

Level of Sexual Health Knowledge and One-Night Stand Relationships among University Students

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Abstract

Knowledge of sexual and reproductive health is believed to improve healthy sexual attitudes and behaviors, and decrease sexual risk-taking behaviors. Casual sexual relationships, such as one-night stand relationships, have become pervasive practices among heterosexual college students in the United States, despite imposing negative consequences on individuals' sexual and reproductive health outcomes. This study employed a cross-sectional method to explore the relationship between the knowledge of sexual and reproductive health and a belief in one-night stand relationships among 804 university students in the United States. Participants answered a questionnaire from the World Health Organization, administered through Qualtrics software. Descriptive statistics, bivariate analysis, and logistic regression analyses were performed. Significant findings were reported by unadjusted and adjusted odds ratios with 95% CI. The findings of this research showed that there was a positive relationship between the level of knowledge and a belief in a one-night stand relationship. The findings also showed that male students are more likely to report a belief in one-night stand relationships compared to female students. In addition, a large number of students did not receive information about condom use, and there was a significant negative correlation between being religious and a belief in one-night stands. This study offers insight into the inadequacy of sexual health knowledge among university students. It also suggests that gender-specific knowledge should be a necessary part of the sexual and reproductive health education programs. Clinical and public health implications are discussed.

Keywords: sexual health, sex education, one-night stand relationship, university students

1. Introduction

Sexual health encompasses the rights of all individuals to access the knowledge and have the opportunity to enjoy "a safe and threat-free sexual life" (WHO, 2010). The sexual health of young people has been a significant public health issue due to the increased rates of Sexually Transmitted Diseases (STDs) among this population (Katavić et al., 2020; Tsevat et al., 2017). According to the report by the Centers for Disease Control and Prevention (CDC) in 2018, adolescents aged 15–19 years and young adults aged 20–24 years are at higher risk of acquiring STDs. The report indicated that men and women aged 20–24 years had the highest rate of Chlamydia and Gonorrhea cases compared with other age groups, with 50% of new infections occurring within these populations (Habel et al., 2018; CDC, 2018). The age group of 20–24 years old comprises the majority of college students, which have been identified as a high-risk population with an increased prevalence of sexual risk-taking behaviors (Habel et al., 2018; Katavić et al., 2020).

Casual sexual relationships, such as one-night stands and hookups, have become pervasive practices among heterosexual college students in the United States, despite inherent physical, emotional, and social consequences on individuals' lives (Garcia & Reiber, 2008; Gray et al., 2019; Napper et al., 2016). A one-night stand is a single sexual encounter in which the participants do not expect further relationships. It is defined as "sexual activity without emotional commitment or future involvement" (Turner, 2009). Studies on casual sexual relationships have

raised concerns that sex with casual partners may lead to a higher risk of STDs (Ann Lyons, 2017; Kuperberg & Padgett, 2017; Lu et al., 2009) and have a detrimental effect on the mental health of young adults (Christianson et al., 2003; Townsend & Wasserman, 2011). A survey on 'sex differences in emotional reactions in sexual hookups among college students' reported that, when women engaged in casual sexual relations, they expressed worry and vulnerability, and "the more significant number of partners was associated with increased worry-vulnerability felt by women" (Townsend & Wasserman, 2011). Another research on chlamydia trachomatis (CT) infected youth with the experience of one-night stand relationships reported an "uneven distribution of responsibility concerning condoms". Males expected females to be "condom promoters"; and "by catching CT infection, females experienced guilt while males felt content through knowing the source of contamination" (Christianson et al., 2003). Most of the studies show a persistent gender difference in casual sexual experience, with men reporting more positive responses compared to women (Piemonte et al., 2019). Although casual sex is usually considered as a harm-producing practice, there are some reports that highlighted the positive reactions following casual sex in both men and women, including improved confidence and self-knowledge, sexual satisfaction, and better social and academic engagement (Owen & Fincham, 2011; Owen et al., 2015). However, most research on the mental health consequences of casual sex has reported links between casual sex and decreased wellbeing, especially among women (Vrangalova, 2015).

Knowledge of sexual and reproductive health has a strong positive relationship with improved sexual health attitudes and behaviors, such as increased use of condoms and contraceptives, and decreased risky sexual behaviors, such as casual sex (Francis et al., 2016; Frost et al., 2012; WHO, 2010). Young people choose different sources of sexual health knowledge, such as peers, school teachers, the internet, social networks, and healthcare professionals. Communication between parents and young people on sexual health issues rarely occurs, and if it does, it mostly consists of strict warnings to prevent unhealthy sexual behaviors (Faludi & Rada, 2019). The research highlighted that sexual health education programs must emphasize the communication about condom use in HIV/STD prevention, which is an important element of sexual health knowledge that affects the attitudes about risky sexual encounters (Widman et al., 2014). Overall, sexual health education programs have a significant impact on improving safer sexual attitudes and behaviours (Breuner & Mattson, 2016; Evans et al., 2020; et al., 2007; WHO, 2010). However, young people still report engaging in significantly risky behaviors with a person not well known, despite having knowledge about risk factors (Hoehn et al., 2016; Jadack et al., 1995).

