

*Full Length Research Paper*

# American college students and HIV/AIDS knowledgeability and sexual behavior change

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**This study aimed at investigating the extent to which US College students know about human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) transmission, infection and prevention, and the transfer of such knowledge to sexual behavior change. The findings showed that college students' knowledge about HIV/AIDS was very good, and that such knowledge was transferable to real life experience, in their interaction with members of the opposite sex. The investigation was based on 58 college students drawn from a private college in New York City. The method of data analysis was quantitative, consisting of frequencies, percentage and chi-square. The implication of the study was that public education on HIV/AIDS is fruitful, and that at the same time, there is need for its continuation, as there are still misconceptions about HIV/AIDS regarding its transmission, infection and prevention.**

**Key words:** College students, human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) transmission, HIV/AIDS prevention, knowledge of HIV/AIDS, HIV/AIDS denial.

## INTRODUCTION

In the past two decades, many American researchers have extensively carried out research investigations to establish whether the threat of Human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) would lead college students to avoid engaging in behaviour that is associated with HIV/AIDS infection (Adefuye et al., 2009; Davis et al., 2007; Khostrovani et al., 2011; Rose, 2008; Sutton et al., 2011). While some studies have shown change in sexual behaviour practices, others have not shown a correlation between increased knowledge of HIV/AIDS and transfer of such knowledge to safe sex.

There are many American adolescents aged 15 to 19 years who engage in sexual behaviour without the use of preventive/contraceptive means such as condoms. Consequently, infection has increased among adolescents (Summerfield, 1990). According to Szekeres (2000), American adolescents constitute the largest

HIV/AIDS invisible population. Many of the adolescents infected are not aware of their HIV status as a result of not having been tested for HIV/AIDS. In the case of those who have undergone testing, they do not receive the necessary treatment for lack or shortage of money, or simply refusing to believe that indeed they are HIV positive.

According to a comprehensive report from the University of California, many adolescents engage in sexual behaviour without the use of condoms. Consequently, the sexually transmitted rate of infections among adolescents is one of the highest in the population. According to the Centres for Disease and Prevention and the American College Health Associations, it is reported that for every 500 American college students, one student is HIV positive (Adefuye et al., 2009; California University, 2011)

Sutton et al. (2011) surveyed the knowledge of college

students regarding HIV/AIDS for the purposes of facilitating efforts towards HIV prevention, for which 1,230 participants responded to a questionnaire presented online. From this, 82% scored average to high scores on their knowledge of HIV. Of these, 79% considered themselves as being at low HIV risk infection; 64% had two or more partners and used condoms the last time they had sex. It was concluded that there was need for educating students regarding assessing sex partners' risk which would improve HIV knowledge and prevention. Despite their knowledge of HIV/AIDS, they did not know their personal risk of acquiring HIV/AIDS and there was no behavior change in sexual behaviour practices (Adefuye et al., 2009).

According to Adefuye et al. (2009), college environment appears to be conducive to HIV high risk behaviour, unsafe sex and multiple sex partners. HIV infection has been on the decline, though such decline among young people has not declined proportionately among the young population. Their study examined sexual behaviours, and perception of HIV increases among College students for a sample of 390 sexually experienced students. The results showed that older students were less likely to use condom; younger students below the age of 30 reported inconsistent use of condoms. Perception of HIV risk was rather poor: 54% aged 30 or older, 48.1% below 30, and 57% for those below 20 years. Many of the participants did not think they were likely to contract HIV/AIDS. The authors concluded that there is a need for targeted HIV prevention and intervention for college students.

Opt et al. (2010) examined college students' knowledge and perception of HIV/AIDS and their sexual practices. It was observed that students were knowledgeable about HIV and the risk involved. However, they were not that concerned about becoming infected, thus confirming a lack of transfer of knowledge.

