ABSTRACT

CONTRACEPTIVE USE AND ATTITUDES OF MALE COLLEGE STUDENTS

By Lindsey J. Lundgaard

Young adults in the United States have a high rate of unintended pregnancies. Specifically, this is a problem in the college setting, because this population has the highest rates of unintended pregnancies due to lack of contraceptive use and unsafe sexual practices (Bryant, 2009). Unintended pregnancies can lead to poor health outcomes for the parent, as well as the child. Since most college students are sexually active, contraceptive education is extremely important for healthcare providers to address with this population to help decrease unintended pregnancy rates.

The purpose of this study was to examine the contraceptive attitudes and demographic characteristics among a group of male college students and to identify the varying characteristics between three different groups of contraceptive users. The final sample consisted of 53 male college students who were sexually active within the past three months. Participants completed a demographic data/contraceptive use questionnaire and the Contraceptive Attitude Scale (1998) as developed by Dr. Kelly Black. A quantitative, comparative descriptive design was used in this study. After data collection, participants were divided into three groups: (a) uninterrupted contraceptive users, (b) intermittent contraceptive users, and (c) contraceptive nonusers. The contraceptive attitudes and demographic characteristics of each group were compared. Demographic data was also compared with Contraceptive Attitude scores. The Theory of Reasoned Action combined with the Theory of Planned Behavior (Ajzen, 1991) was used as the theoretical framework for this study.

No significant difference in demographic characteristics and contraceptive attitudes for race, age, marital status, class level, religion, and income between the contraceptive groups was found. A majority of the participants had a positive attitude regarding contraceptives. Men in the uninterrupted contraceptive user group had a higher mean contraceptive attitude score than intermittent users and nonusers. The results of this study may help healthcare providers to identify men at risk and provide necessary education to increase contraceptive use and, hopefully, decrease rates of unintended pregnancy.

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by

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CHAPTER I

INTRODUCTION

Young adults in the United States have an alarming high rate of unintended pregnancies and induced abortions (Dodge, Sandfort, Yarber, & de Wit, 2005). According to the National Campaign to Prevent Teen and Unplanned Pregnancy (2001), approximately three million pregnancies each year are unintended. The Centers of Disease Control (CDC) defines unintended pregnancy as one that is mistimed or unwanted (2008). Unintended pregnancies that are continued to term are associated with adverse health outcomes, such as an increased risk of damaging prenatal parental behaviors, including smoking and drinking, as well as negative health and social outcomes for both mother and child (Finer & Henshaw, 2006).

Specifically, the college population has one of the highest rates of unintended pregnancy due to lack of contraceptive use and unsafe sexual practices (Bryant, 2009). The National Campaign to Prevent Teen and Unplanned pregnancy (2001) reports that six out of ten pregnancies in women 20 to 24 years of age are unplanned. This is a huge concern for primary healthcare providers caring for this population of patients.

The incidence of unintended pregnancy and the prevalence of sexually transmitted infections (STIs) have increased since the 1980s. Through the years, choosing a contraceptive option to protect against these adverse sexual health outcomes has become more difficult and complex due to the necessity to consider the risks of both unintended pregnancy and STI transmission (Forste & Morgan, 1998). Unfortunately, no single contraceptive method provides maximum protection against both. To help decrease unintended pregnancy rates, along with the prevalence of STIs,

improving contraceptive use and education for men and women has become an important priority for healthcare providers.

Male partners can greatly improve reproductive health outcomes by using condoms consistently with their sexual partners to prevent STIs and unintended pregnancies (Manlove, Ikramullah, & Terry-Humen, 2008). Recently, there has been increased research and attention focused on male involvement in reproductive health decision making; however, the majority of this research concentrated on the adolescent population (Manlove et al.). Healthcare providers need a better understanding of the contraceptive attitudes of males to help improve pregnancy and as STI prevention efforts (Manlove et al.).

While unintended pregnancy rates are high in all populations, certain demographic groups are more susceptible to unintended pregnancy than others, as illustrated by the results of the 2002 National Survey of Family Growth (Finer & Henshaw, 2006). Finer and Henshaw stated that "the rate of unintended pregnancy in 2001 was substantially above average among woman aged 18 to 24, unmarried (particularly cohabiting) women, low-income women, women who had not completed high school, and minority women" (p. 90). Indentifying which populations are more susceptible to unintended pregnancy can help healthcare providers target contraceptive education and services to these specific groups.

While there have been previous research studies which found that both men and women influence the decision of whether to use contraceptives, the majority of the studies focused only on the responses of women (Forste & Morgan, 1998). Previous research also supports the idea that gender differences truly exist in sexual knowledge, attitudes, and behaviors (Carver, Kittleson, & Lacey, 1990). Compared to what is known

about women's attitudes, there is little known about men's attitudes and characteristics that influence their decision to use contraceptives to prevent pregnancy and to take actions to protect them from STIs. The majority of studies that have been conducted on men and contraception have focused on adolescents aged 15 to 19 years. This study will examine the contraceptive use and attitudes of a sample of male college students ages 18 to 44, as well as identify varying demographic characteristics.

Significance to Advanced Practice Nursing

The differences in contraceptive attitudes between men and women need to be understood by healthcare providers and addressed when planning effective pregnancy and STI prevention in the primary care setting. Having a better understanding of college male's attitudes about contraceptive use and consistency will help improve STI and pregnancy prevention efforts within this population. Involving men in reproductive health is crucial to preventing unintended pregnancies. Studies have shown that when men are provided with information about reproductive health issues, they are more likely to be supportive of their partner's contraceptive choices (Watt, 2001). Identification of men's attitudes about contraception may help healthcare providers eliminate some of the barriers and misconceptions regarding contraceptives. Results of this study may enable healthcare providers to develop more effective methods of increasing contraceptive use and simultaneously decrease unintended pregnancy and STI rates.

Problem Statement

There is an alarmingly high rate of unintended pregnancy in the United States, despite the availability of many forms of contraception (Mosher, Martinez, Chandra,

Abma, & Wilson, 2004). One of the leading causes of unintended pregnancy is lack of contraceptive use and contraceptive failure (Mosher et al*.,* 2004). Since many college students are sexually active, it is important for both male and female students to be educated on contraceptive options. It is the healthcare provider's responsibility to have an adequate understanding of the contraceptive attitudes of this population in order to provide them with the most effective and appropriate contraceptive options. While female contraceptive attitudes have been studied previously, there is a lack of research regarding the contraceptive attitudes of males.

Purpose of the Study

The purpose of this study is to examine contraceptive attitudes and demographic characteristics among a group of male college students and to identify the varying characteristics between three different groups of contraceptive users. A similar study -- Contraceptive Use and Attitudes among Female College Students -- was conducted by Kellie Bryant (2009). At the conclusion of her research, Bryant recommended that her study be replicated using males as a sample. Bryant explains that "male partners may play a significant role in decisions about contraception, therefore it is important to examine their attitudes regarding contraception" (p.16). As in Bryant's study, the participants will be divided into three different groups for analysis based on frequency of contraceptive use. The three groups will include males who are (a) uninterrupted contraceptive users, (b) intermittent contraceptive users, and (c) contraceptive nonusers. The contraceptive attitudes and demographic characteristics will be examined within these three groups to identify commonalities and differences between the groups.

Research Questions

1. What are the contraceptive attitudes and frequency of contraceptive use of male college students?
2. Is there a difference in contraceptive attitudes among uninterrupted contraceptive users, intermittent contraceptive users, and nonusers of contraception?
3. Do contraceptive attitudes vary by demographic characteristics?
4. What are the common characteristics of the three different groups of contraceptive users?

Hypotheses

1. Contraceptive attitudes and frequency of contraceptive use will vary among male college students.
2. Contraceptive attitude scores will be higher among uninterrupted contraceptive users than among intermittent contraceptive users and contraceptive nonusers.
3. Contraceptive attitude scores will be lowest among Black or Hispanic males, less than 24 years of age, and of lower socioeconomic status.
4. Demographic factors associated with uninterrupted contraceptive use are: being in a relationship, 24 years of age or older, from a higher socioeconomic status, and ethnic/racial background of White.

Definition of Terms

Conceptual Definitions

Male college student: A male individual attending a university in order to advance his education and obtain a degree.

Contraceptive attitude: Attitude refers to the individual's positive or negative evaluation of performing a behavior (McEwen & Wills, 2007). In this case, attitude is concerned with the participant's beliefs about the consequences of the behavior of using contraception to prevent pregnancy and/or STI. Attitude can be described as a combination of feelings, beliefs, intentions, and perceptions. Combined with knowledge, these factors analyze the acceptability of performing a behavior (McEwen & Wills). A person's attitude toward a behavior can be used to predict if the specific behavior is performed.

