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A descriptive study of undergraduate contraceptive attitudes among students at the University of New Hampshire

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A descriptive study of undergraduate contraceptive attitudes among students at the University of New Hampshire

Abstract

PURPOSE: The purpose of this study was to examine and to understand undergraduate students' contraceptive attitudes and its effects on contraceptive use to further enhance the education regarding unwanted pregnancies and sexually transmitted diseases (STDs). **DESIGN AND METHODS:** A descriptive study to understand contraceptive attitudes while exploring demographics and sexual behaviors as well as the incorporation of the Contraceptive Attitude Scale (CAS). The researchers utilized an online survey system to distribute surveys electronically. **RESULTS:** Most students had a positive attitude regarding contraception. **IMPLICATIONS:** Nurses at college health facilities can focus on educating the college population since their age group is likely to engage in risky behavior.

Keywords

Contraceptives, Sexually Transmitted Diseases, Pregnancy, CHHS, Nursing

Subject Categories

Community Health and Preventive Medicine

**A DESCRIPTIVE STUDY OF UNDERGRADUATE CONTRACEPTIVE ATTITUDES
AMONG STUDENTS AT THE UNIVERSITY OF NEW HAMPSHIRE**

BY

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Abstract

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A Descriptive Study of Undergraduate Contraceptive Attitudes Among Students at the
University of New Hampshire

Introduction

Nearly half of all pregnancies in the United States are unintended, the highest of this instance occurs between 18-24 years of age. Four in ten of all unintended pregnancies are terminated by abortion (Guttmacher, 2011). Sexually active adolescents aged 10-24 years of age are at the highest risk for contracting sexually transmitted diseases (STDs) and while young adults aged 15-24 years represent only 25% of the sexually active experienced population, they acquire nearly half of all new STDs (Centers for Disease Control and Prevention, 2011). The high occurrence of unintended pregnancies and STD contraction can be prevented through contraceptive use. With contraceptives becoming increasingly easier to access, costing less, and expanding in variety or options the question remains as to why such incidences of pregnancies and STDs are so high among the young adult age group. The CDC STD Surveillance report stated that “STDs are hidden epidemics of enormous health and economic consequence in the U.S. They are hidden because many Americans are reluctant to address sexual health issues in an open way and because of the biologic and social characteristics of these diseases. STDs are public health problems that lack easy solutions because they are rooted in human behavior and fundamental societal problems”. The validity in the clause lies in that this deeply rooted behavioral and societal stigma of discussing sexual activity in the U.S. has become an overwhelming barrier to education on contraceptive use. Solutions to these societal issues can only begin through knowledge and discussion to explore how the adolescent population’s behaviors and attitudes regarding contraceptives are affecting their use.

Nationwide Healthy People Goals of 2020 for “Family Planning” prioritize increasing the proportion of females or their partners at risk for unintended pregnancy who use contraception at their most recent occurrence of sexual activity from 83.0% (2006-08), to 91.3%. An additional “Family Planning” goal is to increase the proportion of sexually active persons who receive reproductive health services from the 2006-08 baselines; 78.8% female, 14.9% male. The target goal for 2020 is to see an improvement of 86.7% females and 16.4% males receiving reproductive health services. Because of the current increase in legislative initiative to decrease funding to facilities that provide reproductive care for free or at a low cost, our journey to achieve these standards outlined by Healthy People 2020 may be hindered. How the undergraduate population currently ranks among these nationwide goals that are intended to improve across the next eight years will show strategies for attacking areas revealing a dearth of knowledge and progress.

Review of the Literature

Contraceptive Attitude Scale

Contraceptive attitudes play a large role in sexual intercourse behaviors that may result in unintended pregnancies or STDs. By understanding how undergraduate adolescents feel about contraceptive use, gaps in knowledge or trends in behavior may be utilized to address such issues. The Contraceptive Attitude Scale published by Kellie Dionne Bryant DNP, WHNP in the peer-reviewed journal, *American Black Nursing Faculty* (ABNF) was adapted to measure the positive or negative attitudes of participants regarding contraceptives. This five point Likert scale examines contraceptive attitudes through 17 positively and 15 negatively worded statements. Participants scored their attitudes regarding each statement on a scale of strongly agree to strongly disagree. With nearly 80% of sexually active college females not seeking to become

pregnant, and such occurrences happening due to lack of contraceptive use and unsafe sexual practices, Dr. Kelly Kyes surveyed 120 female college students using this scale to assess their outlook on the subject. With strong test-retest reliability, the validity of the instrument is strong. Of the participants, most women had a positive attitude regarding contraceptives and those with higher scores were more likely to be consistent in contraceptive use. Results from such literature are useful for enhancing healthcare provider's methods of education about contraceptive use. Knowledge is the key defense against unintended pregnancies and STDs, which makes the health care team's role as educators a vital support for the college aged, and adolescent population if they are to be making informed choices during sexual behaviors.

