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ABSTRACT

THE RELATIONSHIP BETWEEN TRANSMISSION  
OF SEXUAL KNOWLEDGE, SEXUAL  
ATTITUDE, AND CULTURE

by

Esther M. Hooley

Chair: Carole Woolford-Hunt

## ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

Title: THE RELATIONSHIP BETWEEN TRANSMISSION OF SEXUAL  
KNOWLEDGE, SEXUAL ATTITUDE, AND CULTURE

Name of researcher: Esther M. Hooley

Name and degree of faculty chair: Carole Woolford-Hunt, Ph.D.

Date completed: April 2017

### Purpose

Sexual knowledge is important for healthy development of adolescents and adults. Currently, there is no consistent mode of introducing the topic of sex to an individual who has not previously learned about the topic. If a shift were to occur in transmission of sexual knowledge, whether by creating a consistent mode, a culture-specific mode, or focusing on sexual attitude rather than behavior, future populations would be positively influenced. If the educational system, religious organizations, and families could be informed of an appropriate and meaningful way to communicate sexual knowledge to adolescents, negative sexual outcomes have the potential to decrease and positive sexual outcomes have the potential to increase.

## Method

Participants completed surveys that measured a) attitudes toward sex, b) source of sexual knowledge and influence of the source, and c) demographic information. This work employed several statistical analysis methods to answer the six research questions that guided the study. These methods included exploratory factor analysis (EFA), descriptive statistics, independent sample t-tests, one-way ANOVA, chi-square and canonical correlation.

## Results

Results indicate that several of the most identified sources of sexual knowledge included school-based sexual education, parents or primary caregivers, media, internet pornography, SEEM, and friends or peers. Sources that were considered influential included parent or primary caregivers, doctors or other healthcare professionals, internet pornography, media, and friends or peers. The sexual attitudes of participants ranged from neutral (Permissiveness and Instrumentality) to moderate agreement with (Communion and Birth Control). Statistically significant differences were noted when looking at ethnicity and sources of sexual knowledge, religious affiliation during formative years and sources of sexual knowledge, gender and some sources of sexual knowledge, gender and sexual attitude, and religious affiliation during formative years and sexual attitude. Lastly, less engagement with any source of sexual knowledge indicated higher agreement with sexual attitudes of Permissiveness, Birth Control, Communion, and Instrumentality.

## Conclusions

This study added to the body of literature concerning how individuals learn about sex, provided a picture of sexual attitudes among a diverse group of 18-30 year old participants, and highlighted the importance of considering cultural background in attainment of sexual knowledge and sexual attitude formation. As researchers, educators, mental health professionals, and lay people better understand sexuality and sexual attitudes, they will be better able to serve the people they encounter. The current research offers several implications for professional practice and future research.

Andrews University

School of Education

THE RELATIONSHIP BETWEEN TRANSMISSION  
OF SEXUAL KNOWLEDGE, SEXUAL  
ATTITUDE, AND CULTURE

A Dissertation

Presented in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

by

Esther M. Hooley

April 2017

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Esther M. Hooley

APPROVAL BY THE COMMITTEE:

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Dedicated to Eric

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## LIST OF ABBREVIATIONS

AAP	American Academy of Pediatrics
AIDS	Acquired Immunodeficiency Syndrome
ANOVA	Analysis of Variance
BSAS	Brief Sexual Attitudes Scale
CDC	Centers for Disease Control
EFA	Exploratory Factor Analysis
HIV	Human Immunodeficiency Virus
HSD	Honest Significant Difference
IRB	Internal Review Board
KMO	Kaiser-Meyer-Olkin
RAA	Respondent Anonymity Assurance
RAINN	Rape, Abuse, & Incest National Network
SCT	Social Cognitive Theory
SEEM	Sexually Explicit or Erotic Material
SES	Socioeconomic Status
SLT	Social Learning Theory
SPSS23	Statistical Package for the Social Sciences, 23 <sup>rd</sup> Edition
STI	Sexually Transmitted Infection
WHO	World Health Organization

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## CHAPTER 1

### INTRODUCTION

#### **Background to the Problem**

Sexual knowledge is important for healthy development of adolescents and adults for several reasons. These reasons include possible decreased instances of sexually transmitted infections (STIs), a decrease in teen pregnancy, information about the sexual decision making process, and an increased knowledge of what a healthy, consensual sexual relationship looks like. The World Health Organization (WHO) defines sexual health as:

a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence. (WHO, 2006, pg. 2)

Currently, there is no consistent mode of introducing the topic of sex to an individual who has not previously learned about the topic. Both informal and formal sources of sexual knowledge exist. Formal sources include school-based sexual education, health care providers, religious institutions such as a pastor or priest of a religious organization, and community-based programs. Informal sources of sexual knowledge include peers or friends, family members, internet websites, internet pornography and sexually explicit or erotic material (SEEM), media, social media, and sexual experiences. However, little consensus exists about which mode of transmission is

most used and what effects on sexual attitude exist due to mode of transmission of sexual knowledge.

Research has shown that a majority of sexual education and modes of transmission of sexual knowledge are focused on sexual behaviors (Kirby, 2002a) and abstinence (Baily & Wolf, 2015). However, issues of concern surrounding sexuality are still present in the lives of young adults. For instance, Kirby (2001) reported that teen pregnancy rates are declining but that at the time of his research, more than four in ten teenage girls become pregnant at least once before they reached the age of twenty, translating to 900,000 teen pregnancies annually. The Centers for Disease Control and Prevention (CDC) reported that in 2012, a total of 305,388 infants were born to females aged 15-19 years (Martin, Hamilton, Osterman, Curtain, & Mathews, 2013). Weinstock, Berman, and Cates (2004) noted that adolescents account for one-quarter of the sexually active population while also accounting for approximately 18.9 million cases of STIs in the United States as found from results gathered in 2000. These numbers clearly present an issue that needs to be addressed.

Formal and informal sources have the ability to form attitude or behavior about sexuality; the source has the ability to act as a reinforcement as the learner experiences internal or external responses to the behavior. In the same respect, if a learner experiences shaping responses to a positive behavior or attitude about sexuality, it is likely that behavior will be reinforced. To date, little if any research exists about attitude-based modes of sexual knowledge even though research (Kraus, 1995) indicates that attitude can significantly predict future behavior.

There is also little known research available about culture-specific modes of transmission. This is troubling as studies exist which promote the idea that culture impacts a person's sexuality (Meston & Tierney, 2010; Okazaki, 2010; Shoveller, Johnson, Langille, & Mitchell, 2004; Stephens & Few, 2007). It is thought that having culture-specific transmission of sexual knowledge would promote better understanding and consolidation of information with learning in this area.

### **Rationale**

The highlighted gaps in research lead one to wonder how a shift in focus of the transmission of sexual knowledge, from behavior to attitude, would influence sexual decision making. It could be purported that behavior is a reflection of attitude and that a shift in focus of sexual knowledge should occur accordingly.

Much of the research that exists has occurred with adolescent populations as members of this stage of development are greatly affected by sexual decisions. However, an adult population would also provide research with new information on this topic. An adult population may be more likely to recall how sexual information gleaned during formative years has an impact in adulthood. This may be due to having more experiences to draw upon in reference to questions about sexuality. Adults may also be more reliable in reporting the subjective influence that sexual knowledge sources had on a personal understanding of sexuality.

As stated previously, attitude significantly predicts future behavior (Kraus, 1995). Research indicates that forming accessible attitudes, contemplating consequences of engaging in behavior when an attitude is initially formed, storing information from a personal or one-sided viewpoint, and being confident about an attitude all allow

individuals to use attitudes to shape future behavior. Literature also suggests that attitude can be a major component in dictating future behavior and is therefore important when considering transmission of sexual knowledge sources.

If a shift were to occur in transmission of sexual knowledge, whether by creating a consistent mode, a culture-specific mode, or focusing on sexual attitude rather than behavior, future populations could be positively influenced. If the educational system, religious organizations, and families could be informed of an appropriate and meaningful way to communicate sexual knowledge to adolescents, negative sexual outcomes have the potential to decrease and positive sexual outcomes have the potential to increase.

This knowledge is also important for clinicians as these professionals address sexuality issues at all stages in the development of lifespan. If clinicians are aware of the links between sexual knowledge and sexual attitude and its cultural implications, they will be better prepared to address the needs of their clients.

### **Purpose of the Study**

The purpose of this study is six fold: (1) to identify how people learn about sex, (2) to identify extent the sources of knowledge influence participants' knowledge of sex when learned in the formative years and currently, (3) to identify the sexual attitudes of the participants, (4) to identify if the source of sexual knowledge is related to gender and cultural background aspects, (5) to identify how sexual attitude is related to gender and cultural background aspects, and (6) to determine the presence of relationship between transmission of sexual knowledge and personal attitude about sex.

## **Research Questions**

Several research questions were developed in light of unknown information concerning the relationship between the transmission of sexual knowledge, sexual attitude, and culture.

- (1) How do individuals in this study learn about sex?
- (2) To what extent have these sources of knowledge influenced participants' knowledge of sex when learned during formative years and currently?
- (3) What are the sexual attitudes of the participants in the study?
- (4) Are sources of sexual knowledge related to gender and cultural background?
- (5) Is sexual attitude related to gender and cultural background?
- (6) Is there a relationship between the source of sexual knowledge and sexual attitude?

## **Conceptual/Theoretical Framework**

This work operated on the frameworks of social learning theory and sexual socialization. Social learning theory (SLT) is how one understands how knowledge, cognitive, behavioral, and environmental factors shape a person's behavior (Behavioral Change Models). Sexual socialization posits that tools, society, and interactions form one's beliefs concerning sexuality (Schtarkshall, Santelli, & Hirsch, 2007).

Albert Bandura (1977) theorized that human behavior can be determined by a three-fold relationship between cognitive factors, environmental factors, and behavior. Bandura also posited that people learn from both direct experience and from the modeling that is observed in others. Reciprocal determinism, behavioral capability, expectation, self-efficacy, observational learning, and reinforcement, all concepts of SLT,

when applied to sexual knowledge, intimate that there are many ways in which a person can learn and be affected by sexual information (Glenz, Rimer, & National Cancer Institute, 1997). These definitions will be expounded upon in Chapter 2.

In 2001, Satcher stated that sexual health is an intricate factor in individual health, both physical and mental. It is through sexual socialization that beliefs, attitudes, and anticipations related to sexuality and sexual relationships are transmitted to children and youth by both formal and informal sources (Ballard & Morris, 1998). Socialization is the process through which a person obtains an understanding of ideas, beliefs, values, cultural symbolism, and codes of conduct (Schneedwind, 2001).

### **Significance of the Study**

It is believed that this study will energize those who have the privilege of educating individuals about sexuality to reconsider the focus of instruction. Historically, the focus of teaching about sexuality has been based on behavioral outcomes (e.g. abstinence-only sex education) and still continues to be a focus despite research that has positively correlated behavior-focused sexual education with teenage pregnancy and birth rates (Stranger-Hall, Hall, & Vitzthum, 2011). It is hoped that from this study, evidence will be provided that begins a shift in sexual education theories and curriculum from behavioral outcomes to attitude development. This would include education that focuses on the beliefs and attitudes of a person in an effort to create a personal value system that guides sexual decision making versus a curriculum that focuses on what a person should or should not do.

This study is also deemed to be significant as sexual knowledge is important to adolescent and individual development for several reasons in that it has the potential to

impact (1) instances of sexual disease, (2) instances of teen pregnancy, (3) the sexual decision making process, and (4) knowledge of what constitutes a healthy, consensual, sexual relationship. This study seeks to provide information about how modes of sexual knowledge are reported as impactful to a learner while also understanding how culture impacts a person's sexuality as reported in previous research samples such as Meston and Tierney (2010). Other studies have focused on ethnicity and sexuality with Asian-Americans (Okazaki, 2010) African-American (Stephens & Few, 2007), and Canadian youth (Shoveller et al., 2004).

### **Definition of Terms**

For the purpose of this study, several key terms need to be defined. The first is that of sexual knowledge. Sexual knowledge in this research is defined as how one learns about sex, sexuality, or aspects of life related to sex. A second term needing clarification is the definition of culture. This research defines culture as the way of life and living of a certain group based on values, beliefs, behaviors, and family traditions. Culture is also influenced by geographical location. The term cultural background as presented in this study includes one's ethnicity, religious affiliation during formative years, and setting of living (rural, suburban, urban, inner-city) during formative years. A final definition is that of sexual attitude, which is conceptualized as a person's beliefs/values about sex.