Frequency of contraceptive use: The amount of times that the participant uses contraception while engaging in sexual activity or how habitually the participant uses some form of contraception during sexual activity.

Operational Definitions

Male college student: Any male who has been sexually active in the past 3 months, is enrolled in a Midwestern university, is between 18 and 44 years of age (as in original study), and who presents to the student health center for care.

Contraceptive attitudes: The Contraceptive Attitude Scale (CAS) will be used to measure contraceptive attitudes among college males. It specifically measures the attitudes toward the use of contraceptives in general, as opposed to attitudes toward a specific type of contraceptive (Davis, Yarber, Bauserman, Scheer, & Davis, 1998).

Frequency of contraceptive use: The participants in this study will be divided into three groups by frequency of contraceptive use. This will be based on the participant's answer to the contraceptive use question on the demographic questionnaire. The three different groups will be labeled as (a) uninterrupted contraceptive users, (b) intermittent contraceptive users, and (c) contraceptive nonusers.

Uninterrupted contraceptive user: One who has used some form of contraception during every sexual act in the last 3 months prior to data collection (Bryant, 2009).

Intermittent contraceptive user: One who has used any form of contraception intermittently during the past 3 months of sexual activity (Bryant, 2009).

Contraceptive nonuser: One who has not used any form of contraception during sexual activity in the past 3 months (Bryant, 2009).

Assumptions

1. Participants will be honest when completing the questionnaire.
2. Male college students choosing to participate are able to read and write English.
3. Male college students will vary on demographic characteristics, as well as frequency of contraceptive use.
4. Male college students have knowledge and understanding of contraceptive methods.

Summary

With the high rates of unintended pregnancy in the United States, especially among college students, the need for healthcare providers to present these individuals with contraceptive education and contraceptive options is clear. Understanding the attitudes of this population toward contraception will help providers eliminate some of the barriers and misconceptions regarding contraceptives. This chapter presented an overview of the research problem, significance to nursing, problem statement, purpose of the research, research questions, hypotheses, conceptual definitions, and operational definitions. Chapter II presents a theoretical framework for this study and provides a comprehensive review of the literature and research relevant to this study.

CHAPTER II

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

Introduction

In this chapter, the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB) are reviewed, and the relevance of these theories in examining contraceptive attitudes and frequency of use among male college students is explored. A detailed literature review of research pertaining to unwanted pregnancy and contraceptive practices and attitudes are also provided.

Theoretical Framework

The TRA combined with the TPB (Figure 1) will be used as the conceptual framework for this study. The TRA was introduced by Martin Fishbein and Icek Ajzen, and developed specifically to understand the relationship between attitudes and behavior (Glanz, Rimer, & Lewis, 2002). The TPB was developed as an extension of the TRA in the 1980s by Ajzen. The TPB added perceived behavioral control to the TRA in an effort to account for factors outside of the individual's control that may affect his or her intention and behavior (Glanz et al.). These specific theories were chosen as the framework for this study because they explain the relationships among beliefs, attitudes, intentions, and behavior (Glanz et al.). This study will examine the beliefs and attitudes regarding the intention to use and actual use of contraceptives.

The TRA states that the most important determinant of behavior is intention, which is determined by the individual's attitude toward the behavior and their subjective norm associated with the behavior (Glanz et al., 2002). A person's attitude toward a particular behavior is often determined by the individual's beliefs about the outcomes or

attributes of performing the behavior (Glanz et al.). Essentially, a person who holds strong beliefs that positively valued outcomes will result from performing a certain behavior will have a positive attitude toward the behavior. The other part of intention is subjective norm and is often determined by his or her normative beliefs, which refers to the approval or disproval of performing the behavior by other individuals, such as parents or friends (Glanz et al.). Subjective norm is often seen as the social pressure upon a person to perform or not perform a behavior (McEwen & Wills, 2007). Using the TRA, interventions can be designed to target and change individual beliefs, which in turn, affect attitude and subjective norm and leads to a change in intention and behavior.

The TPB adds to the TRA by adding perceived behavior control to account for factors outside of the individual's control. According to the TPB, perceived control is an independent determinant of behavioral intention along with attitude toward the behavior and subjective norm (Glanz et al., 2002). Perceived control refers to the perceived power of factors that may facilitate or impede the behavior (McEwen & Wills, 2007).

The TRA and TPB have been used to look at attitudes and contraceptive behavior. Using these theories, attitudes toward the behavior reflect beliefs concerning specific consequences following the behavior and favorable or unfavorable evaluation of these consequences (Ajzen, 1991). The theories also suggest that behavior is influenced by important people or groups with whom the individual is motivated to comply. So, individuals are more likely to change high-risk behavior if changing those behaviors is considered desirable by those people or groups that the individual wishes to please.

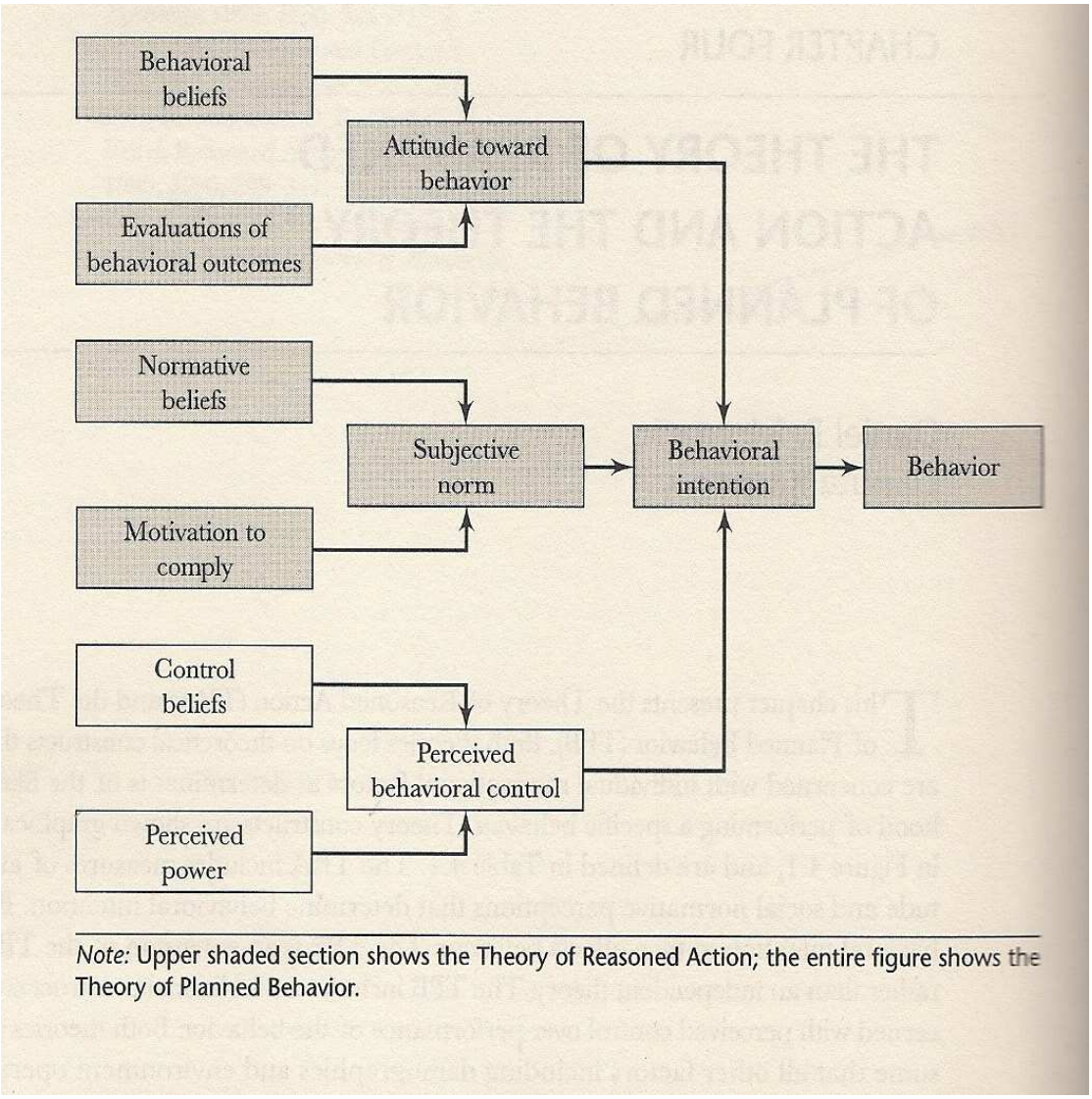

Figure 1. Theory of Reasoned Action and Theory of Planned Behavior (Glanz et al., 2002).

