

# AIDS Knowledge and Sexual Attitudes/Behavior in a Middle-Class, Midwestern, Conservative College Freshman Population<sup>1</sup>

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**ABSTRACT.** The Human Immunodeficiency Virus (HIV) is spreading rapidly and exposure to this virus is no longer confined to formerly defined "high risk" groups. No studies have been reported to establish the incidence of the HIV antibody in a college population of a nonmetropolitan, Midwestern, "conservative" community. Behavior and attitudes of college students impact on the probability of an increase in sexually transmitted AIDS cases in the heterosexual community. Knowledge of HIV transmission, sexual attitudes, and behavior of entering freshmen in a Midwestern university with about 17,000 students were examined using a questionnaire to establish demographic characteristics, social and sexual attitudes and activities, and knowledge of sexually transmitted diseases, especially AIDS. The questionnaire was randomly distributed to 1,450 students; 941 questionnaires were completed of which 97.8% were freshmen. Less than one third reported never having had intercourse; of the sexually active, nearly 82% had had intercourse by their eighteenth birthday. Most were aware of AIDS and its transmission, although very few reported using recommended means to avoid exposure to the virus. Data suggest that current educational programs regarding sex and AIDS are not impacting on these young people. The survey results reveal a need for educational programs at earlier age levels or a major change in the current methods.

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## INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) may be the medical and socioeconomic disaster of this century. The causative agent, Human Immunodeficiency Virus (HIV), is spreading rapidly; exposure to this virus is no longer confined to formerly defined "high risk" groups. Reports in the public media repeatedly suggest that the spread of the virus on large metropolitan university campuses is increasing significantly. No studies have been reported to establish the incidence of the HIV antibody in a college population of a nonmetropolitan, Midwestern, "conservative" community. Further, no data are available to document the knowledge of HIV transmission or the sexual behavior of students in such a "low-risk" college setting. Consensus of the public has been that this population would be highly unlikely to be exposed to the virus. The question of how many college-age students, in the nonmetropolitan, conservative, middle-class areas, have been exposed to the virus, is a very pertinent one. Impacting on this are the greater incidence of sexual activity in today's youth; ineffective education; the absence of awareness and/or understanding of the cause of AIDS; and, the spread of HIV from the high risk groups to groups previously considered to be at low risk, e.g., heterosexuals.

The Center for Disease Control (CDC) has reported that about 66% of the individuals with AIDS were infected through sexual transmission of the disease (Douglas and Pinsky 1989). Sexual activity between men and women has been associated with 4% to 7% of these cases (Guinan and Hardy 1987). Of the 4-7%, 2% of all cases of AIDS have been sexually transmitted between men and women where one partner was known to be infected with the virus, was known to have AIDS, or was "at risk", e.g., a

bisexual man, an intravenous (IV) drug user, blood/blood-product recipient, or born in central Africa or Haiti. In the remaining 2% to 5%, there was no association of one partner having the disease or being "at risk"; the most likely route of transmission was heterosexual sex. The sexual activity of youth before and during college impacts on these figures and places these young people in an increasingly high risk situation. With sexual activity comes the responsibility of not only birth control, but also disease control and prevention. It has been estimated that by 1991 the transmission of HIV through sexual contact between men and women will account for 5% of all AIDS cases; this is projected to be a minimum of 13,500 cases (Chamberland and Dondero 1987). Another report has indicated that by using mathematical models, no precise predictions can be made to estimate the transmission of HIV through heterosexual contact and that current findings can not predict or preclude a major heterosexual epidemic (DeGruttola and Mayer 1988).

While only about 8% of AIDS cases are women, of those cases 79% are women between the ages of 13 and 39 (Guinan and Hardy 1987). Of women who have AIDS, 52% practice IV drug use, 24% are associated with sexual contact with a man having AIDS, and 11% with receiving contaminated blood or blood products. Further, 5% are associated with sexual contact with men born in countries where such heterosexual transmission is considered a major route of infection; and, finally, 8% are classified as infected by an undetermined transmission route. The last group is thought to probably be an example of transmission through sexual contact with men not considered to be "at risk" (Guinan and Hardy 1987). Many high school and college students would be in this last group. In many cases, these students would have no idea when they were infected.

