursing programme Miss Sakun Singh and Miss Shuva Das Gupta for their encouragement and giving opportunity for this study.

We find our words inadequate to express our sense of indebtedness and gratitude to our advisors Prof. Aparna Bhaduri from the nursing faculty who gave her precious time to teach us research theory and practical, Dr. Arun K. Sharma from the department of Community Medicine and Miss Chitra Paul from the department of Community health Nursing for their continuous supervision, direction and guidance as well as valuable help, encouragement, precious time and constructive criticism throughout the study.

We are equally indebted to all the people who are directly and indirectly involved in our work and made it possible.

Our special thanks goes to Nepal Health Research Council(NHRC), Ramshah Path for encouraging and supporting for our Research.

Finally, we owe our special thanks to all students who have participated in this study. Also the principals and teachers of the selected schools of Dharan without whose coordinator-operation this study would not have been possible.

Last but not the least we would like to express our sincere gratitude to Er. Sridhar Nath Dawady for providing invaluable feedback for completing this study.

*Miss Reeta Rijal
Miss Sojani Dhungel
B.Sc. Nursing 4th Year students.*

**LIST OF ABBREVIATIONS**

AIDS	=	Acquired Immuno Deficiency Syndrome.
Approx.	=	Approximately.
B.P.K.I.H.S.	=	B.P. Koirala Institute of Health Sciences.
B.Sc.Nnrsing	=	Bachelor in Science and Nursing
Govt.	=	Government.
HIV	=	Human Immunodeficiency Virus
NA	=	Not Applicable.
NCASC	=	National centre for AIDS and STDs control.
N.H.R.C.	=	Nepal Health Research Council.
NS	=	Statistically not significant.
p-value	=	Probability value for χ^2 test.
Pvt.	=	Private.
STDs	=	Sexually Transmitted Disease
VDRL	=	Venereal Disease Reference Laboratory.
WHO	=	World Health Organization .
χ^2 test	=	Chi ² test.

TABLE OF CONTENTS

S/N	ITEM	PAGE
I. INTRODUCTION		
1.1	. Background and Significance of the Study-----	1
1.2	Need or Justification of the study. -----	2
1.3	Problem Statement -----	3
1.4	Objectives of the Study -----	3
1.5	Definition of Terms -----	3
1.6	Conceptual Framework. -----	4 - 5
1.7	Variables. -----	6
1.8	Assumptions -----	6
1.9	Hypothesis -----	6
2.0	Delimitation -----	6
II. REVIEW OF LITERATURE -----		7 - 10
III. RESEARCH METHODOLOGY		
1.1	Research Approach -----	11
1.2	Types of Survey -----	11
1.3	Setting -----	11
1.4	Population -----	11
1.5	Sample size and Technique -----	11
1.6	Development of Research Tools/Design	
	-Content Validity -----	12
	-Pre-testing/Pilot study -----	12
1.7	Procedure for data collection -----	12
1.8	Plan for data Analysis -----	12
	-Data Analysis -----	13
1.9	Ethical consideration -----	13
2.0	Budget -----	14



IV. ANALYSIS , INTRPRETATIONS AND DISCUSSIONS

1. Tables		
- Results and Discussion.	-----	15 - 28

NHRC Library
 Accession No. 253
 Call No.

V. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.

1.1 Summary of findings	-----	29
1.2 Implications	-----	29
1.3 Recommendations	-----	30
1.4 Difficulties/Problems faced during study	-----	30
1.5 Limitations	-----	30
1.6 Plan for dissemination.	-----	30

VI. ANNEXURE

1. References	-----	i - ii
2. Work Plan for the study	-----	iii
3. Questionnaire		
-English Version	-----	iv - vi
- Nepali Version	-----	vii - ix
4. Blue Print	-----	x

LIST OF TABLES

TABLE NO.	PARTICULARS	PAGE NUMBER
I	DISTRIBUTION OF STUDENTS ACCORDING TO TYPE OF SCHOOLS/ COLLEGES AND CLASSES	15
II	DISTRIBUTION OF AGE OF RESPONDENTS	15
III.	EDUCATIONAL STATUS OF RESPONDENTS' PARENTS	15
IV.	AWARENESS REGARDING HIV/ AIDS AND STDs	16
V	KNOWLEDGE REGARDING FULL FORM OF HIV/ AIDS AND STDs AMONG RESPONDENTS	17
VI.	SOURCE OF INFORMATION ABOUT HIV/ AIDS AND STDs	18
VII.	KNOWLEDGE REGARDING GENERAL ASPECTS OF HIV INFECTION/ AIDS AND STDs	19
VIII.	KNOWLEDGE REGARDING MODES OF TRANSMISSION OF STDs / HIV INFECTION AMONG RESPONDENTS	20
IX.	RESPONDENTS' KNOWLEDGE REGARDING SYMPTOMS OF STDs	21
X.	RESPONDENTS' KNOWLEDGE REGARDING SYMPTOMS OF AIDS	22
XI.	RESPONDENTS' KNOWLEDGE ABOUT PREVENTION FROM THE TRANSMISSION OF AIDS/ STDs	24
XII.	TEACHING IN THE CLASS REGARDING HIV/AIDS AND STDs	25
XIII.	EFFECT OF PARENTS EDUCATION FOR LEVEL OF KNOWLEDGE OF RESPONDENTS	26

LIST OF FIGURES



NHCC Libr

Accession No

Call No.

FIGURE NO	PARTICULARS	PAGE NO.
FIG I	EDUCATIONAL STATUS OF RESPONDENTS' FATHER (GOVERNMENT SCHOOLS/COLLEGES)	31
FIG II	EDUCATIONAL STATUS OF RESPONDENTS' FATHER (PRIVATE SCHOOLS/COLLEGES)	32
FIG III	EDUCATIONAL STATUS OF RESPONDENTS' MOTHER (GOVERNMENT SCHOOLS/COLLEGES)	33
FIG IV	EDUCATIONAL STATUS OF RESPONDENTS' MOTHER, (PRIVATE SCHOOLS/COLLEGES)	34
FIG V	AWARENESS REGARDING HIV/AIDS/STDs (GOVERNMENT SCHOOLS/COLLEGES)	35
FIG VI	AWARENESS REGARDING HIV/AIDS/STDs (PRIVATE SCHOOLS/COLLEGES)	36
FIG VII	AWARENESS REGARDING HIV/AIDS/STDs (GRADE XI)	37
FIG VIII	AWARENESS REGARDING HIV/AIDS/STDs (GRADE IX)	38
FIG IX	SOURCE OF INFORMATION ABOUT HIV/AIDS/STDs (GOVERNMENT VS PRIVATE SCHOOLS /COLLEGES)	39
FIG X	SOURCE OF INFORMATION ABOUT HIV/AIDS/STDs (GRADE IX VS GRADE XI)	40
FIG XI	KNOWLEDGE REGARDING MODES OF TRANSMISSION OF STDs/HIV INFECTION AMONG RESPONDENTS' (GOVERNMENT VS PRIVATE SCHOOLS/COLLEGES)	41
FIG XII	KNOWLEDGE REGARDING MODES OF TRANSMISSION OF STDs/HIV INFECTION AMONG RESPONDENTS' (GRADE IX VS GRADE XI)	42
FIG XIII	RESPONDENTS' KNOWLEDGE ABOUT PREVENTION FROM TRANSMISSION OF STDs/HIV INFECTION (GRADE IX VS GRADE XI)	43
FIG XIV	RESPONDENTS' KNOWLEDGE ABOUT PREVENTION FROM TRANSMISSION OF STDs/HIV INFECTION (GOVERNMENT VS PRIVATE SCHOOLS)	44

ABSTRACT:

Introduction:

Present study was carried out to assess the knowledge level of the class IX Class and XI students of selected government and private schools/ colleges towards HIV/AIDS and STDs.

Objectives:

1. To assess the level of knowledge about different aspects of STDs and HIV/AIDS among class IX and XI Students of government and private schools/ Colleges, and
2. To find out the influence of type of schools , educational status and parents' educational level on their awareness about HIV/AIDS and STDs.

Design: Discriptive and comparative study using pre-tested questionnaire .

Setting: Randomly selected Government and Private, secondary and higher secondary schools of Dharan.

Sample Size: One Hundred Sixty students of selected secondary and higher secondary school students.

Study Variables: Knowledge, Education .

Statistical Analysis: By applying suitable tests of significance (Chi² test).

Results:

Equal number of students were interviewed from government (80) and private (80) schools/ Colleges. The educational status of the parents was within 42.5% among the students of Private schools/ Colleges. The average age of the students was 16.6 years. About 90% of students were aware of HIV and AIDS but only about 40% of students were aware of STDs in which private school students and class IX standard students had higher level of knowledge than government school students and class XI students respectively.

Knowledge regarding full form of HIV, AIDS and STDs, Private school students showed a higher level of understanding than government schools which was eight times more (31.23%) than the private school students (3.75) for HIV and for AIDS also private school students had five times more (61.25%) level of knowledge than government schools (11.25%) students. Similarly class IX students showed higher level of knowledge than class XI students about HIV and AIDS. Only about 1-2% of the students had the knowledge about STDs.

Television was the most common source of information (83.9%) followed by newspapers /books (63.9%) and radio (70%). More than 77% of the students knew that AIDS is a fatal disease though they still had misconception that AIDS Patient can be detected by looking at him/her. More than 70% of students gave correct answer about the question of increase risk of getting AIDS to those who are already infected with STDs. About 95% of students from governments as well as

private schools and grade IX as well as grade XI students said that correct use of condom can prevent AIDS/STDs.

Regarding the mode of transmission about 88 - 95% of the students said reuse of contaminated syringes / needles, blood and unsafe sexual practice are the sources of Transmission of HIV/AIDS and STDs. Less number of students were known about tattooing. About 92% of students knew that AIDS/STDs can be transmitted through infected mother to newborn child. In all correct answer, private school students and class IX students showed better knowledge than government schools' students and class XI students. Many Respondents expressed misconception regarding mode of transmission as mosquito bite, sharing foods and hugging infected person.

About the knowledge regarding symptoms of STDs, 65-71% of students were aware of excessive white discharge as one of the symptoms of STDs but the level of knowledge of class XI was lower (61.25%) than class IX (75 %). Genital Ulceration and itching as a symptom of STDs was known to 78.75% of students from private schools, 68% students from government school and 70% students of class XI, 77.5% students of class IX. Rest of the students either didn't respond to the question or they disagreed.

About One Third and One Sixth of the respondents had the misconception that headache and vomiting as the symptoms of STDs respectively. In response to knowledge regarding symptoms of AIDS 67-91% of students cited that fever for longer duration, weight loss and recurrent infections are the common symptoms of AIDS.

Most of them didn't respond to the question and remaining disagreed to the same. Respondents' knowledge regarding prevention from the transmission of HIV/AIDS was higher. More than 90% mentioned that HIV/AIDS and STDs can be prevented by the use of condom and more than 87% said that HIV/AIDS and STDs can be prevented by the sexual relation with only one reliable partner. Similarly more than 73% of students expressed that HIV/AIDS can be prevented by receiving only screened blood when required. Few students have a misconception of that using mosquito net and not talking with the infected person can prevent the transmission of HIV/AIDS and STDs.

Conclusion:

The overall data reveals that comparative knowledge of class IX and Private schools' students is higher than class XI and Government schools' students. The students have still poor indepth knowledge regarding HIV/AIDS and STDs. So, it needs to be corrected by proper educational programmes.

I. INTRODUCTION

1.1 BACKGROUND AND SIGNIFICANCE OF THE STUDY

The menace of AIDS is with us and there is no way to escape from it⁽¹⁾. AIDS cases were first reported in United States in 1981. Since then, AIDS has spread throughout the world assuming the dimensions of a truly global pandemic⁽²⁾. It was thought to be the disease of homosexual in early 80's in the United States. Later on when the cases were also found in heterosexually active and people with multiple sexpartners, it was realized that it was problem for everybody practicing an unprotected sex in any form.

HIV infection is rapidly becoming the leading cause of disease and death worldwide where the specific treatment is yet to be confirmed. According to the estimate of United Nation Programme of HIV/AIDS and World Health Organization (WHO) 40 million men, women and children will be infected with HIV by the year 2000 and Asia will account for 25% of all people with HIV infection⁽³⁾. Thus it needs great medical attention to protect the countries, communities and families from socio economic consequences.

HIV/AIDS showed up late in the South-East Asia Region but is spreading very rapidly. The first patient with AIDS was diagnosed in Thailand 1984, and HIV infection in most other South-East Asia countries were reported in 1986 or later.⁽²⁾

HIV infection was first detected in Nepal in the year 1988, after that number of cases which went up sharply after 1995. Highest number of HIV cases (489) among voluntary blood checkers were detected in 1997. This is because around 100 of the cases were girls who were brought back from brothels in Bombay⁽³⁾.

According to WHO, 50,000 Nepalese are likely to be HIV positive by the year 2000. WHO estimates the figure stands somewhere in between 25,000-30,000 at present.⁽³⁾

National center for AIDS and STD control (NCASC) record shows about 1,376 people are already infected with HIV including 945 (68.7%) men and 431 (31.3%) women who came for blood test voluntarily in Nepal. This (the low number of women) is because women are hesitant to come forward and have a blood test. Out of the total 1,376 HIV patients, 283 have AIDS and 139 people have succumbed to the disease. This figure was 1,337 till the end of October. The cases are more prevalent in the age group of 14-39 since this group is more sexually active and also consists of intravenous drug user (IDU).

According to WHO estimates, out of every 1,00,000 population in Nepal 66 are HIV positive where as the figure stands at 418 for every 1,00,000 Population in India.⁽³⁾

At the current status: 23 million people are living with HIV and facing death from AIDS, worldwide.

-Every 8000, new people are getting infected with HIV.

-90% of all HIV infections are in the developing world; the great majority in the sub-Saharan Africa.

WHO projects that the pandemic continues at the same pace, 30-40 million worldwide will have been infected with HIV by the year 2000, 8-10 million of these would develop AIDS, the terminal stage of HIV disease.

In parts of Africa, 25-30% of the general population is infected and eventually die.⁽²⁾ The estimated number of people infected with HIV infection in the South East Asia Region, as of mid - 1997, is 3.7 million.⁽²⁾

The evidence that STDs contribute to the still growing HIV epidemic in South Africa underscores the seriousness of STDs. From national antenatal survey in 1996 it was estimated that 2.4 million people were infected with HIV.⁽⁴⁾

In the developed country like, United kingdom and USA a dramatic fall in both primary and secondary syphilis has been observed. Similarly in England the incidence of gonorrhoea has been falling slowly since about 1975 but non-gonococcal urethritis has been increasing dramatically since the early 1970s. Similar declines in the rates for gonorrhoea have been reported for Denmark and Sweden now has the World's lowest reported number of cases for gonorrhoea⁽⁵⁾

In the developing countries, Syphilis is the second most important cause of genital ulcers. Congenital syphilis is a major cause of fetal and parental death⁽⁵⁾

Various studies indicate the prevalence of STDs in Nepal is quite high and it is estimated that up to 3% of the population are infected by some or other STDs. In the high risk behaviors groups as high as 72% VDRL productivity rate have been reported. It seems that there are pockets of high STD prevalence in some area (5). Also another study says in number of female with HIV infection is 48 and male is 11 in the age group 14-19 years⁽⁶⁾.

1.2. NEED FOR THE STUDY

Adolescents are both an important and potential resources for the prevention of HIV infection and STDs . AIDS and STDs are a threat to them personally and to the community at large. The school children and youth who are yet to develop may practice high risk behavioural patterns because of the inadequate knowledge about sexuality and sex education or they may have faced many different types of problems. One of the most important problem is the STDs. STDs including HIV/AIDS has become one of the biggest problems in the world. An individual may be infected by STDs because of unprotected and unsafe sexual practices. Second important problem is the teenage pregnancy. It has a lot of negative consequences. It is dangerous for both mother and child. Pregnancy is not accepted before marriage in our society. It may lead to the forced marriage or illegal abortion and sometimes even suicide. Marriage life may not be long lasting because of the forceful marriage and abortion may be conducted by and unskilled person which may lead to many complications and more often death of the mother.

A 1992 W.H.O. report (as quoted in Kaur, 1995) estimated that more than two thirds of the population in developing countries between the ages of 15 and 19 years have had at least one sexual experience. Researcher has said that education will be most effective if it is given before the onset of behaviour and premature sexual experience can be prevented⁽⁷⁾.

Behra and Padte (1988) state that sex education is urgently needed and should be imparted by the parents and others to develop mature and healthy sexual attitudes and a sense of sexual responsibility among young people. Adolescents should be taught about various physiological phenomena that occur during this stage in order to avoid unnecessary anxiety, fear, misconceptions and ignorance related to reproductive health and to prevent behaviours that place them at risk⁽⁸⁾

Thus we have emphasized as a group in special need of research about knowledge on STDs and HIV infection among high school girls of Dharan.

1.3. PROBLEM STATEMENT:

A comparative study of knowledge on transmission and prevention of STDs and HIV infection between the girls studying in selected government and private high schools/ colleges of Dharan, Nepal.

1.4 OBJECTIVES OF THE STUDY

- a. To assess level of knowledge about transmission and prevention of STDs and HIV infection among class IX and XI students of government and private school.
- b. To find out the factors influencing the level of knowledge:
 - type of school/colleges (Government & Private).
 - educational status of the students
 - parents' education level

1.5. DEFINITION OF TERMS

- i. Knowledge:
Knowledge refers to the correct response to questions on transmission and prevention of STDs and HIV infection .
- ii. Level of knowledge:
Level of knowledge refers to above and below median of knowledge score.
- iii. Level of education:
Level of education refers to girls studying in standard IX and XI
- iv. HIV:
Human Immunodeficiency Virus which causes AIDS.

- v. AIDS:
Acquired Immuno Deficiency Syndrome. The syndrome of opportunistic infections that occur as the final stage of infection by Human Immuno deficiency Virus (HIV). AIDS includes HIV infection and AIDS.
- vi. STDs:
Sexually transmitted diseases. Disease acquired as a result of sexual intercourse with an infected individual. A more inclusive term than Venereal Disease. In this study STDs are limited to gonorrhoea and syphilis.

