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DIFFERENCES IN SEXUAL KNOWLEDGE OF STUDENTS FROM
CHRISTIAN AND NON-CHRISTIAN COLLEGES

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

by
Maren Elizabeth Oslund

June 2006


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ABSTRACT

The purpose of this research was to examine the differences in sexual knowledge and activity between students at Christian and secular colleges. This is an important issue because increased sexual knowledge has been found by previous research to correlate with safer sexual behavior and delayed sexual intercourse. The students completed a 49-item questionnaire, consisting of questions combined from the 24-item version of the Miller Fisk Sexual Knowledge Survey and the Kinsey Institute/Roper Organization National Sex Knowledge Test. The data were examined using t-tests, cross tabulations, chi-squares and Pearson correlation tests. This study shows the importance of giving thorough sexual education to Christian individuals. It also informs sex educators, parents and religious organizations of what information Christian college students are currently lacking.

ACKNOWLEDGMENTS

This project would not have been completed without the extensive assistance and support from many professors, colleagues, family members and friends.

First and foremost, I must express gratitude to my committee members. To my committee chairperson, Dr. Rosemary McCaslin, thank you for your time, guidance and patience, especially during my frantic, stressed-out moments. To Dr. Nancy Mary, thank you for your encouragement and for stretching me academically. To Dr. Ray Liles, thank you for not only your last minute assistance, but also for being an advocate and source of empowerment. Finally, to my mentor, Dr. Kaye Cook, your long-term support and direction has been one of the key influences in my social work education and career.

To my research assistant, Ryan McBain, thank you for your assistance with the revisions, legwork and data entry. I appreciated your assistance greatly.

To T.J. Oslund, thank you for encouraging me and for challenging me to be better. Thank you for putting your life goals on hold to get me through this endeavor. I owe you hours of attention and cooking.

To all six of my parents, thank you for supporting and guiding me. I am where I am today because of you.

To Gretchen Hill, thank you for helping me see the humor in everything. Most importantly, thank you for being understanding of my absent friendship for the past two years.

Finally, to all of my friends and colleagues, thank you for your daily help and encouragement. Whether you helped by reading version five of a chapter, watched Elliot while I wrote or listened to my complaints or doubts at being able to complete this, I appreciate your patience and your commitment.

DEDICATION

I would like to dedicate this research to my parents, Mike & Mary. Since I was a child, they have set a standard of excellence and integrity for our family, whether it be through education, career or relationships. They have given me more than just support. They have enabled me to live a life in which I can impact the lives of others. They have created a legacy that I hope to pass on to my own children.

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CHAPTER ONE

INTRODUCTION

Thorough sexual knowledge and its assimilation with one's faith can be instrumental for Christians in avoiding unplanned pregnancies and sexually transmitted diseases, as well as encouraging a satisfying sex life. Sex education and the sexual activities of Christian youth are being discussed at great length today among parents, clergy, educators and clinicians. It appears that Christians, in their hopes of living sexually *moral* lives, are lacking the basic knowledge that would enable them to lead sexually *healthy* lives, ones that are not plagued by sexually transmitted diseases, unplanned pregnancies or sexual dysfunctions, both physical and mental in nature.

Problem Statement

People who identify themselves as protestant or evangelical Christians tend to have conservative views on sex and sex education. A recent study done by National Public Radio, the Kaiser Foundation and John F. Kennedy School of Government (2003), found that the vast majority of evangelical protestants (eighty-one percent) believe

it is morally wrong to have sex outside of a marriage relationship and seventy-eight percent believe that sex outside of marriage will have harmful physiological and physical effects. They are three times more likely than non-evangelicals to believe that sex education should not be taught in schools; and if it is taught, they tend to be in favor of abstinence-only programs (NPR/Kaiser/Kennedy, 2003).

A lack of formal sexual education, or a limited abstinence-based sex education, may be contributing to a general lack of sexual knowledge among Christians. The Kinsey Institute New Report on Sex (Reinisch & Beasley, 1990), found that only forty-two percent of Protestants, compared to sixty percent of those who held no religious affiliation, passed the Kinsey Institute/ Roper Organization National Sex Knowledge Test, which examined American's knowledge of sexual issues, including the prevention of sexually transmitted diseases and unplanned pregnancies.

Many parents are concerned that their children would be more likely to be sexually active if they had more sexual knowledge. Research has found that while there is little difference in the amount or frequency of sexual

behavior in groups with differing levels of sex education, adolescents with more extensive sex education are less likely to engage in high risk sexual behaviors, by increasing condom usage and delaying initial sexual intercourse (Kirby, 2002; Guzman, Schlehofer-Sutton, Villanueva, Dello Stritto, Casad, & Feria, 2003; Clapp, Leverton Helbert, & Zizak, 2003). Lack of sexual knowledge and confusion about how sexuality relates to the Christian faith, has also been found to correlate with sexual dysfunctions, such as frigidity and erectile disorders (Slowinski, 1994, 2001).

Interestingly, the consequences of a lack of sexual knowledge, about sexually transmitted diseases, unplanned pregnancies and sexual dysfunctions, has a significant impact on an individual's life. Thus it is crucial that people in helping professions (social workers, psychologists, clergy members, etc.) find better ways of educating their clients about sex, recognizing the need for education that is both thorough and faith-integrated. Moreover, parents need to be educated about the importance of their conversations about sex with their children (Somers & Surmann, 2004; Guzman et al., 2003). It is also important that Christian parents are assisted

in their own sexuality and faith integration so as to provide better examples of what it means to have a healthy sex life that fits within the matrix of Christian morality.

The issue of sex education is a hot topic in the Christian church today and among Christian politicians, including the American presidency (Whitehead, Wilcox, Rostosky, Randall, & Wright, 2001). Christian parents are definitive about the type of sex education they want their children to receive from their schools. Their push for abstinence-based education has impacted the funding that these programs receive. Federal funds are available for abstinence-based education and President George W. Bush has called for more funding for these programs (NPR/Kaiser/Kennedy, 2003).

Many Christian clinicians and clergy are seeking more knowledge on how to better assist with the sexually-related dilemmas of their Christian clients (Slowinski, 2001; Conklin, 2001). Thus, further examination is needed to understand the necessity of providing sexual information. In addition, further examination is needed on the impact of withholding this

information, and in what format it should be communicated so as to integrate it into a faith-based model.

It is essential to evaluate whether or not Christians' current methods of disseminating information to their youth are effective or inefficacious. To determine the degree of efficacy, it is important to first identify what Christian youth currently know and what is lacking from their knowledge base. Further, if there is a lack of knowledge, is it impacting their sexual and/or reproductive health? This study hopes to determine whether there are gaps in sexual knowledge among Christian college students.

Purpose of Study

The purpose of this study was to examine the difference in sexual knowledge between students from a protestant Christian college and secular colleges. This particular age group was chosen because of the wide variety of sexual issues that college students have faced, or will be facing in the years following college. Specifically, individuals below the age of 25 were chosen, based on the mean age of loss of virginity, rates

of STD transmission, unplanned pregnancies, and entrance into long-term relationships including marriage.

The Alan Guttmacher Institute (2002) released a report on sexual and reproductive health, which clearly showed the prevalence of the aforementioned sexual issues in college-aged youth. By the time most students enter college, seventy-five percent have had sexual intercourse, with men experiencing first intercourse on average by age 16.9, and women by age 17.4. However, another report found only thirty-one percent of religious adolescents had engaged in sexual intercourse by 12th grade (Clapp et al., 2003). This demonstrates a distinctive difference in sexual activity that the researcher would like to investigate further.

Not only are college youth sexually active, they also are challenged by very high rates of sexually transmitted diseases. American youth ages 15-24 represented forty-eight percent of the new cases of sexually transmitted diseases in 2000. Specifically, this age group represented seventy-four percent of new cases of chlamydia, sixty percent of new cases of gonorrhea and fifty percent of new HIV transmissions (Weinstock & Cates, 2004).

College-aged youth also contend with very high unplanned pregnancy rates. Approximately ten percent (almost 1 million) of women aged 15-19 become pregnant, seventy-eight percent of which were unplanned (Alan Guttmacher, 1999). College-aged youth are also likely to enter marriage during their college career or shortly thereafter. Approximately twenty-five percent of women and twenty percent of men get married in their early 20's and forty-eight percent of women and forty-two percent of men get married by their late 20's. Thus, college students are dealing with a wide variety of sexual issues that require a broad sexual knowledge to navigate and/or prevent.

Two sexual knowledge questionnaires were combined to measure students' current sexual understanding among participants from a Christian college and two non-Christian colleges. Questions were pooled from The Kinsey Institute/Roper Organization National Sex Knowledge Test (Reinisch & Beasley, 1990) and from a 24-item version of the Miler-Fisk Sexual Knowledge Questionnaire formatted by Gough (1974). Two additional questions were added about oral sex and sexually transmitted diseases. The subjects were also surveyed on

their source of sex education, their religiosity, their sexual behavior and any sexual problems they may have encountered.

Significance of Research Project

The need is great for better understanding of what Christian college students know about sex, where they attain that knowledge and how is it impacting their lives. This study fits into the assessment segment of the generalist intervention process, because it measures current levels of knowledge and activity. Due to the lack of research on Christian youth, this study seeks to fill the gap in current understanding of these youth's sexual understanding and activities.

By gauging college students' current understanding, educators will have a clearer direction as to what areas need to be addressed with Christian youth. Similarly, social workers and psychologists will be able to better meet the needs of their clients by being aware of their Christian clients' knowledge base and issues they may be facing. Furthermore, clergy members will be able to better perceive their church members need for integration of sexuality and faith. Finally, parents will be able to

identify the needs of their children, as well as their own role in educating them about sexual issues.

Hypothesis

The research hypothesized three concurrent issues pertaining to students' sexual knowledge and activity. First, there will be a significantly lower level of sexual knowledge from students at the Christian college compared to the students from the non-Christian schools. Second, there will be significantly lower rates of sexual intercourse among students at the Christian college, due to religious convictions. Finally, students from the Christian school would have engaged in more high-risk sexual activity, seen through their use of (or lack thereof) contraceptive devices. Though lack of sexual knowledge could also be leading to sexual dysfunction, as discussed above, the short-term limits of this study will only allow for a focus on the three issues described above.

CHAPTER TWO
LITERATURE REVIEW

Introduction

The current trends in sexuality show that the majority of adolescents, and thus college-aged youth, have been sexually active; and many of them are dealing with the consequences of that activity, including sexually transmitted diseases and unplanned pregnancies. Research shows that sex education, whether from schools, parents or religious institutions, is correlated with a delay in the inauguration of sexual intercourse. However, it is also known that sexually active religious teens use contraception less frequently, which may be related to their sexual activity not being planned. Thus, even if Christians choose to not be sexually active outside of marriage, it is important that they are still educated about the importance of contraception.

Christians in the United States are often divided into three major subcategories: Evangelical Protestant, Mainline Protestant, and Catholic (Sheridan, Wilmer, & Atcheson, 1994). These traditions show great diversity of thought regarding sexuality and each holds a place on a

wide continuum of openness. Though there is a variety of beliefs among Christians today, their core belief in a sovereign God and the Bible as the word of God is a fundamental component of all Christians' faith. As Hodge (2005) noted, this core belief means that Christians "do not have the option, at least in principle, of picking and choosing which values they follow."

The Bible gives few specific guidelines on sexuality, except that one should be sexually active with only their spouse (hence not until marriage) and remain sexually pure. Many of the messages that Christians receive today about sexuality have been passed down by the church through the centuries. These teachings are often steeped in misinformation and sexual repression, which frequently leads to less comfort about sexuality and less sex education. In the present day, when sexual activity among youth is common and often encouraged, it can become difficult for Christians, seeking to follow their faith's guidelines, to make well-informed, responsible and spiritually guided decisions about their sexual beliefs and activities.

