HIV/AIDS KNOWLEDGE, ATTITUDES, SOURCES OF INFORMATION AND BELIEFS OF HIGH SCHOOL STUDENTS IN SHARJAH, UNITED ARAB EMIRATES

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DECLARATION

I declare that this dissertation is my own work, which is being submitted for the degree of masters in Nursing at the University of Natal, Durban.
This dissertation has not been previously submitted for any other degree or examination in any other University.
Where the author has used the work of others, it has been duly acknowledged.

_____
Mariam Mauzi

As the candidate's supervisor, I have approved this dissertation for submission

_____
Dr O Adejumo
Supervisor

This work is
Dedicated to two of the finest
Teachers that ever were, my parents:
My mother Soubhia and my late father Hassan,
And dedicated as well to my beloved family.

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ABSTRACT

This descriptive survey was carried out to gather information that could be used to assist in the development of an AIDS/HIV educational program as a way to promote adolescents' health and prevent diseases in the United Arab Emirates. The study examines the knowledge, attitudes, beliefs and sources of information of high school students in Sharjah city regarding HIV/AIDS. Anonymous questionnaire with five sections: demographics, HIV/AIDS knowledge, sources of information, attitudes and beliefs was administered to 12th grade high school students from four schools in Sharjah. Analysis of findings showed that 87 percent of students knew that AIDS affects the body's immune system and 68.5 percent knew that it is not inherited .The majority of students were aware of relationship between drug abuse and HIV/AIDS. However, students lacked information in some areas as HIV/AIDS transmission routes. There was generally a negative attitude towards HIV/AIDS infected people. This was shown in students' responses to some statements that AIDS was "a punishment for those infected for their immoral acts". Moreover, students expressed unwillingness to live with HIV/AIDS infected people. Students were positive in applying prevention, facilitating proper treatment for the diseased and believed that HIV/AIDS education in schools is a necessity. Their HIV/AIDS sources of information were mainly from written materials (journals, newspapers and books). It was concluded that, generally, students in this study had a good knowledge, and some positive attitudes about AIDS. However, the concerns they expressed in relation to their fears of sharing, or living with HIV/AIDS infected individuals, and some of their beliefs, need to be addressed more in the education prevention programs. Students need to be more knowledgeable about HIV/AIDS prevention. They indicated desires for more knowledge, especially as they become aware of the increasing risk of HIV/AIDS among adolescents in the Emirates.

TABLE OF CONTENTS: ..... pages

CHAPTER ONE: Introduction

CHAPTER TWO:

CHAPTER THREE:

CHAPTER FOUR:

CHAPTER FIVE:

REFERENCES: 84

APPENDICIES:

Graphics:

CHAPTER ONE
INTRODUCTION

Background:

According to a report of the World Health Organization (WHO, 1999), by the year 2000, Asia will have the largest number of Human Immune Deficiency Virus (HIV) infected persons in the world. The 1998 United Nation's report, stated that in every minute five people between the ages of 10-24 are infected with HIV, and at least one third of the 30 million HIV carriers are under 24 years of age. The Centres for Disease Control and prevention (CDC) and the American College Health Association estimate that 1-in 500 college students is infected with HIV. In view of the number of HIV infected people, the initiative to increase HIV/AIDS awareness among young people was issued globally (WHO, 1999).

It would have been appropriate to mention some figures from the United Arab Emirates (UAE), as it has a central geographic location, with frequent population movement to and from other countries for work, trading, tourism, etc. The potential, therefore, for the existence of AIDS is high, given the large number of UAE men who travel for tourism, or for business to high HIV endemic regions. However, there is no official census reporting HIV cases among UAE citizens, and thus no figures about HIV among adolescents are available. The explanation is that HIV/AIDS is considered a taboo subject and rarely do people talk openly about it (Engle, 1999). According to Salome (2000) AIDS in the Arab world has been described as 'the great unknown.'

According to Tawil, O'Rreilly, Coulibaly, Tiemele, Himmich, Boushaba, Pradeep and Carael (1999): "Global, national and local responses remain largely insufficient to reduce the risks, and the consequences of an epidemic that is extracting a heavy toll on urban and rural communities in Africa, Asia and other regions. Among the many factors that account for the gap between needs and the responses, is insufficient political commitment, absence of efforts

to address the determinants of infection, and limited coverage of current HIV – prevention efforts" (p: S239).

The effects of AIDS are not limited to having a disease, nor limited only to the person who is infected. It affects the whole family, which consequently suffers from social stigma and isolation (Herek &Capitanio, 1992). In addition to social stigma and isolation, there is the fact that AIDS, as a disease, has no treatment, or vaccine to immunize people. However, adolescents have the opportunity to minimize their risks of contracting AIDS by understanding the methods of AIDS transmission, and by exhibiting safe practices, as well as modifying their behaviour (Spear &Kulbok, 2001).

Moreover, with the increase in the number of people with HIV infection, it is very likely that adolescents will meet infected individuals. Hence, it is important for them to be aware that they do not get infected through casual contact (e.g. handshaking, coughing, sneezing). Adolescents need to know the facts about AIDS, and that people with AIDS need compassion and care just like any individual with a disease (Redjimi&Lert, 1993).

Among the elements that have been linked to health are family structure, educational institutions, the media and the social network (Williamson, 2000). It is important therefore, to know the sources of information, (media for example) to which the adolescents are exposed, in order to assist in recommendations to expand sources of accurate information through the media and/or through the classroom. Schools have the ability to open the doors for encouraging students to share thoughts, feelings and questions about AIDS with their peers. Teachers should encourage them to learn the facts about AIDS, and the psycho – social issues related to it (Peterson, Cooper&Laird, 2001). The role of school is complementary to the learning that is taking place at home, and to the learning obtained from students' interactions and experiences.

Since the young population is at risk of contracting HIV, and since the quality of life and well being of community members, especially the young people whose health is closely related to the health of all members in the community, the issues related to risk prevention and health of these young people should take place first at home. Parents can add love, security, and values when teaching their children about the facts of life and about AIDS (Schor&Menaghan, 1995).

According to Schor and Menaghan (1995) the family structure affects the children's physical and mental health. They added that children's relationship with their parents, social support, nurturance and sense of self-efficacy have been shown to be related to their mental and physical health, and even to their future productivity. Presently, in the United Arab Emirates, (UAE) there are no formal health education programs targeting parents and schools, which can help them, deal freely with children's questions about HIV/AIDS. Adolescents are curious and inquisitive, so they will tend to ask questions about AIDS. Answering their questions should be through planned programs, which gives them the right answers, initiate counselling and behavioural modification.

According to Sorlie, Backlund and Keller (1995) education affects health through its influence on lifestyle, behaviours, problem – solving abilities and preventive behaviours of people.

Media is a powerful source of information for adolescents. However, the Internet and the globalisation of information have provided an environment that is not always culturally sensitive in its provision of information for adolescents.

According to Eagly (1992) the importance of attitudes lies in their presumed power to influence response. He pointed out that perceived vulnerability or susceptibility to disease is believed to be a motivating factor for changes in attitudes. Therefore, increasing awareness about AIDS risks can help in health promotion and in changes of attitudes. This task would be

eventually the responsibility of family, school, and community, in order to shape the attitudes of adolescents towards a healthy life style, so that when they grow up they become the healthy men and women of the future.

It is very important to understand individual beliefs and attitudes. Each person has a basic set of beliefs that together, forms that individual's value system. If health educators, tutors, parents and others, know their students well enough and understand their basic beliefs, they can target students with appropriate approaches. The goal of these approaches is to increase the student's incentives to understand the suffering of HIV/AIDS infected people, and to increase their caring attitudes and their self-protection so that they would not contract the disease.

Understanding students' beliefs and attitudes to health issues, and especially to HIV/AIDS can be done through research, and through observing, listening, asking, and taking time to establish a trusting relationship between students and parents, tutors, health educators, peers etc.

This study is an attempt to assess and describe the high school students' knowledge, attitudes, sources of information and beliefs about HIV/AIDS. Such a study would perhaps draw attention to areas of concentration on health education programs. These programs should provide information to prevent HIV/AIDS disease and promote health for students. Health education can alleviate the fear of the young population about contracting AIDS. Information and education about transmission of AIDS disease can help young people to understand that they have the power to prevent the disease.

Problem statement:

According to Polit and Hungler (1995) the problem statement is stated either as research question forms (the interrogative form), or as a broad statement of purposes (the declarative form). Since there is no detailed or published information about the status of HIV/AIDS in the U.A.E., and due to the fact that Epidemiological statistics and research are essential for health care planning, this survey was carried out:

1) To explore and describe the Sharjah 12th grade students' knowledge, attitudes, and beliefs about HIV/AIDS.

2) To identify the 12th graders' sources of information about AIDS.

3) To describe gender differences among the students with regard to their HIV/AIDS knowledge, attitudes, beliefs and sources of information.

The purpose of this study, therefore, is to throw more light on the problem of HIV/AIDS among adolescents in Sharjah City, and to understand how they view the disease by assessing and describing their knowledge, attitudes and beliefs about AIDS.

Research questions: The study seeks to answer the following questions:

- What is the status of students' knowledge, attitudes and beliefs about HIV/AIDS?
- What sources of HIV/AIDS related information are the students exposed to?
- What is the relationship between students' gender differences and their knowledge, sources of information, attitudes and beliefs about HIV/AIDS?

Significance of the Study:

Careful attention should be given to HIV/AIDS research about knowledge, attitudes, and beliefs of students, especially as the current statistics about AIDS are not given out. Studies are needed in this area in order to make preparations for health education programs in the UAE

Waiting for statistics to show growing number of AIDS cases before beginning to target assessment projects and prevention interventions may result in a great loss of opportunities to prevent AIDS cases from occurring. Thus more people suffering, especially among adolescents who are exposed to the risks of contracting HIV/AIDS due to their adventurous and exploratory behaviour.

Definition of Terms Used:

Attitude: All of a person's inclinations, prejudices, ideas, fears, and convictions about any specific topic (topic for this study is on AIDS). A person may have a strong attitude for or against certain stimuli when confronted with AIDS, for example.

Beliefs: Beliefs are a result of socio-cultural interactions of self and others. They refer to assumptions, ideas and opinions that are held by students about AIDS and AIDS infected people. Beliefs shape the way students react to AIDS as a life-threatening illness and the way they deal with people infected with it, as well as their beliefs about preventing AIDS.

Knowledge: The act or state of knowing; clear perception of fact, truth, or duty; certain apprehension, cognition. Knowledge consists in the perception of the truth of affirmative or negative propositions. Knowledge about AIDS means knowing information about AIDS transmission modes, prevention and control measures.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction:

AIDS as an infectious disease continues to be a stigmatised disease as stated by many researchers. AIDS misinformation, the fear even from casual contact is present as well as blaming diseased people with AIDS for their illness regardless of the way they contracted their infection. Of these studies, Haworth (1998), conducted Knowledge, Attitudes, Beliefs and Practice (KABP) survey on AIDS in learning institutions in five districts in Zambia .The Survey findings showed that 83 percent of respondents knew the causes of AIDS and mode of transmission. However, misconceptions on the mode of transmission still exist. Some of the participants, for example, believed that it was possible to contract AIDS by having sex with women who have had an abortion, as well as through mosquito bites.

The following surveys assessed HIV/AIDS Sources of information, knowledge, attitudes &beliefs:

Sources of HIV/AIDS information:

An AIDS awareness campaign was carried out by the Ministry of Health and the Ministry of Education, targeting the upper primary and high school students in Zimbabwe. They had a survey of 478 high school students in 1990, to assess their knowledge, attitudes, practices and sources of information in relation to HIV/AIDS.

In their article, Ndlovu and Sihlangu (1992) concentrated only on the part of the study concerned with sources of information. The results were the answers to three (3) questions for a list of fifteen (15) sources of information, such as newspapers, TV, radio, magazines, classmates, booklets, doctors, nurses and parents. The three (3) questions asked students to select their first source of AIDS/HIV information, the second question was about their most preferred source, and the third question was on the most informative source.

Forty nine percent (49%) of students selected newspapers as first sources of HIV/AIDS information, then television, radio, and magazines 45-36 percent. There was a significant low scoring 16-7 percent for parents, teachers, churches and the health personnel as first sources of HIV/AIDS information. Twenty percent (20%) of the respondents had classmates as a first source of information. Twenty five percent (25%) of the students chose the booklets that were distributed during the awareness campaign to increase students' AIDS awareness as first sources of information.

As for the most preferred sources for future additional information, 20 percent of students chose doctors, only 4 percent chose teachers, and 3 percent chose nurses. Magazines and newspapers were selected by 17 to 15 percent of students, respectively, as the most informative sources for HIV/AIDS.

It was noted that authority figures, such as health workers, parents, teachers, and the church did not represent significant sources of first information as was expected.

Researchers further observed sources of information and the frequency of the respondent's choices relating to form, sex, school and geographical locations. Specific patterns were observed by form levels, which identified first sources of information associated with reading skills: newspapers, magazines and booklets. Classmates as well were "the important source of first information for students in higher forms 5 and 6 than was the case with their younger colleagues in the lower forms". Upon relating sources of first information and gender, it was found that classmates and radio were identified more by girls than boys, who identified newspapers and magazines as their first sources of information.

With regard to the relation between sources of information, and school and region, the boarding school students identified classmates as their first source of information. Television and magazines scored high also in boarding schools, but scored low in schools of lower income families.

A survey was done by Zimet, Anglin, Lazebnik, Bunch, Williams and Krowchuk (1989) in an attempt to determine if students, who read the government brochure would demonstrate higher levels of knowledge, less distorted beliefs, and lower levels of social anxiety about AIDS than those adolescents who had not read the brochure.

The brochure was distributed by United States (US) government to every household in Cleveland Ohio in the spring of 1988. Understanding AIDS was the brochure title, which covered the risky behaviours that contributed to contracting AIDS. After 2 weeks of brochure distribution, a total of 177 public high school students were asked to voluntarily complete a questionnaire. This questionnaire included items on demographic data, AIDS knowledge, Beliefs, and Social anxiety scales. The students' mean age was 17 years, of whom 19 percent were males, and 81 percent were females. Thirty four percent (34%) of the total reported reading the "Understanding AIDS" brochure.

The comparison between students, who read the brochure with those who did not, was done by using MANOVA. The results were not significant and the two groups of students did not have any variation with respect to the dependent variables of beliefs and social anxiety measures. Almost all students from both groups knew that it was a high-risk activity to share needles with drug users. However, only one half of the total students knew that donating blood was not risky, which indicated that the others had misconceptions about AIDS transmission modes. Researchers concluded that brochures were not as effective as it was

proposed. They suggested designing and developing approaches that would be more effective with adolescents in order to increase AIDS knowledge, influence students' attitudes and modify their behaviours.

High school students:

A large – scale survey of 18 urban, suburban, and rural high school students was carried out by Steiner, Sorokin, Schiedermayer and Van Susteren, in south-eastern Wisconsin, between 1988-1989. The survey used two instruments, the knowledge survey instrument, which consisted of 15 true – false test items that evaluated adolescents' AIDS education, and the attitude survey instrument which assessed the students' attitudes and perceptions towards AIDS and AIDS infected individuals. The sample of 1543 high school students was selected from schools that participated in an AIDS education program. The age range of these students was from 14 to 18 years, with a completion rate of ninety percent (90%). There were more females (55%) than male students (45%) among the participants.

The results of the two surveys showed that the majority of students had good knowledge about AIDS. It was found that students above 17 years knew more about AIDS than those below the age of 16, which was expected by the authors. However, no significant results were detected in cross tabulation of gender and knowledge, as well as for school and knowledge cross tabulation. Almost all the students had correct answers for AIDS as a life threatening disease. Students agreed that anybody could get AIDS and that not all homosexuals contracted AIDS. The majority of students knew that AIDS could pass to the foetus in the case of a mother with AIDS, and that AIDS can be transmitted by sexual intercourse and by sharing needles.

Students knew that using condoms could lessen the risk of transmission, yet they were confused when they answered questions about blood donation and receiving blood transfusion as AIDS vehicles of transmission. The students showed a positive attitude towards people with AIDS. Most of the students agreed that children with AIDS should be allowed to attend school, and that people infected with AIDS should not be isolated or quarantined. However, some of their responses revealed their fear of the disease. Eighteen percent (18%) of them seemed not to feel comfortable sitting next to a person with AIDS, and 50 percent said they wouldn't feel comfortable using the same locker room or the lavatory facilities. Students had negative attitudes when 45 percent of them responded that if homosexuals and IV drug users contracted AIDS, they got what they deserved.

The survey results showed that students were knowledgeable about AIDS, but at the same time, they were confused about several modes of AIDS transmission. Moreover, one half of the students expressed negative attitudes to AIDS and AIDS infected people. As researchers concluded, this survey could give more directions to AIDS reduction, targeting high school students.

As a periodical assessment of HIV-related knowledge and behaviours among high school students, a survey was conducted by CDC (JAMA, 1990) in 42 sites of education departments in different states, cities and territories, during February – May 1989, in USA.

The survey tool was a questionnaire developed by representatives from departments of education and the Centres for Disease Control (CDC). The questionnaire was anonymous and contained 39 questions, which assessed HIV-related knowledge, beliefs, and intravenous (IV) – drug use and sexual behaviours. All schools assessed students' knowledge and beliefs, but only 25 sites assessed IV drug use, and 19 sites assessed sexual behaviours, in addition to

assessing knowledge and beliefs. The response rates of schools ranged between (27% and 100%), and the sample sizes ranged between 303 and 10, 279 students, aged 13 to 18. Students reported having been taught about HIV/AIDS in schools. Sampling was a combination of probability samples in some sites, and non-probability samples in other sites. Results showed that a range between 43 to 69 percent of students, from the total survey sample, reported having discussed the subject of HIV/AIDS with their parents, or other adults in their families. There were variations in the percentages (32% - 75%) among students when answering questions about the different transmission modes of HIV/AIDS through blood donation, or through mosquito or insect bites (22%-67%) with median 48%; through the use of public toilets (44%-85%); and through blood tests (59%-82%).

However, the majority of students gave correct answers for the following transmission modes: sharing needles (93%-100%), and having unprotected sexual intercourse (no condom use). The range was between (74% and 98%). It was noticeable on assessing the behaviours of students that more male students than females admitted to IV – drug use. A range of (2% - 5%) of students had injections of illegal drugs, such as cocaine or heroin, and (0.2% - 3%) reported having had injections for other drugs

The assessment of sexual behaviours showed variations among students, mainly more male students had sexual intercourse at least once, and more sex partners than female students did number between 27 to 76 percent of students reported having had sexual intercourse at least once, and 7 to 40 percent reported having had four or more sex partners.

As a result of the study, recommendations were made to develop and do periodic measures of changes in the Youth Risk Behaviours Surveillance, and to increase the number of sites, using only probability samples of 9th through 12th grade students, in order to have proper

comparisons between sites. They also recommended using the results of the surveys in planning and evaluating comprehensive school education.

The researchers, Anderson, Kann, Holtzman, Arday, Truman and Kolbe (1990) conducted the first nationally representative survey among high school students in order to assess their knowledge of HIV/AIDS, and to determine whether they were engaged in behaviours that could affect the students' risk of HIV infection. The instrument used was a questionnaire that contained questions covering intravenous drug use and sexual behaviour. Only the sexual behaviour part was reported in this article.

The results showed that 54 percent of students received some form of HIV/AIDS instruction. A range of 98-99 percent of students had correct answers in identifying the two main modes of HIV transmission – sharing needles and having sexual intercourse with HIV infected partners. The majority of students, 91 percent knew correctly that an HIV pregnant woman could pass it to her baby. Some myths about HIV were present in the results. The participants believed that protection against HIV infection could be determined by the use of birth control pills. Moreover, 23 percent believed that they could tell whether people were infected or not by just looking at them. They also believed that donating blood could cause HIV infection (36%), and 55 percent answered that insect bites could transmit HIV. In examining their sexual behaviour, 57 percent of participants reported having had sexual intercourse. Eighteen percent (18%) had only one partner; ten percent (10%) had two partners, seven percent (7%) had three partners, while twenty two percent (22%) had four or more partners. In examining their use of condom, eighteen percent (18%) always used condoms, and seventeen percent (17%) reported that sometimes they used condoms, eight percent (8%) rarely used condoms, and thirteen percent (13%) never used them.

Statistically significant results showed that those students, who had been taught about HIV/AIDS, were less likely to have had multiple partners. Also the 9th grade students' results showed a significantly higher use of condoms than other students. A remarkable increase was with the proportion of students who consistently used condoms with the number of correct knowledge answers ($r=0.6$, $P< 0.05$).

The researchers pointed to the need for proper education programs to be implemented in schools, especially as the incidence of AIDS is increasing among adolescents, and young adult age groups. They pointed out the importance of having more research to monitor HIV related risk behaviours among adolescents, especially in schools.

Adolescents:

Di Clemente, Boyer and Morales (1988) collected data in 1985, on knowledge, attitudes, beliefs about AIDS, using a sample of 261 white adolescents, 226 black and 141 Latino adolescents in San Francisco high schools. The data analysis showed that generally, students had knowledge about AIDS, with differences apparent among the different ethnic groups. All participants were able to identify "that having sex with a partner with AIDS is one way of getting the disease," and that sharing needles with drug users is another transmission mode of HIV infection. White participants (71.7%) were more knowledgeable about the fact that the use of condom decreases the risk of AIDS disease transmission than the black participants (59.9%), and the Latino participants (58.3%).

The authors used high-low susceptibility perceived scales and related it to the knowledge score of correct answers. They found that all participants who had little knowledge of AIDS, perceived themselves more susceptible to contract the disease. The analysis of the scale also showed that black and Latino students were at a greater perceived susceptibility, and were

more likely to indulge themselves in risky behaviours due to their insufficient AIDS information. The results also revealed students' misconceptions about transmission of AIDS through casual contacts with AIDS infected persons, such as touching, shaking hands, and being around them. As a result, the authors recommended the need for preventive AIDS education.

An anonymous, random digit dialling survey by telephone was conducted by Hingson, Strunin, Berlin and Heeren (1990) in August 1988 for 1773 Massachusetts adolescents aged 16-19years. The response rate was 82 percent .The survey, which was distributed in English and Spanish, assessed respondents' beliefs about AIDS, use of alcohol and drugs, and unprotected sex.

The survey questionnaire items covered the beliefs that were defined in the health belief model, which contained AIDS susceptibility and severity, effectiveness of condoms, barriers to the use of condoms, and cues to action.

The results showed that there were a higher percentage of males than females who wanted to always use condoms. Thirty nine percent (39%) of 19 year old wanted to always use condoms, and only 29 percent of 16 year old wanted to use them.

The adolescents who had only one partner were more likely to not use condoms than those who had more partners. The respondents who abstained from drinks were more likely to always use condoms (35%), than those who had five or more drinks (29%).

Twenty two percent (22%) of those who smoked marijuana on a weekly basis used condoms less than those who abstained from smoking (32%). The logistic regression analysis showed that "variables under barriers to use were the strongest predictors of condom use". Race comparison showed that mainly the whites and younger ages were predictive for use of condoms.