1.6. CONCEPTUAL FRAMEWORK

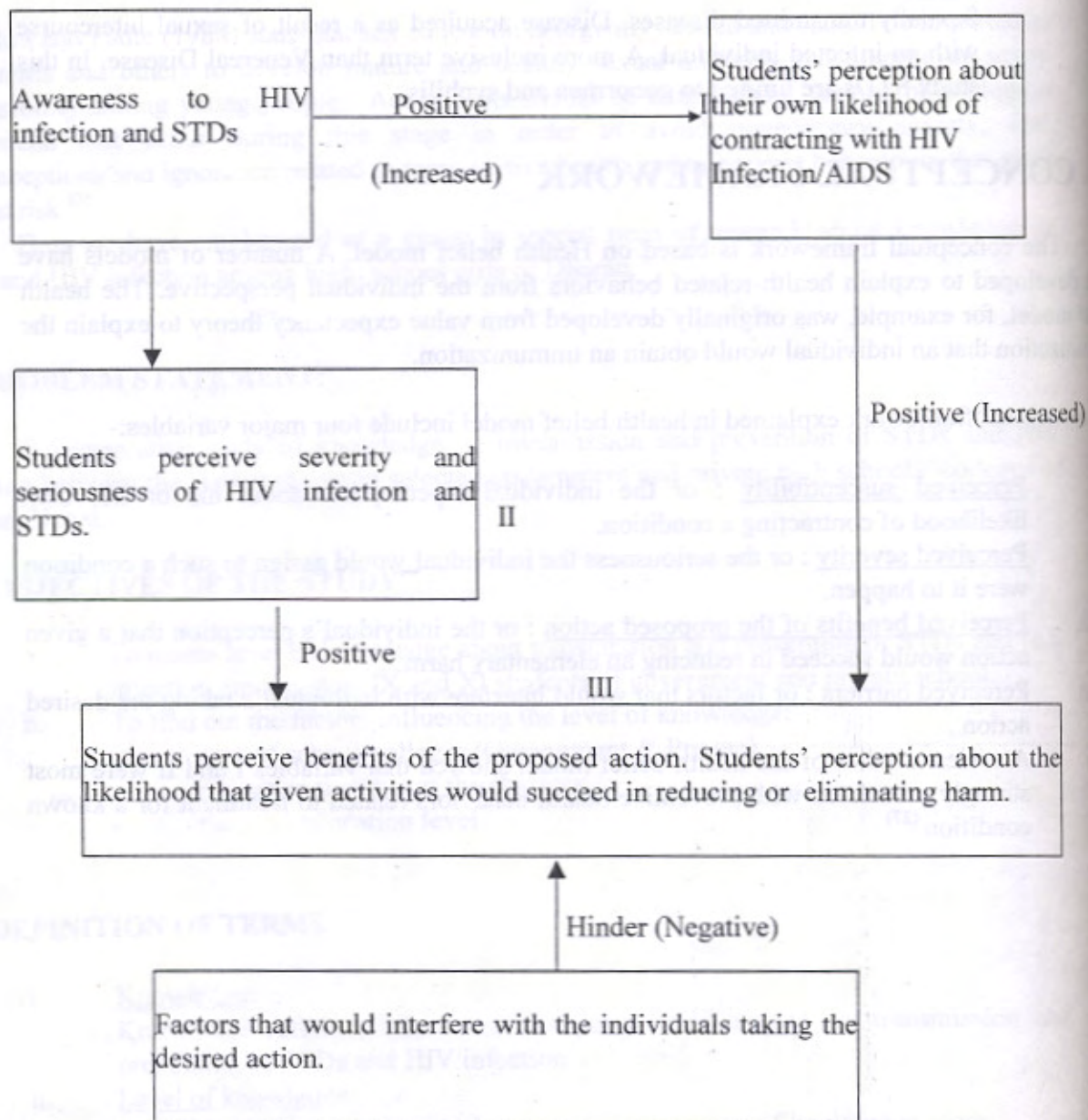
The conceptual framework is based on Health belief model. A number of models have been developed to explain health-related behaviors from the individual perspective. The health belief model, for example, was originally developed from value expectancy theory to explain the immunization that an individual would obtain an immunization.

The conceptual framework explained in health belief model include four major variables:-

- i. Perceived susceptibility : or the individual's perception about his or her own likelihood of contracting a condition.
- ii. Perceived severity : or the seriousness the individual would assign to such a condition were it to happen.
- iii. Perceived benefits of the proposed action : or the individual's perception that a given action would succeed in reducing an elementary harm.
- iv. Perceived barriers : or factors that would interfere with individual's taking the desired action .

A review studies of the health belief model showed that variables I and II were most strongly associated with preventive health behaviors related to treatment for a known condition⁽²⁷⁾

CONCEPTUAL FRAMEWORK



1.7. VARIABLES

- i. Knowledge
- ii. Education

1.8. ASSUMPTIONS

High school girls have some knowledge about STDs and AIDS through education media such as Radio, Television, Newspaper.

1.9. NULL HYPOTHESIS

- i. Educational level of students doesn't influence knowledge about STDs, HIV/AIDS.
- ii. The type of school doesn't influence the level of knowledge in relation to STDs, HIV/AIDS.
- iii. Education of parents doesn't influence the level of knowledge in relation to STDs, HIV/AIDS.

2.0. DELIMITATION

The study will be concerned with:

- i. Only girl students studying in high schools/ colleges of Dharan.
- ii. Class IX and XI students and
- iii. This study is confined to randomly selected government and private schools of Dharan.

II. REVIEW OF LITERATURE

During the course of literature review many books, newspapers, articles, old journals, new journals, medline search, news bulletin and many professional and non-professional journals were searched. Very few concerned literatures about HIV/AIDS and STDs in context of Nepal were found though there were various literatures about these topics in context of other countries. Searched materials concerning the study subject are as follows:

Nearly 1600 school children between the age group of 15-29 years of 9 schools and 3 junior colleges of Wardha were interviewed to assess their awareness about AIDS. Observation revealed that 90.6% students heard of AIDS. Many believed that AIDS is transmitted through physical contact in school or in house (40.6%) were as 25.5% believed that AIDS is insect borne. 49.6% students were unaware of preventive measures and most common source of information was Television⁽⁷⁾

A study was done about HIV transmission prevention, attitudes towards HIV and personal behaviours in New Guinea, which shows that over 98%, knew about AIDS and HIV infection and 97% knew that HIV was sexually transmitted, but many misconceptions existed, like one third thought that HIV is transmitted by mosquito bite. Although the majority of students knew that HIV is sexually transmitted, basic knowledge about STDs were lacking and was not taught as the part of curriculum in most of the schools.⁽⁸⁾

In another study a cross sectional survey done in primary and secondary school children in different community of Africa showed that 80% of primary school boys and 68% of primary school girls were already sexually active; other corresponding figures were 8.9% for secondary school boys and 48% for girls. Despite a rather high (30%) lifetime rate of condom use, 33% and 25% of primary school boys and girls respectively reported past experiences of sexually transmitted diseases (STDs). STD rates were lower among secondary school pupils who had or better knowledge of STDs/HIV infection and fertility issues and reported higher condom use.⁽⁹⁾

A study pattern of STDs at Mid and Far western Regions of Nepal and behavioural study of certain risk group 10 years profile has compiled the information of the patients attending STD clinics of Veri Zonal Hospital. From the year 2040 to 2049, in 11289 STD patients, Gonococcal infection and chancroid were found to be the commonest among STDs. Majority of the age group were of age group 15-30 years and the educational level of the most affected were high school and intermediates.⁽¹⁰⁾

A study of knowledge, beliefs, sexual behaviors of urban adolescent peer educators done in USA shows that these group had a high level of HIV knowledge, confidence in their ability to use condoms, and beliefs that condom use would not decrease sexual pleasure or imply infidelity. Study findings showed that HIV prevention interventions need to include information about specific risk behaviors such as using condom for oral sex.

A retrospective study of normal people for the incidence of HIV and syphilis in Nepal was done and a retrospective analysis of the blood tested at center health laboratory, from

different areas of Nepal was done for the prevalence of HIV, HBV infection and syphilis during the period of the year from 2048.2.10 to 2049.2.9 Number of blood samples tested were 538 from Dharan and 4 were positive, 9 HbsAg positive, 44 VDRL positive⁽¹²⁾.

A cross - sectional study was planned to assess the awareness of nursing students regarding AIDS and to identify the areas of confusion that might serve as an important target for educational intervention. Although most of them have fairly good knowledge about AIDS they are still not clear about causation, mode of transmission and preventive measures of the disease. Negative attitude and biases towards AIDS patients were also prevalent in these students. From the results of present study it seems imperative that educational strategies for training of nursing students should concentrate on imparting correct authoritative knowledge on causation, transmission and prevention of AIDS. This will help to discharge their duties effectively and efficiently.⁽¹⁵⁾

Nation wide Surveillance of HIV /AIDS from 1989 through 1996 as Bangladesh included several risk groups such as professional blood donors, patient with STDs, pregnant women at antenatal clinics, commercial sex workers (CSWs), patient with tuberculosis, long - distance truck drivers, sailors and non - residents . The population was enrolled by convenient sampling after taking informal consent. Among 70,676 persons tested, 80 (1.13 per 1000) were HIV positive. The prevalence rate was steady until 1994, and then increased rapidly. The rate among male heterosexuals was significantly higher than that in females (3.40 per 1000 versus 0.29 per 1000; odds ratio (OR) 11.60 ; 95% confidential intervals (CI) 6.45 to 21.16 ; $p < 0.001$) . Twelve percent of patients with STDs has HIV. The HIV cases concentrated in two districts, Sylhet (25/72) and Chittagong (20/72), that border India and Myanmar, respectively frequent movement of people of Bangladesh to India, Pakistan, Myanmar and Thailand, where HIV rates are higher, is one of the possible sources of spread of the cases. Bangladesh has the potential to avert epidemic spread of HIV at its early stage.⁽¹⁶⁾

A study was done among sexually active rural women to assess the extent of spread of HIV and its awareness. Peripheral blood samples were collected on filtered paper strips from 1 to 5 months pregnant women residing in villages in three Primary health Centers in Pune district of Maharashtra. Elutes were tested for HIV antibodies in two different ELISA systems. Awareness on HIV/AIDS was assessed using a structured questionnaire. Fifteen (1.2 %) samples were detected to be HIV seropositive. HIV sero prevalence was significantly higher among villages situated close to highways ($p < 0.025$). Majority (>95%) of participating women were housewives. Although 70% were aware of the existence of AIDS , only 33 % knew about all the main modes of HIV transmission. Their main sources of information on AIDS were health camps, health workers (70%) and television (45%). Awareness was associated with higher level of literacy ($p < 0.001$) . Many women had misconceptions about the modes of spread of HIV. Greater emphasis needs to be placed on institutions long-term and sustainable strategies to create awareness among young couples with an emphases on involvement of health works in rural areas.⁽¹⁷⁾

According to a study done by Washva S K *et al* (as quoted by Aggarwal *et al* 1997), among all students on roll in classes VIII, IX and X in two schools of Nagpur city, as many as 694 (96.7%) had heard /read about AIDS. Although students were misinformed about methods

of transmission, high risk group and preventive measures. Students reported that they had learned about AIDS from T.V, radio, magazines or newspaper. Few had discussed it with friends, siblings, teachers, parents etc. A big chunk (93.8%) said they wanted to learn more about AIDS and 88.2% said that they waited to learn about AIDS in school. Results of this study showed that students' knowledge about AIDS is not adequate, that they wish to learn more and more information about AIDS should be imparted in secondary schools.⁽¹⁸⁾

According to the study done by Vincent Richard *et al* on "Sexual behaviour, knowledge of HIV transmission and HIV sero prevalence among college students in N'Djamena, Chad", results obtained was of the total groups, 652 adolescents between 13 to 21 years of age, 53.7% were sexually active, the mean age for sexual beginning was 15.4 years. Among the sexually active, 27.7 % admitted having more than 3 partners during last year. Only 12.9% gave the history of sexually transmitted disease, 10.2 % girl had been pregnant, 30.3 % reported paid sex. 20.9% always used condom, 24.6 % used condom sometimes. The majority correctly identified modes of viral transmission via blood transfusion (91.1%) , sexual contact (96.4%) , infected needles (92.2%) . Many (85.9%) incorrectly thought that HIV is transmitted by donating blood⁽¹⁹⁾.

The another study done by Ademola Ajuwon *et al* on "knowledge of AIDS and risky sexual practices of adolescent female hawkers in bus and truck stations in Ibadan, Nigeria," states that the mean age of hawkers was 17.1 years. The STDs known were AIDS and gonorrhoea (43%) . Fifty seven percent believed that HIV can be transmitted through sharing toilet seat and with an infected person and 27% believed that there is a cure for AIDS in Nigeria. Forty two percent did not know what to do to prevent STDs; others would abstain from sex (12.4%), use of condom (9.2%), have one sexual partner (6.0%), wash the vagina after intercourse (3.2%), use drugs (2.8%), pray (0.9%) and be careful in selecting partners (0.9%) . Forty -two percent have had sex; 58% had not. 16% used condom during first episode of sex, 84% did not. About 4% reported that they had been raped in the past in the course of trading in stations⁽²⁰⁾.

A cross sectional study done by Martin Fetue Tokan *et al* among 207 street youths (12 - 25 years) in Yaounde, states that all respondents were sexually active. The mean age for first intercourse was 14 years for boys and 12 years for girls. The average number of sexual partners were 3 for boys and 7 for girls. All girls were promiscuous. Forty nine percent of respondents had sexual intercourse at least once a week . 33% had experienced an STD. Only 9% used condoms. About knowledge of STDs /AIDS , 71% knew at least on STD, 98% of them heard about AIDS through poster in the streets (35%), from radio and television (59%). The average level of knowledge of AIDS was 61% . About perception of sexuality : 35% youths had no model, 29% took one another for model whereas 22% took parents for a model. Some were familiar with sex scenes which they had witnessed (49%) or watched pornographic movies (91%)⁽²¹⁾.

The research done on "Risks for heterosexual transmission of HIV in Uganda" by Dithan Kiragga and *et al* showed that among 500 HIV seropositive patients, contact with prostitutes (78%), multiple sexual partners (94%) and a history of STDs (80%) were the risk identified among 350 men. In women, 20% admitted to multiple sexual partners and 60% had a STD history⁽²²⁾.

A study of "Peer education is an effective way of addressing taboos like sexuality, risky behaviour and STD/HIV prevention among Nepalese adolescents done in Pokhara valley", this program was started in two campuses, 28 students (16 male, 12 female) were selected and trained on STD/HIV/AIDS, sex and sexuality and skills on how to protect themselves and their peers. The first training (7 days) was followed by a 5 day refreshed course. The result was that peer education programmes were very effective and efficient as student peer educators are in a better position to discuss topics related to HIV/AIDS/STDs etc. ⁽²³⁾.

How is knowledge about HIV and other STDs gained? Source of information: In a study done by Rosenthal and Collis, 1996 (as quoted by Moore *S et al*) of the parental perspective, parents regarded themselves as being highly influential, relative to other information sources on the knowledge and practices of their own 16 years son or daughter. While almost all parents believed that they were open to discussions about sex, only 66% reported that they had actually discussed sexual matters with their teenage son or daughter ⁽²⁴⁾.

The number of adolescent females between the ages of 13 and 19 who are contracting sexually transmitted diseases (STDs) is rising at an alarming rate. Although the issue of STDs has been overshadowed by continued public debate over adolescent pregnancy and child bearing, it demands attention. Particularly of concern is the fact that STDs increase the likelihood of transmitting HIV (N E McDonald, 1980). To offset the growing incidence of STDs among female adolescents gender - specific interventions are needed ⁽²⁵⁾.

A prospective study was done to identify whether the secondary school pupils are aware of AIDS or not which was done on 1996 in Serbian school. The result shows that the young people know that sexual intercourse is one way of HIV transmission (96.0%), but they also think that HIV can be transmitted by coughing, sneezing or by swimming in common pool (15.0%). Even 64.0% of pupils believe that blood donation or transfusion can transmit HIV. They state that most information's came form TV and daily press, while popular literature and health workers also ranked high. This result shows that secondary school pupils are not enough informed on ways of HIV transmission. These requires distributing health information of youth through continuous health education work in AIDS prevention ⁽²⁶⁾.

III RESEARCH METHODOLOGY

- 1.1 RESEARCH APPROACH: Survey research approach
1.2 TYPE OF SURVEY: Descriptive and comparative.
1.3 SETTINGS

The Sunsari district has 170 primary schools, 27 middle schools and 45 higher second schools. Of all students 41.11% are females and the remaining 58.89% males. Just about 52% of the population are literate. The total population of the district is 492,718 with density of 368.7 person per square km. The average family size is 5.5. The study planned to cover Government and Private schools of Dharan.

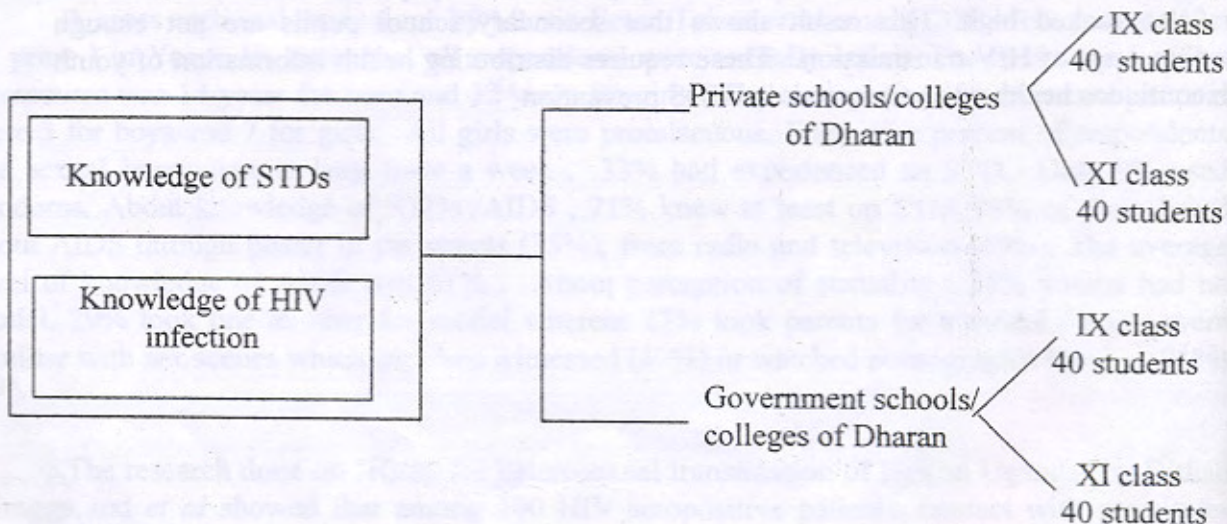
- 1.4 POPULATION: Girl students are selected randomly from different schools/ colleges of Dharan.
1.5 SAMPLE SIZE AND TECHNIQUE:

Sample size = 160

Sampling Technique

The girl students were selected from the attendance register of the class and then serial number was given. After that one number was picked up and random number table was used for the sample selection. If there were only 20 girl students then all of them were taken as a sample.