There are an estimated 1-1.5 million HIV-infected persons who are either homosexual men or IV drug users

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(Turner et al. 1989). The National Research Council has suggested that the spread of AIDS heterosexually may, in fact, go relatively unnoticed when compared to the very large numbers of cases from the homosexual and IV drug user groups (Turner et al. 1989). The implication is that because of the high frequencies in the homosexual and drug use groups, educational programs, research, and public attention will not be directed toward the heterosexual community in a significant way. The fact that AIDS is strongly associated with heterosexual sex in other countries (e.g. African countries and Haiti) is infrequently pointed out in our educational programs. AIDS is still considered a disease of the homosexual and drug communities. This myth must be actively addressed and dispelled. With this in mind, the importance of educating young people about AIDS, its transmission, and safe sex becomes even greater. Data indicate that HIV infection rises from mid-teens, peaks in the early 30s, and declines in the 40s and 50s. One factor implicated is the increased sexual activity in the younger group and the suggestion that the older population has participated in less risky sexual activities since the advent of AIDS.

Kinsey reported that about 37% of the total male population had had some homosexual encounter between adolescence and old age (Kinsey et al. 1948) and Gagnon and Simon (1973) determined that 25% of individuals reporting an homosexual experience had the encounter prior to age 20. More recent data report that a minimum of 2-3% of American men are homosexual or bisexual (Turner et al. 1989).

Because the so-called low risk group may become increasingly more at risk, examination of attitudes and behavior of students entering college and a new life style could provide data to demonstrate whether the fear of AIDS and other sexually transmitted diseases has impacted on the young adults, or whether there is a general indifference to these problems in "low risk" groups/areas. If current programs are effectively meeting the need to educate low risk groups, these individuals should be less careless and more aware of the need for safe sex. Further, they should demonstrate appropriate behavior modification regarding sexual activity. To examine these questions, an in-depth questionnaire to establish, among other things, demographic characteristics, life-style, social and sexual attitudes and activities, and knowledge concerning sexually transmitted diseases was administered to incoming students at a Midwestern university.

## MATERIALS AND METHODS

The questionnaire items were derived, in part, from the U.S. Dept. of Health and Human Services National Health Interview Survey (Dawson et al. 1987) and a survey conducted by the University of California (DiClemente et al. 1987). The survey was distributed to students in freshmen level classes at Bowling Green State University (BGSU), Bowling Green, OH, which has approximately 17,000 students enrolled.

### Questionnaire

In addition to demographic characteristics, topics of

concern were: 1) age at first intercourse; 2) number of heterosexual sex partners; 3) number of homosexual sex partners; 4) frequency of genital manipulation by opposite sex and same sex partners; 5) frequency of oral sex with a heterosexual partner; 6) frequency of discussion of AIDS and/or HIV with sex partners; 7) modification of sexual practices in light of AIDS; 8) use of condoms; and, 9) knowledge of the AIDS virus.

As part of the sexual behavior section, the respondents were asked to report age at first intercourse, number of opposite sex and same sex partners, and frequency of types of nonintercourse sexual activities. Regarding the number of sexual partners, the respondents were asked to indicate the number of opposite sex and same sex partners with whom they had had intercourse within the past month, past year, and ever. Participants were asked to respond to nonintercourse sexual activity questions; included in these were questions concerning manual and oral manipulation of the genitals of partners or of having own genitals manipulated by a person of the opposite sex or the same sex.

In the sexual activity and AIDS section, respondents were asked to indicate if they discussed AIDS, previous sexual activity, or possible past exposure to HIV with partners. Inquiry regarding modification of sexual behavior because of the risk of exposure to HIV was included. To examine the respondents' knowledge of AIDS, they were asked to respond to a list of 22 statements indicating true, false, or don't know (Table 10). To evaluate the students' perceptions regarding the risk of getting AIDS, three questions were posed: What are the chances of someone you know getting the AIDS virus?; What are your chances of getting the AIDS virus?; and, What are a person's chances of getting the AIDS virus as a result of receiving a blood transfusion?