Those adolescents who had discussed AIDS with physicians were more likely to use condoms than others were. This survey stressed the importance of using Health Belief Model in exploring beliefs about AIDS among adolescents. It also stressed the importance of the role of educators in increasing the adolescents' perception of AIDS preventive measures.

Homeless youths:

Researchers, such as Matthews, Richardson, Price and Williams (1996), conducted a study that assessed 40 homeless youths for their knowledge, attitudes and behaviour about AIDS, and compared them to a control group of youths of same age group 15-19 years. The control group of 20 youths lived with parents or legal guardians. This study was one of the very few researches done to assess the homeless adolescents, who are more susceptible to acquire AIDS, considering their drug usage, sexual activity, and the relatively high level of sexually transmitted diseases. The participants were from Brisbane Queensland.

The questionnaire included items that assessed self – perceived risk of contracting AIDS sources of AIDS information, AIDS related knowledge, the preventive and risky behaviours and attitudes. Results showed that 30 percent of homeless adolescents (M=15%, F=45%) were into prostitution. On the other hand, none of the controls provided sex in exchange for money. Of those engaged in vaginal intercourse, ninety five percent (95%) of the homeless youth engaged in that practice, compared to fifty five percent in the control group. Certain activities were reported more by homeless participants than the control group of youths. These activities put them at risk of contracting AIDS. Forty five percent (45%) of homeless youths reported low frequency of condom use in vaginal sex, while 10 percent of them admitted sharing needles and syringes, and fifteen percent (15%) of them had unprotected anal sexual activity. However, fifty two percent (52%) of the homeless youths exhibited a large degree of

concern about contracting AIDS. According to the researchers, it was noticeable that none of the control group had any of these risk factors, such as unprotected vaginal sex, and unprotected anal sex and sharing needles/syringes.

The study findings also showed that there was a significantly lower level of accurate knowledge of AIDS by the homeless youth group when answering the questions about modes of AIDS transmission, and about the preventive measures of AIDS. However, fifty two percent (52%) of the homeless youths were already tested for AIDS. Among the sources of AIDS information, the homeless youth group selected pamphlets (90%), then Media (75%), then youth social workers (45%), friends (35%), school (22.5%), and parents/relatives (17.5%) as their sources of AIDS information. On the other hand, the control group's sources of AIDS information were as follows: Media (100%), friends (70%), parents/relatives (55%), school (45%), pamphlets (35%), and youth social workers (0%).

It was concluded from this study that the homeless were at a higher risk of contracting AIDS than the home-based control group. As a result of learning what the homeless group trusted as sources of information, it was recommended that AIDS education should be stressed in the Media, in pamphlets, and among youth social workers in order to decrease the homeless youths' relative ignorance and misinformation about AIDS.

University students:

A number of researchers as Valimaki, Suominen and Peate (1998) examined the knowledge, attitudes and beliefs about AIDS among various student populations, including undergraduate students, nursing students, dental students and medical students. The research findings of

these studies found negative attitudes among students toward homosexuals and AIDS patients. They also found that the students had fear of the infection.

In general, surveys have found that students in health fields who had more knowledge about AIDS, tended to have a more accepting attitude, and were more willing to work with AIDS infected people (McDaniel, Carlson, Thompson and Purcell, 1996). Few of these studies were included in this literature review.

A study was carried in Finland by Serlo and Aavarinne (1999) to assess the attitudes and feelings of first year university students towards HIV/AIDS. This study was a part of a large research project about HIV/AIDS that was done by the nursing department of Oulu University.

The authors suggested the use of research results in planning and implementing health education for young people. A random sample of 250 students, of equal numbers of males and females were selected. They were given a questionnaire with structured and open – ended questions to answer voluntarily and anonymously.

The mean age for students was 32years. Sixty one percent (61%) of them had permanent sexual relationships. In the knowledge assessment part of the study, the students defined correctly their concept of HIV as a virus, and that it was the first stage that leads to AIDS- the death- as the students described it. They identified sexual transmission as the route whereby HIV infection was spread, and that HIV caused immunodeficiency in the infected person. Moreover, according to the authors, the students defined AIDS as a disease of homosexuals and "the incurable disease which tortures the patient." With regard to the sources of information concerning HIV/AIDS, the students chose TV (91%), then newspapers (80%) then campaigns and information packages, followed by radio and school nurses. Parents and

relatives were the sources of preventive health behaviours, as mothers advise their daughters, and fathers advise their sons. Only 2 students had personal contact with an AIDS patient. Students estimated that they had insufficient knowledge about the emotions and physical well being of HIV/AIDS patients, but they revealed positive feelings about meeting HIV/AIDS patients, although they had negative feelings and fears about the disease. (P=0.002). Most of the students had positive attitudes when answering the question related to "those who have HIV/AIDS have equal rights to get cured as the others". Only 5.8 percent of male students and 6.6 percent of female students considered that HIV/AIDS was a punishment from God. Most of the students' negative attitudes were related to homosexuals and intravenous drugs users. With regard to the use of preventive measures in sexual practices, 42 percent of females and 21 percent of males reported that they never used preventive measures. The research showed also that female students were more active in sexual behaviour than males, and that half of the females used condoms as a protective measure against sexual infection.

The research questions also assessed students' feelings, emotions, and beliefs. The results showed that students were empathetic with regard to finding a cure, and believed that scientific research was going to find a solution for the disease. Some students showed sympathy towards AIDS infected patients, while others felt that AIDS patients were getting what they deserved. The students felt that AIDS patients should behave in a way so as not to spread the infection. In assessing fear, students admitted that they were afraid of becoming infected. As described in the study, the students also felt threatened by the disgusting and dangerous disease, and wanted to learn more about AIDS, as they had insufficient knowledge about it. There were minimal differences between the faculties in the estimation of students' knowledge with regard to the physical welfare of HIV/AIDS infected patients. Only the nursing students estimated their knowledge to be sufficient about AIDS.

Health care professionals:

Knowledge and attitudes of physicians and trainees about HIV/AIDS infection were also examined in a research carried out by Brachman, Kozarsky, Certon, Jacob, Boonitt, Wongsrichanalai and Keystone (1996). They examined the knowledge and attitudes of 155 participants from United States, 196 from Canada, 340 from India and 128 from Thailand, in order to assist in the development of HIV/AIDS preventive and educational programs.

A convenient sample was taken from each speciality of training hospitals in the four countries that participated in the study, which was conducted from January 1992 through October 1992. Participation was voluntary and anonymous. The questionnaire covered four sections:

1) Demographics.

2) Attitudes, especially when dealing with HIV-infected patients.

3) Knowledge.

4) An open-ended question that assessed the impact of AIDS on the participants' practice.

The data was analysed by means of Epi- Info software package and chi-square analysis.

Results of Health Care Professionals (HCPs) showed that HCPs from India and Thailand were approximately four times more likely to be uncomfortable eating at the same table with HIV – infected persons, in performing physical examination, or assisting in surgery, than HCPs from Canada and U.S.A. However, differences in their responses decreased in relation to their concerns about withdrawing blood, or inserting intravenous catheter. Thirty four percent (34%) of the total sample expressed being uncomfortable in performing these common medical procedures. The percentage of participants having previous contact with HIV/AIDS patients ranged between 30 and 98 percent. India was lower than Thailand, which was lower than Canada. The highest contact was in USA. The mean for HIV/AIDS knowledge was 83 percent in India, 84 percent in Thailand, 92 percent in Canada, and 93 percent USA. The

mean for knowledge score correlation with previous contact with HIV/AIDS patients was also in the same sequence from the lowest contact and score percentage in India (30% and 83%), then Thailand (58% and 84%), followed by Canada (85% and 92%) and the highest was among American HCPs (98% and 93%).

However Chi-square analyses of knowledge scores versus gender, age or level of training within each institution did not show significant differences. Yet differences in responses were shown as those from Eastern countries (India & Thailand), where participants did not believe in hand washing practice before or after patient contact, whereas those HCPs from North America (Canada & USA) did believe in the practice. Also the Eastern HCPs thought using masks and goggles might be helpful in physical examinations, and they might help in the protection against HIV transmission. According to the authors, the responses of Eastern HCPs to the practice of hand washing, and the use of physical barriers, such as masks and goggles could be related to their lack of experience and contact with HIV/AIDS infected patients. Moreover, their knowledge was weakest in HIV serology and the clinical manifestation of the infection. Yet, the authors did not expect to have a large number of Americans (35%) and Canadians (26%) who were not aware of the HIV infection symptoms, and ten percent (10%) of them did not know one of the manifestations of AIDS was interstitial pneumonia.

The HCPs from Eastern countries showed a strong ethical obligation to treat HIV/AIDS infected patients despite their concern about contracting the infection, and in spite of the fact that they were not practising in as safe an environment as the North American HCPs.

The researchers concluded that:

1) The physicians and trainees of developed countries should have education programs about AIDS, especially the natural course and serologic diagnosis of HIV.

2) There is need to address the discrepancy in ethical and moral obligation in treating infected patients among western HCPs.
3) There is need to support physicians and trainees in developing countries, in order to face the threat of the dramatic spread of HIV/AIDS in Asia.
4) Resources must increase for diagnosis and treatment.

The study implied an urgent need for educating physicians as a way to prevent the spread of HIV/AIDS.

High school teachers:

From a different perspective to that of assessing students' knowledge and attitudes about AIDS, Dawson, Chunis, Smith and Carboni (2001) conducted a study on high school teachers. The reason for choosing teachers was that, according to CDC statistics, adolescents represent the fastest growing segment of HIV infected people in the United States. Hence, teachers (who teach adolescents) are expected to be knowledgeable about AIDS and comfortable with AIDS issues, in a way that would enable them to interact with high school students, and give them proper instruction. A sample of 141 teachers (47 males, 76 females, 18 unidentified) from nine central Massachusetts high schools completed a study of HIV/AIDS knowledge and attitudes scales for teachers, as well as questions regarding their teaching experiences and academic disciplines. The results showed that male teachers (Mean = 19years) taught for a longer period of time than female teachers (Mean=14 years) of total participants with a range from 1 to 39 years of teaching experience.

Female teachers were more allied with health and special education disciplines than male teachers were, and significantly more males than females were in the industrial arts. A multiple analysis of variance (MANOVA) was done to assess the gender and academic discipline effects on teachers' attitudes, general knowledge, and modes of transmission

knowledge related to AIDS/HIV. The multivariate F tests showed no significant differences for gender, but it was significant for academic disciplines ($P<0.01$).

Univariate F tests showed no significance for academic discipline, but showed significant results as related to both: general knowledge of HIV/AIDS ($P<0.01$), and knowledge of likelihood of transmission ($P<0.01$). Post hoc analyses showed that allied health teachers had greater knowledge and knowledge of the likelihood of AIDS transmission than teachers of other disciplines.

Analyses of results showed that around (60%) of the participants had correct answers for the HIV/AIDS knowledge questions. As per discipline, (77.71%) of allied health teachers answered questions correctly, whereas other teachers had a range of (55 % to 59%). With regard to teachers' AIDS – related attitudes, they were positive.

A significant trend of positive attitudes was found more among female teachers than males, and as per discipline; positive attitudes were revealed more among teachers allied with health than others were. The allied health teachers had more knowledge about HIV/AIDS than other teachers did. There were also some alarming results, which showed that only forty eight percent (48%) of teachers knew that adolescents were one of the groups with the largest increase in HIV infection. There were also inaccurate answers where forty percent (40%) of special education teachers believed that the HIV antibodies could be detected immediately after infection, and thirty percent (30%) of teachers in the humanities believed that HIV could sustain living outside the body for several days. Only ten percent (10%) of teachers showed fear of having HIV positive students in their classrooms. Eighty seven percent (87%) of teachers showed keen interest in increasing the time allocated for teaching and training them about HIV/AIDS, and (99%) supported AIDS education in their schools. This in turn supported the researchers' assessment for the need to increase the emphasis on teachers'

training, so that they could play a role in advising and educating their students about AIDS prevention.

HIV/AIDS in Gulf area:

Travel – related AIDS awareness among young Gulf Arab Men was done in Al Ain district (United Arab Emirates). Al Mulla, Pugh, Hussein and Behrens (1996) surveyed 298 young Emirate males, aged between 18 – 25 years. There were 47 medical students, 194 non-medical students, and 57 school graduates. Eighty five percent (85%) were unmarried.

The study was done to assess the AIDS knowledge. In this survey, the researchers pointed to the AIDS control program that is applied in the Emirates. It was mentioned that the available information on HIV infection in Al-Ain showed low incidence among the citizens. The survey also showed the significant difference between the awareness of medical students and other groups in the surveyed students.

The medical students were more AIDS aware in many aspects such as: AIDS infected person cannot be identified by appearance, and that condoms were a protective measure while travelling abroad ($P<.001$). Al Mulla et al (1996) stressed the risk among the young people of contracting AIDS infection while travelling abroad to popular destinations such as India, Thailand and the Philippines. "The study demonstrated a prevailing uncertainty about AIDS knowledge and a possible fear of AIDS, both of which tend to increase acceptance of special education programs (Al Mulla et al, 1996).

Al – Owaish, Moussa, Anwar, Al-Shoumer and Sharma (1999) conducted another study in Kuwait, on 2219 persons, aged between 18-60 years. The health professionals were excluded from the survey sample. This survey was carried out to assess the knowledge, attitudes, beliefs and practices about HIV/AIDS in Kuwait, and to describe demographic data, role of religion, source of information, and satisfaction with AIDS control programs. The survey involved face to face interviews, using an interview schedule consisting of 60 questions.

The survey results revealed that two thirds of the surveyed population had a good knowledge of AIDS transmission, and that the AIDS knowledge was positively associated with level of education, age, years of hearing about AIDS, and socio-economic status. The multiple logistic regression showed that the surveyed individuals who were less than 40 years old with a low level of education, and single females with a lower socio-economic status had heard about AIDS for less than 3 years, and had a lower level of knowledge. This group tended not to change their behaviour related to AIDS.

The study by Al-Owaish et al (1999) showed that more than half of the participants were satisfied with the AIDS prevention actions taken by the government. The majority of participants also thought that religion was important in dealing with daily life problems. However, Al – Owaish et al (1999) pointed out in their conclusion, that even if the results showed that the surveyed population in Kuwait were aware of AIDS transmission, still there was a gap in the information about the modes that did not transmit AIDS (such as handshaking). This was reflected in their attitudes and practices toward AIDS infected people. The researchers recommended that there was a greater role to be played by medical professionals, mass media, and religion, in AIDS prevention and control.

In Bahrain, an interesting study of HIV and AIDS by Al – Haddad, Baig and Ebrahim (1997) showed that 378 HIV cases were reported, out of which 38.8% were nationals. Nationals had intravenous drug abuse as a major risk factor as compared to 45.7 percent of non- nationals who had the AIDS through sexual contact. The Bahrain survey also drew attention to other modes of AIDS transmission. Risk factor through sex and maternal – fetus route were significant contributors to the spread of AIDS infection in Bahrain.

Summary: It was noticed from the review of literature that international interest in the HIV/AIDS prevention, knowledge, attitudes and behaviours of college students, in different parts of the world have increased significantly in the past few years. Yet, little has been written about knowledge, attitudes, beliefs, practices and behaviours about AIDS among the Arab population. From this survey of literature, the Arab authors were able to reveal a comparative data between the nationals and non- nationals. This is a great step in revealing objective figures of what is happening in the Gulf area. This objectivity of viewing statistics of AIDS among nationals and the risk factors is rare to obtain from reports in other Gulf countries. There is no study that is known to researcher, after extensive literature review, that throws light on the level of AIDS awareness, or about the exposure and risks in the U.A.E, especially among high school students and adolescents. However, all studies reviewed and conducted showed the importance of carrying out such research on students' knowledge, attitudes, beliefs and perceptions. This study is one of a kind that tried to fill the gap, even if it was carried only in Sharjah City. Maybe it will be the first step in the thousand miles of researches to follow. Through studies we can target our programs to control and prevent AIDS among the students, who from the results of various studies are at high risk due to many factors, such as peer pressure, lack of maturity, drug injection and sexual contacts. Effective education programs might be indicated as a way of increasing AIDS knowledge in order to drive students towards positive behavioural change i.e. behaviours that are less risky and preventive behaviours

CHAPTER THREE
RESEARCH METHODOLOGY

Introduction: The research methodology presents the process implemented in conducting this survey. It consists of the following:

Design:

This was a descriptive survey .A descriptive survey is a present-oriented survey. It attempts to describe what exists, and this design allows us to obtain detailed information on known variables, so that current conditions can be assessed and described (Polit and Hungler, 1995). In this study, the design allows for assessing and describing current conditions regarding students' knowledge, attitudes and beliefs about AIDS.

Study Population:

The population targeted was high school 12^{th} grade students in Sharjah City. In the public (government) schools, there is segregation of learners by gender. The school compounds for boys are separate from those schools assigned to girls. Whereas, in the private schools, boys and girls are in the same school compound. Moreover, ninety percent (90%) of public schools students are UAE nationals. The remaining percentage (10%) is left for other nationalities, whose parents are staff in governmental ministries. Private schools are open to all nationalities, as long as they can pay the fees. In public schools, the curriculum is taught in Arabic, so students have to speak and write Arabic fluently in order to cope with their studies. In the private schools curriculum, planners take into consideration the need of multi-nationalities, so the curriculum could be British, American, or according to the ethnic group attending the specific school. The total number of students in Sharjah city is 3020 students, of whom 2170 students are in 13 public schools, and 850 students are in 10 private schools.

Sample and Sampling:

A 2-stage cluster random sampling was used. In large-scale studies where the population is geographically spread out, sampling could be very difficult, expensive, and time consuming. In this survey the groups of students were taken as a cluster in Sharjah City.

The method of sampling in the study involved obtaining from the Ministry of Education (M.O.E) a list of public and private secondary schools in Sharjah city. Randomly two (2) public schools were drawn from a box. This was repeated in the selection of private schools. Out of these four schools, the students of two entire classes were randomly chosen in each selected school. They were invited to participate voluntarily by sending a letter Special private schools for specific foreign interests were excluded from the random sampling, such as the French, Indian, German, and English schools. The sample size from the four schools came to 214 students.

Instrument: The instrument statements were based upon a review of literature. It was a paper-and-pencil questionnaire, written in two languages: Arabic and English. The instrument (questionnaire shown in Appendix) consisted of the following 76 items:

8 demographic questions.

21 questions on knowledge about AIDS with True/False/Don't Know answers. These questions were to assess factual information about AIDS.

19 questions on attitudes about AIDS with five point Likert-scale: Strongly Agree, Agree, Uncertain, Disagree, and Strongly Disagree.

14 questions on beliefs about AIDS and AIDS prevention with Yes/No answers.

11 questions on sources of information about AIDS, with Yes/No and ranking answers.

3 questions on health promotion and disease prevention of AIDS, with Agree/Disagree answers.

Validity: for face and content validity, experts in health education and epidemiology reviewed the instrument. Their remarks were taken into consideration and the instrument was revised accordingly, mainly the knowledge, and attitude parts.

Reliability: The instrument was piloted on 20 students, who were excluded from the study sample. It was tested for readability, clarity, and level of difficulty and acceptability. The instrument was administered for the second time a week later to the same group of 20 students for test-retest reliability. Based on the pilot test, some changes were considered in the questionnaire to increase the clarity of the items. These changes were to convert some medical words into simpler terms. The test-retest reliability co-efficient was of 0.87.

Data Collection:

An anonymous, self-administered questionnaire, hand-delivered by the researcher to participating students was done in spring 2001. The classrooms of the students were the sites for instrument administration. A previous arrangement was done with the school administration for the time period during which students answered the questionnaire.

Data Analysis:

Data analysis was carried out with SPSS version 9.0 for windows. The socio-demographic variables were analysed using descriptive statistics. For the purpose of tabulating AIDS knowledge data, all correct answers were given a score equal to one, and all wrong answers were given a score equal to zero. The "don't know" answers were also given zero score.

Then a sum totalling the correct score for every participant was calculated as sum score of correct answers of AIDS knowledge questions. Those students who scored (75%) and above, were considered as "high" group for AIDS knowledge. Those who scored (60% - 74%) were considered in the "middle" group, and those participants who scored below (60%) were considered in the "low" group for AIDS knowledge.

In order to examine the relation between the gender of participants and their AIDS knowledge, the cross-tabulation using chi-square analysis was used. As well T-test of the sum of correct scores (i.e.knowledge score)

Attitudes of participants about AIDS were answered in a likert – scale, i.e. strongly Agree, Agree, Uncertain, Disagree and Strongly Disagree.Then for convenience, Agree answers were the combination of StronglyAgree and Agree, Uncertain remained as it is and Disagree was the combination of Strongly Disagree and Disagree. These attitude answers of participants were examined using percentage rates. Then cross – tabulation and chi – square test was used to show the relation of gender and attitudes.

The attitude items of numbers (5,8,10,12,14,16) were considered positive and the rest of attitude statements were considered negative. The responses of participants were evaluated as such: the agreement with positive attitude statements and the disagreement with negative attitude statements, both were considered to indicate positive attitudes. The descriptive statistics were used to reflect the participant's attitudes towards AIDS as a disease, their fears and their attitudes towards people infected with AIDS, and it examined whether these attitudes were positive or negative for each attitude statement. The relation of gender and attitudes was examined by cross-tabulation and chi-square test.

Descriptive statistics were used to show the beliefs of participants about AIDS and AIDS prevention. The answers were in the form of Yes/No answers, in order to show association between gender and beliefs; cross-tabulation using the chi-square test was used.

The advice type of question was used in an indirect way to show participants' reflections on health promotion and disease prevention for themselves, their brothers, sisters, and their best friends. Students were asked to show whether they agree or disagree about not sharing needles with drug users, undergoing AIDS blood test before marriage, and their willingness to change risky behaviours.

As for AIDS sources of information, the answers were shown as a result of descriptive statistics, and used for the ranking of the first three sources. Cross tabulation and chi-square test was used to show gender association with sources of information.

Tables and graphs were used for presentation of significant results of different variables, and the findings of cross – tabulation were considered significant at the 0.05 levels.

Ethical Consideration: Permission to administer the questionnaire was obtained from the Ministry of Education (MOE), parents and participating students. The students' responses were dealt with as confidential information for research purposes. The study was given to two teachers to review the questionnaire and check it for cultural sensitivity.

Limitations of the study: some strict rules and conservatism among the people of the Emirates was expected. Sampling error increased also with each stage of sampling in the cluster-multi stage sampling .The true-false kind of questions in assessing HIV/AIDS knowledge of students was considered limiting, and involved a high level of guessing from students. That was reduced when students were given a chance to answer, "don't know", and were told that they were not going to be given a certificate for their knowledge about AIDS. The critical limitations were in cancelling all questions related to sexual practices, such as having boy friends/girl friends, semen, marital status, partner, and any word related to sex or intimate relations. Under these conditions, important assessments of student's knowledge,

beliefs, and attitudes were lacking, as the omissions prevented the inclusion of many questions that would have further enriched the findings.