Results were analysed using standard Chi-square (X^2) contingency table for all variables. Analysis of variance was performed using Microstat of SPSS (Statistical Package for Social Science).



1.6. DEVELOPMENT OF RESEARCH TOOLS/ DESIGN:

Semistructured questionnaire will be prepared for the students studying in class IX and XI of the selected schools. The broad categories of investigation will include biodemographics, general knowledge on STDs and condom use, physical consequences of STDs, transmission, prevention and treatment etc.

In order to ensure cultural sensitivity and valid/accurate data the questionnaire is developed from theoretical concepts, a literature review and data from qualitative study investigating the illness representation of AIDS and STDs. The questions are written clearly in Nepali language.

Content Validity:

To evaluate the content validity of the instruments the questionnaire was discussed with experts. Then according to their suggestions some items were modified and added. There were few questions modified and reused in order to check the reliability of the responses given by the participants.

Pre-testing/pilot study:

The instrument (Questionnaire) was pre-tested on 16 students of government and private schools from class IX and XI. The tool was first prepared in English language but we noticed that Nepali language would be better than English to obtain the correct data so we changed the language and re-tested. The Nepali version was well understood by the students because the results were satisfactory.

1.7. PROCEDURE FOR DATA COLLECTION:

The questionnaire will be distributed to the students studying in standard IX and XI of selected government and private schools of Dharan. The subject matter will be about STDs and HIV infection. Brief introduction and informed consent regarding research process will be given and they will be requested to fill up the questions. At the same time we will assure them that confidentiality will be maintained.

1.8. PLAN FOR DATA ANALYSIS:

Suitable statistical tests of significance will be applied for data analysis.

DATA ANALYSIS

OBJECTS	TYPE OF ANALYSIS									
Knowledge about STDs and HIV Infection among the girls studying on Class IX and XI	Descriptive Statistics.									
Level of knowledge difference about STDs and HIV Infection between the Class IX and Class XI girls.	Comparative analysis - $\chi^2(X^2)$ test.									
Comparing Government and Private Schools.	Association between knowledge levels of Government and Private schools by using $\chi^2(X^2)$ test.									
	<table border="0"> <tr> <td></td> <td style="text-align: center;">Aware</td> <td style="text-align: center;">Not aware</td> </tr> <tr> <td style="text-align: center;">Government</td> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> </tr> <tr> <td style="text-align: center;">Private</td> <td style="text-align: center;">C</td> <td style="text-align: center;">D</td> </tr> </table>		Aware	Not aware	Government	A	B	Private	C	D
	Aware	Not aware								
Government	A	B								
Private	C	D								
Comparing knowledge of students with respect to education of parents.	Association between knowledge levels of daughters of Illiterate and Literate parents by using $\chi^2(X^2)$ test.									
	<table border="0"> <tr> <td></td> <td style="text-align: center;">Aware</td> <td style="text-align: center;">Not aware</td> </tr> <tr> <td style="text-align: center;">Illiterate</td> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> </tr> <tr> <td style="text-align: center;">Literate</td> <td style="text-align: center;">C</td> <td style="text-align: center;">D</td> </tr> </table>		Aware	Not aware	Illiterate	A	B	Literate	C	D
	Aware	Not aware								
Illiterate	A	B								
Literate	C	D								

1.9. ETHICAL CONSIDERATION:

The written and verbal consent was taken from the Department of Nursing, Department of Community Medicine and Principals of selected schools/colleges. The name of respondents and their response is kept confidential and the data is used for the purpose of research work only as for the partial fulfillment of B.Sc.Nursing Course. No one was forced to participate in this study.

2. BUDGET

a) Working manpower		
i. Principal investigators - 2		6,000.00
ii. Computer programmer and Data analyser - 1		2,000.00
b) Questionnaire design	- 2	400.00
c) Transportation		3,000.00
d) Printing		
i. Questionnaire		300.00
ii. Report		700.00
e) Photocopy		1,000.00
f) Stationary		
Diskette		150.00
Notebook		100.00
Pen/ Pencil		200.00
Writing paper		500.00
Subtotal Rs.		14,350.00
Contingency (5%)		717.50
Grand Total		15,067.50

IV. DATA ANALYSIS AND INTERPRETATION

RESULTS AND DISCUSSION:

Demographic profile of the sample is given in table Number 1,2, and 3.

Table Number I: Distribution of students according to schools and classes

S/N	Types of school/college	Number of students		Total Number of students
		Grade IX	Grade XI	
1.	Government	40 (50)	40 (50)	80 (100)
2.	Private	40 (50)	40 (50)	80 (100)

Percentage in parenthesis.

Equal number of girl students were interviewed from government (80) and private (80) schools, as well as Grade IX(80) and Grade XI(80)..

Table Number II: Distribution of Age of the respondents

S/N	Age of the respondents	Grade IX (n=80)	Grade XI (n=80)	Total Number of respondents (N=160)
A.	14-16 years	75 (94)	9 (11)	84 (52.5)
B.	17-19 years	5 (6)	62 (78)	67 (42)
C.	20-22 years	-	9 (11)	9 (5.5)

Average age of the respondents = 16.6 years, Percentage in parenthesis.

The range of age given was 14 - 16 years, 17-19 years and 20 - 22 years. Most of the sample (52.5 %) were in between 14 - 16 years and they were from class IX and the average age of sample was 16.6 years.

Table Number III : Educational status of respondents' parents

S/N	Level of education of parents	Father		Mother	
		Government schools/colleges	Private schools/colleges	Government schools/colleges	Private schools/colleges
1	Illiterate	14 (17.5)	8 (10)	36 (45)	23 (28.75)
2.A.	Primary	18 (22.5)	8 (10)	13 (16.25)	10 (12.5)
2.B.	Secondary	25 (31.25)	30 (37.5)	12 (15)	29 (36.25)
2.C.	Higher Secondary and above	23 (28.75)	34 (42.5)	19 (23.75)	18 (22.5)
	p-value	0.04		0.01	

- n=80 for each cell; p= probability for Chi² test, Percentage in parenthesis.

The educational status of the parents was categorized as illiterate, primary education, secondary education and higher secondary and above. The fathers of government school students were more illiterate (17.5%) than the fathers (10%) of the private school students. But most of the respondents' father of government and private schools had secondary level and higher secondary level of education. In higher secondary and above the difference is more i. e. 28.75% of father of government school students is higher and above level educated whereas in private 42.5 % of fathers were higher secondary or more educated. This difference is statistically significant ($p < 0.05$).

Similarly larger number of government school student's mothers were illiterate (45%) than the private school student's mothers. (28.75%). Less number of mother had primary level of education. The largest Number of respondents' mothers were secondary level educated in private school (36.25%) where as it was less (15%) in government school. About equal no of respondents' mother from government (23.75%) and private (22.5%) schools were higher secondary and above educated . The difference is statistically significant ($p < 0.01$) . The literacy among the mothers was less than that among fathers.

The table shows that the parents of private school student are more educated than the government school students' parents. So it is likely that higher the level of education of parents more likely to send them to the private schools.

Table IV: Awareness regarding HIV, AIDS & STDs

S/N	Awareness regarding	Government schools/colleges	Private schools/colleges	p-value	Grade XI	Grade IX	p-value
A.	HIV	70 (87.5)	75 (94)	NS	68 (85)	77 (96)	0.03
B.	AIDS	75 (94)	76 (95)	NS	75 (94)	76 (95)	NS
C.	STDs	26 (32.5)	39 (49)	0.03	28 (35)	37 (46)	NS

* n=80 for each cell; NS = Statistically not significant; p= probability for Chi² test, Percentage in parenthesis.

Awareness regarding HIV, AIDS and STDs varied according to the type of school and level of education. In relation to the type of schools, about equal number of subjects(87-95%) were aware about HIV infection and AIDS. However, 98% of them heard about AIDS and 71% knew at least one STDs in a similar research done by To Kan M.F. *et al* in Yaounde⁽²¹⁾. Larger number of students from private schools (49%) were aware of STDs than government school students (32.5%) which is statistically significant ($p < 0.03$).

In relation to the level of education, data shows that majority of students from class IX (96%) were aware of HIV infection ($p < 0.03$) than class XI students (85%) whereas the responses of AIDS and STDs were slightly more in class XI than the class IX students.

The level of awareness is relatively more in private school students. It may be because some health talks were given in private school about AIDS and STDs and not in the government school.

Unexpectedly the level of awareness about HIV, AIDS and STDs were more in students of class IX than in students of class XI. It is because these topics are included in their curriculum.

Table V : Knowledge regarding full form of HIV, AIDS and STDs among respondents.

S/N	Abbreviation expansion of	Government schools/college	Private school/college	p-value	Grade XI students	Grade IX students	p-value
A.	HIV	3 (3.75)	25 (31.25)	0.00001	0	28 (35)	NA
B.	AIDS	9 (11.25)	49 (61.25)	0.0001	12 (15)	46 (57.5)	0.000
C.	STDs	1 (1.25)	2 (2.5)	NA	0	3 (3.75)	1 NA

n=80 for each cell; NA= Not applicable; p= probability for Chi² test. Percentage in parenthesis.

It shows the understanding of HIV, AIDS and STDs. The full form of HIV was known to 31.25% of private school students and four percent of government school students. This difference is statistically significant (p= 0.00001). The awareness about full form of AIDS was also high in private schools (61.25%) than government schools (11.25%) which was statistically significant (p=0.0001). Awareness about full form of STDs was known to only few numbers of students of private and government schools. Similarly the level of understanding of class IX had 35 % and the class XI had nil knowledge of full form of HIV. And about AIDS also the level of understanding was significantly high in class IX students (p=0.0001). None of the students had knowledge about full form of STDs in class XI students but three percent students of class IX knew the correct answer.

The table shows more students of private schools knew the full form of HIV, AIDS and STDs than the students of government schools. It may be because some health talks were given in private schools about HIV, AIDS and STDs and not in the government schools. Similarly class IX students gave more correct answer than class XI students. This is because of the reason that these topics are included in the new curriculum of class IX but was not included in class XI. Although STDs was taught in class IX only few students showed awareness about it.

**Table Number VI: Source of information about HIV,AIDS and STDs.
(Percentage in parenthesis)**

S/N	Source of information	government schools/colleges	Private schools/ colleges	p-value	Grade XI	Grade IX	p-value
A	Papers/books	64 (80)	69 (86.25)	NS	67 (83.75)	66 (82.5)	NS
B	Radio	68 (85)	58 (72.5)	NS	61 (76.25)	65 (81.25)	NS
C	Television	73 (91.25)	78 (97.5)	NS	76 (95)	75 (93.75)	NS
D	Health workers	55 (68.75)	37 (46.25)	0.006	45 (56.25)	47 (58.75)	NS
E	Teacher	37 (46.25)	41 (51.25)	NS	29 (36.25)	49 (61.25)	0.002
F	Parents	34 (42.5)	17 (21.25)	0.006	23 (28.75)	28 (35)	NS
G	Siblings	34 (42.5)	36 (45)	NS	39 (48.75)	31 (38.75)	NS

* n=80 for each cell; NS= statistically not significant; p= probability for Chi² test, Percentage in parenthesis.

It shows the different source of information about HIV, AIDS and STDs. The most popular source of knowledge about those topics was through television (83.9%) followed by newspapers /books (63.9%) and radio (70%). Similar type of results were obtained in a study down by Wastiv S R *et al* in Nagpur⁽¹⁸⁾. Other source of information e.g. Health workers, teachers, parents, siblings were less common among students. Among the students of government schools, 68.75% said health workers as a source of information whereas only 46.25% of private school students said this as a source of information which is statistically significant (p=0.006). Although the parents of private schools are more educated, only 21.25 % private school students received information from parents and 42.5% of government school students has parents as a source of this information. Most students of class IX (61.25%) cited teacher as one of source of information than the students of class XI (p=0.002) Beside these, few informants had mentioned that poster, rally and speech are also the sources of information.

Television was the most popular source of information because of its availability in every house and it is one of the interesting medium. Similar is the scenario for radio. Newspapers carry several articles on AIDS, STDs so they are important source of information. AIDS and STDs are also included in curriculum of class IX.. Higher number of students of government school cited that Health Worker is also one of the source of information and the reason for this is not clear. In government school many of the students said parents as the source of information but less number of students from private school said this. It may be because the communication among the parents and student is better in government school students than private school students. Most of the students of Class IX mentioned teachers as a source of information because these topics are included in the curriculum of class IX .

Table Number VII: Knowledge regarding general aspects of HIV infection/ AIDS and STDs.

S/N	Questions	Govt. Schools/ colleges		Pvt. schools/ colleges		p- value	Grade XI		Grade IX	
		Yes	No	Yes	No		Yes	No	Yes	No
A	Is AIDS a fatal disease ?	77 (96.25)	3 (98.75)	79 (98.75)	1 (1.25)	NA	76 (95)	4 (5)	80 (100)	0
B	Can STDs/AIDS patient be detected by looking at his/her face ?	12 (15)	68 (85)	11 (13.75)	69 (86.25)	NS	8 (10.25)	72 (90)	15 (18.75)	65 (81.25)
C	Are the persons already infected with STDs more prone to get HIV infection ?	74 (92.5)	6 (7.5)	72 (90)	8 (10)	NS	70 (87.5)	10 (12.5)	76 (95)	4 (5)
D	Can early detection of AIDS be cured ?	34 (42.5)	46 (57.5)	30 (37.5)	50 (62.5)	NS	30 (37.5)	50 (62.5)	34 (42.5)	46 (57.5)
E	Can correct use of condom prevents AIDS/STDs ?	77 (96.25)	3 (3.75)	79 (98.75)	1 (1.25)	NA	76 (95)	4 (5)	80 (100)	0 (0)
F	Is there any treatment for cure of AIDS ?	17 (21.25)	63 (78.75)	5 (6.25)	75 (93.75)	0.01	11 (13.75)	69 (86.25)	11 (13.75)	69 (86.25)

n=80 for each cell; NS= statistically not significant; NA= statistically not applicable; p= probability for Chi² test. Percentage in parenthesis.

This table gives the ideas about knowledge regarding general aspects of HIV infection, AIDS and STDs. Most of the students from government school as well as private school and class IX as well as class XI were aware of the fact that AIDS is a fatal disease. Majority of students from government school (85.%) and private school (86.25%) said that STDs /AIDS patients can't be detected by looking at his/her face. Similarly 88.75% of class XI and 81.25 % of class IX students gave the same answer.

In response to question "Are the persons already infected with STDs more prone to get HIV infection? " Majority of students from government school 92.5% and private school 90% gave the correct answer. Same type of results were obtained from the students of both level of education. Many of the students from government school (42.5%) and private school (37.5%) had misconception that early detection of AIDS can help in cure. Same type of result was obtained from students of both classes. More than 95% students from both types of schools and both educational levels said that correct use of condom prevents AIDS and STDs.

There were many misconceptions regarding the treatment of AIDS. About a quarter of government school students said that the treatment of AIDS is available where as the smaller proportion of students (p=0.01) gave the same answer from the private school (6.25%). Equal number of students i.e. 13.75% from both educational level mentioned that the cure of AIDS is possible. However 27% of the students of Nigeria believes same which was studied by Ajuwon A, *et al* in Nigeria⁽²⁰⁾.

The proportion of correct responses of knowledge regarding general aspects of HIV infection, AIDS and STDs are more in private schools than government schools and in class IX students than class XI students. This could be on account of more accessibility of knowledge regarding these topics in private schools and in class IX students.

Table Number VIII: Knowledge regarding modes of transmission of STDs/HIV infection among respondents.

S/N	Modes of transmission	Govt. Schools/ colleges		Pvt. schools/ colleges		p-value	Grade XI		Grade IX		p-value
		Yes	No	Yes	No		Yes	No	Yes	No	
A	Re-use of contaminated syringes or needles.	76 (95)	4 (5)	78 (97.5)	2 (2.5)	NA	77 (96.25)	3 (3.75)	77 (96.25)	3 (3.75)	NA
B	Tattooing	31 (38.75)	41 (51.25)	41 (51.25)	23 (28.75)	0.0105	35 (43.75)	37 (43.75)	37 (43.75)	27 (33.75)	NS
C	Blood	73 (91.25)	7 (8.75)	79 (98.75)	1 (1.25)	NA	75 (93.75)	5 (6.25)	77 (96.25)	3 (3.75)	NS
D	Unsafe sexual practice	72 (90)	8 (10)	71 (88.75)	9 (11.25)	NS	72 (90)	8 (10)	79 (98.75)	1 (1.25)	NA
E	Infected mothers to unborn child	75 (93.75)	5 (6.25)	74 (92.5)	6 (7.5)	NS	72 (90)	8 (10)	77 (96.25)	3 (3.75)	NA
F	Hugging to infected person	8 (10)	72 (90)	4(5)	76 (95)	NA	7 (8.75)	73 (91.25)	7 (8.75)	73 (91.25)	NA
G	Sharing foods	8 (10)	72 (90)	3 (3.75)	77 (96.25)	NA	5 (6.25)	75 (93.75)	6 (7.5)	74 (92.5)	NS
H	Sharing public toilet	10 (12.5)	70 (87.5)	7 (8.75)	73 (91.25)	NS	9 (11.25)	71 (88.75)	9 (11.25)	71 (88.75)	NS
I	Mosquito bite	29 (36.25)	51 (63.75)	27 (33.75)	53 (66.25)	NS	29 (36.25)	51 (63.75)	27 (33.25)	53 (66.25)	NS

n=80 for each cell except for tattooing(n=72,64; n=72, 64) response was not given by rest of the students; NS= statistically not significant; NA= not applicable; p= probability for Chi² test. Percentage in parenthesis.

