Continuing Education Contact Hour Opportunity

Reported Condom Use Among Students Enrolled in a Personal Health and Wellness Course

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Abstract

When used consistently and correctly every time, condoms can prevent against the spread of sexually transmitted infections (STIs) and unplanned pregnancies. Condoms are a significant prevention method viable for all populations. This study was conducted among students (277) at a Midwestern University who were enrolled in a personal health and wellness course and examined their reported use of condoms and reported barriers. Results indicated that almost knowledge alone was not enough for consistent condom use. Only 34.29% of students who reported having sex in the past 30 days, reported using a condom always. The most frequently reported answer for not using a condom was trust in partner's monogamy. In addition, the findings also indicate that male students who reported having been taught to put on a condom by a friend were more likely to use a condom. The study results support the theory that knowledge alone is not enough for consistent condom use among college students.

Introduction

Abstinence is the only method to completely prevent pregnancy and sexually transmitted infections (STIs). However, the consistent and correct use of latex condoms is also an effective method for preventing the transmission of STIs and pregnancy (Davis, Sloan, MacMaster, & Kilbourne, 2007). According to Bobrova, Sergeev, Grechukhina, & Kapiga (2005), correct and consistent condom use can reduce HIV transmission by 87%. Health education may be a potential proactive approach that could be used to assist in the prevention of STIs and unplanned pregnancies.

STIs are a major public health issue costing the nation billions of dollars in direct medical costs (Centers for Disease Control and Prevention (CDC), 2013). STIs continue to be a major concern for young adults throughout the United States. Half of all new STIs in the United States occur among young people aged 15 to 24 years (Weinstock, Berman, & Cates, 2004). Some of the possible long term consequences associated with STIs include scarred uterine tissue, ectopic pregnancy, infertility, brain damage, and in some cases death (AVERT, 2011).

According to the CDC (2009), young adults age 13-24 account for 26% of new HIV infections. Thirty-nine percent of all new HIV infections diagnosed in 2009 were among 13 to 29 year olds (CDC, 2011). It is reported that women 15-19 years old in the United States have the highest rates of Gonorrhea and Chlamydia transmission, followed by women ages 20-24 (CDC, 2011). Due to various behavioral, cultural and biological factors, young people are at higher risk for STIs, including HIV/AIDS than any other group (CDC, 2012; Gullette & Lyons, 2005).

Nearly one million young women in the United States under the age of 20 become pregnant each year (Planned Parenthood Federation of America (PPFA), 2011). Unplanned pregnancies have long-term effects on the lives of both parents and unborn children, including emotional and financial constraints. In addition, in many cases, unplanned pregnancies become a barrier to continuing education for many young parents. Furthermore, children born as the result of unplanned pregnancies tend to have lower cognitive scores, lower grade point averages, and are less likely to have college aspirations compared to those children born of planned pregnancies (The National Campaign to Prevent Teen and Unplanned Pregnancy (NCPTUP), 2008). Young adults, ages 18 to 24, are most affected by unplanned pregnancies and STIs. This age range is similar to the average age of college students.

Health education begins in elementary school settings and continues on many college campuses. Understanding the barriers to condom use will allow for more targeted programs aimed at increasing condom use among college students.

The current University's Foundational Studies requirement at this mid-western university includes a Health and Wellness course which includes instruction on STIs and pregnancy prevention. Both abstinence and condom use are presented as prevention methods. This particular course was one of two options every student must complete to fulfill the Health and Wellness Foundational Studies requirement. Therefore, students in the course represent a cross section of

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the University student population and the course provides an opportunity to conduct survey students.

The current study examines reported condom use as well as reported barriers to condom use among students enrolled in a required Foundational Studies freshmen Health and Wellness course at a mid-western university. In addition, the study also examines if students were taught to put on a condom and if there was an association between having been taught to put on a condom and actual reported condom use among those who reported having been sexually active. The study provides valuable information needed to develop effective and targeted STIs and pregnancy prevention programs on campuses.

Methods

Participants

A total of 401 students were enrolled in face to face sections of the Health and Wellness course at the University. Two-hundred-seventy seven (69.08%) students enrolled in the course chose to participate in the study. The University's Institutional Review Board (IRB) reviewed and approved the study. Students who chose to participate in the study had to read and sign an informed consent document prior to their participation. Demographic and descriptive data are presented in Table 1.