Pregnancy

With one in four U.S. women at risk for unintended pregnancy participating in unprotected sex for one or more months, Jennifer Frost and Susheela Singh conducted a study to understand determinant factors for such risky behaviors (2007). Factors that contributed to contraceptive behavior patterns included attitudes toward pregnancy prevention, attitudes toward and experiences with contraceptive methods and service providers and demographic, socioeconomic and sexual partnership experiences. Data was collected through list-assisted, random digit dial, telephone interviews with 1,978 women ages 18-44. To be categorized as "at risk", women had to have reported having sexual intercourse with a man in the past year, they were not pregnant or were not two or fewer months postpartum, they were not trying to get pregnant and neither they nor their partner were contraceptively or noncontraceptively sterile. Through logistic regressions using the two tailed t-test, results showed a strong association between ambivalence about avoiding pregnancy and contraceptive use and non-use. The eight percent of non-contraceptive users were at the highest risk for unintended pregnancy. Women

aged 35-44, who were black, had less than a college education, were uninsured, and who were not currently in a relationship all exhibited more frequent periods of non-use. Dissatisfaction with method choice leads to a high risk of unintended pregnancy due to periods of stopping use and participating in unprotected sex. In conclusion “the association between socioeconomic disadvantage and both long-term contraceptive nonuse and having periods of risky nonuse is consistent with higher rates of unintended pregnancy among disadvantaged women”. Limitations to the telephone study included non-response bias. Women who did not have access to a phone or were unable to participate were excluded from this study. The attitudes and preferences of the male partners may also affect women’s patterns of behavior. A more comprehensive understanding of results could have been developed had men been included in the interviews. The final two limitations were that STD prevention behaviors were not measured nor were the type of method used and how well women utilized the method. From this study health care provider’s education and encouragement can help reduce the frequency of such risky behaviors. Providers should ensure their patients understand the risks of getting pregnant, the importance of planning and preparing for pregnancies, what contraceptive options are available to prevent pregnancies, proper use, side effects and benefits, and availability of low-cost clinics where uninsured women can obtain contraception. Where nearly half of all unintended pregnancies result in abortion, further research would help to assess if women who are ambivalent about becoming pregnant are more likely to terminate their pregnancies. These women could be offered more counseling on method choice and planning. By regularly evaluating patient’s experiences and satisfaction with contraception, issues can be discussed and solved efficiently and promptly.

Through a cross-sectional study conducted by Huber and Ersek at The University of

North Carolina at Charlotte, 326 participated in a study to investigate the association between a variety of characteristics and the decision to use contraception (2009). With lack of contraception use being one of the primary causes for high rates of unintended pregnancy among women aged 18-24 years, research on whether demographic and lifestyle factors are correlated can help health care providers delegate care in the future. Students provided responses through both web-based and postal mail questionnaires. Demographics included age, race, marital status, and whether the participant had ever been pregnant. Behavioral questions focused on participant's living situations, student status, work status, BMI, smoking, alcohol use, whether birth control had ever been discussed with the participant by a health care worker or family member, emergency contraception, and whether the participant had ever undergone HIV testing. Women were also asked to provide reasons for or for not using contraception depending on their response. Results showed that 77.1% of sexually active women used contraception, the most popular methods being oral contraceptives and male condoms. Cost of contraception was the most frequently reported issue for nonusers with 25% of women listing the problem. Those who had discussed contraception with a health care worker or family member had 6.63 times the odds of currently using protection. The major conclusion taken from this study is the concern of cost and the association with contraception non-use. Healthcare providers should incorporate education on low-cost, available and effective methods into their practice. Personalized counseling can help evaluate a patient's needs and what the most beneficial method may be. The major limitation to this study was that students at the University are required to have health insurance; this affects the cost of contraceptive available. School health centers should promote the provision of protection resources such as male condoms that can be obtained for free. Privacy was also a limitation to this study. Participants reported not using a contraceptive because they were

concerned their parents would find out. Schools can reduce this by posting confidentiality information visibly on all health related sites so students can feel comfortable acquiring protection. Assessing patient's satisfaction and concerns at annual physicals can ultimately enhance education on the topics such as STI protection, emergency contraception options, and the importance of consistency. We will be discussing the availability of contraceptives and the possible effects it has on use and non-use. As cost was a major factor of availability to women \ in this study it will be interesting to see if price can influence students at this University. This can provide insight that more education may need to be provided by Health Services on low-cost methods.

