

COLLEGE STUDENTS KNOWLEDGE OF SEXUALLY TRANSMITTED  
DISEASES

by

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The Graduate College  
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ABSTRACT

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College Student's Knowledge of Sexually Transmitted Diseases  
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1. College Students
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This study explores college student's knowledge of sexually transmitted diseases. The research instrument consisted of four sections: demographics, a Likert scale rating the participants attitudes about sex education and sexually transmitted diseases (STDs), a Likert scale which rated how likely the participant would go to the listed source for accurate information about sexually transmitted diseases, and a list of twenty-one true-false statements to measure the participants knowledge about STDs.

The study sample consisted of 103 undergraduate college students from the University of Wisconsin-Stout. The ages of the respondents ranged from 17 to 22. The

sample was represented by 46% males and 54% females of which 97% were Caucasian. Ninety percent of the respondents went to a public high school. The average number of children per respondents family was found to be 2.7.

The students attitudes about sex education are contradictory. The respondents indicated they thought teaching sex education in school encourages teens to have sex, yet they thought sex education should be taught in school. The students also felt it is a parents responsibility to teach their children about sex.

The students responded that the most common place they would go to get accurate information about sexually transmitted diseases was their friends, followed by health professionals, mother, books and social agency. The least common place was found to be grandparents.

The knowledge level of the participants about STDs was found by having the respondents answer to twenty-one true-false statements. The number of correct answers varied from answering 10 to 20 answers correct, with no one answering all of the statements correctly.

Overall, when the amount of accurate knowledge was calculated and compared with how knowledgeable the students thought they were, it was found that college students believe they are more knowledgeable about sexually transmitted diseases than the test scores indicated.

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## Chapter 1

### Introduction

Sexually transmitted diseases are a major health concern for young adults around the world. According to the Centers for Disease Control and Prevention (CDC) (1996), the rates of gonorrhea and syphilis are at historic lows, but we must realize the rates of sexually transmitted diseases are still at epidemic rates. In fact, the United States has the highest rates of sexually transmitted diseases (STDs) in the industrialized world, with rates that are 50 to 100 times higher than other industrialized nations (Women's Health Weekly, 1998). According to the CDC (1995), every year in the United States, an estimated 12 million persons acquire a sexually transmitted disease: two-thirds of these cases occur in persons under 25 years of age. The problem that we must find an answer to is what can be done to continue to reduce the rate of STD transmission.

There are many factors that can be connected to the high rates of STDs. Some of these factors include how obtainable effective birth control is, knowing how to properly use birth control and the misconception that many young adults have of thinking they are untouchable when it comes to contracting a sexually transmitted disease.

The lack of education about STDs is a primary factor researchers focus on when trying to find a solution to reduce the rates of sexually transmitted diseases. Physicians responded to a survey stating that adolescents, under the age of 18, were the type of patient who were least informed about STDs, yet this lack of education does not stop them from having sex (Women's Health Weekly, 1998).

Sex education is both a controversial and taboo topic in many schools and families. There has been a long time debate over who should be responsible for teaching children

about sex. Should the parents be the sole educators, the schools, or a combination? In addition, schools are troubled with conflict over which approach to teaching sex education is appropriate. Some people believe there should be an abstinence approach where students are taught sex should wait until after marriage. Others feel the comprehensive approach which includes education on contraception is more appropriate.

A large body of research indicates that parents are the single most important influence on whether their teens become sexually active. Unfortunately, just 10 to 15 percent of today's youth has discussed sex with their parents (Napier, 1997). These factors contribute to complications between both schools and the family, and may leave young adults lacking information they need to make healthy lifestyle choices.

There is evidence that students want sex education as part of the school curriculum. What some people may find surprising is when secondary students are permitted to participate in the determination of the social-studies curriculum, sex education is almost always demanded. In addition, a course which deals with the practical problems of marriage is generally requested (Michener, 1995). In Micheners study (1995) the schools attendance for this class (which was optional) was perfect, and the discussion was constant. This shows that at this particular school the sex education course was beneficial and this type of course may need to be looked at closer by other schools.

Another one of the factors that contributes to the high rate of STDs is that students are not using condoms when having intercourse. There are several reasons students give for not using condoms. Factors associated with not using condoms include embarrassment about condom purchase, not being able to discuss using condoms with your partner, use of other forms of birth control which don't prevent STDs, the belief that condoms interfere

with sexual pleasure, and insufficient knowledge of STD transmission (MacDonald, Wells, Fisher, Warren, King, Doherty, & Bowie, 1990).

An additional factor which must be taken into consideration is the students perceived risk of getting a STD. Students in a study conducted by Ehde, Holm, and Robbins (1995) rated their risk of HIV infection as none to minimal, yet they reported frequently engaging in vaginal, oral and anal intercourse without the use of condoms. In other cases students report having enough information about sexually transmitted diseases, yet answers to knowledge questions show important misconceptions.

Most people would think that with high rates of STDs and the high number of affected people, risky behavior of students would decline. Yet surprisingly, these risky behaviors such as engaging in unprotected sex, having multiple sex partners, and engaging in sex at an early age are not on the decline. In a study by DeBuono, Zinner, Daamen, and McCormack (1990) the findings show that with the existence of major new infectious diseases (such as STDs), sexual practices among college women did not change markedly in 14 years with respect to the number of sexual partners or specific sexual acts.

Why is this a serious problem? According to the National Institute of Allergy and Infectious Diseases (1998), in the United States there is an estimated 15.3 million new cases of STDs that occur every year. Worldwide, an estimated 333 million new cases of four curable STDs (gonorrhea, chlamydial infection, syphilis and trichomoniasis) occurred in 1997 alone.

Sexually transmitted diseases do not only have human costs, but they make a significant financial impact on society. In 1994, the United States spent approximately \$17 billion dollars on major STDs and their preventable complications. The total cost of

sexually transmitted HIV infection alone was approximately \$6.7 billion (National Institute of Allergy and Infectious Diseases, 1998).

Another issue with sexually transmitted diseases is that either gender and all ages are affected. The problems associated with STDs can be especially damaging for females. The work of Alexander (1992) as cited by Gilbert and Alexander (1998) showed female college students suffer disproportionately because women often have fewer options for protection from disease, are biologically predisposed to acquire sexually transmitted diseases at higher rates than men, are more difficult to diagnose with sexually transmitted diseases, and have more frequent and severe consequences from sexually transmitted diseases than men. Further complications can occur if women pass their infection to their offspring.

One other reason why this problem is so serious is because not all STDs are treatable. STDs can fall into three categories: curable, recurring, and not curable. Early detection of STDs is necessary to help prevent future damage. There are many other precautions females can take to help prevent getting a STD. These behaviors include obtaining regular pelvic exams, checkups, HIV tests before having sex with a new partner, checking the partner's genitals, asking questions of each new partner, and using condoms for protection (Gilbert & Alexander, 1998). For women, sterilization can be an outcome of an untreated STD.

A review of the literature shows that students are engaging in few activities that would protect them from contracting a sexually transmitted diseases. Research also indicates students rate their risk of getting sexually transmitted diseases as none to minimal and the students also report frequently engaging in sex without protection.