Table 1.

Demographics of the sample

	*N=272	%
Age		
18-19	11	41.54
20-21	125	45.96
22-23	22	8.09
24-25	4	1.47
26 and older	8	2.94
Ethnicity	*N=275	
Caucasian	190	69.09
African-American	57	20.73
Hispanic/Latino	9	3.27
Asian/Pacific Islander	8	2.91
Middle eastern	1	0.36
Multi-racial	6	2.18
Other	4	1.45
Sex	*N=275	
Male	169	61.45
Female	106	38.55
Marital Status	*N=275	
Married	12	4.36
Separated/Divorced/Widowed	1	0.36
Single	261	95.28

* Note. N is based on number of completed individual questions.

Procedures

Prior to IRB approval, instructors of all the face to face sections of the Health and Wellness course were contacted to obtain approval to distribute the survey during their class. After IRB approval, the pen and paper questionnaire was administered by a graduate student during the last week of the fall 2011 semester, at the beginning of class periods in Health and Wellness course sections. Participation was voluntary and the survey was anonymous. Students did not include their name or class section on the questionnaire. All section responses were analyzed together to protect student anonymity. Course instructors were only provided summary results at the end of the study.

Instrument

Items from the National College Students Health Risk Behavior Survey (CDC, 1997) were selected to be included in the questionnaire. The original College Student Health Risk Behavior Survey has been tested and used among college students to assess health behaviors. For this study, questions were modified to be directed towards reported condom use barriers to condom use.

The modified questionnaire consisted of questions regarding students' sexual history, substance use, condom use behaviors, and barriers to condom use. "Sex" was defined in the questionnaire as the act of vaginal, anal, and/or oral intercourse with or without the presence of ejaculation. Consistency of condom use was assessed by the questions: "Which statement best describes your condom use in the last 30 days?" and "The last time you engaged in sex did you or your partner use condoms?"

To properly assess barriers to consistent condom use, participants were asked "What statement best describes the reason you have engaged in sex without a condom?" Prescribed answers were: "Peer pressure from sexual partner," Under the influence of alcohol and/or drugs," "Lack of funds to purchase condoms," "Lack of condom availability," "Trust in partner's monogamy," "Always used condoms," and a completion option for "Other reason."

To assess exposure to instruction in the proper use of condoms, participants were asked "Have you been taught how to properly put a condom on?" To determine the specific source of this instruction, participants were also asked "Where were you taught how to put on condoms?" Answers options were the current health course, "Friends," "Parents," and a completion option "Other course."

Data Analysis

SAS 9.2 was used to calculate all statistical analyses. Descriptive statistics were calculated for the sample (Table 1). Chi-square tests for association were calculated to determine the following: condom use rate in the last 30 days by gender (Table 2); condom use in the last 30 days by source of instruction and stratified by gender (Table 3); and barriers to condom use by previous condom use behavior. In analyses resulting in more than 20% of the cells with expected counts less than 5, a p-value for the Fisher's Exact Test will be calculated as well.

Table 2.

Condom use in the last 30 days by gender among students who had reported having sex in the last 30 days (N = 175)

	Male (%)	Female (%)	Total (%)	Chi-square	*P*
Condom Use in the Last 30 Days					
Always	39 (37.50%)	21 (29.58%)	60 (34.29%)	4.74	0.1917
Almost Always	15 (14.42%)	17 (23.94%)	32 (18.29%)		
Almost Never	21 (20.19%)	9 (12.68%)	30 (17.14%)		
Never	29 (27.88%)	24 (33.80)	53 (30.29%)		
Total	104	71	175		
	(59.43%)	(40.57%)			

Table 3.