While research on attitudes and behaviors of contraceptive use is relatively well understood, additional research on the perceptions of contraceptive responsibility is limited. Brunner Huber and Ersek sought to understand such perceptions among 326 female students at UNC Charlotte (2011). Using web-based and mail questionnaires, women were asked to self-report 48 questions on demographics, contraceptive use, sexual intercourse, and contraceptive responsibility. Only women who reported ever having sexual intercourse were asked two specific question on responsibility; "In your opinion, who should be responsible for 'taking care' of birth control?" and "In your experience, who ends up being responsibly for 'taking care' of birth control?". Eighty-nine percent of women felt that contraceptive responsibility should be shared but only 51.8% of participants actually reported responsibility was shared. As for individual responsibility concerning differing methods of contraceptives, 24% of women thought they should be responsible for attaining oral contraceptives and men responsible for providing condoms. Younger women in the study who were in their first year of college had lower odds of reporting shared responsibility. There were multiple limitations to this study concerning the

questionnaire. While the open ended question section allowed women to discuss aspects of contraceptive use that may not have been evaluated in the close ended questions, dual method use, and use of condoms were left out of the survey. With many college students using a combination of contraceptives, the study only asked about the main method of contraception used. Condoms are also a primary method used by men to show responsibility in a relationship so this could have affected low response rates on the shared responsibility from women's perspectives. Overall, many students may have felt the questions were too personal, therefore reducing the accuracy of reported information. In other studies that also included male perspective, a higher percentage felt that responsibility was shared than women did. More extensive research on male perceptions, and couple's opinions, can help future practice by gearing education and counseling on contraceptives to both men and women.

Sexually Transmitted Diseases

Because the majority of STDs go unnoticed due to asymptomatic signs, many students may never know they have contracted a disease. Getting tested for an STD is the only method to accurately diagnose an STD and provide proper treatment. Accessibility and awareness of testing services on a college campus can promote students to subject themselves to test and can further prevent the spread of STDs. Authors Koumans, Sternberg, Motamed, Kohl, Schillinger, and Markowitz found through their research of the proportion of school providing and percentage of students with access to testing, treatment and prevention education that a key factor to this health promotion is having a health center or student housing on campus (2007). This type of resource was more likely to provide condoms to students, and testing for sexually transmitted diseases. With the majority of schools using flyers and posters, additional forms of education included lectures, health fairs, and peer education to engage students. Health centers were much more

prominent among larger Universities which create a deficit of knowledge and health care at smaller colleges. Because the educational methods and accessibility of venues is largely varied, authors concluded that taking into account the high percentage of sexually active students as well as high rate of partner change, adolescents would benefit most from early education and prevention efforts.

The Theory of Reasoned Action model was used by authors Strader and Beaman in the *Journal of Advanced Nursing* to examine college students' knowledge on topics including AIDS, use of condoms, sexual behaviors, and intentions to engage in sexual intercourse. The strongest beliefs that impacted college student's condom use were beliefs about disease, pregnancy, worry, and normative influences of sexual partner and friends (1991). Looking at what factors influence condom or any contraceptive use has the potential to eradicate many of the social stigmas as well as inconsistencies regarding protection. A major barrier to STD and pregnancy prevention is that students often have a "super hero" mind set in that they don't believe anything bad can happen to them. This leads to risky behaviors and with the addition of alcohol or drugs lowering inhibitions and conscious decisions, risk of infection or pregnancy increases for this age group. Authors Hale and Trumbetta studied how college women perceive their risk for contracting and STD (1996). Secondly, they examined how self-efficacy, knowledge and perceived risk affected prevention behaviors. Surveying 308 college women at a University gynecology center, the majority of women had adequate knowledge about STD transmission and prevention. Despite the knowledge participants had regarding STD prevention, this did not correlate with the reported behavior. Authors suggest their findings show a need for improvement in self-efficacy for STD prevention behaviors. Awareness of risky behaviors that could lead to STD contraction should be increased as well as the actuality that they are at risk. College women must be realistic with the

dangers of their actions, which could lead to STDs or pregnancy. Because self-efficacy is determined largely by situations this may be an important opportunity for increased awareness and education among health care facilities at college or university institutions.

Significance

Based on the literature review it was concluded that situational behaviors and self-perception of efficacy are leading causes related to contraceptive misuse. While most of the literature studied women's perceptions and behaviors, this generalization among the college-aged student should be taken into consideration regarding the male adolescent. College aged men and women should have increased education focusing on risky behaviors that could lead to STD infection or pregnancy. Realizing the high potential for STD contraction or unintended pregnancy should be stressed from a young age prior to entering the college community. Increased awareness may strengthen consistency of contraceptive use. Because of the high incidence rates of unintended pregnancy and STD infection among young adults, the environment and behaviors of college students increases the risk factor. Health centers on college campuses should promote reproductive services including STD and pregnancy testing, treatments, and prevention methods such as condoms and birth control prescriptions. Maximizing knowledge, consciousness, and treatment of these health epidemics is the first step to preventing future instances.

