

Running Head: HIV/AIDS EDUCATION AND SAFE SEX PRACTICES

Evaluating the Impact of HIV/AIDS Education on Safe Sex Practices in High School Students

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Abstract

Using the 2005 National Youth Risk Behavior Survey, a survey given to nearly 14,000 high school students in grades 9 through 12, the correlations between HIV/AIDS education were examined to determine their influences on student's safe sex practices. Results revealed a significant positive correlation between HIV/AIDS education and condom use in students' most recent sexual encounter. There were also considerable associations found between HIV/AIDS education and type of contraceptive used during their most recent sexual encounter. Students who had not received HIV/AIDS education were found to be significantly less likely to have used any form of contraception, and had a significantly reduced probability of having used a condom. HIV/AIDS education, however, did not significantly influence different methods of contraception including withdrawal, hormonal methods and some other methods.

In a world where an estimated 33.2 million people are living with HIV/AIDS and around 2.5 million people are newly infected each year, sex education programs concentrating on HIV/AIDS prevention are becoming a crucial issue for schools across the globe. Indeed, it is also the case that young people (15-24 years old) account for half of all new infections (AVERT, 2008). These numbers emphasize the importance of educating our youth about the dangers of HIV/AIDS.

However, opposition to HIV/AIDS education programs in schools is encountered, nonetheless. As HIV/AIDS is primarily transmitted via drug use or sex, the debate seems to lie in religious and/or moralistic principles of abstaining from such vices. AVERT (2006), offers commentary on the abstinence-only approach: “Adults have been trying to stop young people from having sex and taking drugs for many, many years with little success, so this method alone seems unlikely to offer any real relief in terms of the global AIDS epidemic” (¶1). The more pragmatic alternative to abstinence-only education is to instigate more liberal HIV/AIDS education programs in schools, primarily high schools.

Previous research on the subject has offered some information on the impact of sexual education programs. Caron, Godin, Otis & Lambert (2006), for instance, found that following the implementation of an AIDS/STD peer education program, showed significant positive modification of attitude, personal normative beliefs and perceived role beliefs. They also found that at post-test, the control group (those who received no AIDS/STD peer education) were less likely than the experimental group to use condoms on a regular basis.

Other research has yielded similar results. Hausser & Michaud evaluated the efficacy of a condom promoting strategy by determining the influence the Swiss STOP-AIDS Campaign had on adolescent sexual behavior. They found that during a 5-year period, the campaign and local

interventions had a positive effect on the use of contraception and condoms. As was asserted by Abel & Fitzgerald “The only contraceptive option for sexually active young people who wish to minimize the risk of acquiring an STI is the consistent use of condoms” (2006, p. 106).

In order to further examine the effectiveness of HIV/AIDS education in schools, we examined the results of the Youth Risk Behavior Survey (YRBS) to determine whether those students who were educated in school about HIV/AIDS differed any in safe sex practices when compared to those student’s who were not educated in school about HIV/AIDS. It was hypothesized that high school students who receive sex education at school are more likely to practice safe sex through the use of some form of contraceptives. In addition, it was hypothesized that specifically, high school students who receive sex education at school are more likely to have used a condom during their most recent sexual experience.

Method

Participants

Using a 3-stage cluster sample design, the Youth Risk Behavior Survey obtains its sample population from all public, Catholic and other private high school students in grades 9-12 across the United States biennially since 1991. The local and state questionnaires provide data representing high school students in school districts and states that have cooperative agreements from the CDC (Centers for Disease Control and Prevention [CDC], 2004). The 2005 survey consisted of 13,917 questionnaires, 49.5 percent of which were female and 50.5 percent of which were male. Of the 13,917 surveys, 3.4 percent described themselves as Asian, 14.6 percent described themselves as Black/African American, 9.6 percent described themselves as Hispanic or Latino, 61.9 percent described themselves as white, and 10.4 percent placed themselves in other categories; either American Indian or Alaska native, native Hawaiian or other Pacific

Islander, multiple-Hispanic, or multiple-non-Hispanic.

Materials

The materials used include the 2005 National Youth Risk Behavior Survey Data Users Manual, as well as the Youth Risk Behavior Survey (YRBS) data in SPSS format, specifically for question 62: The last time you had sexual intercourse, did you or your partner use a condom? Potential Answers: Yes/No; and question 63: The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? (Select only one response.) Potential Answers: No method was used to prevent pregnancy/Birth control pills/Condoms/Depo-Provera (injectable birth control)/Withdrawal/Some other method; as well as question 85: Have you ever been taught about AIDS or HIV infection in school? Potential Answers: Yes/No.

Design and Procedure

The sample was attained via the 2005 YRBS data sets for question 62, which was answered by 12,642 students (90.8 percent of total sample); question 63, which was answered by 12,600 students (90.5 percent of total sample); and question 85, which was answered by 13,266 students (95.3 percent of total sample). Questions 62 and 85 were separately analyzed for correlations initially, followed by the correlational analyses for questions 63 and 85. SPSS data mining software was used to perform computations and statistics. Operational definitions for sexual education and safe sex practices were used as follows: Sexual education was defined as Aids or HIV education being taught at school; while Safe sex practices were defined as the use of contraceptives during student's most recent sexual experience.

