

Psychological Science

The Effects of Sexual Education on the Sexual Health Practices of College Students

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The period of time spent studying in college is often used a time of exploration for the students to experience living as young adults without the parental supervision associated with living at home. The behavior of college students is often a concern for respective parents because it is often their son and daughter's first extended period away from the structured environment put in place in the household. Students are allowed the freedom to act independently, pursuing personal goals and agendas without parental regulation. Among several common areas of exploration such as alcohol consumption and drug experimentation, students are also free to engage in sexual activity with their peers.

Many risks are associated with participating in sexual activity, specifically in college where students have access to numerous substances, such as alcohol and various drugs, and are living in close contact with one another. Students may experience an unwanted pregnancy or potentially come into contact with different sexually transmitted diseases or infections, which can lead to further complications. To minimize the associated risk of sexual contact, students should be informed and educated on the how to effectively employ safe sex practices before coming to college.

Several studies have been performed to determine whether or not formal sexual education before entering college decreases the affinity for risky sexual behavior. Lindberg and Maddow-Zimet (2012) conducted a study which looked to see whether previous sexual education affected behaviors in young adults. The education was divided by type (only abstinence, abstinence and birth control, or neither). Participants were analyzed in the areas of age of first sexual intercourse, contraception use, and partner age discrepancy. What they found was that participants who received any of the three types of sexual education delayed sexual intercourse and displayed healthier practices in comparison to those who did not receive sexual education.

Vivacanos, R., Abubakar, I., Phillips-Howard, P., & Hunter, P. (2013) conducted a similar study which focused on the contraction of sexually transmitted infections and unprotected intercourse based upon receipt of sexual education in

school. The online survey asked participants to self-report age at first intercourse, recent participation in unprotected intercourse, and if they have ever been diagnosed with an STI. Analysis of data allowed them to conclude that receiving sexual education in school lowered the risks associated with engaging in unprotected sex in young adulthood.

A third study, performed by Gatlin (2013), observed the number of sexual partners, substance abuse during sexual activity, use of contraception, and age at first intercourse in high school students after the completion of an abstinence-based sexual education course. One-way ANOVAs were employed to discern whether or not completion of the course lowered participation in risky sexual behavior. "All findings were positive in favor of the students who received abstinence programming except for number of sexual partners".

In this study we expected to learn whether or not time spent in sexual education courses, topics covered in the courses, and the attitude toward the received education have a relationship with risky sexual behavior practiced by undergraduate college students. Participants completed a questionnaire assessing proficiency of previously received sexual education, attitude toward received sexual education, sexual health practices, and affinity for engaging in risky sexual behavior. It was predicted that participants who completed a sexual education course will exhibit less risky behavior than those who did not complete a course. It was also predicted that covering more topics in the course and higher course ratings will reduce risky sexual behavior.

Method

Participants

A total of 141 undergraduate students participated in this study; sixty-three males, seventy-five females, and three who did not disclose gender. Ages ranged from 17 to 34 years, with a mean age of 19.63 years. Classification status of the participants was distributed with the following percentages; 43.5% freshman, 23.9% sophomore, 14.5% junior, and 18.1% senior. Religious affiliations were distributed as follows; 85.1% Christian, 8.5% Agnostic, 3.5% Atheist, 0.7% Buddhist, and 2.1% undeclared. Participants were selected using stratified selection based on course levels, matching closely to the actual percentages of represented students on campus. Participants were treated ethically under the APA Ethics Code (2002, American Psychological Association).

Materials

A survey was conducted to assess sexual education received by students and the resultant sexual behaviors. The survey consisted of a total of 15 items gauging proficiency of previously received sexual education, attitude toward received sexual education, sexual health practices, affinity for engaging in risky

sexual behavior, and demographic questions, including religious affiliation. Categories along with example items are available on Table 1. The questionnaire is included in the appendix.

Table 1: Examples of the items in original survey and number of items in each factor. A complete copy of the survey is available in the appendix.

Factor	Example Item	Items
Proficiency of Previously Received Sexual Education	What topics were covered in the (sexual education) course?	4
Attitude Toward Received Sexual Education	How would you rate your instruction in the following areas? Instructor's openness to questions.	5
Sexual Health Practices	What forms of protection do you use during sexual activity?	5
Affinity For Risky Sexual Behavior	How strongly do you agree with the following statement? I always use protection during sexual intercourse.	4

Procedure

Participants completed the questionnaire in a classroom setting, supervised by the principal investigator. Upon completion, students individually returned their anonymous questionnaires to the provided folder to ensure confidentiality.