Purpose

The purpose of this study was to examine the contraceptive attitudes of undergraduate students at the University of New Hampshire. After an enlightening experience at the Feminist Health Center of Portsmouth located in Greenland, NH, and interested was sparked in how attitudes and practices of contraceptive use can either positively or negatively affect sexual

behaviors and decisions. The present day college environment elicits significantly different attitudes and behaviors from students than other generations and public atmospheres. College is a period of time where students' beliefs, morals, independence and relationships undergo significant changes and challenges. Studying where our generation stands regarding sexual health and habits within the niche of UNH can be helpful for university health care providers in planning what factors require additional education and promotion.

Methodology

Design

This descriptive study utilized a quantitative approach in analyzing if students had a positive or negative view towards contraceptives. A quantitative approach allowed the researchers to gather information from a very large population in order to enhance data collection.

Sample and Setting

A convenience sample of 400 students at the University of New Hampshire taking the Spring 2012 "Making Babies" course were selected to take the survey. There was no particular inclusion criteria needed to participate in the study. The researchers attended the class to introduce themselves as well as their research intentions and to ask for everyone's participation and their honest answers. The specific course surveyed was chosen due to the large number of students allowed to take it as well as the fact that it is well-received across all majors, ages and genders. The survey was posted on the students' Blackboard accounts to ensure that they had the opportunity to take the survey at their own discretion. The online survey was left open for two weeks to allow ample time for participants to take it. The professor of the course assisted the researchers by consistently reminding the participants to take the survey to help with the data

collection. After the two week time period, data was collected and analyzed through the online survey tool.

Research Instrument: Participant Demographics/Sexual Behavior

In the beginning of the survey, participants were asked a series of demographic questions exploring their age, grade level, marital status, etc. Participants were also asked a range of questions regarding their sexual behavior and contraceptive methods used as well as reasons for use. This allowed the researchers to gain a better understanding of the population as well as the behaviors of the population being surveyed.

Research Instrument: Contraceptive Attitude Scale

As discussed earlier, the Contraceptive Attitude Scale developed by Dr. Kelly Kyes was utilized in order to assess whether students had a positive or negative attitude regarding contraception. Likert scales, developed in 1932, measure attitudes by asking people to respond to a series of statements about a topic, in terms of the extent to which they agree with them, thus tapping into the cognitive and affective components of attitudes (McLeod, 2008). The Contraceptive Attitude Scale asked positive and negative statements and their responses portrayed participants' attitudes relating to contraception.

Ethical Considerations

Prior to data collection, the University of New Hampshire Institutional Review Board approved the anticipated research study and permission was granted to proceed with the study. The online survey initially prompted participants to read the Participant Consent Form (See Appendix C), which outlined the purpose of the study and by progressing to the next screen, participants were giving their consent to partake in the study. The consent form also asked for participants' honest answers and also informed participants that the survey was strictly voluntary

and they had the right to exit the survey at any time if uncomfortable. All answers were kept anonymous and any identifiers were removed upon data collection.

Data Collection

Surveys were distributed via Blackboard so the participants could take the survey at their convenience. Responses were saved upon completion and available to the researchers immediately. Only the researchers, faculty sponsor and nursing honors coordinator had access to the completed surveys.

Data Analysis

Data analysis was completed through SPSS after data was extracted from the online survey tool.

Findings

Demographic Characteristics of Participants

This study yielded a total of 241 University of New Hampshire students, a response rate of 60.25%. Of this number, 80.2% were female and 19.8% were male. The majority of participants surveyed were 19 years in age (32.9%). Thirty-two point five percent were freshman, the majority were sophomores (36.6%), 15.6% were juniors, and 14.0% were seniors. Table 1 provides a visual of the study population divided by age.