To shed light on how sexual health knowledge associates with young people's belief in casual sexual relationships, we studied the association between social-demographic characteristics, sources of knowledge, and level of knowledge with belief in one-night stand sexual relationship among a group of young adult college students.

2. Method

This research adopted a cross-sectional quantitative method. The sample comprised of 804 university students recruited through random sampling. For a random sampling, the list of students enrolled at the university was used as a framework. A population of 27,000 students registered at the university in on-campus and online courses. Health students were excluded from this study because they have prior knowledge on health concepts, and their responses might have diluted the study results. "The required sample size through a computerized sampling technique was 379 participants, according to Rao soft software, based on the University student population" To account for an expected 20% nonresponse rate among participants, the sample size was adjusted to 474 students using the formulae $N = n / (1 - q)$, in which N is the adjusted sample size (474), n is the calculated sample size (379), and q is the expected percentage of nonresponse among students. The power calculation at the end of the study recruitment was conducted to ensure the sufficiency of the sample for this analysis based on the study objective. According to an online calculator from Power and Sample Size.com, the power and alpha for this study were 0.90 and 0.001, respectively" (Ankomah et al., 2021)

2.1 Data Collection and Measures

The study instrument was an adapted World Health Organization self-administered questionnaire. This instrument consists of the following questions:

Sociodemographic questions

"What is your gender?", "What is your educational level?", "Are you currently working?", "What is your monthly income?", "What is your religion?"

In addition, relationship status was inquired via several questions listed in Table 1. The total level of knowledge included knowledge on contraception, STD/HIV, and knowledge of condom use. These sections correspond to sections 11, 7, and 9 of the WHO questionnaire.

2.2 Data Analysis

Data was collected using a social demographic questionnaire and a standard WHO questionnaire for Sexual and Reproductive Health Knowledge of young people. Statistical analysis of this data was done using IBM SPSS Statistics, version 26.0, released in 2019 (IBM Corp., Armonk, NY, USA). Descriptive analysis, bivariate, and linear regression were performed to analyze the data. Logistic regression analysis was conducted to find the predictive relationship between the relationship between social-demographic characteristics, sources of knowledge (family or health professionals), and level of knowledge with belief in one-night stand sexual attitude. The results are presented as odds ratio (OR) and 95% confidence intervals (CI).

2.3 Ethical Considerations

“The protocol of the study was approved by the Ethics committee of the Institutional Review Board (IRB: 1031916-4). We first sent an email to participants. In that invitation letter, the purpose of the study was explained. Students were asked to spend 20 minutes to fill up the questionnaire. Students were assured that the data would be confidential as no identification was collected from the students. The risk and benefits of participation in the study were explained to the participants. General publications and reports coming out of this study were sent to students for general education purposes. Students who participate in the study were eligible to receive a coupon for Pizza. Students were free to refuse participation or discontinuation of the study at any time point. They could also report any insensitivity in handling the research by researchers to the IRB committee” (Jahanfar et al., 2021).

3. Results

The social-demographic findings of this research have been shown in Table 1. The majority of the participants were female (68.8%), undergraduate students (68.2%), and identified as being religious (60.7%) and single (95.4%). The total score of sexual and reproductive health knowledge was 31.31 ± 3.11 . Table 2 shows the bivariate analysis of the relationship between social-demographic characteristics, sources of knowledge (family or health professionals), and level of knowledge with belief in one-night stand sexual attitude. The findings of this research showed that there was a significant positive correlation between the level of knowledge and belief in one-night stand relationships. Table 3 shows the regression analysis of the relationship between social-demographic characteristics, sources of knowledge (family or health professionals), and level of knowledge with belief in one-night stand sexual attitude. The adjusted OR for the total score of knowledge was 1.14 (1.04–1.24). This means that students who agreed to the one-night stand had a higher level of knowledge compared to those who did not agree. The effect size was 1.14. This means $1.14 - 1 = 0.14 * 100 \gg$. The odds of the one-night stand were 14% higher among those with a higher level of knowledge.

Similarly, the odds ratio of the one-night stand was 205% times more likely in males compared to females adjusted for all other variables. This indicates that male are more likely to have a belief in one-night stands than female students are. Religion seems to be a protective factor as the odds ratio is 63% lower in those students who had one type of religion compared to those who did not believe in any religion.