Sexuality and the Christian Church

Before one can understand Christians' choices regarding their sexual behavior, one must understand their theological background. Ranke-Heinemann (1990) stated that before the early church, sexual negativity in early antiquity was predominantly due to medical considerations. It was believed that sexual intercourse and the release of semen was harmful and dangerously drained the energy of men. Thus, sexual intercourse was performed only for the purpose of procreation. This medical concern largely influenced the early church's view of sexuality, which was put in moral rather than medical terminology.

Rathus, Nevid, and Fichner-Rathus (1993) stated that, by the time of the early Christian church, promiscuous sexual behavior was widespread. In reaction to Rome's sexually uninhibited behavior, the early church sought to tame sexual pleasure, often even within marriage. Sexuality, and marriage in general, was seen as a distraction from one's faith. Bell (1966) stated that the highest form of achievement for early Christians was the rejection of their bodies. Thus celibacy was celebrated and sexual activity, outside of marriage, was

strongly discouraged. Moreover, sexual acts performed for means other than procreation was seen as sinful, specifically including "masturbation, homosexuality, oral-genital contact, and anal intercourse." It was viewed that sexual pleasure was related to the sins of the original sinners, Adam and Eve. Denney and Quadagno (1992) stated that this view of sexuality lead to intense guilt among Christians who experienced normal sexual desire and pleasure.

Slowinski (1994) explained that many Christians are dealing with an "underlying dualism between body and spirit," which is based on taking specific scriptural passages literally. Examples of Bible passages that are meant to give Christians guidance about their sexuality include: "It is good for a man not to touch a woman" (1 Corinthians 7:1, New King James Version), and "...you should abstain from sexual immorality; that each of you should know how to possess his own vessel in sanctification and honor, not in passion of lust, like the Gentiles that do not know God" (1 Thessalonians 4:3, New King James Version). Thus, Christians are often faced with anxiety, shame and fear about their sexual desires. Slowinski went on to describe some of the results of this

conflict and sexual repression, such as sexual dysfunctions and relationship difficulties. Strong, DeVault, and Sayad (1999) also stated that this inner conflict between the self and faith-based expectations may contribute to sexual dysfunctions. Often only a better understanding of church doctrine is necessary to relieve the tension that is created.

Slowinski (2001) described therapeutic interventions that clinicians could utilize when working with clients who are dealing with sexual dysfunctions and religion. The author states that many people of faith are making sexual decisions based on an elementary understanding of their religion's views of sexuality. This lack of knowledge has extensive implications for an individual's sexual and spiritual life. Thus Slowinski encourages clinicians to be aware of how a client's sexuality impacts their view of self and their faith.

In a study of Christian seminaries and theological schools (Conklin, 2001), it was found that seventy-five percent of clergy students felt that there was a need for human sexuality education at their schools. Of the sixty-nine schools that participated in the study only forty-seven percent offered a sexuality course; but

eighty-five percent did discuss sexuality issues in other courses. Though it is encouraging to see a high number of discussions about issues related to sexuality, it is clear that the students feel that it is not sufficient. This shows a blossoming interest in the church's involvement in sexuality issues.

Current Trends in Sexuality

Darroch and Singh (1999) examined the recent decline in teen pregnancy rates and its relationship to abstinence, sexual activity and contraceptive use. In reviewing data between 1991 and 1995, it was shown that there was a decline in teen pregnancies (ages 18-19) of twelve percent (12%). They stated that one-quarter of this decline was due to an increase in abstinence rates among women. They also stated that the decline might be due to teenagers using more long-acting contraceptive methods, such as the "pill" or injection contraceptive. This study shows the importance of reducing teen sexual activity and increasing knowledge and usage of contraception options.

In 1997, Campaign for Our Children, Inc. (CFOC), a nonprofit organization, had an extensive website that

allowed for young adults to post questions about sex. In a report on the information that they gathered from these questions (Flowers-Coulson, Kushner, & Bankowski, 2000), they discussed the abundance of misconceptions that young adults hold about sexuality and reproductive health. It was found that there was a lack of basic knowledge about contraception and the avoidance of unintended pregnancies and sexually transmitted diseases. It was also found that young adults have high levels of anxiety and confusion about sexuality. This article clearly shows the deficiency of knowledge that young adults currently have and the amount of emotional turmoil that results from that lack of knowledge.

The National Commission on Adolescent Sexual Health (Haffner, 1995), gathered by Sexuality Information and Education Council of the United States (SIECUS), issued a report that sought to explain the current sexual activity and sex education of American adolescents. They described the need for individuals to develop a sexual self-concept in which they solidify their identity based on their beliefs and knowledge about what it means to be their specific gender and sexual orientation. They illustrated what it means to be a sexually healthy adolescent:

specifically the individual "appreciates his or her own body," "takes responsibility for own behaviors," "is knowledgeable about sexuality issues," "communicates effectively with family about issues, including sexuality," and "understands and seeks information about parents' and family's values, and considers them in developing one's own values." These traits are especially important (and possibly confusing) for an individual who is trying to reconcile his or her faith, which definitively places sex as "off limits," with his or her sexuality. The report gave clear directions about the importance of encouraging good sexual health and sexual knowledge.

It is also important to examine individuals' values about sexuality. Knox, Cooper, and Zusman (2001) found that the majority of college students held relativistic beliefs about sexual behavior, specifically believing that "what you do sexually depends on the person you are with, how you feel about each other, and the nature of the relationship." Only twenty percent were likely to state more absolutist values, often based on religious beliefs. It was also found that women were more likely to be absolutist and men are more likely to be hedonistic in

their sexual values. This study shows the growing trend towards relativity about sexual behavior among college students.

Sources of Sex Education

Spanier (1977) studied the sources of sex education for college youth. It was found that for females, parents were the primary source of sex information, and that for males, male friends were the primary source of education. Mothers being used as a source of sex education was found to be associated with lower sexual activity scores among females and fathers had the same impact upon their sons. It was found that for males, having male friends as a source of sex education was associated with higher levels of sexual activity. This study gives good insight into the sources of sex education and their impact on behavior; however, it differs from the results of more current research, as discussed below.

Sex Education in Schools

Providing sex education in schools, as discussed above, is a hotly debated topic. At the core of the debate is the fear that, by receiving information about sex, kids will be more likely to become sexually active.

Zastrow and Kirst-Ashman (2004) stated that there are two fallacies with this fear. First, they remind their readers that adolescents have access to sexual information, such as through television or magazines, from sources that are often contrary to what adults may prefer. Second, they question the idea that adolescents will try anything they are told about. They go on to emphasize the importance of adolescents having thorough information about sex so that that they can make responsible decisions.

The NPR/Kaiser/Kennedy School Poll (2004) sought to find out what Americans really believe about sex education. They found that only seven percent of Americans say that sex education should not occur in schools. However, fifteen percent say that if sex education is taught in the schools, it should only teach abstinence and should not include information about contraceptive or condom use. This may be related to the thirty-nine percent of Americans who fear that by giving teens information about sex they will be encouraging them to have sex earlier. Evangelical Christians were very specific about what they felt was inappropriate to discuss, including how to obtain birth control, oral sex

and homosexuality. The poll also indicated that Evangelical Christians have significantly more conservative views about what is appropriate sexually: eighty-one percent (compared to thirty-three percent of non-Evangelical Americans) believed that it is wrong to have sex outside of marriage. Seventy-eight percent believed that sex outside of marriage is likely to have negative psychological or physical effects, compared to forty-six percent of other Americans.

In a review of the effectiveness of 73 different sex education programs in schools, Kirby (2002) found that comprehensive sex and HIV education programs do not increase sexual activity and in some cases actually delay sexual intercourse. However, the effectiveness of abstinence-only curricula was found to be inconclusive. The author suggested that abstinence-only programs would be most effective if they included effective components on sexuality and HIV education programs, including providing basic information about risks of sexual activities and methods to avoid unplanned pregnancies and sexually transmitted diseases.

In response to concerns about a sex education course taught at a large community college, Feigenbaum,

Weinstein, and Rosen (1995) studied the relationship between sex education and reported sexual behavior. The researchers found that taking the sex education course had no impact on the likelihood of the individual being sexually active. After completing the course, students were significantly more likely to state that they would use a form of birth control (mainly condoms and spermicides) if they were to engage in sexual intercourse. The researchers also found that participation in the course did not impact an individual's moral beliefs about sexuality or contraception.

In a discussion of a literature review done on the effectiveness of sex education, Kimmel (2000) stated that sex education has been instrumental in helping people become sexually aware. The author stated, "...sex education enables people to make better sexual decisions, and encourages more responsibility, not less." This is seen in the increase of contraception use by those individuals who have had more extensive education and communication about sex, as described below.

Abstinence-Only Education Programs

The content of federally funded abstinence-only programs has been under great scrutiny due to the large amount of funding that they are receiving, including up to \$250 million proposed by President Bush for the 2005 fiscal year. In a review of eleven curricula which are used by programs that receive federal funding, Representative Waxman (2004) found that over eighty percent of these programs are providing misinformation to youth. The curricula contained false and misleading information about the effectiveness of contraceptives and the risks of abortion, as well as encouraged stereotypes about girls and boys. The curricula also contained erroneous information about the risks of sexual activity, including the incorrect fact that cervical cancer is a "common consequence of premarital sex." Overall, the study found that there is a wealth of misinformation being taught to youth, often with the focus on scaring them away from sex.

In 2003, a review was done on the Minnesota Education Now and Babies Later (MN ENABL) program, an abstinence-only education program taught to approximately 45,500 junior high students since 1998. Though the

program was found to encourage communication between parents and teens about sex, it was not found to positively impact the teens' behavior or attitudes. In the one-year follow up survey, there was a significant increase in teens who expressed intentions to have sex within the next year, and actual sexual activity increased from five percent to twelve percent. The review forced the Minnesota Department of Health to seriously evaluate the effectiveness of this program (Minnesota Department of Health, 2003; SIECUS, 2003).

Hauser (2004), Vice President of Advocates for Youth, assessed the impact of abstinence-only education in eleven states that received federal funds for their sex education programs. The evaluation showed that there were few positive short-term effects on the participants' attitudes, intentions to abstain or behavior. In fact, in two of the six programs that evaluated short-term changes in sexual behavior, there was actually an increase of sexual behavior from pre- to post-test. The long-term impacts were just as discouraging: four of the five evaluations that examined changes in attitudes about abstinence, three of the four evaluations of participants' intention to abstain, and all of the

programs that measured impact on sexual behavior, found no positive impact. These studies show that though the goal of youth choosing abstinence may be optimal, abstinence-only education may not be effective enough in encouraging our youth to abstain from intercourse or protecting them from the negative consequences of sexual activity.

Sex Education from Parents

Somers and Surmann (2004) studied adolescents' preference for the source of their sex education and found that parents were the most preferred source of sex education among adolescents. However, white middle-class males preferred their primary source of sex education to be their schools. Peers were found to be considerably less preferred than was found in previous studies, such as Spanier's (1977) as discussed above. Somers and Surmann's study was quite influential: it was the first of its kind to consider socioeconomic status in its findings.

Miller, Kotchick, Dorsey, Forehand, and Ham (1998) found that adolescents were more likely to discuss sexuality with their mothers. Among topics discussed, it

was found that sexually transmitted diseases were the most commonly discussed, and masturbation and sexual development were the least discussed. While mothers were found to be the more likely candidate for sexual discussions, it was found that when adolescents do discuss sex with their fathers it is more likely that sons will discuss it with their fathers and daughters with their mothers. Interestingly, mothers were more likely to think that a conversation about sex had occurred than their children; however, overall there were found to be moderate levels of agreement that the conversation had occurred. The author concluded that in addition to the necessity for more thorough discussions about sex, parents also need to use an open and receptive approach to the conversations.