An advisory group, consisting of a physician and university personnel with degrees/specialties in sexual behavior, sex education, and/or allied health, was established to serve as consultants and to review the questionnaire prior to administration. Analysis of data was descriptive, i.e., frequency and percent, and was conducted by the Population and Society Research Center at BGSU.

### Participation

Confidentiality of all information obtained from the students was guaranteed. Students were advised of the sexually explicit nature of the survey and assured that no repercussions would result from failure to complete the form. To avoid any embarrassment to those students opting to not participate, all students were instructed to return the questionnaire at the end of the allotted time. All participation was voluntary and anonymous. Additionally, any students having questions or concerns were referred to psychologists at the University Student Counseling Center for assistance.

## RESULTS

One thousand four hundred fifty (1,450) questionnaires were administered to students in randomly selected freshman-level classes. The questionnaire was completed

by 941 students giving a response rate of 65%; of these, 879 (95%) were first semester freshmen. Demographic characteristics (Table 1) reported by the respondents indicated that 82.9% were 18 years old and most (89.6%) were white. The majority were from households of four or five (34.2% and 27.8%, respectively); and, about 40% had no older siblings. Approximately 62% were female and 38% male. Occupation of the head of household was reported by one-half (1/2) of respondents to be professional or manager/business officer. Nearly half were members of high school graduating classes of 250 or more and over three-quarters (3/4) were residents of either suburbs of a large city or a small town/rural city.

TABLE 1

*Demographic characteristics of the study population.*

Characteristics	Frequency	Percent
<b>Academic Status</b>		
1st Semester Freshman	879	95.0
2nd Semester Freshman	26	2.8
Sophomore	10	1.1
Junior	5	0.5
Senior	1	0.1
<b>Age</b>		
17 yrs old	71	7.7
18 yrs old	764	82.9
19 yrs old	56	6.1
>19 yrs old	30	3.3
<b>Gender</b>		
Male	350	37.8
Female	576	62.2
<b>Household Size</b>		
One	3	0.3
Two	31	3.4
Three	125	13.5
Four	316	34.2
Five	257	27.8
Six	117	12.6
Seven or more	76	8.2
No Older Siblings	366	39.8
<b>Head of Household's Occupation</b>		
Professional	209	23.6
Manager/Business Officer	214	24.1
Proprietor/Owner	67	7.6
Sales/Clerical	56	6.3
Technician/Semi-professional	49	5.5
Craftsman/Foreman	69	7.8
Skilled Machine Operator	49	5.5
Service Worker	38	4.3
Laborer	72	8.1
Farmer	13	1.5
Military Personnel	4	0.5
Unemployed	8	0.9
Homemaker	8	0.9
Disabled/Handicapped	9	1.0
Retired	21	2.4

TABLE 1 (continued)

Characteristics	Frequency	Percent
<b>Number in High School Graduating Class</b>		
<50	17	1.8
50 to 99	111	12.0
100 to 149	142	15.4
150 to 249	203	22.0
250 or more	449	48.7
<b>Race</b>		
White	824	89.6
Black	64	7.0
Asian	12	1.3
Hispanic	16	1.7
Other	4	0.4
<b>Residence</b>		
Metropolitan City	94	10.2
Suburb of Large City	406	44.0
Small Town/Rural City	341	36.9
Farming Area	81	8.8

**Sexual Behavior**

In response to questions regarding age at first sexual intercourse, less than one-third (30.9%) had never had intercourse. Among those having had intercourse (Table 2), 81.6% had done so prior to their eighteenth birthday, and over one-half (52.6%) by their seventeenth birthday.

TABLE 2

*Age at first sexual intercourse.*

Age	Frequency	Percent
Younger than 14 years	19	0.03
14 years	34	0.05
15 years	97	15.0
16 years	182	29.0
17 years	183	29.0
18 years	113	18.0
19 years	3	0.005

N = 631

Of the total number of respondents (913) 282, or 30.9%, claimed to never have had sexual intercourse.