Table 1

Participant Age

Age	
18	18.9%
19	32.9%
20	23.5%
21	13.6%
22	8.2%
23	2.5%

An overwhelming majority of participants were heterosexual (96.3%), 1.6% were homosexual, 0.8% were bisexual, 0.8% responded “other” and 0.4% had no response. Fifty-one point four percent were single, 48.5% were in a committed relationship, 0.8% were married, 0.4% were married and 0.8% selected “other”. Participants were also asked to select their primary method of contraception. Oral contraceptives (birth control pills) were used by the most of respondents (58.4%), 24.7% use male condoms, 3.7% do not use contraception, 2.1% use an intrauterine device (IUD), 2.1% use the vaginal ring, 0.4% use a birth control patch, 0.8% use withdrawal method, 7.0% reported abstinence, 0.4% receive a hormone injection and 0.4% rely on emergency contraception as their primary method. In addition to primary method of contraception, the researchers asked participants if they use a second form of contraception and if yes, what that second form may be. Fifty-three point nine percent of respondents reported that they in fact do use a secondary form of contraception. Of that 53.9%, 70.8% use male condoms, 15.3% use birth control pills, 0.7% use spermicides, 8.8% use the withdrawal method and 4.4% report abstinence. Table 2 outlines all choices of contraception methods and responses for primary and secondary forms.

Table 2

Primary and Secondary Forms of Contraception

	Primary Contraceptive Method	Secondary Contraceptive Method
Male condoms	24.7%	70.8%
Female condoms	0.0%	0.0%
Oral contraceptives (birth control pills)	58.4%	15.3%
Intrauterine device (IUD)	2.1%	0.0%
Birth control patch	0.4%	0.0%
Vaginal ring	2.1%	0.0%
Spermicides	0.0%	0.7%
Diaphragm	0.0%	0.0%
Withdrawal method	0.8%	8.8%
Abstinence	7.0%	4.4%
Hormone injection	0.4%	0.0%
Emergency contraception	0.4%	0.0%
None	3.7%	

Also, reasons for using contraception were explored. Eighty-one point one percent of respondents reported primarily using contraception for pregnancy prevention, 7.0% reported using contraceptives for STD prevention while 11.9% reported other reasons such as acne, menstrual cycle regulation and menstrual cramps. If participants reported using a secondary method of contraception, we also asked the reasoning behind their answer. Sixty-one point five

percent of respondents reported using a secondary method of contraception for pregnancy prevention, 31.8% used a secondary method for STD prevention and 6.8% reported other reasons such as menstrual cycle regulation, both pregnancy prevention and STD prevention and unable to bear children.

Contraceptive Attitude Scale

After analyzing the mean attitude scores through the Contraceptive Attitude Scale, it was found that the population surveyed overall has a positive attitude regarding contraception. The mean attitude score was 4.25 out of 5, which is the highest possible score. The only surprise was one statement that read, "Contraceptives can actually make intercourse seem more pleasurable" in which the majority of respondents (40.7%) answered "undecided".

Discussion

The most popular primary contraceptive among students surveyed was oral contraceptives with 58.4% of the students using this method. Other notable methods included male condoms (24.7%), abstinence (7%), and none (3.7%). Compared to 2008 national reports from the Guttmacher Institute, the primary contraceptive method was the birth control pill, used by 10.7 million women. This finding correlated to our results that the pill is the most commonly used contraceptive method. This was reassuring because we had originally thought that birth control was the most widely used simply because our participants were mainly female. National numbers reported tubal sterilization as the second most popular choice with 10.4 million women electing this service. Unfortunately we did not include tubal sterilization as an option in our survey so we have no numbers to compare, however we did not feel it would have been significant due to our population age. Sixteen percent of participants in the national survey selected male condoms as their primary method. With half of the students reporting that they also

use a secondary form of contraception, it was clear that most choose male condoms (70.8%) in addition to their primary method. The pill was next with 15.3% of students using this method as a second form of protection. Nearly 9% of the students practiced the withdrawal method as a second form of “protection”. It is unclear how many of these responses overlapped, for instance, a male student who considers himself to use two methods of contraception as male condoms, and his girlfriend taking the pill.

In addition to investigating the methods of contraception, the reason behind contraceptive use was questioned. The two primary reasons for using contraceptives were one, pregnancy prevention and two, STD prevention. Eighty-one percent of the students reported pregnancy prevention as the main reason behind using protection during intercourse. Only seven percent used contraceptive with STD prevention as their motive. When asking students why they used a second form of contraception, if they reported using one, 61.5% used a secondary form for pregnancy prevention and 31.8% for STD prevention. Using SPSS to differentiate between the male and female responses, men reported using contraceptives for STD prevention more than females, 5.3% versus 1.6%. Sixty eight percent of females chose pregnancy prevention as the main reason for contraceptive use versus 12.7% of male students. From this data it was gathered that there is an immense lack in prioritizing STD preventions as a reason for use of contraception. With most students worried about pregnancy, it appeared that not many students were thinking about STD infection when considering safe sexual practices. This was an alarming finding because at this age, combined with a college atmosphere and behaviors, students should be very concerned about STD contraction since they are technically at the highest risk.