### **Limitations and Delimitations**

This research also contains limitations and delimitations. A potential limitation concerns the sensitive nature of this topic. It was expected that some individuals may become uncomfortable when addressing topics pertaining to sex, specifically personal attitude, and therefore response rates may not reach desired levels. Another limitation

concerning sensitivity includes the revealing of how one learned about sex and the importance of the source. This question evokes the participant to reveal information about use of pornography or reporting a non-consensual sexual encounter.

Several delimitations are also present in this study. The first delimitation includes convenience sampling. This research sought results using QuestionPro, a survey database that provides participants based on specified parameters to complete surveys.

Another delimitation included age of participants. Only individuals who were above the age of 18 and below the age of 31 were considered in this research. This was due to the sensitive nature of the topic. Another reason this was considered related to sexual identity development. It is thought that those between the age of 18 and 30 would be most likely to be experiencing the influence of the sources of sexual knowledge particular to their experience.

A final delimitation is the scope of this study. The scope is limited in that only three variables are being considered. It was believed that drawing from a wide online population would help to produce more rounded results.

### **Overview of Methodology**

The design approach of this study utilized online survey research to collect data. This study aimed to understand how people, specifically adults age 18-30, learned about sex, their attitude about sex, cultural identification, and the impact of the source of sexual knowledge on the individual. In this study, adults were defined as individuals over the age of 18. The sample was collected using convenience sampling. Participants were drafted via QuestionPro, an online service that seeks to assist researchers in creating and distributing surveys to target populations.



QuestionPro sustains a database of millions of people who have enrolled to take surveys for the database. In exchange for completion of surveys, QuestionPro gives respondents points that can be redeemed at a later date for gift cards to popular retail institutions. QuestionPro is open to anyone who desires to enroll in the program. To sign up, an individual must provide thorough and complete demographic information so that researchers can be specific in the makeup of their participant sample.

In the case of the present research, QuestionPro recruited a sample of both men and women who were diverse in cultural background between the ages of 18 and 30. Potential participants were contacted by QuestionPro with an invitation to engage in the survey. Participation was strictly voluntary. In order to ensure that the data consisted of enough power to detect an effect of statistically significant size an *N* of 300 was needed. The actual number of valid completions was 352.

Two instruments were used in gathering the data for this study. First, the Brief Sexual Attitude Scale (BSAS) and was used to measure attitudes of respondents' towards sex. (Hendrick, Hendrick, & Reich, 2006). The BSAS is a 23-item scale whose items are rated on a five-point Likert scale ranging from strongly agree to strongly disagree. This instrument is made up of four subscales: Permissiveness, Birth Control, Communion, and Instrumentality.

The second tool used was developed by the author and gathers information about the source of transmission of sexual knowledge, subjective importance of the source, and demographic information. It was designed specifically for this research in an effort to gather specific information without overwhelming participants. This will be expanded upon in Chapter 3.

Data was collected after Internal Review Board (IRB) approval from Andrews University was provided as well as written permission from QuestionPro (Appendix A).

This work employed several statistical analysis methods to determine the six research questions that guided the study. These methods included exploratory factor analysis (EFA), descriptive statistics, independent sample t-tests, one-way analysis of variance (ANOVA), chi-square and canonical correlation. Research results were analyzed using Statistical Package for the Social Sciences 23 (SPSS 23).

### **Organization of the Study**

The organization of this work is as follows. Chapter 1 introduces the issue at hand as well as provides an overview of the study. Chapter 2 introduces the reader to existing literature on the subject matter. The theoretical frameworks of social learning theory and sexual socialization are expanded upon. The importance of sexual knowledge is also examined. Both formal and informal sources of sexual knowledge are presented as well as the outcomes of these sources. Chapter 3 presents an in-depth look at the methodology used in the research. Chapter 4 informs the reader of the results of statistical analysis of the data. Chapter 5 makes meaning of the research results, presents the summary of results and the major findings of the research. A discussion of how the results pertain to the research is also provided. The work closes with recommendations for practice and future research.

## CHAPTER 2

### REVIEW OF LITERATURE

#### **Introduction**

This chapter will cover the transmission of sexual knowledge, sexual attitudes, and the cultural differences or similarities found in current research. Formal and informal sources of sexual knowledge including family transmission, media transmission, school sex education programs, and peer groups as educators will be described and examined. The topic is of importance as it may yield valuable information about the effects of first sexual knowledge encounters on sexual attitude in adulthood. The results may be used as foundational work in shaping future conversations, education, and sources used in the transmission of sexual knowledge. A review of literature has revealed a gap of information when considering post-adolescence and transmission of sexual knowledge. Also, research thus far has been focused on behavior related to transmission more so than attitude.

The purpose of this literature review is to present the need for further study in the area of transmitting sexual knowledge and its impact on sexual attitude. The literature presented will inform the reader that sexual socialization is related to sexual attitude in adulthood and what sources are used more in different cultures. The literature to date has employed surveys and focus groups, with special attention on school-based sexual education programs and family communication styles and how they can be used to

predict or inform adolescent sexual behavior. The review of literature will attempt to reveal the link between behavior and attitude and will focus on an adult population.

Sources were gathered using the online database EBSCOhost through the James White Library of Andrews University and Google-directed searches. Initial searches were made using the key terms ‘sexual knowledge’, ‘sexual education’, ‘sexual sources’, ‘sexual socialization’, and ‘cognitive-behavioral theory’. Further searches were guided by governmental, institutional, and educational websites.

Sources dated from before 2000 were excluded unless directly related to the topic, with the exception of those which provided theoretical framework. Information was also included based on contribution to the topic being researched and whether it contained relevant findings. Source media included websites, books, journal articles, state surveys used to collect data about state residents (e.g. Minnesota Student Survey of 2007), and newspaper articles. Another criteria for inclusion was that of language. Sources were accepted if they were written in English and excluded if they were produced in another language.

### **Theoretical Framework**

Sexual knowledge and its relationship to sexual attitude can be viewed through two theoretical lenses. The first is SLT, in which one understands how knowledge and cognitive, behavioral, and environmental factors shape a person’s behavior (Behavioral Change Models). The second theory - that of sexual socialization – posits that tools, society, and interactions form one’s beliefs concerning sexuality (Shtarkshall et al., 2007). Both theories are important to retain while reviewing the information presented in the following sections.

## Social Learning Theory

In the realms of psychology and education, many learning theories attempt to understand and explain how personal thinking and external factors impact one's behavioral decisions. Social learning theory is a classification of learning theories which is rooted in the understanding that human behavior can be determined by a three-fold relationship between cognitive factors, environmental factors, and behavior (Bandura, 1977).

A basic principle of SLT is that people learn through two different filters. The first is that new patterns of behavior can be attained through direct experience or observation of others. The basic form of learning (direct experience) is largely impacted by reward or punishment when associated with the given action. Individuals are constantly challenged by scenarios in which they must deal in one way or another. When a response is rewarded, has favorable outcomes, or is viewed as successful, the individual is apt to use this reasoning with other exploratory activities. If, in this process, a response elicits a consequence, punishment, or is deemed ineffectual, the particular response is often discarded by the individual (Bandura, 1971). It is frequently thought that responses are unconsciously and routinely reinforced by immediate consequences.

Beyond the impact of direct experiences, a second principle holds that behavior is learned through modeling. It is safe to say that many of the behaviors that a person displays are a product of an influential example, either deliberate or unintentional. Much like learning from a direct experience, learning through modeling is valuable to a person when appropriate and deemed a reliable source or rejected if errors are associated with the modeling. In some avenues of life, modeling is essential to learning and may be the

only means of learning. For example, if an adult does not speak to a child or infant, the child may never acquire the linguistic skills needed for a successful life (Bandura, 1971). It is often thought that acquisition periods can be shortened if information is acquired through modeling rather than other means of learning. Bandura postulates that under most circumstances, a good example is a much better teacher than consequences provided through unguided actions.

During his career, Bandura expanded upon SLT and published a comprehensive framework for the understanding of human behavior, which he based on a cognitive formulation, called Social Cognitive Theory, often referred to as SCT. This theory is quite extensive and, for that reason, this work will only address specific key terms. The following definitions are found in Glanz et al. (1997).

The first concept of importance is that of reciprocal determinism. Reciprocal determinism proposes that behavior change results from interactions between an individual and the environment, suggesting that change is bidirectional. For example, a person's physical surroundings can potentially be filled with reinforcing stimuli, including other individuals. The environment influences the strength and occurrence of a given behavior, just as the behavior influences the environment. Another key concept is that of behavioral capability. This concept suggests that knowledge and skills influence a performed behavior. In order to successfully complete a given task or behavior, a person must have knowledge concerning what is needed to complete the task/behavior and how to complete the task/behavior. It is here that Bandura assumed that consequences of behavior would be learned and impact the environment. A third concept is that of expectations. The concept of expectations refers to beliefs about likely results of a given

action. The concept also refers to the internal or external reactions to a person's behavior that are likely to affect whether a behavior is sustained or superseded. These reactions can be reinforced by the individual or the environment. Another concept is that of self-efficacy, defined as the confidence one has in their ability to take action and to persist in action. Self-efficacy can be influenced by a person's capabilities and environmental factors. The fifth concept is that of observational learning. This is the idea that beliefs are based on observing the behavior of others and that those behaviors can be either physically or visibly reproduced or modeled. The final concept is that of reinforcement. Reinforcement is a response to a person's behavior, belief, or attitude that has the ability to increase or decrease the chances of that response reoccurring.

These terms help to shed light on our understanding of how sexual knowledge can affect sexual attitude and behavior. According to Bandura's model of SLT, a person who is acquiring sexual knowledge will do so through several avenues. In light of reciprocal determinism and sexual knowledge, it can be suggested that an individual has a certain understanding of sexuality but their opinion can be influenced by reinforcing stimuli. These stimuli can take the shape of peers, media, and/or a sexual education course, all of which have the ability to change the cognitions and behaviors of the learner. Over time, the frequency and intensity of these factors can reshape the behavioral capacity of the learner. As this process is bidirectional, the behavior of the learner influences the external factors one comes in contact with, thus impacting how future sexual knowledge is transmitted.

Bandura's concept of behavioral capability is also related to sexual knowledge. Behavioral capability asserts that the learner needs to gain knowledge about sexuality in

order to have an appropriate behavior and attitude about the subject. The learner needs to know what to do and how to do it and should be afforded essential knowledge and skills concerning sexuality. Often, behavioral capability is impacted by how the subject is learned and in what environment.

The third concept is expectations. A learner of sexual knowledge has expectations of the outcomes of the action before engaging in the behavior. Sexual knowledge, when conveyed appropriately, can provide the learner with information about STIs, (human immunodeficiency virus/acquired immunodeficiency syndrome [HIV/AIDS]), contraception, and abstinence. When sexual knowledge is conveyed ineffectively, it can render the learner unprepared for future action, thus leading to unexpected consequences. Expectations are derived from previous experience or influence and can help a learner gain positive or negative attitudes about implementing skills in sexual behaviors.

Self-efficacy is another concept that pertains to sexual knowledge. Once a learner has been exposed to a sexual knowledge source presented appropriately, there is the capacity for effective implementation. A person's confidence in sexual knowledge impacts their ability to successfully perform a behavior: in this case abstinence, effective contraception, or healthy sexual behaviors. As success is achieved in these areas, the learner is able to have an increased sense of capability and confidence to implement the skills acquired as well as new skills.

The concept of observational learning is also key to understanding the importance of sexual knowledge. Observational learning applied to sexual knowledge highlights the impact that modeling the environment can have on a learner. It is likely that a learner



will gain knowledge from hearing and seeing others' experiences, knowledge, and behavior and adopt the actions that are seen. The learner's beliefs are based on the observation of those similar to the learner and the consequences that ensue. Actions can also be modeled by role models, peers, and fictional characters. For example, if a learner observes successful demonstration of sexuality, such as contraception preventing pregnancy, it is likely that the learner will also complete a similar action in a successful manner.