In response to "how many different partners of the opposite sex have you ever had intercourse with," 285 did not answer. Of the 605 sexually active who answered this question, 36.9% indicated only one partner (Table 3). There were 125 (20.7%) who reported having two opposite sex partners; 4.6% reported having more than ten. Respondents from major cities indicated an average of 5.2 partners, while nonmetropolitan residents averaged 2.9 partners. For same sex partners, of the 655 students

answering, 97.4% claimed to have had no same sex partners ever (Table 4). Of the remaining 2.6%, 1.7% indicated having had one same sex partner and four individuals reported having had two. Two other respondents reported having had 30 and 40 same sex partners each.

In response to the number of opposite sex partners within the last 12 months (Table 3), 10.7% reported none; 55.5% reported having had only one partner; 16.9% reported two partners; 8.3% and 4.4% indicated three and four partners, respectively. The remaining 4.1% reported five to ten partners; and, 280 did not answer the question. Regarding same sex partners in the last year, only ten (1.7%) reported having had same sex partners and seven of those had had only one.

Answers to the question of how many opposite sex partners within the last month included, for those responding, 38.6% reporting none, 53.5% claiming one, and 6.3% indicating two partners. Nine individuals claimed three different partners, one claimed four, and one claimed ten different opposite sex partners in the last month.

These data indicate that among freshmen college students, males are less likely to be virgins than females, nonwhites are less likely to be virgins than whites, and nonwhites begin intercourse at an earlier age than do whites (Table 5). Nonurban residents are no more likely to be virgins than are urban residents; however, urban residents begin sexual activity at earlier ages. Over two-thirds of the respondents had participated in heterosexual intercourse, and most of these had had intercourse prior to the age 17. Nearly one-fourth indicated having two or more partners in heterosexual relationships, with an average of three. The number of different partners was higher in nonwhites and in individuals from major cities. Of the nearly two-thirds indicating sexual activity within the past month, 13% claimed multiple partners, ranging from two to ten different partners.

Homosexual activities were reported by about 3% of the respondents with about half of them reporting only one same sex partner. All homosexual activities reported were from male respondents.

While 30% of the entire sample reported having had no previous sexual intercourse, less than 20% reported never having participated in masturbation by a person of the opposite sex.

Asked the approximate number of times in the past 18 months that the respondent had "participated in manipulation of the genitals of, or having your genitals manipulated by a person of the opposite sex," less than 20% reported never, 14% indicated once or twice, and nearly 12% reported in excess of 50 times. The distribution by age at first intercourse indicated that over 58% of the responding virgins have participated in genital manipulation, while 86% and 92% of those under 15 years old and those 15 and over at first intercourse, respectively, participated. These data show that among the virgins, 42% have never participated in manual genital manipulation by the opposite sex. Less than 2% have participated more than 50 times in the last 18 months compared to 16% of nonvirgin participation.

TABLE 3

*Number of opposite sex partners  
of sexually active respondents.*

Number	Frequency	Percent
Ever		
One	223	36.9
Two	125	20.7
Three	78	12.9
Four	58	9.6
Five	39	6.5
Six	15	2.5
Seven	10	1.7
Eight	12	2.0
Nine	3	0.5
Ten	14	2.3
More than ten	28	4.6
Last 12 Months		
None	71	10.7
One	367	55.5
Two	112	16.9
Three	55	8.3
Four	29	4.4
Five	10	1.5
Six	10	1.5
Seven	0	0.0
Eight	2	0.3
Nine	2	0.3
Ten	3	0.5
Last Month		
None	253	38.6
One	351	53.5
Two	41	6.3
Three	9	1.4
Four	1	0.2
Ten	1	0.2

TABLE 4

*Number of same sex partners  
of sexually active respondents.*

Number	Frequency	Percent
Ever		
None	638	97.4
One	11	1.7
Two	4	0.6
Thirty	1	0.2
Forty	1	0.2
Last 12 Months		
None	639	98.5
One	7	1.1
Two	1	0.2
More than two	2	0.4
Last Month		
None	650	99.0
One	7	1.0

TABLE 5

*Percent distribution for age at first sexual intercourse by sample characteristics.*