In a study of how comfortable discussions about sex impact sexual behavior, Guzman et al. (2003) found that adolescents were most likely to speak with the parent of the same gender. Moreover, as other research has verified, adolescents were significantly more likely to and felt more comfortable discussing sex with their mothers than with their fathers. The researchers also found that the level of comfort that the adolescents felt

in discussing sex was significantly predictive of them delaying sexual intercourse. Comfortable discussions with others (e.g., with friends) were shown to lead to safer sexual activities, such as increased condom usage. However, the study also found that comfortable communication with partners about sex was significantly predictive of less intention to delay intercourse and of the individual being sexually active.

Guzman et al.'s study shows the importance of parents being comfortable when discussing sexuality with their adolescents. This may be especially difficult for Christian parents, because they also need to educate their children on their religious values about sex. In a review of communication between parents and teenagers about sex (Hollander, 1998) it was found that the largest barrier to effective conversations about sex was parental comfort with the topic. Nine percent of parents said they didn't know what to say to their teens. However, teens were very specific about what they would like to discuss with their parents, with twenty-three percent saying more information about sexually transmitted diseases and pregnancy prevention, twenty-one percent requesting more information about dating and relationships, and eleven

percent desiring more information about values regarding sexuality. This final statistic is particularly interesting because it shows that teens want to understand how their faith impacts their sexuality.

Church Attendance and Sexual Activity

Church attendance, one of the many ways to gauge one's connection to his or her religion, has been found to impact sexual behavior. Jenson, Newell and Holman (1990) proposed that church attendance impacts sexual beliefs, which then impacts sexual behavior. They found that individuals who attend church weekly were significantly less sexually active than those who attended only occasionally or never attended. Oddly, the study found that those who attend church once or twice a month had a high level of sexual activity. The researchers suggested that these individuals might be attending church more because of social pressures than internal beliefs. Because it is clear that church attendance may not be the only indicator of religious faith, this article shows the importance of examining more than one aspect of one's faith.

In their examination of the connection between religiosity and sexual responsibility, Davidson, Moore, and Ullstrup (2004), found that Christian women who attended church weekly were significantly less likely than those who attended monthly or yearly to have had sexual intercourse. Women who attended church weekly tended to have conservative attitudes about sexuality (such as highly valuing virginity and "saving oneself"). These women were also more likely to express feelings of guilt related to their sexual activity, including masturbation, petting, and sexual intercourse. The author proposed that this guilt might be a result of regular attendance at religious services, which "served to reinforce moral teachings and potentially contributed to guilt feelings surrounding sexual behavior that transgresses societal mores."

In studying the relationship between different religious heritages and premarital sex, Beck, Cole and Hammond (1991) found that there was a variance in the impact depending on the denomination. Individuals who associated themselves with an "Institutional Sect," such as Mormons and Pentecostals, a fundamentalist heritage or Baptist were less likely to engage in sexual activity

than Mainline Protestants. The researchers suggested that this might be due to the high level of commitment and religious activity that are found among these denominations.

Faith and Sexual Activity

There are several components of faith and religiosity, which have been found to impact sexual beliefs and behavior. Overwhelmingly, it has been found that the more religious an individual is, the more likely he or she is to delay sexual activity (Whitehead et al., 2001; Zaleski & Schiaffino, 2000; Pluhar, Frongillo, Stycos, & Dempster-McClain, 1998). However, though religious adolescents and college students report less sexual behavior, when they do become sexually active they are less likely to use contraception, specifically among females (Whitehead et al., 2001; Zaleski & Schiaffino, 2000). In addition, Pluhar et al. (1998) found that religious individuals were more likely to use abstinence or withdrawal, with four percent of the students using just withdrawal. Thus, though piety may act as a deterrent for an individual desiring to participate in sexual activity, it does not act as a protectorate

against high-risk behavior once he or she becomes sexually active. These religious individuals are at high-risk for unplanned pregnancies and transmittal of sexually transmitted diseases due to the lack of protection.

In a report published by the National Campaign to Prevent Teen Pregnancy, Whitehead et al. (2001) found that teens that were active in their religion tended to have more conservative attitudes about sex. However, these conservative views were only moderately predictive of their future sexual activity. Miller and Gur (2002) also found that strong personal faith devotion and involvement in their religious community was associated with fewer partners in the recent past. Spiritual connection, involvement or affiliation with a conservative congregation, does not affect the likelihood of the individual ever having had sex. However, it was found that a strong spiritual connection lowers their awareness of the possible negative consequences of sexual activity. This study continues to confirm that though their sexual activity decreases when they are religiously active, it does not change their previous behavior and is

associated with less understanding of the importance of contraception.

Woody, Russel, D'Souza, and Woody (2000) studied non-coital sexual activity among virgins and non-virgins. They found that adolescents who had engaged in sexual activity had lower rates of religious involvement than those who chose to abstain. It was also found that virgins had received more traditional messages about sexuality from their parents. Virgins were also found to have more moral influences which impacted their sexual behavior. The researchers suggested that if parents wished to encourage abstinence they should provide moral guidance to their virgin teens by encouraging them to be involved in church activities, monitoring their children's activities and having meaningful discussions with them about sex and their values.

Clapp et al. (2003) studied religiously active teens, including those that were of faith backgrounds different from Christianity. They found that while many religious teens are not having sexual intercourse, they are engaging in other sexual activities, including oral sex. Fifty-five percent expressed a lack of information about the act, specifically that they did not know they

could contract a sexually transmitted disease through oral sex. Teens that came from religious organizations that taught about sexuality were found to have no instances of sexually transmitted diseases or pregnancies, but they were not any less likely to have had sex. However, teens that attended religious organizations that did not teach about sexuality were found to have higher rates of sexually transmitted diseases (nine percent of youth) and higher rates of teen pregnancies (eleven percent of girls). In their study on virginity pledges, a recent common activity among religious teens, they found that, though eleven percent had taken a virginity pledge, they were no less likely to become sexually active or to have become pregnant.

Effectiveness of Virginity Pledges

Virginity pledges became popular around 1993 and are a regular activity for promoting abstinence in religious institutions in America. In an examination of the effectiveness of these pledges, Bearman and Bruckner (2001) found that pledges significantly delayed sexual intercourse. Pledgers tended to think that their parents approve of them more, and tended to be more religious

than those who do not pledge. The more religious an individual was, the more significantly delayed was the occurrence of their initial sexual intercourse. As found in other studies on the relationship between sex and faith, pledgers were significantly less likely to use contraception. The authors suggest that though it may appear that pledgers do not need as much knowledge about contraception, it is obvious that they are not prepared or educated enough in the event that they do not remain committed to the pledge.

Sexuality's Impact on One's Faith

Meier (2003) sought to examine not only the impact of religiosity and attitudes on sexual activity but also the impact of sexual activity on religiosity and attitudes about sex. As found in other research, religiosity reduced the occurrence of first sexual intercourse, specifically among females. Also, attitudinal effects significantly correlated with delayed first sex. Meier also found that once an individual had had sex, the occurrence did not impact their religiosity. However, the sexual activity greatly impacted an individual's attitude about sex. Thus, though religiosity

delays the occurrence of first sexual activity, sexual activity does not impact an individual's religiosity.

Summary

Previous research has shown the importance of sexual knowledge in delaying sexual activity and avoiding negative consequences of sex, such as sexually transmitted diseases and unplanned pregnancies. However, this research lacks specific data about the difference in sexual knowledge of youth from Christian and secular colleges. The researcher hypothesized that students from the Christian college would know significantly less about sex. This lack of knowledge would add to the complexity of the difficult task that Christians face in fusing their religious beliefs with their sexual actions. How can one successfully integrate their sexual selves into their religious faiths if they do not have the knowledge that is necessary to make complete and informed decisions? The purpose of this study was to gather more information about that lack of knowledge in order to better direct educational institutions, clinicians, parents and religious communities on how to better meet the sexual needs of their youth.

CHAPTER THREE

METHODS

Introduction

This study used quantitative measurement methods to examine students' current sexual knowledge, their current religiosity, their sex education background, their past and current sexual behavior, and any sexual issues, such as sexually transmitted diseases, they may have faced. This chapter discusses the study design, sampling, data collection and instruments, procedures of collection, and the quantitative procedures that were used to analyze the data. This section also includes how the author sought to protect the subjects through informed consent and debriefing.

Study Design

The purpose of this study was to assess the sexual knowledge of students' from a Christian college and secular colleges and how any lack of knowledge is impacting their lives. The subjects completed a survey that consisted of four sections. First, the survey gathered demographic information. Second, the survey gathered information about the subjects sexual education,

past and current sexual activity and past and current sexual issues such as unplanned pregnancies and sexually transmitted diseases. Third, the survey gathered sexual knowledge. Finally, the survey examined the subjects religiosity.

Two sexual knowledge tests were combined to produce a survey that collected information about the subject's knowledge of male and female anatomy, contraception and reproductive health, and sexually transmitted diseases. Eleven questions were taken from the Kinsey Institute/Roper Organization National Sex Knowledge Test (Reinisch & Beasley, 1990). Eight questions were taken from the 24-item version of the Miller-Fisk Sexual Knowledge Questionnaire (Gough, 1974). Two questions were added, as well. The hypothesis was that students from the Christian college would have less sexual knowledge, lower rates of sexual intercourse and among those who have had sexual intercourse, be involved in more high-risk sexual activities than students from the secular college.

Sampling

The sample consisted of 800 undergraduate college students from a private non-denominational Christian

liberal arts college, 800 students from a secular private liberal arts college in the Eastern United States and 175 students from a public university in the Western United States. The Christian college is an evangelical protestant school and though they tend to be on the more conservative side of the previously mentioned continuum of faith, they also tend to be very open-minded and thoughtful. The study was approved by the Research Review Boards at all three colleges before it was conducted.

Data Collection and Instruments

The survey began by collecting basic demographic information. It examined two interval variables: age and year in school. It also examined two nominal independent variables: gender and marital status. Following the demographic section, the survey examined the subjects' sexual history. First, independent variables regarding the participants' sex education were examined: source of the majority of their sex education (nominal), whether or not they attended a religious middle and/or high school (nominal), and whether or not their middle and/or high school offered sex education (nominal).

The survey then examined the participants' current and past sexual behavior, all of which are nominal independent variables: whether they have had sexual intercourse, age at first intercourse, if a contraceptive device was used at first intercourse, kind of contraceptive device used, whether they are currently sexually active, whether they used a contraceptive device the last time they had sex, whether they usually use a contraceptive device, what type of contraceptive device they usually use, whether they have participated in oral sex, whether they have made a virginity pledge, whether they plan to wait to have sex until marriage, whether they have ever had a sexually transmitted disease, and if so, which one. This section also sought information from women regarding their history of pregnancies (nominal independent variables), including the number of pregnancies, unplanned pregnancies, abortions and miscarriages they've had. Men were also asked how many children they had fathered (nominal independent variable).

The third section of the survey consisted of the sexual knowledge questionnaire, combined from the 24-item version of the Miller Fisk Sexual Knowledge Survey and

the Kinsey Institute/ Roper Foundation National Sexual Knowledge Test. The researcher chose to combine the two questionnaires because the Kinsey Test lacked questions that examined knowledge of anatomy and had unnecessary questions regarding current sexual activities in America. The questions that were chosen focus on knowledge about the male and female anatomy, the prevention of sexually transmitted diseases, and contraceptive use.