This table shows the level of knowledge regarding modes of transmission of STDs/HIV infection among respondents. Most of the students (96.25%) were aware that reuse of contaminated syringe /needle causes transmission of HIV infection, 95% of them knew HIV and STDs can be transmitted by blood products, 89.3% students knew that by unsafe sexual practice and 93.12 % knew that it can be transmitted through infected mother to newborn. Out of 136 respondents, about 52.94% of the respondents knew that tattooing may transmit infection and another 24 students didn't respond to the question. Even though most of the students showed correct response towards the right mode of transmission, few students had misconception that HIV infection and STDs can be transmitted through hugging infected person (7.5%), sharing foods with infected person (6.9%), sharing public toilet (10 .6%) and by mosquito bite (35%) which needs to be rectified. In the similar type of study done by Friesen -H *et al* in New Guinea shows that over 98% knew about AIDS and HIV infection and 97% knew that HIV is sexually transmitted which was better than our results and misconception was one third though the result bite was similar to the result of this study⁽¹⁰⁾.

Majority of students from the private school (51.25%) said that tattooing is one of the cause of transmission where as only 98.75% students agreed to this, which is statistically significant (p=0.019). In most of the other modes of transmission private schools' students showed better knowledge than the government schools' students did but these differences are not statistically significant.

Similarly students of class IX have slightly better knowledge about mode of transmission than the class XI students though the differences are not statistically significant.

The level of knowledge regarding modes of transmission is higher in private schools than government schools because this topic may have been taught in private schools. And this topic is included in the curriculum lately in class IX and students have been exposed to this issue through classroom teaching but class XI students had no such exposure .

Table Number IX: Respondents' knowledge regarding symptoms of STDs

S / N	Symptoms of STDs	Private schools/colleges			P-value	Grade XI			Grade IX					
		Yes	No	NR		Yes	No	NR	Yes	No	NR			
A	Excessive white discharge	52 (65)	7 (8.75)	21 (26.25)	NS	57 (71.25)	6 (7.5)	17 (21.25)	49 (61.25)	7 (8.75)	24 (30)	60 (75)	6 (7.5)	11 (13.75)
B	Headache	31 (38.75)	28 (35)	21 (26.25)	NS	24 (30)	36 (43.75)	20 (25)	23 (28.75)	29 (36.25)	28 (35)	32 (40)	35 (43.75)	11 (13.75)
C	Genital ulceration and itching	63 (78.75)	11 (13.75)	6 (7.5)	0.01	55 (68)	7 (8.75)	20 (25)	56 (70)	13 (16.25)	11 (13.75)	62 (77.5)	5 (6.25)	11 (13.75)
D	Vomiting	14 (17.5)	34 (42.5)	32 (40)	NS	20 (25)	28 (35)	32 (40)	15 (18.75)	30 (37.5)	35 (43.75)	19 (23.75)	32 (40)	28 (35)

* n= 80 for each cell; NR= No response; NS= Statistically not significant; p= probability for Chi² test; percentage in parenthesis.

This table shows the knowledge regarding symptoms of STDs. Majority of the students from the private schools (71.25%) and government schools (65%) knew that excessive white discharge is one of the symptoms of STDs. Twenty one percent (approx.) students from the private school and 26.25% student from the government school did not respond to the question and rest of them did not agree with this fact. Similarly, larger number of students from the IXth standard (75%) and 30% from the XIth standard did not respond to this question. Rest of them did not accept this as one of the symptoms of STDs. Here the proportion of positive result is slightly higher in private schools and IXth standard students than government schools and XIth standard students respectively.

About 65% of all the students who participated in the study responded that genital ulceration and itching is one of the symptom of STDs . The level of knowledge is significantly higher (p=0.001) in government school students (78.75%) than the private school students (68%). Similarly slightly greater number of students form the IXth standard (77.5%) responded correctly than the XIth standard (70%) . Rest of the students didn't respond and gave incorrect answer.

As distracters, headache and vomiting are included as the symptoms of STDs. About one third of government and private school students mentioned headache as one of the symptoms of. About one quarter of the students from both types of schools did not respond to it. But slightly

larger number of students from private school (43.75%) responded to this question correctly than from government school (35%).

Forty three decimal seven five percent (43.75%) of the students of IXth standard gave correct answer as they did not agree to headache as one of the symptom of STDs. Similarly 36.25% students from XIth standard gave correct response for the same. Sixteen percent (approx.) from the IXth standard and 35 % from the XIth standard did not respond to this question. Rest of them gave the incorrect answer.

For vomiting about one fourth or less than that number of students of both type of school and both educational level gave incorrect answer whereas 42.5% students from government school and 35% from private school responded correctly. Rest of the students (40%) from both type of school did not respond to it. Majority of students (40%) from IXth standard responded correctly than XIth standard (37.5%) for the same question. Most of the students from XIth standard (44%) did not respond to the question than IXth standard and others responded incorrectly.

Regarding the symptoms of STDs, the greater number of students of government schools answered correctly about 50% of questions and rest of 50% was answered by the greater number of students of private schools. IN all questions the greater number of students responding to correct answer was from the class IX students as it is included in their curriculum. The limited knowledge regarding the symptoms of STDs seen in this survey was not unexpected. Though the publication about these topics are more, they write the symptoms less frequently. And the other reason may be that people usually hide such diseases, so the chance of getting encountered with such patient is less. Thus it is less likely to know by general people and students.

Table Number X: Respondents' knowledge regarding symptoms of AIDS.

S/ N	Symptoms of AIDS	Govt. schools/colleges			Private schools/colleges			P- valu e	Grade XI			Grade IX			p-value
		Yes	No	NR	Yes	No	NR		Yes	No	NR	Yes	No	NR	
A	Fever for long duration	61 (76.25)	8 (10)	11 (13.75)	58 (72.5)	9 (11.25)	13 (16.25)	NS	49 (69.25)	11 (13.75)	20 (25)	70 (87.5)	7 (8.75)	3 (3.75)	.0001
B	weight loss	65 (81.25)	7 (8.75)	8 (10)	66 (82.5)	4 (5)	10 (12.5)	NS	61 (76.25)	5 (6.25)	14 (17.5)	70 (87.5)	6 (7.5)	4 (5)	0.04
C	Recurrent infections	54 (67.5)	14 (16.25)	12 (15)	53 (66.25)	13 (16.25)	14 (17.5)	NS	51 (63.75)	14 (17.5)	15 (18.17)	56 (70)	12 (15)	12 (15)	NS
D	No response to medication	69 (86.25)	4 (5)	7 (8.75)	63 (78.75)	9 (11.25)	8 (10)	NS	59 (73.75)	8 (10)	13 (16.25)	73 (91.25)	5 (6.25)	2 (2.5)	0.006
E	Swelling of whole body	25 (31.25)	35 (43.75)	20 (25)	21 (46.25)	37 (46.25)	22 (27.5)	NS	19 (23.75)	39 (48.75)	22 (27.5)	27 (33.75)	33 (41.25)	20 (25)	NS

* n= 80 for each cell, NR= No response; NS= Statistically not significant; p= probability for Chi² test Percentage in parenthesis.

This table shows the knowledge regarding symptoms of AIDS.

Specific knowledge regarding the symptoms of AIDS was relatively higher in both types of schools and both educational level, though the response was comparatively higher in class IX students. Majority of students knew that weight loss and fever for long duration are common features of HIV infection. About 76% of students of government school and 72.5 % of private school students responded correctly for the response of the fever for long duration. Eighty-one (approx.) percent of the student from private and government school said that weight loss is the common symptom of AIDS. The correct responses regarding fever for long duration was higher among the students of class IX (75%) than class XI (61.25%) which is statistically significant ($P=0.0001$). About weight loss also, higher number of students of class IX (87.5%) gave correct answer than the students of class XI (76.25%). Similarly the number of correct class IX respondents who correctly responded to this question, were from class IX (70%) than the students of class XI (63.75%). Although the correct answer was given in larger number by the students of class IX, many of them had misconception (33.75%) that swelling of the whole body is also one of the symptom of AIDS whereas only 23.75% of class XI student gave the same answer.

The limited knowledge regarding the symptoms of AIDS and STDs seen in this survey was not expected because such details are less publicized and the poverty of fully developed AIDS cases in the community means that few people have actually known some one with the disease.

Q. 15: Attitude towards AIDS and AIDS victim.

To know the attitude of respondents towards HIV infected person one common question was included in the questionnaire though our study is only related to assessing the level of knowledge.

Among different groups of the students, majority (81 - 87%) of the student had positive attitudes as they said they will come to school/college even if their teachers /friends are infected with HIV and also will provide love and sympathy to the victim.

Most of them (79%) said that they would behave just the way they do so with other friends /teachers. A small proportion of students was also having negative attitudes as they showed willingness to drop out of schools/colleges if their teachers or friends were AIDS victim. They opined they would reject or hate AIDS patients.

Though healthy attitudes have been shown by majority of the students, those with negative attitude need to be corrected by creating proper awareness among them. Some amount of counseling and proper discussion will help in bringing about a change in the attitude of the students.

Table Number XI:- Respondents' Knowledge about prevention from transmission of AIDS/STDs.

S/N	Prevention can be done through	Govt. Schools/ colleges		Pvt. schools/ colleges		p-value	Grade XI		Grade IX		p-value
		Yes	No	Yes	No		Yes	No	Yes	No	
A	Use of condom during sexual intercourse	72 (90)	8 (10)	76 (95)	4 (5)	NS	73 (91.25)	7 (8.75)	75 (93.75)	5 (6.25)	NS
B	Sexual relationship with only one reliable partner	71 (88.75)	9 (11.25)	74 (92.5)	6 (7.5)	NS	75 (93.75)	5 (6.25)	70 (87.5)	10 (12.5)	NS
C	Avoiding to talk with HIV infected person	5 (6.25)	75 (93.75)	4 (5)	76 (95)	NS	17 (21.25)	63 (78.75)	7 (8.75)	73 (91.25)	0.04
D	Using mosquito net	19 (23.75)	61 (76.25)	13 (16.25)	67 (83.75)	NS	17 (21.25)	63 (78.75)	21 (26.25)	59 (73.75)	NS
E	Receiving screened blood only	73 (91.25)	7 (8.75)	75 (93.75)	5 (6.25)	NS	76 (95)	4 (5)	72 (90)	8 (10)	NA

* n=80 for each cell; NA= Not applicable; NS = Statistically not significant; p= Probability for Chi² test; percentage in parenthesis.

This table shows the respondents' knowledge about prevention from the transmission of AIDS/STDs. Ninety percent or above agreed that condom use during sexual intercourse helps in prevention of transmission of AIDS and STDs, by restriction of sex to single reliable partner only is more than 85% and by receiving screened blood only was known to 90% or more. And some of them had misconceptions regarding prevention of AIDS/STDs by avoiding communication with the HIV infected person and using mosquito net.

Knowledge about AIDS/STDs Prevention: While doing comparative analysis of same table between type of schools and level of education, 95% from private school agreed that condom use is helpful in prevention of AIDS and STDs in comparison to 90% of students from government school. Similarly while comparing with level of education, data reveals that greater number of respondents of class IX i.e. 93.75% agreed for the same whereas only 81.25% agreed from the respondents of class XI.

In response to question regarding restriction of sex to only one reliable partner data reveals that 92.5% respondents from private schools agreed with the correct answer whereas only 88.75% respondents from government schools agreed to it. Similarly for this, students of class XI had given correct answer in larger number i.e. 93.75% than class IX students, which is only 87.5%. Both of the above data are statistically not significant.

For the next response regarding receiving only the screened blood, 93.75% respondents from the private schools had given the correct response where as only 91.25% from government

schools. Similarly respondents of class XI had given the correct response in larger number i.e. 95% than class IX students, which is only 90%.

Beside these, some of the students had mentioned that avoiding re-use of syringe or needle and avoiding sexual relationship with the person having HIV infection/STDs prevent the transmission of HIV infection/STDs. Similar type of study was done among less educated female hawkers in Nigeria by Ajuwon A. *et al* in which 42% didn't know about prevention of STDs, others mentioned abstain from sex (12.4%), use of condom (9.2%), have one sexual partner (6%) etc., which shows lower level of knowledge among them.

Myths about AIDS/STDs Prevention: About 23.75% respondents from the government schools and 16.25% from the private schools as well as 26.25% from class IX and 21.25% from class XI were of the opinion that a person could be prevented from getting AIDS/STDs by using mosquito net. Similarly, 5% students from private schools and 6.25% students from government schools as well as 8.75% students from class IX and 21.25% from class XI had misconception that by avoiding talking with the HIV infected victim will help to prevent transmission of the diseases. This table shows the difference is statistically not significant for the type of school but the difference is statistically significant ($p = 0.04$) for the level of education.

The data reveals from the table no.11 that, the proportion of correct responses of knowledge and myths regarding preventive measures of AIDS/STDs, knowledge is more in private school student in all the responses than in government school students because the understanding will be better in private school as there will be less number of students so that accessibility of knowledge will be better. While examining the data in relation to the level of education, correct responses are larger in number for three responses (restriction of sexual relationship with only on reliable partner, using mosquito net and receiving screening blood) from the students of XIth standard whereas for the rest two responses, more correct responses come from the IXth standard students. It may be because of the exposure to mass media and different health programs are more in XIth standard students than IXth.

Table Number XII: Teaching in the class regarding HIV/AIDS and STDs.

S/N	Have you been taught about	Govt. schools/colleges	Pvt. schools/colleges	p-value	Grade XI	Grade IX	p-value
A	HIV/AIDS	56 (70)	61 (76.25)	NS	40 (50)	77 (96.25)	0.001
B	STDs	59 (63.75)	16 (20)	0.001	30 (37.5)	45 (56.25)	0.005

* n=80 for each cell; NA= Statistically not applicable; NS = Statistically not significant; p= Probability for Chi² test; Percentage in parenthesis.

Table Number 12 shows teaching in the class regarding HIV/AIDS and STDs. Higher number of students from private schools (76.25%) had said that they have been taught about HIV/AIDS in their class whereas 70% from the government school said so. Similarly, 96.25% students from the IXth standard said that the subject had been taught. The difference is statistically significant ($p = 0.001$).

When the same question was asked about STDs larger number of positive response i.e. 59% came from government school whereas only 20% came from private school and it shows the

data are statistically significant ($p = 0.001$). Similarly is the observation about the students of XIth and IXth standard.

Greater numbers of students were taught about HIV/AIDS in private schools but unexpectedly very less number of students were taught about STDs in their class as compared to government school. The reason for this is clear. About HIV/AIDS and STDs, both topics were taught more in the IXth standard than XIth because the subjects are now added in the curriculum of secondary schools. Because of this only, in most of the questionnaire the response of students from IXth standard are better than XIth.

Table Number XIII: Effect of Parents' education for level of knowledge of respondents.

S/N	Level of education of:	Number of parents in each level	Q.6			Q.9	Q.12	Q.16	Q.20	Q.21
			A	B	C					
a	Father									
	Illiterate	22 (13.75)	17 (77.3)	21 (95.45)	9 (40.9)	22 (100)	20 (90.9)	17 (77.3)	20 (90.9)	21 (95.45)
	Primary	26 (16.25)	24 (92.10)	25 (96.15)	13 (50)	23 (88.46)	23 (88.46)	14 (53.84)	25 (96.15)	21 (80.76)
	Secondary	55 (34.37)	48 (87.27)	48 (87.27)	14 (25.45)	51 (92.72)	46 (83.63)	27 (49.09)	49 (89.09)	43 (78.18)
	Higher Secondary and above	57 (35.62)	55 (95.49)	57 (100)	29 (50.87)	57 (100)	55 (96.49)	37 (64.91)	57 (100)	52 (91.22)
	p-value		NS	NS	NS	NA	NA	NS	NA	NS
b	Mother									
	Illiterate	59 (36.87)	54 (91.52)	58 (98.3)	21 (35.6)	57 (96.61)	57 (96.61)	41 (69.5)	59 (100)	55 (93.2)
	Primary	23 (14.37)	21 (91.30)	22 (95.65)	10 (43.5)	23 (100)	23 (100)	14 (60.08)	22 (95.65)	16 (69.56)
	Secondary	4↓ (25.62)	35 (85.36)	34 (82.9)	18 (43.9)	37 (90.24)	30 (73.17)	21 (51.21)	36 (87.8)	35 (85.36)
	Higher Secondary and above	27 (23.12)	35 (94.59)	36 (97.29)	16 (43.24)	37 (100)	36 (97.29)	23 (62.16)	34 (91.89)	31 (83.8)
	p-value		NS	NA	NS	NA	NA	NS	NA	NS

NA= Statistically not applicable; NS = Statistically not significant; p= Probability for Chi² test; percentage in parenthesis.

This table shows the level of knowledge of respondents' in relation to parents' educational level. For this purpose six questions [Q. No. 6, Q. No. 9, Q. No. 12, Q. No. 16, Q. No. 20, and Q. NO. 21] are selected from the questionnaire.

- Q. 6 Have you heard about:
 - A. HIV Y/N
 - B. AIDS Y/N
 - C. STDs Y/N
- Q.9 Is AIDS a fatal disease? Y/N
- Q.12 The person who has been already infected with STDs is risk of getting HIV infection. Y/N
- Q.16 AIDS can be cured if detected earlier. T/F
- Q.20 Do you want more information about AIDS and STDs ? Y/N
- Q.21 Is there any medicine available for the cure of AIDS? Y/N

Fathers:

Q. No. 6 reveals about awareness of (a) HIV (b) AIDS (c) STDs.

The question regarding awareness of HIV among the students shows that the higher the level of education of fathers greater is the positive response from the students and vice versa. i.e. the daughters of higher secondary and above educated parents had given the maximum positive response (96.49%) whereas minimum positive response (77.3%) came from the daughters of illiterate fathers.

Similarly about STDs, maximum number of positive response (50.87%) was from daughters of higher secondary or above educated fathers.

Q. No. 9 shows maximum correct response (100%) from the daughters of higher secondary or above educated fathers.

The positive response regarding Q. No. 20 (Do you want further information regarding AIDS and STDs?) reveals that the maximum numbers of daughters of higher secondary or above educated father (100%) were interested to get more information regarding AIDS and STDs.

Table Number 13 shows that the knowledge about AIDS and STDs is comparatively more among the daughters of higher secondary level or above educated fathers compared to less educated fathers. This may be because these students may have got the favorable environment to learn these topics and educated father took better interest in their daughter's education.

Regarding few questions, the daughters of illiterate fathers had shown a higher correct response, which may be because they may be more concerned with the education of the children and encouraged them to learn the new things.

Mothers:

In response to Q. No.6 (see annexure) maximum number of daughters of higher secondary or above educated were aware of HIV. In the next response of the same question i.e. awareness about AIDS, the maximum number (98.3%) daughters of illiterate mothers had heard of AIDS which was approximately equal to the response of daughters of higher secondary or above educated mothers (97.29%).