CHAPTER FOUR
RESULTS

Introduction:

The results will be shown in descriptive and cross-tabulation for demographic data, knowledge, attitudes, beliefs, and sources of information of students.

The participants of the survey were randomly selected by cluster in two stages. The study population consisted of 12th grade high school students from governmental (public) and private schools in Sharjah City. Participation and completion of the questionnaire was voluntary and anonymous. A total of 214 students were invited to participate in the survey, of which 204 students co-operated and completed the questionnaire i.e. 95.3 percent response rate.

Demographic Characteristics:

The participating students were asked to indicate school, nationality, gender, religion, age, with whom they were living, and the level of education of their mothers and fathers.

Results:

All HIV/AIDS knowledge, attitude, sources of information and beliefs tables are in Appendix, for keeping proper page arrangement and contains all survey results.

Table 1 provides a description of survey participants. A total number of 204 participants (12th grade students) were included in the survey analysis. Their ages ranged between 15 and 21. There were a higher percentage of male students (59.8%) compared to female students (40.2%). Analysis showed that there were an approximately equal number of participants from public schools (49.4%) compared to 50.4 percent (50.4%) from private schools.

Table 1: Participants' distribution by age, gender and school, Sharjah, 2001.

Age (years)																
Variable	**15**		**16**		**17**		**18**		**19**		**20**		**21**		**Total**	
School	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#
Private 1	-	-	9.8	20	3.4	7	4.4	9	0.5	1	-	-	-	-	18.1	37
Private 2	4.4	9	12.7	26	10.3	21	4.9	10	0	-	-	-	-	-	32.3	66
Public Girls	-	-	0.5	1	17.2	35	5.9	12	1.5	3	1.0	2	-	-	26.0	53
Public Boys	-	-	1.0	2	12.3	25	6.9	14	2.9	6	-	-	0.5	1	23.5	48
Total	4.4	9	24.0	49	43.1	88	22.1	45	4.9	10	1.0	2	0.5	1	100	204
Gender																
Female	1.0	2	8.8	18	20.1	41	7.8	16	1.5	3	1.0	2	-	-	40.2	82
Male	3.4	7	15.2	31	23.0	47	14.2	29	3.4	7	1.0	2	0.5	1	59.8	122
Total	4.4	9	24.0	49	43.1	88	22.1	45	4.9	10	1.0	2	0.5	1	100	204

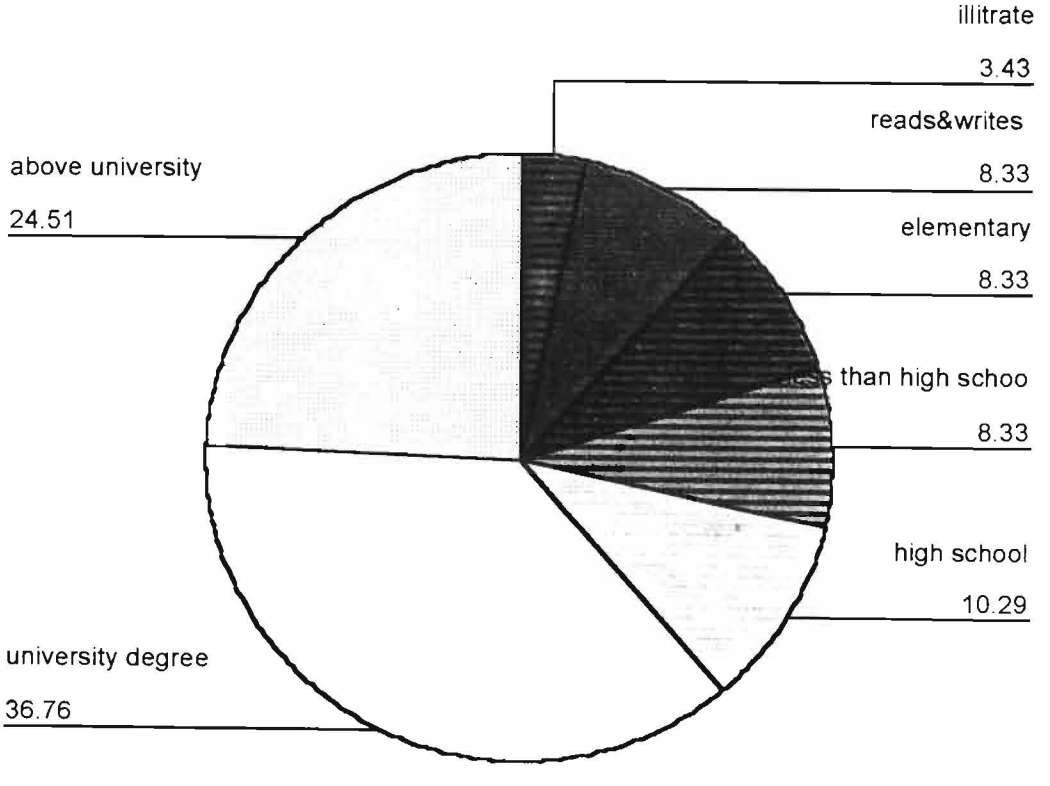
Analysis of the respondents' nationalities (Table 2) showed that the population living in Sharjah suggests a cosmopolitan, multi-national and multi-ethnic society. The total percentage of UAE nationals was 29.5 percent (29.5%); 46.5 percent (46.5%) were Arabs, 8.5 percent (8.5%) were Asians and 15.5 percent (15.5%) were of other nationalities. Analysis of the religion of the study population showed that Muslims represented 84.3 percent (84.3%), and Christians were 11.8 percent (11.8%).

Table 2: Participants' distribution by nationality, school & religion, Sharjah, 2001.

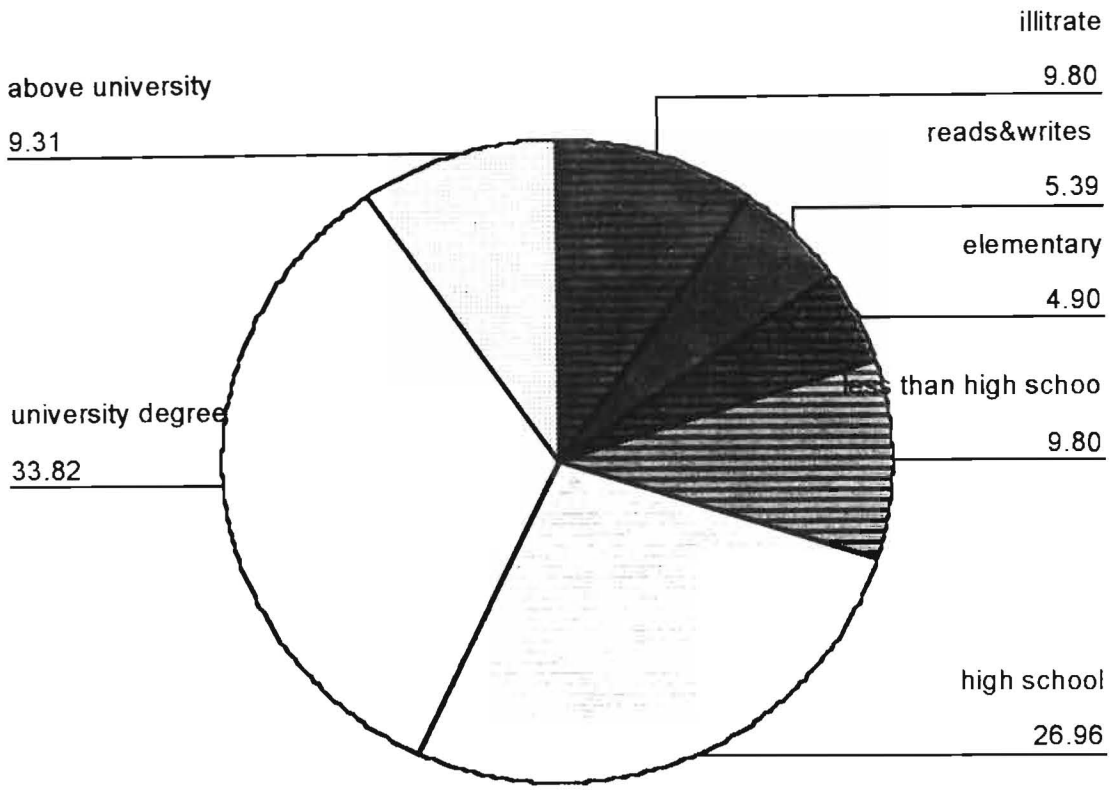
Nationality																				
Schools	**UAE**		**Sham area**		**African Arab**		**Gulf**		**Asian**		**Iran**		**Turkey**		**North American**		**Others**		**Total**	
	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#
Private 1	0.5	1	9.5	19	3	6	1	2	1	2	0.5	1	-	-	-	-	2.0	4	17.4	35
Private 2	5.0	10	4.5	9	2.5	5	1.0	2	8.0	16	0.5	1	2.0	4	4.5	9	4.5	9	32.3	65
Public Girls	13.9	28	8.5	17	-	-	4	8	-	-	-	-	-	-	-	-	-	-	26.4	53
Public Boys	10	20	6.5	13	4	8	2	4	-	-	0.5	1	0.5	1	-	-	0.5	1	23.9	48
Total	29.4	59	29	58	9.5	19	8	16	9	18	1.5	3	2.5	5	4.5	9	7.0	14	100	201
Religion																				
Muslim	29.5	59	24.5	49	8.5	17	8	16	7.5	15	1	2	0.5	1	3.5	7	3.0	6	86	172
Christian	-	-	4.5	9	1	2	-	-	-	-	-	-	2	4	1.0	2	3.5	7	12	24
Bahai	-	-	-	-	-	-	-	-	-	-	0.5	1	-	-	-	-	-	-	05	1
Hindu	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	1	2
No religion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	1	05	1
Missing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4
Total	29.5	59	29	58	9.5	19	8	16	8.5	17	1.5	3	2.5	5	4.5	9	7	14	100	204

The analysis showed (Graph 1 and 2) that illiteracy was greater among the mothers (9.8%) than the fathers (3.4%). The percentage of fathers below elementary level was 16.6 %, and mothers (10.3%). However, the percentage of mothers at high school level was 27% compared to 10% for fathers. It was interesting to note that the level of education of the mothers at high school level was almost three times that of the fathers. Yet education at above university level showed different results. The percentage of fathers with above university education was 24.5% as compared to 9.3% of the mothers. The percentage of fathers with above university education was almost three times that of the mothers. Probably, this denotes that the community still exerts certain reservations on above university education for females due to the fact that women cannot not pursue higher studies, as they carry the responsibility of household duties, and raising children.

Graph 1: Level of education of participants' fathers in percentage



Graph 2: Level of education of participants' mothers in percentage



Cross-tabulation of students' schooling in relation to their parents' level of education showed that the higher the level of the parents' education, the higher the proportion of their children attending private schools, with P-value of 0.000, for both cross-tabs of fathers and mothers.

Analysis of the students' living conditions (Tables 3 and 4) showed that the majority of them (91.7%) lived with both parents. Students who lived with their mothers only represented 6.9 percent of the total sample. This analysis denotes that a significant proportion (6.9%) of the study participants lived with their mothers only. Whereas a very low percentage (1%) of students lived with their fathers only.

Table 3: Level of education of the fathers of the participants and their living with status

Level of Education																
Living With	**Illiterate**		**Reads & Writes**		**Highest Elementary**		**Less than high school**		**High school**		**University**		**Above University**		**Total**	
	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#
Mother & Father	2.9	6	7.4	15	8.3	17	7.4	15	8.8	18	33.8	69	23.0	47	91.7	187
Mother	0.5	1	0.5	1	-	-	1.0	2	1.5	3	2.5	5	1.0	2	6.9	14
Father	-	-	-	-	-	-	-	-	-	-	0.5	1	0.5	1	1.0	2
Others	-	-	0.5	1	-	-	-	-	-	-	-	-	-	-	0.5	1
Total	3.4	7	8.3	17	8.3	17	8.3	17	10.3	21	36.8	75	24.5	50	100	204

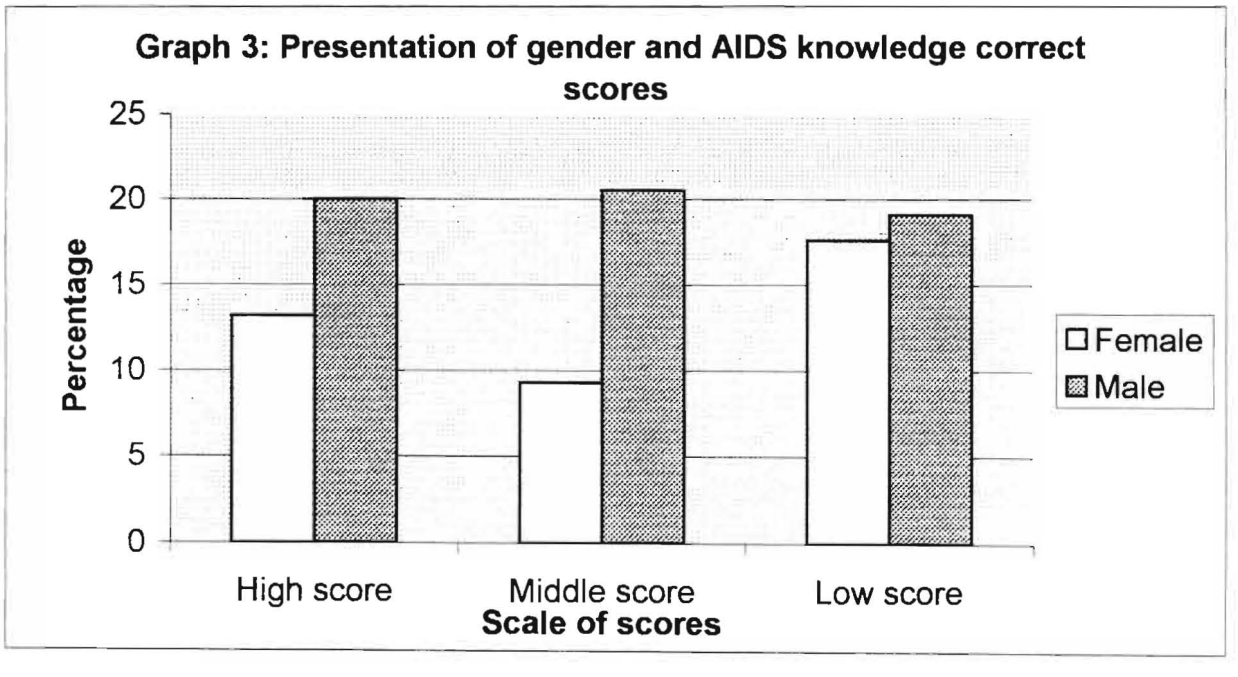
Table 4: Level of education of the mothers of the participants and their living with status

Level of Education																
Living With	**Illiterate**		**Reads & Writes**		**Highest Elementary**		**Less than high school**		**High school**		**University**		**Above University**		**Total**	
	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#
Mother & Father	9.3	19	4.9	10	4.9	10	8.3	17	26.0	53	30.9	63	7.4	15	91.7	187
Mother	0.5	1	0.5	1	-	-	1.0	2	1.0	2	2.5	5	1.5	3	6.9	14
Father	-	-	-	-	-	-	-	-	-	-	0.5	1	0.5	1	1.0	2
Others	-	-	-	-	-	-	0.5	1	-	-	-	-	-	-	0.5	1
Total	9.8	20	5.4	11	4.9	10	9.8	20	27.0	55	33.8	69	9.3	19	100	204

Knowledge about AIDS: the total score of the results of correct answers are discussed first, then HIV/AIDS knowledge items.

The participants responded correctly to the twenty-one (21) items of knowledge, with a very few reports of "don't know" and "missing" answers. The mean result of correct answers for the twenty-one (21) items of the knowledge of AIDS questions was 13.3 (minimum 3.0, maximum 21.0 and SD 4.0). In terms of scoring in percentages, the scales of scores was as follows: those who scored 75 percent and above were considered to be in the high grade, those who scored between 60-74 percent were considered to be in the middle grade. Those who scored below 60 percent were in the low grade of HIV/AIDS knowledge correct scores-test of knowledge scores versus gender of students (0.5) was not significant.

Of total students (63.4%; Female = 22.6%, Male =40.8%) had scores of high and middle scores, whereas a total of (37%; Female =17.8%, Male =19.2%) had their scores fall in the low score scale, as shown in (Graph 3).



The cross-tabulation of gender versus HIV/AIDS knowledge sum of correct answers (Graph 4) shows that male students had higher scores than females. The cross-tabulation of HIV/AIDS knowledge scores in relation to the type of schools the students attended (Table 5 in Appendix) shows significant results with P-value of 0.004. The scores of students who went to private schools were better than the scores of public school students (Table 5 in Appendix).

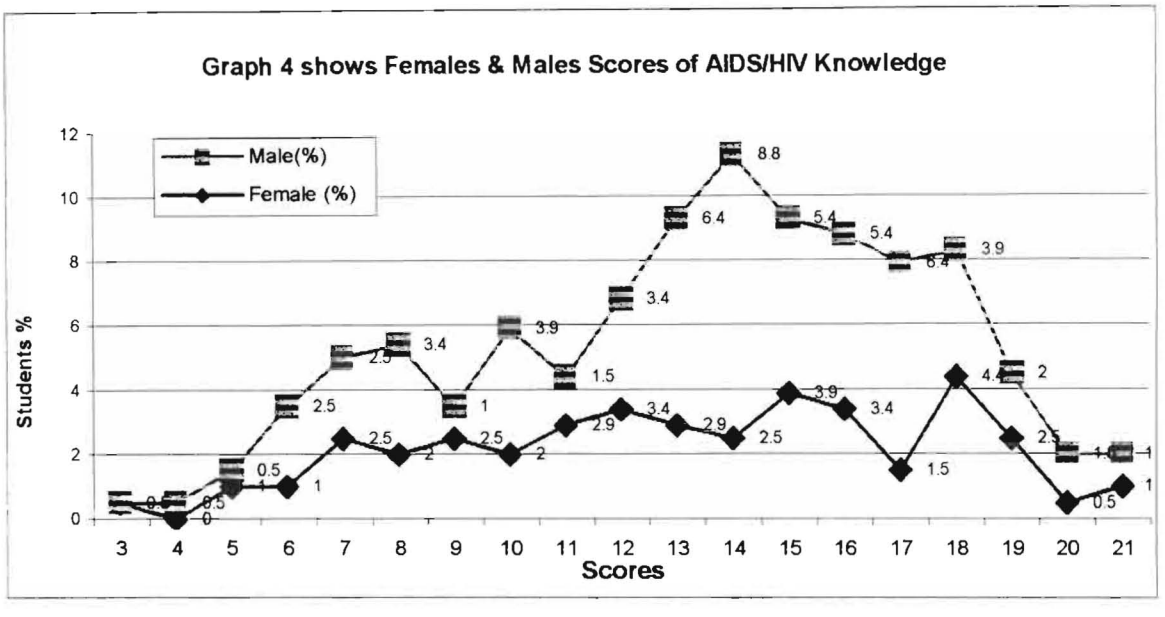


Table 6, shows cross- tabulation of students' HIV/AIDS knowledge scores and their parents' level of education. It is of significance (p-value: 0.001) as it compares the differences in the relationship between knowledge scores and the education of mothers, to that of the fathers (p-value: 0.031). Thus, the students whose mothers were well educated scored better than students whose fathers were as educated as the mothers. Moreover, those students whose parents had above high school scored higher than the rest of students.

Table 6: Students' scores of HIV/AIDS Knowledge VS their mothers' education in percentage.

AIDS/HIV Knowledge Score	Mother's Education P = 0.001							
	Illiterate	Reads & Writes	Elementary	Less than high school	High school	University degree	Above University	Total
3	-	-	0.5	-	-	-	-	0.5
4	-	-	0.5	-	-	-	-	0.5
5	-	-	-	1	-	0.5	-	1.5
6	1	-	-	-	2	0.5	-	3.4
7	1.5	1	-	1.5	0.5	0.5	-	4.9
8	1	-	0.5	0.5	1.5	2	-	5.4
9	0.5	0.5	1	0	0	0.5	1	3.4
10	1	0.5	-	1	0.5	2	1	5.9
11	1	0	0.5	0.5	2.5	-	-	4.4
12	0.5	1.5	-	0.5	1.5	1.5	1.5	6.9
13	0.5	-	1	-	2.9	3.9	1	9.3
14	0.5	0.5	1	0.5	2.9	4.9	1	11.3
15	1	0.5	-	0.5	2.5	4.4	0.5	9.3
16	0.5	0.5	-	1	2.5	3.4	1	8.8
17	-	-	-	1	3.4	3.4	-	7.8
18	-	0.5	-	2	2.9	2.5	0.5	8.3
19	1	-	-	-	1	2	0.5	4.4
20	-	-	-	-	0.5	1	0.5	2
21	-	-	-	-	-	1	1	2
Total	9.8	5.4	4.9	9.8	27	33.8	9.3	100

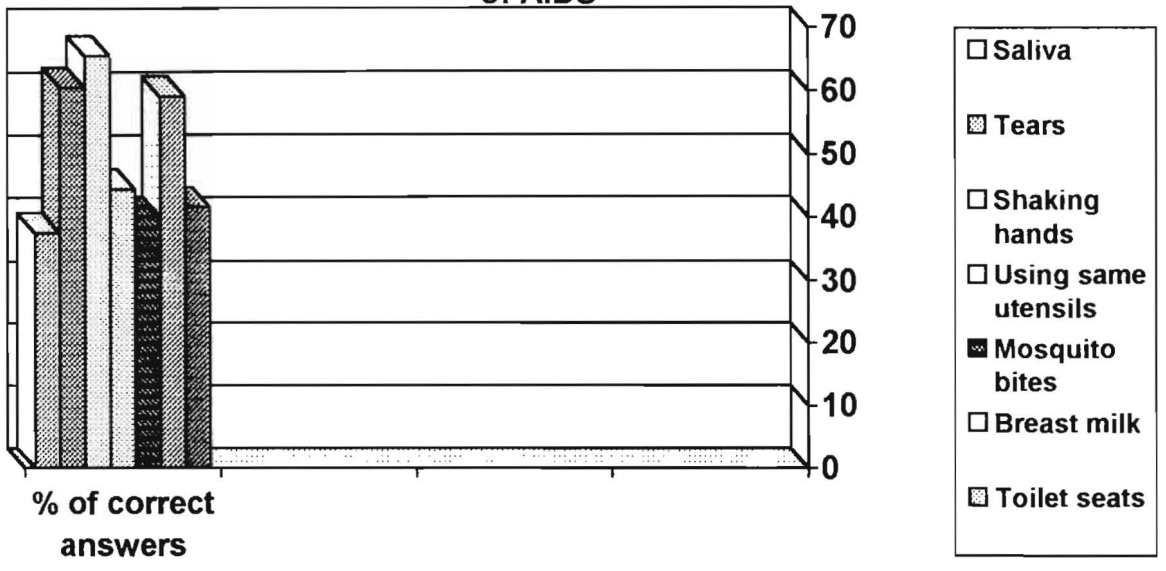
Table 7 (shown in excel-tables in Appendix) provides a description of students' responses to HIV/AIDS knowledge questions:

Results on AIDS immunopathology showed that 87 percent of the participants knew correctly that AIDS was a condition in which the body's immune system was unable to defend itself against foreign substances. The majority of the participants (92%) were well aware that people who receive blood from HIV infected blood transfusion were most likely to contract AIDS. Eighty four percent (84%) were aware of the fact that there is no known cure or vaccine for AIDS, and that people who had AIDS were likely to die (70%).