Case Study

M.L. is a 22-year-old college student who is visiting his primary healthcare provider for his annual physical. When the healthcare provider asks him about his social

and sexual behaviors, M.L. states that he frequently attends parties on the weekends and is involved in binge drinking and often ends the night with “casual” sex with a girl he just met. The provider questions M.L. about contraceptive use, and M.L. replies that he feels contraceptives make intercourse seem too planned and less satisfying. M.L. states that he believes it is the woman’s responsibility to “take care of those things and prevent herself from becoming pregnant.” When the healthcare provider suggests carrying condoms in his wallet to use for those occasions, M.L. says that his friends would make fun of him and tease him for going out and “assuming he will get laid.” M.L. states that his friends also engage in frequent sexual behavior and rarely use contraception. They also hope that the woman is protecting herself, but do not take their own precautions to prevent pregnancy or sexually transmitted diseases.

The provider recognizes that M.L. has a negative attitude about contraceptives, and the subjective norms he experiences are also negative toward contraception. Because of those factors, the perceived control is weak; therefore, based on the Theory of Reasoned Action and Theory of Planned Behavior, the provider presumes that M.L. does not have intention of performing the behavior (using contraception). After coming to this conclusion, the healthcare provider takes extra time during the visit to discuss the importance of contraception and educates M.L. on his contraceptive options.

Review of Literature

This section includes a comprehensive review of literature on the topics of unintended pregnancy, contraceptive use, college student’s sexual health, female contraceptive attitudes, and male contraceptive use and attitudes. While there has been

a significant amount of research in these areas, there is a lack in research of contraceptive attitudes and frequency of use among the college age males.

Unintended Pregnancy

Many pregnancies in the United States are unintended. Finer and Henshaw (2007) calculated the rates of unintended pregnancy and related outcomes by combining data on pregnancy intendedness from the 2001 National Survey of Family Growth and birth, abortion, and population data from federal, state, and nongovernmental sources. According to the results of the study, in 2001 49% of the 6.4 million pregnancies in the United States were unintended (Finer & Henshaw). Of the 3.1 million unintended pregnancies, 44% ended in live births, 42% ended in abortions, and 14% in fetal losses (Finer & Henshaw). Unintended pregnancies largely result from failure to use contraceptives or use a contraceptive method incorrectly (Piccinino & Mosher, 1998). Unintended pregnancies can have negative health outcomes and place children and families at a higher risk of social and health problems as compared to planned pregnancies (Bryant, 2009). When unintended pregnancies are carried to term, the child is at increased risk of child abuse and neglect (Piccinino & Mosher).

While unintended pregnancy is high among all populations, certain groups are more at risk. Finer and Henshaw (2007) concluded that unintended pregnancy is even more prevalent among these groups: women in all ethnicities who are age 18 to 24 years, unmarried, low-income, and/or cohabiting; and Black women. Data provided by the National Campaign to Prevent Teen and Unwanted Pregnancy (2001) reports that the proportion of all pregnancies that are unintended is highest among teenagers; in women less than 20 years of age, 82% of the pregnancies are unintended. For women ages 20 to 24 years, the unintended pregnancy rate is 58%. Seventy-two percent of

pregnancies in unmarried women are unintended. Sixty-two percent of pregnancies in women who are less than 100% of poverty are unintended, and 57% of pregnancies are between 100% and 199% of poverty. Unintended pregnancy rates also vary by race. Sixty-nine percent of pregnancies in Non-Hispanic Black women are unintended, whereas, 54% of pregnancies in Hispanic women are unintended. In comparison, in Non-Hispanic White women, 40% of the pregnancies are unintended.

Contraceptive Use

In addition to unintended pregnancy, contraceptive use also varies among women of different ages and racial groups. Piccinino and Mosher (1998) studied trends in contraceptive use in the United States from 1982 to 1995. The researchers used data collected from a sample of women of reproductive age from the 1995 National Survey of Family Growth (NSFG) and compared it with similar data from previous years to examine trends in use. Piccinino and Mosher described that trends in contraceptive use have implications for shifts in pregnancy rates and birthrates. This information can help providers in clinical practice to be aware of the needs for contraceptive methods and services. The researchers found that 64% of women in the U.S. were using some form of contraceptive method in 1995, which had increased from 60% in 1988. The three most reported used methods of contraception included female sterilization, the birth control pill, and the male condom, which were consistent with methods reported in 1982 and 1988. Piccinino and Mosher found that users of the pill decreased from 31% to 27%, while condom use rose from 15% to 20%. The largest decreases in pill use and the largest increases in condom use occurred among never-married women and among Black women younger than 25 years of age. Using these trends in contraception, providers can become aware of how women and their partners control fertility and

whether contraceptive needs of important subpopulations are being met (Piccinino & Mosher).

Mosher et al. (2004) continued this research in 2002 and found that there was an increase in the number of sexually active women since 1995, who were not using birth control. Contraceptive use decreased among women ages 15 to 44 years from 94.6% to 92.6%. The biggest drop in contraceptive use occurred in women ages 25 to 34 years. Mosher et al. believed that the increase in the number of women who do not use contraceptives could cause an additional 1.43 million women to be at risk for an unintended pregnancy. The highest risk groups for unintended pregnancy continued to be Hispanic and Black women (Mosher et al.).

Frost and Darroch (2008) examined a sample of women 18 to 44 years of age to observe factors associated with contraceptive choice and inconsistent use of the pill and condoms. Frost and Darroch found that contraceptive choice was associated with a variety of socioeconomic and partnership characteristics, as well as pregnancy-, method-, and provider-related experiences and attitudes. Inconsistent pill or condom use was associated mainly with partnership and attitudinal factors. Frost and Darroch also reported that women who were not completely satisfied with their method were more likely than others to use their method inconsistently. The researchers concluded that women and their partners need to be provided with a variety of method options, and it is important to identify users who are dissatisfied with their current method of contraception (Frost & Darroch).

College Students' Sexual Health

Due to the higher rate of unintended pregnancies in college-aged individuals, it is important to look at the sexual health of college students. Differences in sexual health

outcomes for college students across national cultures have been observed (Dodge et al., 2005). The researchers conducted a study to assess differences in sexual health behaviors, outcomes, and potential socio-cultural determinants among male college students in the United States and the Netherlands. Findings showed that American men were more likely to report inadequate contraception, HIV/STD infection, and unintended pregnancy than Dutch men. Dodge et al. concluded that religiosity and sexuality education, specifically, were predictive of differences in sexual health outcomes.

Strader and Beaman's (1990) study compared a group of college students and a group of patients at a clinic who had tested positive for an STD. This study compared the two groups' knowledge about AIDS, high risk sexual behaviors, and beliefs about condom use. Focusing on the results of the college students only, Strader and Beaman found that 87% of college students were sexually active, and 60% of them did not use condoms. Beliefs about disease, pregnancy, worry, and normative influences of sexual partner and friends had the strongest impact on college students influencing condom use (Strader & Beaman).

Female Contraceptive Attitudes

As stated earlier, the majority of research on contraception use has concentrated on women. In one specific study, Bryant (2009) examined contraceptive use, attitudes, and demographic characteristics among female college students after dividing the participants into three groups based on their contraceptive use. Bryant found that a positive contraceptive attitude can enhance contraceptive use, and students with higher contraceptive attitude scores were more likely to be uninterrupted contraceptive users. In regards to demographic data, it was found that age played a significant factor in regards to contraception. Younger women reported increased condom use, while older

women were less likely to use any birth control. Bryant failed to find a relationship between contraceptive use and race, age, socioeconomic status, years of education, or religion; however, this may have been due to the homogenous sample of the students at the university. Bryant suggested that this study should be duplicated on another college campus to examine the male partner's perception on contraception, since male partners play a significant role in decisions about contraception. This suggestion was used as the basis for this particular study.

Male Contraceptive Use and Attitudes

The majority of previous research which has been conducted on males has focused on adolescents. One particular study, conducted by Marsiglio (1993) examined how young men's perceptions of masculinity are related to their procreative experiences. The study examined whether young men's social class and race or ethnic background were indirectly related to their procreative experiences. Marsiglio used data previously gathered from the National Survey of Adolescent Males (NSAM) in 1988, which included a sample of 1,880 men 15 to 19 years of age. The data were used to measure attitudes related to paternity and procreative consciousness, procreative responsibility, and previous contraceptive behavior. Demographic data of the participants were also examined. From the results of this study, Marsiglio suggested that although social class factors were associated with some aspects of young men's procreative consciousness, they are largely weak predictors of their perceptions about contraception and responsibility for paternity and contraceptive behavior. According to Marsiglio, men of low socio-economic status viewed paternity as a source of self-esteem and were consequently more likely to say that fathering a child would make them feel like a real man and they would be pleased with an unplanned pregnancy. Marsiglio also found that

Black men and Hispanic men were more likely to have discussed contraception with their partner, and that Black men were more likely to use a contraceptive method. Marsiglio suggests that this is because Black men may feel more comfortable talking about sex and contraception with their partner than White men. This is interesting considering it contradicts the data that show that unintended pregnancy is highest among Black women.