Looking at how UNH compares to the national Healthy People 2020 goals that were outlined earlier, 82.6% of students reported that they were “likely” or “very likely” to use

contraceptives during their next period of sexual intercourse. This is very close to the national baseline goal from 2006-08 of 83%. With the target goal of 91.3% by 2020, the university has some improvement to make over the next eight years. For the second family planning goal to increase the amount of sexually active people receiving reproductive health services, national aims were 86.7% of females and 16.4% of males. The University of New Hampshire can use this to strive to increase the number of student to visit the facility for reproductive health issues. Hopefully with increased testing awareness and contraceptive accessibility more students will visit for these services.

Study Limitations

Of the 241 students that participated in the survey, 195 or 80.2% were female. It is unclear if the fact that most respondents were female had any influence over the results from the survey. Although the survey was anonymous, it could have been an uncomfortable topic for some of the target population, which prevented them from participating. On the other hand, some respondents may not have taken the survey seriously and they may have answered the questions untruthfully. Also, no incentives to participate in the survey were offered, which could have encouraged subjects to complete the online survey, especially more males. The University of New Hampshire is predominantly comprised of New England residents and considering that New England is a primarily liberal area, this factor could have influenced responses. In addition, UNH is a public university, which allows health services to supply free contraceptives as well as prescription methods. Had the researchers surveyed a private or faith based university or college, views regarding contraceptives may have been more negative. Similarly, the diversity rate at the University of New Hampshire is significantly low, whether ethnicity and race would have influenced the responses is unclear but it is a possibility. Overall, the “college population”

targeted in this research study may not be an accurate indication of all college students' attitudes and beliefs towards contraception.

Conclusion

It is evident that more research is needed about STD knowledge within the college population and that education on college campuses needs to be more widespread. Since the students surveyed have positive attitudes regarding contraception, this data can be used to further increase awareness among the college population about sexual behaviors. Nurses have the responsibility to promote healthy practices among a variety of age groups. While this study focuses on students' attitudes towards contraceptive use, their practices are largely situational based which is something health care providers do not always have the ability to control. The most that can be done for unintended pregnancy and STDs is to educate, to treat and to provide resources.

Implications

Nursing Education for Others

College is a time and an environment that often introduces drugs and alcohol to those students who have never been exposed before. Young adults come to college and for many; it is their first time being away from home with no rules and no consequences. As a result, these students are likely to engage in risky behavior, one of these behaviors being sex. The combination of alcohol, sex and/or drugs can lead to careless sexual encounters, thus increasing one's likelihood of becoming pregnant and/or contracting a sexually transmitted disease. Since the college population is at such a high risk for encountering these situations, education has the capacity to prevent these occurrences from happening or potentially cause more college students to reevaluate their thoughts and actions regarding sexual intercourse. Nurses at college health

facilities should focus on educating young college students towards the benefits of using contraceptives not only for pregnancy prevention but also for STD prevention. While interacting with young patients, nurses should take advantage of the opportunity to assess their knowledge and provide patient teaching about contraception and STDs.

Accessibility of Sexually Transmitted Disease Testing

A major factor to increasing awareness and preventing transmission is firstly, student having access to testing and treatment, and secondly, having access to contraceptives such as condoms to prevent the spread of these diseases. University of New Hampshire promotes their “Get Yourself Tested” campaign primarily through advertisements in the campus dormitories. This tactic of targeting students living in on campus housing is a prevalent initiative however students who live off campus are left blind. This discrepancy between accessibility and knowledge across the student population shows room for improvement for campus educators. Incentives offered to students for getting tested includes a five dollar gift card as well an special for free HIV testing. Because students might not always know that they have an STDs can spread at an alarming rate. Encouraging students to get tested frequently if they are engaging in unprotected sex, regardless of symptoms, will require education and promotion of accessible testing opportunities. UNH is a public university our health services facility offers free condoms for students. Condoms are the only contraceptives that provide protection against STDs so this is proactive approach to encourage their use. The combination of easy accessibility for testing and protection cannot prevent students from making risky behaviors and decisions but can educate and encourage students towards the right direction.

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Appendix A
Letter of Approval

University of New Hampshire

Research Integrity Services, Service Building
51 College Road, Durham, NH 03824-3585
Fax: 603-862-3564

12-Dec-2011

Van Eron, Danielle
Nursing, Hewitt Hall
4 Library Way
Durham, NH 03824

IRB #: 5318

Study: A Comparison of Undergraduate Contraceptive Attitudes Among Male & Female Students at the University of New Hampshire

Approval Date: 06-Dec-2011

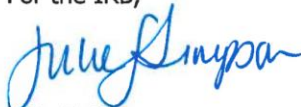
The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study as Exempt as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 101(b). Approval is granted to conduct your study as described in your protocol.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the attached document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. (This document is also available at <http://unh.edu/research/irb-application-resources>.) Please read this document carefully before commencing your work involving human subjects.