Bandura's final concept applied to sexual knowledge in this section is that of reinforcement. It is expected that positive and negative attributes of sexuality can be reinforced. This can happen through self-reinforcements or reinforcements from the environment. If attitude or behavior about sexuality is formed through a specific source, this source has the ability to act as a reinforcement as the learner experiences internal or external responses to the behavior. In the same respect, if a learner experiences shaping responses to a positive behavior or attitude about sexuality, it is likely that their behavior will be reinforced.

### Sexual Socialization

In 2001, Satcher stated that sexual health is an intricate factor in individual health, both physical and mental. A person and their attributes are shaped by many factors, such as environmental, cultural, familial, spiritual, and others. One of these factors is known as socialization. It is through sexual socialization that beliefs, attitudes, and anticipations related to sexuality and sexual relationships are transmitted to children and youth by both formal and informal sources (Ballard & Morris, 1998).

Socialization is the process through which a person obtains an understanding of ideas, beliefs, values, cultural symbolism, and codes of conduct (Schneedwind, 2001). Sexual socialization is a facet of overall socialization and begins in infancy. There are several forms of early sexual socialization that are deemed essential (Hirsch, 2003). One such example is that of the values the parents project onto their children concerning sexuality. It is through transmitted parental values that children begin to form a picture of sexuality. These values can include, but are not limited to, modesty, privacy, nudity, and gender-specific expectations and roles. Children are also taught about physical contact from parental responses to issues such as masturbation and displays of physical affection between parents and caregivers. Parents are also some of the first educators about the bodily differences between males and females and sexual language regarding gender differences. These values can be imparted through implicit or explicit means (Shtarkshall et al., 2007).

Sexual socialization also occurs apart from the home during childhood and adolescence. This can be done through observing cultural and community norms. A child may question the adequacy of the socialization acquired by comparing personal sexuality to that of one's friends, members of the same cultural group, or classmates. Sexual socialization can also occur through the use of mass media, as this is a major source of connection between adolescents and the world around them. Participation in cultural and religious activities also serves as means of sexual socialization. This type of socialization may focus on rites of passage, sexual abstinence outside of marriage, gender roles, abortion, and the use of contraception.

## **Sexual Knowledge**

It is the norm in Western culture to know that individuals are born with a sexual component. Yet it is generally not discussed with them until they are at an appropriate age, usually determined by a parent, school, or societal norm, with the approximate timing occurring at middle school age. A child is deemed to have received proper sexual knowledge after an intervention, usually school-based, that focuses on sexual education. Sexual knowledge is the acquired understanding of issues of sexuality including reproduction, menstruation, contraception, and STIs including HIV. The United Nations Convention on the Rights of the Child purports that school sex education should be evidence based, be used to prevent common outcomes of unawareness such as STIs and early pregnancies, promote positive outcomes of sexual knowledge such as sexual and emotional health, and provide knowledge about homosexual children and promote acceptance of them. The WHO defines sexual health as

a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence. (WHO, 2006, p. 2)

### **Importance of Sexual Knowledge**

Sexual knowledge is important to adolescent and individual development for several reasons. The first is the potential to educate about STIs in an attempt to promote safe sex. If learners are unaware of potential consequences of sexual behavior, they will make unhealthy choices. Sexual knowledge has the potential to inform learners, increase safe sex behavior, and decrease incidences of STIs. Weinstock et al. (2004) noted that adolescents account for one-quarter of the sexually active population while also

accounting for approximately 18.9 million cases of STIs in the U.S. as found from results gathered in 2000. These numbers clearly present an issue that needs to be addressed.

These numbers also indicate that the current state of sexual education may not be sufficiently promoting safe sex.

Second, sexual knowledge is an important component to reducing teen pregnancy. Teen pregnancy prevention is crucial as teen pregnancies account for 9.4 billion dollars in costs to U.S. taxpayers for various reasons (National Campaign to Prevent Teen and Unplanned Pregnancy, 2014). Sexual knowledge is vital to teens, as pregnancy and birth rate are substantial contributors to high school dropout rates among females. Approximately 50% of teen mothers receive high school diplomas by age 22, compared with 90% of females who have not given birth during adolescence (Perper, Peterson, & Manlove, 2010). Hoffman (2008) also found that children of teen mothers are more likely to have lower school achievement, dropout of high school, have more health problems, be incarcerated at some point during youth, give birth as a teen, and struggle with unemployment as an adult. Kirby (2001) reports that teen pregnancy rates are declining, but that at the time of his research, more than four in ten teenage girls become pregnant at least once before they reached the age of twenty, translating to 900,000 teen pregnancies annually. The CDC reported that in 2012, a total of 305,388 infants were born to females aged 15-19 years (Martin et al., 2013). This was considered a record low for U.S. teens in this age range and represented a 6% drop from 2011. The CDC reports that reasons for declines in teen pregnancies are not clear, but the trend suggests that teens seem to be less sexually active and are using a form of contraceptive if they are sexually active.

Sexual knowledge is also important in the sexual decision making process. As sexual knowledge is transmitted to a learner, it has the potential to enlighten the learner about facts that previously may have been unknown. Receiving sexual knowledge allows individuals to make informed decisions about engaging in a sexual relationship, the use of contraceptives, the impact of STIs and HIV, and the ownership of one's body. Having a sexual knowledge foundation can also lead to a sense of empowerment in a learner and bolster self-efficacy for future sexual decisions. Knowledge thus becomes a source of power and affirmation to the learner using the new found sexual knowledge.

A fourth highlight of the importance of sexual knowledge focuses on preparing learners for a point in life when they will want to engage in a sexually consensual relationship and express sexuality by being in relationship with another person. Before a relational act of sexuality, one might explore sexuality through the use of conversations with others, personal sexual fantasies, or social media. As individuals make sense of these types of sexual experiences, they are creating beliefs about themselves and how sexuality is expressed in a relationship (e.g., sexual etiquette, how bodies respond to sexual emotion and expression). Enjoyment and engagement in a sexual relationship depends on how sexual knowledge is received and processed. The interaction of sexual knowledge helps to guide a person in making decisions regarding beliefs, values, and commitment in a sexual relationship. This thought process is needed before engaging in a sexual relationship to decrease the chance of an abusive or unsafe sexual relationship dynamic.

## Sources of Sexual Knowledge

How do people learn about sex and sexuality? Is there a means that is more advantageous than another? Much literature exists that provides information about the transmission of sexual knowledge. Transmission of sexual knowledge is defined as how one learns or gains knowledge about sexuality. Sources may be categorized into two classes: formal sources and informal sources. Formal sources are those that include educators, healthcare professionals, religious institutions, and community organizations. Informal sexual sources are those that include people in the daily lives of individuals (peers, friends, and family), internet, internet pornography, and movies or television.

### **Formal Sources and Outcomes**

#### School-based sexual education programs

One of the most readily thought of formal sources of sexual knowledge is school-based sexual education. This paper makes no argument concerning the validity of abstinence-based sexual education programs or information-based sexual education programs. Much research exists on the outcomes of school-based sexual education, and several of those studies will be presented in this section. The first study was completed by Ancheta, Hynes, and Shrier (2005). The study's objective was to explore the relationship between sources of sexual knowledge, timing of reproductive health education, and cognitive and behavioral sexual risk amongst a sample of high-risk female adolescents and young adults. The sample was gathered from females receiving treatment for an STI who were able to report sources of sexual health education, the topics covered, and when the sexual education took place. The results of this study were that most of the participants received reproductive health education from both an informal source, parents

in this study (80%), and a formal source, sexual education (92%). It was reported that the formal source of sexual knowledge focused on STIs. In this study, the median age of first formal sexual instruction was 12 years, with 26% of the participants reported having received their first formal sexual education throughout or after the year that they initiated coitus. Conclusions based on this study showed that early sexual education both from parents and a school-based approach was associated with reduced sexual risk among high-risk adolescent females.

In another study, researchers focused on school-based sexual education (Kennedy & Covell, 2009), and its present inadequacies as it stands right now. It also highlighted the impact of traditional school-based sexual education on 15 year-olds' knowledge about topics such as contraceptive, STIs, pregnancy, and attitudes toward gays and lesbians. The 120 participants in this study were 10<sup>th</sup> grade students who completed surveys and questionnaires regarding age of first sexual education, how well sexual topics were covered in their sexual education experience, sexual activity, sexual knowledge, attitudes towards gays and lesbians, the education of homosexuality, and school-based experience with homophobia. The findings showed that while most participants identified as sexually active, the students believed that sex education topics had been covered poorly, rating education about homosexuality as the lowest. Students also reported low sexual knowledge with an ANOVA showing that males had less knowledge than females regarding STIs, pregnancy, and homosexuality. It was also found that prejudicial attitudes toward gays and lesbians were related to experience with homophobia (reported as a daily experience by this sample) and lack of education about homosexuality. In

conclusion, this study called for a shift in sex education practices, teacher attitudes, and teacher behaviors.

Kirby (2002a) completed a review of literature pertaining to school-based sexual education programs and behavioral outcomes for his work. He found that some research indicated that sexual education delayed initial sexual contact, some indicated no impact whatsoever, and still others indicated that sexual education had accelerated the onset of sexual behaviors.

Other studies by Kirby measured the impact of sexual and STI/HIV education upon contraceptive use, finding that this type of education increased the use of contraceptives. Kirby's opinion of all of the literature was that, while the purpose of these studies was an attempt to measure the impact of the diversity of sex and STI/HIV school-based programs, the studies were riddled with methodological problems. He reported that the studies he reviewed had extremely limited data on the quality of these school-based programs, and that there didn't seem to be an accurate way to assess the natural impact of school-based sexual education due to sex and STI/HIV education programs being more commonly implemented in higher-risk schools. Kirby recommends that more weight should be given to research in this area that uses a quasi-experimental or experimental design.

Kirby (2002b) went on to review 73 studies in which the following criteria were met: (a) the study was published in 1980 or later, (b) the study took place in Canada or the U.S., (c) participants were middle school or high school students (12-18 years old), (d) the study used an appropriate experimental or quasi-experimental design, (e) the samples sizes were at least 100 in the combined treatment and control groups, and (f) the



study measured approaches that had an impact on sexual or contraceptive behavior, pregnancy, or childbearing. Kirby's article focused on four groups of programs that provided evidence of success but only one group of programs is essential to this review as the focus of this research is on modes of transmission of sexual knowledge.

The group of effective programs that Kirby (2002b) reviewed comprised comprehensive sex and HIV education programs. These types of programs normally highlighted that abstinence is the safest way to prevent STIs and pregnancy and that condoms and other forms of contraceptive provide protection against pregnancy and STDs and are a safer option than unprotected sex. The programs reviewed in this group were mostly implemented in educational settings, while some were implemented in community-based settings (e.g., detention centers and homeless shelters). Results of these programs included support of the conclusion that sexuality and HIV education do not increase sexual intercourse including onset, frequency, or number of sexual partners. A review of the programs in this group revealed that the data indicated that sex and HIV education programs do not significantly increase any measure of sexual activity and may even delay or reduce sexual intercourse among teens and that HIV education programs increased condom use in participants. The data also suggested that these types of programs carry greater impact with high risk youth than lower risk youth.

#### Healthcare providers

Another formal source of sexual knowledge is that of healthcare providers in healthcare settings. Although a review of the literature offered limited information regarding this source of knowledge, conversations about sexuality are occurring within the healthcare field. The American Academy of Pediatrics (AAP) even went so far as to

publish policy statements concerning sexuality and adolescence (AAP, Committee on Adolescence, 1998). The AAP posits that pediatricians can be a model of appropriate sexual education to children. This is because providers have a longitudinal ability to provide preventative care to their patients and often their education goes hand in hand with programs that are being enacted by schools or community resources.

Discussions of sexuality with pediatricians and doctors are unlike school-based instruction for several reasons. Healthcare-provided sexual knowledge provides an opportunity to incorporate personalized information, complete confidential screening of risk factors and status, and supply health promotion and counseling (AAP, 2001). Children are accustomed to their pediatricians by the time they reach elementary or middle school and can use their doctors to ask questions or discuss personal information, even when sensitive or embarrassing. Doctors can also facilitate sexual communication between parents and children.