Another study conducted on adolescent males focused on condom use and consistency (Manlove et al., 2008). The researchers examined a sample of sexually experienced male adolescents 15 to 19 years of age from data collected in the 2002 National Survey of Family Growth to identify factors associated with condom use. Manlove et al. reported that more positive attitudes about condoms were associated with a greater probability of condom use and consistency. This study also uncovered an association between predisposing socio-demographic differences and the odds of condom use and consistency. Specifically, Black males have a greater likelihood of condom use and consistency, while Hispanic men have the lowest condom use (Manlove et al.). Other findings in this study included that older age, more frequent sexual experience, and longer sexual relationships were all associated with a reduced likelihood of condom use and consistency of contraceptive use (Manlove et al.).

Watt (2001) wrote an article regarding pregnancy prevention in primary care. This article used the Health Belief Model as a theoretical framework to explain that healthcare providers can help reduce the incidence of teen pregnancy by helping adolescent males become more responsible decision makers and effective and consistent contraceptive users. Watt stated that currently, healthcare providers are consistently missing opportunities to educate adolescent males about pregnancy

prevention, so this population is not adequately educated about their own reproductive health needs. According to Watt, although condom use is increasing among the adolescent population, it is often used inconsistently, and use decreases with age. The researcher also reported that significant proportions of male teenagers, who are Black or Hispanic, still remain unprotected. Watt explained that using the Health Belief Model's emphasis on the individual's attitude and belief system is a key factor in influencing behavior. Watt concluded that it is important to figure out what adolescent males recognize as barriers to using contraception, so providers can design specific interventions to encourage responsible sexual behavior.

While the majority of the research reviewed has focused on contraceptive use in adolescent males, one particular study conducted by Forste and Morgan (1998) looked at how relationships of American men affect contraceptive use and efforts to prevent sexually transmitted diseases. This study used attitudinal and background data previously gathered from the National Survey of Men (NSM). The NSM was conducted in 1991 and 1993 and was used to examine issues related to sexual behavior and condom use among men 20 to 39 years of age. The NSM consisted of data collection, with an initial interview in 1991 and follow up survey in 1993. The survey had a final sample of 1,597 men. Forste and Morgan's study demonstrated that men's attitudes and characteristics were important predictors of contraceptive use to prevent pregnancy and efforts to protect against STI, even after controls for the female partner's characteristics were entered in the analysis. The findings of this study emphasized the need to include men in the interventions aimed at reducing unintended pregnancy and STI transmission. The results of the study by Forste and Morgan implied that men's priorities were important factors in predicting their contraceptive use. Men who were

using contraception for STI prevention were less likely to be practicing contraception to prevent unwanted pregnancy (Forste & Morgan). Forste and Morgan reported that men are more likely to protect themselves against STIs if their perceived effective methods were easy to obtain and did not interfere with sexual pleasure. The researchers also concluded that men's concerns about their partner influenced their contraceptive practice, and men who felt that they shared the responsibility with their partner for the children they fathered were more likely to be protecting themselves against STIs (Forste & Morgan). On the other hand, men who felt that women should be responsible for contraception were less likely than others to be protecting themselves against STIs (Forste & Morgan, 1998). The study supported previous research that the type of sexual relationship influenced both contraceptive use to prevent pregnancy and efforts to prevent STIs. The researchers stated that the more casual the relationship, the greater likelihood of contraceptive use. Married men are least likely to use contraceptives to prevent pregnancy or protect themselves from STIs (Forste & Morgan). Results from this study also illustrated that men from lower socioeconomic groups felt that pregnancy enhances their masculinity more than do men from higher socioeconomic groups. Forste and Morgan reported that race had no effect on contraceptive use to prevent pregnancy or STI protection once the number of sexual partners was controlled for. Educational level showed no significant effect on the likelihood of STI protection, but it did predict contraceptive use (Forste & Morgan). While the religious affiliation of the men did not have a significant effect on contraceptive use, if the partner was other than Protestant or Catholic, the men were more likely to be preventing pregnancy (Forste & Morgan). Findings of this study emphasize the importance of men's attitudes and characteristics in predicting contraceptive use in both marital and non-marital

relationships. These findings also help healthcare providers identify that interventions need to focus on men who engage in risky behavior.

Summary

This chapter discussed the theoretical framework for the study, along with providing an in depth review of the literature. The intention of performing the health-promoting behavior of using contraceptives was explained using the Theory of Reasoned Action along with the Theory of Planned Behaviors. These theories were explained in depth, and it was described how one can predict the behavior of contraceptive use by looking at the attitudes toward the behavior, the subjective norms, and the perceived behavioral control. A case study was provided as an example of the application of this model.

The previous research and literature pertinent to the research topic was presented and explained. In reviewing the preceding literature, it is apparent that the rate of unintended pregnancy is disturbingly high in the United States and especially among specific groups of individuals. The rate of unintended pregnancy in the college-aged population is particularly high, and this group of individuals is known to engage in unsafe sexual practices. Contraceptive attitudes can provide a good indication of intention to use contraceptives during sexual activity, but the majority of research on this topic has focused on women. When reviewing the literature regarding men, the bulk of the research has focused on adolescent males and not the college population. The research has shown that contraceptive use and intention varies by demographic characteristics. The literature review supports the need to further study the

contraceptive attitudes and use among college males and examine their demographic characteristics.

CHAPTER III

METHODOLOGY

The purpose of this study was to examine contraceptive attitudes and demographic characteristics among male college students and to identify the varying characteristics between three different groups of contraceptive users. This chapter includes study design, sample, data collection, and data analysis procedures.

Research Design

The design chosen for this study is a quantitative, comparative descriptive survey design to examine contraceptive attitudes and demographic characteristics of contraceptive use among male college students and to identify the varying characteristics between three different groups of contraceptive users. The purpose of descriptive research is to observe, describe, and document aspects of a situation as it naturally occurs (Polit & Beck, 2008).

The dependent variables identified in this study are contraceptive attitudes and frequency of contraceptive use. The independent variables in this study are the demographic characteristics of the sample, which include: age, race, religion, marital status, level of college education, and yearly household income.

Population, Sample, and Setting

The target population in this study was male college students on the campus of a Midwestern university. This study used a convenience sample drawn from male students who visited the student health center for any health reasons. The sampling inclusion criteria for this study were: any male student enrolled in the university who has

been sexually active in the last 3 months, age 18 to 44 years, and able to read and write English. This age range will be used because it is the same range used in Bryant's (2009) original study.

Once data were collected, participants were divided into three contraceptive groups based on the participant's answer to the contraceptive use question. These three groups were labeled as: (a) uninterrupted contraceptive users, (b) intermittent contraceptive users, and (c) contraceptive nonusers, as done in Bryant's (2009) study.

Data Collection Instruments

Two instruments were used to collect data in this study. The first instrument used in the study was a demographic/contraceptive use questionnaire (Appendix A) designed by the researcher. This tool consisted of questions addressing the participant's age, race, level of education, religion, marital status, yearly income, and one question regarding frequency of contraceptive use, which was used to group the participants.

The second instrument is the Contraceptive Attitude Scale (CAS) (Appendix B), which was developed by Dr. Kelly Black, and is used to measure contraceptive attitudes (Davis et al., 1998). This scale measures general attitudes toward the use of contraceptives and not a specific form of contraception. The instrument contains 32 items; 17 positively worded statements and 15 negatively worded statements, using Likert scale responses. Participants responded to each item by selecting their level of agreement with each statement. Possible responses ranged from 1 (strongly disagree) to 5 (strongly agree). The tool took approximately 10 minutes for the participant to complete (Davis et al.).

In scoring the tool, answers of *strongly disagree* receive a score of 1 and *strongly agree* receive a score of 5 for all positively worded statements. Negatively worded statements are scored in reverse and *strongly disagree* receives a score of 5 and *strongly agree* receives a score of 1. The total score is the sum of all responses. The total score is then divided by the number of questions to obtain a score average. Lower scores indicate more negative attitudes toward contraceptive and higher scores indicate more positive attitudes (Davis et al., 1998). A score average of five on the scale indicates the most positive attitude about contraceptives.

The CAS tool has a test-retest reliability of r (166) = .88, p < .001 (Davis et al, 1998). The validity of the instrument is strongly based on correlated scores with the premarital contraceptive attitude evaluation instrument, r = .72 (Davis et al.). The tool also correlated with the reported frequency of contraceptive use among non-virgin male and female college students, r = .60 (Davis et al.). Written consent to use this tool was obtained from Dr. Kelly Black prior to data collection (Appendix C).