When the question was asked about the awareness regarding STDs, the positive response was quite less as compared to response to HIV/AIDS. The higher positive response from the daughters of primary, secondary and higher secondary or above educated mother i.e. 43% of all three categories and low positive response came from the daughters of illiterate mother. This difference is statistically not significant.

The correct response regarding Q. No.5 (see annexure), maximum number (100%) came from the daughters of higher secondary or above educated mothers. About the question "Whether early detection of AIDS can result in cure? The maximum number of correct response for early detection of AIDS can't be cured was from the daughters of illiterate mother i.e. (69.5%) followed by daughters of higher secondary or above educated mother i.e. 62.16%. However, the parents regards themselves as being highly influential relative to other information sources on the knowledge and practices of their own 16years son or daughter (according to Rosenthal and Collis 1996). While almost all parents believed that they were open to discuss about sex, only 66% reported that they have actually talked with their teenager son or daughter⁽²⁴⁾. The daughters of illiterate mother (100%) are interested to get more information of AIDS/STDs.

For the Q. No.21 also maximum number (93.2%) from the daughters of illiterate mother gave the correct answer that there is no medicine for cure of AIDS.

In the cultural value system of Nepal, the father plays more important role in deciding about education of the children. Hence, educational status of father significantly influenced the results in our study. By examining the effect of mothers' education in the given table, no definite inference can be drawn. Though, it appears that students of uneducated mothers gave more positive response as compared to that of educated mothers. This response pattern could not be explained by any scientific process.

Q. No. 20: Students' interest to know about AIDS and STDs.

This question shows that majority of the students are interested to know more details regarding AIDS/STDs.

This response was universal and was not significantly influenced by parents

V. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

1.1. SUMMARY OF FINDINGS AND CONCLUSIONS

The study is aimed to assess the existing level of knowledge of school/college girl students studying in standard IX and XI about STDs, HIV infection and AIDS. Three private schools/colleges and three government schools/colleges of Dharan were included in the study. A pre-tested semistructured close ended questionnaire was prepared and administered to 160 students i.e. 80 from government and 80 from private schools and same number of sample from classIX and classXI. Average age of the respondents was 16.6years. Over all awareness regarding AIDS/HIV was found to be satisfactory but very low about STDs. Regarding the understanding of AIDS /HIV and STDs it was found to be very poor. However there were significant differences in knowledge between classIX and XI students, also between government and private schools/colleges. There were some misconception regarding symptoms, transmission, prognosis and prevention. Media and newspapers/books were most common sources of information. Most of the students were interested to learn more about HIV/AIDS and STDs. About information regarding these topics, only the students of grade IX were taught in the class as they were added in the newer curriculum in classIX. Therefore, the overall knowledge of class IX students were higher than classXI opposing the hypothesis whereas the overall knowledge of private school students were higher than government school students accepting the research hypothesis. And about level of knowledge of respondents in relation to parents' educational level most of the students of higher educated parents have higher knowledge but in same of the responses it is reverse. Though most of the students were aware of these alarming diseases, they don't have indepth knowledge about it's symptoms, modes of transmission, prevention etc. So, we conclude that STDs/AIDS education should concentrate on clarifying areas of the misconception and it should be added on the curriculum of higher schools and colleges.

1.2. IMPLICATIONS:

This study would help the adolescents to make aware of the alarming diseases i.e. AIDS/STDs as well as they will know the general aspects of HIV/AIDS and STDs, it's symptoms, modes of transmission and prevention. Such type of research study may be one of the sources of information for students and it will help in creating interest to know more about these topics. This may develop a healthy attitude to the adolescents. This research study can be implemented for planning of different health education programmes and can also be used for curriculum development of schools and colleges.

1.3. RECOMMENDATIONS:

1. This study should be extended to cover all the students of both sexes of Dharan so that a health educational intervention can be planned and instituted to improve awareness about HIV/AIDS and STDs.
2. Other factors influencing the level of knowledge also be examined.
3. The result of this research will be helpful in curriculum development of the schools/colleges.

1.4. DIFFICULTIES/PROBLEM FACED DURING THE STUDY

1. The time study has to be completed in short span of time.
2. Few respondents were hesitated to give the answers of questionnaire.
3. It is difficult to grade the availability of facilities. It varies according to individuals.
4. Measurement of individual differences found difficult to grade.
5. There were minimal computer facilities for research work, Medline search etc. So we spent lots of time for this purpose only.
6. Little literature was available in relation to studies done in Nepal.

1.5 LIMITATIONS

1. Unavailability of students in some schools.
2. Difficulty in using random sampling, because of less number of students in some schools.

1.6. PLAN FOR DISSEMINATION:

The investigators have plan to share the findings of this study to concerned persons and places as below:

1. BPKIHS - Nursing coordinator /Nursing Department
2. BPKIHS - Supervisors
3. BPKIHS - Library
4. Nepal Health Research Council (NHRC)
5. Based on this study an article will be published in.... after taking permission of the concerned authority.

Fig.I: Educational Status of Respondents' Father (Government Schools/Colleges)

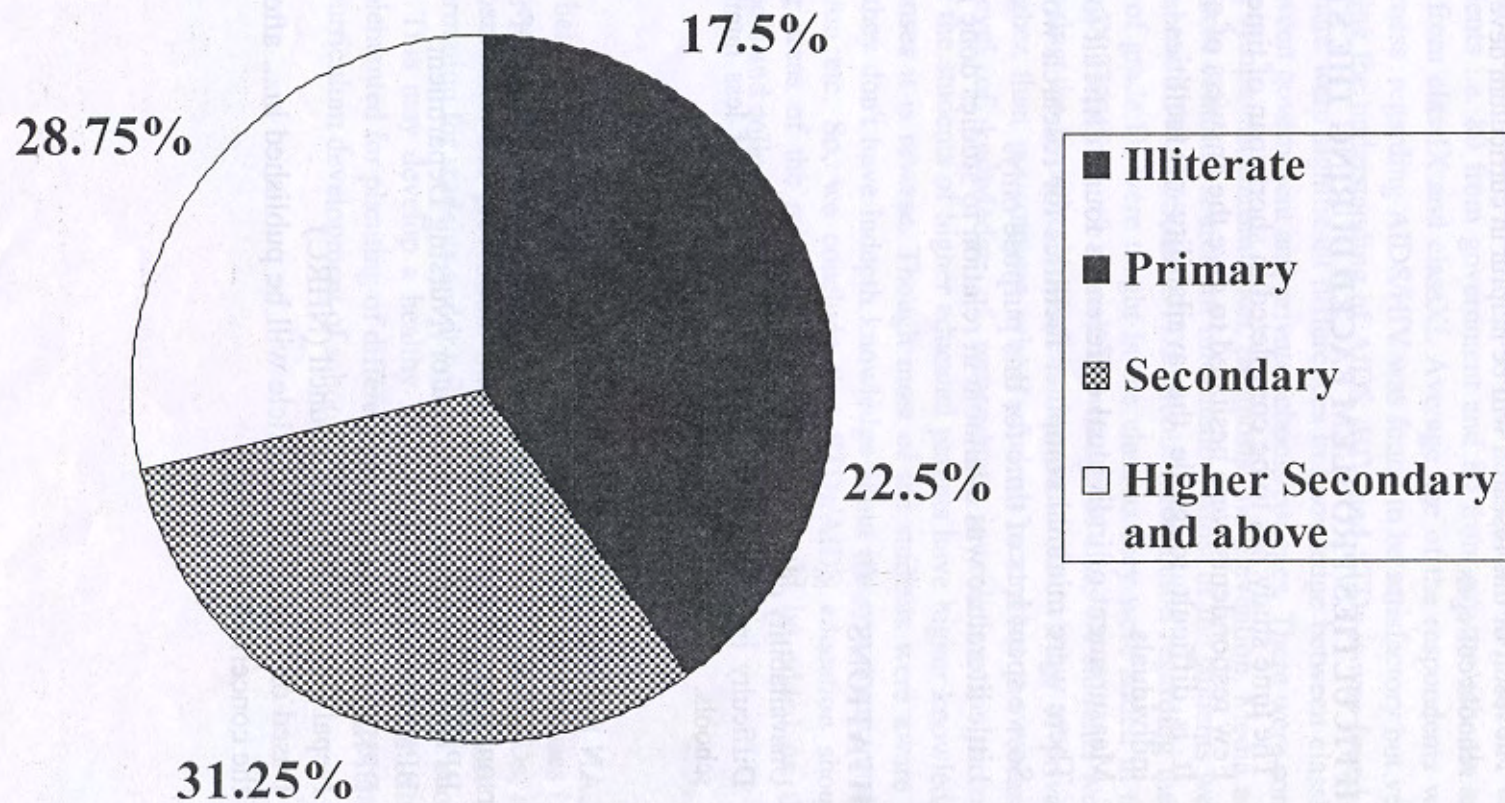


Fig.II: Educational Status of Respondents' Father (Private Schools/Colleges)

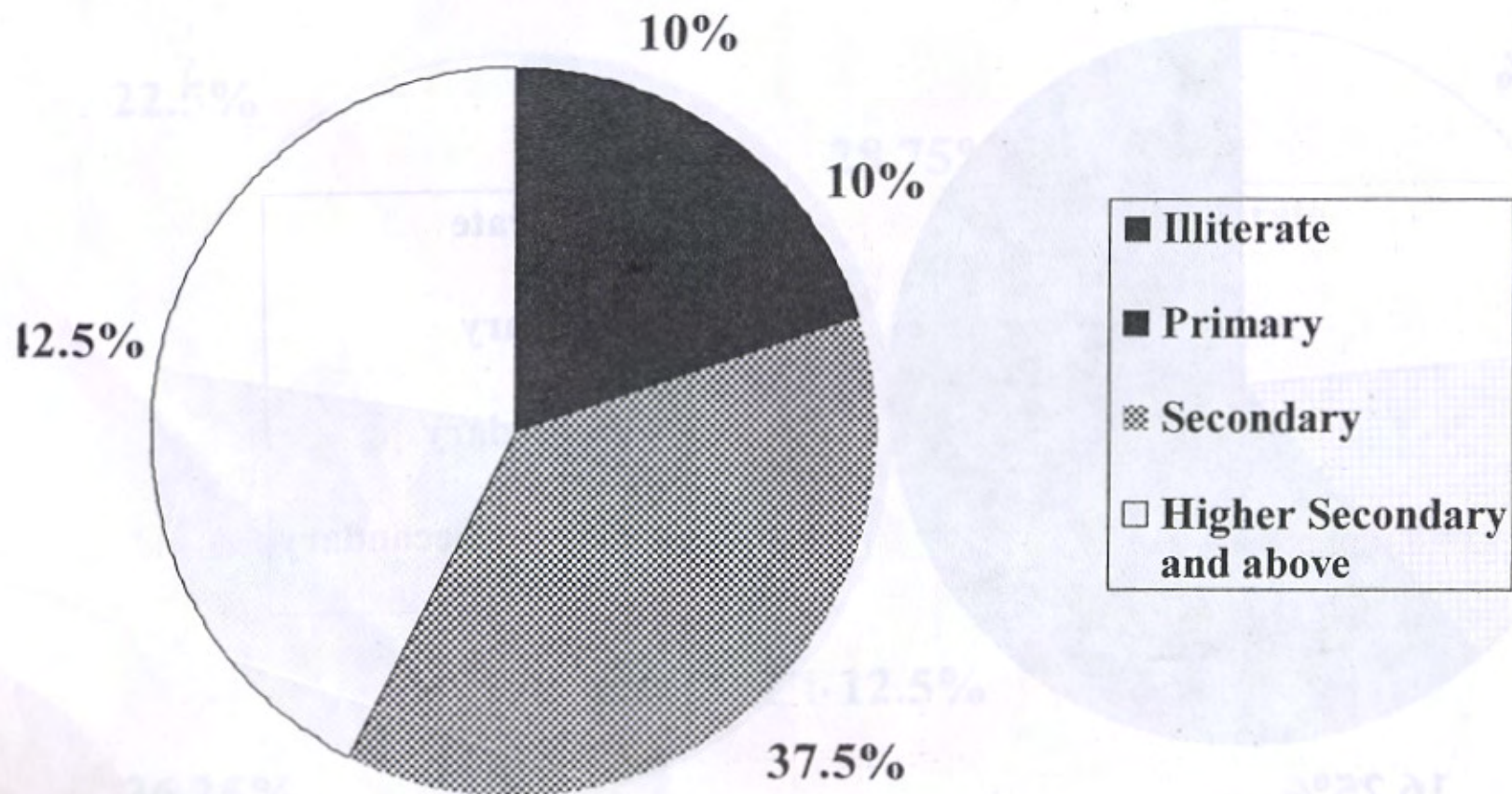


Fig.III: Educational Status of Respondents' Mother (Government Schools/Colleges)

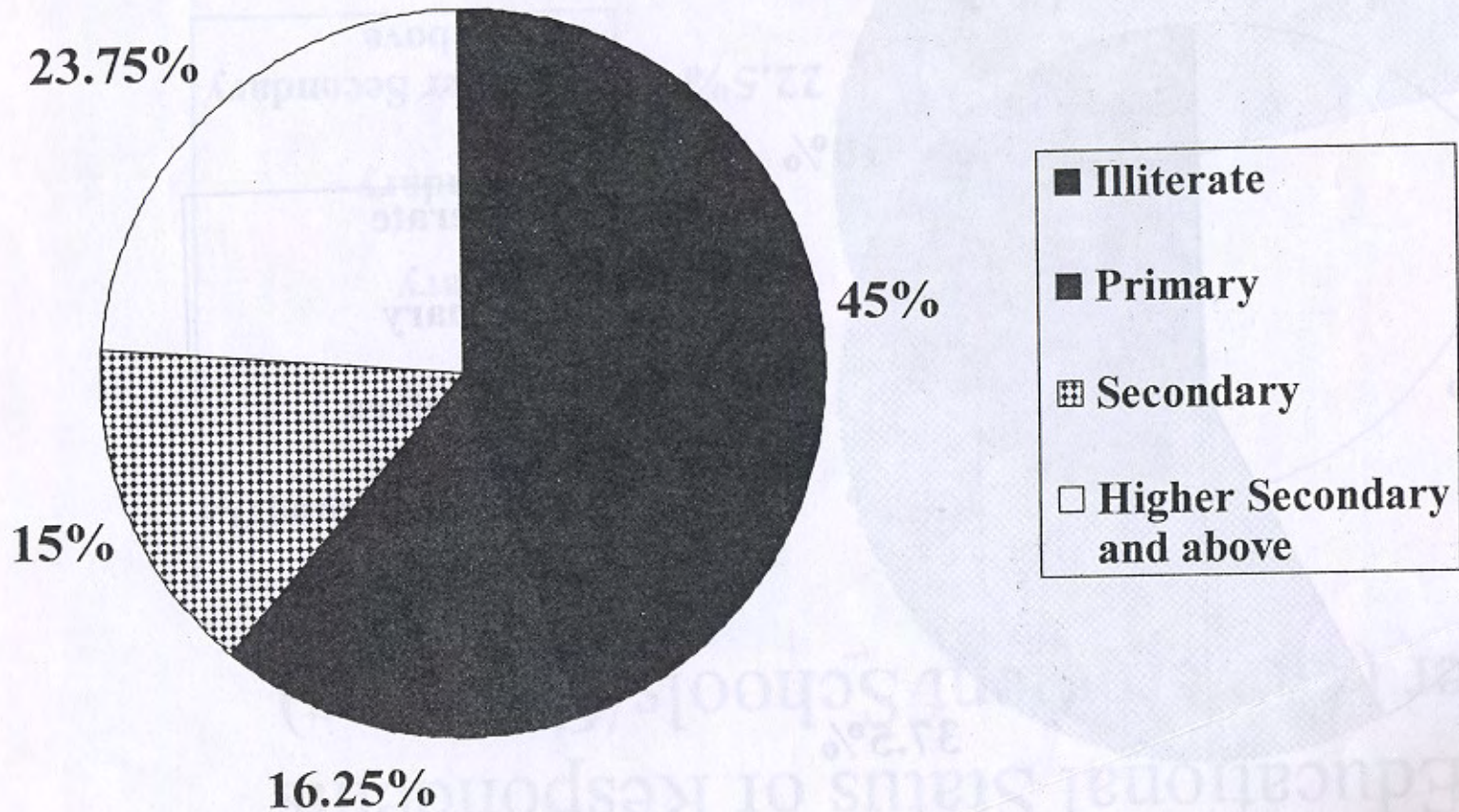


Fig.IV: Educational Status of Respondents' Mother (Private Schools/Colleges)