Both sources have been shown reliable and valid. Two questions were added regarding sexually transmitted diseases and oral sex. It was decided to add more questions about sexually transmitted diseases to balance the large number of questions regarding contraception/unplanned pregnancies found in the Miller-Fisk Sexual Knowledge Survey. All questions in this section are multiple choice or true/false (nominal). Each subject's answers were added to produce interval scores, with a potential score of 40.

The survey concludes by collecting information about the participants' faith and religion (religiosity). This section looks at the following independent variables: whether or not they identify themselves as being religious (nominal), the religion and denomination they

identify with (nominal), their family's religious background (nominal), how often they participate in religious services (ordinal), their involvement in other religious activities such as Bible studies (nominal), how often they pray (ordinal), and how important religion is to them (ordinal).

Procedures

Two different procedures were utilized to gather data: one for the private colleges in the Eastern United States, and one for the public University in the Western United States. At the private colleges in the East, including the Christian and non-Christian colleges, the student's campus mailboxes were used to distribute the surveys. The researcher and her assistant placed 800 packets into every other student's mailboxes, beginning with a random box at each school.

The packet began with an introductory letter, which acted as an informed consent. Following the introductory letter was a cover page, which included a disclaimer stating that the following questions are explicit. After the disclaimer, came the survey. The packet ended with the debriefing statement. Attached to the packet was a

raffle ticket and addressed return envelope. Students who choose to participate in the study were asked to complete the survey, place it into the provided return envelope and seal it. They were then asked to deposit this envelope in their colleges' mailroom mailbox. The staff of the mailrooms were asked to place these labeled return envelopes into a designated labeled box in their mailroom. The researcher and her assistant periodically checked this designated box and picked up the returned packets during a one week period.

As stated above, all students who attend the participating colleges in the Eastern United States were given raffle tickets to win a \$30 gift certificate to Starbucks. Students did not need to participate in the study or complete a survey to participate in the raffle. The students placed their raffle ticket into a labeled box outside of their colleges' mailroom. A gift certificate was raffled for each school, thus two \$30 gift certificates were given. A raffle ticket was randomly pulled for each school and the gift certificates were mailed to the winning students within one month.

At the public non-Christian university in the Western United States, the surveys were distributed via

classrooms. The researcher handed out the surveys during two introductory psychology classes. The students were asked to complete the surveys during their own time and return them to their university's Psychology Department's peer support center. When they returned the completed survey, workers at the peer support center gave them extra credit slips which could be used in participating psychology classes. The workers at the peer support center then stored the completed surveys in a closed filing cabinet. The researcher periodically checked the filing cabinet and picked up the completed surveys.

As stated above, all participants from the public non-Christian university were given the opportunity to earn an extra credit slip, worth 1 extra credit point. This extra credit could be used towards any participating class. These slips are considered normal currency for extra credit in this university's psychology department. Students could only receive the extra credit if they returned a completed survey.

Protection of Human Subjects

As described in the Procedures section, an introductory letter was used in lieu of an Informed

Consent Document. This letter was attached to the front of the survey. Students were not asked to sign or initial the letter. By completing and returning a survey, students showed their consent for participation. A different introductory letter was used for each school so as to meet the Research Review Board requirements at each school (Appendixes A through C).

The debriefing statement included resources for further information about sex, contraceptives and sexually transmitted diseases. The survey did not ask for the subjects' names as to protect their confidentiality. The surveys were only seen by the researcher, research assistant and the researcher's advisor. All results were stated in group format only.

Data Analysis

The surveys, which included no identifying information about the participants, were scored by the researcher and research assistant using the original answers from The Miller-Fisk and Kinsey sexual knowledge surveys. The sexual knowledge section of the surveys was scored and then the score was analyzed in relation to the independent variables. T-tests, cross tabulations,

chi-squares and Pearson correlations were used to analyze the data.

Summary

The survey and study procedures were designed to gather the most comprehensive understanding of students from Christian and non-Christian colleges sexual knowledge and yet also to protect the students' confidentiality and well-being. The study examined the relationship between the source of sexual knowledge, the religiosity of the participant and their actual sexual knowledge. Also, the researcher hoped to identify how the subjects' level of sexual knowledge impacts their level of risky sexual behavior. By using multiple forms of analysis, the researcher hoped to gather further understanding of the needs of these students.

CHAPTER FOUR

RESULTS

This chapter contains a detailed description of the results of this study. The data were analyzed using a SPSS computer program. Several forms of analyses were used, including t-tests, crosstabulations, chi-squares, and Pearson's r correlations.

Descriptive Statistics

The total sample used in the study consisted of 460 college students. There were 314 participants from the private Christian college, 66 from the private secular college, and 80 from the public secular university. The demographic characteristics of the sample are shown in Appendix F (Demographic Information: Age & Year, Demographic Information: Gender & Marital Status).

Participants' ages ranged between 18 and 39 years old ($x = 19.82$, $s.d. = 1.9$), with 98% between the ages of 18 and 23. The public secular college's students included more older students ($x = 20.32$, $s.d. = 3.51$, range = 18-39) than those from the private Christian college ($x = 19.72$, $s.d. = 1.3$, range = 18-23) or the private secular college ($x = 19.71$, $s.d. = 1.4$,

range = 18-24). See Appendix F (Demographic Information: Age & Year) for a further description of the participants' ages.

The total sample consisted of 111 males (24.2%) and 348 females (75.8%). At all of the colleges, three quarters of the students were female. The vast majority of students were single at the private colleges (95 to 97%) and slightly fewer at the public college (80%). See Appendix F (Demographic Information: Gender & Marital Status) for a further explanation of the gender and marital status of the participants.

The sample consisted of 140 freshman (30.4%), 108 sophomores (23.5%), 106 juniors (23%), 96 seniors (20.9%) and 10 5th year seniors (2.2%). At both the private Christian and secular colleges, the sample was fairly evenly distributed from freshman through seniors. However, at the public secular college, the majority of the students were freshman. See Appendix F (Demographic Information: Age & Year) for a further description of how many students participated per grade level.

Religiosity

To better understand the sample, it is important to first look at their religiosity. A religiosity score was calculated for each participant based on their answers to specific questions regarding their religion and/or faith activities. These include how important religion is to them, how often they pray or meditate, and how often they attend religious services and participate in faith-related activities. The total sample mean score was 11.54 (s.d. = 3.2), with a range between 2 to 14. The highest possible score was 14.

Students from the Christian college ($x = 13.05$) had statistically higher religiosity scores than those from the secular colleges ($x = 8.33$) ($t = -19.627$, $df = 451$, $p = .000$). The highest mean religiosity score was found at the private Christian college ($x = 13.05$, $s.d. = 1.39$, $range = 5-14$). The second highest mean score was found at the public secular college ($x = 9.85$, $s.d. = 3.45$, $range = 2-14$), followed by the private secular college ($x = 6.52$, $s.d. = 3.14$, $range = 2-14$). It was expected that there would be high religiosity scores from the Christian college because most of the students from that college identify themselves as Christian. The high score

from the public secular college may be related to its location in a region which tends to be very religious and conservative.

When asked if they consider themselves to be religious, 397 (86.7%) of the total sample stated that they did. At the private Christian college, 98.1% stated that they consider themselves to be religious. At the public secular college, 76.3% considered themselves to be religious, but at the private secular college, only 43.9% stated that they considered themselves religious. See Table 1 for a summary of the answers to all of the religiosity questions.

Table 1. Religiosity

Variable	Christian		Private Secular		Public Secular		Total	
	Freq (n)	Perc (%)	Freq (n)	Perc (%)	Freq (n)	Perc (%)	Freq (n)	Perc (%)
<u>Consider Self Religious</u>								
Yes	307	98.1%	29	43.9%	61	77.2%	397	86.7%
<u>Attendance at Services</u>								
Every Week	213	68.3%	6	9.1%	27	33.8%	246	53.7%
2-3x a month	71	22.8%	5	7.6%	11	13.8%	87	19.0%
Once a month	20	6.4%	4	6.1%	5	6.3%	29	6.3%
A few times a year	5	1.6%	22	33.3%	23	28.8%	50	10.9%
Only on holidays	2	0.6%	8	12.1%	3	3.8%	13	2.8%
Never	1	0.3%	21	31.8%	11	13.8%	33	7.2%
<u>Involvement in Activities</u>								
Yes	255	81.2%	11	16.7%	20	25.0%	286	62.7%
<u>How Often Pray</u>								
Often	234	74.8%	11	16.7%	45	56.3%	290	63.2%
Sometimes	74	23.6%	22	33.3%	16	20.0%	112	24.4%
Rarely	4	1.3%	19	28.8%	13	16.3%	36	7.8%
Never	1	30.0%	14	21.2%	6	7.5%	21	4.6%
<u>Importance of Religion</u>								
Very Important	293	93.9%	7	37.9%	47	58.8%	347	75.4%
Somewhat Important	16	5.1%	34	51.5%	26	32.5%	76	16.5%
Not Very Important	3	1.0%	25	10.6%	7	8.8%	35	7.6%

The sample consisted of participants who identified with a wide variety of religions or faiths, including Judaism, Buddhism, Islam, Atheism and Christianity, as well as others. The majority of the sample identified with a Christian religion or faith (92.4%). See Appendix F (Religions) for a summary of the religions divided by school.

Testing of Hypotheses

Sexual Behavior

The first hypothesis expected that students from the Christian college would be less sexually active.

Differences among the schools were found to be statistically significant. Sexual activity was gauged by whether the participant had engaged in oral sex or sexual intercourse, as well as whether they were currently sexually active. See Table 2 and Appendix F (Sexual Activity) for a summary of the findings on sexual activity.

When asked if they had participated in oral sex, 213 (46.5%) of the total sample said yes. The majority (65.5%) from the private Christian college had not participated in oral sex. In contrast, the majority (89.4%) of the sample from the private secular college had participated in oral sex, as had a smaller percentage (58.2%) at the public secular college. A chi-square analysis confirmed that students from the Christian college were significantly less likely to participate in oral sex ($\chi^2 = 71.282$, $df = 2$, $p = .000$).

The majority (279 = 63.4%) of the total sample had not had sexual intercourse, with 162 (36.8%) having had

sexual intercourse. Students from the Christian college were significantly less likely to have had sexual intercourse than students from the two secular colleges ($\chi^2 = 131.544$, $df = 2$, $p = .000$) At the private Christian college, 18.8% reported having had sexual intercourse. This was significantly lower than the private secular college (84.4%) and the public secular college (65.4%). This finding supports the hypothesis that students from the Christian college would be less sexually active.

Table 2. Sexual Activity

Variable	Christian		Private Secular		Public Secular		Total	
	Freq (n)	Perc (%)	Freq (n)	Perc (%)	Freq (n)	Perc (%)	Freq (n)	Perc (%)
<u>Oral Sex</u>								
Yes	108	34.5%	59	89.4%	46	58.2%	213	46.5%
<u>Intercourse</u>								
Yes	56	18.8%	54	89.4%	51	65.4%	161	36.6%
<u>Current Sexually Active</u>								
Yes	29	50.0%	47	88.7%	44	80.0%	120	72.3%

Of the total sample, 102 (86.7%) reported being between the ages of 16 and 18 years old when they first had sexual intercourse ($x = 16.95$, $s.d. = 1.74$, $range = 12-23$). The age of first intercourse ranged between the ages of 12 and 23, with 39.1% having their

first sexual intercourse before the age of 17. Students from the secular colleges were significantly more likely than the students from the Christian college to have had sexual intercourse before the age of 17 ($\chi^2 = 5.426$, $df = 1$, $p = .020$). See Appendix F (Sex Before Age 17) for further information. At the private Christian college, only 26.4% had had sex before the age of 17. This was considerably fewer than students from the public secular college, where 46.9% had had sex before age 17 and the private secular college, where 44.4% had had sex before age 17. See Table 3 for a further summary of age at first intercourse listed by school.