	Age		Sex		Residence		Race	
	<=18 Yrs	19+ Yrs	Male	Female	City	Other	White	Other
Never	32.1	14.1	23.7	34.9	30.4	30.5	31.5	22.2
<14	2.2	1.2	3.5	1.1	5.4	1.7	1.4	8.1
14	3.0	10.6	5.0	3.1	6.5	3.4	3.0	10.1
15	10.6	10.6	9.9	11.3	13.0	10.4	10.2	14.1
16	19.8	21.2	21.4	19.1	13.0	20.7	20.0	19.2
17	20.8	12.9	22.5	18.5	15.2	20.6	20.5	16.2
18	11.4	22.4	12.9	11.7	14.1	12.2	12.9	8.1
19	0.1	2.4	0.0	0.4	0.0	0.4	0.4	0.0
>19	0.0	4.7	1.2	0.0	2.2	0.2	0.3	2.0

The frequency of oral genital manipulation by opposite sex partners is low. About one-third of the entire sample had never participated in this activity, while 22% reported once or twice, and only 4% reported more than 50 times. The distribution of the data by age at first intercourse reflects that nearly 70% of virgins have never participated in oral genital manipulation, compared to about 19% for nonvirgins. One percent of virgins claim to have participated in oral genital activity more than 20 times, compared to 18% for nonvirgins. Frequency of same sex genital manipulation in the last 18 months revealed only 2.8% had participated in this activity.

Participation in oral genital manipulation was reported as an activity less frequently than manual genital manipulation. While all virgins are at risk of becoming nonvirgins, those who engage in heavy petting may be more at risk of becoming nonvirgins than are their nonparticipating counterparts.

### Sexual Activity and AIDS

To measure the extent to which AIDS is discussed with sex partners, the extent to which students have admittedly modified their sexual behavior because of knowledge of the AIDS virus, and how sexual behavior has been modified, the students were asked specific questions regarding these areas.

Among the sexually active population, less than half (46.9%) have discussed AIDS with their sex partner(s). In response to the question asking if they discuss previous sex activity before having first sexual intercourse with a sex partner (Table 6), 40.4% reported never, less than a third (27.1%) indicated rarely, and only 16.6% reported always discussing previous activity. Respondents were asked if they discussed possible past exposure to the AIDS virus with a partner before having first sex with him/her (Table 7). Among the sexually active respondents, nearly

TABLE 6

*Discussion with new partner of previous sexual activity.*

	Frequency	Percent
Never	251	40.4
Rarely	169	27.1
About half the time	50	8.0
Almost all the time	49	7.9
Always	103	16.6
N = 622		

TABLE 7

*Discussion of possible AIDS exposure with partner prior to first intercourse.*

	Frequency	Percent
Never	396	63.9
Rarely	103	16.6
About half the time	29	4.7
Almost all the time	29	4.7
Always	63	10.1
N = 620		

two-thirds (63.9%) indicated never discussing possible AIDS exposure with partners before first intercourse. Of those who did inquire about possible previous exposure to AIDS, 16.6% rarely did; 4.7% did about half the time; 4.7% did almost all the time; and, 10.1% claimed to always

discuss the possibility prior to first intercourse.

Educational programs have promoted the use of condoms to avoid the spread of HIV. To examine the impact of such information, respondents were asked if they use condoms during intercourse. Among the sexually active population, only 27% claimed to always use condoms during intercourse (Table 8), while nearly 17% reported never using them. Others reported use as rarely, about half the time, and almost all the time (20%, 16%, and 20%, respectively).

TABLE 8  
*Condom use during intercourse.*

	Frequency	Percent
Never	108	16.8
Rarely	129	20.2
About half the time	101	15.8
Almost all the time	129	20.2
Always	173	27.0

N = 640

The question, "Have you modified your sexual behavior because of AIDS?", was followed by the question, "How have you modified your sexual behavior because of AIDS?" There were 656 sexually active respondents who answered the inquiry to modification of sexual behavior because of risk of AIDS. Students claiming to have modified their sexual behavior accounted for 56%, while the remaining 44% reported no change in sexual behavior. The 370 individuals who indicated a modified behavior were asked to indicate how they modified their behavior (Table 9). The highest percentage was selective about partners, followed closely by use of condoms, about 65% and 61%, respectively. Nearly 45% indicated not participating in anal intercourse; abstinence and monogamy were each reported by about 17%. Avoiding oral sex was listed by about 12% and limiting activity to heavy petting