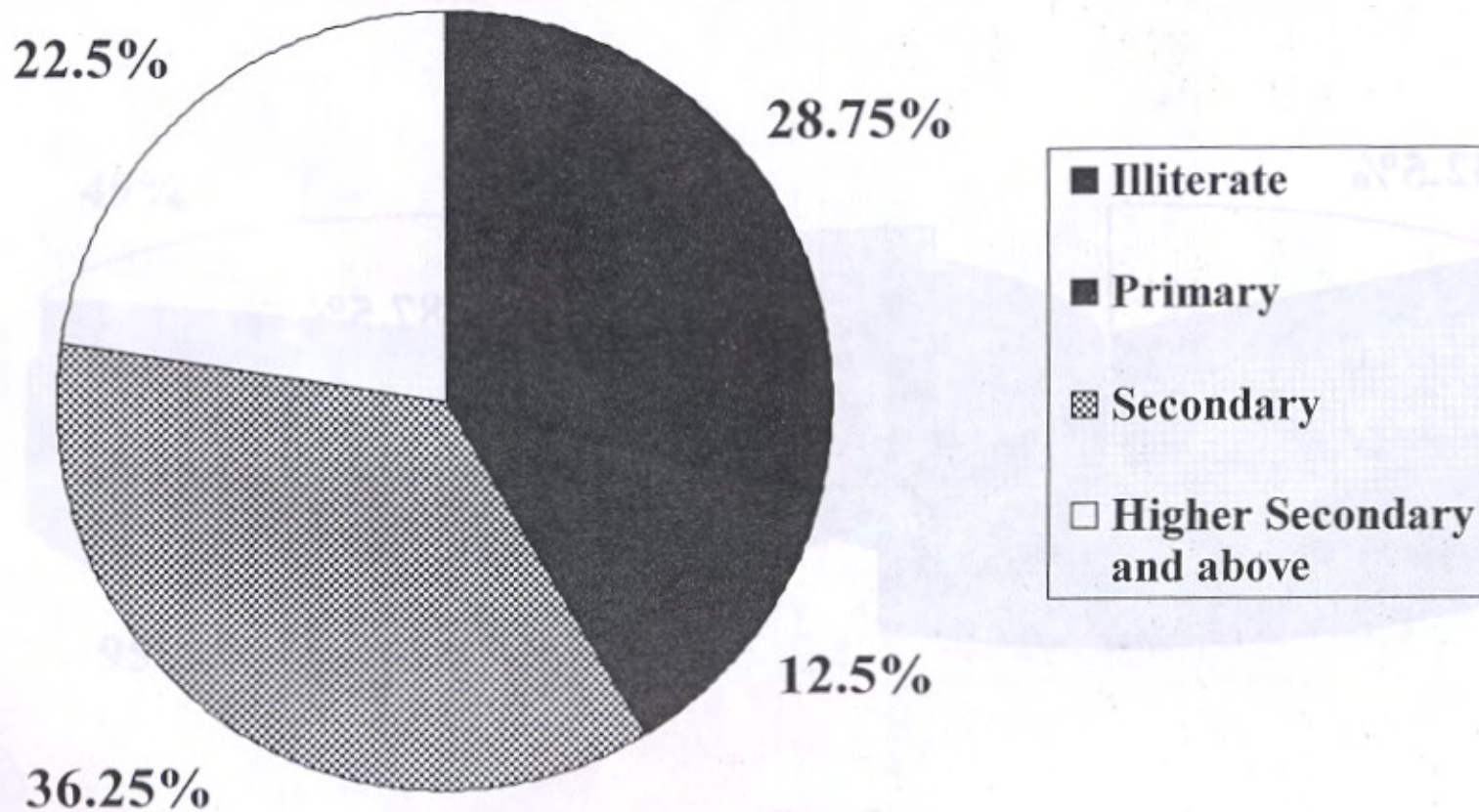


Fig.V: Awareness Regarding HIV/AIDS/STDs
(Government Schools/Colleges)

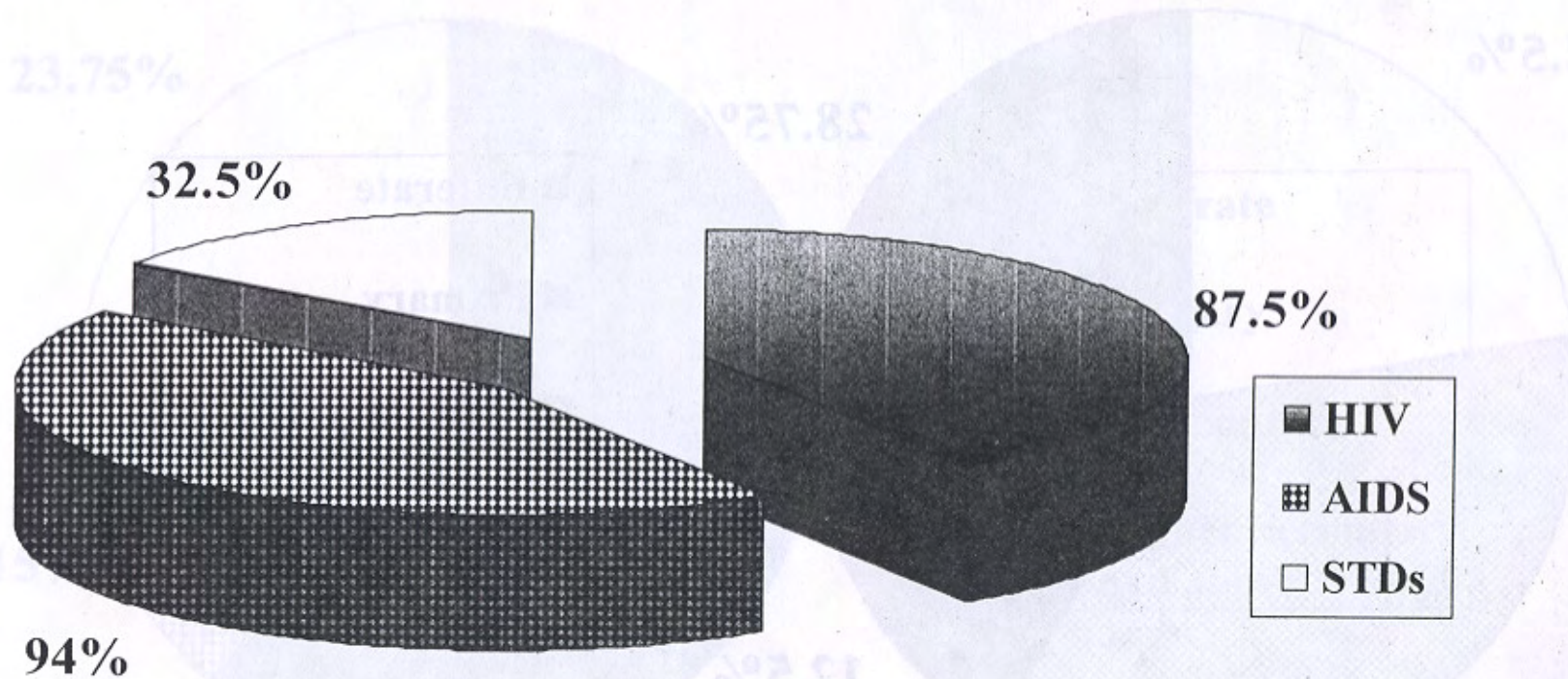


Fig. VI: Awareness Regarding HIV/AIDS/STDs
(Private Schools/Colleges)

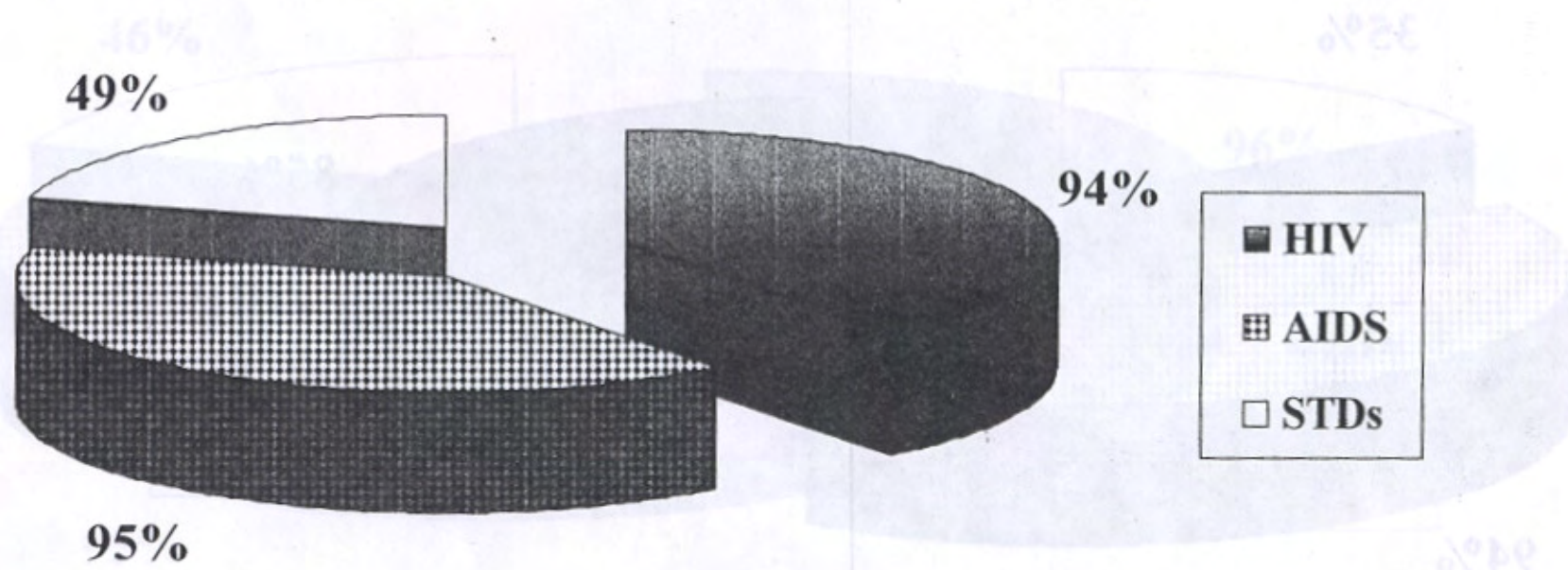


Fig. VII: Awareness Regarding HIV/AIDS/STDs
(Grade XI)

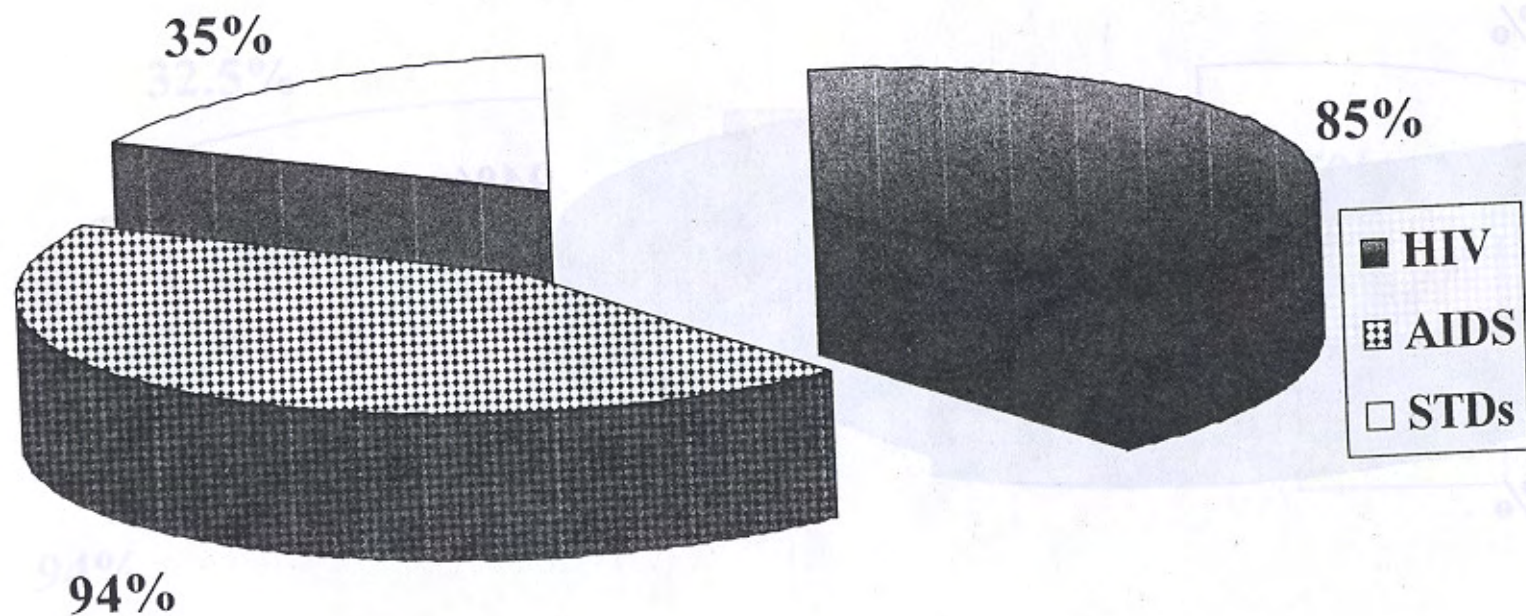
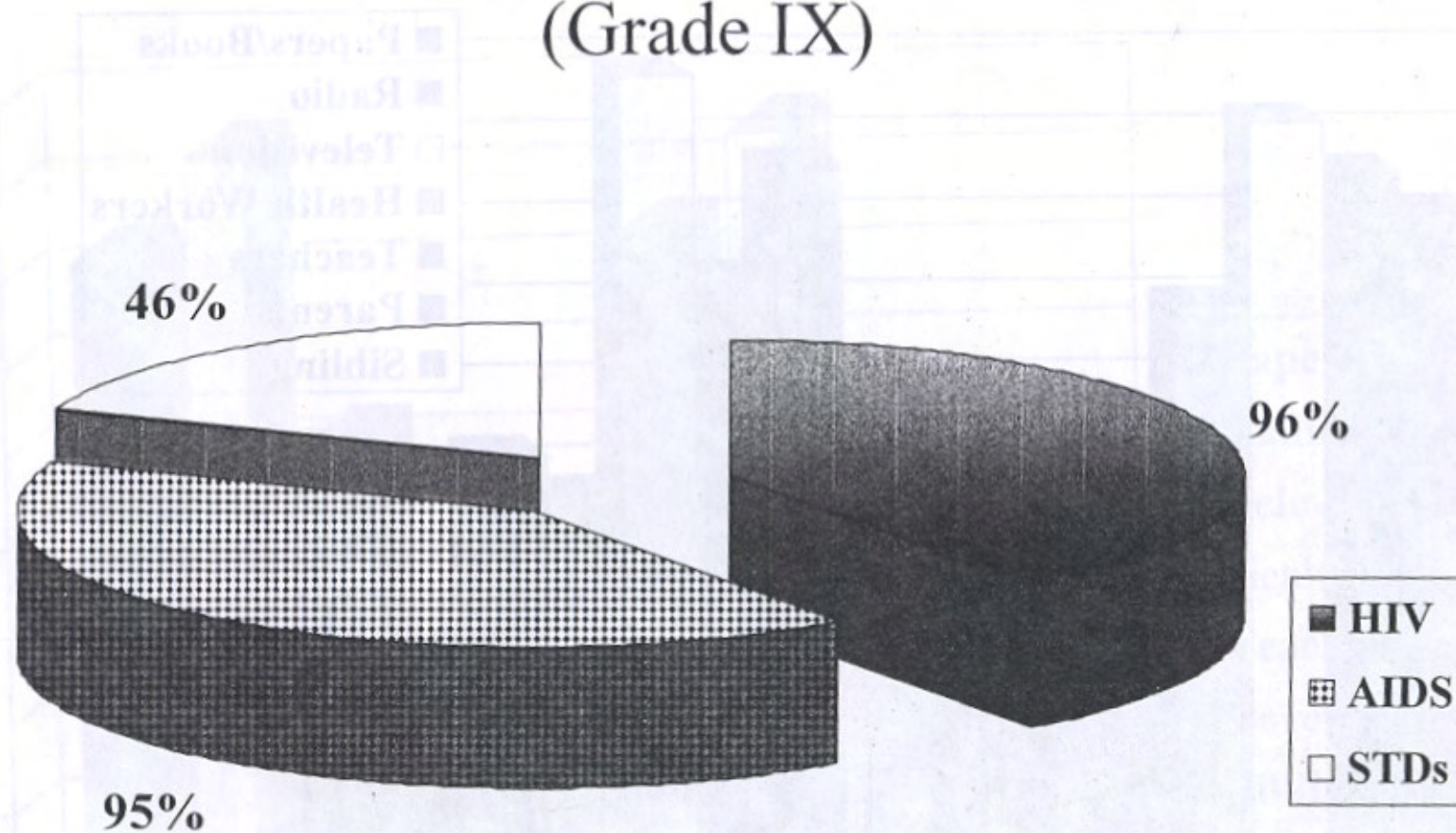


Fig. VIII: Awareness Regarding HIV/AIDS/STDs
(Grade IX)