With the information from this research, sex educators will be able to modify current programs to give an adequate education to young adults. In turn, the new form of education would help continue reducing the rates of STDs. Programs can also be developed which can give parents knowledge about STDs, what the risky behaviors are, and how to talk to their children about sex.

### Statement of the Problem

The purpose of this study is to describe the level of actual and perceived knowledge about sexually transmitted diseases by UW-Stout underclass students.

Objectives of the study are:

1. To determine the amount of accurate knowledge students have about transmission of sexually transmitted diseases.
2. To determine how much students perceive they know about the transmission of sexually transmitted diseases as well as their attitudes about sexuality and sexually transmitted diseases.
3. To determine where students go to get accurate information about sexually transmitted diseases.

### Definition of Terms

Students - People in the age range of 17-22.

Sexually Transmitted Disease (STD) - A contagious disease that is passed from one sex partner to another. Examples include AIDS, gonorrhea, genital warts, herpes and chlamydia.

## Chapter 2

### Review of Literature

The purpose of this chapter is twofold: a discussion of STD rates and trends and a review of literature related to the connection between behavior and sexual knowledge. Many researchers have found connections between students behaviors, attitudes, and source of education about sex in relationship to the rates of sexually transmitted diseases.

#### Sexually Transmitted Diseases Rates and Trends

The rates of sexually transmitted disease are not what society would expect. There is an estimated 12 million new cases of STDs in the U.S. each year, of these, 3 million occur among teenagers. Chlamydia causes an estimated 4 million infections annually, primarily among adolescents and young adults. It has been estimated that 1 in 10 adolescent girls and 1 in 20 women of reproductive age are infected with chlamydia. Adolescent females ages 15-19 have the highest rates of gonorrhea. About 30 million persons in the United States have genital herpes simplex virus. An analysis of data from 1993 showed rates of syphilis among females were more than twice as high as rates among males in the 15-19 age group (CDC, 1996). In statistics published by the National Institute of Allergy and Infectious Disease (1998), as of December 1998, an estimated 33.4 million people worldwide were living with HIV/AIDS.

Some of the highest rates of STD infection are found among minorities. According to the CDC (1997), African American women have syphilis rates which are 7 times greater than the female population as a whole. In a separate report by the CDC (1993b) as reported by Buzi, Weinman, and Smith (1998), the syphilis rates for Black female

adolescents increased more than 150% from 1986 to 1990, compared with increases of less than 50% for other ethnic groups. Some of the highest rates of gonorrhea were found in the 15- to 19-year old Black female group. Rates of chlamydia were also found to be significantly higher among Black females than among White females. Furthermore, according to the CDC (1996) the proportion of blacks ever infected with genital herpes infection is 2-3 times that in whites. HIV is the leading cause of death for African-American men and women between the ages of 25 and 44 (CDC, 1998). The rate of STD reinfection has also been found to be higher among the minority populations.

There are many factors that can be attributed to STD exposure. College students frequently engage in high-risk behaviors, such as sexual activity with multiple partners without using condoms, experimenting with drugs, and inconsistent safe sex practices. With college students continuing these behaviors, the rates of STDs are unlikely to fall. These alarming statistics have many researchers looking for answers on how to further reduce the rates of sexually transmitted diseases.

### Education

As stated earlier, the type of education that students should be provided and whose responsibility it is to teach students are constant problems. In most cases, schools provide some information to students. However, the quality and timing of this sex education are very important issues which are not addressed.

How important is it that students receive contraceptive education? As reported by Mauldon and Luker (1996), data from the 1988 National Survey of Family Growth indicated that exposure to a formal contraceptive education program increases the

likelihood that a teenage woman will use a contraceptive method at first intercourse. Furthermore, if contraceptive education occurs in the same year that a teenager becomes sexually active, the odds of any method use and of condom use are increased by 70-80%, and the odds of pill use are more than doubled (Mauldon and Luker, 1996). In addition, Mauldon and Luker (1996) suggest that with greater educational efforts, the proportion of teenagers who use condoms at first intercourse could increase from 52% to 59%. If the rate of birth control and condom use goes up both the number of teen pregnancies and the transmission of STDs are sure to decline. For some, this is strong support for using contraceptive education as a part of a solution to decrease the rates of sexually transmitted diseases.

Young adults typically name parents as an important source of information for sex education. Raffaelli, Bogenschneider, and Flood (1998), found sexual discussions with parents to be a very important link to less risky sexual behavior among teenagers. Mauldon and Luker (1996) found "talking to parents about birth control is correlated with using either a condom or the pill, and respondents who neither had formal education about contraception nor discussed it with their parents reported the lowest levels of condom and pill use" (p.21). In a study which was published in the American Journal of Public Health (1998) it was found that the timing of discussions between the parent and adolescent was crucial. For the teens whose mother had talked to them about condom use before their first sexual encounter condom use was increased. In fact, these teens were three times more likely to use condoms than those teens who had never discussed condom use with their mothers or those who had the discussion after initiating sexual activity. The study also

found that those who used condoms at first intercourse were twenty times more likely to use condoms in subsequent acts.

Major differences are evident in how parents discuss sexual topics with adolescents. The work of both Raffaelli et al. (1998) and Miller, Kotchick, Dorsey, Forehand, and Ham (1998) indicate mothers are more likely than fathers to communicate with teens about sexual topics. In a study published in the American Journal of Public Health (1998) "71% of teens in the study reported having discussed condoms with their mothers. Male adolescents discussed condoms with their mothers at an earlier age than females (12.9 years vs. 13.5 years, respectively)".

It may be surprising that the gender of the adolescent also impacts which parent will discuss sexual topics. In a study by Miller et al. (1998) it was found that "mothers communicate more often with their daughters than with their sons, while fathers rarely communicate with their daughters about sex; however, mothers and fathers discuss sex with their sons at approximately equal rates" (p. 218). Raffaelli et al. (1998) also found daughters to be more frequently the target of sexual communication than sons.

There have been many different approaches used to help educate the public about sexually transmitted diseases. Some approaches would include large-scale screening programs in family planning clinics, improved STD treatment programs, and various education programs.

The media is a very popular approach for public education. Public Health officials have given the public advice to always use condoms when having sex, yet most sexually active young people do not use condoms. There was a hope that after Earvin "Magic" Johnson revealed his HIV-positive status on television, the public would become aware

that anyone could get HIV. However, studies have shown that even with an increase in the scores on HIV knowledge tests, Magic's disclosure did not significantly affect these students attitudes, risk perception, or sexual behavior, and students continued to engage in behaviors that may put them at risk for HIV infection (Ehde, Holm, and Robbins, 1995). Opposing research conducted by Sheehan, Ambrosio, McDevitt, and Lennon (1990), suggests that AIDS-education campaigns and media attention to AIDS is working to change students high-risk behavior.

The UK Department of Health and Social Security used a campaign to educate the public about AIDS by using ads in the national press. An evaluation of this program by Sherr (1987), as cited by Barling and Moore (1990), showed through pre- and post-testing that information about AIDS increased. However, the campaign had no effect on adjusting misconceptions, changing attitudes, or, most importantly, changing behaviors.