TABLE 9  
*Reported behavior modification because of AIDS.*

	Frequency	Percent
Abstinence	62	16.8
Monogamy	62	16.8
Selective about partners	240	64.9
No anal intercourse	166	44.9
Partners tested for AIDS	7	1.9
Use condoms	226	61.1
Avoid vaginal intercourse	10	2.7
Avoid oral sex	43	11.6
Limit activity to heavy petting	23	6.2
Use a diaphragm	2	0.5
Use spermicide	11	3.0

N = 370; multiple response item.

by 6%. Avoiding vaginal sex and use of a spermicide were each listed by about 3%. The smallest groups of responses were limiting partners to those having been tested for AIDS (about 2%); and, using a diaphragm (0.5%).

### AIDS Knowledge

The most significant of the responses to the list of 22 true/false statements (Table 10) about AIDS included: 1) Less than 40% of the respondents answered false to the statement "the cause of AIDS is unknown," while a full 81% responded true to "AIDS is caused by a virus." (The contradiction of these two responses suggests a lack of clear understanding.) 2) A belief that AIDS can be contracted by donating blood was expressed by 34%. 3) Nearly 7% responded true to "the AIDS virus can be transmitted by using the same toilet seat as someone infected with AIDS," and 15% checked "don't know." 4) Less than 50% answered false to "a person can get AIDS by kissing—with exchange of saliva—a person infected with the disease."

### Risk

To the question regarding the perceived risk of getting AIDS ("What are the chances of someone you know getting the AIDS virus?"), 923 responded. Nearly 10% of students responding suspected that the odds were high that someone they know will get AIDS (Table 11). Only 6.5% indicated that they believed no one they knew had a chance of getting AIDS; over one-third (37.1%) believed the possibility to be low; and, slightly under one-fourth (22.4%) indicated the chances to be medium.

In contrast, to the second question ("What are your chances of getting the AIDS virus?"), of the 918 respondents, less than 8% indicated a medium to high chance (Table 11). Of the remainder, about 16% didn't know; 31% believed there was no chance; and, 46% believed there was a low chance.

The last question regarding AIDS risk was "What are a person's chances of getting the AIDS virus as a result of receiving a blood transfusion?" Choices given the students were: 1 in 25; 1 in 25,000; 1 in 250,000; 1 in 2,500,000; 1 in 250,000,000; and, no chance at all. Distribution of the 906 responses was fairly even across all categories, indicating that most students did not know the correct answer. Only 21% selected the correct response, 1 in 250,000. Less than 5% believed transfusion presented no risk at all and 16% believed the risk to be as high as 1 in 25.

## DISCUSSION

To date, the occurrence of AIDS in the United States has been primarily associated with drug use and homosexual activity (Turner et al. 1989), while in other countries AIDS is commonly associated with heterosexual activity. Predictions of great increases in the numbers of individuals infected with HIV through heterosexual activities and, thus, the need to participate in safe sex, seem to have had little impact on young people. This recent BGSU study has confirmed the high degree of sexual activity in young people of the so-called conservative Midwest. This high