As mentioned before, there is a lack of outcomes related to behaviors associated with receiving sexual knowledge from a healthcare professional. Instead, AAP (2001) offers eight recommendations as to the role of a pediatrician as a source of sexual knowledge. First, frame sexuality from a lifelong perspective and encourage parents to discuss sexuality with their children in a manner that is consistent with the family's values. Second, encourage parents to offer sexuality education and to be open with discussing particular sex-related issues that are appropriate for the child's age. This may include proper terms for anatomic parts, masturbation, answering questions fully and openly, and providing tools for the parents to do this. Third, a pediatrician can provide sexuality education in a way that respects confidentiality and acknowledges individual

family-specific issues and values. This education should include an emphasis on contraception, STIs, potential risks of sex, and sexual pleasure. It should also address concerns, questions, and misunderstandings by children concerning things like anatomy, masturbation, menstruation, erections, nocturnal emissions, sexual fantasies, sexual orientation, and orgasms.

While discussing sexuality, a pediatrician should also discuss the influence of media, obtain a comprehensive sexual history, and discuss reasons to delay sexual activity or use contraception with adolescents. It is here that parents are able to receive counsel from the clinician about communicating with their child about these issues. Fourth, provide specific, confidential, culturally sensitive, and nonjudgmental counseling about key issues of sexuality such as development, preventing unintended pregnancy, and strategies to avoid STIs, HIV, and AIDS. Fifth, pediatricians can provide appropriate counseling or referrals for children and adolescents with special issues and concerns such as sexual orientation, those with disabilities, or those who are sexually active at a very young age. Sixth, if a pediatrician has adolescent patients who are sexually active, regular gynecologic services should be provided as well as screens for cervical cancer and STIs. Seventh, become knowledgeable about other sources of sexual knowledge, and if possible, collaborate with sources. For example, a doctor could provide education about contraceptives in schools or community agencies. Lastly, pediatricians should work with local public planners to develop comprehensive interventions to decrease rates of risky adolescent sexual behavior and adverse outcomes.

## Religion or religious organizations

Another formal source of sexual education includes religion. Religion plays an important part in the life of American youth. According to the National Study of Youth and Religion conducted in 2002-2003, of 3,400 13-17 year olds, 84% identified as having a religious affiliation. Six in ten teens stated they attended religious services at least once a month, and approximately half stated that religion was extremely or very important in shaping how they lived their daily lives. Although little is provided in research about the outcomes of receiving sexual knowledge from a religious institution, the statistics above lead one to believe that if a person were to have the option of receiving sexual education at their church, synagogue, mosque, etc., it would be able to shape how a person acquires and retains knowledge about sexuality.

In 2003, the Religious Institute on Sexual Morality, Justice, and Healing—an interdenominational organization that advocates for sexual health, education and justice in faith communities and society—surveyed youth ministries in 28 of the largest denominations and religious companies that serve Jewish, Christian, and Unitarian Universalist teens concerning what their faith offers them in terms of sexual development services. The survey found that, although 84% of the respondents reported encouraging the use of sexual education in a place of worship, less than one-third reported happenings in this area. Another survey conducted by the Christian Community (Clapp, 2003), found that only 14% of congregations offered a moderately comprehensive form of sex education, approximately half offered a limited amount, and 37% reported close to nothing. In that survey 5,800 teens from 635 congregations (predominantly Protestant, but also Catholic, Unitarian, Jewish, and Islamic) reported that they often did not receive

the information concerning sexuality they needed from their faith communities. This survey also revealed that two in three clergy felt that their congregation could do more to promote sexual education within their place of worship.

The Religious Institute on Sexual Morality, Justice, and Healing published the *Open Letter to Religious Leaders About Sex Education* (2002) to communicate their beliefs about how religion might be involved in sexual education. This publication calls for religious institutions to utilize sexual education that includes all people types. They posit that religion values education—including sexual education—and the purpose of this education is to empower the learner. This education should be considered “truthful” i.e. not just promoting abstinence but also discussing contraception, risky behavior, sexual health, and reproduction. It also includes educating about personal relationships for the purpose of preparing a young adult to engage in a healthy, meaningful, respectful, and loving partnership.

The work of the Religious Institute (2002) also provides guidelines concerning the standard of sexual education. First, it must emphasize responsibility, rights, ethics, and justice. Second, it must affirm the dignity and worth of all persons. Third, it teaches that sexuality includes physical, ethical, social, psychological, emotional, and spiritual dimensions. Fourth, it must complement the education that is provided by other sources. Fifth, the education must publicly identify the values that underline the teachings. Sixth, it must teach that decisions about sexual behaviors should be based on moral and ethical values, as well as considerations about physical and emotional health. Seventh, it affirms the goodness of sexuality while acknowledging the risk and dangers that are associated

with sexual activity. Lastly, the education must introduce the differing sides of controversial sexual issues with respect.

A review of the literature highlighted the lack of research concerning behaviors associated with learning about sexuality from this source. It may be assumed that if research was done regarding religious institutions as a source of sexual knowledge, the results would indicate that there is some impact on sexual behaviors. This conclusion is based on the NSYR survey mentioned previously where approximately half of the participants reported that their religion has an impact in shaping who they are. If this is the case, logically one could say that learning about sexuality from a religious source would impact the way that sexual expression occurred within the life of the adolescents exposed to this source. According to a 2006-2010 National Survey of Family Growth, the reported contradictions of personal religious and moral values are the most important reason teenagers ages 15-19 choose not to have sex (Martinez, Copen, & Abma, 2011).

#### Community-based programs or organizations

A final formal source of sexual knowledge considered in this work is that of community-based programs and community organizations. This work will review different types of curriculums and programs without stating a preference. The first community-based education program to be reviewed is that of abstinence-focused education. Bailey and Wolf (2015) presented the “Sex After Marriage” prevention program which was executed for three years in Philadelphia neighborhoods with high-risk youth ages 12- 18. The program was supported by adults, healthcare professionals, and the general public. This program was a three-tiered program and focused on a middle-school curriculum (Sex Can Wait). This program was implemented in 16

different locations. The goal was to provide support for vulnerable teens in postponing sexual activity through matching specific interests of youth through the curriculum, workshops for supporting adults, and utilizing a multimedia approach to other abstinence education initiatives (i.e., public service announcements and a website).

Surveys were completed by the population over the three-year time period. Results indicated that knowledge about sexuality and abstinence increased at a statistically significant level, but a benchmark level of 75% for overall knowledge about the topics was not achieved (20.9%). Attitudes concerning sexuality and abstinence also improved at a statistically significant level. However, the benchmark level of 50% was not achieved, with the final index score being that of 41%. Lastly, the intention to remain abstinent until marriage final score was 53%, but the 75% benchmark was not met. The conclusion of this study was that risk-reduction based programs are a necessity for today's youth.

Chin et al. (2012) reviewed two differing strategies for group-based sexual education. The first strategy was comprehensive risk reduction and the second was abstinence education. Both aimed at preventing pregnancy, HIV, and STIs. The effectiveness of these strategies and interventions was evaluated based on reduction in sexually risky behavior, rate of pregnancy, HIV, and STIs, and increases in protective sexual behaviors. The literature search completed by the authors revealed 6,579 citations related to comprehensive risk reduction and abstinence education. Out of the total, 66 studies dealt with comprehensive risk reduction and 23 studies dealt with abstinence education and the effects of group-based interventions.

The researchers in this study utilized meta-analysis to look at both of the strategies. Seven key outcomes were identified by the researchers: current sexual activity, frequency of sexual activity, number of sex partners, frequency of unprotected sexual activity, use of protection (condoms and/or hormonal contraception), pregnancy, and STIs. The results of the meta-analysis concerning comprehensive risk reduction showed satisfactory scores for all of the seven outcomes reviewed. Concerning abstinence education, the meta-analysis showed uncertainty about effect estimates due to a small number of studies with inconsistent results that varied by design and follow-up time. Based on these results, Chin and colleagues found group-based comprehensive risk reduction to be an effective strategy to reduce teen pregnancy, HIV, and STIs. The authors were unable to draw conclusions related to group-based abstinence education.

Another study focused on the effects of community-based sex education was completed by Lou, Wang, Shen, and Gao (2004) and used a young adult population from Shanghai. Their research looked at the effectiveness of a youth-friendly intervention that promoted safe sex among 2,524 young unmarried individuals aged 15-24. The study used an intervention group and a control group to look at changes before and after intervention. The intervention was focused on building awareness, offering counseling and other services related to reproduction and sexuality. Baseline surveys were conducted in both groups before the intervention was applied and similar surveys were completed 20 months afterward. There was a 92% follow-up rate in this study with a focus on main measures (contraceptive use at onset of sexual intercourse if it occurred during the course of the intervention, use of contraceptive ever, use of regular contraceptive, and if condoms were ever used). The results were analyzed using logistic



regression models as well as dichotomous measures of contraceptive use and generalized estimating equations with repeated measures.

Results of the study indicated that at baseline, no statistical difference was present concerning contraceptive use between the control and intervention groups. After the intervention was initiated, the proportion reporting regular contraceptive use and condom use were much higher in the intervention group compared to the control group. Statistical analysis confirmed these findings. After adjusting for some extraneous factors, participants in the intervention group were 14.58 times as likely to use contraceptives at onset of sexual intercourse as those in the control group. These results were similar between male and female subjects.

Overall, it would seem that community-based intervention can have an impact on sexual behavior. This positive behavior includes safe sex practices including contraceptive and condom use, informed choices, and reduction of HIV and STIs.

### **Informal Sources and Outcomes**

A review of the literature revealed much more research concerning informal sources of sexual knowledge than formal sources of sexual knowledge. This work will not be able to report all of the literature on this topic and a reader should keep that in mind in the following sections. A survey done by Whitfield, Jomeen, Hayter, and Gardiner (2013) found that adolescents find informal sources of sexual knowledge to be most useful to them and they experience higher levels of comfort specifically when interacting with best friends and mothers. In this work, informal sexual sources are those that include people who have daily participation in the lives of individuals learning about

sexuality: peers, friends, family, the internet and internet pornography, modes of media, social media, and sexual experiences.

#### Friends or peers

The first source to be reviewed is that of friends or peers. Friends are one of the most popular sources of sexual information alongside parents. Gaining knowledge about sexuality from a friend can be considered safe, non-threatening, and relaxed, making peers and friend groups an important factor in adolescent decision making about sex. Adolescents (13-18) are most likely to get information about sexual issues from peers (Kaiser Family Foundation, 2000). Youths tend to engage with those who hold similar beliefs, meaning that teens who do not engage in sexual activity tend to have friends who also do not engage in sexual activity. Youth who are sexually active tend to believe that their friends are also sexually active. Much research exists concerning the influence that peers and friends have on a teen's choice to engage in sexual behavior or remain abstinent (Advocates for Youth, 1997; Fraser, 1997; Sieving, Eisenberg, Pettingell, & Skay, 2006). The research points out that peers and friends are one of the greatest influences on a teens sexual choices.

Throughout the last several decades, conversation has persisted in literature concerning peers as sexual educators. Advocates for Youth (2008) sought to have a literature review done of this research so they could substantiate or refute the notion of peer sexual educators. As expected, peer education profoundly influences sexual knowledge. The review showed that peer programs have a statistically significant effect on attitudes, norms, knowledge, behavior, and health and achievement outcomes. The work by Advocates for Youth (2008) highlighted 28 programs that were either peer-led

or peer-assisted. They drew the conclusion that peer work makes a valued and useful contribution to efforts that improve youth's overall health, success, and well-being.

#### Parents and caregivers

As mentioned above, parents and caregivers are an important influence on sexual knowledge and behaviors of teens. The literature on this topic highlights themes of parental influence – parent-child connectedness, parental expectations, and parent-child communication. In addressing parent-child connectedness, research indicates that among sexually experienced teens, high levels of this connectedness are linked with more consistent contraceptive use (Dittus & Jaccard, 2000) as well as a reduction in teen pregnancy (Dittus & Jaccard, 2000; Resnick et al., 1997). Parental expectations regarding adolescent sex, contraception, and pregnancy can also influence teen sexual behavior. For instance, research reports that explicit parental support for contraception increases the likelihood that sexually experienced teens will use contraception (Crosby et al., 2001; Sieving, Bearinger, Resnick, Pettingell, & Skay, 2007).

Parents are the most accessible source and sometimes considered the most reliable by an adolescent to convey expectations related to sex, contraception, and pregnancy through the use of direct parent-child communication. For instance, teens who regularly participate in dialogue about negative consequences of pregnancy with a mother tend to hold a more negative attitude about teen pregnancy than their peers (Jaccard, Dodge, & Dittus 2003). A teen's negative view about teen pregnancy has been shown to be linked with lower pregnancy risk (Resnick et al., 1997). In accordance, if sexually experienced teens converse about safe sex practices with their parent, they are more

likely to practice safe sex than others (DiClemente et al., 2001; Hutchinson, Jemmott, Jemmott, Braverman, & Fong, 2003; Whitaker & Miller, 2000).