However, a high percentage had incorrect answers to the question that someone who was HIV sero- positive did not transmit AIDS infection to others. Only 90 participants (45%) gave the correct answer, which required the statement to be declared as false. This was also noted for the question about AIDS being transmitted through the saliva. Only 41 percent knew the correct answer that AIDS was not transmitted through saliva.

Around one third (36.8 %) of the students had the wrong information about transmission of AIDS through mosquito bites. Only 40 percent answered correctly. As for the transmission of AIDS through the toilet seats, 45 percent answered correctly, that AIDS could not be transmitted through toilet seats (Graph 5).

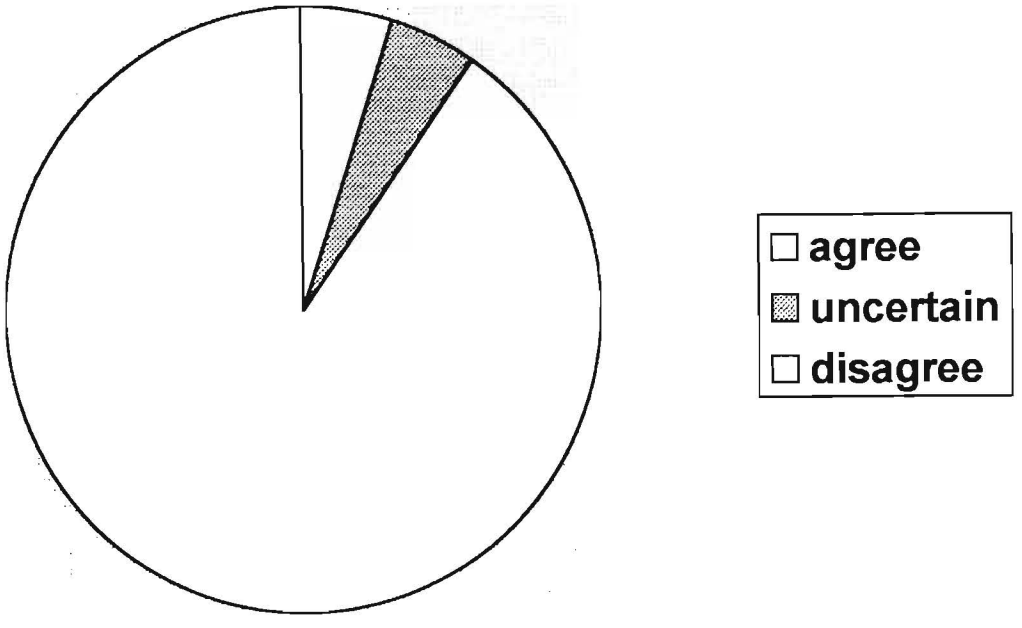
Graph 5: Percentage of correct answers for the transmission of AIDS



Attitudes about AIDS:

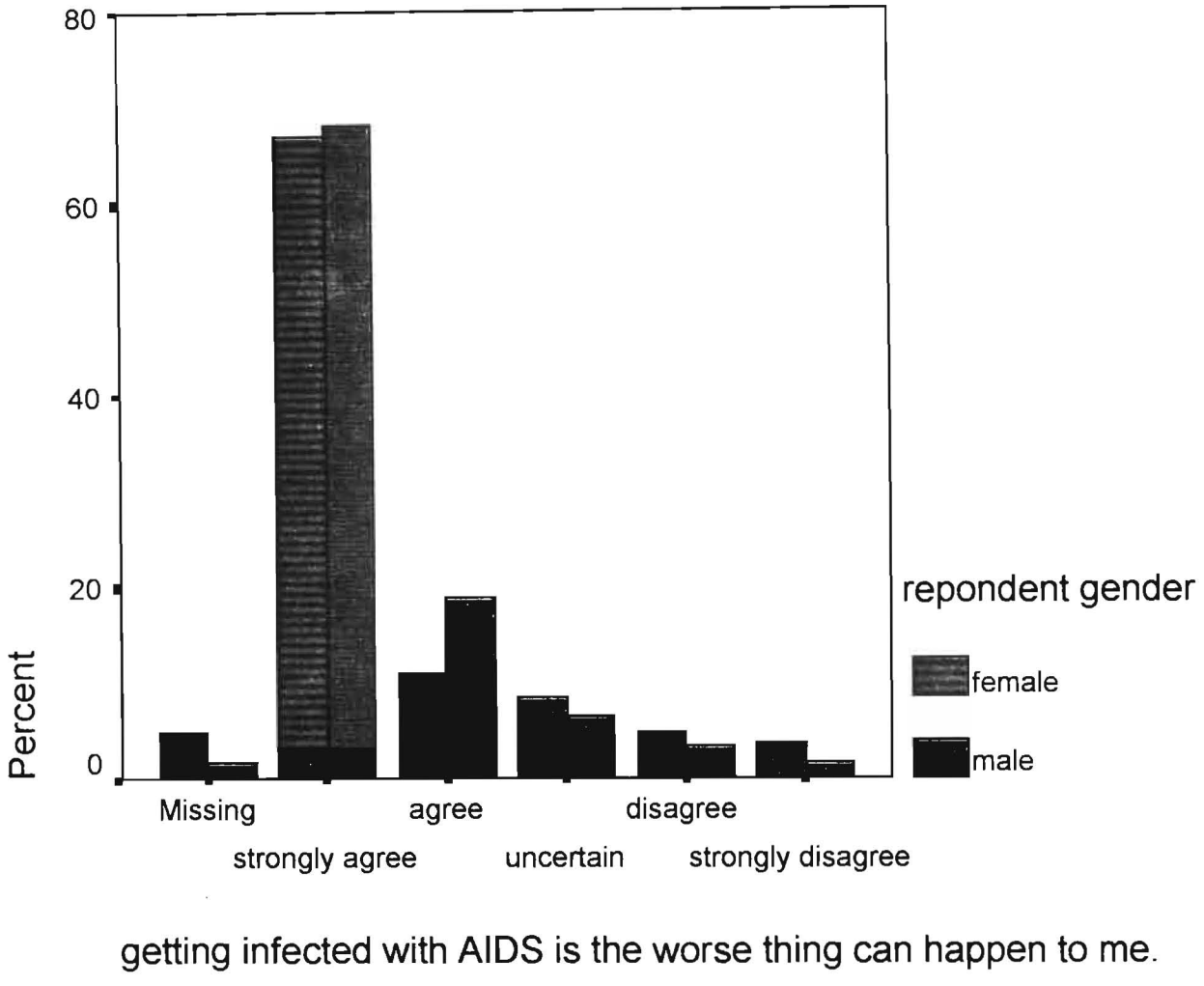
Almost two thirds (55.8%) of participants agreed/strongly agreed that people who contracted AIDS, engaged in immoral behaviour; one-third (20.6%) disagreed/strongly disagreed with this statement. Almost one third of students (29.8 %) agreed/strongly agreed that those who had AIDS were either junkies or gays, while 54.6 percent disagreed/strongly disagreed, which denotes that half of the students were showing positive attitudes towards persons with AIDS. More than eighty percent (82.8 %) of the participants agreed/strongly agreed that people contracted AIDS from heterosexual practices. On the other hand, (9.7 %) disagreed/strongly disagreed. Five percent (5 %) of the participants' agreed/strongly agreed with the statement "Women do not get AIDS" (Graph 6). A high percentage, (90.1%) disagreed/strongly disagreed with the same statement. Students (42.8%) strongly agreed/agreed that living with AIDS infected person was impossible.

Graph 6: Attitude of participants towards women not getting AIDS



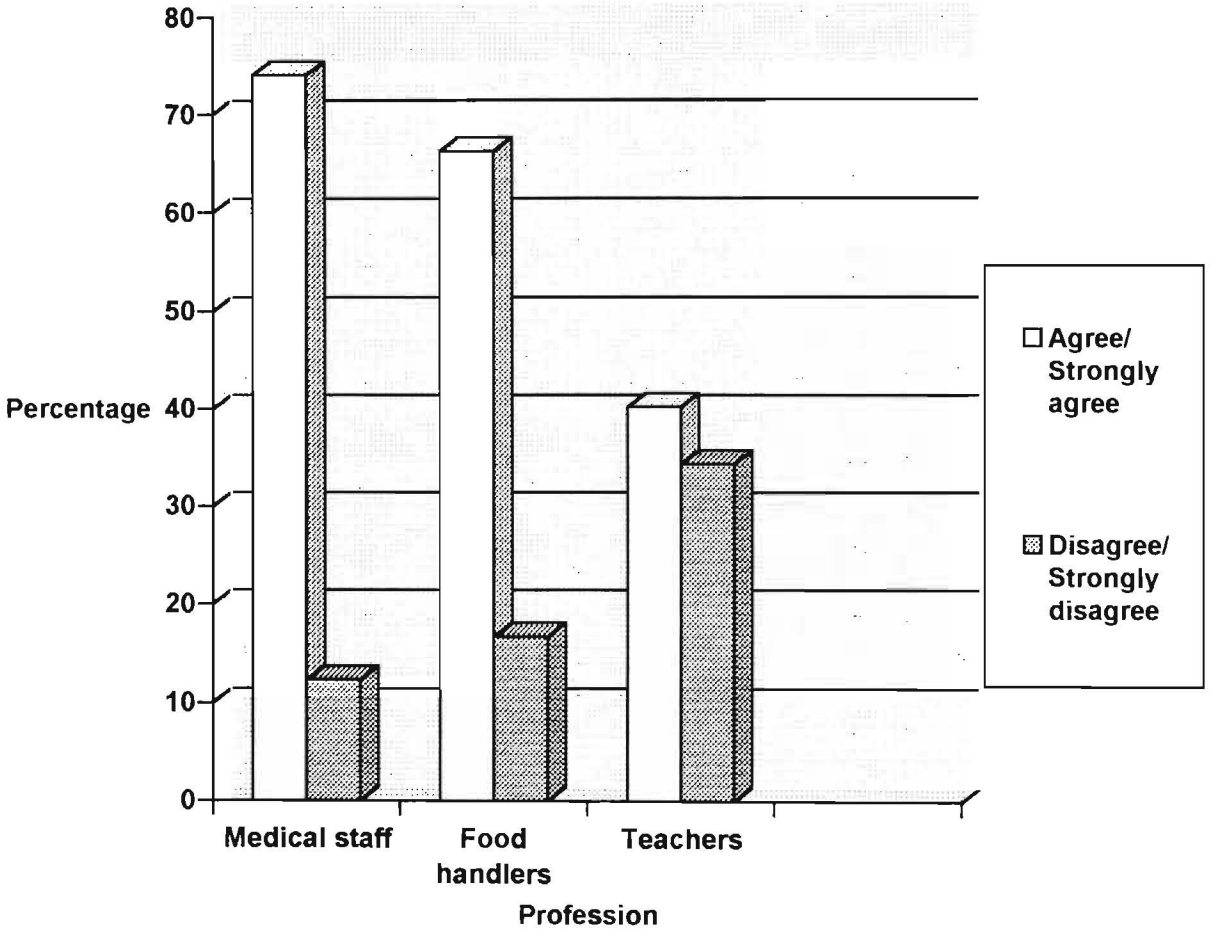
Almost three-quarters of the students (76.8 %) disagreed/strongly disagreed with the statement that children could not contract AIDS, which was a good result since participants knew that AIDS also affected children. Close to sixty percent (59.2 %) of the participants disagreed/strongly disagreed with the statement that people who had AIDS deserved it, while twenty one percent (21%) of participants had the attitude of agreeing/strongly agreeing that they deserved it. The fear of getting infected with AIDS was dominant among participants. About eighty six percent (85.9 %) of participants' agreed/strongly agreed with the statement that getting infected with AIDS was the worst thing that could happen to them (Graph 7).

Graph 7: Attitude of participants towards possible infection with AIDS in percentage

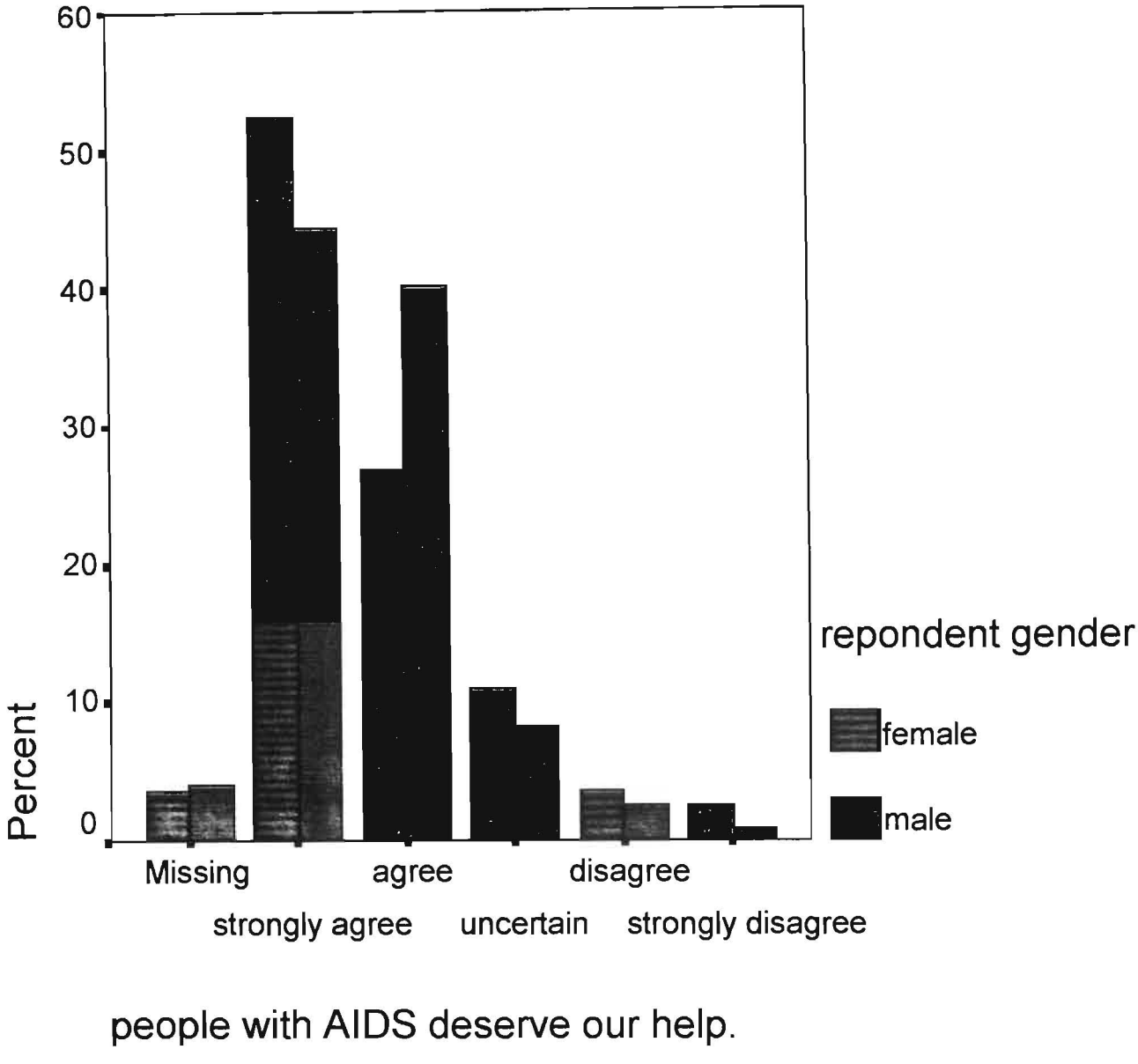


Almost 60 percent (60%) of the participants were for isolating AIDS patients, which may indicate that the stigma of AIDS may be still persisting. False self-assurance of students showed in about forty-six percent (46.1%) of the participants who said that there was no chance that they would contract AIDS. This could be considered dangerous, as they are not accepting the possibility of getting infected. The students' attitudes towards prohibiting medical staff, food handlers, and teachers with AIDS from working are shown in (Graph 8). The highest percentage was for prohibiting medical staff from working. The lowest was for teachers.

GRAPH 8:Attitude towards prohibiting people with AIDS from different professions



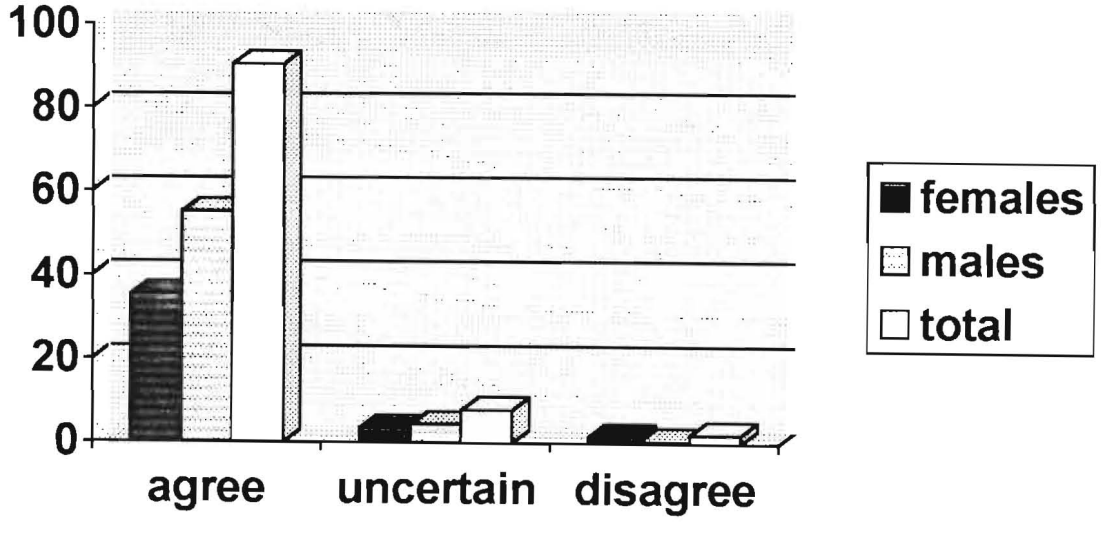
Graph 9: Attitude of participants towards AIDS people deserving help in percentage



Almost one third (33.3%) of participants disagreed/strongly disagreed with the statement that they should treat everyone in the same way, regardless of whether they had AIDS or not. This may denote discriminatory attitudes towards those with AIDS. Almost three-quarters of students (76.9%) agreed that resources should be directed towards preventive measures since AIDS is preventable. This denotes that students were aware of the importance of the role of preventive measures. However, 13.7 percent (13.7%) of them disagreed with the above

statement. This shows that there is a need to provide AIDS education program in schools, especially about the importance of preventive measures. It was encouraging to know that 85.7 percent (85.7%) participants agreed that people with AIDS deserved help (Graph 9). A high percentage of participants strongly agreed /agreed (90.2%) that mandatory HIV blood testing should be done for everyone, including students (Graph 10). Almost 18 percent (17.7%) disagreed with giving treatment to people with AIDS like people with any other disease, which was a very alarming response.

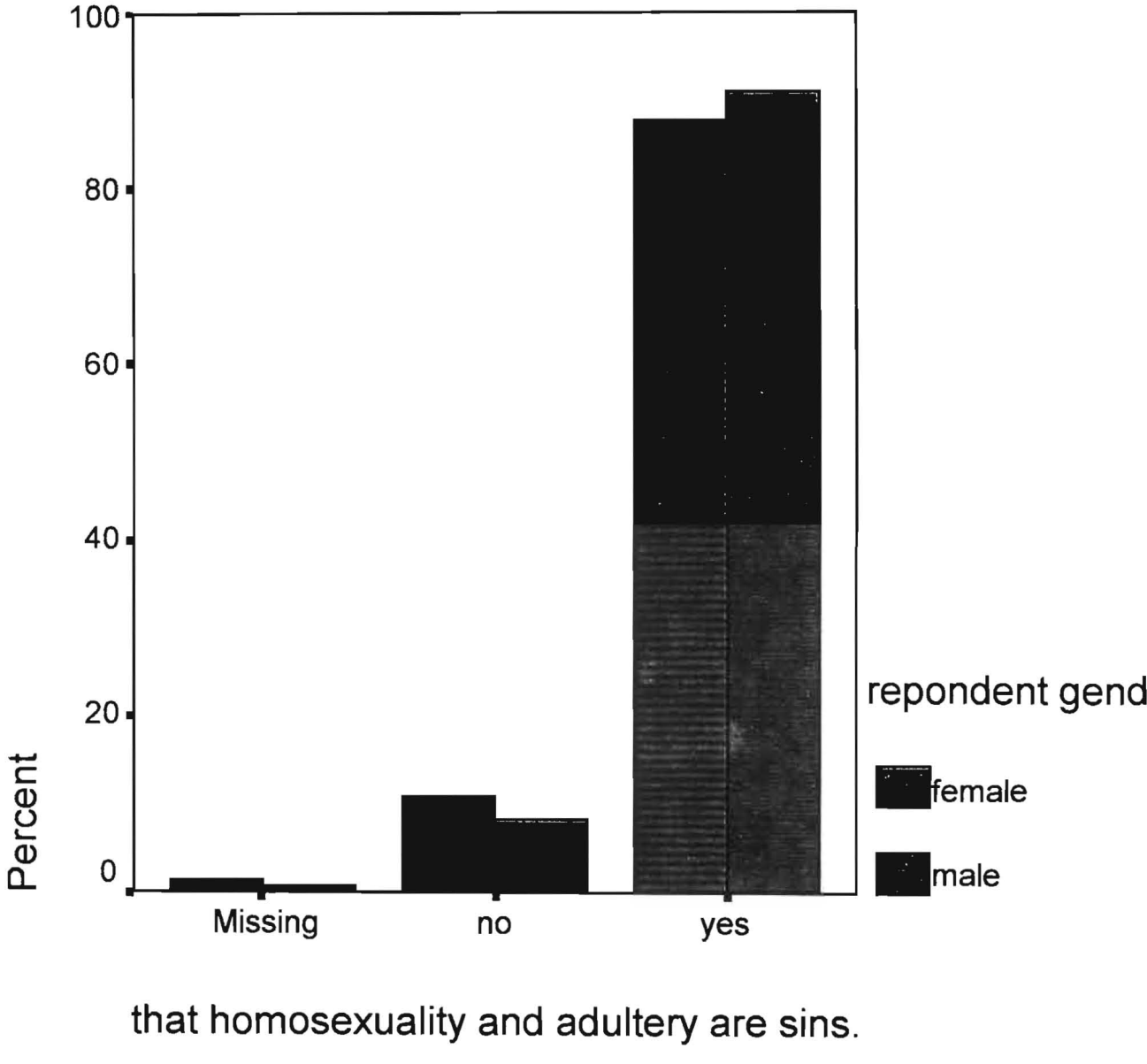
Graph 10: Attitude of participants towards HIV testing in percentage