With the numerous approaches to sex education, researchers have conflicting ideas on what is necessary to include in an effective education program. MacDonald et. al. (1990), suggest behavior focused education programs are needed to improve condom use and reduce STD/HIV risk. They believe three main components of this type of program include the program providing relevant information about STDs/HIV that allows the students both to objectively assess their personal risk, and to ascertain the best method of risk reduction within their individual social environment. Second, the program must provide training in behavioral skills necessary for practicing safer sex. Third, the individuals in the program must be motivated to act on their knowledge of personal STD/HIV risk by using behavior risk reduction skills.

Baldwin and Baldwin (1988), support the idea that sex education programs need to be broad-based. They believe a program should rely on the use of pragmatic reasoning for minimizing risks and foster habits that might help reduce a variety of risky AIDS-related behaviors.

Gilbert and Alexander (1998), believe in yet another approach to education interventions. In addition to promoting condom use, they believe education must focus on other interventions such as the need for regular pelvic examinations, screenings for STD/HIV (for both the individual and partner), and lower risk sexual activity.

The CDC works with many resources including scientific literature, scientific databases (both domestic and international), and speaks with colleges from around the world to identify effective interventions for all populations at risk. According to information published by the CDC (1998) "Comprehensive, ongoing prevention efforts are needed for each group entering adolescence and young adulthood. All groups that exert influence over young people - families, schools, peer groups and social systems, youth-serving agencies, religious organizations - must be involved".

With so many ideas of what an effective education program needs to include, there is no wonder why there is not one effective program in place. The major ideas which must be addressed is that whatever program is used, it is specific to the population and relevant to their current levels of knowledge, beliefs, attitudes, interests, and behaviors. In addition, the content of the education program should be age appropriate, yet this can lead into another disagreement of what is considered age appropriate.

## Knowledge

The knowledge level of students is commonly questioned as a reason for the high rates of sexually transmitted diseases. In a study conducted by Buysse (1996), respondents indicated that they had received sufficient information or that they were rather indifferent with regard to additional information about sexually transmitted diseases, however answers on knowledge questions showed important misconceptions.

Buysse (1996) was in agreement with other research which showed that the general knowledge level about AIDS and HIV transmission of the young adult population was rather high, but substantial confusion was found concerning some specific topics including the knowledge level about how to use contraceptives in general and about condoms in particular was low. Education programs need to focus on how these misconceptions can be corrected.

Sheehan, Ambrosio, McDevitt, and Lennon (1990), also found their respondents to have misconceptions about the transmission of AIDS. "Substantial proportions (30% or more) of subjects in both 1986 and 1988 indicated that HIV could be contracted through such incorrect mechanisms as mosquito bites, saliva on a glass, and public hottubs" (p. 726). There are many who believe that these important misconceptions may be a reason why the spread of STDs is so high.

Why do students feel they know so much about STDs? Buysse (1996) believes one possible explanation for the overestimation of one's knowledge is that students often use unreliable information sources. Many students are likely to get information about STDs from their friends or from the media - both of which are not always accurate.

Not only do students have an overestimation of their own knowledge, they also think their chances of contracting a sexually transmitted disease is low. Even with the increase of HIV infection in the heterosexual population, students feel they are not at a great risk for contracting HIV. In the study by Ehde, Holm, and Robbins (1995), the participants reported frequently engaging in vaginal, oral, and anal intercourse without the use of condoms and reported their perceived risk of HIV infection as none to minimal.

Ehde, Holm and Robbins (1995) made a comparison between men and women with regards to their level of knowledge about STDs and found that women were more knowledgeable than men about HIV and its transmission.

### Behaviors

The number of youth who are deciding to engage in pre-marital intercourse is rising. There are behaviors which are associated with risks of acquiring sexually transmitted diseases including "age at first coitus, number of sexual partners, frequency and timing of sexual intercourse, sexual practices, nondiscriminating recruitment of sex partners, and behavioral characteristics of sex partners, including health-care practices, use of protection, and experimentation with alcohol and drugs" (Gilbert and Alexander, 1998, 107). Unfortunately, these are many of the behaviors today's adolescents are participating in.

A disconcerting note is there is only a very small percentage of students who are using condoms on a consistent basis. In a study by Ehde, Holm, and Robbins (1995), three fourths of their total sample reported being sexually active in the past year, yet only 18.4% reported consistently using condoms during vaginal intercourse. As reported by Campbell,

Pepau, and DeBro (1992), a study by Baldwin and Baldwin (1988) found that during a three month period, only 13% of sexually active college students always used a condom during vaginal intercourse. Even more surprising, 66% reported they had never used a condom.

As stated earlier, women tend to be more knowledgeable about sexually transmitted diseases. They also seem to engage in more cautious sexual behavior than males. This could be in part because society teaches women to be passive, but this also could be because females are more aware of the serious problems which may result from unplanned pregnancies as well as sexually transmitted diseases.

## Chapter 3

### Methodology

This chapter includes how the sample was selected, a description of the participants and the instrumentation used to collect the data. An explanation of the data collection and analysis is also presented.

#### Selection of Sample and Description of Participants

The respondents in this study were undergraduate college students aged 17-22 enrolled at the University of Wisconsin - Stout. Three classrooms were chosen and the students in these classes made up the sample which totaled 103 students. Those students who did not fit the age criteria were given a survey, but their responses were not included in the calculations.

The survey sample had slightly more females (54.4%) than males (45.6%). The majority of respondents were Caucasian. Those respondents who went to a public high school totaled 90.3% and most of those public schools were located in the city (38.8%) or a rural area (38.8%).

The family structure for the majority of the sample was with both natural (or adoptive) parents. The response on birth order indicated 3.9% were the only child, 40.8% were the youngest child, 23.3% were the middle child, and 31.1% were the oldest child in their family. The number of siblings in the samples' families ranged from 0 to 5, with the highest percent (47.6%) having 1 sibling. (see Table 3.1).

Table 3.1

Demographic Information

Demographic Variable	Frequency	Percent
<u>Age</u>		
17 years old	1	1.0
18 years old	4	3.9
19 years old	29	28.2
20 years old	31	30.1
21 years old	25	24.3
22 years old	13	12.6
<u>Gender</u>		
Male	47	45.6
Female	56	54.4
<u>Race</u>		
Asian American	1	1
Caucasian American	100	97.1
Hispanic American	1	1
<u>Location of High School</u>		
City	40	38.8
Suburb	22	21.4
Rural	40	38.8

Type of High School

Public	93	90.3
Private	10	9.7

Family Structure

Single parent family	12	11.7
Remarried family	9	8.7
Both natural (or adoptive) parents	82	79.6

Birth Order

Only child	4	3.9
Youngest child	42	40.8
Middle child	24	23.3
Oldest child	32	31.1

Number of Siblings

0 siblings	4	3.9
1 sibling	49	47.6
2 siblings	28	27.2
3 siblings	18	17.5
4 siblings	3	2.9
5 siblings	1	1.0

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## Instrumentation

The survey (see Appendix A) was developed by the researcher. The knowledge questions in Section IV was based on information obtained in the textbook Human Sexuality Today by Bruce King, Cameron Camp, and Ann Downey (1991). The survey was divided into four sections: demographics, attitudes, information, and knowledge.