Research highlights that less communication between daughters and their mothers about sexuality is linked to less knowledge of sex, which has the potential to leave adolescents more vulnerable to risky or dangerous sexual behavior (Somers & Paulson, 2000). While much research exists concerning the impact of mothers on adolescent sexual behavior, little research has investigated a father's impact. As a result of this lack of knowledge, little is known statistically about the potential role a father or father figure may play in impacting teen sexual risk such as premature sexual activity and other consequences of sex (pregnancy, STIs, etc). Several studies have looked at affection and support from a father or father-figure and determined that it is important in relation to an adolescent's well-being and overall positive development (Harris, Furstenberg, & Marmer, 1998; King & Sobolewski, 2006). There are even a few studies that have found that teens who have a healthy and close relationship with their father or stepfather are likely to delay sexual activity (Burns, 2008; Regnerus & Luchies, 2006) and also report less positive attitudes about having sex while an adolescent (Menning, Holtzman, & Kapinus, 2007). Conversely, Mendle et al. (2008) report that children in their study (14-21 years of age) who were raised without a biological father in the household had earlier average ages of initial sexual intercourse than teen children who were raised with a father in the household.

Overall, the literature about parents as informal sources of sexual knowledge indicate that more is better. While mothers are the predominant communicators of sexuality among parents, fathers have the ability to be just as important in this area. If a

parent and child are actively engaging in communication, positive modeling, and openly stating values, the teen is more likely to make positive choices concerning sexuality.

Adversely, if a parent is silent about the issue of sexuality, the teen is forced to seek out another source of information.

### Sibling

If a teen is unable to gain sexual knowledge from a friend, peer, or parent, the seeker may next try to gain information from a sibling. Female teens are often more comfortable talking with their sisters (other than parents/brothers) about issues related to dating and sexuality (Kowal & Blinn-Pike, 2004). Often times in families, younger siblings look up to their older siblings and base their behavior on what is being modeled by the older sibling. Killoren and Roach (2014) used an observational methodology to study sibling communication. Twenty-eight sister dyads were videotaped discussing their ideas about sexuality and dating. Three roles within the sister dyads were identified: sisters as confidants, sources of support, and mentors. Both older and younger sisters were used as confidants and sources of support for one another, whereas older sisters were more likely to be mentors for their younger sibling rather than the opposite. Their findings are indicative of the importance that sister/same gender sibling relationships can have in forming adolescent ideas about dating and sexuality. Their research opted for engaging older siblings in prevention/intervention programs that focus on reducing teen sexual risk behavior and promoting healthy relationships and sexuality.

Social learning theory—mentioned above—points to similar conclusions about the importance of older siblings on sexuality. When viewed through this lens, sisters are seen as important socializers of sexuality (McHale, Bissell, & Kim, 2009). Conversely,

older sisters can sometimes contribute to younger sisters' risky sexual behavior. Researchers have found that teens who have sexually active older siblings are more likely to have or be engaging in sexual intercourse than those with non-sexually active older siblings (Rodgers & Rowe, 1988). East, Felice, and Morgan (1993) examined sisters' influence on teen pregnancy and found that having an older sister who was a teen mom was associated with a higher likelihood of becoming sexually active at an early age. It also associated with a higher likelihood of becoming pregnant (East, Reyes, & Horn, 2007). Even though this research presents negative associations, one could conclude that older sisters may behave in ways that diminish risky sexual behavior, meaning that an older sister who abstains from sexual intercourse may lessen the likelihood of sexual risk for their younger sister. Perhaps, if a sexually active older sister is practicing responsible sexual behavior (i.e., contraceptives/condoms), a younger sister may be more likely than not to also practice safe sexual behavior.

Although limited research is available regarding brother dyads and sexual communication, Kowal and Blinn-Pike (2004) report minimally on this. Their research looked at the role of older siblings in encouraging safe sexual practices with their younger siblings and did not distinguish between male and female differences. Their study looked at 297 Midwestern high school students who were approximately 17 years of age. These participants responded to questionnaires that assessed their attitudes about sexual intercourse, self-efficacy for engaging in safe sex, and discussion, with their older siblings and parents about sex. The results of their questionnaire suggested that sibling discussion about safe sex, in tandem with parental discussions, was predictive of positive attitudes toward safe sexual behavior for the teens. A teen's perception of the quality of

the sibling relationship was more closely associated with sibling discussions about safe sex than were older siblings' general attitudes about safe sexual practices. The researchers concluded that the quality of the sibling relationship may be a protective factor as it facilitates more sibling discussions about safe sexual behavior.

#### Family member, not parent or sibling

Besides the nuclear family, extended family members also have the ability to impact an adolescent's sexual knowledge. Although this is particularly true of minority families, relatively few studies actually investigate the role extended families play in talking about sex and sexual behaviors with teens. Grossman, Tracy, Richer, and Erkut (2015) used a mixed-methods approach to assess extended family sexuality communication. Surveys were given to 1492 diverse middle school students and interviews were done with 32 students. Logistic regression was used to show that the participants who reported having had sex were more likely to report having talked to extended family members about sexual health and behavior, as compared to those participants who were not sexually active. Several themes were explored in the interview portion of this research and included reasons for and content of teen sexuality conversations with extended family members. The researchers interpreted sexually active teens who reported communication with extended family as evidence of extended family members gaining importance and merit in sexual communication as teens became sexually active.

#### Internet pornography and SEEM

In the past, the primary means of sexual socialization were family and institutions such as schools and churches, but with the arrival of the internet, social media, and access

to materials at a moment's notice, sexual knowledge is readily available to all who search for it. One way in which children and adolescents are seeking out sexual knowledge is through the informal source of internet pornography and SEEM. This work will define pornography in the same way that Reid and colleagues (2011): "material that creates or elicits sexual feelings or thoughts and contains explicit images or descriptions of sexual acts involving the genitals." The advent of sexual availability has completely altered the way our world operates. Adolescents, as well as adults, inhabit a hypersexualized culture in which SEEM continues to proliferate and access to it becomes ever easier.

Sabina, Wolak, and Finkelhor (2008) note some of the dynamics associated with exposure to internet pornography in adolescence. Data for this study was gathered through an online survey service using an undergraduate population of 563 students. The survey gathered information regarding demographics, age of first exposure to online pornography (if any), consumption of 10 specific types of images, reasons for viewing, and whether they had seen online pornography before age 18 that had a strong effect on their attitudes or emotions. The article noted that 72.8% of the participants had viewed pornography before the age of 18 (93.2% of boys and 62.1% of girls). The average age of first exposure occurred between the ages of 14 and 17. Girls, more than boys, reported not purposefully seeking out pornography. A small portion of the participants (12% of boys and 18.7% of girls) reported that viewing online pornography before the age of 18 had a strong effect on their attitudes and emotions. The males in this study were more likely to report feeling sexual excitement, while girls reported embarrassment and disgust. Equal numbers/proportions of male and female participants reported that they



were less eager to seek sexual activity as a result of their encounter with internet pornography.

Another study done by To, Ngai, and Kan (2012) looked at direct and mediating effects of SEEM on Hong Kong adolescents' attitudes, knowledge, and behaviors related to sex. Their hypothesis challenged the assumption that a direct relationship existed between frequencies of accessing SEEM and an adolescent's sexuality and instead hypothesized that exposure to SEEM would produce intrapersonal reactions that would mediate effects on sexual development. The researchers used a survey design to assess the 503 adolescents in their study. Analysis of covariance and mediation were conducted and several results occurred. The first indicated that an adolescents' frequency of access and reactions to SEEM were positively connected to their level of acceptance of stereotypical gender roles, power imbalance within sexual relationships, premarital sex, sexual compulsion, and sexual daydreaming or fantasizing. Another result indicated that adolescents' reactions to SEEM mediate, as well as amplify, effects of the frequency of accessing SEEM. Concisely stated, it is how a person reacts physiologically, cognitively, affectively, and behaviorally that mediates effects of accessing SEEM.

Owens, Behun, Manning, and Reid (2012) reviewed research that occurred between 2005 and 2012 and also looked at the impact of internet pornography on adolescents. Their review uncovered several noteworthy findings. One finding looked at the impact of pornography on attitudes and beliefs. Tsitsika et al. (2009) produced findings in 529 Greek adolescents that suggested that adolescents who are exposed to sexually explicit material have the propensity to develop unrealistic attitudes about sex and relationships. The research done by Peter and Valkenburg (2010) with 959 Dutch

adolescents suggested that the more teens come in contact with sexually explicit material, including internet pornography, the more their perceptions of realistic sexuality are altered and the utility of the material increases. Their study also found that as the teens used these materials more often and their perceptions were altered, it was more likely that the teens viewed sex as casual and physical rather than relational and affectionate. However, there are some studies (Lofgren-Martenson & Mansson, 2010) that contradict these findings and instead discovered that teens from the study's much smaller population of 51 are able to differentiate between sexual fantasy and sexual reality even though the ideals of sexually explicit material do influence teens.

Furthermore, several authors argued that viewing pornography was a natural, normal, and somewhat expected part of contemporary adolescence (Sabina et al., 2008; Svedin, Åkerman, & Prieve, 2011; Ybarra & Mitchell, 2005). This trend seems to be carrying into adulthood as Carroll et al. (2008) found in their study with 813 adults. It was discovered that 67% of males and 49% of females felt that an acceptable way to express one's sexuality was through the viewing of sexually explicit materials. Certain cultures have deemed viewing such material as normal rather than shameful (Lofgren-Martenson & Mansson, 2010).

Another study (Svedin et al., 2011) conducted with 2,015 Swedish adolescent males supported findings that males who frequently view sexually explicit materials had a more liberal and positive attitude towards the material than those who viewed it infrequently or not at all. The study also proposed that regular viewers of explicit material felt that using the material had the possibility to create a more exciting sex life for the consumers.

Research also exists pertaining to adolescents' exposure to SEEM and sexual preoccupation. Peter and Valkenburg (2008) were the first to study this and found that in a sample of 962 Dutch teens who were surveyed three times in the course of a year, regular viewing of this material led to more frequent thoughts, interest, and distractions related to sex. The study also proposed that "sexual arousal as a result of exposure to SEEM may cue sex-related cognitions in memory . . . and may eventually lead to chronically accessible sex-related cognitions, that is sexual preoccupation" (p. 227).

Several studies examined the connections between SEEM and attitudes. Lo and Wei (2005) used hierarchical regression analysis with Taiwanese adolescents to study how explicit material found on the internet influenced teens when compared to pornographic material not found on the internet. They found that sexually explicit internet material had a greater influence on teens than other pornographic materials. A similar study completed in the U.S. (Braun-Courville & Rojas, 2009) determined that the more regularly an adolescent was exposed to SEEM, the more permissive their attitudes toward sex became as measured by the BSAS. Meaning that a relationship was found between early exposure to SEEM and an agreement with an attitude of sexual permissiveness.

Gender roles and gender attitudes are also influenced by SEEM. A longitudinal study conducted by Brown and L'Engle (2009) found a connection between teen engagement with sexually explicit material and less progressive attitudes concerning gender roles for both males and females. An example of what they found specified that male dominance and female submission are gender roles that become reinforced through sexually explicit material. Peter and Valkenburg (2007) studied 745 Dutch teens and

found that increased engagement with sexually explicit material influenced the likelihood that teens, male and female, would view women as sex objects. Peter and Valkenburg clarified these results in a later study (2009) where they discovered that viewing women as sex objects was associated with increased consumption of SEEM.

Engagement with sexually explicit material is also connected with causal and premarital sexual relations. A study (Lo & Wei, 2005) of 2,001 Taiwanese students found that a relationship existed between engagement with sexually explicit material and positive attitudes toward premarital/extramarital sexual relations. A study done by Haggstrom-Nordin, Hanson, and Tyden (2005) among 718 Swedish teens found that those who interacted with sexually explicit materials held positive attitudes about casual sex. These findings were supported by a qualitative study with 18 teens done by Haggstrom-Nordin et al. (2006). They found that Swedish teens who engaged with SEEM possessed positive attitudes about having casual sex with a friend. In the United States, it has been suggested that teens who have increased exposure to SEEM are more likely to be accepting of casual sex (Braun-Courville & Rojas, 2009).