Data Collection Procedures

Prior to conducting this study, approval was obtained from the Institutional Review Board of the university where the study was conducted (Appendix D). Protection of human participants was considered throughout the study. Males presenting to the student health center were approached by a health center staff member and invited to participate in the study. Eligible participants were provided with information regarding the purpose of the study and were assured of total privacy and anonymity in an informational/cover letter (Appendix E) attached to questionnaires. Consent from the participants in the study was implied by the return of the completed questionnaires.

The nursing staff at the student health center was informed of the purpose of the study and the procedure for gathering data prior to the initiation data collection. A script was provided for the staff to follow when distributing the questionnaires. The staff offered the questionnaires at the beginning of the visit to the health center, and the participants were able to fill out the questionnaires in complete privacy before leaving the exam room. The completed questionnaires were placed by the participants into a locked box in the health center lobby. This researcher collected the completed questionnaires monthly until the sample size was sufficient. Data collection took place over a 2-month period and aimed at a sample size of at least 60.

Data Analysis

Upon completion of the data collection, the researcher used the Statistical Package for the Social Sciences (SPSS) to analyze the data. Descriptive statistics were used to describe the demographic characteristics and contraceptive attitude scores of the sample. Once the sample was divided into the three groups of contraceptive users, analysis of variance (ANOVA) was used to compare the mean contraceptive attitude scores between the three groups. Descriptive statistics were also used to describe the demographic characteristics of the different contraceptive groups. Demographic data was also compared with contraceptive attitude scores using ANOVA to examine if certain demographic characteristics were associated with higher or lower contraceptive attitude scores.

Anticipated Limitations

1. Due to convenience sampling, participants who choose to participate in the study may respond differently on the instruments than the students who choose not to participate in the study, therefore results cannot be generalized.
2. Small sample size may occur from not enough males visiting the student health center who are willing to participate in the study. This may prevent accurate interpretation of the data.
3. The sample may be too homogenous and fail to show differences between contraceptive use and attitudes and demographic data.

Summary

This chapter reviewed the research design, sample design, data collection instruments, data collection procedures, data analysis, and limitations. Although there are anticipated limitations in this study, the data generated from this research may provide healthcare providers with baseline knowledge of contraceptive attitudes and frequency of use among male college students. This information may help healthcare providers promote sexual health among male college students.

CHAPTER IV

FINDINGS AND DISCUSSION

The purpose of this study was to examine the contraceptive attitudes and demographic characteristics among a group of male college students and to identify the varying characteristics between three different groups of contraceptive users. A demographic questionnaire, including a question regarding the frequency of contraceptive use in the last 3 months, was used along with the Contraceptive Attitude Scale, as developed by Dr. Kelly Black (Davis et al., 1998).

Data were collected during November and December 2010. A total of 150 surveys were left at the student health center for distribution. Of the 150 surveys, 109 were returned completed. Out of these, 30 respondents had not been sexually active within the past 3 months. These surveys were excluded as discussed in the methodology. This brought the usable surveys down to 79. Only 53 of these could be used for analysis due to missing data.

Demographic Data

The 53-person convenience sample was made up of college males ages 18 to 29 years, who presented to the university student health center for care. The majority of the participants (83%) were ages 18 to 23 years, with 9.4% age 24 to 29 years, and 7.5% of participants not responding. Fifty of the 53 (94.3%) participants were of White, non-Hispanic origin. Two participants (3.8%) identified themselves as Hispanic or Latino, and one (1.9%) answered “other” but failed to specify. Age and race of students are listed in Table 1 and Table 2.

Table 1

Age (n=53)

Age	Frequency	Percentage
18	11	20.8
19	12	22.6
20	5	9.4
21	6	11.3
22	7	13.2
23	3	5.7
24	3	5.7
25	1	1.9
29	1	1.9
Missing data	4	7.5

Table 2

Ethnicity (n=53)

Ethnicity	Frequency	Percentage
American Indian	0	0.0
Asian or Pacific Islander	0	0.0
Black (non-Hispanic)	0	0.0
Hispanic or Latino	2	3.8
White (non-Hispanic)	50	94.3
Other	1	1.9

In regards to the participants' marital status, 28 (52.8%) of the participants were single, while 25 (47.2%) were in a relationship. Eighteen participants (34%) were freshman, 9 (17%) were sophomores, 13 (24.5%) were juniors, and 13 (24.5%) were seniors. Marital status and class level are listed in Tables 3 and 4.

Table 3

Marital Status (n=53)

Marital Status	Frequency	Percentage
Single	28	52.8
In a relationship	25	47.2
Married	0	0.0
Separated	0	0.0
Divorced	0	0.0
Widowed	0	0.0
Living with Partner	0	0.0

Table 4

Class Level (n=53)

Class Level	Frequency	Percentage
Freshman	18	34.0
Sophomore	9	17.0
Junior	13	24.5
Senior	13	24.5

Participants were asked to specify their religion. Twenty-three (43.4%) identified themselves as Catholic, 16 (30.2%) were Protestant, and 3 (5.7%) were Atheist. Eleven participants answered "other" and four (7.5%) identified themselves as Agnostic, while seven (13.2%) others did not specify. Religion of participants is listed in Table 5.

Table 5

Religion (n=53)

Religion	Frequency	Percentage
Catholic	23	43.4
Protestant	16	30.2
Atheist	3	5.7
Agnostic	4	7.5
Other	7	13.2

Participants were also asked about their household's annual income. The majority of the participants (65.4%) identified themselves as earning less than $14,999 per year. Two participants earned $15,000 to $24,999, one participant earned $25,000 to $44,999, and one participant earned $45,000 to $69,999. Eight participants specified their annual income as $70,000 to $99,999, and six participants specified their income as $100,000 and over. One participant did not answer the question. Table 6 lists the breakdown of the participants' specified annual income.

Table 6

Annual Household Income (n=53)

Annual Household Income	Frequency	Percentage
Less than $14,999	34	64.2
$15,000 - $24,999	2	3.8
$25,000 - $44,999	1	1.9
$45,000 - $69,999	1	1.9
$70,000 - $99,999	8	15.1
$100,000 and Over	6	11.3
Missing data	1	1.9

Contraceptive Use

Participants were asked about their use of contraceptives within the past 3 months and then placed in groups based on their answer to this question. Thirty-one participants (58.5%) identified that they had used some form of contraception during every sexual act within the past 3 months, and these participants were placed in the Uninterrupted Contraceptive Users group. Eighteen (34%) identified they had used a form of contraception during sexual activity some of the time within the past 3 months, and they were placed in the Intermittent Contraceptive Users group. Four (7.5%) identified they had not used any form of contraception at all during sexual activity within the past 3 months, and they were placed in the Contraceptive Nonusers group. These groups are identified in Table 7.

Table 7

Contraceptive Use (n=53)

Contraceptive Use Group	Frequency	Percentage
Uninterrupted Contraceptive Users	31	58.5
Intermittent Contraceptive Users	18	34.0
Contraceptive Nonusers	4	7.5

Contraceptive Attitudes

The mean contraceptive attitude score for all study participants was M = 4.13 out of 5, with a standard deviation (SD) = .401, and a range of 3.41 – 4.97. A score of 5 on the Contraceptive Attitude Scale indicates that a participant has a positive attitude about contraceptives. When looking at each individual contraceptive group, there was a significant difference in the mean contraceptive attitude score. The mean contraceptive attitude score for the uninterrupted contraceptive users was M = 4.25 out of 5 with a SD = .41. The mean contraceptive attitude score for the intermittent contraceptive users was M = 4.06, with a SD = .30. The mean contraceptive attitude score for the contraceptive nonusers was M = 3.56, with a SD = .15

Analysis of variance (ANOVA) was used to compare the mean contraceptive attitude scores between the three groups of contraceptive users. A significant difference was found among the groups [F (2,50) = 6.774, $p < .05$]. Refer to Table 8 for complete list. Post hoc analysis revealed that participants who were in the uninterrupted contraceptive user group scored a significantly higher contraceptive attitude score than

the contraceptive nonusers. The intermittent contraceptive users also scored significantly higher than contraceptive nonusers. There was not a significant difference between the uninterrupted contraceptive users and intermittent contraceptive users. The strength of the effect size was measured by partial eta squared and equal to .213, which indicates a large effect.

The findings are similar to the study completed by Bryant (2009) on college females. In her study, the uninterrupted contraceptive users had a mean score M = 4.24, with a SD = .45; the intermittent contraceptive users had a mean score M = 3.98, SD = .47; and the contraceptive nonusers had a mean score, M = 3.8, SD = .55. Her study revealed that contraceptive attitude scores of uninterrupted users were significantly different from both intermittent and contraceptive nonusers (Bryant, 2009).