In their study of college students and HIV/AIDS, Mongkuo et al. (2010) reported that college students were knowledgeable about HIV/AIDS and its transmission, and also had understanding of the risk behaviour associated with HIV/AIDS; prevention and willing to associate with those who were HIV positive and had keen interest in HIV/AIDS education. Such factors served as predictors of students practising safe sex. The sample was based on 300 students aged 15 to 25 years. Similarly, Rose (2008) studied a sample of 222 participants with a mean age of 18 years. Most students were knowledgeable about HIV prevention and transmission. Their knowledge was based on their indicating that they would use a condom if they were to engage in sexual activity in future, should they engage in sexual intercourse. On the other hand, their high level of HIV knowledge did not have a bearing on their engaging in risky sexual behaviors.

Khostrovani et al. (2011) asserted the view that the literature shows that a high knowledge of HIV/AIDS was not sufficient to prevent students from engaging in high risk sexual behaviour; It is therefore argued that the

media has an important role to play in the dissemination of knowledge on HIV/AIDS, which leads to people avoiding high risk sexual activity.

A sample of 331 college students was used. The results showed that students were knowledgeable about HIV/AIDS. However, their knowledge was not sufficiently accompanied by avoidance of high risk sexual behavior. There were 77% who were sexually active and of these, 55% used condom for safe sex, whereas 37% neither protected themselves nor their partners. In view of this, Khostrovani et al. (2011) underscored that there is need for media and other institutions in society to play a significant role in the control of HIV/AIDS transmission.

Davis et al. (2007) advanced the argument that there is a decline of HIV infection in the USA, though such decline does not match the population of those below the age of 25 years. College students are particularly vulnerable to HIV infection as a result of a number of factors such as the influence of drugs and alcohol. Yet this does not seem to bother college students engaging in high risk sexual behaviour. Their investigation aimed at demonstrating whether HIV/AIDS knowledge, attitudes and vulnerability could be used as predictors of engaging in safer sex behaviors.

In a random sample of 650 college students, Inungu et al. (2009) examined their knowledge and attitudes towards HIV/AIDS. Those who claimed to be familiar with HIV/AIDS were 77.3%. It is nevertheless argued that, while college students have a good knowledge of HIV/AIDS, there is still a lot of misconceptions regarding HIV/AIDS. This therefore underscores the need for more public education about HIV/AIDS among college students. Participants conceded that they were engaged in sexual intercourse with multiple partners, and that either they did not use condoms, or they were used twelve months prior to the survey being carried out (Unungu et al., 2009). Moreover, they did not believe that they were at high HIV risk, though they were engaged in multiple relationships. A large number of respondents did not see the need for being tested, implying that in the event they were unknowingly HIV positive, they would be infecting others. This therefore calls for educating and promoting HIV/AIDS testing of college students.

It was therefore noted that there is a co-existence of misconception regarding the transmission of HIV/AIDS and the denial of participants contracting HIV. This therefore, calls for proactive approach to resolve such challenges among college students.

## METHODOLOGY

### Sample

The sample of this study comprised 58 participants drawn from one of the private colleges in Manhattan, New York City. The participants were registered in a Psychology course taught by the researcher. There were both male and female participants who answered the questionnaire.

### Procedure

Inasmuch as the researcher was responsible for teaching the course they were registered for, there was no need to seek permission to administer the questionnaire to students. Consent was sought from the participants who were advised that participation in the exercise was voluntary, and that those who wanted to participate were free to do so. They all volunteered to participate in answering the questionnaire. This they were able to complete in twenty minutes, and the researcher collected them. For the purpose of confidentiality, participants were advised not to write their names or the name of the College.

### Measuring Instrument

A questionnaire of 25 statements and questions was used to measure their knowledge of HIV/AIDS dealing with its transmission, infection and prevention. Only 19 questions and statements were considered for scoring and statistical analysis. Such decision was informed by the fact that the six left out were rather ambiguous and therefore unfit for statistical analysis purposes. For each statement/question, there were three possible responses which participants were to tick, if in their view they were most descriptive of their knowledge regarding HIV/AIDS. The answers were "Yes, No, Did not know".