Beliefs:

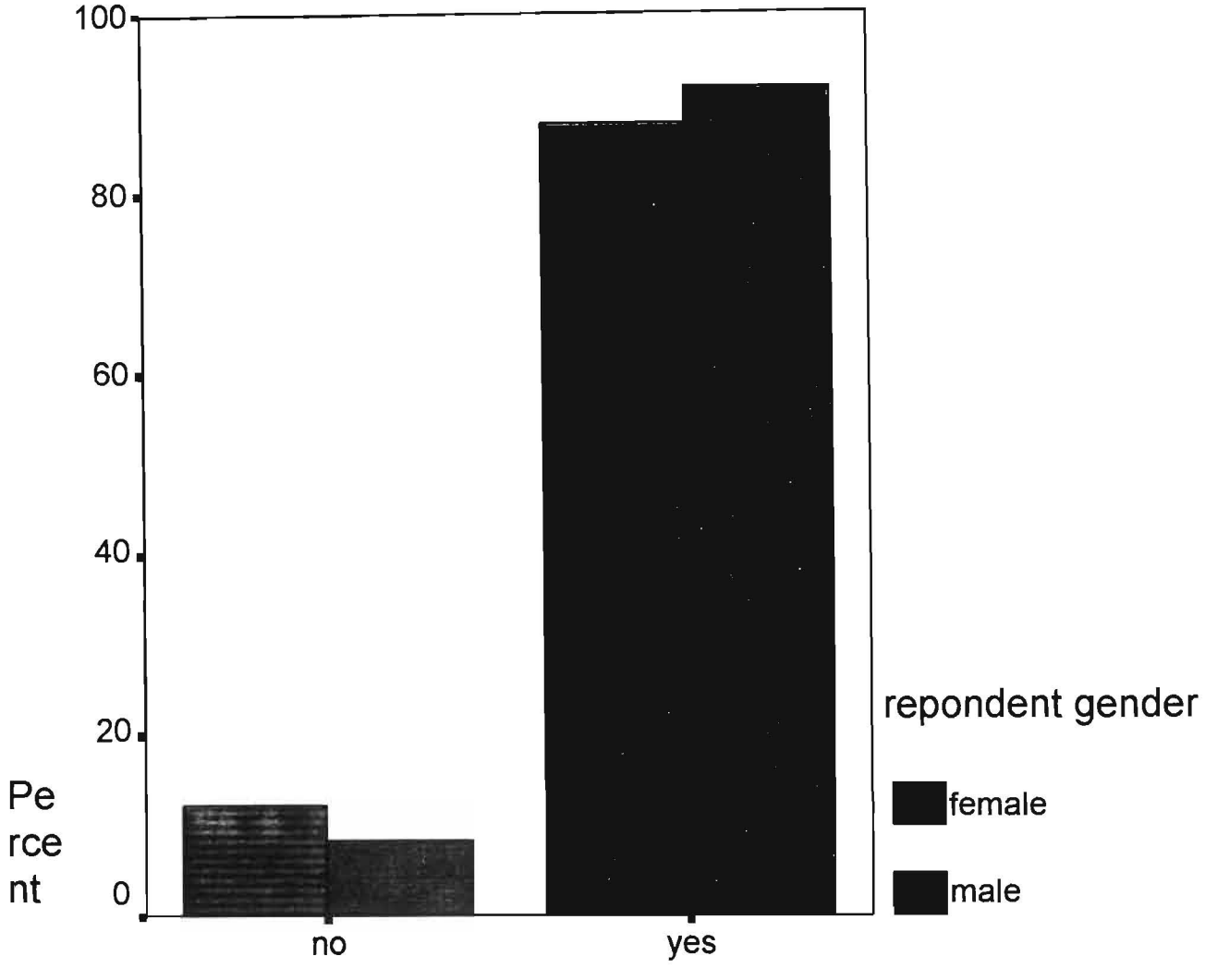
Results showed that 74.5 percent (74.5%) of students believed that AIDS was the wrath of God, while 25.5 percent (25.5%) of students did not believe it to be the case. However, the missing answers for this statement (3.9%) was the highest in the belief question items. About ninety one percent (90.6%) of students believed that adultery and homosexuality were sins and 9.4 percent (9.4%) reported that they did not believe that these were sins (Graph 11).

Graph 11: Beliefs of participants about sins in percentage



Almost two thirds of the students (69%) believed that the behaviour of the individual determined his/her possibility of contracting AIDS, and one third (31%) responded "no" to this belief statement. The majority of students (90.2%) responded "yes" and 9.8 percent (9.8%) responded "no" to the statement that religious beliefs might help in preventing the spread of AIDS (Graph 12).

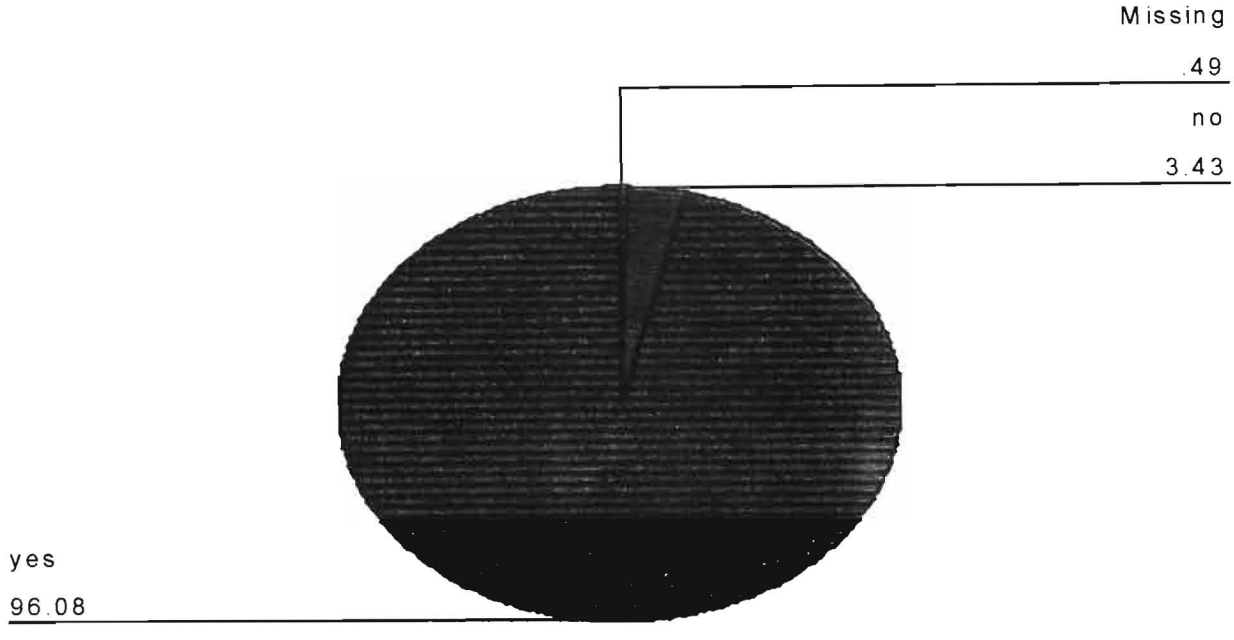
Graph 12: Role of religious beliefs in preventing spread of AIDS in percentage



that religious beliefs may help in preventing spread of AIDS.

With regard to the threat of AIDS, 82.2 percent (82.2%) of students believed that AIDS posed a serious threat to high school students and adolescents; amazingly, 17.8 percent (17.8%) of students did not believe that AIDS was a serious threat. Moreover, 63.7 percent (63.7%) of students believed that AIDS was becoming a serious problem in the Emirates, especially among adolescents, whereas one third of students (36.3%) did not believe it to be so. In responding to " Students should be taught about AIDS in school", the majority (96.6%) said "yes" and (3.4%) answered "no" (Graph 13).

Graph 13: Beliefs of students about teaching AIDS in schools in percentage

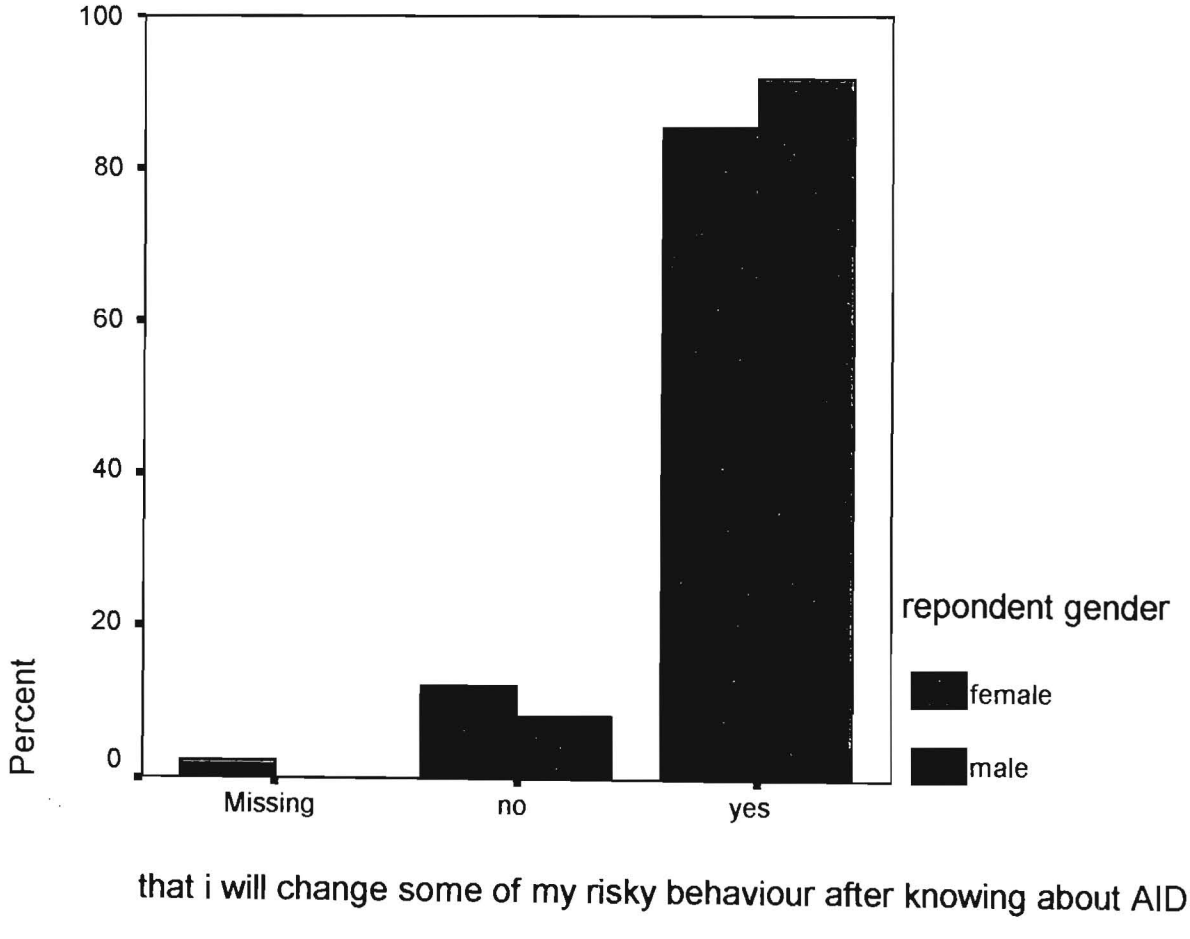


Sixty eight percent (68%) of the respondents answered "yes" to the statement about permitting children with AIDS to attend school, and 32 percent (32%) of the students answered that children with AIDS should not be permitted to attend school. Thirty two percent (32%) was a significant response, and may indicate that they wanted those infected to be isolated or segregated.

Students reported interesting responses about themselves, two thirds (71.4%) of students falsely believed that they had sufficient protection against contracting AIDS, while one third of the students (28.6%) did not believe so. About eighty five percent (84.8%) of the students believed that they could help in preventing the spread of AIDS by influencing their friends'

behaviour, whereas 15.2 percent (15.2%) of students said they could not. A very low percentage of students (33.7%) said they would feel comfortable talking with a friend infected with AIDS, and a high percentage of students (66.3%) reported feeling uncomfortable about it. The majority of the students (90.1%) reported that they would change some of their risky behaviour after knowing about AIDS (Graph 14).

Graph 14: Response of participants towards changing risky behaviour in percentage



It is noteworthy that 86.3 percent (86.3%) of the students answered "yes" to the question about discussing AIDS with teachers, and 70.9 percent (70.9%) said that they could discuss the subject of AIDS with their parents.

Cross-tabulation of gender versus beliefs of students showed the following: within the female students 28 percent (28%) responded "no" to the statement that AIDS poses a serious threat to high school students and adolescents. This was double the percentage of the males who had the same response (10.8%). However 89.2 percent (89.2%) of males responded "yes", which was higher than the females (72.0%), the p value was 0.002, which is highly significant.

Female responses to: "I can discuss AIDS with my parents" showed a lesser percentage than males. Within the female body of students, the percentage was 22.2 percent (22.2%), and 8.9 percent (8.9%) of the total sample who were unable to discuss AIDS. Within males the "no" results were 33.6 percent (33.6%), and from the total, the percentage was (20.3%). There were more "yes" answers among the females (77.8%) compared to the "yes" answers among the males (66.4%). The total sample of "yes" answers was 70.9 percent (70.9%) of whom Females were 31 percent, and Males were 39.9 percent. The p value was 0.080, which was a marginal value.

Sources of information:

Data on the sources of information regarding HIV/AIDS for the respondents is presented in table 11(in Appendix). With regard to radio and television (TV), results showed that 90.9 percent (90.9%) of total students chose radio and TV, of whom 37.1 percent (37.1%) were females, and 53.8 percent (53.8%), were males.

The written material source of information, such as newspaper, magazines, and books represented a popular source for students (89.8%; Female =34.7%, Male = 55.1%). However, (10.2%) of all students said that the written material was not an AIDS source of information.

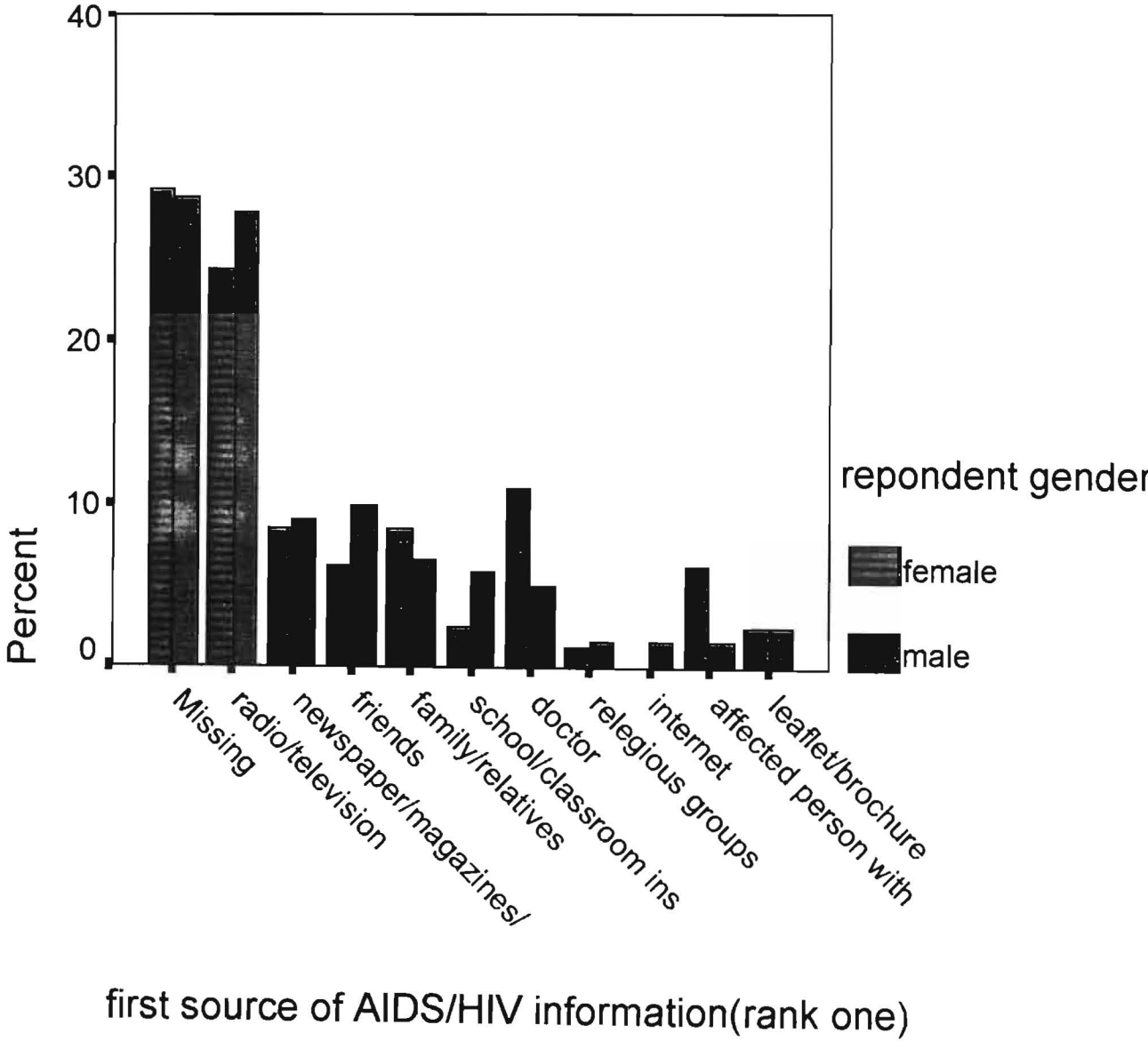
Friends were a source of information four times more (79.0%) compared to none being a source of information (21.0%). This was an expected result, especially among teenagers due to friendships and peer influence. As for school and classroom instructors, 73.5 percent (73.5%) of students selected school and class teachers as sources of information, whereas one quarter of them did not.

One of the advanced technologies is the Internet, which was also chosen as an AIDS source of information by 68.3 percent of students (Female = 26.2%, Male = 42.1%). This may reflect an increase in the use of Internet among adolescents. In the U.A.E schools, the Ministry of Health has assigned physicians and nurses to give students medical care and health education. Two thirds of the students selected physician as a source of information (66.7%), and almost 10 percent less of total students chose nurse as an AIDS information source.

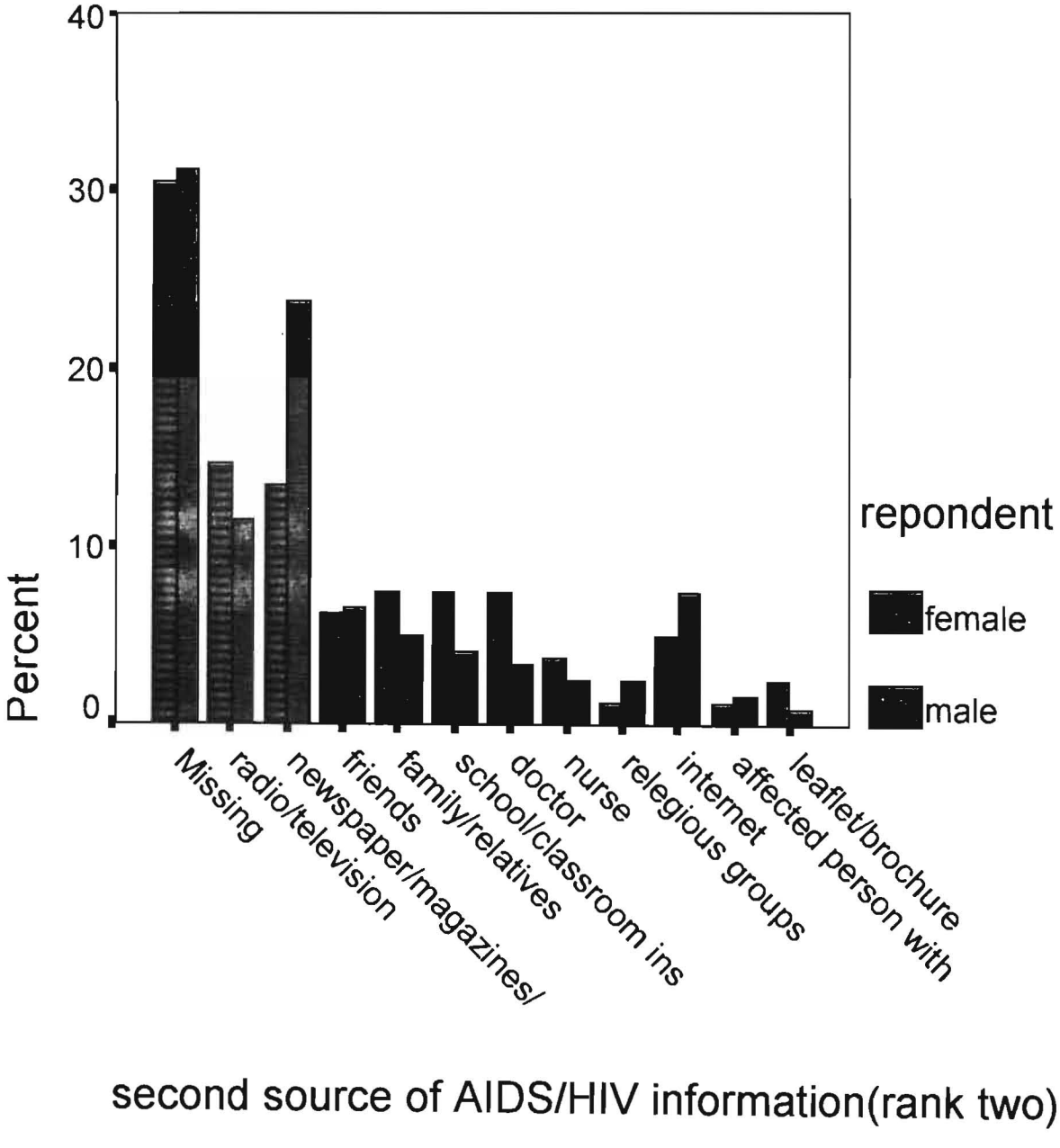
When students ranked their AIDS sources of information, radio and television ranked first (37.2%), an expected result due to the availability and popularity of TV, then newspapers and

magazines (Graph 15). The second in rank were newspapers, magazines and books (28.4%), then radio and TV (Graph 16). The third in rank was radio and TV (20.4%), then friends (13.4%) (Graph 17).