**Fig.IX:Source of Information about HIV/AIDS/STDs
(Government Vs Private Schools/Colleges)**

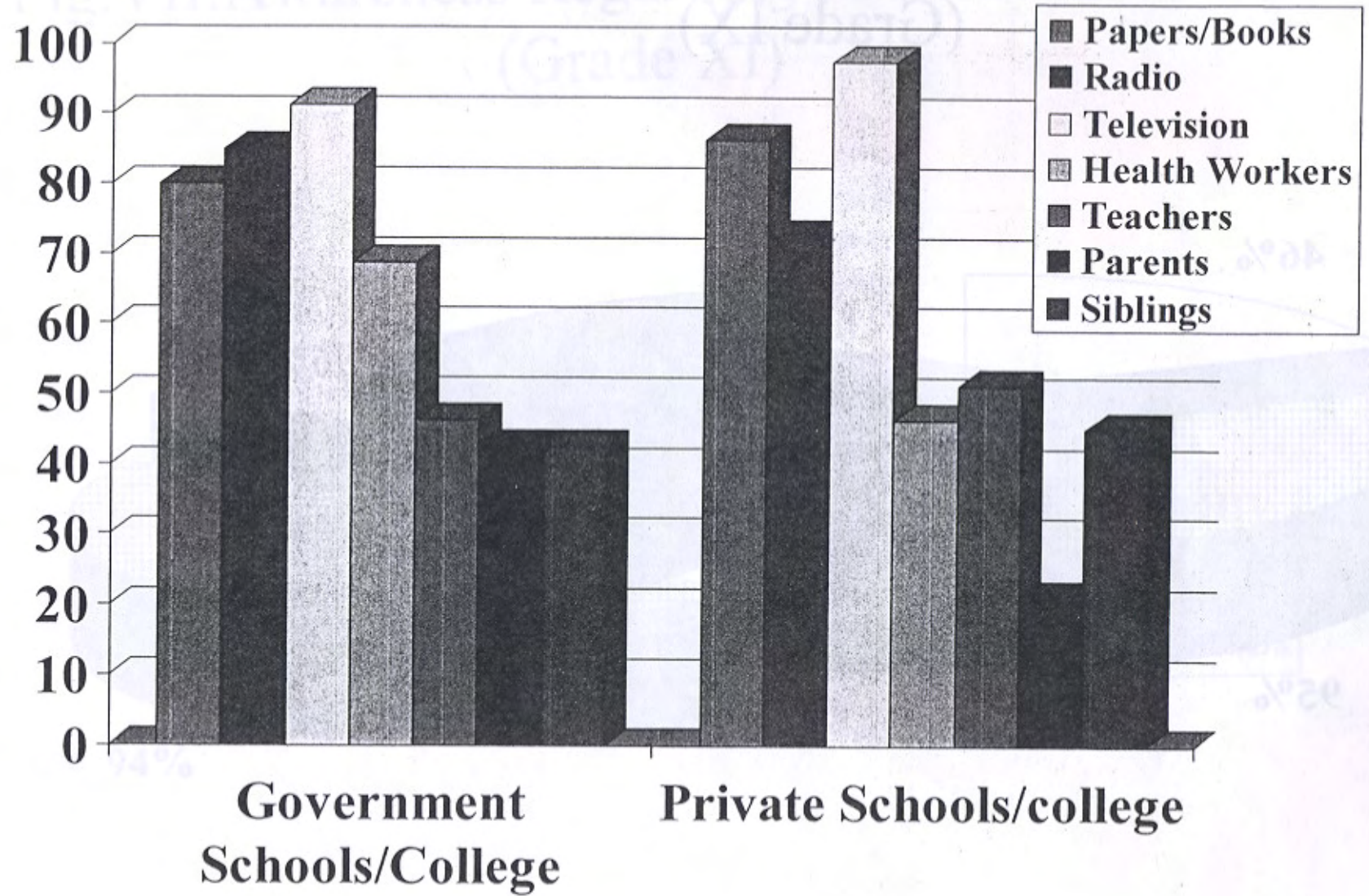
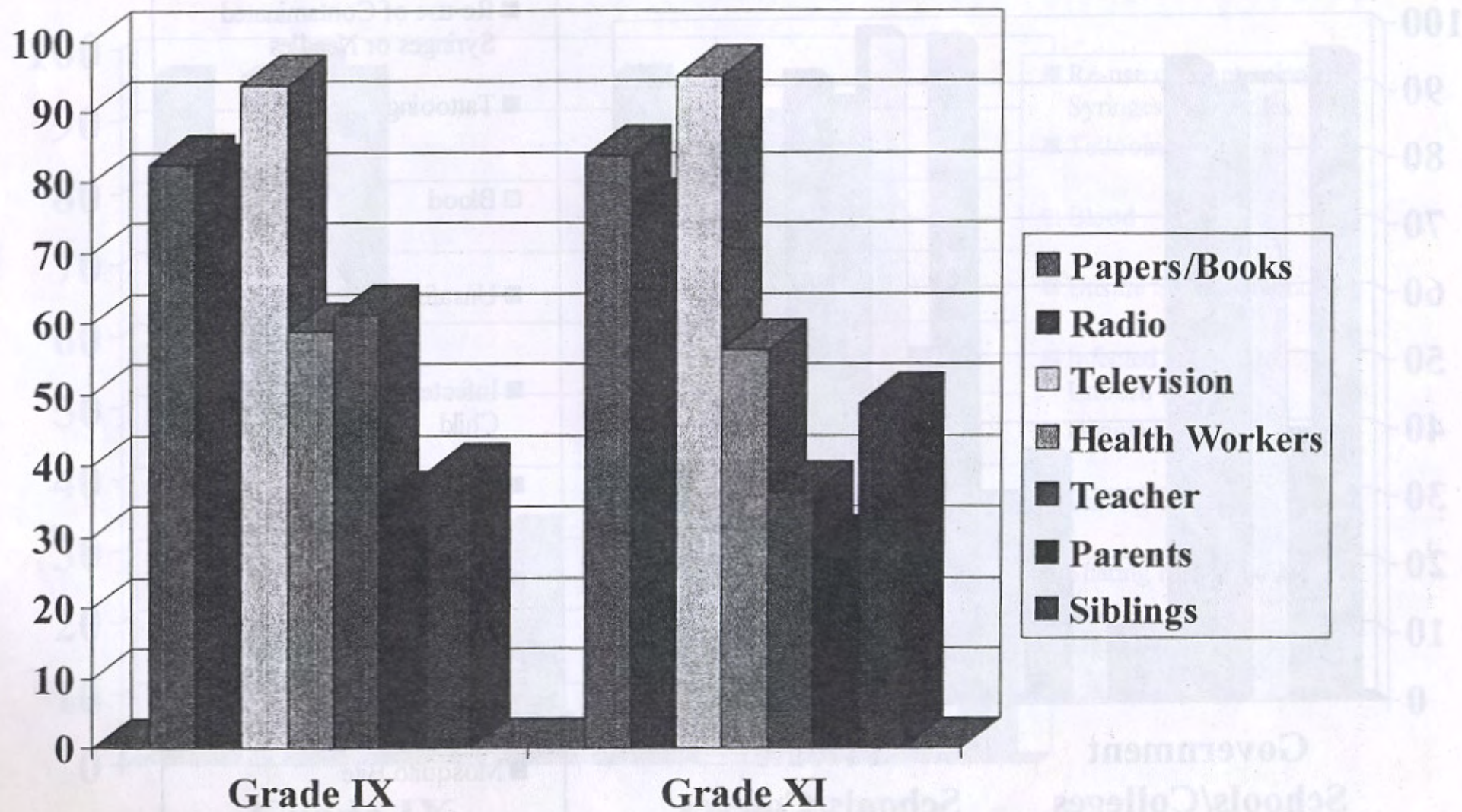


Fig.X:Source of Information about HIV/AIDS/STDs
(Grade IX Vs IX)



STDS/HIV Infection Among Respondents' (Government Vs Private Schools/Colleges)

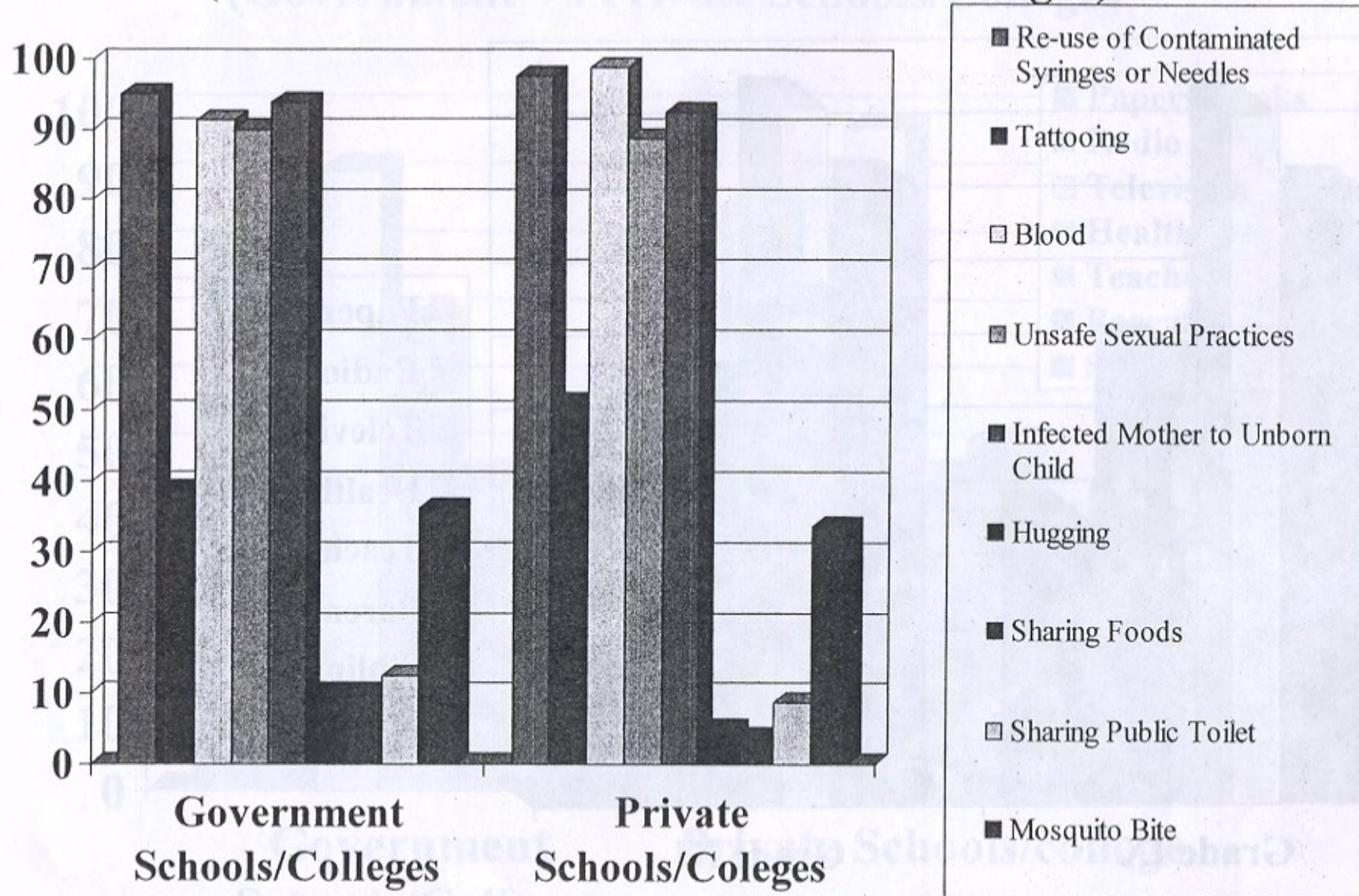


Fig.XII: Knowledge Regarding Modes of Transmission of STDS/HIV Infection Among Respondents' (Government Vs Private Schools/Colleges)

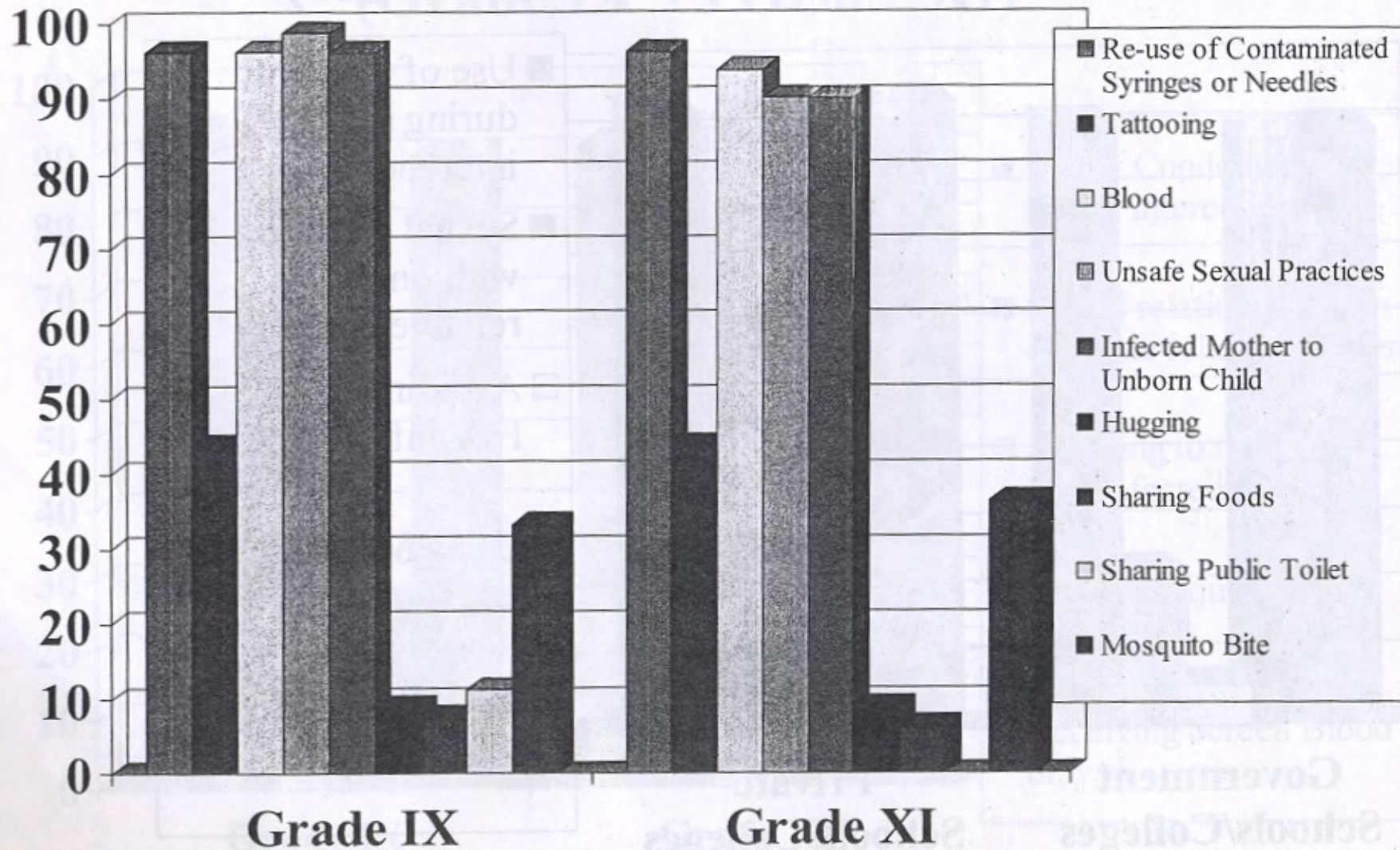


Fig.XIII: Respondents' Knowledge about Prevention from transmission of AIDS/STDs (Government Vs Private Schools/Colleges)

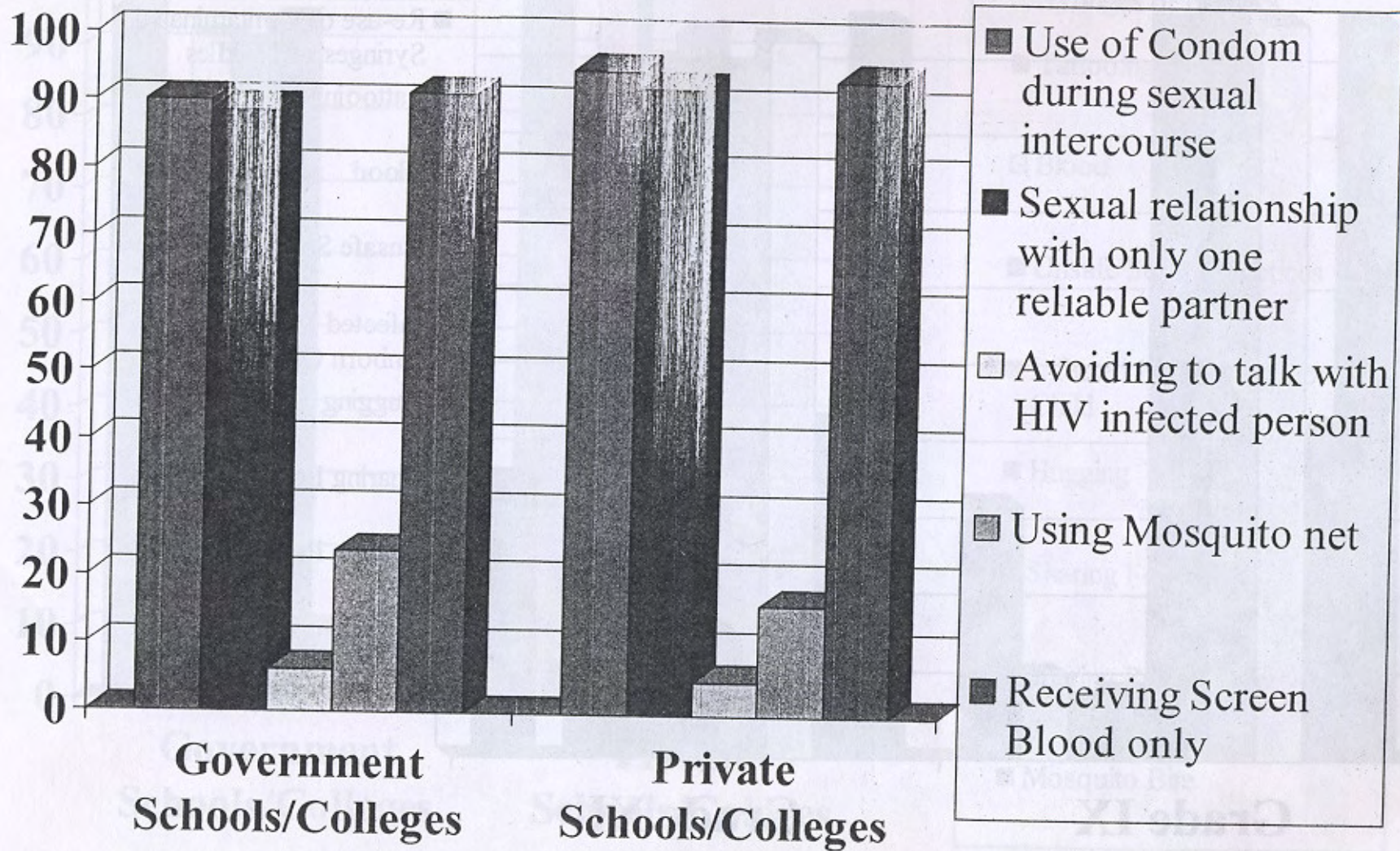
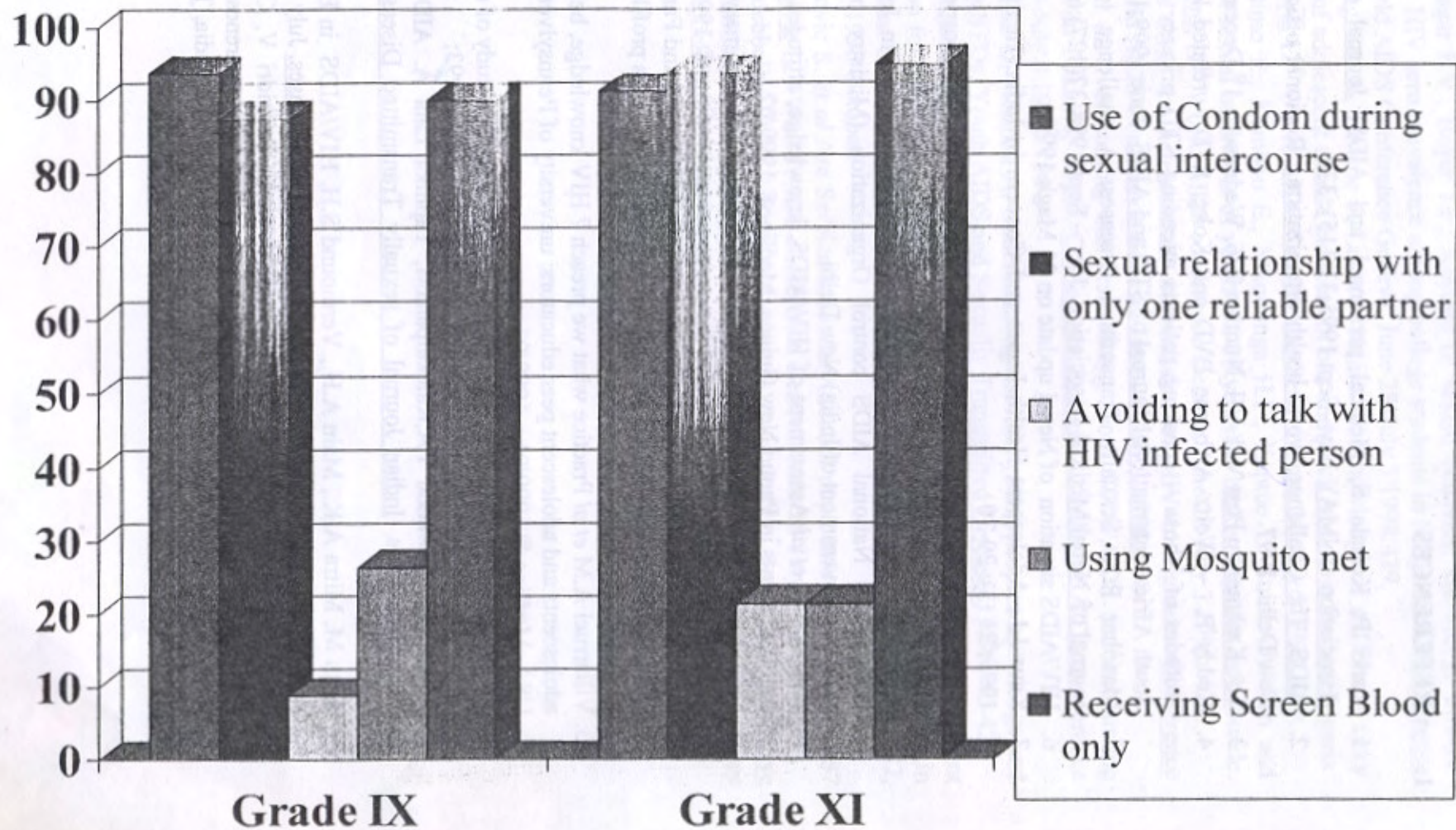