Section I, demographics, provided information about the respondents. These questions included age, gender, race, family dynamics, and if they have taken a college course in human sexuality.

Section II, attitudes, determined what the respondents thought about sex education and how educated they thought they were in the areas of sexuality and sexually transmitted diseases. The respondents were asked to respond to statements based on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The purpose of Section III was to determine where the respondents would go to get accurate information about sexually transmitted diseases. A list of possible resources was given and the respondents were asked to rate on a Likert scale of never to always on how likely they were to go to the listed resource for accurate information about sexually transmitted diseases. The resources were divided into three sections. Section one was relatives which included mother, father, brother, sister, grandparents, and other relatives. Section two was listed as other resources including friends, clergy member, health professional, teachers, and school counselors. The third section was other resources including movies, television, social agency, books, magazines, and other. The choice of not applicable was also given for those who did not have the relation.

Section IV asked twenty-one true-false statements related to the transmission of sexually transmitted diseases. The respondents were asked to circle the correct answer. This information was collected to show the actual knowledge of the respondents in regards to sexually transmitted diseases.

### Data Collection

The written survey method was used to gather the data from a convenience, non-random sample. The survey was delivered to college students in three different classrooms. The classrooms were chosen so that males and females would be represented equally and so the majority of the respondents were between the ages of 17-22. A cover letter was attached to the surveys explaining that the survey was voluntary and the protection of their privacy would be upheld (see Appendix A). The researcher distributed the surveys and instructed the respondents to place their surveys in a collection envelope at the front of the room when they were finished. The respondents that were not between the ages of seventeen and twenty-two were removed and not included in the total tabulations.

### Data Analysis

Responses obtained through the research instrument were tabulated and analyzed using the Statistical Package for the Social Sciences (SPSS). The data from Section I of the instrument was examined by using frequencies, means, and percentages. In Section II and Section III the means were calculated for each question. Correlations were calculated for items in these two sections. For Section IV the mean of the number of correct answers

for each participant was determined. In addition, the mean number of participants who answered each question correctly was found.

## Chapter 4

### Results and Discussion

The purpose of this study was to describe the students level of actual and perceived knowledge about sexually transmitted disease. A written survey was developed and given to UW-Stout underclass students. The survey contained four sections: demographic information (Section I), attitudes (Section II), information (Section III), and knowledge (Section IV). The demographic information was presented in Chapter 3 and Table 3.1. This chapter will report how the findings are related to the proposed objectives.

#### Objective 1 - Amount of Accurate Knowledge

The first objective of this study is to determine the amount of accurate knowledge students have about transmission of sexually transmitted diseases.

Section IV of the survey had twenty-one true-false statements which were used to measure the knowledge students had about the transmission of sexually transmitted diseases. Table 4.1 displays the frequency for the number of correct answers. The number of correct answers ranged from 10 to 20, with no one answering all of the questions correctly. About half of the respondents had 16 or fewer correct answers. Both the mean and median of the number of correct answers was 16.

The most frequently incorrectly answered question was item 57, "A person with genital herpes is not generally contagious between active attacks", which 79.6% of respondents answered incorrectly. Another frequently incorrect answer was given to item 56, "If neither person had a sexually transmitted disease to begin with, a monogamous

Table 4.1

Knowledge Scores for College Students About Sexually Transmitted Diseases

Number of Correct Answers For 21 Questions	Frequency of Respondents	Percentage of Respondents	Cumulative Percent
10	3	2.9	2.9
11	4	3.9	6.9
12	2	1.9	8.8
13	6	5.8	14.7
14	9	8.7	23.5
15	12	11.7	35.3
16	17	16.5	52.0
17	21	20.4	72.5
18	14	13.6	86.3
19	8	7.8	94.1
20	6	5.8	100.0

couple can engage in oral-genital or anal sex without fear of getting AIDS", which 60.2% of respondents answered incorrectly. (see Table 4.2).

The question most frequently answered correctly was item 59, "A person who has recently been sexually active and who has no symptoms does not have to worry about gonorrhea, chlamydia, or syphilis", with 98.1% of respondents answering correctly. In addition, 94.2% of respondents answered item 64 correctly which states "Latex condoms greatly reduce the risk of catching sexually transmitted diseases, including AIDS". (see Table 4.3). Appendix B has a list of all the statements in rank order from most frequently answered correctly to most frequently answered incorrectly.

#### Objective 2 - Students Perceived Knowledge

The second objective of this study is to determine how much students perceive they know about the transmission of sexually transmitted diseases as well as their attitudes about sexuality and sexually transmitted diseases.

Section II of the survey included twenty-two statements in order to find out how much the students perceived they knew about the transmission of sexually transmitted diseases based on the level of agreement with the statement. In the statements which asked about the respondents knowledge (see Table 4.4) the highest mean (4.4) was answered to item 23, "I think I have received enough information about sex to make healthy decisions". In item 24 which asks the students how knowledgeable they are about sexually transmitted diseases a mean of 4.1 was calculated. The respondents were also asked to respond to the

Table 4.2

True-False Sexually Transmitted Disease Statements Most Frequently Answered

Incorrectly

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Question	Frequency	Percent
57. A person with genital herpes is not generally contagious between active attacks.	82	79.6
56. If neither person had a sexually transmitted disease to begin with, a monogamous couple can engage in oral-genital or anal sex without fear of getting AIDS.	62	60.2
52. Homosexuality is one of the causes of AIDS.	63	61.2
53. If left untreated, gonorrhea can turn into syphilis.	63	61.2
55. A person with a cold sore on the mouth can give his or her partner genital herpes during oral-genital contact.	65	63.1

---

Table 4.3

True-False Sexually Transmitted Disease Knowledge Statements Most FrequentlyAnswered Correctly

Question	Frequency	Percent
59. A person who has recently been sexually active and who has no symptoms does not have to worry about gonorrhea, chlamydia, or syphilis.	101	98.1
64. Latex condoms greatly reduce the risk of catching sexually transmitted diseases, including AIDS.	97	94.2
61. A person can only have one type of sexually transmitted disease at a time.	96	93.2
51. Having a sexually transmitted disease is a sign of promiscuity.	95	92.2
60. Most women do not show any symptoms in the early stages of gonorrhea or chlamydia.	94	91.3

Table 4.4

Students Attitudes about Sexuality and Sexually Transmitted Diseases

Question	Mean
14. My high school gave me an adequate sex education.	3.3
17. I think I have sufficient knowledge about sex.	4.2
18. I learned a lot about sexually transmitted diseases from sex education in high school.	3.4
19. I know where I can go to get accurate information about sex related issues.	4.0
23. I think I have received enough information about sex to make healthy decisions.	4.4
24. I am knowledgeable about sexually transmitted diseases.	4.1
28. I am knowledgeable about the biological aspects of sex.	4.0
31. I think I should have more knowledge about the many aspects of sex.	3.0

Likert Scale: 1=Strongly Disagree, 5=Strongly Agree

statement "I think I should have more knowledge about the many aspects of sex." (item 31) which yielded a mean response of 3.0 (neutral).