#### Online websites or materials

Another informal source of sexual knowledge is that of non-explicit online websites that are available to provide information concerning sexuality. Rideout, Foehr, and Roberts (2010) conducted a major study concerning media's impact on 8-18 year olds. They studied 2,002 3<sup>rd</sup> to 12<sup>th</sup> graders for approximately seven months. They found that among 7<sup>th</sup>-12<sup>th</sup> graders, 55% reported that they had looked up health information online in order to gain more knowledge about something that was affecting them or someone they knew. Buhi et al. (2010) evaluated 177 sexual health websites and found

that the websites had below average quality but also had few inaccuracies. The more complex and technical the wording and material being covered, the more inaccuracies were found. 46% of the websites addressing contraception and 35% of those looking at abortion contained inaccurate information. Although no previous literature was found that addressed outcomes of learning about sexuality from online sexual health sources, it is still considered an important informal source of sexual knowledge.

### Social media

Social media is also a relevant part of adolescent lives and thus has the potential to be an informal source of sexual knowledge. Social media is a somewhat new resource. As such, a limited amount of research is available regarding the subject matter. One study presented here involves Facebook. Young and Jordan (2013) conducted two studies that looked at whether online social networking, in this case Facebook, influenced health behavioral social norms and thus personal health behavioral intentions among 49 undergraduate students. Study 1 had experimental participants peruse peers' Facebook photos on a college network. These photos were low in sexually suggestive content. These participants then estimated the number of their peers who have sex without condoms and then rated their own intentions to use condoms in the future. The control group did not view photos. Experimental participants, in comparison to their counterpart, estimated that a larger amount of their peers use condoms and also indicated a higher intention to use condoms in the future. Study 2 randomly assigned participants to view sexually suggestive or neutral Facebook photos and then respond to sexual risk behavioral questions. Results found that those who had viewed sexually suggestive photos expected that a larger number of their peers engaged in unprotected sexual

relations and sex with strangers and were more likely to report that they themselves were likely to engage in those behaviors. This study showed that online social networking sites have the ability to impact perceptions of peer sexual risk behavior and thus alter perceptions of peer norms and future personal choices.

A popular tool used with social media is the selfie, recently earning the title of “word of the year” by Oxford dictionary in 2013. Many adolescents engage in posting, tweeting, snap-chatting, and texting selfies. However, as Peek (2014) notes, the selfie can quickly be sexualized and become sexting. As mentioned previously, if a peer, friend, or partner is doing it, your average teen will soon be engaging in it as well. This follows the theme found in SLT and is important to note due to how often a teen receives sexual information from a peer or friend.

## Media

An additional informal source of sexual knowledge is media in general. In this work, media represents music, television, magazines, and non-pornographic movies. Much research exists about adolescents who actively seek sexual content in media and those who do not. Exposure to sexuality in the media is one of several factors that encourages risky sexual behavior. Many researches and studies have shown that exposure to sexual content in media is related to early sexual initiation, progression and extent of sexual activity, and timing of sexual intercourse (Aubrey, Harrison, Kramer, & Yellin, 2003; Bleakley, Hennessy, Fishbein, & Jordan, 2008; Brown et al., 2006; Collins, 2005; Hennessy, Bleakley, Fishbein, & Jordan, 2009; L’Engle, Jackson, & Brown, 2006; Somers & Tynan, 2006).

The study conducted by Chandra et al. (2008) looked at whether watching sex on television (movies, TV shows) predicted teen pregnancy. This pioneering study surveyed teens age 12-17 and monitored them until age 15-20. Multivariate logistic regression models controlled for known correlates of exposure to sexual content and involvement in pregnancy during the three year period. Their study showed that teens who were exposed to television with high levels of sexual content were twice as likely to experience pregnancy in some way (father or mother) in the three year period compared to those who were exposed to low levels of content. However, this study was criticized for not considering the role of culture.

#### Initial sexual experience

The final informal source presented in this section is that of an initial sexual experience. These initial sexual experiences can occur consensually or non-consensually. It is safe to assume that a non-consensual initiating sexual encounter may be considered traumatic by the participant who is not willingly engaging. One source, Rape, Abuse, & Incest National Network (RAINN) points out that having a sexual experience interpreted as traumatic can have psychological, emotional, and physical effects. Sometimes these effects are difficult to deal with and take a specific kind of support to overcome. Effects may include post-traumatic stress disorder, STIs, self-harm behaviors, depression, flashbacks, coping through substance use, eating disorders, pregnancy, suicidality, dissociation, and sleep disorders. Another source (Bloom, 2003) reports that sexual assault (whether as a first sexual experience or at any time) has immediate as well as long-term effects. These effects include altering a person's psychobiology, affecting

personal adjustment, and impacting how one forms meaning. This, in turn, influences overall mental health, social adjustment, re-victimization, and parenting abilities.

Conversely, someone may perceive an initial sexual experience as one with positive effects. This can be the case when the sexual experience is considered consensual by both participants. If an initial sexual experience is considered positive, it has the ability to shape the attitudes, values, and individual purposes of future sexual activity. If the initial sexual experience was carefully thought out, protective measures were in place (i.e. trust between partners, contraceptive, etc.), and was mutually beneficial, the sexual participants may use that first experience as a blueprint for future sexual activity.

There is some research that looks at age of sexual debut, or age of sexual initiation. Sandfort, Orr, Hirsch, and Santelli (2008) looked at long-term health correlates related to sexual debut from a US national study. Their study also looked at abstinence until marriage and its health effects. They used data from a 1996 National Sexual Healthy Survey with an adult population and compared health outcomes between two groups: those who initiated sexual activity at an early or late age and those who initiated sexual activity at an average age. The researchers also compared results of sexual health between individuals whose first sexual intercourse encounter occurred before or after marriage. Their results indicated that early participation in sexual intercourse was related to sexual risk factors including higher numbers of sexual partners and recent sexual activity done under the influence of alcohol. Late sexual debut was found to be associated with fewer risk factors. Both early and late sexual debut were related to sexual problems involving arousal and orgasm (mainly in males). There was no correlation



between early or late sexual debut and relationship solidarity or sexual relationship satisfaction.

Significant other without the use of intercourse

It is recognized that there are other means of transmitting sexual knowledge, yet research is lacking in the outcomes that are associated with these sources. One source that lacks research includes gaining sexual knowledge from a significant other without the use of intercourse. It is plausible that a person, specifically as a child or teen, would have conversations with a significant other concerning sexuality. It would be from these conversations that values, ideas, and behaviors might be formed. These could then be enacted when a person decided to become sexually active.

### **Sexual Attitudes**

As seen in some of the research presented previously, behavior is closely considered in research related to outcomes of sexuality. It is commonly accepted that attitude and behavior are related, and thus, attitude needs to be considered when studying sexuality. There is a variety of research available as to how attitude and behavior are related. The first presented here is the ABC model of attitudes as presented by McLeod (2009).

McLeod (2009) states that there are three components of attitude structure. The first is the Affective component and is constructed by a person's feelings or emotions about an attitude object. The second component is Behavioral and involves the way that a person's attitude influences how one acts or behaves. The third component is Cognitive and regards a person's belief of knowledge about the attitude object at hand. In the case of this work, the object is sexuality. An underlying assumption about this ABC model is

that of principle consistency. This principle expects that a person's behavior will be consistent with the attitudes to which s/he ascribes. This means that if individuals have positive or healthy attitudes about sexuality, this will be reflected in their behavior with themselves and their partners.

A somewhat dated meta-analysis (Kraus, 1995) looked at 83 studies concentrating on attitudes-behavior. The purpose of the study was to determine the extent to which attitude could predict future behavior and to identify what influences the attitude-behavior relationship. Based on methodological criteria, 83 studies were identified as usable for the analysis. Results of his work indicated that attitude significantly predicted future behavior ( $p < .000000000001$ ). Behavior-attitude correlations ranged from  $-.10$  to  $.91$  and an average of  $.38$  was reported. The number of studies with significantly correlated attitude and behavior was 64. The author stated that "there would need to be 54,563 additional studies in 'file drawers' reporting no correlation between attitudes and behavior to reduce the overall set of results to nonsignificance, i.e.  $p > .05$ " (Kraus, 1995, p. 60). Among the other conclusions that might be drawn from this work, we see that attitudes that are held with confidence rather than doubt predict behavior more accurately. Decisive attitudes, rather than ambivalent, are better predictors of behavior. Easily recalled, rather than difficult-to-recall, are better predictors of behavior. Lastly, direct experience, rather than indirect experience, stimulates greater attitude-behavior consistency.

A more recent meta-analysis (Glasman & Albarracin, 2006) examined the factors that are influential and present at the time an attitude is formed and guide future behavior. Their meta-analysis included 128 conditions and had a participant number of 4,598. The

results found an overall weighted-mean attitude-behavior correlation of .52 (note that this is higher than .38 as presented in Kraus, 1995 when he included research that had low attitude-behavior correspondence). The researchers here concluded that their findings were compatible with the findings of Kraus.

What sets the Glasman and Albarracin (2006) study apart is its analysis of moderators concerning attitude accessibility and stability. Their meta-analysis suggested that individuals form attitudes that are more predictive of behavior when they are motivated to think about the object in question, have direct experience with the attitude object, are frequently reporting their attitude, construct attitudes based on information that is relevant to behavior, interact with positive/negative information about the object, and believe that their attitude is correct. The review of research also indicated that forming accessible attitudes, contemplating consequences of engaging in behavior when an attitude is initially formed, storing one-sided information, and being confident about an attitude all allow individuals to use attitudes to shape future behavior. A further finding was that behaviors which promote attitude stability influence the relationship between attitudes and behavior.

This research is important to this study because it provides a rationale for shaping attitudes about sexuality rather than focusing on behavioral aspects of education. The literature suggests that attitude can be a major component in dictating future behavior and is therefore important when considering transmission of sexual knowledge and sexual knowledge sources.

## **Cultural Differences**

Another major contributing factor of sexuality is that of specific cultural norms. Culture is composed of many things – country of origin, family of origin, religious background, ethnicity, and others. Many individuals are unaware of the impact culture can have on areas of their life, especially sexuality. As stated earlier in this chapter, families are the prime informers of shaping and socializing a person. It could then be concluded that the values and norms of a parent would be adopted by the child when it is time to form beliefs about sexuality. Parents are also primary determinants for a child's religious and ethnic beliefs and traditions.

Much research exists concerning the influence that cultural factors have on sexual development and sexuality in general. For instance, a study by Shoveller et al. (2004) found that in Canadian youth and young adult populations, social norms and structures pathologized sex and eliminated conversation that the participants would have liked to engage in with others. This created an environment of sex-based shame as reported by the participants.

In a study of Asian-Americans, by Okazaki (2010), findings indicated that Asian-American teens are notably different than other ethnic groups in terms of sexuality. For example, compared to other ethnic group cohorts, Asian-Americans hold more sexually conservative attitudes and behaviors and also initiate sex at a later age. Reasons for this were attributed to cultural characteristics such as importance of family values, valuing collective goals, sexual restraint, modesty, and emphasis of social propriety and codes. It was noted that as Asian-Americans became more acculturated, they became less

conservative in sexual beliefs, showing once again the impact of culture, even if the culture is not a culture of origin.

Another study (Stephens & Few, 2007) examined the female African-American population and the influence of hip hop on adolescent sexual frameworks. In the study, Stephens and Few looked at how sexual images (e.g., the Diva, Gold Digger, Freak, Dyke, Gangster Bitch, Sister Savior, Earth Mama, and Baby Mama) informed and reflected beliefs about African-American female sexuality. Findings indicated that regular engagement with cultural and interpersonal messages pertaining to sexual images has a direct effect on African-American youths' sexual self-identity, behaviors, and experiences.

A study done by Meston and Tierney (2010) looked at acculturation and sexual behavior in a diverse undergraduate population of 1,419 (67% Euro-Americans, 17% Hispanic, 16% Asian; 33% male and 67% female). The study utilized measures of acculturation to assess the relative effects of heritage and mainstream culture within the various groups. Findings indicated that Asians reported more conservative levels of sexual experiences, less frequency of sexual behaviors, and later age of initial sexual debut than both Euro-Americans and Hispanics. Both Hispanics and Euro-Americans reported comparable sexual experiences. Number of lifetime sexual partners of Asian females was found to be predicted by both mainstream and heritage culture. In Hispanic male participants, higher levels of mainstream acculturation predicted higher incidences of casual sexual behavior when heritage acculturation was low. Although the studies presented here are not exhaustive, they do provide evidence that culture indeed is a contributing factor of sexual behavior and attitude.