Fig.XIV: Respondents' Knowledge about Prevention from transmission of AIDS/STDs (Grade IX Vs Grade XI)



ANNEX - I

1. REFERENCES

1. Karki P, Koirala S, Medical personnel and AIDS. Journal of the Nepal Medical Association (JNMA). July -Sept 1995;33(115): 336
2. AIDS. The Challenge. world health organization. Regional office for South East Asia, New Delhi, 1997.
3. The Kathmandu Post Vol. VII, Number 276, Wednesday 1st December 1999:1
4. Reddy P, - Weitz A, borne BVD and Kokg. STD - related knowledge, beliefs and attitudes of Xhosa - speaking patients attending STD primary health - care clinic in South Africa. International Journal of STD and AIDS. June 1999;10(6):392-393.
5. Manohar R.K. Sexually Transmitted Diseases: A challenge to reproductive health. Journal of Nepal Medical Association. July - Sept 1998;37(127):601-603.
6. HIV/AIDS situation of Nepal update on 31 Magh 1996.
7. Kaur J.J., Adolescent Health Issues and Concern in India. Health for the all Millions. 1995; 21 (3): 29-30
8. Behra R.C. and Padte B. Unmarried teenage pregnancy, A prospective study. Journal of Obstetrics and Gynecology. 19986; 38: 132-134
9. AIDS awareness in school children: HIV/AIDS Research in India (1997), page 181. Publications National AIDS control Organization (Ministry of Health and Family Welfare, Government of India) New Delhi.
10. Friesen - H *et al* Assessment of HIV/AIDS, knowledge, attitudes and behaviour of high school students in Papud New Guinea. Medline® 1999/02.
11. Matasha - E *et al* Sexual and reproductive health among primary and secondary school pupils in Mwanza, Tanzania: need for intervention. Medline ® 1999/02.
12. Shakya GR. Pattern of sexually transmitted diseases at Mid and Far-west regions of Nepal and behavioral study of certain high-risk groups: A ten years profile. Journal of the Nepal Medical Association. Oct - Dec 1993;31(108):352.
13. Villarruel A.M *et al* Practice what we preach ? HIV knowledge, beliefs and behaviours of adolescents and adolescent peer educators; university of Pennsylvania, School of Nursing, USA. Medline ® 1999/01 - 1999/02.
14. Dr. Shrestha CD, Dr. Gurubacharya V.L. A Retrospective study of normal people for two incidence of HIV, HBV and syphilis in Nepal. Oct - Dec 1993; 31(108):345.
15. Aswar NR, Hiwarkar PA, KalekalpanaM, Tapnika Lata A. AIDS awareness amongst nursing students. Indian Journal of sexually Transmitted Diseases. July - Dec 1999; 20(2): 18-19.
16. Islam M, Mitra A.K., Main A.H., Vermound S.H. HIV/AIDS in Bangladesh: a National Surveillance. Indian Journal of sexually Transmitted Diseases. July 1999; 10(7):471.
17. Kunte A, Misra V, Paranjape R, Mansukhani N, Padbidri V, Gonjari S, Kakrani V, Thakur M and Mehendale S. HIV Seroprevalence and awareness about AIDS among pregnant women in rural areas of Pune district, Maharashtra, India. The Indian Journal of Medical Research. October 1999; 110. ISSN 0971-5916: 115.

18. Washva S.K., Wahab S.N, Gupta S.C., Tibdewal G.S., Deshmukh J.S. Knowledge and Attitude of secondary students towards HIV/AIDS. HIV/AIDS Research in India. [Editors; O.P. Agrawal, A.K. Sharma, A. Indrayan.] National AIDS control organization, New Delhi 1997: 187.
19. Richard V, Belingar F.V., Boyer J.P., Koyalta D. sexual behavior, knowledge of HIV transmission and HIV sero prevalence among college students in N'Djamena. Conference Record, 12th World AIDS Conference Geneva. June 28-July 3 1998:429.
20. Ajuwon A, Osungbade K, Fawole F, Lurie P, Hearst N. Knowledge of AIDS and risky sexual practices of adolescent female hawkers in bus and truck station in Ibadan, Nigeria. Conference Record, 12th World AIDS Conference Geneva. June 28-July 3 1998: 429.
21. Tokan M.F., Edimo E., Kembou E., Mkouonga H.F., Kaptue L. Street children and AIDS: A study of sexual behaviour of youth (12-25 years) in broken families in Yaounde. Conference Record, 12th World AIDS conference Geneva. June 28-July 3 1998: 428.
22. Kiragga D *et al* Risk for heterosexual transmission of HIV in Uganda. Conference Record, 12th World AIDS Conference Geneva. June 28-July 3 1998: 418.
23. Bhadra R. P. *et al* Over coming barriers: talking about STDs/AIDS and sex among campus students in Pokhara, Nepal. Conference Record, 12th World AIDS conference Geneva. June 28-July 3 1998: 190
24. Moore S, Rosenthal D, Mitchell A. Understanding the risk: young peoples knowledge and attitudes towards STDs. Youth AIDS and Sexually Transmitted Diseases. 1996: 40-42.
25. Guthrie B.J., Wallace J, Doerr K, Zanz N, Schottenfeld D, Selig S. Girl talk: development of an intervention for prevention of HIV/AIDS and other sexually transmitted diseases in adolescent females. University of Michigan School of Nursing, Ann Arbor 48109-0482, USA. Medline® 1996 October.
26. Matovic-Mijjanovic S. *et al* Are Serbian secondary School pupil informed about AIDS? Conference Record, 12th World AIDS conference Geneva. June 28-July 3 1998: 194. *
27. Wallae R.B., Doebbeling B.N., Maxcy – Rosenau - Last. Public Health and preventive medicine 14th edition, 1998. Model of Health Behavior, Health belief model. Page Number 812. Publications: Appleton and Lange.

ANNEX – III

QUESTIONNAIRE (ENGLISH VERSION)**B. P. Koirala Institute of Health Sciences, Ghopa, Dharan, Nepal**
“Questionnaire on Knowledge of STDs & HIV Infection”

The following questionnaire is prepared to determine the knowledge on Transmission and Prevention of STDs and HIV infection among high school girls of Dharan. The name of the respondents & their response will be kept confidential and the data will be used only for the purpose of research work.

[The respondents are requested to help us by putting tick mark (✓) in the best suited answer]

Part I**Identification and Demographic data:**

1. Name of the school/ college
2. Type of school/ college
 - a. Government
 - b. Private
3. Class of Students
 - a. IX
 - b. XI
4. Age:
 - a. 14 – 16 years
 - b. 17 – 19 years
 - c. 20 – 22 years
5. Education of parents

Roll no.

Address

	Illiterate	Literate			
		P	S	HS	Above
Father					
Mother					

Part II**Questions of Knowledge**

6. Have you heard about
 - a. HIV
 - b. AIDS
 - c. STDs
7. Write the full form of
 - a. HIV
 - b. AIDS
 - c. STDs

Y/N
Y/N
Y/N

8. Sources of information regarding HIV/AIDS and STDs is/are:
- | | | |
|-------------------|-----------------------|--|
| a. Magazine/Books | e. Teacher | |
| b. Radio | f. Parents | |
| c. Television | g. Peers | |
| d. Health Worker | h. Others (Specify) - | |
9. Is AIDS a fatal disease? Y/N
10. One can generally identify a person with HIV infection or STDs by looking at him/her. T/F
11. STDs/HIV infection can be transmitted through:
- | | |
|---|-----|
| a. Reuse of syringes or needle | T/F |
| b. Tattooing | T/F |
| c. Blood or Blood Products | T/F |
| d. Unsafe sexual practice with the infected partner | T/F |
| e. Infected mother to child | T/F |
| f. Hugging to infected person | T/F |
| g. Sharing foods with infected person | T/F |
| h. Use of public toilet | T/F |
| i. Mosquito bite | T/F |
12. The person who has been already infected with STDs is risk of getting HIV infection.
13. Common symptoms of STDs are:
- | | |
|---------------------------------------|-----|
| a. Excessive with discharge | T/F |
| b. Headache | T/F |
| c. Ulcer and itching around genitalia | T/F |
| d. Vomiting | T/F |
14. Common symptoms of AIDS are:
- | | |
|---|-----|
| a. Fever for longer duration (>1 month) | T/F |
| b. Excessive weight loss | T/F |
| c. Recurrent infection | T/F |
| d. Swelling of whole body | T/F |
| e. Others (Specify) - | |
15. If your teacher or friend has been suffered from AIDS; would you like to
- | | |
|---------------------------------------|-----|
| a. Come to school | Y/N |
| b. Hate him/her | Y/N |
| c. Behave like other teachers/friends | |
- Y/N

Part III

Questions Regarding Prevention and Treatment

- | | |
|--|-----|
| 16. AIDS can be cured if detected earlier | T/F |
| 17. Proper use of condom can help to protect from transmission of AIDS/STDs. | T/F |
| 18. Transmission of HIV/AIDS and STDs are prevented by | |
| a. Using condom on every intercourse. | T/F |
| b. Only one reliable sex partner. | T/F |
| c. Avoiding talking with infected victim. | T/F |
| d. Using mosquito net. | T/F |
| e. Transfusion of screened blood only. | T/F |
| f. Others (Specify) – | |
| 19. Do you want to get more information about HIV infection and STDs? | Y/N |
| 20. Have you been taught about following topics in your class? | |
| a. HIV/AIDS | Y/N |
| b. STDs | Y/N |
| 21. Is there any medicine for cure of AIDS? | Y/N |

THANK YOU

बी० पी० कोइराला स्वास्थ्य विज्ञान प्रतिष्ठान
घोषा, धरान

यौनरोग (STD) तथा एच.आई.भि (HIV Infection) सम्बन्धी प्रश्नावली

तलका प्रश्नहरू धरान नगरपालिकाभित्र रहेका सरकारी तथा निजी विद्यालय र क्याम्पसमा अध्ययनरत छात्राहरूलाई सोधिनेछ । यसमा संलग्न भएका जवाफकर्ताहरूको गोप्यता कायम राखी प्राप्त तथ्यांकहरू अनुसन्धानको लागि मात्र प्रयोग गरिने छ ।

१. विद्यालय । कलेजको नाम:
२. विद्यालय । कलेजको प्रकार:
 - (क) सरकारी
 - (ख) निजी
३. हाल अध्ययनरत कक्षा:
 - (क) ९
 - (ख) ११ प्रवीणता प्रमाण पत्र तह प्रथम वर्ष
४. उमेर:
 - (क) १४ देखि १६
 - (ख) १७ देखि १९
 - (ग) २० देखि २२

	अशिक्षित	शिक्षित			
		प्रा०वि०	मा०वि	उच्च मा०वि०	अन्य
बुवा					
आमा					

सामान्य जानकारीहरू:

६. तपाईंले निम्न विषयहरू वारेमा सुन्नु भएको छ

- | | |
|----------|---------|
| (क) HIV | छ । छैन |
| (ख) AIDS | छ । छैन |
| (ग) STDs | छ । छैन |

७. पुर्णरूपमा लेबनुहोस्:

- (क) HIV
- (ख) AIDS
- (ग) STDs

८. तपाईंको HIV/AIDS तथा यौनरोग सम्बन्धित सूचनाको मुख्य स्रोतहरू के के हुन् ?

- (क) पत्रपत्रिका । पुस्तकहरू
 (ख) रेडियो
 (ग) टेलिभिजनहरू
 (घ) शिक्षक
 (ङ.) शिक्षक
 (च) अभिभावक
 (छ) साथीभाई
 (ज) अन्य खुलाउने)

९- AIDS प्राणघातक रोग हो

१०. यौन रोग एड्सरोगीलाई अनुहार हेरेर चिन्न सकिन्छ कि सकिदैन सकिन्छ । सकिदैन

११. यौन रोग तथा HIV मुख्यतः निम्न माध्यमहरूबाट सर्दछन्

- (क) प्रयोग गरिसकेको सुई । सिरिन्जबाट ठीक । बेठीक
 (ख) शरिरमा खोपेर बुट्टा बनाउनाले ठीक । बेठीक
 (ग) रगतबाट ठीक । बेठीक
 (घ) असुरक्षित यौन सम्पर्कबाट ठीक । बेठीक
 (ङ.) STDS/AIDS भएको आमाबाट जन्मिएको नवजात शिशुलाई ठीक । बेठीक
 (च) STDS/AIDS भएको व्यक्तिलाई अंगालो हाल्दा ठीक । बेठीक
 (छ) STD/AIDS भएको व्यक्तिसँगै बसेर खाना खाँदा ठीक । बेठीक
 (ज) सार्वजनिक शौचालयको प्रयोग गर्दा ठीक । बेठीक
 (झ) लामखुट्टेको टोकाईबाट ठीक । बेठीक

१२. जो व्यक्ति यौनरोगका शिकार छन् तिनीहरूलाई HIV सर्ने सम्भावना बढी हुन्छ
 हुन्छ । हुदैन

१३. यौनरोगका साधारणतः लक्षणहरू निम्न छन्:

- (क) धेरै मात्रामा सेतो पानी (श्वेत प्रदर) जाने ठीक । बेठीक
 (ख) टाउको दुख्ने ठीक । बेठीक
 (ग) गुप्ताङ्गमा घाउ हुने र चिलाउने ठीक । बेठीक
 (घ) बान्ता हुने ठीक । बेठीक
 (ङ.) अन्य (खुलाउने) ठीक । बेठीक

१४. एड्स रोगका लक्षणहरू निम्न छन्:

- (क) लामो समयसम्म ज्वरो आउनु (१महिना भन्दा बढी) ठीक । बेठीक
 (ख) शरीरको वजन घट्नु ठीक । बेठीक
 (ग) बारम्बार सानातिना रोगहरूबाट पिडित हुनु ठीक । बेठीक
 (घ) औषधी खाँदा पनि रोगहरू निको नहुनु ठीक । बेठीक
 (ङ.) जिउ सुनिनु ठीक । बेठीक
 (ड.) अन्य (खुलाउने) ठीक । बेठीक

१५. यदि तपाईंको शिक्षक वा साथीलाई एड्स लागेको छ भने तपाईं:
- (क) स्कुल । कलेज आउनु हुन्छ हुन्छ । हुदैन
 (ख) उहाँलाई हेलाको दृष्टिले हेर्नुहुन्छ हुन्छ । हुदैन
 (ग) अरु शिक्षक । साथीसंग जस्तै व्यवहार गर्नुहुन्छ हुन्छ । हुदैन
१६. बेलैमा एड्सरोगको पत्ता लागेको खण्डमा यसलाई उपचारद्वारा निको पार्न सकिन्छ
 सकिन्छ । सकिदैन
१७. यदि ठीक तरीकाले कण्डमको प्रयोग गरेमा, एड्स तथा यौनरोग सर्नबाट बच्न सकिन्छ ।
 ठिक । बेठिक
१८. यौनरोग तथा HIV/AIDS सर्नबाट कसरी रोगथाम गर्न सकिन्छ
- (क) धेरै जना व्यक्तिसंग यौन सम्पर्क गर्दा कण्डम प्रयोग गरेर । ठीक । बेठीक
 (ख) एकजना विश्वासिलो व्यक्तिसंग मात्रै यौन सम्पर्क राख्दा । ठीक । बेठीक
 (ग) AIDS/HIV भएका व्यक्तिसंग कुराकानी नगरेमा ठीक । बेठीक
 (घ) भुल प्रयोग गरेमा ठीक । बेठीक
 (ङ.) रक्तदाताको एच०आई०भी० परीक्षण गरेरमात्रै रगत लिदां । ठीक । बेठीक
 (च) अन्य (खुलाउने)
१९. तपाईंहरूलाई निम्न विषयमा कक्षामा जानकारी गराईएको छ ?
- (क) HIV/AIDS छ । छैन
 (ख) यौनरोग ढक्ढक् छ । छैन
२०. तपाईं एड्स तथा यौन रोगका बारेमा स्वास्थ्य शिक्षा लिन इच्छक हुनुहुन्छ ?
 छ । छैन
२१. एड्स उपचारका लागि कुनै औषधी पाइन्छ ?
 पाइन्छ । पाइन्दैन

ANNEX – IV

4. BLUE PRINT

S/N	CONTENT VALIDITY	KNOWLEDGE OF HIV INFECTION and STDs	UNDERSTANDING
1	Meaning/definition of STDs and HIV Infection		
2	Symptoms of HIV infection		
3	Symptoms of common STDs		
4	Mode of transmission of HIV infection and STDs		
5	Prevention of HIV infection and STDs.		
6	Treatment of STDS and HIV infection		
7	Source of information about HIV and STDs.		