Table 4.5 indicates the respondents attitudes about parents and schools as sex educators. A mean score of 4.05 (slightly agree) was calculated for statement 11 (Teaching sex education in a school encourages teens to have sex). Yet, the mean for the statement "Sex education should be taught in schools" (item 13) was 4.37. The respondents indicated they learned a lot about sexually transmitted diseases from sex education in high school (item 18) which yielded a mean response of 3.40.

In the statements which looked at attitudes about sex education and parents, the highest mean score (3.93) was found with item 12 which stated "I feel it is a parents responsibility to teach their children about sex.". The responses to the statement "My parents have talked to me about sex and its implications." (item 32) had a calculated mean of 3.11. Item 16 which asked "It is easy for me to ask my parents about sex." scored a mean of 2.64.

### Objective 3 - Information Sources For Accurate Knowledge

The third objective is to determine where students go to get accurate information about sexually transmitted diseases.

Section III of the survey focused on where students would go to get accurate information about sexually transmitted diseases. Overall, the most common place a student would go for information is to their friends which had a mean score of 3.95. Other sources which ranked the highest for where respondents would go for information were

Table 4.5

Attitudes About Parents and Schools as Sex Educators

---

Statement	Mean
<b>About Parents</b>	
12. I feel it is a parents responsibility to teach their children about sex.	3.93
16. It is easy for me to ask my parents about sex.	2.64
32. My parents have talked to me about sex and its implications.	3.11
<b>About Schools</b>	
11. Teaching sex education in a school encourages teens to have sex.	4.05
13. I believe sex education should be taught in schools.	4.37
18. I learned a lot about sexually transmitted diseases from sex education in high school.	3.40

---

Likert Scale: 1=Strongly Disagree, 5=Strongly Agree

Health Professionals (3.48), Mother (2.86), books (2.76), and Social Agency (2.62). (see Table 4.6). The least common place a student would go for information was their grandparents which had a mean of 1.20. Other places which scored lower means were a clergy member, teachers, school counselors, and the movies. (see Table 4.7).

Table 4.8 displays the mean scores for how likely the respondents are to go to the listed individual to get accurate information on sexually transmitted diseases. In the category of relatives mothers had the highest mean with 2.86 and in the category of other people health professionals the highest mean with 3.48. Books had the highest mean (2.76) in the area of other resources.

Pearsons correlation was used to compare attitudes and where they go to get accurate information. (see Table 4.9). There is a strong positive correlation ( $r=.3195$ ,  $p<.001$ ) between parents responsibility and mother as information source. However, the correlation with fathers as information sources was insignificant ( $r=.0111$ ,  $p<.913$ ). A strong positive correlation was found between how easy it is to ask parent and mother ( $r=.4082$ ,  $p<.000$ ) and also father ( $r=.3883$ ,  $p<.000$ ). There was a strong positive correlation between the statement parents have talked to me about sex and mother ( $r=.4082$ ,  $p<.000$ ). There was also a positive correlation with fathers ( $r=.2740$ ,  $p<.006$ ).

There was not a significant correlation between the statement my friends are knowledgeable and the variable friends ( $r=.1204$ ,  $p<.226$ ). There also was not a significant correlation between an adequate sex education in high school and teachers ( $r=-.1023$ ,  $p<.304$ ) or school counselors ( $r=.0217$ ,  $p<.828$ ).

Table 4.6

Information Sources – Most Common

---

Source	Mean
Friends	3.95
Health Professional	3.48
Mother	2.86
Books	2.76
Social Agency	2.62

---

Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree

Table 4.7

Information Sources – Least Common

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Source	Mean
Grandparents	1.20
Other	1.41
Clergy Member	1.55
Teachers	1.68
School Counselors	1.81
Movies	1.88

---

Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree

Table 4.8

Information Sources (By Category)

Source	Mean
Relatives	
Mother	2.86
Sister	2.51
Brother	2.15
Father	2.00
Other Relatives	1.89
Grandparents	1.20
Other People	
Friends	3.95
Health Professional	3.48
School Counselors	1.81
Teachers	1.68
Clergy Member	1.55
Other Resources	
Books	2.76
Social Agency	2.62
Magazines	2.61
Television	1.97
Movies	1.88

Other

1.41

---

Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree

Table 4.9

Correlation of Attitudes and Information Source

Variables Correlated	Pearsons Correlation
Parents responsibility (#12) and	
Mother (#33)	r = .3195***
Father (#34)	r = .0111
Easy to ask parent (#16) and	
Mother (#33)	r = .4082***
Father (#34)	r = .3883***
Parents have talked to me (#32)	
Mother (#33)	r = .4082***
Father (#34)	r = .2740**
Friends are knowledgeable (#20)	
Friends (#39)	r = .1204
High School adequate sex education (#14)	
Teachers (#42)	r = -.1023
School Counselors (#43)	r = .0217

\*\* p < .01

\*\*\* p < .001

## Chapter 5

### Summary, Conclusions and Recommendations

This chapter presents an overview of the research on college students knowledge of sexually transmitted disease and attitudes about sexuality. A summary of the purpose, instrumentation, and data collection and analysis are included. Conclusions of the findings for each objective are presented as well as limitations of the study. The chapter is concluded with recommendations by the researcher.

#### Summary

The purpose of this study was to describe the level of actual and perceived knowledge about sexually transmitted diseases. The research objectives of the study were:

1. To determine the amount of accurate knowledge students have about transmission of sexually transmitted diseases.
2. To determine how much students perceive they know about the transmission of sexually transmitted diseases as well as their attitudes about sexuality and sexually transmitted diseases.
3. To determine where students go to get accurate information about sexually transmitted diseases.

The survey used to collect the data was developed by the researcher. The knowledge questions in Section IV were based on information obtained in the textbook Human Sexuality Today by Bruce King, Cameron Camp, and Ann Downey (1991). The survey was divided into four sections.

Section I, demographics, provided information about the respondents. Section II, attitudes, determined what the respondents thought about sex education and how educated they thought they were in the areas of sexuality and sexually transmitted diseases. Section III determined where the respondents would go to get accurate information about sexually transmitted diseases. Section IV measured the students knowledge by using twenty-one true or false statements related to the transmission of sexually transmitted diseases.

The respondents in this study were a non-random sample of undergraduate college students whose age ranged from 17-22. A total of 103 surveys were collected. The survey sample had slightly more females (54.4%) than males (45.6%). The majority of respondents (96.1%) were Caucasian. The number of siblings ranged from 0 to 5, with the highest percent (47.6%) having 1 sibling.

Responses were tabulated and analyzed using the Statistical Package for the Social Sciences (SPSS). Data from Section I of the instrument was examined by using frequencies, means, and percentages. In Section II and Section III the means were calculated for each question. Correlations were calculated for items in these two sections. For Section IV the mean of the number of correct answers for each participant was found and also the mean number of participants who answered each question correctly was found.