Upon completion of your study, please complete the enclosed Exempt Study Final Report form and return it to this office along with a report of your findings.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,



Julie F. Simpson
Director

cc: File
Cappiello, Joyce
Heisler, Katrina

Appendix B
Letter of Intent

This is a letter for support for the research project submitted by senior nursing students Katrina Heisler and Danielle Van Eron. Their proposed research project plans to contribute to the knowledge and understanding of undergraduate students' contraceptive attitude and actions. This project is unique in that it will focus on both male and female college students and will focus specifically on students enrolled at the University of New Hampshire. The findings may be beneficial in planning and targeting contraceptive health education on campus.

Katrina and Danielle are enrolled have successfully completed NURS 645, an honors nursing research class in which they expanded their ability to analyze nursing research. They are currently working with their honors course mentor, Dr. Gene Harkless, DNSc, APRN, FAANP, CNL, Associate Professor and Chair of the nursing department.

In addition, I am providing content supervision based on my specialty and expertise in sexual and reproductive health issues. I met regularly with the students throughout the spring semester to provide guidance in reviewing the literature and selecting a survey tool. We will continue to meet regularly until the project is completed.

Joyce Cappiello PhD, APRN-FNP
Adjunct Faculty
Department of Nursing

Appendix C
Participant Consent Form



UNIVERSITY of NEW HAMPSHIRE

Dear Participant,

We are conducting a research project to investigate undergraduate students' perspectives and habits regarding contraception. We are inviting approximately 400 students to participate in an online survey where you will be asked a series of questions in order for us to gather necessary data for our senior honors thesis. The survey will take approximately 15 minutes to complete. You should understand that any form of communication over the Internet does carry a minimal risk of loss of confidentiality. Your identities will be kept completely anonymous. If at any time during the survey you feel uncomfortable and wish to no longer participate, you have the option to exit at any point. In the event that you do not want to answer a certain question, you may skip that question. Participation is strictly voluntary.

Your honest answers would be greatly appreciated in this survey. Your responses will be analyzed as a part of a large group and no individual data will be reported. The data will be collected and analyzed by us, the researchers, as well as our faculty advisor, Joyce Cappiello PhD, APRN-FNP, Adjunct Faculty at the University of New Hampshire and Dr. Gene Harkless, DNSc, APRN, FAANP, CNL, our honors course mentor. All results will be presented at the Honors Research Symposium in Spring 2012 as well as at the Undergraduate Research Conference in April 2012. Results may be published as well.

There are no anticipated benefits for the participants responding to this survey. Our anticipated benefits are to increase awareness for health care providers on the attitudes and the beliefs of the undergraduate students' perspectives and habits regarding contraception. These results can hopefully help better address this issue on campus here at the University of New Hampshire.

If you have any questions or concerns regarding this survey, please feel free to contact Danielle Van Eron at dme54@wildcats.unh.edu or Katrina Heisler at krq33@wildcats.unh.edu. If you have any concerns as a subject to our research study, you can contact Dr. Julie Simpson at UNH Research Integrity Services at Julie.simpson@unh.edu.

Sincerely,

Danielle Van Eron and Katrina Heisler

Appendix D
Demographic and Sexual Behavior Questionnaire

- 1- Age
 - a. 17
 - b. 18
 - c. 19
 - d. 20
 - e. 21
 - f. 22
 - g. 23
- 2- Gender
 - a. Male
 - b. Female
 - c. Other
- 3- Grade
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Graduate Level
- 4- Sexual Orientation
 - a. Heterosexual
 - b. Homosexual
 - c. Bisexual
 - d. Other
 - e. No response
- 5- How many sexual partners have you had in your lifetime?
 - a. Free text
- 6- What is your current relationship status?
 - a. Single
 - b. Committed relationship
 - c. Engaged
 - d. Married
 - e. Other
- 7- Age at first sexual intercourse
 - a. Free text
- 8- What is your primary method of contraception?
 - a. Male condoms
 - b. Female condoms
 - c. Oral contraceptives (birth control pills)
 - d. IUD (Intrauterine device)
 - e. Birth control patch
 - f. Vaginal ring
 - g. Spermicides
 - h. Diaphragm