Table 8

Comparison of Contraceptive Groups and Contraceptive Attitude Scores (n=53)

Group	N	Mean	SD	*F*	*p**
Uninterrupted Contraceptive Users	31	4.25	0.41	6.77	0.002
Intermittent Contraceptive Users	18	4.06	0.30		
Contraceptive Nonusers	4	3.56	0.15		

*accepted *p* value < .05

Analysis of variance (ANOVA) was also used to compare the mean contraceptive attitude scores with age, marital status, class level, religion, and annual income. Race was not analyzed because the majority of participants (94%) were white, so there was not enough data to compare. Age and contraceptive attitude scores were compared

using ANOVA, and no significance was found [$F(1,47) = 0.639$, $p > .05$]. In using ANOVA to compare marital status and contraceptive attitude scores, no significant difference was found [$F(1,51) = 0.91$, $p > .05$]. Next, class level was compared to contraceptive attitude scores using ANOVA, and again, no significance was found [$F(3,49) = .463$, $p > .05$]. Religion was compared with contraceptive attitude scores using ANOVA, and no significant difference was found [$F(3,49) = 2.51$, $p > .05$]. Lastly, when income was compared with attitude scores using ANOVA, a significant difference was found [$F(5,46) = 3.91$, $p < .05$].

Descriptive statistics were used to describe the demographics of the three different contraceptive user groups. The uninterrupted contraceptive users had a mean age of 20.11. Eighteen (58%) of the 31 participants in this group were single, while 13 (42%) were in a relationship. The majority of the participants in this group were White (97%). There were 11 (35%) freshman, 4 (13%) sophomores, 9 (29%) juniors, and 7 (23%) seniors in this group. Ten (32%) of the participants in this group were Protestant, 12 (39%) were Catholic, 3 (10%) were Atheist, and 6 (19%) selected “other.” In looking at household income, 19 (61%) reported their income as less than $14,999, 2 (7%) reported income of $15,000 – 24,999, 1 (3%) reported income of $25,000 - $44,999, 1 (3%) reported income of $45,000 – $69,999, 3 (13%) reported income of $70,000 - $99,999, and 3 (10%) reported income over $100,000. One participant (3%) in this category did not answer the question regarding income. Demographics for this group are listed in Table 9.

Table 9

Demographic Data of Uninterrupted Contraceptive Users (n=31, mean age 20.11 years)

	Frequency	Percentage
Marital Status		
Single	18	58
In a relationship	13	42
Ethnicity		
White	30	97
Hispanic or Latino	0	0
Other	1	3
Class Level		
Freshman	11	35
Sophomore	4	13
Junior	9	29
Senior	7	23
Religion		
Protestant	10	32
Catholic	12	39
Atheist	3	10
Other	6	19
Income		
< 14,999	19	61
15,000 – 24,999	2	7
25,000 – 44,999	1	3
45,000 – 69,999	1	3
70,000 – 99,999	4	13
100,000 or >	3	10
Missing data	1	3

In the intermittent contraceptive user group, the mean age was 19.44. Seven (39%) participants in this group were single, while 11 (61%) were in a relationship. Two participants (11%) were Hispanic or Latino, and 16 (89%) were White. There were 4 (22%) freshman, 4 (22%) sophomores, 4 (22%) juniors, and 6 (34%) seniors in this group. Four (22%) participants in this group were Protestant, 10 (56%) were Catholic and 4 (22%) chose “other” to describe their religion. In regards to income, 13 (72%) reported a household income of less than $14,999, 3 (17%) reported an income of $70,000 - $99,999, and 2 (11%) reported an income of over $100,000. Demographic data is outlined in table 10.

Table 10

Demographic Data of Intermittent Contraceptive Users (n=18, mean age 18 years)

	Frequency	Percentage
Marital Status		
Single	7	39
In a relationship	11	61
Ethnicity		
White	16	89
Hispanic or Latino	2	11
Other	0	0
Class Level		
Freshman	4	22
Sophomore	4	22
Junior	4	22
Senior	6	34
Religion		
Protestant	4	22
Catholic	10	56
Atheist	0	10
Other	4	22
Income		
< 14,999	13	72
15,000 – 24,999	0	0
25,000 – 44,999	0	0
45,000 – 69,999	0	0
70,000 – 99,999	3	17
100,000 or >	2	11
Missing data	0	0

Within the contraceptive nonuser group, the mean age was 19.75. All of the participants were White. Three (75%) of the participants were freshman, and 1 (25%) was a sophomore. Two (50%) of the participants were Protestant, 1 (25%) was Catholic, and 1 (25%) selected “other” in this category. In regards to income, 2 participants (50%) reported an annual income of less than $14,999, 1 participant (25%) reported an income of $70,000 - $99,999, and 1 participant (25%) reported an income of $100,000 and over. See Table 11.

Table 11

Demographic Data of Contraceptive Nonusers (n=4, mean age 19.75 years)

	Frequency	Percentage
Marital Status		
Single	3	75
In a relationship	1	25
Ethnicity		
White	4	100
Hispanic or Latino	0	0
Other	0	0
Class Level		
Freshman	3	75
Sophomore	1	25
Junior	0	0
Senior	0	0
Religion		
Protestant	2	50
Catholic	1	25
Atheist	0	0
Other	1	25
Income		
< 14,999	2	50
15,000 – 24,999	0	0
25,000 – 44,999	0	0
45,000 – 69,999	0	0
70,000 – 99,999	1	25
100,000 or >	1	25
Missing data	0	0

In looking at the demographic data within the three different groups of contraceptive users, the sample is too homogenous and small to notice any significant differences among the groups.

Individual statements and corresponding responses on the Contraceptive Attitude Scale were also examined for a wide range of responses. One specific statement read, “Contraceptives reduce the sex drive.” In response to this item, 24 (45.3%) participants strongly disagreed with this statement, 19 (35.8%) disagreed, 5 (9.4%) were “undecided,” 4 (7.5%) agreed with this statement, and 1 (1.9%) strongly agreed. The responses to this item could indicate a need for education and information on different types of contraception and possible options that may not reduce the sex drive, if it is something that is of concern.

Another statement that was analyzed read, “Males who use contraceptives seem less masculine than males who do not.” The majority of the participants strongly disagreed (62.3%) or disagreed (20.8%) to this statement.

Another statement in the scale read, “I would not become sexually involved with a person who did not accept contraceptive responsibility,” also had a variety of responses. Five (9.4%) participants disagreed with this statement, 11 (20.8%) were undecided, 19 (35.8%) agreed, and 18 (34%) strongly agreed.

“Contraceptives make sex seem less romantic” was another item that had a variety of responses. Nineteen participants (35.8%) strongly disagreed with this statement, while 18 (34%) disagreed, 6 (11.3%) were undecided, 9 (17%) agreed, and 1 (1.9%) strongly agreed.

One statement on the scale read, “I do not believe that contraceptives actually prevent pregnancy.” Two participants (3.8%) were undecided regarding this and one participant (1.9%) agreed.

Another statement on the scale which read, “Contraceptives can actually make intercourse seem more pleasurable,” divided the participants in their responses. Ten participants (18.9%) strongly disagreed with this statement, while 14 (26.4%) disagreed, 12 (22.6%) were undecided, 13 (24.5%) agreed, and 4 (7.5%) strongly agreed.

The last item with diverse responses read, “Contraceptives encourage promiscuity.” Fourteen (26.4%) strongly disagreed with this statement, 21 (39.6%) disagreed, 11 (20.8%) were undecided, and 7 (13.2%) agreed.

In examining each of these previous statements individually, the researcher identified areas which could benefit from further research. The recommendations will be discussed in depth in Chapter V.

Summary

Demographic data and contraceptive use and attitudes were examined among a group of 53 male students on a Midwestern college campus. The majority of the men used a form of contraception at least some of the time (92.5%). When separated into three contraceptive groups, contraceptive attitudes and demographic data were examined. The men who used contraceptives during every sexual act within the past 3 months had a higher contraceptive attitude score than those who only used contraceptives intermittently or not at all. This finding was similar to the study conducted by Bryant (2009) using college females.

The demographic data was analyzed with contraceptive attitude scores, resulting in no significant results. The demographics were also examined within the three groups of contraceptive users; however, the sample was too homogenous and small to notice any differences among the groups.