## Conclusions

Objective 1 - To determine the amount of accurate knowledge students have about transmission of sexually transmitted.

By using 80% as a passing score for Section IV over half of the respondents failed the knowledge portion of the survey. The findings show 47% of the respondents scored 80% or higher on the knowledge questions. As stated earlier, research conducted by both Buysse (1996) and Sheehan et al (1990) found their respondents had misconceptions about the transmission of sexually transmitted diseases.

This raises questions such as how can these students make healthy decisions when they don't have the knowledge level necessary. In addition, we must look closer at this possibly being a reason why STD rates are so high among this age group.

Objective 2 - To determine how much students perceive they know about the transmission of sexually transmitted diseases as well as their attitudes about sexuality and sexually transmitted diseases.

The findings show students think they know enough and don't need any more education. These findings agree with the research conducted by Buysse (1996) which found respondents indicated that they had received sufficient information or that they were rather indifferent with regard to additional information about sexually transmitted diseases.

There was a conflicting area when looking at the respondents attitudes about sex education. The respondents thought teaching sex education in schools encourages teens to have sex, yet they thought very strongly that sex education should be taught in schools. One possible conclusion to this may be that the respondents think it is acceptable to encourage teens to have sex as long as the teens are being taught about sex. But, as the conclusions from this study show students do not know as much about STDs as they think. In addition, they think they do not have a need to learn more about sexually transmitted diseases.

Objective 3 - To determine where students go to get accurate information about sexually transmitted diseases.

In this study the most common place students went for accurate information were friends; followed by health professionals, mother, books and social agency. This supports the research which was conducted by Buysse (1996) which found the young adult population goes to friends most often for information about sex. How can students be getting accurate information if they are going to their peers who are not scoring high on knowledge tests? According to the findings from objective one which showed the failing knowledge level scores, they are not getting accurate information.

The respondents slightly disagreed that it was easy for them to ask their parents about sex, yet their mother was ranked third highest on where they would go for information about sexually transmitted diseases. In addition, there was a strong positive correlation between how easy it is to ask their parents about sex and how likely they are to ask their mother and father for information.

### Limitations

The knowledge level of the respondents may have been impacted by recently taking a college course in human sexuality. 13.6% of the respondents have taken a college course in human sexuality and 38.8% of respondents have had a college course that included a lecture on sexually transmitted diseases.

The first sentence of the survey incorrectly states the questionnaire is part of a study to explore sex education programs in schools rather than the knowledge level about

sexually transmitted diseases. However, I believe this would not have an impact on the findings of this research study.

### Recommendations

From this study it was determined students are not as knowledgeable as they think about sexually transmitted diseases. It was also determined that students are most likely to go to their friends for information about sexually transmitted diseases. There are many misconceptions that need to be clarified before students are able to make healthy decisions. The questions we are now faced with is how can we teach people who think they already know all the answers? In addition, how can we get these students to go to sources who have accurate information about STDs?

One possible solution would be to require courses starting with junior high that teach students about sexually transmitted diseases and how the students can be impacted by a sexually transmitted disease. In addition, these courses should focus on teaching students how to make healthy decisions. Research, such as this study, should be presented to the classes to let the students know they may not be as knowledgeable as they think. Further research can be done to determine if females or males are more knowledgeable about STDs to determine if there is a group we need to focus on to provide more education.

With the rates of STDs being much higher in the minority populations further research needs to focus on the knowledge level among those groups. Programs can be developed to focus on the STDs and other sexual issues which are most prevalent in the individual race groups.

Assessing how we can encourage a change from unhealthy to healthy decision making is another area that should be researched. Healthy decision making impacts many parts of a student's life. Students need to know how to make healthy decisions about sex, drugs, school, religion and many other areas. Topics that play a part in healthy decision making which need to be addressed include peer pressure and self-esteem.

A large body of research shows students' perceived risk of getting a sexually transmitted disease is low. This low perceived risk can be caused by the lack of education the students have and common misconceptions about STDs. Widespread stereotypes may also play a role in students' risk perception. Some of the stereotypes that students believed in this study were that homosexuality is a cause of AIDS and also that men are more likely to contract a STD.

Further research can be done in countless other areas. The effectiveness of the many types of educational programs currently used needs to be evaluated. There is such a large number of programs that don't seem to be effective and revisions to these programs need to be made. Research by the CDC (1998) has found the best approach to use in education is a comprehensive approach, using all groups that have an influence over young people. However, this continues the debate of whose responsibility it is to teach sex education.

Abstinence education is another approach which could be used to teach about sexuality. This approach focuses on teaching students to wait to have sex. The problem presented with this approach is because a large majority of students are already sexually active this is not helping to reduce the rates of STDs or pregnancies. Unless we can reduce

the number of students having sexual intercourse, we need to continue to educate them about the consequences which could occur if they do have sex.

There are some parents who believe they should be solely responsible for the sex education of their children. Research shows it is critical for the parents to be involved and in fact that parental involvement can increase condom use. However, through this research students slightly disagreed that they would go to their parents to talk about sex. This proves we need to have other outlets available for students to get accurate information.

With so much research stating parents are important (if not the most important) factors in the sex education process another area must be looked at – How educated are the parents? Parents, themselves, may not be accurately educated on the types of sexually transmitted diseases or on the many methods of birth control available which can prevent the transmission of STDs. This calls for a need for programs that can educate parents about STDs and how they can teach their children accurately and effectively.

There are also problems that arise if we rely solely on the schools to provide the necessary information to students. Because of the controversy over who should teach children about sex, the schools have their hands tied as far as what information can be presented. The information that is currently being presented is too little, too late.

What is clear is that there is a definite need for effective sex education programs. If the parents and schools are not thorough in educating, students are left lacking important information to make healthy decisions. To help to continue to reduce the rates of STDs many different avenues should be investigated including the availability of birth control, teaching which birth control is effect in preventing STDs and the proper method for using birth control. The possibility of having STD screening clinics more accessible and

affordable also should be considered. Because of the human and financial costs STDs have to our society it is necessary to try every avenue possible to reduce the epidemic rates of sexually transmitted diseases.

## Bibliography

Baldwin, J. D., & Baldwin, J. I. (1988). Factors affecting AIDS-related sexual risk-taking behavior among college students. The Journal of Sex Research, 25, 181-196.

Barling, N. R., & Moore, S. M. (1990). Adolescents' attitudes towards AIDS precautions and intention to use condoms. Psychological Reports, 67, 883-890.

Buysse, A. (1996). Adolescents, young adults and AIDS: A study of actual knowledge vs. perceived need for additional information. Journal of Youth and Adolescents, 25, 259-271.

Buzi, R. S., Weinman, M. L., & Smite, P. B. (1998). Ethnic differences in STD rates among female adolescents. Adolescence, 33, 313-318.

Campbell, S. M., Peplau, L. A., & DeBro, S. C. (1992). Women, men, and condoms. Psychology of Women Quarterly, 16, 273-288.