Results

Attitude Toward Received Sexual Education

Analysis focused on the relationship between total rating of the sexual education course and several aspects of the course. Of the 141 participants, 19.1% (N= 27) indicated that they did not complete a sexual education course. A Likert-type scale spanning five items was used for the course rating, with 5 (poor) being the lowest possible score and 25 (outstanding) being the highest. Results indicate that students' attitudes fell between neutral and somewhat satisfied (M= 17.97, SD= 4.287). Pearson r correlation revealed a positive relationship between course rating and the number of topics covered ($r = .391, p < .001$) and between course rating and the amount of time the course encompassed ($r = .302, p < .001$).

Sexual Health Practices

Analysis focused on the relationship between received sexual education and several aspects of sexual health. Each of these was scaled by range and included the average number of sexual encounters experienced over the period of one month, the number of sexual partners during the last three months, number of STD screenings received within the past six months, and the females' tendency for keeping up with yearly pap smears. Participants who expressed that they were not sexually active were excluded from the factors measuring STD screenings and sexual partners to avoid skewing results (N= 47). Pearson r correlation revealed no significant relationships between any of the factors presented.

Descriptive properties of each of the statistics were recorded, special interest being paid to the highest percentages presented in each factor. Of the sexually active participants, 50.5% of them indicated that they experienced between one and three encounters in the past month, 88.9% indicated having between one and three partners during the last three months, 87.1% indicated having no STD screenings over the last six months, and 44.7% of the females indicated that they do not keep up with yearly pap smears. Descriptive statistics for these factors are presented in Table 2.

Table 2: Sexual Health Factor Descriptives

Factor	Possible Scores	Mean	Standard Deviation
Encounters	0 – 5	1.26	1.317
Partners	1 – 5	1.82	.673
STD Screenings	0 – 5	.13	.337
Pap Smears	1 - 3	1.92	.906

An independent samples t-test was run for each of the factors to determine if there were differences between the participants who have completed a sexual education course and those who have not. None of these comparisons produced significant results.

Affinity For Risky Sexual Behavior

Analysis focused on scaling student affinity for risky sexual behavior, the different levels of displayed risky behavior between classifications, and the relationship between received sexual education and risky behavior. A Likert-type scale spanning four items was used to measure tendency for risky sexual behavior.

A score of 4 is the lowest achievable score and 16 is the highest.

Results indicated that students overall were more likely to participate in risky sexual behavior than not ($M= 9.79, SD= 2.274$). Mean scores for risky behavior were compared among the four classifications (freshman, sophomore, junior, and senior). The differences between the classifications were found to be significant, $F(3, 85) = 3.433, p < .05$, with sophomores having the highest score. Mean scores for each group are presented in Table 3.

Table 3: Mean Scores for Affinity to Risky Sexual Behavior

Classification	Mean	Standard Deviation
Freshman	9.98	2.181
Sophomore	11.07	2.374
Junior	8.93	2.495
Senior	8.94	1.731

When comparing mean scores for affinity to risky sexual behavior between those who did and did not receive an education using an independent samples t-test, no significant difference was found.

Discussion

There is much concern for the health of college-aged adults when concerning sexual activity and risk factors. Risky sexual behavior is often defined as engaging in sexual intercourse without protection or involving alcohol and/or drugs in sexual activity. Several studies have been conducted to support the claim that sexual education decreases risky sexual behavior in young adults. However, our results do not suggest this hypothesis.

This incongruence between our results and those received from Lindberg and Maddow-Zimet, Vivicanos et al. (2012), and Gatlin (2013) may be due to the affiliation with the Methodist church at the institution where the study was conducted. Over 33% of participants in the study declared themselves abstinent and 85% indicated an affiliation to the Christian religion, making the sample unrepresentative of the overall college population and likely affecting results.

To further investigate this research, a study should be done that encompasses a larger number of participants from multiple colleges and universities. A suggested number of over 1,000 students may help to minimize any confounds presented when doing this research on one campus.

References

- American Psychological Association. (2002) *American Psychological Association ethical principles of psychologists and code of conduct*. Retrieved from <http://www.apa.org/ethics/code2002.html>
- Gatlin, M. (2013) *Effects of an Abstinence Education Program on Sexual Risk-Taking Behaviors*. *Dissertation Abstracts International Section A*, 74.
- Lindberg, L., & Maddow-Zimet, I. (2012). *Consequences of Sex Education on Teen and Young Adult Sexual Behaviors and Outcomes*. *Journal of Adolescent Health*, 51(4), 332-228.
- Vivacanos, R. R., Abubakar, I. I., Phillips-Howard, P. P., & Hunter, P. R. (2013). *School-based Sex Education is Associated with Reduced Risky Sexual Behaviour and Sexually Transmitted Infections in Young Adults*. *Public Health*, 127(1), 53-57.