Table 3. Sexual Activity/Age

School	<u>Age at 1st Intercourse</u>		
	x	s.d.	range
Christian	17.45	1.65	14-21
Private Secular	16.7	1.64	12-20
Public Secular	16.67	1.86	13-23
		<u>% Before Age 17</u>	
School		%	
Christian		26.40%	
Private Secular		44.40%	
Public Secular		46.90%	

Of those in the total sample who had reported having had sexual intercourse, 120 (72.3%) reported being currently sexually active. At the Christian college, 50% stated that they are currently sexually active. This is significantly fewer than at the private secular college (88.7%) and at the public secular college (80%) ($\chi^2 = 23.124$, $df = 2$, $p = .000$). It is also important to note here that only 2% of the total sample stated that they are married.

Sexual Knowledge

The second hypothesis stated that students from the Christian college would have less sexual knowledge than the students from the secular colleges. This was partially supported, as explained below. A sexual knowledge score was calculated based upon the respondents' answers to the sexual knowledge questionnaire section of the survey. The original survey included 21 items. However, printing problems rendered responses to one item unreliable. Thus, twenty questions were used in calculating the score, with a total possible score of 40.

The total sample mean score was 32 (s.d. = 3.33), with scores ranging between 18 and 39 points. At the

private secular college, the mean was 33.15 (s.d. = 2.76), with scores ranging from 27 to 39. At the private Christian college, the mean was 31.94 (s.d. = 3.50), with scores ranging from 18 to 39. The public secular college's mean was 31.65 (s.d. = 2.86) with scores ranging from 25 to 37.

To test if sexual knowledge was associated with what school the participants attended, three separate t-tests were run. Each school's scores were compared to the other two schools. Results showed that the students from the private Christian college ($x = 31.93$) had significantly less sexual knowledge than the students from the private secular college ($x = 33.15$) ($t = -2.65$, $df = 378$, $p = .008$). Interestingly, students from the private secular college had higher sexual knowledge scores than those from the public secular college ($x = 31.65$) ($t = 3.208$, $df = 144$, $p = .002$). However, there was no significant difference in sexual knowledge between the students from the private Christian college and the public secular college. Among all three schools, it was found that the higher the participants' religiosity, the lower their sexual knowledge ($n = 453$, $r = -.116$, $p = .013$).

When examining the total sample's answers to the individual questions, it was found that they had the most difficulty with question 4 ("True or False: Almost all erection problems can be successfully treated"), with 287 (62.4%) participants answering it incorrectly. The second most difficult question was #8 ("True or False: Most women prefer a sexual partner with a larger-than-average penis"), with 264 (57.4%) answering it incorrectly. The third most difficult question for the total sample was #2, ("True or False: Petroleum jelly, Vaseline Intensive Care, baby oil, and Nivea are not good lubricants to use with a condom or diaphragm"), with 235 (51.1%) answering it incorrectly. See Appendix F (Sexual Knowledge Questionnaire) for a further explanation of the sexual knowledge questions.

High-Risk Sexual Activity

The final hypothesis anticipated more high risk sexual behaviors among students at the Christian college than among students at the two secular colleges. High-risk activity was assessed by looking at the contraception use at first sexual intercourse, if contraception was usually used and if contraception was used the last time the participants had sexual

intercourse. These high-risk activities were assessed by using chi-square tests. This hypothesis was also found to be partially confirmed. See Table 4 for a further explanation of contraception usage.

When asked if they had used a contraceptive device the first time they had sex, 120 (72.3%) from the total sample stated that they had. The students from the private secular college were most likely to have used contraception (94.4%). At the public secular college, 83.3% had used contraception and at the private Christian college, only 79.6% had used contraception. When examining all three schools, there was no significant difference on whether a contraceptive device was used during first sexual intercourse. However, a chi-square analysis of only the private secular college and private Christian college, found that students from the Christian college were significantly less likely to use a contraceptive device the first time they had sexual intercourse ($\chi^2 = 5.252$, $df = 2$, $p = .022$).

It was found that the participants from the Christian college were significantly less likely to usually use a contraceptive device ($\chi^2 = 7.058$, $d.f. = 2$, $p = .029$), than those from the two secular colleges. When

asked if they usually use a contraceptive device, 138 (91.4%) stated that they do usually use contraception. See Figure 1 for a summary of contraceptive use including which device was most commonly used.

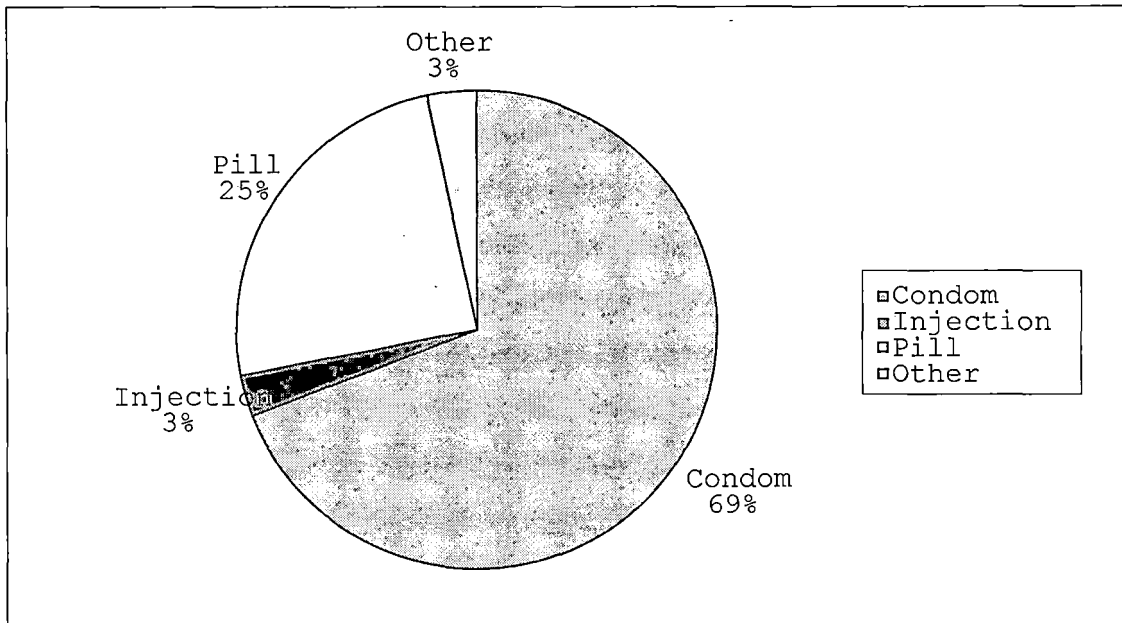


Figure 1. Type of Contraception at 1st Sexual Intercourse

Interestingly, though 91.4% of the sexually active respondents stated that they usually use a contraceptive device, only 77.2% reported using a contraceptive device the last time they had sexual intercourse. It was found that the participants from the Christian college were significantly less likely than those from the secular colleges to have used a contraceptive device the last

time they had sexual intercourse ($\chi^2 = 18.773$, d.f. = 2, $p = .000$).

Table 4. Cross Tab Contraception

	Christian	Private Secular	Public Secular	Total
1ST TIME CONTRACEPTION				
Yes	43	51	45	139
No	11	3	9	23
Total	54	54	54	162
Chi-Square = 5.270 df = 2 p = .072				

	School		Total
	Christian	Private Secular	
1ST TIME: PRIVATE COLLEGES			
Yes	43	51	94
No	11	3	14
Total	54	54	108
Chi-Square = 5.252 df = 1 p = .022			

	School			Total
	Christian	Private Secular	Public Secular	
USUALLY USE CONTRACEPTION				
Yes	42	50	46	138
No	6	0	7	13
Total	48	50	53	151
Chi-Square = 7.058 df = 2 p = .029				

	School			Total
	Christian	Private Secular	Public Secular	
LAST TIME USAGE				
Yes	40	50	32	122
No	11	3	22	36
Total	51	53	54	158

Other Findings

Sex Education

The majority of students had received sex education from their middle or high schools (83.2%). This was found to be similar among participants from all three schools. The majority of the sample had not attended a

religious middle or high school (76.5%). However, the sample from the private Christian college (27.7%) were more likely to have attended a religious school than those from the private secular college (16.7%) or the public secular college (12.5%) ($\chi^2 = 10.197$, $df = 2$, $p = .006$). See Appendix F (Religious School) for further information on religious schools.

When asked from whom they received the majority of their sex education, the three main sources were the participants' schools (48%), friends (42.2%) and/ or mothers (28.9%). Education was also received from books (16.8%), their fathers (11.7%), other relatives (4.2%), church (5.5%) and other sources (8.2%). Although asked to name only the main source of their sex education, many students marked more than one source; percentages do not add to 100%. This information is summarized by school in Figure 2 and Appendix F (Source of Sex Education).

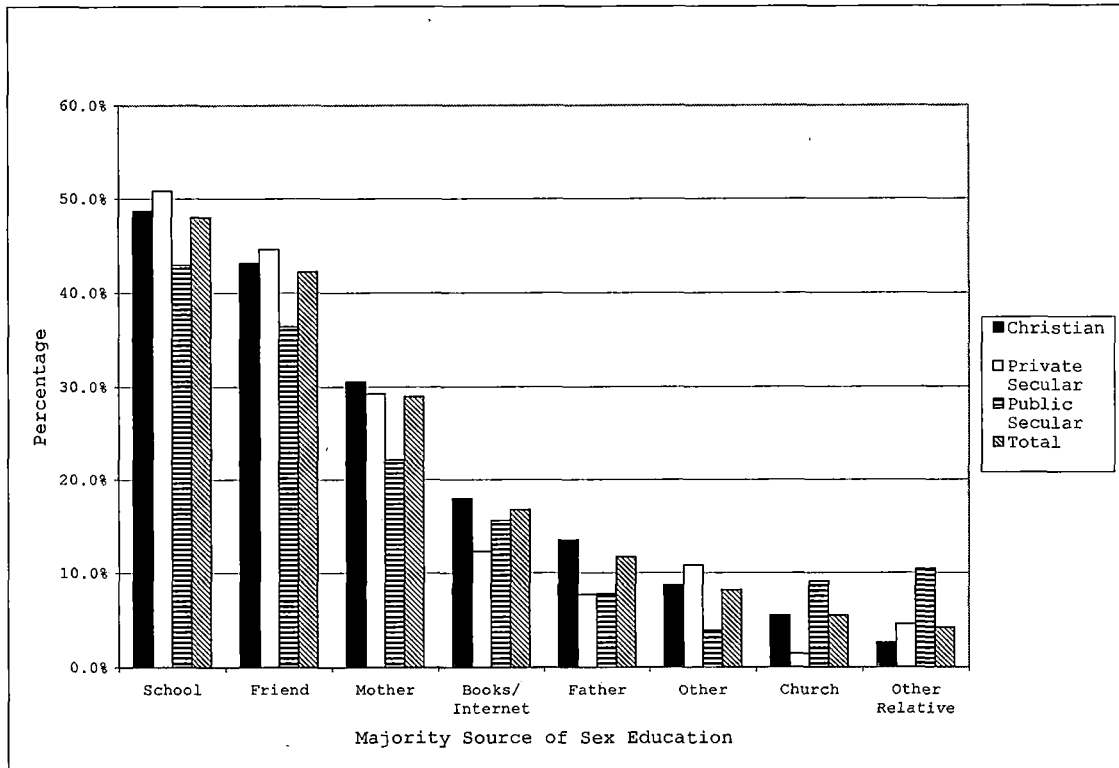


Figure 2. Source of Sex Education

Further Findings on Sexual Knowledge

There were several other findings regarding sexual knowledge. First, the more sexually active a participant was, the higher sexual knowledge score they had (yes $x = 32.76$, no $x = 31.66$, $t = 3.376$, $df = 438$, $p = .001$). Second, the participants who had received sexual education from their middle or high school had more sexual knowledge (yes $x = 32.23$, no $x = 31.31$, $t = 2.219$, $df = 456$, $p = .027$).