Center for Disease Control and Prevention. (1998). Patterns of condom use among adolescents: The impact of mother-adolescent communication. American Journal of Public Health. [On-line]. Available:  
[http://www.cdc.gov/nchstp/hiv\\_aids/pubs/facts/con\\_use.htm](http://www.cdc.gov/nchstp/hiv_aids/pubs/facts/con_use.htm)

Center for Disease Control and Prevention. (1998). Young people at risk – epidemic shifts further toward young women and minorities. [On-line]. Available:  
[http://www.cdc.gov/nchstp/hiv\\_aids/pubs/facts/youth.htm](http://www.cdc.gov/nchstp/hiv_aids/pubs/facts/youth.htm)

Center for Disease Control and Prevention: Division of sexually transmitted disease/HIV. (1995). Annual Report, 1993. Atlanta, GA: U.S. Department of Health and Human Services.

Center for Disease Control and Prevention: Division of STD Prevention. (1996).  
The challenge of STD prevention in the United States. [On-line]. Available:

[http://www.cdc.gov/nchstp/dstd/STD\\_Prevention\\_in\\_the\\_United\\_States.htm](http://www.cdc.gov/nchstp/dstd/STD_Prevention_in_the_United_States.htm)

DeBuono, B. A., Zinner, S. H., Daamen, M., & McCormack, W. M. (1990).  
Sexual behavior of college women in 1975, 1986, and 1989. New England Journal of  
Medicine, 322, 821-825.

Ehde, D. M., Holm, J. E., & Robbins, G. M. (1995). The impact of Magic  
Johnson's HIV status disclosure on unmarried college students HIV knowledge, attitudes,  
risk perception, and sexual behavior. The Journal of American College Health, 44, 55-  
58.

Gilbert, L. & Alexander, L. (1998). A profile of sexual health behaviors among  
college women. Psychological Reports, 82, 107-116.

King, B. M., Camp, C. J., & Downey, A. M. (1991). Sexually transmitted and  
sexually related diseases. In M. Harrison, Human Sexuality Today (pp. 122-123).  
Englewood Cliffs, New Jersey.

MacDonald, N. E., Wells, G. A., Fisher, W. A., Warren, W. K., King, M. A.,  
Doherty, J. A., & Bowie, W. R. (1990). High-risk STD/HIV behavior among college  
students. Journal of American Medical Association, 263, 3155-3159.

Mauldon, J. & Luker, K. (1998). The effects of contraceptive education on  
method use at first intercourse. Family Planning Perspectives, 28, 19-24.

Michener, J. A. (1995). Sex education: A success in our social-studies class. The  
Clearing House, 69, 95-98.

Miller, K. S., Kotchick, B. A., Dorsey, S., Forehand, R., & Ham, A. Y. (1998). Family communication about sex: What are parents saying and are their adolescents listening? Family Planning Perspectives, *30*, 218-222.

Napier, K. (1997). Chastity programs shatter sex-ed myths. Policy Review, *83*, 12-16.

National Institute of Allergy and Infectious Diseases. (1998). Sexually Transmitted Disease Statistics. [On-line]. Available: <http://www.niaid.nih.gov/factsheets/stdstats.htm>

Ob/Gyns see gap in STD awareness. (1998, June 29). Women's Health Weekly, 17-18.

Raffaelli, M., Bogenschneider, K. & Flood, M. F. (1998). Parent-teen communication about sexual topics. Journal of Family Issues, *19*, 315-333.

Sheehan, E. P., Ambrosio, A., McDevitt, T. M., & Lennon, R. (1990). An examination of change in reports of AIDS related knowledge and attitudes in 1986 and 1988. Psychological Reports, *67*, 723-729.

## Appendix A

Dear UW - Stout Students,

I am seeking your attitudes and knowledge about sex education and sexually transmitted diseases. I am hoping to secure this information as part of the requirements for a Master's Degree in Home Economics - Family Studies and Human Development. The attached survey will take approximately ten minutes of your time to complete. Most of the questions can be answered by simply circling or checking your response. **YOUR PARTICIPATION IS STRICTLY VOLUNTARY.**

**THANK YOU** for your cooperation in helping me with this project.

Sincerely,

Angie Stoskopf  
Graduate Student

To Participant,

I understand that by returning this questionnaire, I am giving my informed consent as a participating volunteer in this study. I understand the basic nature of the study and agree that any potential risks are exceedingly small. I also understand the potential benefits that might be realized from the successful completion of this study. I am aware that the information is being sought in a specific manner so that no identifiers are needed and so that confidentiality is guaranteed. I realize that I have the right to refuse to participate and that my right to withdraw from participation at any time during the study will be respected with no coercion or prejudice.

NOTE: Questions or concerns about participation in the research or subsequent complaints should be addressed to Dr. Ted Knous, Chair, UW-Stout Institutional Review Board for the Protection of Human Subjects in Research, 410 BH, UW-Stout, Menomonie, WI 54751, phone (715) 232-1126 or Dr. Judy Rommel, Research Advisor, 446 HE, UW-Stout, Menomonie, WI 54175, phone (715) 232-2544.

This questionnaire is part of a study to explore sex education programs in schools. DO NOT PUT YOUR NAME ON THE SURVEY. The questionnaire is completely anonymous. Please answer all the questions to the best of your ability. All information will be kept COMPLETELY CONFIDENTIAL.

Section I: General Information. Place a check on the blank next to the one response that best describes you.

1. Your age:

17       20  
 18       21  
 19       22

2. Gender:

Male  
 Female

3. Race:

African American  
 Asian American  
 Caucasian American  
 Hispanic American  
 Native American  
 Other (Please Specify \_\_\_\_\_)

4. I went to high school in:

the city  
 a suburb  
 a rural area

5. My high school was:

public  
 private

6. My family:

is a single parent family  
 is a "remarried" family  
 includes both natural (or adoptive) parents  
 I live with other relatives or a guardian

7. I am the:

only child  
 youngest child  
 middle child  
 oldest child

8. I have: \_\_\_\_\_ brothers and/or \_\_\_\_\_ sisters (Indicate number of each)

9. Have you taken a **college** course in human sexuality?

\_\_\_\_\_ yes

\_\_\_\_\_ no

10. Have any of your college courses had a lecture on sexually transmitted diseases?

\_\_\_\_\_ yes

\_\_\_\_\_ no

### Section II: Attitudes

Indicate the extent to which you agree with each of the attitude statements below by selecting a number from 1 to 5. If you strongly agree with the statement, circle the 5. If you strongly disagree with a statement, circle the 1. If your feelings are not as strong, circle a number between 1 and 5.