- i. Withdrawal method
 - j. Abstinence
 - k. Every 3 month-hormone shot
 - l. Emergency contraception
- 9- What is your primary reason for using contraception?
- a. Pregnancy prevention
 - b. STD prevention
 - c. Other
 - i. Free text
- 10- Do you use another form of birth control in addition to your primary method during sexual intercourse?
- a. Yes
 - b. No
- 11- If yes, what is your secondary form?
- a. Male condoms
 - b. Female condoms
 - c. Oral contraceptives (birth control pills)
 - d. IUD (Intrauterine device)
 - e. Birth control patch
 - f. Vaginal ring
 - g. Spermicides
 - h. Diaphragm
 - i. Withdrawal method
 - j. Abstinence
 - k. Every 3 month-hormone shot
 - l. Emergency contraception
- 12- Why do you have a secondary method?
- a. Pregnancy prevention
 - b. STD prevention
 - c. Other
 - i. Free text
- 13- How likely is it that you will use a contraceptive method each time you have intercourse over the next year?
- a. 1- Very unlikely
 - b. 2- Unlikely
 - c. 3- Neutral
 - d. 4- Likely
 - e. 5- Very likely

Appendix E
Contraceptive Attitude Scale

Below are several statements about the use of contraceptives (birth control). We are interested in knowing your opinion about each statement. Using the scale below, please indicate your level of agreement or disagreement with each statement. Keep in mind that there are no right or wrong answers. Also remember that we are interested in your personal opinion. Therefore, we want to know how you feel about these statements and not how you think your family or friends might feel about these statements.

1 = Strongly agree; 2 = Agree; 3 = Undecided; 4 = Disagree; 5 = Strongly disagree

1. I believe that it is wrong to use contraceptives. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
2. Contraceptives reduce the sex drive. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
3. Using contraceptives is much more desirable than having an abortion. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
4. Males who use contraceptives seem less masculine than males who do not. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
5. I encourage my friends to use contraceptives. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
6. I would not become sexually involved with a person who did not accept contraceptive responsibility. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
7. Teenagers should not need permission from their parents to get contraceptives. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
8. Contraceptives are not really necessary unless a couple has engaged in intercourse Disagree more than once. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
9. Contraceptives makes sex seem less romantic. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
10. Females who use contraceptives are promiscuous. Disagree 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
11. I would not have intercourse if no contraceptive method was available. Disagree 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree

1 = Strongly agree; 2 = Agree; 3 = Undecided; 4 = Disagree; 5 = Strongly disagree

12. I do not believe that contraceptives actually prevent pregnancy. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
13. Using contraceptives is a way of showing that you care about your partner. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
14. I do not talk about contraception with my friends. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
15. I would feel embarrassed discussing contraception with my friends. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
16. One should use contraceptives regardless of how long one has known their partner. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
17. Contraceptives are difficult to obtain. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
18. Contraceptives can actually make intercourse seem more pleasurable. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
19. I feel that contraception is solely my partner's responsibility. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
20. I feel more relaxed during intercourse if a contraceptive method is used. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
21. I prefer to use contraceptives during intercourse. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
22. In the future, I plan to use contraceptives any time I have intercourse. 1-----2-----3-----4-----5
Disagree Strongly
23. I would practice contraception even if my partner did not want me to. 1-----2-----3-----4-----5
Disagree Strongly
24. It is no trouble to use contraceptives. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
25. Using contraceptives makes a relationship seem too permanent. 1-----2-----3-----4-----5
Disagree Strongly
26. Sex is not fun if a contraceptive is used. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree
27. Contraceptives are worth using, even if the monetary cost is high. 1-----2-----3-----4-----5
Strongly Agree Strongly Disagree

28. Contraceptives encourage promiscuity. 1-----2-----3-----4-----5
 Strongly Agree Strongly Disagree
29. Couples should talk about contraception before having intercourse. 1-----2-----3-----4-----5
 Disagree Strongly Agree Strongly Disagree
30. If I or my partner experienced negative side effects from a contraceptive we method, would use a different method. 1-----2-----3-----4-----5
 Strongly Agree Strongly Disagree
31. Contraceptives make intercourse seem too planned. 1-----2-----3-----4-----5
 Disagree Strongly Agree Strongly Disagree
32. I feel better about myself when I use contraceptives. 1-----2-----3-----4-----5
 Strongly Agree Strongly Disagree

Appendix F
Key for Contraceptive Attitude Scale

1. Negative
2. Negative
3. Positive
4. Negative
5. Positive
6. Positive
7. Positive
8. Negative
9. Negative
10. Negative
11. Positive
12. Negative
13. Positive
14. Negative
15. Negative
16. Positive
17. Negative
18. Positive
19. Negative
20. Positive
21. Positive
22. Positive
23. Positive
24. Positive
25. Negative
26. Negative
27. Positive
28. Negative
29. Positive
30. Positive
31. Negative
32. Positive

Positive statements:

Strongly disagree=1, Strongly agree=5

Negative statements:

Strongly disagree=5, Strongly agree=1