It was found that the source of sexual education could impact the amount of sexual knowledge. If a

participant received the majority of their sexual education from their mothers, they had higher rates of sexual knowledge ($r = .149$, $p = .001$). However, if a participant received the majority of their sexual education from a friend, they had lower rates of sexual knowledge ($r = -.160$, $p = .001$)

It was also found that participants who had planned or were planning to wait until marriage to have sexual intercourse had lower rates of sexual knowledge (yes $x = 31.81$, no $x = 32.76$, $t = -2.656$, $df = 456$, $p = .008$) than those who did not. Participants who had made a virginity pledge had lower rates of sexual knowledge (yes $x = 31.59$, no $x = 32.39$, $t = -2.543$, $df = 457$, $p = .011$) than those who had not.

Virginity Pledges or Plans

Though it was found that 189 participants (41.2%) had made a virginity pledge, the majority of those participants were from the private Christian college. At the private Christian college, 168 (53.7%) reported having made a virginity pledge, compared to only 17 (21.3%) from the public secular college and 4 (6.1%) from the private secular college. Students from the Christian

college were significantly more likely to have made a virginity pledge ($\chi^2 = 66.899$, $df = 2$, $p = .000$).

Apart from making a virginity pledge, the majority of the sample (74.9%) reported having planned or currently planning to wait until marriage to have sex. However, this was more common at the private Christian college (92.6%) than at the public secular college (47.5%) or the private secular college (24.2%) ($\chi^2 = 174.154$, $df = 2$, $p = .000$). See Table 5 for a further breakdown of participants who made virginity pledges or who are waiting till marriage to have sexual intercourse.

Table 5. Virginity Pledge

VIRGINITY PLEDGE	School			Total
	Christian	Private Secular	Public Secular	
Yes	168	4	17	189
No	145	62	63	270
Total	313	66	80	459
Chi-Square = 66.899 df = 2 p = .000				

WAITING TILL MARRIAGE	School			Total
	Christian	Private Secular	Public Secular	
Yes	289	16	38	343
No	23	50	42	115
Total	312	66	80	458
Chi-Square = 174.154 df = 2 p = .000				

Sexually Related Concerns

When the male participants were asked if they had fathered any children, of the total sample only 3 (.6%) stated yes. All three of these participants attended the public secular college. When the female participants were asked how many pregnancies they had had, 16 (3.5%) reported that they had been pregnant at least one time. There were 9 cases of unplanned pregnancies, 5 abortions and 7 miscarriages, among the total sample.

At the private Christian college, 4 (1.3%) of the participants reported having been pregnant. Among these participants, 3 (.9%) experienced an unplanned pregnancy, 2 (.6%) had an abortion and 2 (.6%) had a miscarriage. As stated above, no males from the private Christian college reported having fathered a child.

At the private secular college, 2 (3%) of the participants reported having been pregnant, one of whom stated that it was unplanned. Both of these participants reported, having an abortion. At the public secular college, 10 (12.5%) of the participants reported having been pregnant, 5 (6.3%) of whom reported experiencing unplanned pregnancies. Only 1 (1.3%) participant reported

having had an abortion, however, 4 (5.1%) participants stated that they had experienced a miscarriage.

Only 1.5% of the total sample reported having had a sexually transmitted disease. At the private Christian college, only 1 (.3%) participant reported having had a sexually transmitted disease. However, 3 participants from the private secular college (4.5%) and 3 participants from the public secular college (3.8%) reported having had a sexually transmitted disease.

Summary

The results showed a wealth of information regarding sexual knowledge, sexual activity and religiosity. All three hypotheses were found to be at least partially supported. Participants from the Christian college were less sexually active than the students from the two secular colleges. The participants from the Christian college had less sexual knowledge than those from the private secular college. Interestingly, the students from the public secular college also had more sexual knowledge than those from the private secular college. Finally, the participants from the Christian college were engaging in

higher-risk sexual behavior than were those from the secular colleges.

CHAPTER FIVE

DISCUSSION

Introduction

This study explored the differences in sexual knowledge between students from Christian and secular colleges. It also looked at how that sexual knowledge, or lack thereof, impacted their sexual activity. The research produced expected and unexpected results. The results present implications for how parents, educators, and social workers should address the issue of sexuality. The study has also given direction for further research.

Hypothesis

The first hypothesis looked at the sexual activity of the students. As previous research had found, this study confirmed that the more religious a young adult is, the less likely he or she is to be sexually active. This was found to be true at all three schools.

The second of the three hypotheses was partially supported. Students from the private Christian college had significantly less sexual knowledge than students from the private secular college. There was not a

statistical difference in sexual knowledge between the private Christian college and the public secular college.

However, the more religious a participant was, the less sexual knowledge they possessed. This is an important fact because it begins to bring clarity to the question of how religiosity impacts sexuality and opens the door for further examination. Do religious participants possess less sexual knowledge because of a difference in the amount or kind of sex education they receive? Do they possess less sexual knowledge because they have not fully integrated their faith and their sexuality? These issues need to be explored through further research.

The third hypothesis was also partially supported. This study did not find that students from the Christian college were less likely to use contraception the first time they had sexual intercourse. However, it did show that they were less likely to, on a consistent basis, use contraception and to have used contraception the last time they had sexual intercourse. This behavior puts them at higher risk of sexually transmitted diseases and unplanned pregnancies. This result was similar to

previous research which found that Christian individuals are less likely to use contraception.

Other Significant Findings

The average age at first sexual intercourse was found to be similar to previous findings. Students from the Christian college were significantly more likely to wait until their later teen years to have their first sexual intercourse experience. This shows that even though they may be more apt to participate in high-risk sexual activity when they do begin having sexual intercourse, they are delaying the process of becoming sexually active. Hopefully, this delay in initiation of sexual activity will act as safeguard for those who lack the essential knowledge on how to be sexually safe.

This study's findings on the main source of students' sexual knowledge were consistent with previous research. The primary source of sex education for the participants in this study was the participants' schools. The second main source was the participants' mothers, followed by the participants' friends. Students who received the majority of their sex education from their mothers had more sexual knowledge. This is interesting

when compared to the fact that students who received the majority of their sex education from their friends, actually had less sexual knowledge than those who received their education elsewhere. This suggests that it is important that parents provide thorough sex education to their children. Further, it is important for religious parents to discuss with their children their values regarding sexuality.

The research also found that participants who have waited in the past or are currently waiting to have sexual intercourse until marriage, or who have made a virginity pledge, have less sexual knowledge. Also, as found in previous research, if these participants do become sexually active, they are less likely to use contraception. Their lower sexual knowledge may be influencing their reduced use of contraception. If these individuals were better educated about the importance of contraception, they might be more likely to use it.

Question of Differences

One unexpected result of the study were the differences between the two secular colleges. The public secular college's sexual knowledge scores were more

similar to the private Christian college than to the private secular college. However, their sexual activity was more similar to the private secular college. These differences could possibly be due to several issues.

First, the public secular college is located in a more rural and politically conservative area than the private secular college. Second, the students from the public secular college often come from a lower socioeconomic environment. A large number of students from the public college come from working class families, whereas many of the students from the two private colleges come from upper-middle to upper class families. This difference in upbringing may have impacted the students' education (e.g. public versus private education) and exposure to life experiences (e.g. working from a young age, being latch-key children).

Third, the public secular college is located in an area with a larger number of Catholic and religious individuals. Fourth, there was a wider range in age at the public secular college. Finally, there was a higher percentage of freshmen from the public secular college.

The researchers were also surprised by the significantly lower number of responses from the private

secular college than the private Christian college. As explained in the methods section, the same method was used to gather surveys from these two schools. The lower response rate may be a result of less involvement with school activities and/or less use of the school mailroom/student center at the private secular college.

When the primary researcher was gathering surveys from the private secular college, she discussed this issue with a student mailroom worker. Interestingly, the student worker stated that students from the private secular college "have more to hide." In this remark, the student made a poignant statement that individuals with more sexual activity and/or possible negative consequences of that activity may be less likely to share their experiences. This concept may need to be examined through further research.

Limitations and Suggestions for Further Research

There were several limitations to this research. The research only evaluated three schools. It would be useful in further research to examine multiple schools from the three categories (private Christian, private secular and public secular). Using schools from two different

geographic locations also complicated the research. It would be helpful to look at schools from each category that are located in the same area.

As found with any research, more exploration is necessary. In the future, it would be important to look at other factors that could influence sexual knowledge, such as socioeconomic backgrounds and geographic-based and ethnic-based cultural differences. It would also be important to do a more thorough examination of the participants' high-risk sexual activity. This could include investigating how many sexual partners the participants have had or if they have discussed sexual history with their partner.

Implications of Research

There are several important implications of this research. For parents, it suggests the importance of providing sex education to their children. It is important to note how young the sexually active participants were when they first had sexual intercourse. This may be a wake up call for some parents who think that their children will wait until college to first have sexual intercourse. In reality, this study found that the

majority of teens who have had sex did so before age 17, and some as young as 12 and 13.

This study also suggests to sex educators, whether they be public health nurses, teachers or church staff, that religious youth are in need of more sex education. This study shows specific areas in which sex education is lacking, such as how to use contraceptive devices correctly and facts related to fertility. It may be necessary for sex educators to re-evaluate their current methods of providing sex education to religious youth.

This study is also important for the Christian community as a whole. It is imperative that this community understands the importance of providing their youth with better sex education, including a more thorough discussion of how to integrate sexuality and faith. Though many religious teens are not having sexual intercourse, this study found that they may be participating in oral sex. Further, when they do have sexual intercourse, they are not protecting themselves sufficiently. It is a possibility that because they are not protecting themselves during sexual intercourse, they may not be protecting themselves while participating in oral sex, as well.

Finally, social work academic programs should consider putting more emphasis on sexuality issues. It is important that social workers evaluate their own sexual knowledge and attitudes. Their personal biases or lack of information may negatively impact the relationship with the client if not carefully evaluated and dealt with.

Social workers need to examine how sexual knowledge may be impacting their religious clients. Clients may be facing issues such as unplanned pregnancies, sexually transmitted diseases or even relationship difficulties because of a lack of sexual knowledge. Further, clients' religious beliefs may be impacting their sexuality, including sexual concerns or dysfunctions. Thus, social workers should be open to further evaluation and discussion of sexual knowledge and activity with their clients.

School social workers also have the ability to encourage more sexual knowledge among students. It is important that school social workers advocate for more comprehensive sex education in the schools. When meeting with students individually, they should assess their sexual activity and knowledge. Finally, school social workers should encourage the students' parents to have

open dialog with their children regarding sexuality and their family's sexual values.

Summary

This research sheds new light on the sexual knowledge of students from a religious background. Parents, educators, and social workers must re-evaluate current methods of educating children and clients. If sexuality is viewed as a significant component of mental health, it must be a priority to help clients integrate their sexuality and faith.