Graph 15: First source of AIDS information versus the gender of the respondents in percentage



Graph 16: Second source of AIDS information versus the gender of the respondents in percentage



Graph 17: Third source of AIDS information versus the gender of the respondents in percentage

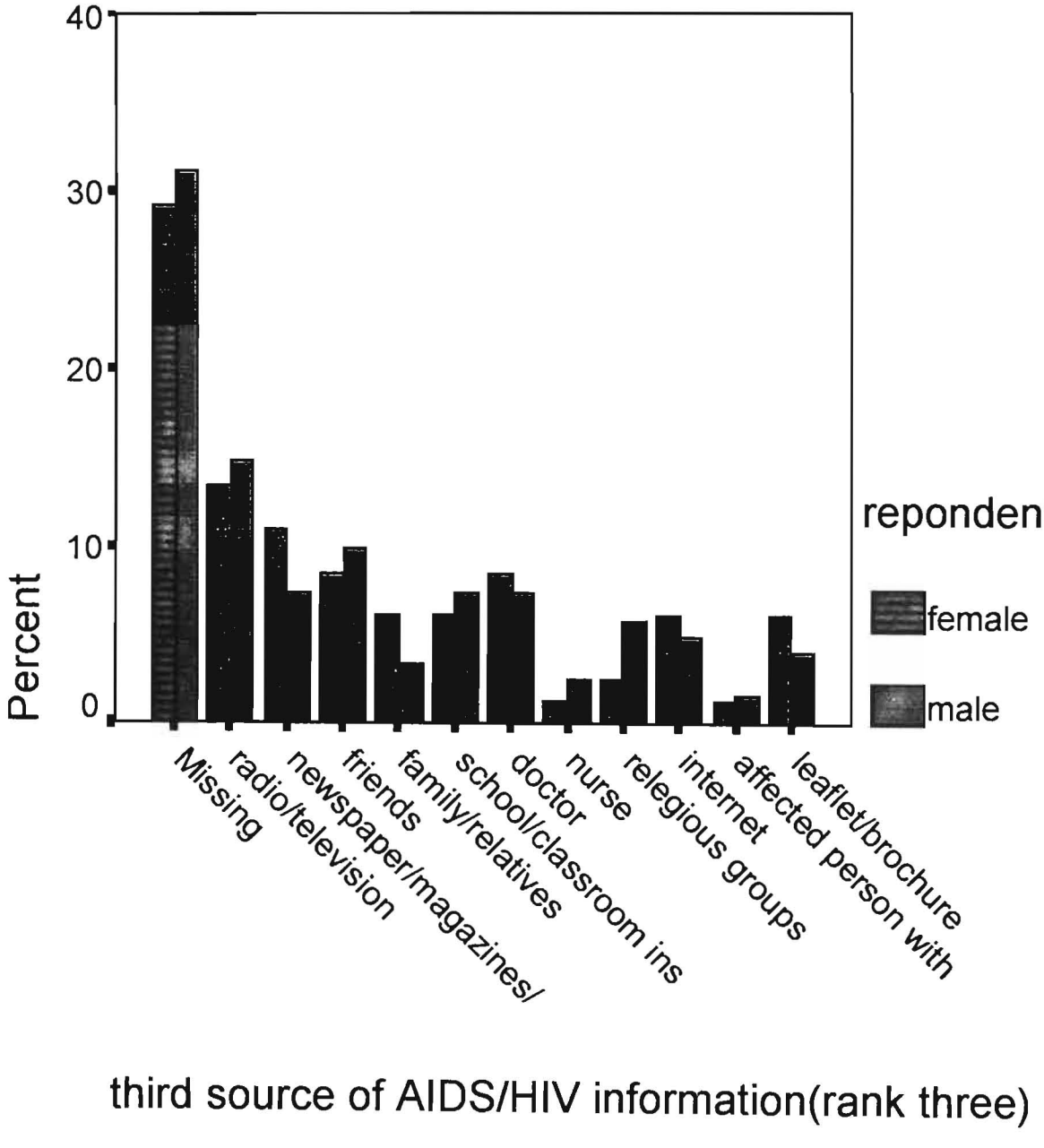


Table 9: AIDS prevention advice by participants in percentage

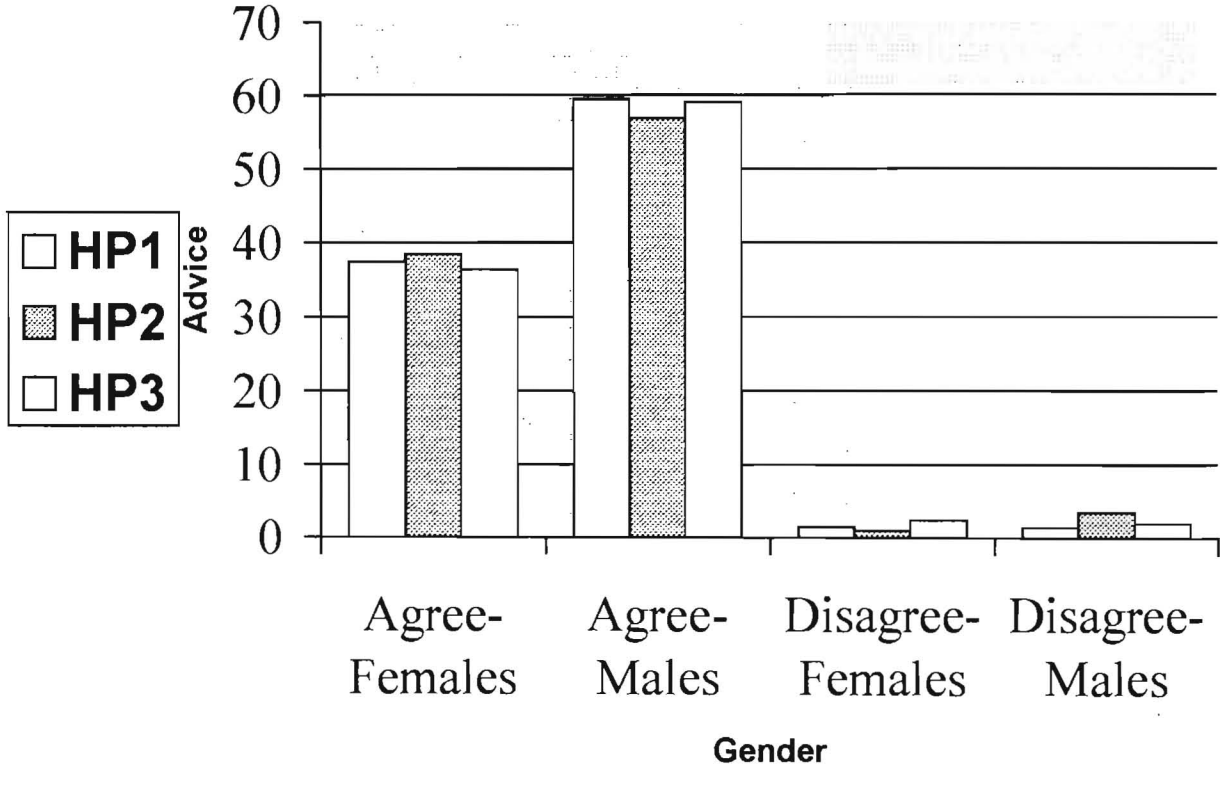
Code	Health Promotion, Disease Prevention:	% Agree	% Disagree	% Missing
	What advice would you give to self, best friend, brother & sister in order to avoid contracting AIDS			
HP1	Not to share needles with others if they (Friend, brother, sister) are drug users.	95.1	2.9	2.0
HP2	To do AIDS blood test before getting married	93.6	4.4	2.0
HP3	To change risky behaviours	92.6	4.4	2.9

As shown in (Graph 18), the results of the participants' responses for AIDS prevention advice, to themselves, to their best friends, and to their brothers and sisters show that a high percentage agreed:

1) Not to share needles with others.
2) To undergo an AIDS blood test before getting married.
3) To change risky behaviours.

The results of those who disagreed with the advice ranged between 2.9 to 4.4 percent (2.9-4.4%) whereas the missing answers ranged between 2 to 2.9 percent (2-2.9%).

Graph 18: AIDS prevention advice by participants in percentage



Summary: This study assessed HIV/AIDS knowledge, attitudes, sources of information and beliefs of 204 high school students in Sharjah city .The assessment tool was in a questionnaire form .The results showed that 87 percent of students knew that AIDS affects the body's immune system and 68.5 percent knew that it is not inherited .The majority of students were aware of people who were most likely to get AIDS (as drug users). However, students lacked information in some areas as HIV/AIDS transmission routes. There was generally a negative attitude towards HIV/AIDS infected people. This was shown in students' responses to some statements as AIDS being a punishment for those infected for their immoral acts. Moreover, students expressed unwillingness to live with HIV/AIDS infected people. Students were positive in applying prevention, facilitating proper treatment for the diseased and believed that HIV/AIDS education in schools is a necessity. Their HIV/AIDS sources of information were mainly from written materials (journals, newspapers &books).

CHAPTER FIVE
DISCUSSION OF THE RESULTS

This HIV/AIDS survey about high school students' knowledge, attitudes, beliefs and sources of information was carried out to assess and to gain an understanding of how students in Sharjah view AIDS. In the study sample, the demographic characteristics of 204 students showed that their ages ranged between 15 and 21. Students were from four schools (2 public, 2 private) with genders, females (40.2%) and males (59.8%). The survey was conducted in spring 2001. Students' nationalities suggested a cosmopolitan, multi-ethnic society. Students were nationals of UAE (28.9%), Arabs (45.5%), Asians (8.8%) and (15.3%) from other nationalities. The religion of students showed that Muslims were (84.3%), Christians were (11.8%), and others were (4%). The students formed more or less a homogenous group since they were mostly from Eastern societal backgrounds, who are supposed to share many religious beliefs, traditions, and customs.

The illiteracy of students' mothers (9.8%) was more than that of fathers (3.4%). Illiteracy among mothers was expected in a young country that gained its independence 30 years ago. It was only then that the UAE started to have schools in all its cities, and for all students. Yet, at the level of high school education, the students 'mothers (27%) were of higher percentage than fathers (10%). Probably this result was due to the presence of women from other countries who had official academic schools back home. The education percentage level differed at the above university level, where the mothers' education dropped down to 9.3 percent (9.3%) compared to that of fathers (24.5%). This variation was probably due to the responsibilities of the women at that age. Women's responsibilities included (as expected in Eastern societies), bearing and rearing children, as well as carrying out household duties.

The education of parents reflected on students' school enrolment, where it was found that the more educated the parents were the more likely their children enrolled in private schools. Probably this can be related to the fact that educated parents had a better income, and so could afford private school fees. Furthermore, non-national students had limited official approval to enrol in public schools.

The majority of students (91.7%) lived with their parents. Few of them reported living with either one or other of the parents. With mothers, the percentage rate was 6.9 percent (6.9%), which may indicate those mothers were either separated or divorced.

Review of research on AIDS knowledge among students suggested that students knew little about HIV/AIDS modes of transmission, as mentioned by Hingson, Strunin, Berlin &Heeren (1990) and it is consistent with the findings of this study.

The students still appeared to be confused about the nature of HIV/AIDS infection. Eighty seven percent (87%) of students (Male =53%, Female =34%), knew that AIDS affected the body's immune system, but only 68.5 percent (Male =33.5; Female =35%) knew that AIDS was not inherited, and that it was not a condition one was born with. Almost eighty four percent (84.1%) of students knew that AIDS as a disease has no known cure or vaccine, and about seventy percent (70.3%) knew that it results in death. Around three-quarters of students (73.7%) knew that AIDS could affect all of us (consistent with Serlo &Aavarinne, 1999).

The gender difference was significant (p=0.0001) in answering, "AIDS is an inherited disease". Where 2 percent (2%) of females and 21 percent (21%) of males had wrong answers. The wrong answers given by the males were ten times more than that of females. This may indicate that females are more oriented in the reproductive health as far as AIDS is concerned. Thus females had fewer wrong answers than their males colleagues.

The gender differences were significant (0.009) about AIDS causing death, where males' correct answers were almost double that of the correct answers given by the females (Male=44.6%; Female =25.7%).

The majority of students were aware of people who were most likely to get AIDS. Drug users were among the people that students thought would contract the disease (81.8%). As well as people who became infected through blood transfusion (92.7%), the elderly (82.6%), child born of a mother with AIDS (88.4%), homosexuals (69.3%), husband from wife and vice versa, (56.3%) and husband from AIDS infected wife and vice versa (consistent with Zimet, Anglin, Lazebnik, Bunch, Williams and Krowchuk, 1989; Serlo and Aavarinne, 1999).

Students should be made aware that heterosexual relationships and drug use are the commonest routes of transmission that was reported in Arab countries (Kaiser daily HIV/AIDS report, 1999). They also need to know that women are at a special risk of AIDS infection from their husbands since cultural norms discourage women from talking about sex. If they get a sexually transmitted disease, they are too embarrassed to seek treatment. Moreover, women in Eastern countries have little control on their sexual life (Kaiser daily HIV/AIDS report, 1999) .So, if their husbands become infected from extra marital relationships or risky practices, these men can pass their HIV to their wives. Students also need to know that if women are HIV/AIDS positive then there is a high possibility of mothers transmitting the virus to their newborn babies.

A high percentage (43.4%) of incorrect answers among all HIV/AIDS knowledge questions was that related to "if someone is HIV-sero positive, he/she doesn't transmit infection to

others". The correct answer was to deny that statement as given by 45.9 percent (45.9%) of students who had the correct answer.

It is clear that students know that AIDS as a disease affects a broad-section of society. Yet, only 62.6 percent (62.6%) of students knew that infected people could not be diagnosed by their looks, since AIDS, as a disease, takes years till its symptoms are apparent (consistent with Anderson et al, 1990, contrary to Al Mulla, Pugh, Hussein &Behrens, 1996). Students demonstrated less knowledge regarding AIDS transmission through casual contact, such as hand shaking (73.6%). The gender difference was with p value of 0.062 since females had lower percentage rate of correct answers than males had (46.7%). That was consistent with other studies (Al-Owaish et al, 1995;Steiner, Sorokin, Schiedermayer &Van Susteren, 1990; Di Clemente, Boyer&Morales, 1988; Haworth, 1998).

Students had the lowest percentage rate of correct answers (41.6%) about saliva, and showed their misconception of whether AIDS is transmitted via saliva. It is understandable that students may be mixed up about it, as in laboratory studies HIV was detected in saliva. However, saliva has not been proven until now to be a transmitting mode of the infection. Great attention should be paid to misconceptions about how HIV/AIDS is transmitted, otherwise discrimination and stigmatisation of AIDS people will continue.

The study results confirm some misconceptions as reported by other researchers (Steiner, Sorokin, Schiedermayer&VanSusteren, 1990; Anderson et al, 1990; Di Clemente, Boyer&Morales, 1988;JAMA, 1990;Al-Owaish et al, 1999), specifically, students' responses to tears (66.7%), using same utensils (48.9%), mosquito bites (44.1%), breast milk (64%), and toilet seats (45.7%).

Negative responses and attitudes towards AIDS and AIDS infected people were strongly linked to students' scores of AIDS knowledge, and in particular to the causes of AIDS and its routes of transmission.

The students' scores of HIV/AIDS knowledge showed that male students had higher scores than that of females. Thus males had more knowledge. Furthermore, students' knowledge scores were higher among those coming from private schools than their peers from public schools. Moreover, students whose parents were educated above high school scored higher. This may give clues to health decision-makers to increase efforts in stressing gender specific AIDS education, and to actively involve the parents in prevention and control plans.
Thus this average score for AIDS knowledge for female students which was lower than that of males, may give a signal to health educators to tailor and specify the AIDS prevention and health messages according to gender of recipients.

Upon examining responses to HIV/AIDS among students, it has been possible to identify some of the attitudes and beliefs in which people with AIDS were stigmatised and were likely to be discriminated against. This will be shown below in the students' views about people with AIDS.

HIV/AIDS was seen by half of the students (55.8%) as a punitive consequence of people engaging in immoral behaviour. Almost one quarter (23.6%) of students was uncertain about it, and students who disagreed were only one fifth of the total sample (20.6%). So there was a higher percentage rate of students with negative attitudes compared to the positive attitudes.

This negativity continued with almost one third of students (29.8%) towards AIDS infected people as students labelled them to be gay or junkies. It would seem from students' answers to these questions that they accused people of AIDS because of their behaviours.

It was noticed that attitudes of students had hardened towards those perceived as practising "High risk" activities.

Heterosexual spread of AIDS seems to be agreed upon by students (82.8%). This is encouraging, since it is supported by Kaiser's report (1999), which showed that people in the Middle East and North Africa were infected primarily with HIV by heterosexual sex, and drug use.

It has been demonstrated that there is a significant relation between gender of students and their attitudes to AIDS diseased people. These were in "women don't get AIDS" with P=0.011," communicating with family in case they had AIDS "(p=0.05), and their attitudes towards prohibiting "teachers from job in case they had AIDS (p=0.029).

Many students (42.8%) expressed unwillingness to live with an AIDS infected person, while 37.3 percent (37.3%) said they were willing to live with them, and 19.9 percent (19.9%) were uncertain (consistent with Steiner, Sorokin, Schiedermayer &VanSusteren, 1990). Forty three percent (43%) of students said that they would not treat them as equally as people with other diseases. This raises many questions to be investigated more in future studies.

Some of the students' social responses and reactions to people with AIDS were biased. For example, 21.4 percent (21.4%) of students stated that infected people deserved their fate. On the other hand, 19.4 percent (19.4%) were uncertain about that. Around sixty percent (59.6%) of students said that people with AIDS should be isolated. They perceived this attitude as

protecting society. This implies discrimination against people with AIDS (consistent with Serlo &Aavarinne, 1999; Steiner, Sorokin, Schiedermayer & VanSusteren, 1990).
The majority (90.2%) of students supported mandatory HIV blood testing for everyone, including him or herself. More than three-quarters (77.7%) of students' attitudes were for preventive measures and focusing resources on prevention of AIDS.

Other data raised questions for further studies and action. For example, almost 46.5 percent (46.5%), i.e. half of the students thought that AIDS wouldn't affect them. This is very critical, since it affects their health, and their attitudes about taking precautions (contrary to what's mentioned by Serlo &Aavarinne, 1999). Their attitudes that they are not at risk of acquiring HIV/AIDS infection are a false self-assurance, and are also alarming. It should be a warning for health educators to take active actions. Although, chi-square analysis indicated no significant result for gender and the perception of AIDS risk. Yet, it was noted that there was a difference between the perception of males who believed they were at an increasing risk of acquiring AIDS compared to females (Female =16.8%, Male =29.7%) who believed they were not at risk of AIDS. Only 30.2 percent (30.2%) of whom (Female =13.9%, Male=16.3%) of students were right in agreeing that there was a chance for them to get AIDS (consistent with Serlo &Aavarinne, 1999).

Students, particularly males, seemed to have exaggerated fears about the infectiousness of HIV/AIDS, which might have affected their responses to medical treatment availability, and made them suggest that people infected with AIDS should be quarantined and isolated. May be after introducing a curriculum about HIV/AIDS and explaining how AIDS is transmitted, these students would be able to realise that AIDS can affect everyone, and would learn how fast – spreading HIV/AIDS really is, and that they should not discriminate against those who

are infected. Moreover, students would learn that nobody is immune from AIDS, including themselves. It is very important that students learn that HIV infection, which causes AIDS, is associated with behaviours that involve exchange of blood, semen and vaginal secretions. So, as a way of preventing and controlling the spread of AIDS, it is very important to encourage students, and people in general, to modify those risky behaviours, and to take precautions related to AIDS transmission.

In so far as prohibiting people with AIDS from continuing in their jobs, prohibiting infected medical staff was highly supported by the students (79.9%; Female=27.6%, Male=48.3%). Next came food-handlers who were expected to be prohibited by 69.4% of the students (Female=24.7%, Male=44.7%). On the other hand, students (44.1%; Female=12.4%, Male=31.7%) were more tolerant towards infected teachers remaining in their jobs Most students perceived AIDS as a serious disease, and 85.9 percent (85.9%; Female =32.3%, Male =53.5%) reported that they themselves were very afraid of getting AIDS by expressing that it is the worst thing that could happen to them.

Students (65.9%; Male =39.1%, Female =26.7%) were in agreement that they would tell their families if they became infected with HIV/AIDS. The high percentage rate was expected, since in Arab countries and Eastern societies, the families and communities are generally, supportive settings for illnesses management. This supportive spirit was revealed by students' responses in their sympathy shown towards patients with AIDS, when they stated that AIDS was like any other illness, and that people with AIDS deserved to be treated well (74%), and that people with AIDS deserved their help (85.7%). On the other hand, (34%) said that they would not tell their families if they became infected with AIDS. Attitudes of students can be influenced by their families.

After all, the family responses to infected relatives may be influenced negatively by community perceptions of AIDS, "the Unknown disease"(Salome, 2000). These families who may have HIV/AIDS infected relatives may fear isolation within the community. This leads to hiding of the disease or some immoral acts towards the relatives infected with AIDS, as well as causing stress and depression within the family for facing a hopeless case and being unable to help them.

The family and the community may respond negatively towards people with AIDS because infected people may be seen as a source of infection and threat to family, and community health. This may explain, on the one hand, why some families repudiate their infected relatives, and on the other hand, it explains the presence of fear among students. These families may be labelled by the community as having "deviant relatives." It may also affect their reputation, in that people may accuse them of not raising their children properly, according to the norms, customs and traditions of their conservative society. Furthermore, economic considerations, and productivity have a great impact on the acceptance of people with the disease. Since the advent of AIDS, infected people are not granted any employment, and if they are expatriates, they are sent back to their countries.
These people, such as Asians, Africans and South Americans return to their countries, having no jobs, and no money to buy the expensive medications for controlling the advancement of AIDS symptoms. They are then a burden on their economically poor countries.

A high percentage (96.6%) of students indicated that they believed that they should be taught about AIDS in schools, so that they become more familiar with AIDS as a disease. They felt that more education is needed. It is important for decision-makers, in health and education, to

include in the curriculum health promotion and knowledge about diseases in general, and more specifically about AIDS, especially as students have demanded it (consistent with Serlo&Aavarinne, 1999).

However, the author's concern about students' responses was high, upon examining their responses about the rights of AIDS infected children to attend schools. One third (32%) of students denied them that right (contrary to Steiner, Sorokin, Schiedermayer, &VanSusteren, 1990). This response suggests that they (students) want these children to be segregated, which reveal students' fears of these children, or else, the students are not properly prepared to handle their fears of HIV infection. It may also denote that students are just revealing what they have heard from their peers, or their teachers. Thus, health and safety issues should be discussed with students and teachers, in order to alleviate their fears, and in order not to add more suffering to the innocent children, who are already suffering from the disease.

Students (63.7%) stated that AIDS was becoming a serious problem in the Emirates, especially among adolescents. Unluckily, there are no official documents to show AIDS figures. However, the most important way to implement, effectively and efficiently, the HIV/AIDS prevention and control programs is to make people aware of AIDS, and to admit that AIDS exists.