Condom use in the last 30 days by source of instruction for proper condom use stratified by gender among students reporting having sex in the last 30 days (N=174)

Females

Where were you taught to properly put on condoms?	Always or Almost Always	Never or Almost Never	Total	Chi-square	*P* (Fisher's Exact Test)
Did Not Answer	6 (15.79%)	3 (9.38%)	9	5.35	0.4049
Friends	7 (18.42%)	7 (21.88%)	14		
Health Class	6 (15.79%)	2 (6.25%)	8		
Other Course	6 (15.79%)	11 (34.38%)	17		
Parents	5 (13.16%)	2 (6.25%)	7		
Not Taught	8 (21.05%)	7 (21.88%)	15 (21.43%)		
Total	38	32	70		

Males

Where were you taught to properly put a condom on?	Always or Almost Always	Never or Almost Never	Total	Chi-square	*P* (Fisher's Exact Test)
Did Not Answer	8 (14.81%)	7 (14.00%)	15	2.20	0.8340
Friends	15 (27.78%)	19 (38.00%)	34		
Health class	11 (20.37%)	8 (16.00%)	19		
Other course	9 (16.67%)	8 (16.00%)	17		
Parents	5 (9.26%)	2 (4.00%)	7		
Not Taught	6 (11.11%)	6 (12.00%)	12		
Total			104		

*Significant at an alpha level of 0.05. **Significant at an alpha level of 0.01

Results

Two-hundred-seventy five (68.58%) students enrolled in the course chose to participate in the study. All participants were 18 years or older (Table 1). Almost 46% (45.99%) of students surveyed were 20-21years old, 41.54% were 18-19 years old, 8.09% were 22-23 years old, and 4.41% were 24 years old or older. Nearly 70% (69.09%) of all students surveyed were Caucasian, 20.73% were African American, 3.27% were Hispanic/Latino, 2.91% were Asian/Pacific Islander, 2.18% were Multi-Racial, and 1.45% reported other. Males accounted for 61.45% of participants. The majority of participants 261 (95.26%) reported being single, one (.36%) student surveyed reported being separated/divorced/or widowed, and 12 (4.38%) students reported being married (Table 1).

Of the 275 students participating in the current study, 222 (80.73 %) of students reported that they had engaged in sex at least once during the course of their lifetime. When participants were questioned concerning whether they had been instructed how to put on a condom properly, the majority of the students (86.55%) reported that they had been taught how to put on a condom. Almost 90% (88.89%) of female participants and 82.95% of male participants reported being taught how to put on a condom. Students were then asked where they were taught to put on a condom. The most common response was by "Friends" (32.47%). More than 20% (20.62%) answered the Health course as their source of instruction. About one-fifth (21.65%) of participants chose "Other Course" as a response, for which they were permitted to write in a response; among the participants who selected "Other Course" as a response, the most reported written response was "High School Health."

Condom Use in the Last 30 Days

The current study examined condom use within the 30 days prior to the survey. While the initial sample size for the current study was 275, only data from the 175 participants who reported engaging in sex during the 30 days prior to the survey were used for this analysis. There was no significant association between gender and frequency of condom use while engaging in sexual intercourse during the last 30 days (Table 2). Nearly 35% (34.29%) of participants indicated they always used condoms within the last 30 days, followed by never using condoms (30.29%), almost always using condoms (18.29%), and almost never using condoms (17.14%). The greatest proportion (37.50%) of males who had engaged in sexual intercourse within the last 30 days reported always using condoms in the past month, whereas the greatest proportion of females (29.58%) who had engaged in sexual intercourse within the past month indicated they had never used condoms within that month (Table 2).

Frequency of condom use within the past 30 days by source of instruction (Table 3) was also analyzed. There was no statistically significant association between condom use frequency in the past 30 days and source of instruction for either males or females. The greatest proportion (21.05%) of females who reported always using or almost always using a condom during the past 30 days indicated they had not been taught how to properly put on a condom; however, the greatest proportion (34.38%) of females who indicated they had never or almost never used a condom in the past 30 days reported they had been taught how to properly put on a condom by another course (a course other than the health course which they attended at the time of the survey). Males who reported they had always or almost always used condoms within the past 30 days were the most likely (27.78%) to state their friends taught them how to properly put on a condom; males who indicated they had never or almost never used condoms in the last 30 days were most likely (38.00%) to indicate they had learned to properly put on a condom from their health course.

Barriers to Condom Use

Barriers to condom use were measured through responses to the survey item, "What was the reason you did not use a condom?" From the original sample of 275 participants, 53 indicated they had never engaged in sexual intercourse. Of the remaining 222 participants who had ever engaged in sex, 60 reported that they always used condoms and were also excluded from the sample for this specific analysis. Thus, 162 participants were eligible for the analysis for barriers to condom use; however, due to nonresponse of one participant, 161 participants were included in the analysis.