## RESULTS

For analysis descriptive statistics: frequencies, percentage and chi-square were used as displayed in Table 1. The objective of the investigation was to determine the extent to which participants were knowledgeable about HIV/AIDS, as well as such knowledge having learning transfer in relationship with members of the opposite sex. From Table 1, there is ample evidence that indeed the participants' HIV/AIDS knowledge was very high in terms of percentage and significant chi-square values.

In response to whether participants would share a cigarette with a person who is HIV/AIDS positive, 84% did not support the statement and this was statistically significant,  $\chi^2$  (2df, N 56) = 68,  $p < 0.001$ . Similar outcomes were observed when asked whether they would drink from the same cup used by someone infected by HIV/AIDS, as 84% rejected the statement which was significant,  $\chi^2$  (2df, N 56) = 13,  $p < 0.001$ . Regarding sharing food with an HIV/AIDS person, 83% had no problem with it which was significant  $\chi^2$  (2df, N 56) = 53.6,  $p < 0.001$ . As regarding using the same toilet seat, 79% said they would do so which again was significant,  $\chi^2$  (2df, N 56) = 56,  $p < 0.001$ .

When asked whether respondents would be prepared to kiss an HIV/AIDS infected person, 60% indicated that they would do so. This was also statistically significant  $\chi^2$  (2df, N 56) = 19.5,  $p < 0.001$ . In terms of taking care of an AIDS patient, 83% had no problem taking care of such patient. Statistically, such a response was significant  $\chi^2$  (2df, N 56) = 66,  $p < 0.001$ . Sharing clothes with an infected person was supported by 84% of respondents at the level of significance of  $p < 0.001$ . In response to if

receiving a blood transfusion from an infected person would lead to infection, overwhelmingly, 98% of respondents agreed. This was significant  $\chi^2$  (2df, N 56) = 112,  $p < 0.001$ . When asked whether if engaging in sexual activity with an infected person would lead to infection, there was another overwhelming response of 98% in support of the statement, which was also significant at  $p < 0.001$ . Shaking of hands with an infected person was rejected by 95% as a source of transmission. This was statistically significant,  $\chi^2$  (2df, N 56) = 101,  $p < 0.001$ .

Mosquito bite was rejected as a source of HIV/AIDS infection, and the rejection was significant at  $p < 0.001$ . Similar rejection was expressed regarding the existence of a cure for AIDS. HIV/AIDS being God's punishment for those who engage in sexual practice outside marriage was rejected by 93% of the respondents, and this was statistically significant  $\chi^2$  (2df, N 56) = 94.5,  $p < 0.001$ . The statement that if infected persons should be avoided as much as possible was rejected by 93% participants which was significant,  $\chi^2$  (2df, N 56) = 94.5,  $p < 0.001$ .

Many adolescents do not believe that they are likely to contract HIV/AIDS. For this reason, participants were asked to state whether they thought they had a chance of being infected by HIV/AIDS. Only 28% agreed with the statement. Those denying the statement were significantly more, thus confirming what other researchers have reported in the HIV/AIDS research literature.

In response to whether based on their knowledge of HIV/AIDS, participants were careful in their relationship with members of the opposite sex, 88% agreed with the statement and this was statistically significant  $\chi^2$  (2df, N 56) = 84.7,  $p < 0.001$ . HIV/AIDS children attending school with those who are not infected was accepted by 64% and was significant statistically at  $p < 0.001$ . Responses for sleeping on the same bed and sitting next to an HIV/AIDS person were both accepted at significant level ( $p < 0.001$ ).

## DISCUSSION

The present investigation aimed at examining the extent to which American College students were knowledgeable about HIV/AIDS, and the extent to which such knowledge was transferable to sexual behavior. The results overwhelmingly confirmed that indeed American college students are versatile in knowledge pertaining to HIV/AIDS transmission, infection, and prevention. On the question of knowledge transfer to real sexual behavior, the majority of participants responded that they were very careful in their relationship with members of the opposite sex, with the sole purpose of avoiding contracting HIV/AIDS.