Table 1. Sociodemographic characteristics (n=804)

Variables	N (%)
Age (Mean±SD)	23.87±7.56
Gender	
Male	167 (18.1)
Female	636 (68.8)
Education	
Undergraduate	549 (68.2)
Graduate	256(31.8)
Work	
Yes	520(68.8)
No	236(31.2)
Income	
\$1000 or less	721 (78.0)
More than \$1000	203 (22.0)
Are you a religious person?	
Yes	471(60.7)
No	305(39.3)
Relationship status	
Single	601(95.4)
No single	29(4.6)
Discussed sex-matters with family member	
Yes	262(87.6)
No	37(12.4)
Sources of information _Poster	
Yes	195(69.6)
No	85(30.4)
Sources of information _Brochures	
Yes	134(47.9)
No	146(52.1)
Sources of information _talks about condom	
Yes	91(32.4)
No	190(67.6)
Did the doctor or nurse talk to you about: Contraception	
Yes	233(83.2)
No	47(16.8)
Did the doctor or nurse talk to you about: STD/HIV	
Yes	198(71.0)
No	81(29.0)
Did the doctor or nurse talk to you about: Pregnancy	
Yes	186(67.4)
No	90(32.6)
Receive information from doctor of nurse about condom, contraception, pregnancy, and STD/HIV	
Yes	65(23.6)
No	210(76.4)
Total score of knowledge	31.31±3.11

Table 2. Bivariate analysis relationship between social demographic characteristics, sources of knowledge (family or health professionals) and level of knowledge with believe in one-night stand sexual attitude (n=804).

Variables	One-night stand + N (%)	One-night stand - N (%)	P
Age (Mean±SD)	23.31 ±6.49	22.92±6.89	0.14
Gender			
Male	68(76.4)	21(23.6)	0.02
Female	208(63.6)	119(36.4)	
Education			
Undergraduate	102(34.0)	198(66.0)	0.78
Graduate	38(32.5)	79(67.5)	
Work			
Yes	85(32.5)	179(67.5)	0.85
No	47(33.3)	94(66.7)	
Income			
\$1000 or less	73(29.8)	172(70.2)	0.59
More than \$1000	34(34.0)	66(66.0)	
Are you a religious person?			
Yes	108(42.5)	146(57.5)	0.01
No	32(19.6)	131(80.4)	
Relationship status			
Single	112(30.9)	251(69.1)	0.43
No single	5(41.7)	7(58.3)	
Discussed sex-matters with family member			
Yes	12(57.1)	9(42.9)	0.08
No	53(37.6)	88(62.4)	
Receive information from health professional			
Yes	15(23.1)	50(76.9)	0.22
No	66(31.4)	144(68.6)	
Total score of knowledge	31.58±2.99	30.86±3.22	0.05

Table 3. Regression analysis relationship between social demographic characteristics, sources of knowledge (family or health professionals) and level of knowledge with believe in one-night stand sexual attitude (n=804).

Variables	Unadjusted OR 95%CI	Adjusted OR 95%CI
Total score of knowledge	1.07(0.99-1.16)	1.14(1.04-1.24)
Age (Mean±SD)	1.01(0.98-1.04)	1.00(0.96-1.04)
Gender		
Male	1.85(1.08-3.17)	3.05(1.47-6.35)
Female	1	1
Education		
Undergraduate	1.07(0.68-1.69)	-
Graduate	1	
Work		
Yes	1.04(0.67-1.61)	-
No	1	

Income		
\$1000 or less	1.21(0.74-1.99)	-
More than \$1000	1	
Are you a religious person?		
Yes	0.33(0.21-0.52)	0.37(0.22-0.64)
No	1	1
Relationship status		
Single	1.60(0.45-5.15)	-
No single	1	
Discussed sex-matters with family member		
Yes	0.45(0.18-1.14)	-
No	1	
Informed by health professional		
Yes	0.66(0.34-1.25)	-
No	1	