APPENDIX A
INTRODUCTORY LETTER: CHRISTIAN
PRIVATE COLLEGE

Dear Student,

I am inviting you to participate in a study that examines the sexual knowledge of college students at both a Christian and secular college. Taking part in this study is completely voluntary and the results will be kept confidential. Whether or not you choose to participate, you are welcome to join in a **raffle for a \$30 gift certificate to Starbucks**. To enter, please place your name and address on the back of the raffle ticket and place it in the labeled box by the mailroom. The gift certificate will be mailed to the winner by DATE.

If you choose to participate in the study, I suggest that you take it to a quiet place where you can complete it in privacy. You will be asked to answer questions related to your religion, sexual practices, sexual knowledge, and education. It will take about **5-10 minutes** to fill out. You are free to not answer any questions that make you feel uncomfortable. When you have completed the survey, please insert it into the provided envelope, seal it and place it into the slot for local mail in the mailroom. You can keep the last page of this packet (the disclosure statement) for your own reference. Please return the survey by **DATE**.

There are minimal foreseeable risks in participating in this study. Some of the questions are a bit explicit and may cause you some discomfort. The nature of the survey means that I have to be direct in the questions I ask.

The potential personal benefit that may occur as a result of your participation in this study is achieving a **better understanding of your sexual knowledge**. If you realize that you are having difficulty answering the questions, you may want to seek information. To help you in this process, we have provided resources at the end of this packet in the disclosure statement. The researchers anticipate using the results to help sex educators, parents, and religious institutions in planning more effective education processes.

Please do not put your name anywhere on the survey and **all responses are anonymous**. Results will be summarized in such a way that you and the college you represent will not be identifiable. By returning the survey, it will be understood that you are giving your informed consent to participate.

Thank you for your time and consideration. If you have any questions about this research project, please contact the researcher's advisor, Rosemary McCaslin, Ph.D. at (909) 537-5507, rmccasli@csusb.edu. If you have questions about your rights as a participant, please contact the College Institutional Review Board (IRB) Chair at ***** or by e-mail at *****

If you choose to participate, please return survey by _____.

* This research project is being done as partial fulfillment for the requirements of the Masters of Social Work degree at California State University, San Bernardino by Maren Oslund. She is under the supervision of Dr. Rosemary McCaslin (California State University) and is assisted by Dr. Kaye Cook (Gordon College), Dr. Nancy Mary (California State University) and Ryan McBain. It has been approved by the Institutional Review Board's Department of Social Work Sub-Committee at California State University, San Bernardino and by the Institutional Review Board at ***** College.

APPENDIX B
INTRODUCTORY LETTER: PRIVATE
NON-CHRISTIAN COLLEGE

Dear Student,

I am inviting you to participate in a study that examines the sexual knowledge of college students at both a Christian and secular college. Taking part in this study is completely voluntary and the results will be kept confidential. Whether or not you choose to participate, you are welcome to join in a **raffle for a \$30 gift certificate to Starbucks**. To enter, please place your name and address on the back of the raffle ticket and place it in the labeled box by the mailroom. The gift certificate will be mailed to the winner by DATE.

If you choose to participate in the study, I suggest that you take it to a quiet place where you can complete it in privacy. You will be asked to answer questions related to your religion, sexual practices, sexual knowledge, and education. It will take about **5-10 minutes** to fill out. You are free to not answer any questions that make you feel uncomfortable. When you have completed the survey, please insert it into the provided envelope, seal it and place it into the slot for local mail in the mailroom. You can keep the last page of this packet (the disclosure statement) for your own reference. Please return the survey by **DATE**.

There are minimal foreseeable risks in participating in this study. Some of the questions are a bit explicit and may cause you some discomfort. The nature of the survey means that I have to be direct in the questions I ask.

The potential personal benefit that may occur as a result of your participation in this study is achieving a **better understanding of your sexual knowledge**. If you realize that you are having difficulty answering the questions, you may want to seek information. To help you in this process, we have provided resources at the end of this packet in the disclosure statement. The researchers anticipate using the results to help sex educators, parents, and religious institutions in planning more effective education processes.

Please do not put your name or other identifying information anywhere on the survey. **All responses are anonymous**. Results will be summarized in such a way that you and the college you represent will not be identifiable. By returning the survey, it will be understood that you are giving your informed consent to participate.

Thank you for your time and consideration. If you have any questions about this research project, please contact the researcher's advisor, Rosemary McCaslin, Ph.D. at (909) 537-5507, rmccasli@csusb.edu.

If you choose to participate, please return survey by _____.

* This research project is being done as partial fulfillment for the requirements of the Masters of Social Work degree at California State University, San Bernardino by Maren Oslund. She is under the supervision of Dr. Rosemary McCaslin (California State University) and is assisted by Dr. Kaye Cook (Gordon College), Dr. Nancy Mary (California State University) and Ryan McBain (Gordon College). It has been approved by the Institutional Review Board's Department of Social Work Sub-Committee at California State University, San Bernardino and by the Institutional Review Board at ***** College.

APPENDIX C
INTRODUCTORY LETTER: PUBLIC
NON-CHRISTIAN UNIVERSITY

Dear Student,

I am inviting you to participate in a study that examines the sexual knowledge of college students at both Christian and secular colleges. Taking part in this study is completely **voluntary** and the results will be kept **confidential**. If you choose to complete the survey, you will earn **1 extra credit point** for the participating psychology classes.

I suggest that you take it to a quiet place where you can complete it in privacy. You will be asked to answer questions related to your religion, sexual practices, sexual knowledge, and education. It will take about **5-10 minutes** to fill out. You are free to not answer any questions that make you feel uncomfortable. When you have completed the survey, please return it to the Peer Advising Center across from the ***** Department office in the ***** Building. Please return the survey by February 7th, 2005.

There are minimal foreseeable risks in participating in this study. Some of the questions are a bit explicit and may cause you some discomfort. The nature of the survey means that I have to be direct in the questions I ask.

The potential personal benefit that may occur as a result of your participation in this study is achieving a **better understanding of your sexual knowledge**. If you realize that you are having difficulty answering the questions, you may want to seek information. To help you in this process, we have provided resources at the end of this packet in the disclosure statement. The researchers anticipate using the results to help sex educators, parents, and religious institutions in planning more effective education processes.

Please do not put your name or other identifying information anywhere on the survey. **All responses are anonymous**. Results will be summarized in such a way that you and the college you represent will not be identifiable. By returning the survey, it will be understood that you are giving your informed consent to participate.

Thank you for your time and consideration. If you have any questions about this research project, please contact the researcher's advisor, Rosemary McCaslin, Ph.D. at (909) 537-5507, rmccasli@csusb.edu.

If you choose to participate, please return survey by February 7th.

* This research project is being done as partial fulfillment for the requirements of the Masters of Social Work degree at California State University, San Bernardino by Maren Oslund. She is under the supervision of Dr. Rosemary McCaslin (California State University) and is assisted by Dr. Kaye Cook (Gordon College), Dr. Nancy Mary (California State University) and Ryan McBain (Gordon College). It has been approved by the Institutional Review Board's Department of Social Work Sub-Committee at California State University, San Bernardino.

APPENDIX D
SEXUAL KNOWLEDGE SURVEY

A Survey of Religiosity, Sexual Knowledge and Behavior

The pages that follow ask some very explicit questions. No personal data, and no data that identifies the college you represent, will be reported.

Please complete as many questions as possible but you are free to choose not to answer any question you wish.

Demographic Information

1. Age: _____
2. Gender: M F
3. Marital Status: Single Engaged Married Divorced Widow
4. Year in school: 1st (Freshman) 2nd 3rd 4th 5th +

Sexuality and Sex Education

5. Source of the majority of your sex education to date:
Mother Father
Other Relative Friend
School Church
Books/Internet Other: _____
6. Did you go to a religious school for middle school or high school? Yes No
7. Did your middle or high school offer sex education? Yes No
8. Have you ever made a virginity pledge? Yes No
9. Do/did you plan to wait until marriage to have sex? Yes No
10. Have you participated in oral sex? Yes No
11. Have you had sexual intercourse? (if no, please go to #12) Yes No
 Age at first intercourse: _____
 Were you married at time of first intercourse? Yes No
 Did you use any form of contraceptive device? Yes No
 If no, why: _____
 If yes, what kind of device did you use?
 Condom Birth Control Pill/ Patch
 Birth Control Injection Other: _____
 Are you currently sexually active? Yes No
 Did you use a contraceptive device the last time you had sexual intercourse? Yes No
 Do you usually use a contraceptive device? Yes No
 What kind of device do you use most frequently?
 Condom Birth Control Pill/ Patch
 Birth Control Injection Other: _____
12. For men:
 # of children fathered: _____

13. For women:
of pregnancies: _____
of unplanned pregnancies: _____
of abortions: _____
of miscarriages: _____

14. Have you ever had a sexually transmitted disease? Yes No
Please circle all that apply:
Herpes Gonorrhea Chlamydia HIV Crabs Hepatitis Other: _____

Sexual Knowledge Questionnaire

1. Menopause, or change of life as it is often called, does not cause most women to lose interest in having sex.	True	False	Don't know
2. Petroleum jelly, Vaseline Intensive Care, baby oil, and Nivea are not good lubricants to use with a condom or diaphragm.	True	False	Don't know
3. Unless they are having sex, women do not need to have regular gynecological examinations.	True	False	Don't know
4. Almost all erection problems can be successfully treated.	True	False	Don't know
5. Teenage boys should examine their testicles ("balls") regularly just as women self-examine their breasts for lumps.	True	False	Don't know
6. It is usually difficult to tell whether people are or are not homosexual just by their appearance or gestures.	True	False	Don't know
7. A person can get AIDs by having anal (rectal) intercourse even if neither partner is infected with the AIDs virus.	True	False	Don't know
8. Most women prefer a sexual partner with a larger-than-average penis.	True	False	Don't know
9. There are over-the-counter spermicides people can buy at the drugstore that will kill the AIDS virus.	True	False	Don't know
10. Withdrawal is an effective means of contraception (birth control).	True	False	Don't know
11. An individual can get a sexually transmitted infection from giving or receiving oral sex.	True	False	Don't know

12. Failure to have an orgasm on the part of the female eliminates or substantially reduces the likelihood of becoming pregnant.	True False Don't know
13. Sperm retain their ability to fertilize (cause pregnancy) for one to two days following ejaculation (release).	True False Don't know
14. Menstrual blood is similar to a body "poison" or toxin that must be eliminated in order for a woman to remain healthy.	True False Don't know
15. Condoms will protect you from all sexually transmitted infections.	True False Don't know
16. A woman or teenage girl can get pregnant during her menstrual flow (her "period")?	True False Don't know
17. What do you think is the length of the average man's erect penis?	a. 2 inches e. 6 inches i. 10 inches b. 3 inches f. 7 inches j. 11 inches c. 4 inches g. 8 inches k. 12 inches d. 5 inches h. 9 inches l. Don't know
18. The single most important factor in achieving pregnancy is:	a. Time of exposure in the cycle b. Female's desire or wish to become pregnant c. Frequency of intercourse d. Female's overall state of health
19. Which of the following is the most dependable (effective) method of contraception?	a. Condom (male prophylactic) b. Diaphragm c. Rhythm d. Pill
20. Which of the following is the poorest or least dependable method of contraception?	a. Condom b. Diaphragm c. Post intercourse douching d. Rhythm
21. The rhythm method of contraception is:	a. Always effective b. Avoidance of intercourse during unsafe (or fertile) time c. A technique of intercourse d. None of the above

Religiosity

1. Do you consider yourself to be religious? Yes No

2. If so, what religion or faith do you align yourself with?
(please circle which of the following applies to you)
Atheist Buddhist
Christian Hindu
Jewish Muslim
Other: _____

3. If you are religious, do you consider yourself to be a part of a particular denomination or sect (ie. Baptist, Hasidic or Sunni)? Yes No
If so, which one? _____

4. Were you raised in a religious family? Yes No

5. If so, what religion or faith did your family align themselves with?
(please circle which of the following applies to you)
Atheist Buddhist
Christian Hindu
Jewish Muslim
Other: _____

6. How often do you go to church, synagogue, mosque or temple (not including school chapel)?
Every week 2-3x month
Once a month A few times a year
Only on Holidays Never

7. Are you involved in any other faith-based activities (bible studies, fund-raising, refugee work, choir, etc.)? Yes No

8. How often do you pray or meditate?
Often Sometimes Rarely Never

9. How important is religion to you?
Very Somewhat Not very important

APPENDIX E
DEBRIEFING STATEMENT

Study of Sexual Knowledge of College Students Debriefing Statement

Thank you for your participation in this research on the difference in sexual knowledge of students from Christian and secular colleges. During the study you were asked questions about sex, sexually transmitted diseases and pregnancy. This study will hopefully give more information about differences or similarities in sexual knowledge, sex education and sexual activities of students at Christian and secular colleges. This is an important issue because it assists sex educators, parents, and religious institutions in planning for more effective education processes.