Such outcomes were either like or unlike other studies reported in the review of literature as presented in the introductory section. They were like other reported

**Table 1.** Participants' correct responses frequencies, percentage, Chi-squares and probability N = 58.

No.	Statement	Frequencies	Percentage	Chi-square ( $\chi^2$ )	Probability (P)
2	Sharing cigarette with AIDS person	49	84	68	0.001
3	Sharing a cup with AIDS person	49	84	13	0.001
4	Sharing food with infected person	48	83	53.6	0.001
5	Using same toilet seat AIDS person	46	79	55.6	0.001
6	Kissing an AIDS person	35	60	19.5	0.001
7	Taking care of AIDS person	48	83	66	0.001
9	Sharing clothes with AIDS person	49	84	71	0.001
10	Blood transfusion from AIDS person	57	98	112	0.001
11	Having sex an infected person	57	98	120	0.001
12	Shaking hands with AIDS person	55	95	101.8	0.001
13	Mosquito bite	32	55	22.7	0.001
14	There is no cure for AIDS	42	72	53	0.001
16	AIDS is punishment for engaging in sex outside marriage	54	93	94.5	0.001
17	AIDS persons should be avoided	54	93	94.5	0.001
21	Stand a chance of Contracting AIDS?	16	28	33.6	0.001
22	Careful in relationship with gender counterpart to avoid AIDS	51	88	84.7	0.001
23	Should AIDS children be in the same school with those who do not have AIDS?	37	64	26.5	0.001
24	Would you sleep with an AIDS person?	39	67	31	0.001
25	Would you sit next to an AIDS person?	49	84	68.8	0.001

findings to the extent that, they confirmed that American college students' knowledge of HIV/AIDS is indeed very high (Adefuye et al., 2009; Rose, 2008; Sutton et al., 2011; Tagoe and Aggor, 2009).

In terms of transfer of knowledge, they were unlike some of the other reported findings, as those cited in the preceding statement. In the review of literature, researchers were inclined to assert a lack of correlation more than the converse. In this study, there was clear evidence that there was a correlation between HIV/AIDS knowledge and applying it to real sexual behavior. This was based on the majority of participants showing a high level of knowledge which matched a similar number of those who said they were very

careful in their relationship with members who predisposed them to contracting HIV/AIDS. Such finding confirms what other researchers have reported (California State, 2011; Khostrovani et al., 2011; Mongkuo et al., 2010)

This discourse may well be summarized by what has been presented in a comprehensive narration from the University of California. It is pointed out that research has been carried out extensively to establish whether the threat of contracting HIV/AIDS would lead college students to avoiding engaging in the behavior that is associated with HIV/AIDS infection.

While some studies may show change in sexual behavior, others have shown no correlation between increased knowledge of HIV/AIDS and

transfer of such knowledge to safe sex. For example, men who are knowledgeable in HIV/AIDS engage in safe sex. Moreover, they engage in sex less frequently and are inclined to take precaution by use of condom, when they engage in sexual act. On the other hand, college women's knowledge about HIV/AIDS is not associated with the use of precautionary measure such as condom use on false hope that they are not vulnerable to being infected.

In summary, the investigation has shown ample evidence that American College students are very knowledgeable about HIV/AIDS transmission, infection and prevention. This is in keeping with what other researchers have reported for the past two decades. In addition to this, this investigation

has shown a correlation between HIV/AIDS knowledge and the transfer of learning of such knowledge. This is a contrast with other findings which have not reported such outcomes.

## CONCLUSION

In the present investigation, it has been confirmed that the American college students' knowledge about HIV/AIDS is very good, and that there exists a relationship between such knowledge and its transferability to sexual behaviour change. Both aspects of the investigation contribute to knowledge in confirming and strengthening what other researchers have reported. It is a further contribution to knowledge, as it informs the reader that battle against HIV/AIDS is far from over, since there are still misconceptions which call for further public education on HIV/AIDS. Moreover, there are people who are knowledgeable about HIV/AIDS and yet they engage in sexual behavior that predisposes them to contracting and transmitting the disease. This calls for better strategies of reaching such audience.

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