In the assessment of students' beliefs, a significantly greater percentage of males, compared to females believed they were sufficiently protected from acquiring AIDS (Male=44.3%; Female=27.1%). This percentage rate (71.4%) of students believing themselves protected was less than their (82.2%) percentage rating of their beliefs about AIDS posing a threat to high school students (Female=29.2%, Male=53%, P=0.002)

The false self-assurance of having enough protection shows minimal concern about contracting HIV/AIDS. It may decrease the level of following safety precautions as recommended, and it may lower the appreciation of how dangerous the disease is, and the behaviours that put individuals at risk of contracting HIV/AIDS. Moreover, it may affect their interests in following health messages, or in carrying on discussions about AIDS with others.

Findings of the survey showed that 86.3 percent (86.3%) of students believed that they could discuss the subject of AIDS with their teachers. Almost 71 percent of them (Male=39.9%, Female=31%)-a lesser percentage- said they could discuss it with their parents, whereas 29.1 percent (29.1%) of whom (Male=20.2%, Female =8.9%, P=0.008) said they cannot talk about AIDS with parents (consistent with that in JAMA, 1990). The reluctance to discuss the subject of AIDS might be due to inhibitions about it felt by students, teachers and parents.

The wide spread beliefs among the students (74.5%) that AIDS is a sign of the "Anger of God"(consistent with Serlo &Aavarinne, 1999), may lead to a kind of social discrimination against people with AIDS, in societies such as the UAE, and other Arab countries. This belief (and other beliefs) might be a factor that prevents people from being tested voluntarily for HIV, and prevents them from receiving care. This also applies to other sexually transmitted diseases.

Perhaps this could explain why there are many non-compliance cases to treatment among HIV/AIDS people. This is noticed in the gradual decrease of people going to the hospital pharmacy, in the absence of people coming to have their HIV antiviral drugs, and in the decrease in the number of people going to the laboratory, where they are supposed to do CD4 immunity tests. Exact figures of the non-compliance need to be assessed thoroughly

It is very important to understand people with AIDS, and feel for them. HIV positive people feel themselves a danger to the community, and are afraid of being stigmatised by others. They might wish to die before any body else gets to know about their disease, which might be a main reason for their non-compliance, and for not reporting to the pharmacy or laboratory. This situation requires proper community awareness, and extensive counselling for patients and their families, in order to lessen, and in future, control social discrimination, and ensure that treatments and follow ups of patients are carried out more effectively, with empathy and understanding.

Students' attitudes reflected a relationship between AIDS and people whose social and sexual behaviours did not meet with public approval. In this study, 90.6 percent (90.6%) of students believed that homosexuality and adultery were sins, and 69 percent (69%) of students believed that the behaviour of the individuals determines his/her possibility of contracting AIDS. Moreover, 69 percent (69%), of whom (Male =40.9%, Female =28.1%) of students believed that the possibility of an individual contacting AIDS was determined by the behaviour of that individual. This association was seen in their attitudes when they pointed out "people get AIDS by engaging in immoral behaviour" and "anybody with AIDS is either gay or a junkie". Perhaps these beliefs and attitudes mirror our society, and maybe from students' responses we could get an explanation of the 'AIDS stigma' in Arab societies about AIDS, and HIV/AIDS positive people. This was also reported in literature (Salome, 2000; Kaiser, 1999).

The students' attitudes about homosexuals, and about adultery may be seen, and used positively, as well. It was interesting to note that students (90.6%) believed that adultery and

homosexuality were sins. These attitudes may have important implications for health messages in addressing their beliefs, since the Arab world strictly prohibits pre-marriage sex, adultery, homosexuality and drug abuse. This is supported by Kaiser Daily HIV/AIDS report, which points out that "taboos smother HIV education efforts" (1999).

Moreover, the majority (90.2%) of students believed that religious beliefs had an important role in preventing the spread of AIDS. By using religious beliefs, health messages could be more effective.

Sources of AIDS information were associated more with student's reading skills, i.e. newspaper, magazines, and books. Students ranked them as their first sources of information (consistent with Serlo &Aavarinne, 1999;Mathews, Richardson, Price &Williams, 1990).

Most (90.9%), of whom (Male=53.8 %, Female=37.1 %, P=0.045) of students reported that they received their information about AIDS from the media. Their AIDS information was via radio and television (89.9%) of whom (Male=55.1%, Female=34.7%), from newspapers, magazines, and books (75.5%), of whom (Male=44.6%, Female=31%) and via leaflets and brochures. The findings are consistent with other literature (Ndlovu&Sihlangu, 1992).

Media was the most important source of AIDS information for students; thus, media has an important and constructive role to play. If the media were to present inaccurate or incomplete information about AIDS as a threatening disease, and didn't react to AIDS infected people in a caring and humane way, then it would have failed in its role. It is very important for the media to be the channel for decreasing stigmatisation, and alleviating the sufferings of those infected with AIDS.

The fact that only 73.5 percent of students (Male =45.9%, Female =27.6%, P=0.099) reported that schools and teachers were their sources of information could be attributed to the inhibitions in delivering information openly and freely about AIDS to the public, and to students. This could be due to fears of staff losing their jobs for tackling a sensitive topic like AIDS. It could also be attributed to resources limitations, as there is a shortage of staff covering the health education. The limitations include the abilities and the competence of staff to carry efficiently and effectively health education programs, which target the students' needs, their physical and developmental growth, and their psychosocial development. This also was repeated in relatively low percentage rate of students (66.7%) who chose the health staff (Male =38.8%, Female =27.9%); physicians (63.1%; Male =38.8%, Female =25.1%); family and relatives, (61.1%; Male =41.1%, Female =20%, P=0.034) chose religious people.

Nurses had the lowest percentage (57%; Male =33%, Female =24%) as students' sources of AIDS information. This could perhaps be due to mistrust, arising from a lack of a confidential personal relationship with a physician or religious group. This could discourage students from resorting to physicians and religious groups for information, or health advice. Authority figures like parents, teachers, health care professionals, and the religious people, did not emerge as significant sources of AIDS information (Ndlovu and Sihlangu, 1992, had the same findings).

Religious people have a chance to be more active in preventing the spread of HIV/AIDS by advising, and encouraging people who attend mosques, churches, or other religious places to adhere to religious principles, especially in such matters as pre-marital sexual relationships, homosexuality, adultery, drug use, and alcohol consumption, as these can put people's health

at risk. It is also important that religious people encourage virginity for both males and females, and encourages them to comply with social norms, values and ethics.

About forty percent (39.4%) of students (Male =23.3%, Female =16.1%) obtained their information from people infected with AIDS. So, while students had limited contact with AIDS infected people, it also shows that some of them were in contact with HIV/AIDS people.

What this study has highlighted is the importance of perceived risk and perceived self – efficacy among students. This was shown in their responses to their abilities or intentions to advise themselves, their brother, sisters and friends about not sharing injections, undergoing pre-marital blood testing, and the readiness to change risky behaviours. All these were agreed upon by the majority of students as a way to AIDS disease prevention, and health promotion.

Summary of Discussion:

The findings of this study demonstrate that on average, students had a fairly high level of HIV/AIDS knowledge. They had positive attitudes towards HIV/AIDS infected persons, and had high level of intentions for taking protective behaviours. They perceived themselves at moderate risk of acquiring HIV/AIDS. Misconceptions about AIDS are still apparent.

Recommendations:

Lawrence and Lawrence (1989), and others concluded from the research findings that there is a positive correlation between knowledge about AIDS and a positive attitude towards AIDS – related issues (Pederson, 1993). Therefore, by increasing knowledge we can expect more positive attitudes from people, including students, towards people with AIDS.

The recommendations put forward as a result of this study are in two parts:

1) It is important to have further studies and research.
2) It is important to stress disease prevention and health promotion in the form of educational programs about AIDS.

For Students:

Effective HIV/AIDS prevention programs for teenagers are in demand, as long as cures for HIV are yet to be discovered. Adolescents in the Emirates, like adolescents in different parts of the world, engage in adventurous behaviours, so prevention efforts must continue to expand and target the adolescents and school students. Giving messages, or providing information only cannot be effective, if programs do not include assisting adolescents in adopting behaviour skills that would reduce the risks of contracting HIV/AIDS. This program, which should be in the curriculum as it was tried in many schools in USA, should include at least an individual HIV/AIDS prevention counselling, a small group behaviour change intervention, voluntary HIV testing sessions, as well as orientation on pre-marital testing and counselling. The single sessions can be planned according to need assessment of students.

The small group intervention may provide:

Information about HIV/AIDS and knowledge that can be used to reduce HIV/AIDS risk.

Decision-making, communication and assertiveness skills training and life-skills. These skills should be designed to help students recognise, manage, avoid, or leave risky situations.

Negotiation skills.

Instruction and perhaps demonstration on proper use of barrier protection.

Peer group support. These small-group behaviour change interventions can be allocated one hour for every topic.

The school health clinic doctors and nurses are to be oriented, trained and requested to consider these interventions as an attempt to influence adolescent's knowledge, attitudes and beliefs, and to enrich their health information resources. This program is recommended to be implemented by teachers, and health care staff who are assigned to schools.

Also more recreation centres are recommended in order to redirect adolescents' activities and energies in a healthy-life style and to shape their behaviours. This program already exists but needs more activation.

To help allay student's fears and modify their attitudes about AIDS infected people, there should be a great emphasis placed on ethics and human values in their education. For example, structured controversy sessions should be set for students where students will be divided in small groups and carry an interactive education. In these sessions the students should argue both for and against a position or a health issue, such as, AIDS infection and social stigma. Then students supervised by teachers, social workers, and health care professionals should be helped in their attempts to reach consensus on the given position.

Furthermore, it would be useful to have hot phone lines for adolescents to help them deal with their problems, concerns and direct them not to engage in drugs, unsafe sex and other risky behaviours that can endanger their lives, and have serious consequences on their communities.

Peer educators (scaffolding) should also be adopted in programs of disease prevention and health promotion for adolescents.

As a result of this survey, other recommendations are:

A need (globally) for friendly preventive health services for adolescents.

Counselling adolescents on health issues, mainly on sexuality, appropriate age life skills, risky behaviour prevention, negotiation and empowerment skills, and how to deal with social pressures and influences.

3) Proper health education programs for students and adolescents to raise their health awareness, generally, and more specifically about HIV/AIDS. Although a life-skills course was included in the schools curriculum last year, the program, however, ended in failure for many reasons. So it is recommended that specialised people deliver these kinds of programs, such as life-skills program, in order to have better results for students' sake.

Recommendations for Health Care Workers (HCWs)

The recommendations suggested here are to encourage HCWs to have a more active role in HIV/AIDS prevention, education and counselling with students.

Following infection control precautions.

Availability of safety devices and strategies for safer disposal of contaminated items.

Having plans for post-exposure to HIV/AIDS.

Training, monitoring and reporting HIV/AIDS exposures should be of high importance in implementation as well as to have continuous administrative support for HCWs in case of exposure and infection.

Awareness campaigns to be activated more, and should involve adolescents in activities of health promotion and disease prevention. Factual information and health education should increase through TV and newspapers.

There is a need to train teachers, health care workers and other members of school staff in how to inspire trust among students, give correct health information, and empower students. There is also is a need to design and implement health education programs and preventive – promotive strategies in their approaches in order to have a healthy young generation, which will grow into healthy men and women.

For parents:

Parents have an important and powerful role to play in health promotion and disease prevention. Efforts need to be directed at parents in order to empower them to overcome inhibitions, or reluctance in assuming their role as a model of good behaviour, and a source of information to their children, especially in building trusting – relationships, security, and helping their children about perceived judgement attitudes towards AIDS infected individuals. This can be achieved by having better communication channels between adolescents and their parents, and other family members. Parents and family members play an important role, and they have a powerful position to shape adolescents' lives mainly through their knowledge, beliefs, attitudes, and the support they provide to their off spring.

Community:

The opinion leaders (political and religious) should provide more commitment and more active and effective efforts. Furthermore, role models such as actors, sports heroes' etc... should participate in the AIDS prevention and control programs in the Emirates. This can be attained by increasing community participation and ownership in the AIDS preventive program, after increasing AIDS awareness of people and sense of involvement in health issues.

A study to evaluate teachers and health workers in schools is recommended, in order to asses whether they are prepared in such a manner so as to adequately understand and effectively address health related issues (such as AIDS), that might affect children and adolescents, especially students in the new millennium.

A study to asses the developmental and psychological aspects of adolescents' health behaviour in order to help in designing more effective interventions.

Using a Japanese health education experience, to set a program for training some groups in the community to spread AIDS awareness messages to their clients, while offering them their services. According to the Japanese model, these groups include beauty saloons barbers, and tailors. I recommend adding coffee shops and shopping centres, where most adolescents meet in large groups.

It is very important that all preventive interventions or educational activities for AIDS should be culturally sensitive. Otherwise all planned activities would end in failure. For example, condom free distribution, and exchanging needles and syringes are not at all applicable in UAE society.

Continued research is needed to be done on larger groups of students in all seven Emirates, and among different school levels, starting at sixth grade. Studies should also include teachers, health care staff, and adolescents who do not attend schools, in order to explore their knowledge, attitudes, beliefs, and practices. Research is needed also to assess the factors that influence adolescents and students in order to reduce their risky behaviours, especially that related to AIDS.

Counselling services must be made available in all health facilities, and it is important to open clinics for adolescents to provide care and counselling for them.

More health education programs are suggested to target those who travel abroad for business matters or tourism.

Conclusion :

Overall, the students in this study had a good knowledge, and some positive attitudes about AIDS. However, the concerns they expressed in relation to their fears of sharing, or living with HIV/AIDS infected individuals, and some of their beliefs, need to be addressed more in the education prevention programs.

Students need to be more knowledgeable about HIV/AIDS prevention. They have already revealed desires for seeking more knowledge, especially as they are feeling the increasing risk of HIV/AIDS among adolescents in Emirates.

As the majority agree with the advice given about disease prevention, their involvement will be welcomed in extending and expanding their roles for peer education and in health promotion.

The findings of this study point to several implementations for HIV/AIDS prevention programs, as well as the gaps in students' knowledge, misconceptions, some negative attitudes, and some beliefs that need to be addressed more in future research.

Further studies are needed to determine the different ways to influence adolescents to reduce their risks of acquiring HIV/AIDS. Prevention through education and behaviour modification is the best way to combat HIV/AIDS infection, in the absence of a vaccine or cure. Moreover, education about AIDS should start in the early years of adolescence. On the whole, high school students in Sharjah City were found to be positive in their attitudes, although some had fears about the disease, and others stigmatised those who were infected.

In order to increase the success of therapeutic interventions against AIDS, it is imperative for health care workers to know and consider the psycho – social cultural factors in therapy as well. The multiplicity of approaches and inclusion of many parties in the prevention of AIDS is of great importance.

Self – confidence may play a role in an adolescent's ability to participate in HIV/AIDS risk reduction and prevention programs. This study reveals that factors, which influence students' knowledge, attitudes, and beliefs, should be more organised. Emphasis on approaches should be more gender and age specific, for example, in AIDS awareness programs, especially as students are willing, and are asking for educational programs to be implemented in their schools.

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Appendix A:

Abbreviations:

UAE: United Arab Emirates.

JAN: Journal of Advanced Nursing.

CDC: Centers for Disease Control and prevention.

M: Male.

F: Female.

JAMA: The Journal of American Association.

MJOA: The Medical Journal OF Australia.

JOSH: The Journal of School Health.

UN: United Nation.

USA: United States of America.

IV: Intravenous.

HIV: Human Immuno Deficiency Virus.

AIDS: Acquired Immune Deficiency Syndrome.

AJDC: American Journal of Disease Control.

AJPH: American Journal of Public Health.

HCPs: Health Care Professionals.

MOE: Ministry of Education.

MOH: Ministry of Health.

WHO: World Health Organization.

SPSS: Statistical Package for the Social Sciences.

HCW: Health Care Workers.

APPENDIX B:

Study Timetable – action plan & needed resources,

Action	*Accountability*	Completion Date	Remarks
Get resources (Library, internet & People	Researcher	July 2000-on	
Receive approval to conduct the study & permission to use the tool	Researcher	January 2001	
Modify the tool for cultural sensitivity & pi study	Researcher	January 2001	
Develop demographic data form	Researcher	January 2001	
Prepare photocopies & arrange for 200 participants.	Researcher	February 2001	
Contact school for establishing rapport ai arrange for proper timing for distribution c questionnaire.	Researcher	February 2001	
Distribute the questionnaire	Researcher	February 2001	
Collect data	Researcher	April 2000	
Analyze data	Researcher	May-November 2001	
Interpret results	Researcher	December 2001	
Communicate findings	Researcher	January 2002	

Budget Allocation for the study:

Budget Items	Cost (DHS)
Questionnaire photocopies, others	250
Internet use	600
Transportation	100
Consultation and editing	1000
Total	1950

Message to Students

Dear Students:

- This questionnaire asks what students know about AIDS, their beliefs, attitudes and source of information of AIDS.
- The need to know this is to help in developing the best possible AIDS education programs for high school.
- Please do not write your name anywhere on this questionnaire.
- All of the information collected will be kept confidential. No one will see or know about it, except for pure research and scientific use.
- Please feel free and comfortable in answering the questions.

Thank you for voluntary participation.

Demographic Information

Please, check (✓) the answer you choose, and write answers when needed:

(D1) School Name: ----------

(D2) Sex: A- ☐ Male B- ☐ Female

(D3) Age: ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20

(D4) Nationality: ---------- (D5) Religion: ----------.

(D6) Father's Education (one answer please)

- (1) Illitrate.
- (2) Reads and Writes.
- (3) Elementary.
- (4) Less than high school
- (5) High School
- (6) University degree.
- (7) Above university

(D7) Mother's Education (one answer please).

- (1) Illitrate.
- (2) Reads and Writes.
- (3) Elementary.
- (4) Less than high school.
- (5) High school
- (6) University degree.
- (7) Above university.

(D8) I live with my: (check one)

- (1) Mother and Father
- (2) Mother.
- (3) Father
- (4) Relatives
- (5) Others

Code	Knowledge of AIDS	Not correct	Correct	Don't know	Missing
K1	AIDS is a medical condition in which the body's immune system is unable to defend against foreign substances.				
K2	AIDS is a condition you are born with (you inherit it).				
K3	AIDS is a disease with no known cure or vaccine.				
K4	People who get AIDS are more likely to die.				
K	Which of the following people are most likely to get AIDS?				
K51	Drug users.				
K52	People who get blood transfusion infected with AIDS.				
K53	The elderly				
K54	Homosexuals				
K55	Child born for a mother with AIDS				
K56	Husband from his wife or vice versa.				
K57	Husband from his AIDS infected wife or vice versa.				
K6	Some one who is HIV – sero positive does not transmit AIDS infection to others.				
K7	You can tell from people's looks whether or not they are infected with AIDS.				
K8	AIDS is a disease that may affect all of us.				
	AIDS can be transmitted by:				
K91	Saliva.				
K92	Tears.				
K93	Shaking hands.				
K94	Using same utensils.				
K95	Mosquito bites.				
K96	Breast milk.				
K97	Toilet seats.				

Attitude (Code)	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
• (A1). People get AIDS by engaging in immoral behavior. • (A2). Any body with Aids is either gay or a junkie. • (A3). People get AIDS from heterosexual practices. • (A4.) Women don't get AIDS. • (A5). I treat everyone the same, regardless of whether or not they have AIDS. • (A6). Living with AIDS infected person is impossible. • (A7). Children can't contract AIDS. • (A8). Because AIDS is preventable, we should focus our resources on prevention instead of curing. • (A9). People who contract AIDS deserve it. • (A10). People with AIDS deserve our help. • (A11). Getting infected with AIDS is the worse thing can happen to me. • (A12). If it happens that I get AIDS I will be willing to communicate this with my family. • (A13). People with AIDS should be isolated in order to protect the rest of society • (A14). Mandatory HIV blood testing should be done for all including students. • (A15). There is no chance that I get AIDS. • (A16). People with AIDS should be given treatment as any other diseased people. • People with AIDS should be prohibited from these jobs: • (A171). Medical Staff • (A172). Food Handlers • (A173). Teachers.					

Beliefs about AIDS and AIDS prevention

I believe	Yes	No
1. That AIDS is the wrath of God.		
2. Students should be taught about AIDS in school.		
3. That I have sufficient protection from getting AIDS.		
4. That AIDS poses a serious threat to high school students and adolescents.		
5. That I can help prevent the spread of AIDS by influencing my friend's behavior concerning AIDS.		
6. That I would feel comfortable talking with a friend infected with AIDS.		
7. Those children with AIDS should be permitted to attend school.		
8. That Homosexuality and adultery are sins.		
9. AIDS is becoming a serious problem in Emirates, especially among adolescent.		
10. That the behavior of the individual determines his/her possibility of contracting AIDS.		
11. That religious beliefs may help in preventing spread of AIDS.		
12. That I will change some of my risky behavior after knowing about AIDS.		
13. That I can discuss about AIDS with my parents.		
14. . That I can discuss about AIDS with my teachers.		

1. Source of Information (code) Where did you hear about AIDS? Please rank 3 most sources.	**Yes**	**No**	**Rank (1,2,3)**
• S1-Radio / Television. • S2-Newspapers / Magazines / Books • S3-Fiends • S4-Family & Relatives • S5-School & Class room instructor • S6-Doctor • S7-Nurse • S8-Religious groups • S9-Internet • S10-Affected person with AIDS • S11-Information leaflet			

Health Promotion, Disease Prevention: (code) What advice would you give to self; best friend; brother & sister, in order to avoid contracting AIDS?	**Agree**	**Disagree**
• (HP1). Not to share needles with others if they (Friend, brother, sister) are drug users. • (HP2). To do AIDS blood test before getting married. • (HP3). To change risky behaviors.		

رسالة إلى الطالب والطالبات

العزاء / الطالبات والطلبة

السلام عليكم ...

هذا الستبيان لستقصاء ما لديكم من المعلومات والمعتقدات والتجاهات نحو مصدر مع رفق المعلومات الخاصة بمرض (متلازمة نقص المناعة المكتسبة) الإيدز.

هذا الاستبيان يتوقع منه أن يساعد في ترتيب برامج التربية الصحية عن الإيدز للطلبة الفصل الثالث ثانوي.

[redacted]

يرجى العلم أن معلومات الاستبيان سوف تعامل بسرية تامة ولن تستخدم إلا في البحث العلمي فقط.

نشكر لكم تعاونكم في مدى استمارة الاستبيان.

[redacted]

اسم المدرسة: _____

الجنس: ذكر أنثى

2) العمر (بالسنوات) 15 16 17 18 19 20

3) الجنسية: _____

4) الديانة: _____

5) مستوى والدي التعليمي (اجابة واحدة فقط)

I- أمي

II- يقرأ ويكتب

III- ابتدائي

IV- إعدادي

V- ثانوي

VI- جامعي

VII- ما بعد الجامعة

6) مستوى والدتي التعليمي (اجابة واحدة فقط)

أ- أمي

ب- يقرأ ويكتب

ت- ابتدائي

ث- إعدادي

ج- ثانوي

ح- جامعي

خ- ما بعد الجامعة

7) أعيش مع (اختر واحدة)

أ- أمي وأبي

ب- أمي

ت- أبي

ث- أقاربي

ج- آخرين (أذكرهم) _____

<u>المعلومات:</u> فيما يلي بعض الجمل عما هو معلوم عن الإيدز، منها ما هو صواب ومنها ما هو معلومات خاطئة. اختر الإجابة الصحيحة حسب رأيك بوضع علامة (✓) أمامها.