If you feel the need to speak with someone about feelings or personal concerns that arose while completing this study, counselors are available to speak with you. If you have any questions or concerns about the study, please feel free to contact the researcher's advisor, Rosemary McCaslin, Ph.D. at (909) 537-5507, or by email at rmccasli@csusb.edu. The results of this study may be obtained from the Pfau Library at California State University, San Bernardino by the end of September, 2006.

This researcher, Maren Oslund, is a student in the Master of Social Work program at California State University, San Bernardino and is under the supervision of Rosemary McCaslin, Ph.D..

For further information about sex, contraceptives and protection against sexually transmitted diseases or unintended pregnancy:

Books: Intended for Pleasure by Ed Wheat and Gaye Wheat
 The Gift of Sex by Clifford Penner & Joyce Penner

Websites: Teens Health:
 http://kidshealth.org/teen/sexual_health/
Sexual Health Network: www.sexualhealth.com
Go Ask Alice! (site developed by Columbia
University's Health Education Program):
 www.goaskalice.columbia.edu
Alan Guttmacher Institute: www.guttmacher.org
Advocates for Youth: www.advocatesforyouth.org

APPENDIX F
DATA TABLES

Demographic Information: Age

School	<u>Age</u>		
	x	s.d.	range
Private Christian	19.72	1.31	18-23
Private Secular	19.71	1.38	18-24
Public Secular	20.33	3.51	18-39

School	<u>Year in School</u>		
	x	s.d.	range
Private Christian	2.47	1.14	1-5
Private Secular	2.5	1.17	1-5
Public Secular	2.09	1.3	1-5

Demographic Information: Gender & Marital Status

Variable	Christian		Private Secular		Public Secular		Total	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
Gender								
Male	77	24.6%	16	24.2%	18	22.5%	111	24.1%
Female	236	75.4%	55	75.8%	62	77.5%	348	75.7%
Marital Status								
Single	298	94.9%	64	97.0%	64	80.0%	426	92.6%
Engaged	13	4.1%	2	3.0%	9	11.3%	24	5.2%
Married	3	1.0%	0	0.0%	6	7.5%	9	2.0%
Divorced	0	0.0%	0	0.0%	1	1.3%	1	0.2%
Widowed	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Religions

Variable	Christian		Private Secular		Public Secular		Total	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
Religion								
Christian	310	99.7%	38	88.4%	40	60.6%	388	92.4%
Other Religion	0	0.0%	2	4.7%	20	30.3%	22	5.2%
Atheist	1	0.3%	2	4.7%	1	1.5%	4	1.0%
Buddhist	0	0.0%	0	0.0%	3	3.8%	3	0.7%
Jewish	0	0.0%	1	2.3%	1	1.5%	2	0.5%
Muslim	0	0.0%	0	0.0%	1	1.5%	1	0.2%

Sexual Activity

ORAL SEX	School			Total
	Christian	Private Secular	Public Secular	
Yes	108	59	46	213
No	205	7	33	245
Total	313	66	79	458

Chi-Square= 71.282 df= 2 p= .000

INTERCOURSE	School			Total
	Christian	Private Secular	Public Secular	
Yes	56	54	51	161
No	242	10	27	279
Total	298	64	78	440

Chi-Square= 131.544 df= 2 p= .000

CURRENTLY	School			Total
	Christian	Private Secular	Public Secular	
Yes	29	47	44	120
No	29	6	11	46
Total	58	53	55	166

Chi-Square= 23.124 df= 2 p= .000

Sex Before Age 17

SEX BEFORE AGE 17	School		Total
	Christian College	Secular Colleges	
Yes	14	47	61
No	39	56	95
Total	53	103	156
Chi-Square= 5.426 df= 1 p= .020			

Sexual Knowledge Questionnaire

Variable	Christian		Private Secular		Public Secular		Total	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
#1: Menopause, or change of life as it is often called, does not cause most women to lose interest in having sex.								
Correct	166	52.9%	42	36.4%	25	31.3%	233	50.7%
Incorrect	147	46.8%	24	63.6%	55	68.8%	226	49.1%
#2: Petroleum jelly, Vaseline Intensive Care, baby oil, and Nivea are not good lubricants to use with a condom or diaphragm.								
Correct	123	39.2%	51	22.7%	49	61.3%	223	48.5%
Incorrect	189	60.2%	15	77.3%	31	38.8%	235	51.1%
#3: Unless they are having sex, women do not need to have regular gynecological examinations.								
Correct	272	86.6%	66	100.0%	66	82.5%	404	87.8%
Incorrect	39	12.4%	0	0.0%	14	17.5%	53	11.5%
#4: Almost all erection problems can be successfully treated.								
Correct	103	66.6%	37	42.4%	30	62.5%	170	37.0%
Incorrect	209	32.8%	28	56.1%	50	37.5%	287	62.4%
#5: Teenage boys should examine their testicles ("balls") regularly just as women self-examine their breasts for lumps.								
Correct	240	76.4%	65	95.5%	72	90.0%	377	82.0%
Incorrect	72	22.9%	1	1.5%	8	10.0%	81	17.6%
#6: It is usually difficult to tell whether people are or are not homosexual just by their appearance or gestures.								
Correct	194	61.8%	41	62.1%	43	46.3%	278	60.4%
Incorrect	118	37.6%	25	37.9%	37	53.8%	180	39.1%
#7: A person can get AIDs by having anal (rectal) intercourse even if neither partner is infected with the AIDs virus.								
Correct	229	72.9%	48	72.7%	43	46.3%	320	69.6%
Incorrect	85	27.1%	18	27.3%	37	53.8%	140	30.4%
#8: Most women prefer a sexual partner with a larger-than-average penis.								
Correct	137	43.6%	35	53.0%	23	28.8%	195	42.4%
Incorrect	176	56.1%	31	47.0%	57	71.3%	264	57.4%
#9: There are over-the-counter spermicides people can buy at the drugstore that will kill the AIDS virus.								
Correct	288	91.7%	62	6.1%	74	92.5%	424	92.2%
Incorrect	26	8.3%	4	93.9%	6	7.5%	36	7.8%

Variable	Christian		Private Secular		Public Secular		Total	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
#10: Withdrawal is an effective means of contraception (birth control).								
Correct	246	78.3%	56	84.8%	45	43.8%	347	75.4%
Incorrect	67	21.3%	10	15.2%	35	56.3%	112	24.3%
#12: Failure to have an orgasm on the part of the female eliminates or substantially reduces the likelihood of becoming pregnant.								
Correct	260	82.8%	61	92.4%	62	77.5%	383	83.3%
Incorrect	51	16.2%	5	7.6%	18	22.5%	74	16.1%
#13: Sperm retain their ability to fertilize (cause pregnancy) for one to two days following ejaculation (release).								
Correct	174	55.4%	46	69.7%	35	43.8%	255	55.4%
Incorrect	138	43.9%	19	28.8%	44	55.0%	201	43.7%
#14: Menstrual blood is similar to a body "poison" or toxin that must be eliminated in order for a woman to remain healthy.								
Correct	173	55.1%	28	42.4%	26	32.5%	227	49.3%
Incorrect	139	44.3%	38	57.6%	53	66.3%	230	50.0%
#15: Condoms will protect you from all sexually transmitted infections.								
Correct	290	92.4%	54	81.8%	50	62.5%	394	85.7%
Incorrect	23	7.3%	12	18.2%	30	37.5%	65	14.1%
#16: A woman or teenage girl can get pregnant during her menstrual flow (her "period")?								
Correct	166	52.9%	48	72.7%	61	76.3%	275	59.8%
Incorrect	142	45.2%	17	25.8%	19	23.8%	178	38.7%
#17: What do you think is the length of the average man's erect penis?								
Correct	237	75.5%	60	90.9%	41	51.3%	338	73.5%
Incorrect	75	23.9%	5	7.6%	39	48.8%	119	25.9%
#18: The single most important factor in achieving pregnancy is:								
Correct	260	82.8%	54	81.8%	45	56.3%	359	78.0%
Incorrect	48	15.3%	11	16.7%	34	42.5%	93	20.2%
#19: Which of the following is the most dependable (effective) method of contraception?								
Correct	122	38.9%	16	24.2%	21	26.3%	159	34.6%
Incorrect	46	14.6%	12	18.2%	55	68.8%	113	24.6%
#20: Which of the following is the poorest or least dependable method of contraception?								
Correct	107	34.1%	12	18.2%	56	70.0%	175	20.4%
Incorrect	57	18.2%	17	25.8%	20	25.0%	94	38.0%

*Note: Questions #17-20 have multiple choice answers. See Appendix: Sexual Knowledge Questionnaire for

Religious School

RELIGIOUS SCHOOL		School			Total
		Christian	Private Secular	Public Secular	
Yes		87	11	10	108
No		227	55	70	352
	Total	314	66	80	460
Chi-Square= 10.197 df= 2 p= .006					

Source of Sex Education

Variable	Christian		Private Secular		Public Secular		Total	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
<u>Source of Sex Education</u>								
School								
Yes	151	48.7%	33	50.8%	33	42.9%	217	48.0%
No	159	51.3%	32	49.2%	44	57.1%	235	52.0%
Friend								
Yes	134	43.1%	29	44.6%	28	36.4%	191	42.2%
No	177	56.9%	36	55.4%	49	63.6%	262	57.8%
Mother								
Yes	95	30.5%	19	29.2%	17	22.1%	131	28.9%
No	216	69.5%	46	70.8%	60	77.9%	322	71.1%
Books/ Internet								
Yes	56	18.0%	8	12.3%	12	15.6%	76	16.8%
No	255	82.0%	57	87.7%	65	84.4%	377	83.2%
Father								
Yes	42	13.5%	5	7.7%	6	7.8%	53	11.7%
No	269	86.5%	60	92.3%	71	92.2%	400	88.3%
Other								
Yes	27	8.7%	7	10.8%	3	3.9%	37	8.2%
No	284	91.3%	58	89.2%	74	96.1%	416	91.8%
Church								
Yes	17	5.5%	1	1.5%	7	9.1%	25	5.5%
No	294	94.5%	64	98.5%	70	90.9%	428	94.5%
Other Relative								
Yes	8	2.6%	3	4.6%	8	10.4%	19	4.2%
No	303	97.4%	62	95.4%	69	89.6%	434	95.8%

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