### **Need for Further Research**

Completing a literature review in the area of sexual knowledge, sexual attitude, and culture revealed several gaps in the literature. The first is related to the importance of attitude. Behavior is a reflection of attitude and a shift in transmitting sexual knowledge needs to occur accordingly. Appropriate influencing of sexual attitude can result in personal safety, safety of sexual partners, and other-gender acceptance, as well as increase the likelihood of appropriate and consensual sexual experiences for all involved.

A second reason for pursuing research in this area is the target population. Much of the research concerning sources of sexual knowledge has occurred with adolescent populations. A study that used an adult population (18 years of age and older) may be more apt to report openly and be less concerned with others' perceptions of sources. An adult population may also be more reliable in reporting the influence of source type. Using a college population may also be more helpful as sexual exploration and behaviors tend to be more prevalent in young adulthood. Research on this population may also lead to program development or implementation that can guide or inform sexual behavior at this volatile time.

A third reason why more research in this area is needed concerns children. As this review has shown, there are many different sources of sexual knowledge with different outcomes related to each source. If the educational system, religious organizations, and families could be informed of an appropriate and meaningful way to communicate sexual knowledge to adolescents, negative sexual outcomes might decrease.

## **Summary**

This review of literature has reported that sexuality is an important part of human development and identity. There are many ways that a person can learn about sexuality, including formal and informal sources. To date, research has documented specific outcomes related to source of sexual knowledge. While many of the findings have focused on behavioral outcomes, it is important to know that attitude shapes and monitors behavior. Cultural norms and expectations also play a part in dictating sexual behaviors and attitudes.

The topic is of importance as it may yield valuable information about the effects of first sexual knowledge encounters in childhood or adolescence and its relationship to sexual attitude in adulthood. The results may be used as foundational work in shaping future conversations, education, and sources used in the transmission of sexual knowledge. This study is considered important as a review of literature has revealed a gap when considering an age group beyond adolescence and transmission of sexual knowledge. Also, research thus far has been focused on behavior related to transmission more so than attitude concerning this topic.

## CHAPTER 3

### METHODOLOGY

#### **Introduction**

This chapter describes the research design that was used to examine the relationships amongst the variables; mode of transmission of sexual knowledge, sexual attitude, and culture. The present study utilized a non-experimental, correlational research design using a survey research method. Participants completed surveys that measured sexual attitude and gathered information about how one learned about sex, the mode's influence, and demographic information. This work employed several statistical analysis techniques to answer the six research questions that guided the study. These techniques included EFA, descriptive statistics, independent sample t-tests, one-way ANOVA, chi-square and canonical correlation.

#### **Research Questions**

Several research questions were addressed in this study:

- (1) How do individuals in this study learn about sex?
- (2) To what extent have these sources of knowledge influenced participants' knowledge of sex when learned then and now?
- (3) What are the sexual attitudes of the participants in the study?
- (4) Are sources of sexual knowledge related to gender and cultural background?
- (5) Is sexual attitude related to gender and cultural background?



(6) Is there a relationship between the source of sexual knowledge and sexual attitude?

### **Research Design**

For the purpose of this study, a non-experimental, correlational research design was utilized. Non-experimental, correlational research is a fairly common approach in the field of psychology. Variables in this context are examined without manipulation by the primary researcher or environmental threats. Because of this, adequate and informative understanding of how phenomena are experienced can be provided to individuals. However, it is noteworthy that correlational research does present some weakness; most conspicuously, it does not allow for induction or causal inferences. Although one may have knowledge concerning two variables being highly related, it does not lead one to know whether one variable causes the other.

In this study, data was obtained using a survey research method. This approach was decided as best fit practices due to the nature of the variables being studied. The variables in this study were subjective and therefore unable to be directly observed. Consequently, the best way to measure these variables was using a self-report format, such as a survey or interview. The survey method format was chosen for this study due to its simplicity in administration, ability to provide clear, quantitative data, in an unobtrusive manner. However, survey research is not without its limitations. Compared to interviews, information gleaned is less detailed and nuanced. This method also lacks the stringent consistency of the experimental research environment, thus being unable to provide information concerning why participants responded the way they did.

## Independent Variables

The present study measured three independent variables: transmission of sexual knowledge, gender, and cultural background. Transmission of sexual knowledge is defined as how one learns or gains knowledge about sexuality. Sources may be categorized into two classes: formal sources and informal sources. Formal sources are those that include educators, healthcare professionals, religious institutions, or community organizations. Informal sexual knowledge sources are those that include people in the daily lives of individuals (peers, friends, and family), internet pornography, SEEM, online websites or materials, social media, media, an initial sexual experience, or a significant other without the use of intercourse. Information about transmission of sexual knowledge was collected through a sexual knowledge tool (Appendix D). Gender refers to one's internal sense of self regardless of biological gender. Cultural background refers to one's ethnicity, religious affiliation during formative years, and setting of living during formative years.

## Dependent Variables

In this study, one dependent variable was measured: sexual attitude. Sexual attitude is defined as an individual's beliefs about sexuality. The BSAS was used to measure this variable (Appendix D). The four attitudes presented by the BSAS include: Permissiveness, Birth Control, Communion, and Instrumentality.

## Population and Sample

This study aimed to understand how people, specifically adults, learned about sex, the impact of the source of sexual knowledge, their attitude about sex, and their cultural identification. In this study, adults were defined as individuals over the age of 18 and

participants were between the age of 18 and 30. The sample was collected using convenience sampling. Participants were drafted via QuestionPro, an online service that seeks to assist researchers in creating and distributing surveys to target populations.

QuestionPro sustains a database of millions of people who have enrolled to take surveys for the database. For completion of surveys, QuestionPro gives respondents points that can be redeemed at a later date for gift cards to popular retail institutions. QuestionPro is open to anyone who desires to enroll in the program. To sign up, an individual must provide thorough and complete demographic information so that researchers can be specific in the makeup of their participant sample.

In the case of the present research, QuestionPro recruited a sample of both men and women who were diverse in cultural background and between the age of 18 and 30. Potential participants were contacted by QuestionPro with an invitation to engage in the survey. Participation was strictly voluntary. In order to ensure that the data consisted of enough power to detect an effect of statistically significant size, over 300 responses were obtained through QuestionPro.

## **Instrumentation**

### **Brief Sexual Attitudes Scale**

The BSAS consists of 23 questions to which a participant is prompted to respond. This scale is a shorter version to The Sexual Attitudes Scale (Hendrick & Hendrick, 1987). Both versions of the scale were designed to assess several dimensions of sexual attitudes in a single measure. Participants are asked to read statements concerning sex and then respond to them using a 5-point Likert scale ranging from (1) strongly disagree with the statement to (5) strongly agree with the statement. A higher score on each subscale

indicates a greater tendency of correspondence to the aspect of sexual attitude being measured by the subscale. An overall score is not very useful. Instead, the four subscale scores are achieved based on calculating the mean for each subscale.

The instrument produces scores for four subscales: Permissiveness (items 1-10), Birth Control (items 11-13), Communion (items 14-18), and Instrumentality (items 19-23) (Hendrick et al., 2006). The Permissiveness subscale includes 10 items that assess a person's attitude about casual sex. Sample items include "I do not need to be committed to a person to have sex with him/her" and "The best sex is with no strings attached." The Birth Control subscale includes three items which assess attitudes about birth control responsibility. For example, "Birth control is a part of responsible sexuality." The Communion subscale includes five items that assess a person's attitude related to emotional meaning of sex. Sample items include "Sex is the closest form of communication between two people" and "Sex is a very important part of life." The Instrumentality subscale includes five items which focus on physical pleasure. A sample item includes "The main purpose of sex is to enjoy oneself."

Hendrick et al. (2006) found that all four subscales of the BSAS have high internal consistency. Cronbach's alpha for each scale was as follows: Permissiveness = .93, Birth Control = .84, Communion = .71, and Instrumentality = .77. Subscale intercorrelations were found to be low. The correlation between the Permissiveness and Instrumentality subscales were .41, while correlations between the other combinations of scales were .19 or lower. Test-retest correlations for all four subscales include Permissiveness = .92, Birth Control = .57, Communion = .86, and Instrumentality = .75. Construct validity was established through various studies correlating the BSAS with

other measures (Hendrick, 1988; Hendrick, Hendrick, & Dicke, 1998; Lund, 1985; Miller, Berg, & Archer, 1983). Alpha reliability coefficients ranged from .70 to .95 (Hendrick et al., 2006). The BSAS was seen as a reliable instrument for the study based on Cronbach's Alpha ( $\alpha = .879$ ).

### Sexual Knowledge Tool

An informal tool was used to gather information concerning transmission of sexual knowledge and subjective importance. The process of item generation began by brainstorming different questions that would fulfill the purpose of the tool, eliminating redundant or wordy questions, and reviewing what literature has said about the topic. Two distinct categories were identified within the tool to classify transmission of sexual knowledge sources. These included formal and informal sources of sexual knowledge. Formal sources are those that include educators, healthcare professionals, religious institutions, or community organizations. Informal sexual sources are those that include people in the daily lives of individuals (peers, friends, and family), internet pornography, SEEM, online websites or materials, social media, media, an initial sexual experience, or a significant other without the use of intercourse. Thurstone Scaling was used in this survey to assess forms of transmission of sexual knowledge and adequacy of sources for participants.

Approximately 1,000 sources were reviewed for this questionnaire and were narrowed down to 50 reliable sources (see Table 1). Literature examinations were made in research databases, internet searches, government websites and dissertations. Searches were conducted using the key terms "sexual knowledge", "sexual sources", and "sexual education". Years of publication range from 2000 to 2012.

Table 1

*Sources of Sexual Knowledge Tool*

Variable	Conceptual Definition	Operational Definition	References
Formal Sources of Sexual Knowledge Transmission	Sources of information concerning sexuality that include schools, healthcare settings, religious institutions and other community organizations	Information provided by school: Information provided by healthcare providers: Information provided by religious institutions: Information provided by community organizations.	Ancheta, Hynes, & Schrier (2005), Ojalvo (2011), NCSL (2015), Guttmacher Institute (2012), Lindberg (2006), Bleackley et al. (2009): Ancheta, Hynes, & Shrier (2005), Minnesota Dept of Ed. (2007): Religious Institute on Sexuality Morality, Justice and Healing (2011): Bailey & Wolf (2015), Strauss et al. (2012).
Informal Sources of Sexual Knowledge Transmission	Sources of information concerning sexuality that include those in the daily lives of individuals, internet, internet pornography, and movies or television.	Information provided by peers or friends: Information provided by parents: Information provided by sibling: Information provided by internet resources: Information provided by internet pornography: Information provided by movies/television	Ojalvo (2011), Brown (2008), Measor (2004): Somers & Paulson (2000), Somers & Vollmar (2006), Martinez, Abma, & Casey (2010): MSS, Davis & Friel (2001), Killoren & Roach (2014): Minnesota Dept of Ed. (2007), Szekely & Nagy (2011), Rideout et al. (2010), Buhi et al. (2010): Sabina (2008), Lofgren-Martenson & Mansson (2009), Finkelhor et al. (2000): Chandra et al. (2008)

Other instruments were used to create this questionnaire and include the Minnesota Student Survey of 2007, 2006-2008 National Survey of Family Growth, The Sexual Communication Scale, and anonymous responses to a New York Times blog concerning how individuals learned about sex.

### **Procedure**

To the extent of my knowledge, no harm came to the research participants in the process of this study. The surveys were anonymous and were thought to not produce psychological harm. However, the topic of sexuality is sensitive in nature and participants were informed of the nature of the surveys before they elected to complete the measures. Participants were also informed of their rights to discontinue participation at any point in the process. The primary researcher's contact information, as well as the contact information of the dissertation chair, were provided to participants in the event that they had questions or concerns.

The sample consisted of 352 participants. Participants were recruited via QuestionPro. Results were gathered in less than 24 hours and nearly 400 responses were collected. QuestionPro was utilized because it allowed for varying survey sizes, ensured the anonymity of participants, and was convenient in use.