TABLE 10

*Response to aids awareness statements.*

Statement	Percent			
	True	False	D.K.*	Correct
1. AIDS is a medical condition in which your body cannot fight off diseases.	95	2	3	95
2. AIDS is caused by a virus.	80	8	12	80
3. If you kiss someone with AIDS you will get the disease.	4	89	7	89
4. AIDS can be transmitted by touching.	2	95	3	95
5. All gay men have AIDS.	2	96	2	96
6. Anybody can get AIDS.	96	2	2	96
7. The cause of AIDS is unknown.	42	39	19	39
8. Having sex with someone who has AIDS is one way of getting it.	98	1	1	98
9. Using a condom during sex will completely protect one from acquiring AIDS.	3	93	4	93
10. You can get AIDS by sharing a needle with a drug user who has the disease.	99	1	0	99
11. All gay women have AIDS.	1	96	3	96
12. AIDS can be cured if treated early.	2	79	19	79
13. Using a condom during sex can lower the risk of getting AIDS.	97	1	2	97
14. The risk of getting AIDS from a sex partner is about the same as the risk of getting cancer from a sex partner.	1	89	10	89
15. There are no diagnosed cases of AIDS in Ohio.	3	87	10	87
16. A person can be infected with the AIDS virus and not have the disease AIDS.	83	5	12	83
17. Any person with AIDS virus can pass it on to someone else during sexual intercourse.	95	1	4	95
18. A person can get AIDS by kissing—with exchange of saliva—a person infected with the disease.	29	50	21	50
19. A person can get AIDS by eating food that has been prepared by someone who has the AIDS virus.	3	86	11	86
20. The AIDS virus can be transmitted by using the same toilet seat as someone infected with AIDS.	6	78	16	78
21. The AIDS virus can be transmitted by using the same water fountain as someone infected with AIDS.	3	86	11	86
22. A person can get AIDS by giving blood.	35	59	6	59

\*D.K. = Don't Know

TABLE 11

*Perceived chances of acquaintance/self getting AIDS.*

	Frequency	Percent
Acquaintance*		
High	91	9.9
Medium	208	22.4
Low	342	37.1
None	60	6.5
Don't know	223	24.1
Self**		
High	17	1.9
Medium	50	5.4
Low	420	45.8
None	281	30.6
Don't know	150	16.3

\*N = 923

\*\*N = 918

percentage of sexual activity at early ages may not be surprising; but, the attitudes and perceptions of these youth regarding AIDS and exposure to HIV has proved to be alarming.

Age at first intercourse, number of opposite and same sex partners, and frequency of types of nonintercourse sexual activity, e.g., petting and oral sex, are important factors in determining risk levels among students with respect to the spread of AIDS and other sexually transmitted diseases (Turner et al. 1989). Results obtained from the present survey certainly substantiate the increased sexual activity of students entering college. The data from the BGSU study concerning homosexual activity are within the frequencies that are reported elsewhere.

Additionally, data from the present study indicate that frank discussions about AIDS and previous sexual activity prior to intercourse do not exist (Tables 6,7). Less than half claim to discuss AIDS with their partners. The use of condoms was one of the most commonly reported choices of behavior modification, although condom use may have been solely for birth control (Table 8). It is difficult, if not impossible, to determine if the respondents were actually modifying their behavior to avoid exposure to HIV or just perceived a change. The driving force in many cases may have been birth control, not disease prevention. In view of the increased educational emphasis on using condoms as a means of avoiding/preventing HIV infection (Turner et al. 1989, Douglas and Pinsky 1989), the finding that more than one-third of the respondents choose not to use them suggests that our educational programs are failing. Responses indicating the use of spermicide as a modification of sexual behavior to avoid AIDS is another indication of the lack of understanding of disease prevention.

Finding that over half of the respondents indicated the cause of AIDS remains unknown and over three-quarters indicated it to be caused by a virus (Table 10) suggests a failure to adequately read the question or a total lack of

understanding. The responses to exposure risks via blood donation, kissing, toilet seats, and so forth, also indicate a lack of understanding of HIV transmission. Current educational programs are either not adequately addressing the topic or have failed to get the attention of our young people. Reluctance of some of the students to respond to some of the questions may indicate a fear of potential exposure or a lack of experience in those areas. However, the numbers of students responding provided sufficient data for analysis.

It is clear that, while these young people are aware of AIDS and the transmission of HIV, they remain apathetic to the possibility of contracting the virus themselves. This may be a reflection of the invincible attitude of youth. The data obtained in this study strongly suggest that the previously considered low risk group of college-age students from a nonmetropolitan, "conservative," middle-class area university (Turner et al. 1989) have become increasingly at risk. Whether because of apathy or lack of understanding, it is clear that this sexually active population does not practice safe sex. The attitudes projected by this population establish the growing need to target these young people for in-depth AIDS education regarding prevention of HIV transmission. Current methods of education must be examined and changed to provide a more effective result. With sexual activity beginning at an increasingly earlier age, AIDS education must begin earlier, i.e., during the elementary years, and continue during the high school years.

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