Results

It was originally hypothesized that the data would reveal that high school students who are given sex education at school are more likely to practice safe sex through the use of some

form of contraceptives. A $2 \times 6 \chi^2$ analysis was performed using question 63 answers for pregnancy prevention during most recent sexual encounter: No method /Birth control pills/Condoms/Depo-Provera (injectable birth control)/Withdrawal/Some other method; as well as question 85 answers: HIV/AIDS education/No HIV/AIDS education. The results of this analysis can be found in table 2. As the table illustrates, a significant positive correlation between using condoms and having had HIV/AIDS education at school was found. A significant positive correlation was also found between using no method of contraception and not being taught about HIV/AIDS education at school. However only minor insignificant correlations were found for the other forms of contraception in question.

It was hypothesized that high school students who receive sex education at school are more likely to have used a condom during their most recent sexual experience. A $2 \times 2 \chi^2$ analysis was performed using question 62 answers: condom/no condom; and question 85 answers: HIV/AIDS education/No HIV/AIDS education. The results for this analysis can be found in table 1. Fisher's Exact Test revealed that a significant positive correlation was, in fact, found for condom use and having AIDS/HIV education in school, $\chi^2(4, N = 13,266) = 4.146$, $p=.043$. Also noticeable in the results was an overall positive trend for condom use.

Discussion

The results indicate that the initial hypothesis, high school students who receive sex education at school are more likely to practice safe sex through the use of some form of contraceptives, was partially supported, in that students were more likely to use something and were more likely to use condoms if they had received sexual education (HIV/AIDS education) in school. However this hypothesis was not fully supported due to the fact that no significant correlation was found in regards to other forms of contraception (hormonal versions or other

methods). In addition, the second hypothesis, that high school students who receive sex education at school are more likely to have used a condom during their most recent sexual experience, was fully supported by the results of the $2 \times 2 \chi^2$.

As these results divulge, high school students who receive sex education at school are at least slightly more inclined to practice safe sex. This highlights the positive effects sex education programs have on high school students, and supports the notion that a standardized sexual education program encompassing HIV/AIDS education is a necessary step in encouraging safer sex practices. As the CDC claims, “Although rates of pregnancy and STDs among adolescents have decreased since 1988 (29,30), pregnancy and STDs, including HIV infection, remain critical public health problems for youth” (2004, p. 5). Sexual education programs in schools need to be closely scrutinized to determine that they are effectively teaching the right things.

These results also support previous research findings, including the previously discussed research studies. As with our results, Caron et. al (2004) found that condom use seemed to be promoted by sexual education. In addition, the findings are also similar to those obtained by Hausser & Michaud (1994), who examined condom-promoting strategies and also found an increased tendency towards condom use. Conversely, their research indicated a tendency by those who received sex education to use different forms of contraception as well, yet the results we attained indicated there was only a mild effect.

There are several other variables to take into account when examining the data and results. A primary issue of concern is whether the HIV/AIDS education question on the YRBS (question 85) encompasses the broader context sex education programs. It may not be judicious to assume that those with HIV/AIDS education have, in fact, received a comprehensive sexual

education course. An all-inclusive sex education program with a fully informed curriculum that includes education on all potential STD's would likely have even more far-reaching effects. An abstinence-plus program or a comprehensive sex and HIV education program is an essential obligation to prevent the numbers of STD's and pregnancies in teens from growing (Avert, 2006).

There are also several issues with the survey and sample to take into account. First off, students are instructed to only select one answer to question 63 on contraceptive use, when it is likely that many use more than one preventative method. It may have been found that more students double up on protective methods, which could lead to further significance in our results. In addition, as Sabia (2004) pointed out, there are probably gender, ethnic, class, or age differences that play a role in the results. Another interesting variable that could not be examined were variations in school type, such as the differences in private and public schools.

There are several implications for further research that these issues suggest. Breaking down the analyses to see if gender, social or ethnic differences actually do come into play would likely reveal interesting information for specific groups. In addition, analyzing the role of age may eliminate potential questions. To determine whether these results vary by school type, a question for school category (parochial, etc.) would likely have interesting results. In addition, the YRBS needs to expand upon the question regarding AIDS/HIV Education. Broader context sexual education programs need to be included to determine which programs seem to have the most efficacy. Increasing the number of questions about sexual education will guide us in the right direction for constructing efficient sexual education curriculums.

References

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Table 1

Condom Use among Students during Most Recent Sexual Encounter (in percentages)

Condom Use	Condom used	Condom not used
Taught about HIV*	66.2	61.5
Not taught about HIV*	33.8	38.5
Overall Total (Q62)	53.4 of total	30.8 of total

Note. Table diagrams 2 x 2 χ^2 analysis for Question 62 (condom use) & Question 85 (HIV/AIDS education).

*HIV education in question refers to HIV/AIDS education that takes place in the school environment.

Table 2

Condom Use among Students during Most Recent Sexual Encounter (in percentages)

Condom Use	Taught about HIV**	Not taught about HIV**
Nothing	13.2*	18.7*
Birth Control	15.2	15.6
Condoms	58.1*	49.8*
Depo-Provera	2.7	3.1
Withdrawal	8.4	10.4
Some other method	2.3	2.4
Overall Total (Q85)	88.5	7.4

Note. Table diagrams 2 x 2 χ^2 analysis for Question 62 (condom use) & Question 85 (HIV/AIDS education).

*p < .05 **HIV education in question refers to HIV/AIDS education that takes place in the school environment.