CHAPTER V

SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to examine the contraceptive attitudes and demographic characteristics among a group of male college students and identify varying characteristics between three different groups of contraceptive users. This study used a convenience sample of 53 male college students 18 to 29 years of age, who presented to the student health center at a Midwestern university for care. Students volunteered for the study after being provided with an informational letter concerning informed consent and the purpose of the study. The staff at the student health center administered the survey, which consisted of questions regarding demographic information, history of contraceptive use, and the Contraceptive Attitude Scale, as developed by Dr. Kelly Black (Davis et al., 1998). Data were analyzed using descriptive and inferential statistics to examine the demographic data, contraceptive use, and contraceptive attitudes of the participants. The participants were grouped according to their contraceptive use to examine the contraceptive attitudes of the groups, as well as the demographic characteristics. The three groups consisted of (a) uninterrupted contraceptive users, (b) intermittent contraceptive users, and (c) contraceptive nonusers.

This study used the Theory of Reasoned Action (TRA) along with the Theory of Planned Behavior (TPB) as the framework. The TRA describes that the individual's attitude toward the behavior helps determine the intention of performing the behavior (Glanz et al., 2002). The results of the study correspond with that theory and showed that the participants with the higher contraceptive attitude scores were also the ones

who used contraceptives on a regular basis. In using that information, it can be assumed that if attitudes regarding contraception can be improved by advanced practice nurses providing adequate contraceptive education, individuals will be more likely to use contraceptives in the future.

The TPB adds the element of perceived behavior control, which accounts for factors outside of the individual's control. In this study, factors outside the individual's control include some of their demographic characteristics. This study, however, did not find a link between certain demographic characteristics and contraceptive attitude scores. There are other variables that may influence a person's perceived behavior control that were not looked at and would need to be researched in a further study.

Conclusions

There are some conclusions from analyzing the data that can be made.

1. The participants in this study used a form of contraception at least some of the time. Fifty-eight percent of the participants used a form of contraception during every sexual act, and 34% used a form of contraception some of the time during sexual activity in the past 3 months.
2. The participants in this study had a positive attitude about contraceptives. The mean contraceptive attitude score was 4.13 out of 5.0. A score of 5 indicates a positive attitude towards contraceptives.
3. College males who are uninterrupted contraceptive users have a more positive attitude toward contraceptives than intermittent contraceptive users and contraceptive nonusers. The mean contraceptive attitude score of uninterrupted contraceptive users was 4.25, while the mean score for

intermittent contraceptive users was 4.06, and the mean score for contraceptive nonusers was 3.56.

4. The data and analysis did not show any significant difference between demographic characteristics and contraceptive attitude scores except for yearly income.
5. The data was too homogenous to show any significant difference in the demographic characteristics between the three different groups of contraceptive users.

Limitations of the Study

Many factors influenced the generalizability of the study. A convenience sample was used, which may not accurately represent the target population. The sample was homogenous, as the majority of the participants were between the ages of 18 and 23 years, White, and single (or single, but in a relationship). The sample did not show differences between the contraceptive use and attitudes when comparing demographic characteristics except when analyzing yearly income.

While the results did show a statistically significant difference when comparing income and contraceptive attitude scores, the researcher believes these numbers may be inaccurate because there could have been differences in how participants chose their response to this question. Some participants could have been identifying their own personal annual income, while others could have been identifying their parent's annual income. While no significant difference was found when comparing religion and contraceptive attitude scores, this could have been due to the religion choices provided in the demographic tool. Many participants wrote in "non-denominational" in the "other"

category. If religion was compared with contraceptive attitude scores using different choices, the results could have been different. The different contraceptive groups also failed to demonstrate any demographic differences because the groups were so demographically similar.

The sample size was limited due to missing data. Some participants skipped some of the questions in the Contraceptive Attitude Scale, which resulted in an inability to determine a total score. A reason for one missing response could have been due to a printing error on the Contraceptive Attitude Scale. One item on the scale failed to have a line next to the statement for the participant to mark their response. The sample size was also limited due to a requirement that the participant had to be sexually active in the last 3 months. Thirty surveys were returned where the participant reported they were not sexually active.

Another limitation of this study is that it is possible that participants were not honest when completing the survey. The participants could have been answering the questions based on how they feel they should answer the questions. The participants also could have been confused on the definition of contraception and might have thought that wearing a condom was the only thing that constituted contraceptive use. This is assumed because one specific participant selected that he hasn't used contraceptives in the past 3 months, but then wrote on the side that his girlfriend is on "the pill." The researcher should have defined contraception for the participants in the tool.

Implications for Advanced Nursing Practice

Although there have been studies done on the contraceptive use and attitudes among women, there have been very few studies done on the male population, making

this study significant to advanced nursing practice. The results of this study demonstrate that college males differ in their use of contraception, as well as their attitudes toward contraception. Because of this finding, it is important that advanced practice nurses need to identify individuals at high risk for unintended pregnancy and implement specific interventions that address their hesitancy to use contraceptives. Advanced practice nurses should help assist men to make an informed decision about contraceptive use by addressing their concerns and clearing up misconceptions. Advance practice nurses need to include men in contraceptive education, because men play an important role in decisions about contraception. More accurate information regarding contraception can influence their attitudes regarding use, and a better attitude toward contraception should mean they are more likely to use contraceptives.

Recommendations for Further Study

After completing this study and analyzing the results, there is a need for follow up and expanded research on this topic. To enhance this study, it should be conducted at a larger, more diverse college campus or across multiple campuses to create a more diverse sample. Having a diverse sample will help identify if demographic differences play a role in contraceptive use and attitudes. To enhance the validity of the results, a larger sample is needed. To gather more information about contraceptive attitudes, the study could be expanded to include college males who are not sexually active. This would create a fourth contraceptive group to examine if there are differences in contraceptive attitudes in sexually active men versus non-sexually active men.

It is known that both men and women have a say in the use of contraception during sexual activity (Forste & Morgan, 1998), but further research should examine the

role men play in decisions regarding contraceptive use. Many contraceptive options are designed just for women, so how much do women include men in their choice for contraception? To explore that topic further, a study should be conducted which examines male's knowledge of contraception and the various forms of contraception.

Since gender differences are bound to exist between males and females regarding contraceptive attitudes, a similar study should be conducted which includes the attitudes of males and females and note the differences between the two. The differences in some of the specific items in the Contraceptive Attitude Scale would especially be interesting to note. Specifically, the statement, "Males who use contraceptives seem less masculine than males who do not." Also the statements, "I would not become sexually involved with a person who did not accept contraceptive responsibility," and "Contraceptives make sex seem less romantic," would be other items that would be interesting to examine.

The statement in the scale, "Contraceptives encourage promiscuity," produced a variety of responses by the participants. This statement could have been influenced by religious background, so this could be examined further in another study.

In order to provide better care to the college-age population regarding the prevention of unwanted pregnancy and the use of contraception, additional research is needed. The more evidence-based research findings that advanced practice nurses have regarding contraceptive use and attitudes of college students, the more prepared they will be to provide adequate education and interventions to prevent unwanted pregnancies.

APPENDIX A

Contraceptive Use/Demographic Information

Please choose the statement that accurately reflects your contraceptive use in the past three months.

1. In the past 3 months, I have used some form of contraception during every sexual act. _____
2. In the past 3 months, I have sometimes used a form of contraception during sexual activity.____
3. In the past 3 months, I have not used any form of contraception at all during sexual activity. ____
4. In the past 3 months, I have not been sexually active._____

IF YOU CHECKED #4, STOP, AND DO NOT FILL OUT THE REST OF THE SURVEY.

Are you currently on medications for anxiety, stress, or mood disorders?_____

IF YOU ANSWERED YES, STOP, AND DO NOT FILL OUT THE REST OF THE SURVEY.
Age_____

Please specify your current marital status (check only one).
1. Single _____
2. In a relationship _____
3. Married _____
4. Separated _____
5. Divorced _____
6. Widowed _____
7. Living with Partner _____

Which best represents your racial and ethnic heritage (check only one)?
1. American Indian _____
2. Asian or Pacific Islander _____
3. Black (non-Hispanic) _____
4. Hispanic or Latino _____
5. White (non-Hispanic) _____
6. Other (please specify _____

Please specify your class level (check only one).
1. Freshman _____
2. Sophomore _____
3. Junior _____
4. Senior _____
5. Graduate _____
6. Other (please specify) __ _____

Please specify your religion (check only one).
1. Protestant _____
2. Catholic _____
3. Jewish _____
4. Islam _____
5. Atheist _____
6. Other (please specify) _ _____

Please specify your household's annual income.
1. Less than $14,999 _____
2. $15,000 - $24,999 _____
3. $25,000 - $44,999 _____
4. $45,000 - $69,999 _____
5. $70,000 – $99,999 _____
6. $100,000 & Over _____

APPENDIX B

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.