4. Discussion

The results of this research showed that there is a positive relationship between the level of knowledge and a belief in a one-night stand relationship. This indicates that students who agreed to one-night stands had a higher level of knowledge compared to those who did not agree. This seems to be strange, as it is usually believed that the knowledge of sexual health has a positive impact on improving safer sexual practices (Evans et al., 2020; Visalli et al., 2019; WHO, 2010). However, it may speak to the inadequacy of the education they receive, or the positive effect of knowledge of sexual health on motivations in casual sex. Although a review of three decades of research provides evidence for the effectiveness of sexual health education programs (Goldfarb & Lieberman, 2020) research has shown that not all sex education programs provide equally effective knowledge, as the accuracy of content, emphasis, and effectiveness is extensively varied (ACOG, 2016; Visalli et al., 2019). The protective influence of sex education emphasizes the issues of contraception, condom use, and reproductive health outcomes rather than “if or when to have sex” (Lindberg & Maddow-Zimet, 2021). Sexual health education in the United States, which mostly relies on the federally funded “Abstinence-Only Until Marriage (AOUM)” program, has not been effective in reducing sexual risk behaviors, or improving reproductive health outcomes. It has been widely criticized by medical and public health professionals, sexuality educators, and the human rights community because “AOUM withholds information about condoms and contraception, and promotes religious ideologies and gender stereotypes” (Hall, et al., 2016). It lacks a wide range of medically accurate, evidence-based, age-appropriate, and culturally based information that should be provided for students to improve attitudes, skills, and values to make healthy choices (ACOG, 2016; Kirby et al., 2007; et al., 2019). Our findings showed that a large number of respondents did not receive information about condom use, while topics on contraception, STD/HIV, and pregnancy have been discussed by the source of information. Most of the research on HIV and STDs prevention highlights the urgency of emphasizing communication about condom use (Hoehn et al., 2016; Visalli et al., 2019). Communication about condom use is critical for the health of sexually active youth, and sex education without communicating condom use may result in an ineffective outcome.

The findings also showed a significant relationship between gender and belief in a one-night stand relationship, as male students more frequently reported belief in one-night stand relationship compared to female students. The research has persistently reported that men are more likely to engage in risk-taking behaviors, such as one-night stands (Piemonte et al., 2019). A few studies have emphasized the role of masculinity ideology in men’s interest in such practices. For instance, stereotyped masculinity norms regulate men’s sexuality through an emphasis on performing well in one-night stands (Elmerstig et al., 2014), and display of sexual prowess in casual relationships (Chan, 2019). Research has also highlighted the relationship between lower physical self-concept and higher sexual risk-taking among men (Potard et al., 2019). This indicates that it is necessary to include gender-specific knowledge, such as the masculinity norms, in sexual education programs, which is an important factor in promoting the sexual wellbeing of young men.

4.1 Strength and Limitation

The cross-sectional nature of this study makes it susceptible to temporal bias as cause and effect concepts cannot be substantiated. Moreover, there is a possibility of recall bias. We assume that the information bias, resulting from a boosting about sexual activities under peer pressure among students, or shying away from stating the truth about private sex life, are avoided. These are often named as information bias.

The strength of this study was in several facts: Firstly, the sample size was relatively large compared to similar studies. Secondly, we utilized a standard WHO questionnaire which have been used in similar research in other countries. This makes our research comparable to that of others. Unlike some developing countries that had to change the questionnaire dramatically to adjust to the cultural and religious beliefs (Soltani et al., 2017), we used a relatively intact questionnaire with not much change. Using Qualtrics as a platform for this study gave the students ease and comfort to fill up the questionnaire on their own time. Hence, not disturbing their daily routine of study schedule.

4.2 Clinical and Public Health Implications

This study offers insight into the inadequacy of sexual health knowledge in preventing belief in casual sexual behaviors among university students. The positive correlation between the knowledge of sexual health and belief in one-night stand relationships indicates that sexual health education programs should provide specific knowledge about risk-taking behaviors. The major (desired) outcome of sexual health education programs is the prevention of risky sexual behavior. Therefore, specific knowledge about condom use is promoted. Another outcome is the positive correlation between the level of knowledge and a belief in a one-night stand relationship. Hence, a strictly 'technical' extension of the education program with information about risks and vulnerabilities could have adverse effects in terms of boosting this correlation. Therefore, a comprehensive sex education that includes social and emotional consequences (e.g., worry/vulnerability) is highly recommended in order to provide sufficient knowledge of sexual health behaviors. Our findings revealed that although doctors and nurses have discussed the topics of pregnancy, contraceptives, and STD/HIV with students, most of the students did not receive information about condom use. Therefore, a belief in one-night stand relationship with lack of knowledge of condom use may put sexually active youth at a greater risk of sexually transmitted infections. Our findings also confirmed that male students more frequently reported a belief in one-night stand relationships. This finding suggests that sexual health programs should communicate more gender-specific topics in their curriculum in order to improve the adequacy of knowledge in preventing risky sexual behaviors.

4.3 Research Implications

The findings of this cross-sectional study suggest that general sexual health knowledge does not prevent a belief in one-night stand relationships. Therefore, we recommend an in-depth exploration of beliefs about such a risk-taking sexual relationship among university students, and the reasons behind the beliefs about one-night stands through qualitative methods. It is also important to investigate how sexual health knowledge changes or shapes beliefs about one-night stand relationships, and what factors motivate university students to engage in these behaviors. Since our study focused only on the beliefs about one-night stands, we recommend future longitudinal studies to look into the actual engagement in risky sexual behaviors, including one-night stands, among the university students who have received sexual health education.

Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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