المعلومات	صواب	خطأ	لا أعرف
8) الإيدز هو حالة صحية يكون فيها جهاز المناعة في الجسم غير قادر على الدفاع ضد ما يهاجمه من أجسام غريبة.			
9) الإيدز مرض وراثي يصيب الإنسان منذ الولادة.			
10) ليس للإيدز علاج متوفر أو تطعيم.			
11) المصابون بالإيدز غالباً يموتون سريعاً.			
12) من أكثر الناس عرضة للإصابة بالإيدز:			
أ- مدمنو حقن المخدرات.			
ب- الأشخاص الذين ينقل لهم دم ملوث بالإيدز.			
ت- كبار السن.			
ث- الشاذين جنسياً.			
ج- أطفال ولدوا من أم مصابة بالإيدز.			
ح- الزوج من زوجته أو العكس.			
خ- الزوج من زوجته المصابة بالإيدز أو العكس.			
13) الشخص الذي تم إيجابي لفحص فيروس الإيدز، لا ينقل مرض الإيدز للآخرين.			
14) تستطيع أن تعرف إذا كان الشخص مصاباً بالإيدز أم غير مصاب بالإيدز بمجرد النظر إليه.			
15) مرض الإيدز من الممكن أن يصيب أياً منا.			
16) ينتقل مرض الإيدز عبر: -			
أ- اللعاب.			
ب- السائل المنوي.			
ت- الدموع.			
ث- مصافحة الأيدي.			
ج- المراحيض.			
ح- استعمال نفس أواني الطعام.			
خ- لسع الحشرات.			
د- حليب الثدي.			

الاتجاهات: اختاروا من هذه الجمل ما يعبر عن اتجاهاتكم، ضعوا علامة (✓) لإجاباتكم.

الاتجاهات	أوافق بشدة	أوافق	غير متأكد	غير موافق	غير موافق بشدة
17) الأشخاص ذوو السلوك الجنسي يمرضون بالإيدز.					
18) أي شخص مريض بالإيدز هو شاذ أو غريب.					
19) الأشخاص يصابون بمرض الإيدز عبر ممارسة الرذيلة.					
20) النساء لا تصبن بالإيدز.					
21) عاملوا الجميع نفس المعاملة. سواء كانوا مصابين بالإيدز أم لا.					
22) من المستحيل أن تعيش مع مصاب بالإيدز.					
23) الأطفال لا يصابون بالإيدز.					
24) على الناس أن يركزوا الجهود على الوقاية، لأن الإيدز مرض من الممكن الوقاية منه.					
25) الأشخاص المصابون بالإيدز يستحقون ما أصابهم.					
26) الأشخاص المصابون بالإيدز يستحقون مساعدتنا.					
27) أسوأ أمر يحدث لي هو أن أصاب بالإيدز.					
28) إذا حصل أن أصبت بالإيدز فسوف أخبر عائلتي.					
29) يجب عزل الأشخاص المصابين بمرض الإيدز حتى نحمي بقية المجتمع.					
30) يجب إلزام الجميع بفحص الدم للإيدز بين فئة الطلاب والطالبات.					
31) ليس هناك أي احتمال للإصابة بالإيدز.					
32) يجب معاملة الأشخاص المصابين بالإيدز كغيرهم من المرضى.					
33) الأشخاص المصابين بمرض الإيدز يجب أن لا ينخرطوا في هذه الأعمال:-					
أ- الحقل الطبي.					
ب- الأغذية.					
ج- التعليم.					

المعتقدات عن الإيدز والوقاية منه:

أعتقد	نعم	لا
34) أن الإيدز هو بلاء من الله.		
35) أن الطلاب يجب أن يتلقوا في المدرسة تثقيف عن الأمراض المتعلقة عن الإيدز.		
36) أن لدي حماية كافية من الإصابة بالإيدز.		
37) أن مرض الإيدز هو خطر يحيق بطلاب المرحلة الثانوية والمراهقين.		
38) أنني أستطيع أن أساعد في منع انتشار الإيدز عبر تأثيري على سلوكيات أصدقائي فيما يخص الإيدز.		
39) أنني أكون مرتاحاً لدى محادثتي مع صديق مصاب بالإيدز.		
40) أن الأطفال المصابين بالإيدز يجب أن لا يسمح لهم الانخراط في المدرسة.		
41) أن الشذوذ والرذيلة يعتبران من أفعال الخطيئة.		
42) أن مرض الإيدز هو مشكلة خطيرة في الإمارات خاصة بين المراهقين.		
43) أن السلوك الشخصي هو الذي يحدد احتمال الإصابة بمرض الإيدز.		

		44) أن نشر القيم الدينية يساعد في منع انتشار الإيدز
		45) إنني سوف أغير من سلوكياتي الغير قويمة بعد معرفتي عن خطر الإيدز
		46) أعتقد أنني قادر على مناقشة موضوع الإيدز مع أسرتي
		47) أعتقد أنني قادر على مناقشة موضوع الإيدز مع معلمي-معلمتي

مصدر المعلومات: من اين تحصل على المعلومات الخاصة بالإيدز: ضع علامة (✓) الإجابة ثم رتب أهم 3 مصادر من حيث الأولوية:

المصادر	نعم	لا	الترتيب
48) من الإذاعة والتلفاز			
49) من الصحف والمجلات والكتب			
50) من الأصدقاء			
51) من أفراد الأسرة والأقارب			
52) من المدرسة والمعلم/ المعلمة			
53) من الطبيب			
54) من الممرض / الممرضة			
55) من رجال الدين			
56) من شبكة الانترنت			
57) من مصاب بالإيدز			
58) من مواد تثقيفية متنوعة			

تعزيز الصحة ومنع المرض:

ما هي النصيحة لنفسك ولصديقك والخطوات حتى يتجنبوا الإصابة بالإيدز:

الإصابة بالإيدز	أوافق	لا أوافق
59) عدم مشاركة الآخرين استخدام الحقن (لدى تعاطي المخدرات بالحقن).		
60) إجراء فحص تحليل الدم للإيدز قبل الزواج.		
61) تغيير السلوكيات المؤذية للإصابة بالإيدز.		

Table 6A: Student's scores of HIV/AIDS Knowledge VS their mothers

AIDS/HIV Knowledge Score	Mother Education						P = 0.001	
	Illitrate	Reads & Writes	Elementary	Less than high school	High school	University degree	Above university	Total
3	-	-	0.5	-	-	-	-	0.5
4	-	-	0.5	-	-	-	-	0.5
5	-	-	-	1	-	0.5	-	1.5
6	1	-	-	-	2	0.5	-	3.4
7	1.5	1	-	1.5	0.5	0.5	-	4.9
8	1	-	0.5	0.5	1.5	2	-	5.4
9	0.5	0.5	1	0	0	0.5	1	3.4
10	1	0.5	-	1	0.5	2	1	5.9
11	1	0	0.5	0.5	2.5	-	-	4.4
12	0.5	1.5	-	0.5	1.5	1.5	1.5	6.9
13	0.5	-	1	-	2.9	3.9	1	9.3
14	0.5	0.5	1	0.5	2.9	4.9	1	11.3
15	1	0.5	-	0.5	2.5	4.4	0.5	9.3
16	0.5	0.5	-	1	2.5	3.4	1	8.8
17	-	-	-	1	3.4	3.4	-	7.8
18	-	0.5	-	2	2.9	2.5	0.5	8.3
19	1	-	-	-	1	2	0.5	4.4
20	-	-	-	-	0.5	1	0.5	2
21	-	-	-	-	-	1	1	2
Total	9.8	5.4	4.9	9.8	27	33.8	9.3	100

Table 6B: Student's scores of HIV/AIDS Knowledge VS their fathers

AIDS/HIV Knowledge Score	Father Education							P = 0.031
	Illitrate	Reads & Writes	Elementary	Less than high school	High school	University degree	Above university	Total
3	-	-	-	-	0.5	-	-	0.5
4	-	-	0.5	-	-	-	-	0.5
5	-	-	-	1	-	0.5	-	1.5
6	-	-	-	1	0.5	0.5	1.5	3.4
7	0.5	0.5	2	0.5	0.5	0.5	0.5	4.9
8	0.5	1	0.5	-	1	2	0.5	5.4
9	-	-	1	1.5	0.5	0	0.5	3.4
10	0.5	0.5	0.5	1	-	2	1.5	5.9
11	1	1	-	-	1	1.5	-	0.4
12	0.5	0.5	1	0.5	-	2	2.5	6.9
13	-	0.5	1	-	1.5	3.4	2.9	9.3
14	-	1	1	1	0.5	3.9	3.9	11.3
15	0.5	1.5	0.5	0.5	0.5	4.4	1.5	9.3
16	-	0.5	-	1	0.5	3.9	2.9	8.8
17	-	-	-	-	1	4.4	2.5	7.8
18	-	0.5	0.5	0.5	2	3.4	1.5	8.3
19	-	1	-	-	0.5	2.5	0.5	4.4
20	-	-	-	-	-	1	1	2
21	-	-	-	-	-	1	1	2
Total	3.4	8.3	8.3	8.3	10.3	36.8	24.5	100

Table 7: Gender Vs Students' Knowledge of HIV/AIDS

	Knowledge of AIDS	Females						Males						Grand Total						P Value
		Correct		Not Correct		Don't Know		Correct		Not Correct		Don't Know		Correct		Not Correct		Don't Know		
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
1	AIDS is a medical condition in which the body's immune system is unable to defend against foreign substances	68	34	4	2	8	4	106	53	3	1.5	11	5.5	174	87	7	3.5	19	9.5	0.621
2	AIDS is a condition you are born with (you inherit it).	70	35	4	2	6	3	67	34	42	21	11	5.5	137	69	46	23	17	8.5	0
3	AIDS is a disease with no known cure or vaccine.	66	33	8	4	7	3.5	103	51	10	5	7	3.5	169	84	18	9	14	7	0.675
4	People who get AIDS are more likely to die.	52	26	18	8.9	11	5.4	90	45	28	14	3	1.5	142	70	46	23	14	6.9	0.009
5	Which of the following people are most likely to get AIDS.																			
51	Drug users.	62	33	11	5.9	6	3.2	91	49	15	8	2	1.1	153	82	26	14	8	4.3	0.157
52	People who get blood transfusion infected with AIDS	74	38	3	1.6	3	1.6	105	54	4	2.1	4	2.1	179	93	7	3.6	7	3.6	0.994
53	The elderly	55	33	1	0.6	11	6.6	83	50	10	6	7	4.2	138	83	11	6.6	18	11	0.021
54	Homosexuals	47	26	8	4.5	17	9.5	77	43	17	9.5	13	7.3	124	69	25	14	30	17	0.113
55	Child born for a mother with AIDS.	70	37	4	2.1	3	1.6	97	51	8	4.2	7	3.7	167	88	12	6.3	10	5.3	0.655
56	Husband from his wife or vise versa.	34	20	24	14	12	6.9	64	37	31	18	9	5.2	98	56	55	32	21	12	0.134
57	Husband from his AIDS infected wife or vice versa.	65	35	7	3.7	4	2.1	107	57	1	0.5	3	1.6	172	92	8	4.3	7	3.7	0.013
6	Some one who is HIV - sero positive does not transmit AIDS infection to others.	32	16	5	2.6	40	20	68	30	16	8.2	45	23	90	46	21	11	85	43	0.091
7	You can tell from people's looks' whether or not they are infected with AIDS.	47	23	10	4.9	25	12	80	39	21	10	20	9.9	127	63	31	15	45	22	0.056
8	AIDS is a disease that may affect all of us.	53	27	22	11	4	2	93	47	23	12	3	1.5	146	74	45	23	7	3.5	0.205
9	AIDS can be transmitted by:																			
91	Saliva.	32	17	29	16	13	7	45	24	52	28	14	7.6	77	42	81	44	27	15	0.492
92	Tears.	49	26	9	4.8	17	9.1	75	40	21	11	15	8.1	124	67	30	16	32	17	0.17
93	Shaking hands.	49	27	14	7.7	12	6.6	85	47	15	8.2	7	3.8	134	74	29	16	19	10	0.062
94	Using same utensils.	34	18	28	15	13	7	57	31	38	20	16	8.6	91	49	66	36	29	16	0.706
95	Mosquito bites.	32	17	27	15	15	8.1	50	27	48	26	14	7.5	82	44	75	40	29	16	0.334
96	Breast milk	54	29	10	5.3	13	6.9	67	36	25	13	20	11	121	64	35	19	33	18	0.231

Table 8 A: Gender VS Negative Attitudes:

	Attitude	Females										Males										Total										P Value
		Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree		Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree		Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree		
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
1	People get AIDS by engaging in immoral behavior.	24	12.1	24	12.1	16	8	9	4.5	7	3.5	26	13.1	37	18.6	31	15.6	18	9	7	3.5	50	25.1	61	30.7	47	23.6	27	13.6	14	7	0.539
2	any body with AIDS is either gay or a junkie.	10	5.1	11	5.6	12	6.1	21	10.6	24	12.1	16	8.1	22	11.1	19	9.6	37	18.7	26	13.1	26	13.1	33	16.7	31	15.7	58	29.3	50	25.3	0.677
3	People get AIDS from heterosexual practices	49	24.9	20	10.2	2	1	3	1.5	3	1.5	68	34.5	26	13.2	13	6.6	9	4.6	4	2	117	59.4	46	23.4	15	7.6	12	6.1	7	3.6	0.201
4	Women don't get AIDS	1	0.5	3	1.5	4	2	21	10.4	53	26.2	4	2	2	1	6	3	10	5	98	48.5	5	2.5	5	2.5	10	5	31	15.3	151	74.8	0.011
*6	Living with AIDS infected person is impossible.	16	8	16	8	17	8.5	17	8.5	14	7	35	17.4	19	9.5	23	11.4	31	15.4	13	6.5	51	25.4	35	17.4	40	19.9	48	23.9	27	13.4	0.384
6	Children can't contract AIDS.	4	2	6	3	11	5.6	22	11.1	38	19.2	4	2	3	1.5	18	9.1	36	18.2	56	28.3	8	4	9	4.5	29	14.6	58	29.3	94	47.5	0.546
7	People who contract AIDS deserve it.	6	3	10	5	14	7	22	10.9	28	13.9	14	7	13	6.5	25	12.4	40	19.9	29	14.4	20	10	23	11.4	39	19.4	62	30.8	57	28	0.444
8	Getting infected with AIDS is the worse thing can happen to me.	55	27.8	9	4.5	7	3.5	4	2	3	1.5	83	41.9	23	11.6	8	4	4	2	2	1	138	69.7	32	16.2	15	7.6	8	4	5	2.5	0.507
9	People with AIDS should be isolated in order to protect the rest of society.	31	15.3	18	8.9	10	4.9	9	4.4	14	6.9	51	25.1	21	10.3	22	10.8	15	7.4	12	5.9	82	40.4	39	19.2	32	15.8	24	11.8	26	12.8	0.418
10	There is no chance that I get AIDS.	23	11.4	11	5.4	20	9.9	8	4	20	9.9	38	18.8	22	10.9	27	13.4	20	9.9	13	6.4	61	30.2	33	16.3	47	23.3	28	13.9	33	16.3	0.86
11	People with AIDS should be prohibited from these jobs:																															
*	Medical Staff.	39	19.6	16	8	12	6	7	3.5		2.5	65	32.7	31	15.6	11	5.5	6	3	7	3.5	104	52.3	47	23.6	23	11.6	13	6.5	12	6	0.487
*	Food Handlers.	36	18.5	12	6.2	15	7.7	9	4.6	4	2.1	59	30.3	28	14.4	11	5.6	15	7.7	6	3.1	95	48.7	40	20.5	26	13.3	24	12.3	10	5.1	0.262
*	Teachers.	15	8.1	8	4.3	14	7.5	16	8.6	19	10.2	38	20.4	21	11.3	20	10.8	23	12.4	12	6.5	53	28.5	29	15.6	34	18.3	39	21	31	16.7	0.029

Table 8B: Gender VS Students' Positive Attitudes:

	Attitude	Females										Males										Total										P Value
		Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree		Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree		Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree		
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
5	I treat everyone the same, regardless of whether or not they have AIDS	23	11.5	14	7	22	11	9	4.5	13	6.5	22	11	27	13.5	24	12	28	14	18	9	45	22.5	41	20.5	46	23	37	18.5	31	15.5	0.097
2	Because AIDS is preventable, we should focus our resources on prevention instead of curing	43	21.3	17	8.4	6	3	7	3.5	8	4	66	32.7	31	15.3	11	5.4	10	5	3	1.5	109	54	48	23.8	17	8.4	17	8.4	11	5.4	0.239
3	People with AIDS deserve our help.	43	21.9	22	11.2	9	4.6	3	1.5	2	1	54	27.6	49	25	10	5.1	3	1.5	1	0.5	97	49.5	71	36.2	19	9.7	6	3.1	3	1.5	0.318
4	If it happens that I get AIDS I will be willing to communicate this with my family.	38	18.8	16	7.9	19	9.4	5	2.5	2	1	48	23.8	31	15.3	27	13.4	2	1	14	6.9	86	42.6	47	23.3	46	22.8	7	3.5	16	7.9	0.054
5	Mandatory HIV blood testing should be done for all including students	55	27	17	8.3	7	3.4	3	1.5			87	42.6	25	12.3	9	4.4			1	0.5	142	69.6	42	20.6	16	7.8	3	1.5	1	0.5	0.253
6	People with AIDS should be given treatment as any other diseased people	45	22.5	19	9.5	5	2.5	10	5	2	1	56	28	28	14	11	5.5	15	7.5	9	4.5	101	50.5	47	23.5	16	8	25	12.5	11	5.5	0.473

Table 9: Students' scores of HIV/AIDS Knowledge VS their schools in percentage.

HIV/AIDS Score	Schools			P=0.004	
	Private 1	Private 2	Public girls	Public boys	Total
3	-	-	0.5	-	0.5
4	-	-	-	0.5	0.5
5	0.5	-	1	-	1.5
6	0.5	0.5	1	1.5	3.4
7	-	0.5	2.5	2	4.9
8	1	0.5	2	2	5.4
9	-	0.5	2.5	0.5	3.4
10	0.5	1.5	2	2	5.9
11	-	1	2.9	0.5	4.4
12	-	1.5	2.5	2.9	6.9
13	2	2.9	2	2.5	9.3
14	2.5	3.9	1	3.9	11.3
15	2.5	2.5	2.9	1.5	9.3
16	1.5	5.4	1	1	8.8
17	2	3.4	0.5	2	7.8
18	3.4	2.9	1.5	0.5	8.3
19	1	2.5	0.5	-	4.4
20	1	1	-	-	2
21	-	2	-	-	2
Total	18.1	32.4	26	23.5	100

Table 10: Gender VS Beliefs about AIDS and AIDS prevention

	Beliefs Variable	Females				Males				Grand Total				P-Value
		Yes		No		Yes		No		Yes		No		
		#	%	#	%	#	%	#	%	#	%	#	%	%
1	That AIDS is the wrath of God	59	30.1	20	10.2	**87**	**44.4**	**30**	**15.3**	146	74.5	50	25.5	0.959
2	Students should be taught about AIDS in school.	78	38.4	3	1.5	**118**	**58.1**	**4**	**2**	196	96.6	7	3.4	0.871
3	That I have sufficient protection from getting AIDS	55	27.1	26	12.8	**90**	**44.3**	**32**	**15.8**	145	71.4	58	28.6	0.365
4	That AIDS poses a serious threat to high school students and adolescents.	59	29.2	23	11.4	**107**	**53**	**13**	**6.4**	166	82.2	36	17.8	0.002
5	That I can help prevent the spread of AIDS by influencing my friend's behavior concerning AIDS.	69	33.8	13	6.4	**104**	**51**	**18**	**8.8**	173	84.8	31	15.2	0.83
6	That I would feel comfortable talking with a friend infected with AIDS.	25	12.4	55	27.2	**43**	**21.3**	**79**	**39.1**	68	33.7	134	66.3	0.557
7	That children with AIDS should be permitted to attend school.	57	28.1	25	12.3	**81**	**39.9**	**40**	**19.7**	138	68	65	32	0.7
8	That Homosexuality and adultery are sins.	72	35.6	9	4.5	**111**	**55**	**10**	**5**	183	90.6	19	9.4	0.497
9	AIDS is becoming a serious problem in Emirates, especially among adolescents.	54	26.5	28	13.7	**76**	**37.3**	**46**	**22.5**	130	63.7	74	36.3	0.604
10	That the behavior of the individual determines his/her possibility of contracting AIDS.	57	28.1	24	11.8	**83**	**40.9**	**39**	**19.2**	140	69	63	31	0.724
11	That religious beliefs may help in preventing spread of AIDS.	72	35.3	10	4.9	**112**	**54.9**	**10**	**4.9**	184	90.2	20	9.8	0.346
12	That I will change some of my risky behavior after knowing about AIDS.	70	34.7	10	5	**112**	**55.4**	**10**	**5**	182	90.1	20	9.9	0.317
13	That I can discuss about AIDS with my parents.	63	31	18	8.9	**81**	**39.9**	**41**	**20.2**	144	70.9	59	29.1	0.08
14	That I can discuss about AIDS with my teachers.	71	34.8	11	5.4	**105**	**51.5**	**17**	**8.3**	176	86.3	28	13.7	0.544

Table 11: Gender versus sources of AIDS information of high school students in Sharjah.

	Sources of AIDS	Females				Males				Grand Total				P value
		Yes		No		Yes		No		Yes		No		
		#	%	#	%	#	%	#	%	#	%	#	%	
1	Radio / Television	73	37.1	3	1.5	106	53.8	15	7.6	179	90.9	18	9.1	0.45
2	Newspaper / Magazines / books	68	34.7	8	4.1	108	55.1	12	6.1	176	89.9	20	10.2	0.906
3	Friends	51	32.8	22	11.8	96	51.6	17	9.1	147	79	39	21	0.014
4	Family / Relatives	46	25.1	25	13.7	70	38.3	42	23	116	63.4	67	36.6	0.754
5	School / Classroom instructor	51	27.6	25	13.5	85	45.9	24	13	136	73.5	49	26.5	0.099
6	Doctor	51	27.9	24	13.1	71	38.8	37	20.2	122	66.7	61	33.3	0.75
7	Nurse	43	24	28	15.6	59	33	4	49	102	57	77	43	0.433
8	Religious people	36	20	34	18.9	74	41.1	10	36	110	61.1	70	38.9	0.034
9	Internet	48	26.2	24	13.1	77	42.1	17	34	125	68.3	58	31.7	0.701
10	Affected persons with AIDS	29	16.1	44	24.4	42	23.3	8	65	71	39.4	109	60.6	0.949
11	Leaflets / brochure	57	31	14	7.6	82	44.6	31	16.8	139	75.5	45	24.5	0.236