1	2	3	4	5
Strongly Disagree	Slightly Disagree	Neutral	Slightly Agree	Strongly Agree

11. Teaching sex education in a school encourages teens to have sex. 1 2 3 4 5

12. I feel it is a parents responsibility to teach their children about sex. 1 2 3 4 5

13. I believe sex education should be taught in schools. 1 2 3 4 5

14. My high school gave me an adequate sex education. 1 2 3 4 5

15. I think adolescents need more sex education. 1 2 3 4 5

16. It is easy for me to ask my parents about sex. 1 2 3 4 5

17. I think I have sufficient knowledge about sex. 1 2 3 4 5

18. I learned a lot about sexually transmitted diseases from sex education  
in high school. 1 2 3 4 5

19. I know where I can go to get accurate information about sex related  
issues. 1 2 3 4 5

20. My friends are knowledgeable about the biological aspects of sex. 1 2 3 4 5

21. My religious beliefs play a role in my views about premarital sex. 1 2 3 4 5

22. I am embarrassed to talk about sex. 1 2 3 4 5

23. I think I have received enough information about sex to make healthy  
decisions. 1 2 3 4 5

24. I am knowledgeable about sexually transmitted diseases. 1 2 3 4 5

24. I wish I would have received more information about sex sooner in life. 1 2 3 4 5
26. I plan on waiting until I am married to have sex. 1 2 3 4 5
27. I would take a course about sex education in college if one was available. 1 2 3 4 5
28. I am knowledgeable about the biological aspects of sex. 1 2 3 4 5
29. Most teenagers are well-informed about sexually transmitted diseases. 1 2 3 4 5
30. If a free class about sex was offered in my community I would attend. 1 2 3 4 5
31. I think I should have more knowledge about the many aspects of sex. 1 2 3 4 5
32. My parents have talked to me about sex and its implications. 1 2 3 4 5

**Section III: Information**

Indicate in the list below to whom/what you would turn to for **accurate information** about sexually transmitted diseases if you had some questions or concerns by selecting a number from 1 to 5. Remember, your personal opinion is the best response. Please give each item a rating.

N	R	S	F	A	N/A
Never	Rarely	Sometimes	Frequently	Always	Not Applicable

For accurate information about sex I would turn to:

**Relatives**

- |                     |   |   |   |   |   |     |
|---------------------|---|---|---|---|---|-----|
| 33. Mother          | N | R | S | F | A | N/A |
| 34. Father          | N | R | S | F | A | N/A |
| 35. Brother         | N | R | S | F | A | N/A |
| 36. Sister          | N | R | S | F | A | N/A |
| 37. Grandparents    | N | R | S | F | A | N/A |
| 38. Other Relatives | N | R | S | F | A | N/A |

(Please Specify \_\_\_\_\_ )

**Other People**

- 39. Friends                                    N R S F A                                    N/A
- 40. Clergy Member                        N R S F A                                    N/A
- 41. Health Professional                 N R S F A                                    N/A  
(doctor, nurse, etc.)
- 42. Teachers                                N R S F A                                    N/A
- 43. School Counselors                    N R S F A                                    N/A

**Other Resource**

- 44. Movies                                    N R S F A                                    N/A
- 45. Television                              N R S F A                                    N/A
- 46. Social Agency                         N R S F A                                    N/A  
(such as Planned Parenthood)
- 47. Books                                     N R S F A                                    N/A
- 48. Magazines                               N R S F A                                    N/A
- 48. Other                                     N R S F A                                    N/A

(Please Specify\_\_\_\_\_ )

Section IV: Knowledge

The following questions are to test your knowledge about sexually transmitted diseases. Please circle true or false to the best of your knowledge.

- T F 49. People who have had a sexually transmitted disease are immune to getting that type of sexually transmitted disease again.
- T F 50. Many cases of gonorrhea and syphilis are contracted by people using dirty toilet seats in public bathrooms.
- T F 51. Having a sexually transmitted disease is a sign of promiscuity.
- T F 52. Homosexuality is one of the causes of AIDS.
- T F 53. If left untreated, gonorrhea can turn into syphilis.
- T F 54. Untreated chlamydia results in serious complications more often than untreated gonorrhea.

- T F 55. A person with a cold sore on the mouth can give his or her partner genital herpes during oral-genital contact.
- T F 56. If neither person had a sexually transmitted disease to begin with, a monogamous couple can engage in oral-genital or anal sex without fear of getting AIDS.
- T F 57. A person with genital herpes is generally not contagious between active attacks.
- T F 58. A person diagnosed with gonorrhea can assume that it is safe to resume sexual activity after being treated with a large dose of penicillin.
- T F 59. A person who has recently been sexually active and who has no symptoms does not have to worry about gonorrhea, chlamydia, or syphilis.
- T F 60. Most women do not show any symptoms in the early stages of gonorrhea or chlamydia.
- T F 61. A person can only have one type of sexually transmitted disease at a time.
- T F 62. More people have died from untreated syphilis than from AIDS.
- T F 63. Cold sores and fever blisters are symptoms of herpes.
- T F 64. Latex condoms greatly reduce the risk of catching sexually transmitted diseases, including AIDS.
- T F 65. Because of penicillin and other drugs, sexually transmitted diseases are on the decline in the United States.
- T F 66. Men are more likely to contract a sexually transmitted disease.
- T F 67. Cases of AIDS among heterosexuals are increasing at a greater rate than among gay men.
- T F 68. Douching after sexual intercourse can prevent sexually transmitted diseases.
- T F 69. Chlamydia is the most common sexually transmitted diseases.

## Appendix B

## Knowledge Statements in Rank Order

<u>Percent Correct</u>	<u>Statement</u>
98.1	59. A person who has recently been sexually active and who has no symptoms does not have to worry about gonorrhea, chlamydia, or syphilis.
94.2	64. Latex condoms greatly reduce the risk of catching sexually transmitted diseases, including AIDS.
93.2	61. A person can only have one type of sexually transmitted disease at a time.
92.2	51. Having a sexually transmitted disease is a sign of promiscuity.
91.3	60. Most women do not show any symptoms in the early stages of gonorrhea or chlamydia.
90.3	49. People who have had a sexually transmitted disease are immune to getting that type of sexually transmitted disease again.
88.3	58. A person diagnosed with gonorrhea can assume that it is safe to resume sexual activity after being treated with a large dose of penicillin.
84.5	50. Many cases of gonorrhea and syphilis are contracted by people using dirty toilet seats in public bathrooms.
82.5	63. Cold sores and fever blisters are symptoms of herpes.
81.6	54. Untreated chlamydia results in serious complications more often than untreated gonorrhea.
80.6	68. Douching after sexual intercourse can prevent sexually transmitted diseases.
77.7	66. Men are more likely to contract a sexually transmitted disease.
77.7	67. Cases of AIDS among heterosexuals are increasing at a greater rate than among gay men.
76.7	65. Because of penicillin and other drugs, sexually transmitted diseases are on the decline in the United States.
63.1	55. A person with a cold sore on the mouth can give his or her partner genital herpes during oral-genital contact.

- 61.2 52. Homosexuality is one of the causes of AIDS.
- 61.2 53. If left untreated, gonorrhea can turn into syphilis.
- 60.2 56. If neither person had a sexually transmitted disease to begin with, a monogamous couple can engage in oral-genital or anal sex without fear of getting AIDS.
- 58.3 62. More people have died from untreated syphilis than from AIDS.
- 55.3 69. Chlamydia is the most common sexually transmitted diseases.
- 19.4 57. A person with genital herpes is generally not contagious between active attacks.