Because 36 percent of the cell counts had expected frequencies less than 5, Fisher's Exact Test was calculated in addition to a chi-square test for association; thus the p-value represents the significance level for the Fisher's Exact Test. There was a statistically significant association (X^2=23.00; p = 0.0004) between the reason participants engaged in sexual intercourse at least one time without using a condom and whether or not they had ever used a condom (Table 4). Participants' trust in their partners' monogamy was the most common reason reported for having sex without using a condom; however, this reason was reported to a greater extent among participants who had never used a condom (58.65%) than those who had ever used a condom (38.60%). Among participants who had never used a condom, "Other reasons" was the second most commonly reported (25.00%), followed by "Lack of Condom Availability (7.69%).

Discussion and conclusion

Strengths of this study include use of a modified standardized instrument and data collection methods that allowed participants to answer sensitive questions with confidence that their information would be anonymous. Limitations include use of a modified instrument, self-reported responses, and lack of randomization; furthermore, the study utilized a sample of convenience.

Condoms are only effective when used correctly and consistently. One can assume that the effectiveness of condom use is decreased among participants who reported not having been taught how to put a on a condom. It would be very beneficial for all instructors of the Health and Wellness courses to include condom instruction in addition to supplement the cognitive information about STIs and pregnancy prevention in the course curriculum.

This study's results also indicate that there were no differences in past 30 days reported condom use between those who were taught how to put on a condom and those who were not. This is consistent with previous research studies that suggest knowledge alone is not enough to influence condom use

Table 4.

Reported reasons for not using condoms by previous condom use among students who had engaged in sexual intercourse at least one time without using a condom (N = 161)[a]

	Ever Used Condom	**Never used Condom**	**Total (%)**	**Chi-square**	**P (Fisher's Exact Test)**
What was the reason you did not use a condom?					
Did not answer	2 (3.51%)	1 (0.96%)	3	23.00**	0.0004
Lack of condom availability	8 (14.04%)	8 (7.69%)	16		
Lack of funds to purchase condoms	3 (5.26%)	0 (0.00%)	3		
Pressure from sexual partner	5 (8.77%)	3 (2.88%)	8		
Trust in partner's monogamy	22 (38.60%)	61 (58.65%)	83		
Under the influence of drugs or alcohol	10 (17.54%)	5 (4.81%)	15		
Other reason	7 (12.28%)	26 (25.00%)	33		
Total	57	104	161		

*Significant at an alpha level of 0.05.

**Significant at an alpha level of 0.01

a One response missing from analysis due to nonresponse to survey item.

(Baldwin & Baldwin, 1988). However, there was a significant difference between male students who were taught by friends to put on a condom and those who were taught in any other way. Those who were taught by friends were more likely to report using a condom the last time they had sex suggesting that peer education might be an effective educational strategy to promote condom use among male students. This result is consistent with other studies' results indicating that adolescents who believe their peers to have a positive attitude toward condom use are more likely to use condoms. It is believed that peers trust other peers and are more likely to discuss sensitive topics with their peers (Campbell & MacPhail, 2002; Caron, Godin, Otis, & Lambert, 2004; Richie & Getty, 1994).

Few students in this study reported peer pressure, alcohol, and drug use as barriers to condom use. The most reported barrier to condom use was "trust in partner's monogamy." This finding is consistent with other studies which found that condom use decreases as relationships progress because of subjective assessment of partner safety. Young adults tend to use condom more frequently at the beginning of a relationship (Civic, 2000; Wendt & Solomon, 1995).

The study results also confirm that instruction of proper condom use is essential for correct use, but knowledge alone is not sufficient to promote consistent condom use. Some students wrote "other birth control" as the "other reason" for not using condoms, indicating the importance of health education programs focusing on STIs prevention.

Based on the literature and current findings, health education programs should also address other contributing factors such as communication, perception of susceptibility to diseases and pregnancies, and perceptions of partners' desires related to condom use. STIs prevention education in the required Health and Wellness course, which is similar to introductory Health and Wellness course offered at many universities in the United States, is a good beginning but will need reinforcement. This can be accomplished through collaboration with other campus organizations which focus on health promotion, especially those that use peer education methods. Recommendations for future studies include studying students' attitudes toward condom use and their intention to use condoms.

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Instructions and self-study questions may be found on page 46