SA = Strongly agree; A = Agree; U = Undecided; D = Disagree; SD = Strongly disagree

1. I believe that it is wrong to use contraceptives. _____
2. Contraceptives reduce the sex drive._____
3. Using contraceptives is much more desirable than having an abortion._____
4. Males who use contraceptives seem less masculine than males who do not._____
5. I encourage my friends to use contraceptives._____
6. I would not become sexually involved with a person who did not accept contraceptive responsibility._____
7. Teenagers should not need permission from their parents to get contraceptives.__ _____
8. Contraceptives are not really necessary unless a couple has engaged in intercourse more than once._____
9. Contraceptives make sex seem less romantic._____
10. Females who use contraceptives are promiscuous._____
11. I would not have intercourse if no contraceptive method was available._____
12. I do not believe that contraceptives actually prevent pregnancy._____
13. Using contraceptives is a way of showing that you care about your partner._____
14. I do not talk about contraception with my friends._____
15. I would feel embarrassed discussing contraception with my friends. _____
16. One should use contraceptives regardless of how long one has known his/her sexual partner. _____
17. Contraceptives are difficult to obtain._____
18. Contraceptives can actually make intercourse seem more pleasurable._____
19. I feel that contraception is solely my partner's responsibility._____
20. I feel more relaxed during intercourse if a contraceptive method is used._____
21. I prefer to use contraceptives during intercourse._____
22. In the future, I plan to use contraceptives any time I have intercourse._____
23. I would practice contraception even if my partner did not want me to._____
24. It is no trouble to use contraceptives._____
25. Using contraceptives makes a relationship seem too permanent._____
26. Sex is not fun if a contraceptive is used._____
27. Contraceptives are worth using, even if the monetary cost is high.__ _____
28. Contraceptives encourage promiscuity._____
29. Couples should talk about contraception before having intercourse._____
30. If I or my partner experienced negative side effects from a contraceptive method, we would use a different method._____
31. Contraceptives make intercourse seem too planned._____
32. I feel better about myself when I use contraceptives. _____

APPENDIX C

Permission to use Contraceptive Attitude Scale

UNIVERSITY OF WASHINGTON

WASHINGTON NATIONAL PRIMATE RESEARCH CENTER
Built and supported by the National Institutes of Health
David M. Anderson, D.V.M., Director

1-421 Health Sciences Center, Box 357330
Telephone: (206) 543-1430
Fax: 206-616-6771

September 29, 2009

To whom it may concern:

Lindsey Lundgaard, of the University of Wisconsin-Oshkosh has my permission to use the Contraceptive Attitude Scale in her research project.

Thank you,

Kelly J. Black

Kelly J. Black, Ph.D.

APPENDIX D

UW Oshkosh IRB Approval

October 16, 2009

Ms. Lindsey Lundgaard
W5985 Sweet William Drive
Appleton, WI 54915

Dear Ms. Lundgaard:

On behalf of the UW Oshkosh Institutional Review Board for Protection of Human Participants (IRB), I am pleased to inform you that your application has been approved for the following research: Contraceptive Use and Attitudes of Male College Students.

Your research has been categorized as EXEMPT. This means you will not be required to obtain signed consent. However, unless your research involves **only** the collection or study of existing data, documents, or records, you must provide each participant with a summary of your research that contains all of the elements of an Informed Consent document, as described in the IRB application material. Permitting the participant, or parent/legal representative, to make a fully informed decision to participate in a research activity avoids potentially inequitable or coercive conditions of human participation and assures the voluntary nature of participant involvement.

Please note that it is the principal investigator's responsibility to promptly report to the IRB Committee any changes in the research project, whether these changes occur prior to undertaking, or during the research. In addition, if harm or discomfort to anyone becomes apparent during the research, the principal investigator must contact the IRB Committee Chairperson. Harm or discomfort includes, but is not limited to, adverse reactions to psychology experiments, biologics, radioisotopes, labeled drugs, or to medical or other devices used. Please contact me if you have any questions (PH# 920/424-7172 or e-mail: rauscher@uwosh.edu).

Sincerely,

Dr. Frances Rauscher
IRB Chair

cc: Dr. Judith Westphal
1667

APPENDIX E

Informational/Cover Letter

Dear Participant:

You are being asked to participate in a research study on contraceptive attitudes and use among male college students. This study is being done as part of the requirement for me to earn my Masters of Science Degree in Nursing. The data that will be obtained from the study will help health care providers have a better understanding of contraceptive behaviors in college-aged men.

As part of this study, you will be asked to complete two surveys that will take about 10-15 minutes of your time. Your participation in this study is completely voluntary. You do not have to participate and can stop at any time. If you refuse to participate now, it will have no effect on any regular services or benefits available to you at this clinic.

I do not anticipate that the study will present any medical or social risk to you, other than the inconvenience of the extra time required for you to answer the survey. Participation in this study may not benefit you directly.

All of the information and data collected will be kept confidential. DO NOT include your name or any identifying information on the surveys. No information in the study will identify you personally and it cannot be traced back to you.

Once the survey is completed, please place it in the locked box in the lobby. If you have any complaints about your treatment as a participant in the study, please call or write:

Chair, Institutional Review Board
c/o Grants Office- UW Oshkosh
800 Algoma Boulevard
Oshkosh, WI 54901
(920) 424-1415

If you fill out and return the questionnaires, it is assumed that you have read and understood this information and you consent to participate in this study. Thank you for taking the time to consider participation in my study. If you have questions, please contact me at the e-mail address or phone number listed below.

Sincerely,

Lindsey Lundgaard, BSN, RN
Graduate Student
lundgl09@uwosh.edu
920-246-1939

REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179-211.

Bryant, K. (2009, Winter). Contraceptive use and attitudes among female college students. *The ABNF Journal*, *20*(1), 12-16.

Carver, V. C., Kittleson, M. J., & Lacey, E. P. (1990). Adolescent pregnancy: A reason to examine gender differences in sexual knowledge, attitudes, and behavior. *Health Values*, *14*(6), 24-29.

Centers for Disease Control and Prevention (2008). *Unintended pregnancy prevention*. Retrieved from http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/

Davis, C., Yarber, W., Bauserman,R., Scheer, G., & Davis, S. (1998). *Handbook of sexuality related measures*. Thousand Oaks, CA: Sage Publishers.

Dodge, B., Sandfort,T., Yarber, W., & de Wit, J. (2005). Sexual health among male college students in the United States and the Netherlands. *American Journal of Health Behavior*, *29*(2), 172-182.

Finer, L., & Henshaw, S. (2006, June). Disparities in rates of unintended pregnancy in the United States, 1994 and 2001*. Perspectives of Sexual and Reproductive Health*, *38*(2), 90-96.

Forste, R., & Morgan, J. (1998). How relationships of U.S. men affect contraceptive use and efforts to prevent sexually transmitted diseases. *Family Planning Perspectives, 30*(2), 56-62*.*

Frost, J., & Darroch, E. (2008). Factors associated with contraceptive choice and inconsistent method use, United States, 2004. *Perspectives on Sexual and Reproductive Health*, *40*(2), 94-104.

Glanz, K., Rimer, B. K., & Lewis, F. M. (2002). *Health behavior and health education: Theory, research, and practice*. San Francisco, CA: Jossey-Bass.

Manlove, J., Ikramullah, E., & Terry-Humen, E. (2008). Condom use and consistency among male adolescents in the United States. *Journal of Adolescent Health 43*(4), 325-333.

Marsiglio, W. (1993). Adolescent males' orientation toward paternity and contraception. *Family Planning Perspectives*, *25*(1). Retrieved June 9, 2009 from EBSCOhost database.

McEwen, M., & Wills, E.M. (2007). *Theoretical basis for nursing.* (2nd ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Mosher, W., Martinez, G., Chandra, A., Abma, J., & Wilson, S. (2004). *Use of contraception and use of family planning services in the United States: 1982-2002. Advance data from vital and health statistics*; No. 350. Retrieved from http://www.cdc.gov/nchs/data/ad/ad350.pdf .

Piccinino, L., & Mosher, W. (1998) Trends in contraceptive use in the United States 1982-1995. *Family Planning Perspectives*, *30*(1). Retrieved July 25, 2009 from EBSCOhost database.

Polit, D., & Beck, C. (2008). *Nursing research: Generating and assessing evidence for nursing practice*. (8th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Strader, M., & Beaman, L. (1990). Comparison of selected college students' and sexually transmitted disease clinic patients' knowledge about AIDS, risk behaviors and beliefs about condom use. *Journal of Advanced Nursing*, *16*(5), 584-590.

The National Campaign to Prevent Teen and Unplanned Pregnancy (2001). *Unplanned pregnancy and birth data*. Retrieved from http://www.thenationalcampaign.org/nationaldata/pdf/Proportion-Unplanned-Pregnancies-United-States.pdf

Watt, L.D. (2001) Pregnancy prevention in primary care for adolescent males. *Journal of Pediatric Health Care*, *15*(5), 223-228.