Appendix

I, Donicia Blanton, am conducting a survey to assess attitudes toward your experience with sexual education and sexual health. I am requesting only a few minutes of your time to complete this survey. Your responses are very important. Be assured that your responses are **strictly confidential**. You are not being asked to provide your name on the survey and all responses are completely **anonymous**. I have randomly selected you to participate in this project. By completing the questionnaire, you are giving consent for your responses to be used for the purposes of this study. You have the right not to participate if you so choose and you may leave the questionnaire blank. Thank you for taking the time to complete the questionnaire.

Sincerely,

Donicia L. Blanton

Sexual Education

1.) Have you ever completed a sexual education course, attended a seminar on sexual health, or received any type of sexual education? If yes, how many total hours did this encompass?

- >1 hour 1-3 hours 4-6 hours <7 hours
- I did not complete a sexual education course.

2.) Where was this education received? (Check all that apply).

- At home In school classroom Through program outside of school
- With health care professional Other (please specify): _____
- I did not complete a sexual education course.

3.) What topics were covered in the sexual education course/courses? (Check all that apply).

- Abortion Abstinence Birth control (NuvaRing, pills, etc)
 Pregnancy Protection devices (condoms, dental dams, etc.)
 Reproductive anatomy STD/STI prevention STD/STI symptoms
 STD/STI treatment Other (please specify): _____
 I did not complete a sexual education course.

4.) Did you receive a referral elsewhere to obtain any extra help or information on the topic? If so, please specify where you were referred to. (Check all that apply).

- Health department Pamphlet Internet source Program
 Spiritual leader
 I did not receive a referral to an outside source.

5.) How would you rate your instruction in the following areas? (Note: please skip to question 6 if you checked that you did not complete a sexual education course).

Instructor's preparedness to teach course:

1 2 3 4 5
Poor Neutral Outstanding

Instructor's openness to questions:

1 2 3 4 5
Poor Neutral Outstanding

Depth of topics covered:

1 2 3 4 5
Poor Neutral Outstanding

Instructor's overall helpfulness:

1 2 3 4 5
Poor Neutral Outstanding

Overall satisfaction with course:

1 2 3 4 5
Poor Neutral Outstanding

Sexual Health6.) On average, how many sexual encounters do you experience over the period of one month?

- 1-3 4-7 8-12 13-20 >20
 None

7.) How many sexual partners have you had over the period of the last three months?

- 1-3 4-7 8-12 13-20 >20
 None

8.) What forms of protection do you use during sexual activity? (Check all that apply).

- Birth control Condoms Dental dams Diaphragms / cervical caps
 Female condoms Spermicides Other (please specify): _____
 None
 I do not engage in sexual activity.

9.) How strongly do you agree with the following statements? (Note: please skip to question 10 if you checked that you do not engage in sexual activity).

It is easier for me to engage in sexual activity with the use of alcohol or drugs:

Strongly Agree Somewhat Agree Somewhat Disagree Strongly Disagree

The use of alcohol or drugs allows me to engage in risky sexual behavior (no protection):

Strongly Agree Somewhat Agree Somewhat Disagree Strongly Disagree

I always use protection during oral sex:

Strongly Agree Somewhat Agree Somewhat Disagree Strongly Disagree

I always use protection during sexual intercourse:

Strongly Agree Somewhat Agree Somewhat Disagree Strongly Disagree

10.) How many times have you received an STD/STI screening over the past six months?

- 1-3 4-7 8-12 13-20 >20
 None

11.) If you are a female, do you keep up with your yearly pap smears?

- Yes Not as often as I should No
 I am not a female

About You

12.) What is your classification?

- Freshman Sophomore Junior Senior
 Other (please specify): _____

13.) What is your age? _____

14.) What is your gender? _____

15.) With which religion do you most closely identify?

- Agnostic Atheist Buddhist Christian Hindu
 Jewish Muslim Other (please specify): _____

Thank you for completing this survey. Please return the questionnaire to the envelope at the front of the room when you are finished.

If you have any comments or concerns, or would like to further elaborate on responses to this questionnaire, please write them below: