

Abstract

Sexual Behaviors of College Students

by Shelita Robertson

April 2010

Director: Sharon Ballard, PhD

DEPARTMENT OF CHILD DEVELOPMENT AND FAMILY RELATIONS

This research study examined sexual behaviors of college students in relation to the effects of race, socioeconomic status, and religious commitment. One hundred and ninety eight ECU students responded to a survey administered through Perseus. Data were analyzed using the SPSS analysis software. Results indicated that those with a high religious commitment have a lower level of sexual risk-taking. There was a significant difference between college student's religious commitment and sexual risk-taking. Students with low and moderate religious commitment participated in moderate sexual risk-taking behaviors. When variables were assessed together, there were no apparent differences in sexual risk-taking behaviors based on race or religious commitment, which indicates that race and religious commitment are interrelated and the effects of each independently are difficult to determine. These research findings can be useful in guiding the development of culturally-relevant sexuality education programs.

©Copyright 2010  
Shelita Robertson

Sexual Behaviors of College Students

A Thesis

Presented to

The Faculty of the Department of Child Development and Family Relations

East Carolina University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by Shelita Robertson

April 2010

Sexual Behaviors of College Students

by

Shelita Robertson

APPROVED BY:

DIRECTOR OF THESIS: \_\_\_\_\_  
Sharon Ballard, PhD

COMMITTEE MEMBER: \_\_\_\_\_  
Alan Taylor, PhD

COMMITTEE MEMBER: \_\_\_\_\_  
Paige Averett, PhD

CHAIR OF THE DEPARTMENT OF CHILD DEVELOPMENT AND FAMILY RELATIONS:

\_\_\_\_\_  
Cynthia Johnson, PhD

DEAN OF THE GRADUATE SCHOOL:

\_\_\_\_\_  
Paul J. Gemperline, PhD

## TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION.....	1
Literature Review.....	2
Conceptual Framework.....	3
Symbolic Interaction Theory.....	4
Human Ecological Theory.....	6
Symbolic Interaction and Human Ecological Theories.....	7
Sexual Behaviors .....	8
Premarital Sex.....	8
Sexual Risk-Taking.....	9
Religious Commitment.....	11
Socioeconomic Status and Race.....	13
CHAPTER TWO: METHODS.....	17
Sample and Procedures.....	17
Measures.....	18
CHAPTER THREE: RESULTS.....	22
Sample Description.....	22
Religious Commitment and Sexual Risk-Taking.....	22
Race and Sexual Risk-Taking.....	23
Socioeconomic Status and Sexual Risk-Taking.....	24
Religious Commitment, Race, Socioeconomic Status and Sexual Risk Taking...24	
Socioeconomic Status and Religious Commitment.....	24
Race, Religious Commitment, and Sexual Risk Taking.....	25

Socioeconomic Status, Religious Commitment and Sexual Risk Taking.....26

Discussions.....28

Limitations.....31

Conclusion.....32

References.....33

APPENDIX A: SURVEY DOCUMENTS

APPENDIX B: SEXUAL BEHAVIORS OF COLLEGE STUDENTS SURVEY

## LIST OF TABLES

1. Determining Socioeconomic Status of Participants.....	20
2. Religious Commitment and Sexual Risk Taking.....	22
3. Religious Commitment and Family Socioeconomic Status.....	25
4. Race, Religious Commitment, and Sexual Risk Taking.....	26
5. Socioeconomic Status, Religious Commitment and Sexual Risk Taking.....	27

## CHAPTER ONE: INTRODUCTION

Young adults who choose to have sexual intercourse often fail to take the necessary precautions to ensure a safe and healthy experience (Broman, 2007; Cooper, 2002). For example, approximately one-half of people who are sexually active will acquire a sexually transmitted disease by age 25 (Centers for Disease Control, 2005). The focus of this paper is to examine factors which influence the sexual behaviors of college students. Specifically, the purpose of this study is to explore the sexual risk-taking behaviors of college students and how they are influenced by their religious commitment, race, and socioeconomic status. Several researchers and scholars have agreed on the association shared between religiosity, ethnicity, and sexual attitudes regarding adolescents; (Evans, Cullen, Dunaway, Burton, 1995; Morrison-Beedy, Carey, & Feng, 2008); however, the same association has not been adequately researched within college students in the Eastern part of North Carolina (Barkan, 2006; Browne & Higgins, 2008; Ickovics, Beren, Grigorenko, Morrill, Druley, & Rodin, 2002). It is possible that some inconsistent findings and inadequate research within this area could be present as a result of cultural differences. This study will contribute to research that specifically focuses on the sexual behaviors and conduct of college students who are a part of the “Bible Belt.” The results can be used to design effective interventions and programs that raise awareness and maintain the health of all college students worldwide.

Young adults’ sexual behaviors before college and while in college have become a serious concern for professionals in the health sciences field (Broman, 2007; Cole, Dodge, Reece, Sandfort, 2004; Cooper, 2002). An estimated 19 million new cases of sexually transmitted diseases are reported per year among individuals ages 15 to 24 (Centers for Disease Control, 2007). As previous research (Centers for Disease Control, 2007; Trepka, Kim, Pekovic,

Zamor, Velez, & Gabaroni, 2008) has shown, adolescents are engaging in sexual intercourse at higher rates - 47% of high school students in 2005 reported having sexual intercourse. When separated into gender and ethnicity, Black (44%) and Hispanic (27%) male adolescents were much more likely to engage in early sexual intercourse than Non-Hispanic White (16%) male adolescents. For females, Black (23%) and Non-Hispanic (13%) adolescents were more likely to engage in early sexual involvement than Hispanic (13%) female adolescents (Centers for Disease Control, 2007). Sexual activity alone may not be seen as something that is harmful in the eyes of society; however, when the rates of sexual transmitted diseases continue to progress and the rates of unintended pregnancy increase (Witte, El-Bassel, Gilbert, Wu, & Chang, 2007), there is a need for closer observation on the behaviors and practices of the population.

### Literature Review

Since the sexual revolution, attitudes towards sexual experiences have been liberated (Christensen & Gregg, 1970; Herdt, Russell). Interestingly enough, as the years progress, Americans have become more open to discussing sexual behaviors like sexual intercourse, sexual orientation, and sexual education. Rather than continually viewing behaviors as negative and extremely regulated, we are seeing an increase in consideration of the positive aspects of sexuality in hopes to gain a better understanding of people's responsible sexual behavior (Russell, 2005). By viewing sexuality from a positive perspective, we might be able to better determine those behaviors that lead to positive outcomes of sexuality rather than negative outcomes. In this literature review, we will explore the common sexual behaviors displayed by adolescents and emerging adults, sexual risk taking behaviors and influences on sexual risk-taking amongst emerging adults. Literature on each variable (race, socioeconomic status,

religious commitment) will be explored and presented to illustrate the common associations and themes found throughout research.

### *Conceptual Framework*

Family science researchers promote the use of theory within research studies to increase the possibility of inductively leading to the creation of a new theory. When existing theory is used in research studies, it allows for expectations to be made prior to the completion of the study (White & Klein, 2002). A theory is an interpretation of an observation (Bengston, Acock, Allen, Dilworth-Anderson, Klein, 2005). An alternative explanation of what theory means is “theorizing is the process of systematically formulating and organizing ideas to understand a particular phenomenon. A theory is a set of interconnected ideas that emerge from this process” (Boss, Doherty, LaRossa, Schumm, & Steinmetz, 1993, p.20).

White and Klein (2002) identified basic building blocks of all scientific theories which include concepts, propositions, and relations. The central idea of a concept focuses on the ability to organize the overall experience as a result of an event. The interactions between different concepts are identified as relations. Relations serve as verbs in theory. They have the ability to acknowledge association between two or more concepts. When concepts are able to be interchanged and are “linked in a meaningful way” this is considered a proposition (p.11). In theory, propositions can account for cause and effect relationships to be established (White & Klein, 2002). Theoretical concepts, relations, and propositions, specifically those in symbolic interaction and human ecological theory, guide this research study.

### *Symbolic Interaction Theory*

Symbolic interaction theory is a theory that allows commonly shared symbols to be used in order for humans to survive and adapt to their environment. George Herbert Mead (1934), made contributions that allow us to evaluate the major impact of social interactions and social networks and their influence on our behaviors specific to this study, our sexual behaviors. Mead's philosophy was centered on the effects and influence that we as humans have while in various environments and under various stipulations. His contributions expressed how individuals are "socially mediated" and may take on the perspective of others. Role, role strain, and definition of the situation are all common terms associated with symbolic interaction theory and will assist in guiding this study.

When sexual interaction and practices are observed, basic concepts from the symbolic interaction theory can be used to evaluate the behaviors. Harper, Gannon, Watson, Catania, and Dolcini, (2004) used symbolic interaction to explain the roles shared in sexual behaviors inspired by interactions. Specifically, the participants were able to discuss how they conceptualized communicating with their friends, thoughts and feelings about dating, sexual activity, dating or sexual partners, in addition to how they communicate this information with peers. Mead (1934) defined roles as the place or function of the individual. A young adult in a relationship may have the role of being a partner who is responsible for providing physical, emotional, and social support. Ensuring that expectations and role requirements are understood is a very important part of role concept. In some cases, the individual may not behave as expected which can ultimately result in "role strain." When role strains take place, there is a lack of resources or behaviors to function appropriately.

In 1928, Thomas and Thomas used the definition of the situation to address how our actions have consequences which dictate our behaviors and problem solving techniques. Young adults must interpret what is meant by certain behaviors and actions of their peers which is one of the common assumptions of symbolic interaction; the meaning behind human behavior must be understood (White & Klein, 2002). For example, a girl has a close relationship with a boy and she begins to develop feelings towards the boy and he does not understand why. In this scenario, the girl failed to understand the meaning for the boy's actions towards her. In some situations, when behaviors are misinterpreted, young adults run the risk of putting themselves in a place of vulnerability.

Understanding that all human beings have their own individual mind is another basic assumption that is associated with this theory. Consider that our brain and other organs are developed as a result of our genetic make-up and we are able to process and internalize information that we acquire through interactions and experiences. As an individual interacts with other constituents of their environment, they are guided by society as a whole. For example, if a student is in a sexual health class and they are discussing personal experiences with contraceptives, they may choose to only share what they feel is appropriate given the regulations and guidelines established within the classroom setting. When one engages in conversation or activities with members of their environment often times, social norms and values are respected and dictate the type of conduct one will display. Because we are unable to make common associations and implications without symbols in our society, individuals' thought processes and self-concepts are influenced on a daily basis.

### *Human Ecological Theory*

The human ecological theory can provide insight into examining sexual behaviors of individuals. The theory is centered on the influence of environmental factors and the effects that these factors generate in our lives. Hawley (1986) reported that the central concept of the human ecological theory is ecosystem. An ecosystem is the relationship held by at least two mutually dependent entities which allow the population to function as a whole. The ecosystem of a young adult college student would be comprised of family members, roommates, professors, and classmates. Whereas, a young adult that is not a college student may have an ecosystem that consists of only family members, fellow employees, and limited friends. A person's niche or function in the system may be influenced by outward stimuli allowing the impact of environmental factors and the effects in which they generate in our lives to be examined and later evaluated.

Bronfenbrenner (1979) argued that humans function in a distinct set of guidelines within their ecological environment. Bronfenbrenner's model is composed of the microsystem, mesosystem, exosystem, macrosystem and chronosystem. The microsystem is defined as the immediate environment in which a person participates in interpersonal relationships. For example, a young adult's microsystem could consist of immediate family or roommates that the person interacts with consistently. The next system is the mesosystem which encompasses the interactions between two or more microsystems. A young adult's exosystem does not directly involve them, however; they are affected as a result of what takes place in the system. For example, a person's religious beliefs and values may have regulations that were not established by the individual directly; however the person's interactions may be dictated by the standards. The last system identified by Bronfenbrenner (1979) serves as the blueprint of a

person's society or culture and is classified as the macrosystem. A young adult's macrosystem could consist of a culture of college students, fellow military personnel, or young adults that are not in school or other professional avenues. One additional system that was recently been added to this theory incorporates the events or changes that transpire over one's lifetime (Bronfenbrenner, 2005). It is called the chronosystem. An example of someone's chronosystem could be experiencing and adjusting to a recent divorce or death of a loved one.

One example of how this theory has been used in previous research within the area of sexuality was a study conducted by Small and Luster (1994). In this study, the human ecological theory was used in an effort to examine the interactions between adolescent's sexual intercourse and other factors such as, physical abuse, neighborhood monitoring, and attachment to school. Small and Luster (1994) found that there were several risk factors that could determine whether or not adolescents were sexually experienced.

The human ecological theory allows us to assume that humans, both individuals and groups are comprised of biological (i.e. race) and social natures (i.e. socioeconomic status). In addition to this assumption, as social beings, humans are dependent on other humans for survival (Bubolz & Sontag, 1993). Depending on other people to survive leads us to consider the basic interactions and social natures that young adults experience and how it influences their sexual practices.

### *Symbolic Interaction and Human Ecological Theory*

Symbolic Interaction and Human Ecological Theories are able to be used together to explain human interactions. Both theories, in some facet, allow one's environment to be evaluated to determine how behaviors and interactions are internalized or viewed

(Bronfenbrenner, 1979; Mead, 1934). The ecological system of an individual is comprised of symbols that have been culturally and socially derived (White & Klein, 2002). For example, one's exosystem may include some form of commitment to a particular religion. The doctrine that was established within the religion may consist of several symbolic or customary signs that govern the individual's actions and behaviors. Because of the influence of symbols on the perception of what is taking place (i.e. wearing a cross and communicating that your religion is against premarital sex) our behaviors are influenced (i.e. refraining from engaging in premarital sex). One variable in this study, examines how religious commitment (individual's exosystem) dictates individual's willingness to engage in sexual risk taking behaviors (individual's microsystem). By viewing this, we are able to observe the connection of our behaviors (body language-symbols) to our environment (increase in sexually transmitted diseases, etc.).

Another main symbol in this study is sex. Sex to some people is seen as procreation, a way to give life, a way to stay healthy or even relieve stress (Russell, 2005). Individuals that are religiously committed may think that sexual intercourse is something that should be shared only by a husband and wife (Barkan, 2006). What sex represents may vary based on the person's beliefs, values, and morals. Symbolic Interaction Theory and Human Ecological Theory affords us the opportunity to examine this interaction more closely considering the influence of symbols and the various systems that create who we are as individuals.

### *Sexual Behaviors*

#### *Premarital sexual intercourse*

In the past, individuals, both males and females, have engaged in sexual intercourse before marriage (Finer, 2007). Since the early 1960s attitudes towards premarital intercourse

have changed; transitioning from something that was seen as “wrong” to acceptable in America (Harding & Jencks, 2003). Sexual intercourse is defined as the penetration of the vaginal or anal area by a partner (male or female). In research sexual behaviors of individuals are commonly viewed as personal and social problems (Russell, 2005). Throughout the development of sexual health today, we have seen an increase in sexually transmitted diseases, early onset of sexual activity, and sexual risk taking (Centers for Disease Control, 2005; Russell, 2005).

### *Sexual risk taking*

When entering college, students have the freedom to live without the demands of t parental rules and close supervision. Students are able to become involved in academic and social activities with their peers and may even participate in common behaviors known to most college students such as drinking and partying. Involvement in such behaviors increases the likelihood of sexual risk taking (Langer, Warheit, & McDonald 2001; Santelli, Robin, Brener, & Lowry, 2001).

Sexual intercourse can be identified as “risky” when someone places themselves in a predicament where they can be harmed or cause harm to another individual (i.e. not using a condom, contracting a sexually transmitted disease) (Trepka et. al., 2008). Being aware of the potential harm that is associated with sexual risk taking demonstrates the overall competence of the person. Sexual competence is the awareness or understanding of actions or common practices in relation to sexual behaviors. As shown throughout research (Barkan, 2006; Earle, Perricone, Davidson, Moore, Harris, & Cotton, 2007; Murray, Ciarrochi, & Murray-Swank, 2007) sexual behaviors, including risk taking, has been influenced by religious involvement, beliefs, values, and overall commitment. Recent research (Ickovics, Beren, Grigorenko, Morrill,

Druley, & Rodin, 2002; Randolph, Torres, Gore-Felton, Llyod, & McGarvey, 2009) evaluated the consequences for adolescents, emerging adults and older adults who chose to engage in sexual intercourse. They concluded that choosing to engage in any form of sexual activity would place people at risk for contracting sexually transmitted diseases, emotional harm or dependence, or even lead to date rape. In college students, risky behaviors include increased numbers of sexual partners, early onset of sexual intercourse, anonymous sex, sex without a condom, and common alcohol binging (Fisher & Fisher, 1993; Jemmott & Jones, 1993; Langer et. al., 2001; Netting, 1992)

According to the Centers for Disease Control (2007), people who have contracted a sexually transmitted disease are two out of five times more likely than a person who has never had a sexual transmitted disease to acquire HIV infection. In 2006, there were approximately 1.1 million people diagnosed in addition to the 42, 655 new cases of HIV/AIDS in 2007 amongst adults, children, and adolescents (Center for Disease Control, 2007). The use of contraceptives could reduce this amount substantially. Condoms are a highly effective contraceptive when used properly to prevent sexually transmitted diseases and pregnancy (Cates, 2001). Inconsistent use of this contraceptive method could lead to the contraction of diseases including but not limited to HIV, AIDS, Gonorrhea, Chlamydia, Trichomonias, or Syphilis (Centers for Disease Control, 2009). Throughout research, condom use has also been related to condom failure, condom use self efficacy, and incomplete condom use (Farmer & Meston, 2006; Sanders, Graham, Yarber, & Crosby, 2008) College student's consistent condom use is low and can be linked to the increase of contracting a sexually transmitted disease or becoming pregnant during emerging adulthood (Center for Disease Control, 2009; Eisenberg, 2001).

Sexual risk taking has been associated with alcohol consumption (Randolph et. al, 2009). Similarly, Anderson and Mathieu (1996) reported that 33.2% male and 17.4% female participants stated that they allowed themselves to drink “more than normal” at least one time in order to have sex easier. In addition to drinking, some emerging adults report being involved in substance abuse (Anderson & Mathieu, 1996; Santelli, et. al., 2001). Involvement in both substance and alcohol use are common predictors of sexually risk taking behaviors (Santelli, et. al., 2001).

### *Religious Commitment*

One of the nation’s most conservative regions is the South (Erikson, Wright, & McIver, 1993). Characterized by conservative attitudes and conventional policies of residents within North Carolina, one expects that religiosity would be a founding principle in the explanation of everyday interactions (Erikson, Wright, & McIver, 1993). North Carolina is a religiously diverse state (Wortham, 2006). Over time the religious economy of North Carolina continues to change causing robust effects on how actions and interactions are displayed on a daily basis (Wortham, 2006). Living in the bible belt, though it has been defined in several different contexts, primarily means that there are several churches (city, state, or region) that profess a literal interpretation of the bible resulting in strong beliefs and practices that are solely governed by the Bible (Gin, Walker, Poulson, Singletary, Cyrus, & Picarelli, 1998; Heatwole, 1978). Some denominations that may fall under this category include, but are not limited to, Southern Baptist Convention, Lutheran Church, Seven Day Adventist, and General Baptist churches.

Religiosity is a common set of beliefs held by an individual or group that governs their conduct Barkan (2006). Beginning in the 1970s, research studies have demonstrated how

religiosity has decreased the involvement in premarital sexual encounters (Barkan, 2006; Leffkowitz, Gillen, Shearer & Boone, 2004; Rostosky, Wilcox, Wright, & Randall, 2004). In one study conducted by Leffkowitz, et. al., (2004) participants who were religious were less likely to participate in sexual intercourse. Common trends found throughout the research on religiosity ultimately demonstrates how young adult students and those transitioning into college are protected by their beliefs and values and decrease the rate of initiating sexual activity (Zaleski & Schiaffino, 2000). Zaleski and Schiaffino (2000) conducted a study that indicated that students who were entering into college and were sexually active had lower levels of intrinsic and extrinsic religiosity. Extrinsic religiosity refers to the use of religion for outward reward such as status and self-justification. In contrast, intrinsically motivated people allow their religion to shape their everyday experiences and interactions (Ball, Armistead, & Austin, 2003). Aside from the expression of religiosity, extrinsically and intrinsically, participation in religious services and other faith-based activities have proven to serve as protective factors for premarital sexual activity (Ball et. al., 2003; Barkan, 2006). When emerging adults maintain participation in faith-based activities where they are “accountable” for their actions to other members of the faith, then they less likely to participate in sex; however, individuals who were previously participating in sexual activity and convert to a new doctrine of the faith may not be protected by their religiosity (Zaleski & Schiaffino, 2000).

Interestingly, there are some religious individuals who choose to engage in sexual intercourse but use contraceptives and receive regular sexually transmitted disease screenings (Bearman & Bruckner, 2001; Fehring, Cheever, German, Philpot 1998; Miller & Olson, 1988; Zaleski & Schiaffino, 2000). In previous research, individuals who were religiously involved were more likely to practice abstinence, engage in sexual intercourse less, and have fewer

partners (Murray-Swank, Pargament, & Mahoney, 2007). In regards to contraceptive use, studies have shown that college students who attest to having high levels of religiosity are less likely to use condoms (Campbell & Stewart, 1992; Cochran & Beeghley, 1991; Davidson, Moore, & Ullstrup, 2004; Woodroof, 1985; Zaleski & Schiaffino, 2000). High levels of religiosity are characterized by high levels of religious beliefs (being religiously committed, believing in life after death), attending church regularly (at least once per week), and extrinsically displaying your faith (Cochran & Beeghley, 1991; Davidson, Moore, & Ullstrup, 2004; Zaleski & Schiaffino, 2000).

### *Socioeconomic Status and Race*

Socioeconomic status and race are two common background factors that have been found to influence both religiosity and sexual behaviors (Ickovics et. al., 2002; Trepka et. al., 2008). In this study we examined the interaction between these factors and how they relate to religiosity and sexual behaviors.

Socioeconomic status helps to determine someone's social class or rank in our society. Being a part of a certain socioeconomic status allows societal expectations and assumptions to be made based on facts related to one's salary, education, and marital status, etc. Navarro (1990) believed that socioeconomic status is an extremely important factor in terms of being a health indicator over race and ethnicity. Considering socioeconomic status in research prevents racial prejudices or possible stereotypes (Williams & Collins, 1995). For example, if an African American person agrees to participate in a study that fails to include questions dealing with socioeconomic status, the researcher may automatically assume that they are from a lower socioeconomic status as a result of being a minority. However, if the study includes questions

pertaining to their socioeconomic status-income, and education level they will be able to make inferences based on actual facts instead of assumptions.

When socioeconomic status is explored in regards to sexual activity findings have shown that some behaviors can be accepted in one class that may not be accepted in others. Ickovics et. al. (2002) found that women who are from a higher socioeconomic status were more likely to engage in sexual intercourse without protection with fewer partners as a result of having consistent partners and feeling “safe.” In contrast, women emerging into adulthood that were from a lower socioeconomic status were more likely to experience higher levels of stress related to having several sexual partners and being in open relationships with riskier partners.

There is one trend that is noticeable when socioeconomic status is paired with education. This trend is directed to the level of education achieved by the mother. Females whose mothers received some form of post high school education are less likely to engage in sexual intercourse during adolescent years (Meir, 2003; Rostosky et. al., 2003). In addition, the mother’s education also delayed male’s likelihood of engaging in sexual intercourse before marriage (Meir, 2003; Rostosky et. al., 2003). The mother’s education has such an impact on the behaviors and conduct of students as a result of the time that is shared between the mother and the child (Meir, 2003).

Outside of the levels of the mother’s education, researchers have explored the influence of personal educational aspirations of students and how their socioeconomic status influences their sexual behaviors. Baumer and South (2001) introduced the notion that the economy and the lack of educational institutions available in distressed neighborhoods cause adolescents to be less attentive to the use of barriers that prevent sexually transmitted diseases and pregnancy. Hence,

the influx of sexually transmitted diseases and high pregnancy rates in low poverty communities. Adolescents who do not have a serious desire to further their education after high school are more likely to engage in sexual intercourse more often, at an earlier age and without using any form of contraceptive (Lauristen, 1994; Small & Luster, 1994). These findings are consistent with the human ecological theory which emphasizes the effects of our environment on our behaviors and decision making (Bronfenbrenner, 2005).

While research studies on college student's sexual practices are on the rise, conclusions with respect to how sexual behaviors are influenced specifically by race are unclear. In many studies, researchers fail to include sufficient information based on the racial composition of its participants (Cooper, 2002). However, there are a small number of studies that do report important racial differences amongst the participants in their study (Cooper, Pierce & Huselid, 1994; Trepka, et. al., 2008) and these differences will be reviewed below. Barkan (2006) examined the relationship between religiosity and the number of sexual partners before marriage of never married adults. Based on theoretical discussions involving religiosity and socially disapproved conduct being inversely related, the hypothesis was that individuals who are more religiously involved will have fewer sexual partners. In addition to this hypothesis, Barkan (2006) expected that African Americans would have greater inverse relationships than their White counterparts. This hypothesis was based on the fact that African Americans are generally considered to be "more religious" than Whites (Hunt & Hunt, 2001; Wallace, Brown, Bachman, Laveist, 2003). Barkan (2006) found that race and religiosity was inversely related for Caucasians but not for African Americans, in regards to sexual intercourse. Similarly, Barone, Ickovics, Ayers, Katz, Voyce, and Weissber, (1996) and Broman (2007) found that compared to Caucasians, African American students had more sex partners and were less likely to use

protection than the Caucasian participants. Hispanics were also more likely than their Caucasian counterparts to have a large amount of sex partners (Barone et. al., 1996).

Trepka et. al., (2008) focused on gaining a better understanding of the predictors of risky sexual behaviors (including condom use and number of sexual partners). Researchers addressed the racial composition of study participants and acknowledged that risky sexual behaviors were not associated with race or ethnicity. However, they do report that a difference was revealed in the National College Health Risk Behavior Survey amongst African Americans and their higher rates of condom usage. Trepka et. al., (2008) accounts this discrepancy to having a “non-Hispanic black” student population that included both African Americans and individuals from Caribbean decent.

The present study explored the sexual behaviors of college students and how they were influenced by race, socioeconomic status, and religious commitment. Based on common themes, theories, and previous research, religion, socioeconomic status, and race have been identified as areas that need additional research and these variables were be included in the research study in an attempt to fill the gap in the literature.

## CHAPTER TWO: METHODS

The purpose of this study was to explore the sexual behaviors of college students in relation to their religious commitment, race, and socioeconomic status while focusing on four main questions:

- a) Is there difference in sexual-risk taking based on religious commitment?
- b) Is there a difference between the sexual-risk taking behaviors of African Americans and Caucasians?
- c) Is there a difference in sexual risk taking based on socioeconomic status?
- d) Are there differences between sexual-risk taking behaviors based on religious commitment, race, and socioeconomic status?

Based on previous research (Hardy & Raffaelli, 2003; Trepka et. al., 2008; Worthington, 1988; Zaleski & Schiaffino, 2000) the following hypotheses were made: a) there will be a difference in the sexual risk taking behaviors of individuals with low, moderate, and high levels of religious commitment; b) there will be a difference in sexual risk taking behaviors based on race; c) there will be a difference in the sexual risk taking behaviors of individuals from low, medium, and high socioeconomic status levels; and d) there will be differences between levels of religious commitment, socioeconomic status, race and sexual risk taking.

### *Sample and Procedures*

The convenience sample consisted of 192 (38 males, 153 females) students from a university in the Southeastern part of the United States. Through the use of a survey which included multiple choice, Likert scale, and open-ended response options, students were able to share information about their personal experiences. Participants were from all classifications (i.e. freshman, sophomore, junior, senior) and majors (i.e. business, child development); and

majority were seniors (n=62). Perseus, a common survey application, which allows surveys to be formed, organized, and analyzed through the World Wide Web, was used to collect data.

Approximately fifteen professors from various fields of study (College of Human Ecology, College of Fine Arts and Communication, and College of Health and Human Performance) were asked to post the link to the survey on their Blackboard website in an effort to increase response ratios. This website is accessible to all students enrolled in the professor's class. Students had access to the survey for a two week period. Prior to beginning the questionnaire, participants were required to give informed consent to participate in the research study.

### *Measures*

Participant's demographic information was determined by their responses to questions in regards to their age, gender, major, race (i.e. African American, Caucasian), classification, and relationship status (i.e. single, married, divorced, widowed, separated) (See Appendix A).

Religious commitment, was defined as the dedication and level to which a person upholds their religious values, beliefs, and practices and utilizes them in their daily interactions and decision making (Worthington, Wade, Ripley, McCullough, Berry, Schmidt, Berry, Bursley, & O'Connor, 2003). Religious commitment was identified by using The Religious Commitment Inventory. The Religious Commitment Inventory-10 is a 10-item version of the original Religious Values Scale (McCullough, Worthington, Maxie, & Rachal, 1997) and was used to evaluate participant's devotion and beliefs to a specific religion or religious practices. The Religious Commitment Inventory-10 has a high internal consistency ( $\alpha=.94$ ) (McCullough et. al., 1997). Some of the statements that were used to measure religious commitment are: "I often read books and magazines about my faith", "I make financial contributions to my religious organization", "I spend time trying to grow in understanding of my faith", and "Religion is

especially important to me because it answers many questions about the meaning of life.” A 5-point Likert-type response scale was used ranging from 1=Not at all true of me to 5= Totally true of me. The religious commitment scale yielded a Cronbach Alpha of .96. Upon data collection participants responses were categorized as high, medium, and low levels of religious commitment. In order to categorize participants into low, moderate, and high religious commitment we grouped responses. The average was taken for each response and then recoded. Averages that were .999 or less were categorized as low commitment, 1-2.99 had moderate commitment, and 3 or more were categorized as high religious commitment (See Appendix A).

Socioeconomic status is considered an individual’s position within a hierarchical social structure. Participant socioeconomic status was determined by examining the response provided regarding their parent(s) highest level of education and whether or not their family was financially very well off, well off, average, not very well off, or not at all well off (Shoveller, Johnson, Langille, Mitchell, 2004). Gained information about perceptions of finances provided additional insight on the financial stability of the family by determining the socioeconomic status. Participants whose parent(s) did or did not complete high school were categorized as low, Associates or Bachelors degree was considered medium and student’s whose parent(s) had a Masters or Doctorate(s) were considered high socioeconomic status. In regards to the financial state of the family participants were asked “When you were a teenager, how financially well off was your family?” Response options were very well off (high), well off or not well off (low), and average (moderate). Family education (i.e., education of mother or father) and family finances were combined to create high, medium, and low socioeconomic status groups (See Table 1.0).

Table 1.0

## Determining Socioeconomic Status of Participants

Family Education	Family Finances	SES
Low family education	Low finances	Low SES
Medium family education	Low finances	Low SES
High family education	Low finances	Med SES
Low family education	Medium finances	Low SES
Medium family education	Medium finances	Med SES
High family education	Medium finances	High SES
Low family education	High finances	Med SES
Medium family education	High finances	Med SES
High family education	High finances	High SES

Sexual risk taking was measured based on participant's responses to level of sexual risk taking. The following response options were provided: 1-never had sexual intercourse; 2-currently refraining from sexual intercourse but I have had sex before; 3-sexual intercourse once, considering doing it again with the same partner; 4-consistent partner, condom use, monogamous relationship; 5-sexual intercourse with same partner without a condom, monogamous relationship; 6-sexual intercourse, multiple partners with without condom use, drug and alcohol use prior to having sex occasionally, 7-sexual intercourse, multiple partners without a condom; 8-sexual intercourse, multiple partners without condom use, drug and alcohol use prior to having sex occasionally; 9-sexual intercourse with multiple partners, no condom use, alcohol and drugs use prior to having sex frequently; 10-willing to try anything-sex, drugs, alcohol, not concerned about my health. Of the provided responses several (25.3%) participants reported that they engaged in sexual intercourse with the same partner without a condom and the relationship was monogamous. Other responses ranged from never having sexual intercourse (7.3%) to having

sexual intercourse with multiple partner, no condom use, alcohol and drug use prior to having sex frequently (2.6%).

As a result of using survey questionnaires electronically, participant's information was kept confidential. Data were collected over a two week period of time during the spring 2010 semester. Permission to collect data and conduct research was obtained from the university's institutional review board (See Appendix). Data were exported to a spreadsheet in the SPSS system and SPSS was used for all data analyses.

## CHAPTER THREE: RESULTS

### *Sample Description*

One hundred ninety two individuals (38 males, 153 females) from a university in the Northeastern part of North Carolina completed a survey on their sexual risk-taking behaviors. Of the 192 participants, there were 34 African Americans, 146 Caucasians, one Asian, six Hispanics, one Native American, and four Other. The sample consisted of 39 freshmen, 33 sophomores, 48 juniors, 62 seniors, and 11 graduate/non-degree students. The majority of the students reported that they were either single (n=75) or exclusively dating (n=75). Very few reported that they were casually dating (n=21), engaged (n=11), or married (n=2). Due to the nature of the study, participants were asked to disclose whether or not they considered themselves a virgin. Of 194 individuals who participated, 91.2% (n=177) said no and 7.7% (n=15) said yes they still considered themselves as a virgin.

In this study, sexual risk taking serves as a dependent variable. Sexual risk taking behaviors were examined to determine which variables (race, socioeconomic status, and religious commitment) influence the behaviors of college student's sexual risk-taking practices. The mean on the item measuring sexual risk-taking was 4.6 (R= 1-10, SD=1.9). Participant's responses ranged from one to nine.

### *Is there a difference in sexual-risk taking based on religious commitment?*

Of the three categorical levels of religious commitment, 41% (n=76) considered themselves to have low religious commitment, 45% (n=83) considered their religious commitment as moderate and 13% (n=24) considered themselves as having high levels of religious commitment.

Overall, the participants of this study who had high religious commitment participated in lower amounts of sexual risk taking. A one-way ANOVA comparing the sexual risk taking of low, moderate, and high religious commitment groups was conducted. A significant difference ( $F(2, 1) = 4.83, p = .054$ ) was found among college students who had high religious commitment ( $M=3.6$ ). Participants who had low ( $M=4.9$ ) and moderate ( $M=4.9$ ) levels of religious commitment participated in moderate sexual risk taking. There was a medium effect ( $\eta^2=.054$ ) between religious commitment and sexual risk taking.

Table 1.1

## Religious Commitment and Sexual Risk Taking

Religious Commitment	N	Mean	Standard Deviation
Low commitment	71	4.9	2.0
Moderate commitment	77	4.9	1.7
High commitment	23	3.6	1.9
Total	171	4.7	1.9

*Is there a difference between the sexual risk-taking behaviors of African Americans and Caucasians?*

Participants were asked to report information regarding their race by answering “What is your race?” The response options that were given were African American, Asian, Caucasian, Hispanic, Native American and Other. Racial groups that were represented in the sample were African American-17.5% ( $n=34$ ), and Caucasian-75.3% ( $n=146$ ). Almost 6% ( $n=12$ ) of the participants were categorized as “other” and because of the low numbers and the diversity of responses within this sub-group, these participants were excluded from further analyses. A  $t$  test was calculated to compare the mean of African American’s sexual risk taking behaviors to Caucasian’s sexual risk taking behaviors. The mean of African American’s sexual risk taking

was 4.2 (SD=1.4) and 4.8 (SD=1.9) for Caucasians. A significant difference was found ( $t(177) = -1.89, p < .05$ ) amongst African American and Caucasian sexual risk taking behaviors. African American participants have a lower level of sexual risk-taking.

*Is there a difference in sexual risk taking based on socioeconomic status?*

Of the three different levels of socioeconomic levels previously provided, 18.0% (n=35) were from low socioeconomic status levels, 54.0% (n=104) were from medium socioeconomic status levels, and 27.0% (n=52) were from high socioeconomic status groups. A one-way ANOVA comparing the sexual risk taking of low, medium, and high socioeconomic groups was computed. The means of students who were from three different socioeconomic groups were compared using a one-way ANOVA. No significant difference was found ( $F(2, 1) = 2.80, p = .063$ ). The students from three different socioeconomic groups did not differ significantly in sexual risk taking behaviors.

*Are there interactions between religious commitment, race, socioeconomic status and sexual risk taking?*

*Socioeconomic status and religious commitment.*

Twenty-six percent (n=44) were from medium socioeconomic status levels and had moderate religious commitment and 13.5% of participants (n=23) also had moderate religious commitment but were from high socioeconomic status groups. Of the participants in the medium socioeconomic status group 38.0% had low levels of religious commitment, 47.8% had moderate commitment and 14.1% had high commitment. Forty-one percent of participants from the high socioeconomic status group had low religious commitment, 47.9% had moderate levels of commitment and 10.4% had high levels of religious commitment. A 2 (socioeconomic status) x 2 (religious commitment) between-subjects factorial ANOVA was calculated comparing the sexual

risk taking behaviors of participants who were from low, medium and high socioeconomic status groups and from low, moderate, and high levels of religious commitment. The main effect for socioeconomic status was not significant ( $F(2,162) = 2.80, p = 0.65$ ). The main effect for religious commitment was significant ( $F(2,162) = 4.70, p = 0.10$ ). Finally, the interaction was also not significant ( $F(4,162) = 0.613, p = 0.66$ ). Thus, it appears that both socioeconomic status and religious commitment, when paired together, have no effect on sexual risk taking.

Table 1.2

## Religious Commitment and Family Socioeconomic Status

Religious Commitment	Family SES			Total
	Low	Medium	High	
Low commitment	9.4%	20.5%	11.7%	41.5%
Moderate commitment	5.8%	25.7%	13.5%	45.0%
High commitment	2.9%	7.6%	2.9%	13.5%
Total	18.1%	53.8%	28.1%	100.0%

*Race, religious commitment, and sexual risk taking.*

The influence of participants' religious commitment, African American ( $M = 4.7, SD = 1.4$ ) and Caucasian ( $M = 5.1, SD = 1.8$ ) on sexual risk taking was evaluated. A 2 (race) x 3 (religious commitment) between-subjects factorial ANOVA was calculated comparing the effects of both race and religious commitment on sexual risk taking. The main effect for race was not significant ( $F(1,165) = 0.94, p > .05$ ). The main effect for religious commitment was also not significant ( $F(2, 165) = 2.80, p > .05$ ). Finally, the interaction was not significant ( $F(2, 165) = 0.66, p > .05$ ). Thus, it appears that when examined together, the effects of race and religious commitment are longer apparent.

Table 1.3

## Race, Religious Commitment, and Sexual risk taking

Race	Religious Commitment	N	Mean	Standard Deviation
African American	Low Commitment	7	4.7	1.4
	Moderate Commitment	16	4.1	1.4
	High Commitment	8	3.6	1.8
	Total	31	4.1	1.5
Caucasian	Low Commitment	64	5.0	2.1
	Moderate Commitment	61	5.1	1.8
	High Commitment	15	3.6	2.1
	Total	140	4.9	2.0
Total	Low Commitment	71	4.9	2.0
	Moderate Commitment	77	4.9	1.7
	High Commitment	23	3.6	1.9
	Total	171	4.7	1.9

*Socioeconomic status, religious commitment, and sexual risk taking.*

A majority of participants who were a part of the medium socioeconomic status had moderate levels of religious commitment ( $M=5$ ,  $SD=2.09$ ). Forty-four of the participants within the moderate commitment category were a part of the medium socioeconomic status group ( $M=5$ ,  $SD=1.61$ ). Thirteen of the twenty three participants who were categorized as having high religious commitment were a part of medium socioeconomic status groups ( $M=4$ ,  $SD=2.1$ ). A 2 (religious commitment) x 3 (socioeconomic status) between-subjects factorial ANOVA was calculated comparing the effects of both socioeconomic status and religious commitment on sexual risk taking. A significant main effect for religious commitment was found ( $F(2, 162) = 4.71$ ,  $p < .05$ ). The main effect for socioeconomic status was not significant ( $F(2, 162) = 2.81$ ,

$p > .05$ ). Finally, the interaction was also not significant ( $F(2, 162) = 0.61, p > .05$ ). Thus, it appears that religious commitment has a significant effect on sexual risk taking; however, socioeconomic status does not have an effect on sexual risk taking.

Table 1.4

## Socioeconomic Status, Religious Commitment and Sexual Risk Taking

Religious Commitment	Family SES	N	Mean	Standard Deviation
Low Commitment	Low	16	4.9	2.0
	Medium	35	5.1	2.1
	High	20	4.7	1.8
	Total	71	4.9	2.0
Moderate Commitment	Low	10	4.0	1.8
	Medium	44	5.4	1.6
	High	23	4.4	1.7
	Total	77	4.9	1.7
High Commitment	Low	5	2.8	1.1
	Medium	13	4.0	2.1
	High	5	3.4	2.2
	Total	23	3.6	1.9
Total	Low	31	4.3	2.0
	Medium	92	5.1	1.9
	High	48	4.4	1.8
	Total	171	4.7	1.9

## CHAPTER FOUR: DISCUSSION

The report of sexually transmitted disease has increased to 19 million new cases per year in individual's ages 15 to 24 (Centers for Disease Control, 2005). Hence, a closer observation of sexual practices and behaviors is needed. In this study, we hypothesized four different outcomes. Of the four expected outcomes, only two were supported. There was not a difference in levels of socioeconomic status on sexual risk-taking behaviors which was different than what was expected. A significant difference between college student's levels of religious commitment and sexual risk taking was found and sexual risk taking differed based on race. Yet, when these two variables were examined together, they were not significant.

Considering the contributions made by theory, the concepts of symbolic interaction theory (role, definition of the situation), we were able to infer that religious commitment and what it represents to an individual can serve as a protective factor. As found in similar studies (Davidson, Moore & Ullstrap, 2004; Zaleski & Schiaffino, 2000) religious commitment serves as a positive buffer in regards to sexual risk taking. Utilizing the symbolic interaction theory afforded researchers the opportunity to examine sexual behaviors and what is meant by them. Some people choose to participate in sexual risk taking and others may choose to refrain. Symbols provided within the study, like religiosity and what it means to a person, explained how we as a society are able to function and internalize knowledge that ultimately influences our behaviors. Researchers in the human service field can work together to establish distinct characteristics of sexual risk-taking behaviors to minimize the plethora of definitions that go along with this concept. Once common characteristics of sexuality have been identified, professionals may experience a greater likelihood of noticing these types of risk-taking behaviors before they become harmful.

As expected, guidance from the human ecological theory was used in looking at aspects of one's ecosystem (ex. religious commitment) to explain its influences on sexual risk-taking behaviors. As a result of being a part of an environment (i.e. at a party that provides free alcohol), one may choose to engage in behaviors such as sexual intercourse with an unfamiliar individual or oral sex with a traditional partner all because the environment (i.e. a party with underage drinking) permitted this type of behavior. Human ecological theory allows us to take a closer observation of religion and its influences on behavior. One's religious commitment is a part of their exosystem, where rules and regulations are established and created, ultimately influencing actions and interactions of its followers. Some may even consider their religion to be a part of their microsystem, directly influencing their thoughts, perspectives, and desires. Religious commitment in this sense is composed of fellow believers who directly interact with others and are able to serve as an accountability partner. One's race is considered a part of their microsystem. Typically, relationships are developed with people who share some of the same things such as, race. Culturally, it is possible to identify behaviors that are common in various racial groups (i.e. sexual practices and socioeconomic statuses). In knowing this, researcher can further study the influence of peer relationships, social organizations, night life of the area, type of environment the student was a part of before attending college, and the interactions between other systems in order to identify other protective factors for sexual risk taking.

Substantial findings supported the notion that race impacts sexual risk taking behaviors. Barkan (2006) shared that African Americans are more likely to be religious which decreases their likeliness to engage in sexual risk taking behaviors unlike their Caucasian peers. The results of this study support Barkan's findings. In knowing this, health professionals can create more culturally-based intervention and education methods for college students. Programs could

educate the students on common trends found in research surrounding sexual intercourse. People from all races, ethnicity, and cultures would be informed of not only religious commitment, but other protective factors that influence sexual behaviors. Students who do not identify with being “religious” could also be a target population for more sexual education. All students would be encouraged to participate in health drives where health professionals would be available to discuss many of the myths that are present based on one’s race and the sexual practices in which they may choose to engage.

In an attempt to explain how this study fits in with research previously conducted, we acknowledged the positive influence of religion as did Barkan (2006), Leffkowitz et. al., (2004), Rostosky et. al., (2004), and Zaleski and Schiaffino (2000). When questions on the religious commitment inventory were viewed, it seems that many of these things are indicative of the role of the church on one’s life. For example, reading information to increase your knowledge of your faith could potentially be a resource that was issued by a church or other faith-based organization. Based on information provided within the result section, religious commitment was not related to socioeconomic status; however, religious commitment was related to one’s race. Overall, those that have a higher religious commitment have lower levels of sexual risk taking. When race and religious commitment are viewed together they tend to cause a “wash-out.” When race is entered in the equation, religious commitment is no longer significant and the effect size is noticeably reduced; suggesting that there is in fact an interaction between the two. It seems that these two variables (i.e., race and religious commitment) may be measuring the same thing.

Over half of the African American participants were considered as moderately religiously committed and had lower levels of sexual risk taking ( $p=.026$ ). A larger percent of Caucasians

had low religious commitment. This finding contradicts previous research conducted by Broman (2007) and Ickovics et. al., (1996) where African American participants had a higher number of sexual partners and were less likely to use protection when engaging in sexual intercourse than Caucasian participants. This leads researchers to consider the relationship between African Americans and religious commitment. For most African Americans who reside in the “Bible Belt,” it is culturally expected for one to be involved in some form of faith-based doctrine. This contributing idea allows the roles held by African Americans to be evaluated. The role of being an African American student and a member of a religious community may cause role strain that eventually affects the behaviors of this particular race in an effort to meet the expectations of their religious doctrine. African Americans sometimes may be considered to be “more religious” than Caucasians (Hunt & Hunt, 2001; Wallace et. al., 2003). North Carolina, part of the most conservative regions in the United States, is known for its traditional attitudes and values regarding sex (Erikson, Wright, & McIver, 1993; Wortham, 2006). It may be that in the South, it is impossible to separate being African American from religion. It may be that race and religion together represent one’s culture and that together these have a different effect on sexual risk-taking than when teasing out the influence of each of these separately. The human ecological theory allows us to acknowledge the influence of both the microsystem (race) and the exosystem (religion) on our sexual risk taking behaviors.

### *Limitations*

One limitation of this study was access to the actual survey not being available to the entire student body. Participants were recruited through emails that were sent out by researchers soliciting participation. If a more adequate sampling style was utilized response rates could have potentially been higher. An additional limitation of this study was the poor representation cross

culturally. Racial groups had to be restricted as a result of inadequate representations of groups other than African American and Caucasian.

### *Conclusions*

The sexual risk-taking behaviors of college students and persons emerging adulthood is a major concern for health professionals (Broman, 2007; Cooper, 2002). As sexually transmitted diseases increase (Centers for Disease Control, 2005), so does the need for the identification of predictive factors. This study examined the sexual risk taking behaviors of college students and how their religious commitment, socioeconomic status, and race influenced their behaviors. Findings support that additional research is needed to exclusively identify cross cultural differences experienced specifically between African Americans and Caucasians. Once cultural differences have been determined, one will be able to provide a more concise explanation of behaviors that are associated with each racial group. As a result of this study, we hope that professionals are able to create and facilitate programs and informationals that will raise awareness of the importance of maintaining the health of all college students worldwide.

## References

- Anderson, P. B., Mathieu, D. A. (1996). College students' high-risk sexual behavior following alcohol consumption. *Journal of Sex and Marriage Therapy*, 22, 4.
- Ball, J., Armistead, L., & Austin, B. J. (2003). The relationship between religiosity and adjustment among African-American, female, urban adolescents, *Journal of Adolescence*, 26, 431-446.
- Barkan, S. E. (2006). Religiosity and premarital sex in adulthood. *Journal for the scientific study of religion*, 45(3), 407-417.
- Barone, C., Ickovics, J. R., Ayers, T. S., Katz, S. M., Voyce, C. K., Weissberg, R. P. (1996). High-Risk sexual behavior among young urban students. *Family Planning Prospective*, 28, 69-74.
- Baumer, E. P., & South, S. J. (2001). Community effects on the resolution of adolescent premarital pregnancy. *Journal of Family Issues*, 22, 1025-1043.
- Bearman, P. S. and H. Brückner. 2001. Promising the future: Virginity pledges and first intercourse. *American Journal of Sociology* 106:859–912.
- Bengston, V. L., Acock, A. C., Allen, K. R., Dilworth-Anderson, P., & Klein, D. M. (2005). *Sourcebook of Family Theory and Research*. Thousand Oaks, CA: Sage Productions.
- Boss, P.G., Doherty, W. J., LaRossa, R., Schumm, W. R., and Steinmetz, S.K. (1993). *Sourcebook of family theory and methods: A contextual approach*. NY: Plenum Press.
- Broman, C. (2007). Race drug use and risky sexual behavior. *College Student Journal*, 41, 999-1010.
- Bronfenbrenner, U. (2005). *Making human beings human*. Thousand Oaks, CA: Sage Productions.

- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Browne, I., Higgins, J. A. (2008). Sexual needs, control, and refusal: How “doing” class and gender influences sexual risk taking. *Journal of Sex Research*, 45(3), 233-245.
- Bubolz, M. M. & Sontag, M. S. (1993). Human Ecology Theory. In Boss, P. G., Dorherty, W. J., LaRossa, R. Schumm, W. R., & Steinmetz, S. L. *Sourcebook of Family Theories and Methods: A contextual approach*. (p.419-448). New York Plenum Press.
- Campbell, L. F., & Stewart, A. E. (1992). Effects of group membership on perception of risk for AIDS. *Psychological Reports*, 70, 1075-1092.
- Cates, W. J. (2001). The NIG condom report: The glass is 90% full. *Family Planning Perspective*, 33, 231-233.
- Centers for Disease Control. (2005). *Sexually transmitted disease surveillance*. Atlanta, GA: US Department of Health and Human Services, Retrieved October 15, 2009 from [http://www.cdc.gov/nchstp/dstd/stats\\_trends/stats\\_and\\_trends.htm](http://www.cdc.gov/nchstp/dstd/stats_trends/stats_and_trends.htm).
- Centers for Disease Control. (2007) *Sexually transmitted disease surveillance 2005 supplement: Gonococcal isolate surveillance project (GISP) annual report*, Atlanta, GA: US Department of Health and Human Services, CDC; 2007. Retrieved October 15, 2009 from <http://www.cdc.gov/std/GISP2005/default.htm>.
- Centers for Disease Control. (2009). *Condom effectiveness*. Retrieved October 15, 2009, from <http://www.cdc.gov/condomeffectiveness/latex.htm>.
- Christensen, H. T., & Gregg, C. F. (1970). Changing sex norms in America and Scandinavia. *Journal of Marriage and Family*, Vol. 32(4), 616-627.

- Cochran, J. K., & Beeghly, L. (1991). The influence of religion on attitudes towards nonmarital sexuality: A preliminary assessment of reference group theory. *Journal for the Scientific Study of Religion*, 30, 45-62.
- Cole, S. L., Dodge, B., Reece, M., & Sandfort, T. G. (2004) Sexual compulsivity among heterosexual college students. *The Journal of Sex Research*, 41, 343-350.
- Cooper, M. L. (2002). Alcohol use and risky sexual behavior among college students and youth: Evaluating the evidence. *Journal of Studies on Alcohol*, Supplement No. 14, 101-117.
- Cooper, M. L., Pierce, R. S. & Huselid, R. F. (1994). Substance use and sexual risk taking among black adolescents and white adolescents. *Health Psychology*, 13, 251-262.
- Davidson, J. K., Moore, N. B., Ullstrup, K. M. (2004). Religiosity and sexual responsibility: Relationships of choice. *American Journal Health and Behavior*, 28, 335-346.
- Earle, J. R., Perricone, P. J., Davidson, J. K., Moore, N. B., Harris, C. T., & Cotton, S. (2007) Premarital sexual attitudes and behavior at a religiously-affiliated university: Two decades of change. *Sex Cult*, 11, 39-61.
- Eisenberg, M. (2001) Differences in sexual risk behaviors between college students with same-sex and opposite-sex experience: Results from a national survey. *Archives of Sexual Behavior*, 575-589.
- Erikson, R.S., Wright, G.C., & McIver, J.P. (1993) *Statehouse democracy: Public opinion and policy in the American states*. New York: Cambridge University Press.
- Evans, T. D., Cullen, F. T., Cullen, Dunaway, R. G., & Burton, V. S. (1995). Religion and crime reexamined: The impact of religion, secular controls, and social ecology on adult criminality. *Criminology*, 33, 195-224.

- Farmer, M. A., Meston, C. M. (2006). Predictors of condom use self-efficacy in an ethnically diverse university sample. *Archives of Sexual Behavior*, 35, 313-326.
- Fehring, R. J., K. H. Cheever, K. German, & C. Philpot. (1998). Religiosity and sexual activity among older adolescents. *Journal of Religion and Health* 37:229-48.
- Finer, L. B. (2007). Trends in premarital sex in the United States, 1954-2003. *Public Health Reports*, 122, 73-78.
- Ginn, S.R., Walker, K., Poulson, R.L., Singletary, S. K., Cyrus, V. K., Picarelli, J.A. (1998). Coercive sexual behavior and the influence of alcohol consumption and religiosity among college students in the Bible belt. *Journal of Social Behavior and Personality*, 13, 151-165.
- Harding, D. J., Jencks, C. (2003). Changing attitudes toward premarital sex. *Public Opinion Quarterly*, 67:211-226.
- Hardy, S. A., & Raffaelli, M. (2003). Adolescent religiosity and sexuality: An investigation of reciprocal influences. *Journal of Adolescence*, 26, 731-739.
- Harper, G. W., Gannon, C., Watson, S. E., Catania, J. A., Dolcini, M. M., (2004). The role of close friends in African American adolescents' dating and sexual behavior. *The Journal of Sex Research*, 41, 4.
- Hawley, A. (1986). *Human Ecology: A theoretical essay*. Chicago: University of Chicago Press.
- Heatwole, C.A. (1978). The Bible belt: A problem in regional definition. *Journal of Geography*, 77:2, 50-55.
- Herd, G., Russell, S., Sweat, J., & Marzullo, M. (2003). *Sexual inequality, youth empowerment, and the GSA: A community study in California*. Unpublished manuscript, Institute for Sexuality, Inequality, and Health, San Francisco State University.

- Hunt, L.L. & Hunt, M.O. (2001). Race, religion, and religious involvement: A comparative study of Whites and African Americans. *Social Forces*, 80: 605-631.
- Ickovics, J. R., Beren, S. E., Grigorenko, E. L., Morrill, A. C., Druley, J. A., & Rodin, J. (2002). Pathways of risk: Race, social class, stress, and coping as factors predicting heterosexual risk behaviors for HIV among women. *AIDS and Behavior*, 6 (4), 339-350.
- Jemmott, J. B. & Jones, J. M. (1993) Social psychology and AODS among ethnic minority individuals: Risk behaviors and strategies for changing them. In *The Social Psychology of HIV Infection*, Pryor, J.B. and Reeder, G.D. (eds.). Hillsdale, NJ: Erlbaum & Associates.
- Langer, L., Warheit, G., & McDonald, L. (2001). Correlates and predictors of risky sexual practices among a multi-racial ethnic sample of university students. *Social Behavior and Personality*, 29, 133-144.
- Lauristen, J. L. (1994). Explaining race and gender differences in adolescent sexual behavior, *Social Forces*, 72, 859 – 884
- Lefkowitz, E. S., Gillen, M. M., Shearer, C. L., & Boone, T. L. (2004). Religiosity, sexual behaviors, and sexual attitudes during emerging adulthood. *Journal of Sex Research*, 41, 150 – 159.
- McCullough, M. E., Worthington, E. L., Jr., Maxie, J., & Rachal, K. C. (1997). Gender in the context of supportive and challenging religious counseling interventions. *Journal of Counseling Psychology*, 44, 80-88.
- Mead, G. H. (1934). *Mind, self and society*. Chicago: University of Chicago Press.
- Meier, A. M. (2003). Adolescents' transition to first intercourse, religiosity, and attitudes about sex. *Social Forces*, 81 (3), 1031-1052.

- Miller, B. C. & T. D. Olson. (1988). Sexual attitudes and behavior of high school students in relation to background and
- Morrison-Beedy, D., Carey, M. P., & Feng, C. (2008). Predicting sexual risk behaviors among adolescent and young women using a prospective diary method, *Research in Nursing and Health*, 31, 329-340.
- Murray, K. M., Ciarrocchi, J. W., & Murray-Swank, N. A. (2007). Spirituality, religiosity, shame and guilt as predictors of sexual attitudes and experiences. *Journal of Psychology and Theology*, 35(3), 222-234.
- Murray-Swank, N. A., Pargament, K., Mahoney, A. (2005). At crossroads of sexuality and spirituality: The sanctification of sex by college students. *The International Journal of the Psychology of Religion*, 15, 199-219.
- Navaro, V. (1990). Race or class versus race and class: Mortality differentials in the United States. *Lancet*, 33, 1238-1240.
- Netting, N. S. (1992). Sexuality in youth culture: Identity and change. *Adolescence*, 27 (108), 962-976.
- Randolph, M. E., Torres, H., Gore-Felton, C., Lloyd, B., & McGarvey, E. L. (2009). Alcohol use and sexual risk behavior among college students: Understanding gender and ethnic differences. *American Journal of Drug and Alcohol Abuse*, 35, 80-84.
- Rostosky, S. S., Wilcox, B. L., Wright, L. C., & Randall, B. A. (2004). The impact of religiosity on adolescent sexual behavior: A review of the evidence. *Journal of Adolescent Research*, 19, 677-697.
- Russell, S. T. (2005) Introduction to positive perspectives on adolescent sexuality: Part 1. *Journal of National Sexuality Resource Center*, 2, 1-3.

- Sanders, S. A., Yarber, W. L., Crosby, R. A., & Graham, C. A. (2008). Starting early, ending late: Correlates of incomplete condom use among young adults. *Health Education Monograph, 25*, 45-50.
- Santelli, J. S., Robin, L., Brenner, N. D., & Lowry, R. (2001). Timing of alcohol and other drug use and sexual risk behaviors among unmarried adolescents and young adults. *Family planning perspectives, 33*, 5.
- Shoveller, J.A., Johnson, J.L., Langille, D.B., Mitchell, T. (2004). Socio-cultural influences on young people's sexual development. *Social Science & Medicine, 59*, 473-487.
- Small, S.A., & Luster, T. (1994). Adolescent sexual activity: An ecological, risk-taking approach. *Journal of Marriage and Family, 56*, 1, 181-192.
- Thomas, W. I. & Thomas, D. S. (1928). *The child in America: Behavior problems and programs*. New York:Knopf.
- Trepka, M. J., Kim, S., Pekovic, V., Zamor, P., Velez, E., & Gabaroni, M. V. (2008). High-risk sexual behavior among students of a minority serving university in a community with a high HIV/AIDS prevalence. *Journal of American College Health. 57*, 77-82
- Wallace, J.M., Brown, T.N., Bachman, J.G., & Laveist, T.A. (2003). The influence of race and religion on abstinence from alcohol, cigarettes, and marijuana among adolescents. *Journal of Studies on Alcohol. 64*:843-848.
- White, J. M. & Klein, D. M. (2008). *Family Theories*. Thousand Oaks, CA: Sage Publications.
- Williams, D. R., & Collins, C. (1995). US socioeconomic and racial differences in health: Patterns and explanations. *Annual Review of Sociology, 21*, 349-386.

- Witte, S. S., El-Bassel, N., Gilbert, L., Wu, E., & Chang, M. (2007). Predictors of discordant reports of sexual and HIV/sexually transmitted infection risk behaviors among heterosexual couples. *Sexually Transmitted Diseases, 34*, 302-308.
- Woodroof, T. J. (1985). Premarital sex and religious adolescents. *Journal for the Scientific Study of Religion, 24*, 343-366.
- Wortham, R.A. (2006). The 200 North Carolina religious adherence rate: A demographic explanation. *Sociological Spectrum, 26*, 453-469.
- Worthington, E. L., Jr., Wade, N. G., Hight, T. L., Ripley, J. S., McCullough, M. E., Berry, J. W., Schmitt, M. M., Berry, J. T., Bursley, K. H., & O'Connor, L. (2003). The Religious Commitment Inventory-10: Development, refinement, and validation of a brief scale for research and counseling. *Journal of Counseling Psychology, 50*, 84-96.
- Worthington, E. L., Jr. (1988). Understanding the values of religious clients: A model and its application to counseling. *Journal of Counseling Psychology, 35*, 166-174.
- Zaleski, E. H., Schiaffino, K. M. (2000). Religiosity and sexual-risk taking behavior during the transition to college. *Journal of Adolescence, 23*, 223-227.

## APPENDIX A: RESEARCH STUDY DOCUMENTS



**University and Medical Center Institutional Review Board**  
East Carolina University, 600 Moye Boulevard  
1L-09 Brody Medical Sciences Bldg. • Greenville, NC 27834  
Office 252-744-2914 • Fax 252-744-2284 • [www.ecu.edu/irb](http://www.ecu.edu/irb)  
Chair and Director of Biomedical IRB: L. Wiley Nifong, MD  
Chair and Director of Behavioral and Social Science IRB: Susan L. McCammon, PhD

---

**Date:** January 29, 2010

**Principal Investigator:** Shelita Robertson  
**Dept./Ctr./Institute:** Child Development and Family Relations  
**Mailstop or Address:** Rivers RW134

**RE:** Exempt Certification  
**UMCIRB#** 10-0027  
**Funding Source:** Unfunded

**Title:** Sexual Behaviors of College Students

Dear Ms. Robertson:

On January 26, 2010, the University & Medical Center Institutional Review Board (UMCIRB) determined that your research meets ECU requirements and federal exemption criterion #2 which includes anonymous surveys.

It is your responsibility to ensure that this research is conducted in the manner reported in your Internal Processing Form and Protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The UMCIRB Office will hold your exemption application for a period of five years from the date of this letter. If you wish to continue this protocol beyond this period, you will need to submit an Exemption Certification Request at least 30 days before the end of the five year period.

Sincerely,

Chairperson, University & Medical Center Institutional Review Board

Attachments

pc: Norma Epley

**Unique Identifier: SEXUAL BEHAVIORS**

UNIVERSITY AND MEDICAL CENTER INSTITUTIONAL REVIEW BOARD  
HUMAN BEHAVIORAL AND SOCIAL SCIENCE IRB PROCESSING FORM  
SUBMISSION FOR UMCIRB REVIEW  
EXEMPT RESEARCH

DEMOGRAPHIC INFORMATION

Type of application:  New       Modification      Date this form was completed: 01/19/2010      UMCIRB #:

Title of proposed research (this title must match protocol, funding application and consent form):  
SEXUAL BEHAVIORS OF COLLEGE STUDENTS

List of all items related to this research study submitted for UMCIRB review and approval:

Recruitment email-Informed Consent  
Questionnaire

Principal Investigator, credentials, department, section, and school:

Shelita Robertson, BS Department of Child Development and Family Relations, East Carolina University

Check the institutions for which the principal investigator is affiliated:  ECU     PCMH     Other      Investigators not affiliated with ECU or PCMH require submission of an Unaffiliated Investigator Agreement.

Subinvestigators, credentials, department, section and schools:

Dr. Sharon Ballard, PhD, CFLE-College of Human Ecology-Child Development and Family Relations Department

Dr. Alan Taylor, PhD-College of Human Ecology-Child Development and Family Relations Department

Dr. Paige Averett, PhD-College of Human Ecology-Social Work Department

List the duties of the research team members and describe the qualifications of each member to perform their duties.

Dr. Sharon Ballard, PhD: Received a PhD from the University of Tennessee, Knoxville. She is a Certified Family and Consumer Sciences Educator, Certified Family Life Educator with special research interest in: Family life education for mid-life and older adults, HIV/AIDS and mid-life and older adults, sexuality education and parent-child communication. Dr. Ballard will serve as the thesis committee chair and is responsible for providing guidance and direction throughout the duration of the research study.

Dr. Alan Taylor, PhD: Received a Ph.D. in Family and Child Development from Virginia Tech University and Graduate Certificate in Gerontology. He is a Certified Family Life Educator and a member of the National Council on Family Relations. Dr. Taylor special research interest is grandparent-grandchild relationships, grandfather involvement, family life education, family aging Issues/intergenerational relationship Issues. He is serving as a member of the thesis committee where he will provide feedback to the principal investigator concerning the findings and ways to improve the study.

Dr. Paige Averett, PhD: Received a PhD from Virginia Polytechnic University. Her research interest includes Women's sexuality, qualitative methodology, and parent-adolescent relationships, self of the researcher/therapist. She is serving as a member of the thesis committee where she will provide feedback to the principal investigator concerning findings and ways to improve the study.

SOURCE OF FUNDING

- Government Agency, Name:
- Private Agency, Name:
- Institution or Department Sponsor, Name:
- No funding
- Grant, include 1 copy of the final grant application

NOTE: The UMCIRB Conflict of Interest Disclosure Form does not need to be submitted for exempt research.

**Unique Identifier: SEXUAL BEHAVIORS**

CHECK ALL INSTITUTIONS OR SITES WHERE THIS RESEARCH STUDY WILL BE CONDUCTED:

- East Carolina University
- Other

Indicate applicable boxes if study involves PCMH and obtain the corresponding signature

- Nursing services \_\_\_\_\_
- Medical records \_\_\_\_\_
- Radiology \_\_\_\_\_
- Laboratory \_\_\_\_\_
- Physical therapy \_\_\_\_\_
- Occupational therapy \_\_\_\_\_
- Speech therapy \_\_\_\_\_
- Audiology \_\_\_\_\_
- Recreation Therapy \_\_\_\_\_
- Psychology \_\_\_\_\_
- OTHER \_\_\_\_\_

PLEASE CHECK THE APPROPRIATE EXEMPTION CATEGORY

- (1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human participants can be identified, directly or through identifiers linked to the participants; and (ii) any disclosure of the human participants' responses outside the research could reasonably place the participants at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, or reputation. *NOTE: This category may not be used for the collection of data from voice, video, digital or image recordings made for research purposes.*
- (3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human participants are elected or appointed public officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
- (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that participants cannot be identified, directly or through identifiers linked to the participants. *NOTE: 1) This information must be existing on the date this IRB application is submitted. 2) The data collection tool may not have an identifier or code that links data to the source of the information.*
- (5) Research and demonstration projects which are conducted by or subject to the approval of Department or Agency heads, and which are designed to study, evaluate, or otherwise examine: (i) Public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.
- (6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

**Unique Identifier: SEXUAL BEHAVIORS**

NOTE: Exemptions #1, #3, #4, #5, and #6 are applicable to research involving minors. Exemption #2 regarding educational tests is also applicable to research involving minors. However, research involving survey or interview procedures or observations of public behavior can not be given an exempt status when minors are involved, except for research involving observation of public behavior when the investigator(s) do not participate in the activities being observed.

PROTOCOL SUMMARY

Provide a brief, one page summary of the research study. Include a description of how participants will be selected and recruited, the consent/assent process (if applicable) and study procedures. For survey studies, submit a copy of any verbal recruitment scripts, recruitment email or cover letter. Provide a separate protocol (complete research proposal, thesis proposal, etc.) if one is available.

The present study will explore the sexual behaviors of college students and how they are influenced by race, socioeconomic status, and religious commitment. Based on common themes, theories, and previous research, religion, socioeconomic status, and ethnicity have been identified as areas that need additional research and these variables will be included in the current research study in an attempt to fill the gap. The purpose of this study is to explore the sexual behaviors of college students in relation to their religious commitment, ethnicity, and socioeconomic status while focusing on four main questions:

- a) Is religious commitment related to sexual risk taking?
- b) Is race related to sexual risk taking?
- c) Is socioeconomic status related to sexual risk taking?
- d) Are there interactions between religious commitment, race, socioeconomic status and sexual risk taking?

Perseus, a common survey application, which allows surveys to be formed, organized, and analyzed through the World Wide Web, will be used to collect data. The link will also be made available through Blackboard in various classrooms around campus in an effort to increase response ratios. All students enrolled will receive an email through the university student announce system requesting that they complete a voluntary survey on the sexual practices of college students. Students will have access to the survey for a period of two to three weeks dependent upon participant response rates. Completion of the survey (see appendix C) will serve as informed consent (see appendix B) for the research study.

**Unique Identifier: SEXUAL BEHAVIORS**

CONTACT INFORMATION

Mailing address for all correspondence: Rivers RW 134 Greenville NC 27828

Telephone Number: 252-328-1356

Fax Number:

e-mail: ballards@ecu.edu

Research assistant: Shelita Robertson

Telephone number: 252-414-9608

REQUIRED RESEARCH APPROVALS

Is the research study being conducted outside of your institution?  Yes  No

If yes, attach a letter of support from that site.

SUPERVISING FACULTY

If you are an undergraduate, graduate, post-graduate, resident, fellow, or visiting professor, complete the information below on the responsible faculty member and obtain his/her signature.

Responsible Faculty: Dr. Sharon Ballard

Mailing address: Rivers RW 134 Greenville NC 27828

Telephone Number: 252-328-1356

Fax Number:

e-mail: ballards@ecu.edu

I have reviewed the study proposal and materials submitted.

\_\_\_\_\_  
Signature responsible faculty as above

\_\_\_\_\_  
Print

\_\_\_\_\_  
Date

NOTE TO INVESTIGATORS:

The principal and sub-investigators understand that:

1. Exempt research under the regulations is human subject research that is deemed at no more than minimal risk and fits into one of six categories as designated on this application form.
2. Research that is deemed exempt according to the established criteria does not require continuing review by the UMCIRB; however, the investigator must meet all institutional obligations in the conduct of the research.
3. Only one of the UMCIRB chairs or their designee may determine that a research study meets the criteria for an exempt status.
4. The UMCIRB chair or designee may require necessary modifications prior to granting an exempt status.
5. The investigator should consult the UMCIRB for any changes in the study that may impact the required level of review to that of expedited or full committee status.

\_\_\_\_\_  
Signature Principal Investigator

\_\_\_\_\_  
Print

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature Sub - Investigator

\_\_\_\_\_  
Print

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature Sub - Investigator

\_\_\_\_\_  
Print

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature Sub - Investigator

\_\_\_\_\_  
Print

\_\_\_\_\_  
Date

**Unique Identifier: SEXUAL BEHAVIORS**

The following is for institutional approval. Please see the [instructions](#) for further guidance.

INDICATE APPLICABLE BOXES IF STUDY INVOLVES PCMH SERVICES OR ECU MEDICAL RECORDS AND OBTAIN THE CORRESPONDING SIGNATURES

- Nursing services \_\_\_\_\_
- Radiology \_\_\_\_\_
- Rehab Services \_\_\_\_\_  
(PT, OT, RT, Speech therapy, Audiology, Psychology)
- Special Medical Services \_\_\_\_\_  
(Endoscopy, Bronchoscopy, Respiratory, Urodynamics, Neurophysiology)
- other \_\_\_\_\_

PCMH Laboratory – (George Williams – 847-4946)

1. Will there be any laboratory tests performed as part of this study that will not be billed to the patient's hospital account?  
N/A
2. Will there be any specimens collected from the patient that will require testing or examination at an outside laboratory?  
N/A
3. Does this study require the PCMH Microbiology laboratory to perform susceptibility studies on investigational drugs?  
N/A
4. Will hospital pathologists or pathologist assistants be asked to collect or examine tissue specimens as part of this study?  
N/A
5. Will stored tissue (block or slides) be examined as part of this study?  
N/A

Note the following information:

1. The PCMH laboratory is prepared to support research by performing all tests that are part of our standard test menu.
2. The PCMH laboratory is not prepared to collect, prepare, store or transport specimens to central laboratories as part of this study.
3. Requests for laboratory testing performed at PCMH which are not a part of the patient's standard of care should be submitted on special forms obtained in the laboratory Outreach office from Vickie Radford at 847-4222.
4. Note that any individual mailing biological materials from the institution must have received the appropriate training and certification or its equivalent. For additional question call Benton Dow at 744-2237.

Not applicable because the study does not include services under this section

\_\_\_\_\_  
Laboratory services

\_\_\_\_\_  
Date

PCMH Health Information Management Services (HIMS) & PCMH Privacy Officer  
ECU HIPAA Privacy Officer

1. Which of the following have been submitted for this study?

- HIPAA Authorization
- Waiver of HIPAA Authorization (if a HIPAA waiver is used, you must provide PCMH or ECU Privacy Officer with accounting of disclosure list – call if questions)
- Application for research on decedents
- HIPAA Authorization has been incorporated into the research consent document

2. Will this study require (or has it already required) use or disclosure of protected health information for purposes related to preparing for the research study (e.g. recruiting participants, developing protocol, etc.) If so, contact Ken Deville at 744-5200 or Joy Hardee at 847-6545.

**Unique Identifier: SEXUAL BEHAVIORS**

No.

Note the following information:

1. Research access to medical records will be "view only".
2. The legal medical record for PCMH is the imaged medical record.
3. A researcher must have and maintain the appropriate UMCIRB and HIPAA approvals prior to requesting or accessing any protected health information from the hospital medical records system.
4. The researchers will follow all established ECU and PCMH policies for the conduct of research and use of protected health information.

Not applicable because the study does not require use or disclosure of any patient information.

---

PCMH Health Information Management Services  
Jean Foster, Administrator HIMS – 847-4249  
Joy Hardee – UHS Privacy Officer 847-6545

Date

---

ECU HIPAA Privacy Officer  
Ken DeVille 744-5200

Date

I have reviewed this Form, and all [BSOM] [PCMH] signatures have been obtained. Please note, however, that this is not a representation of the accuracy or appropriateness of each department's review and Institutional approval of this Study. Each department's approval is the sole responsibility of the relevant department representative.

\_\_\_\_\_ PCMH

Contact: Dianne Marshburn at 847-4817

\_\_\_\_\_ BSOM

Contact: Ken DeVille at 744-5200

## COLLEGE STUDENT'S SEXUAL BEHAVIORS

Are you interested in enhancing the lives of others by sharing your story? Here is your chance to contribute to research on sexuality! I invite you to complete my survey which takes approximately 20 minutes to complete! Simply click on the link and follow the instructions. Please feel free to forward the link to fellow classmates who are over the age of 18.

### COLLEGE STUDENT'S SEXUAL BEHAVIORS SURVEY

Your participation in the completion of this questionnaire is anonymous and voluntary, and non-participation will in no way compromise your status as a student at East Carolina University or your grade in any particular course. Your completion and submission of this questionnaire will be consent to participate in the study, and if for any reason you choose not to complete and submit the questionnaire you may do so without penalty. Please feel free to forward this link to any of your fellow East Carolina University classmates who are over the age of 18. The investigators will be available to answer any questions concerning this research study. You may contact the investigators Shelita Robertson and Dr. Sharon Ballard by phone 252-328-1356 or by email [ballards@ecu.edu](mailto:ballards@ecu.edu). If you have any questions about your rights as a research participant you can contact the Chair of the University and Medical Center Institutional Review Board at 252-744-2914 (days).

APPENDIX B: SEXUAL BEHAVIORS OF COLLEGE STUDENTS SURVEY

**PARTICIPANT DEMOGRAPHIC SURVEY**

1. What gender are you?
  - a. Male
  - b. Female
  
2. What is your academic rank?
  - a. Freshman
  - b. Sophomore
  - c. Junior
  - d. Senior
  - e. Graduate Student/non-degree
  
3. What is your race?
  - a. African American
  - b. Asian
  - c. Caucasian
  - d. Hispanic
  - e. Native American
  - f. Other (please write) \_\_\_\_\_
  
4. What is your relationship status?
  - a. Single
  - b. Casually dating
  - c. Exclusively dating
  - d. Engaged
  - e. Engaged and Cohabiting
  - f. Married

- g. Other (please write)\_\_\_\_\_
5. Do you consider yourself a virgin?
- a. Yes
  - b. No
6. Have you ever engaged in vaginal sexual intercourse?
- a. Yes
  - b. No
7. If yes, at what age did you first engage in vaginal sexual intercourse?
- (please write)\_\_\_\_\_
8. Have you ever engaged in anal intercourse?
- a. Yes
  - b. No
9. If yes, at what age did you first engage in anal intercourse?
- (please write) \_\_\_\_\_
10. Have you ever engaged in oral sex?
- a. Yes
  - b. No
11. If yes, at what age did you first engage in anal intercourse?
- (please write) \_\_\_\_\_

12. Please rate your level of sexual risk taking based on the following:

1 Never had sexual intercourse.
2 Currently refraining from sexual intercourse but I have had sex before.
3 Sexual intercourse once, considering doing it again with the same partner.
4 Consistent partner, condom use, monogamous relationship.
5 Sexual intercourse with same partner without a condom, monogamous relationship.
6 Sexual intercourse with same partner with a condom, alcohol use and drug use occasionally.
7 Sexual intercourse, multiple partners without a condom.
8 Sexual intercourse, multiple partners without condom use, drug and alcohol use prior to having sex occasionally.
9 Sexual intercourse with multiple partners, no condom use, alcohol and drugs use prior to having sex frequently.
10 Willing to try anything-sex, drugs, alcohol .not concerned about my health.

**The next few questions ask you to think back on your life when you were younger.**

13. When you were a teenager, how financially well off was your family?

- a. Very well off
- b. Well off
- c. Average
- d. Not very well off
- e. Not at all well off

14. What is your mother's highest level of education?

- a. Didn't complete high school
- b. Completed high school
- c. Associate's degree
- d. Bachelors degree
- e. Masters degree
- f. Doctorate degree

15. What is your father's highest level of education?

- a. Didn't complete high school
- b. Completed high school
- c. Associate's degree
- d. Bachelors degree
- e. Masters degree
- f. Doctorate degree

### SES Metric

Parent(s)

$\leq 2$  years post high school education = Low

= 4 years post high school education = Medium

$\geq 4$  years post high school education = High

### RCI-10

Instructions: Read each of the following statements. Using the scale to the right, CIRCLE the response that best describes how true each statement is for you.

	Not at all true of me	Somewha t true of me	Moderately true of me	Mostly true of me	Totally true of me
	1		3		5
1. I often read books and magazines about my faith.	1	2	3	4	5
2. I make financial contributions to my religious organization.	1	2	3	4	5
3. I spend time trying to grow in understanding of my faith.	1	2	3	4	5
4. Religion is especially important to me because it answers many questions about the meaning of life.	1	2	3	4	5
5. My religious beliefs lie behind my whole approach to life.	1	2	3	4	5
6. I enjoy spending time with others of my religious affiliation.	1	2	3	4	5
7. Religious beliefs influence all my dealing in life.	1	2	3	4	5
8. It is important to me to spend periods of time in private religious thought and reflection.	1	2	3	4	5
9. I enjoy working in the activities of my religious affiliation.	1	2	3	4	5
10. I keep well informed about my local religious group and have some influence in its decisions	1	2	3	4	5