Upon opening the survey, participants were introduced to the study. Potential risks and benefits were identified and participants were informed that they retained the right to discontinue the survey at any time. Contact information for the primary researcher and dissertation chair was also provided. By clicking on a particular button, participants acknowledged that they had read and understood the introductory information and that, by answering the questions of the survey, they were giving their

consent to participate in the present study. Following this, demographic information was collected including: age, religious affiliation, socioeconomic status (SES), family structure, income, marital status, gender, ethnicity, educational background, and location of living where one has spent the majority of their life (Appendix C). Participants then responded to the BSAS and the sexual knowledge tool. Throughout the duration of the surveys, a button was available to participants which allowed the discontinuation of the survey at any time. After respondents completed the surveys, a final screen appeared which thanked them for participation and also informed them of the points QuestionPro had added to their account.

### **Treatment of Data**

In order to ensure participant anonymity, no identifying information linked participants to their survey responses. QuestionPro also ensures that this is the case with responses by providing a feature known as Respondent Anonymity Assurance (RAA). Respondent Anonymity Assurance assigns each participant a code and then removes all identifying information that QuestionPro has about participants (e.g., contact information, amount of points earned). QuestionPro collected IP address information in an effort to ensure that the same person does not complete the same survey more than once. However, upon receiving the data from QuestionPro, this piece of participant information was immediately deleted.

In an effort to ensure complete answering of surveys, when participants missed an item, an alert appeared which asked that they fill it in before continuing survey completion. If a participant discontinued the survey early, it was assumed that they changed their mind about participating. This excluded them from the final data set.



Once downloaded, survey data was stored in a password-protected document on a private computer and a backup was stored on an external hard drive. The only individuals with access to the data were the primary research and members of the dissertation committee. After the data was downloaded and backed up, the surveys and responses were deleted from QuestionPro.

### **Summary**

This chapter described the research methodology used in this study. This work employed several statistical analysis techniques to answer the six research questions that guided the study. These methods included EFA, descriptive statistics, independent sample t-tests, one-way ANOVA, chi-square and canonical correlation. The research design was also defined in this chapter. The population and sample were identified. Research questions and hypotheses were presented and the research variables were defined. Specifically, the following variables were defined: mode of transmission of sexual knowledge, cultural background, and sexual attitude. The instruments used to measure the variables were also presented and described. The data collection procedures and data analysis procedures were described. Chapter 4 will present the results of the research and Chapter 5 will discuss the implications of research results in light of the research questions and existing literature.

## CHAPTER 4

### RESULTS

#### **Introduction**

The purpose of this research was to identify the relationship between transmission of sexual knowledge, sexual attitude, and culture. In this chapter, the demographic characteristics of the participants are described. Results for each research question are then presented. Statistical analyses used include descriptive statistics, EFA, independent samples t-test, one way ANOVA, and canonical correlation analysis. The level of significance was set at .05.

#### **Description of Sample**

A total of 399 individuals completed the surveys. However, some of these cases were excluded because they were outside of the 18-30 years age range stipulated in this study. A total of 352 participants were able to remain in the study. No participants abandoned completion of the surveys at any point. By beginning the survey, participants were assumed to have given their consent to participate in this study. Demographic information about the sample is presented in Table 2.

The sample consisted of mostly females (69.3%). Approximately one-quarter of the respondents identified as African-American (23.9%), followed by Caucasians making up approximately 18.5% of the research population. Approximately 32.7% of the respondents identified as Latino/Hispanic.

Table 2

*Respondents' Demographic Characteristics*

Demographic	N	%
<b>Gender</b>		
Female	241	69.3
Male	107	30.7
Transgender	2	
Other	2	
<b>Ethnicity</b>		
Latino/a Hispanic	115	32.7
African-American	84	23.9
Caucasian	65	18.5
Asian	55	15.6
Multiracial	28	8.0
Other	5	1.4
<b>Setting of Living during Formative Years</b>		
Suburban	150	42.6
Urban	105	29.8
Rural	63	17.9
Inner-city	34	9.7
<b>Religious Affiliation</b>		
Catholic	93	26.2
Agnostic/Don't Know	75	21.3
Protestant	43	12.2
Other	41	11.6
Orthodox Christian	32	9.1
Atheist	30	8.5
Eastern	17	4.8
Mormon/Jehovah's Witness	8	2.3
Muslim	7	2.0
Jewish	6	1.7

Asian respondents made up 15.6% of the research sample. During their formative years, approximately 18% of the participants reported living in a rural area, 42% reported living in a suburban area, 30% reported living in an urban area, and 10% reported living in an inner-city.

The religious affiliation of the respondents were also obtained. Approximately 26.4% of the population identified as Catholic. Roughly 22.2% of the respondents identified with some facet of Protestantism and nearly 10% of the population identified as being affiliated to religions other than Protestantism. Lastly, about 41.5% reported being unaffiliated with any religions.

### **Results by Question**

This section will present the results of each research question.

(1) How do individuals in this study learn about sex?

(2) To what extent have these sources of knowledge influenced participants' knowledge of sex when learned during formative years and currently?

(3) What are the sexual attitudes of the participants in the study?

(4) Are sources of sexual knowledge related to gender and cultural background?

(5) Is sexual attitude related to gender and cultural background?

(6) Is there a relationship between the source of sexual knowledge and sexual attitude?

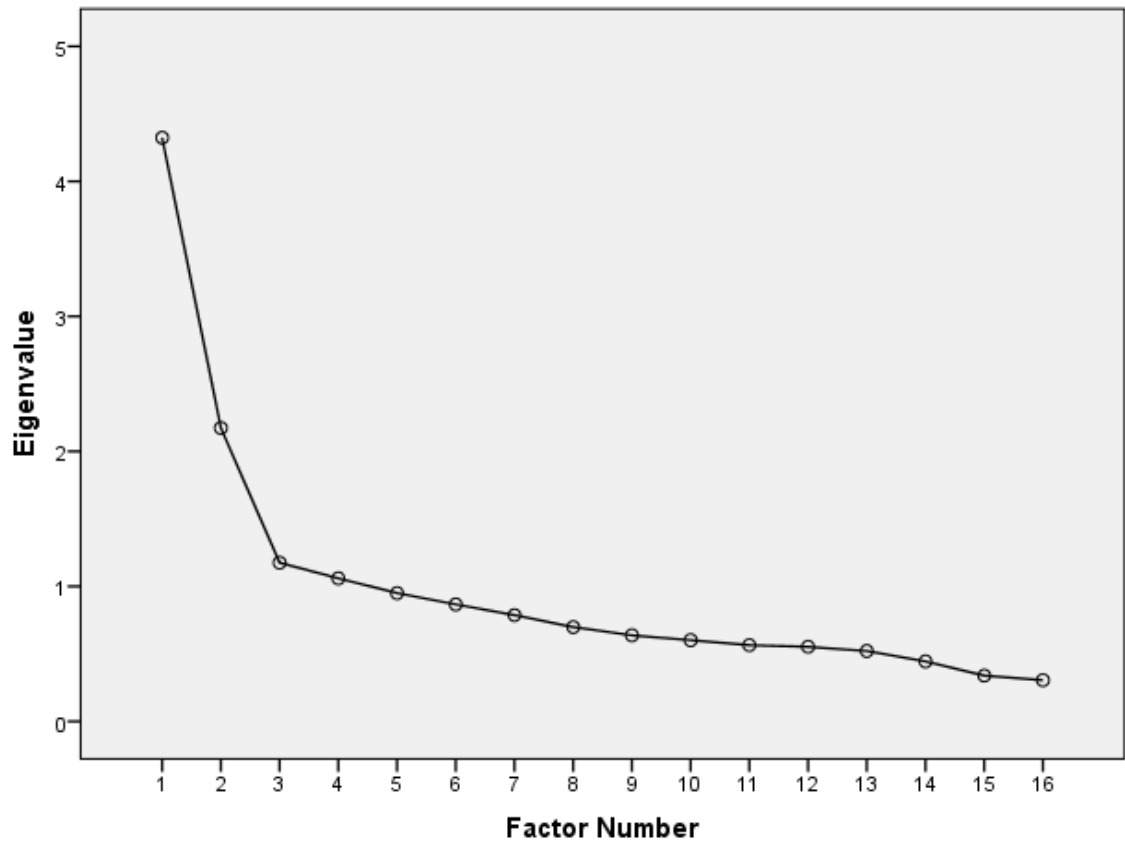
### **Preliminary Exploratory Factor Analysis**

In an effort to provide ease of understanding, the sources of sexual knowledge used in this study were examined using EFA to see if grouping the factors would be advantageous. Because the research was interested in identifying the number of latent

constructs and the underlying structure of the variables in the data set without imposing any predetermined structure (Childs, 1990), EFA was used to better group the sources of sexual knowledge.

To determine the factorability of the sources, the Kaiser-Meyer-Olkin Test of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity were examined. The KMO was observed to be .85. According to Friel (2004), the KMO was interpreted to show that the degree of common variance among the variables was "meritorious." This indicated that if factor analysis was conducted, the extracted factors would account for a substantial amount of variance. The Bartlett's Test of Sphericity  $\chi^2(120) = 1443.974, p < .001$  showed that there were structured relationships between the items.

The data was subjected to EFA using principle axis factoring (PAF) and oblique/promax rotation. Principle axis factoring is a common estimation method in EFA and is better able to improve weak factors (de Winter, 2011) and was thus chosen for this analysis. Oblique rotation was used as this method assumes that the factors at play are correlated. Gorsuch (1983) recommends rotating with promax when using an oblique rotation. After extraction, the criterion for choosing the number of factors were identified. Using an eigenvalue cut-off of 1.0, three factors were found to explain a cumulative variance of 47.95%. The scree plot associated with these factors can be seen in Figure 1. The research also followed the threshold for factor loadings set forth by Hair, Tatham, Anderson, and Black (1998, p 112) who suggest that, with a sample size of 350, a significant factor loading value is 0.30. Similarly, Tabachnick and Fidell (2001) note that .32 is a good rule for identifying the minimum loading of an item. This research kept a factor loading cutoff of 0.30.



*Figure 1.* Scree plot indicating number of factors extracted.

The three factor groupings were identified. Factor 1 included the following sources of sexual knowledge: community organizations or programs, a mentor or family friend, a doctor, nurse or other healthcare professional, a parent or caregiver, a family member who is not a parent or sibling, a brother or a sister, religion or a religious leader, and a school-based sexual education program. Factor 2 included the following sources of sexual knowledge: sexually explicit or erotic material, internet pornography, and media (movies, television, magazines, and music). Factor 3 included the following sources of

sexual knowledge: an initial sexual experience, online websites or materials, a significant other without intercourse, social media, and friends or peers.

Factor extractions can be seen in Table 3. Labels were then provided to the factors based on the variables in each group. Factor 1 was categorized as Respected Sources and included community organizations or programs (.616), a mentor or family friend (.582), a doctor, nurse, or other healthcare professional (.582), parents or caregivers (.569), a family member who is not a parent or sibling (.569), a brother or sister (.560), religion or religious leader (.465), and a school-based sexual education program (.303). This factor accounted for 27.02% of variance. Factor 2 was labeled Media Sources and included sexually explicit or erotic material (.891), internet pornography (.765), and media including movies, television, magazines, and music (.756). Factor 2 accounted for 13.58% of variance. Factor 3 was labeled Personal Experience Sources and included an initial sexual experience (.587), online websites or materials (.432), a significant other without intercourse (.361), social media (.352), and friends or peers (.337). The third factor accounted for 7.34% of variance.

The labels Respected, Media, and Personal Experience sources were given to the factors based on the sources of sexual knowledge within the factor. All of the sources in Factor 1 were seen to be a source with a certain amount of authority (doctor, school-based program, family member, religion, etc.) and therefore garner respect by the person gaining the knowledge. These are sources that could be considered accurate and trustworthy by a learner of sexual knowledge.

Table 3

*Factor Loadings of Sources of Sexual Knowledge*

Source	Factor 1 Respected Sources	Factor 2 Media Sources	Factor 3 Personal Sources	% of variance
FACTOR 1				27.02%
Community Organization or Program	.616			
Mentor or Family Friend	.582			
Doctor, Nurse, or other Healthcare Professional	.582			
Parents/Caregivers	.569			
Family Member not Parent or Sibling	.569			
Brother or Sister	.560			
Religion or Religious Leaders	.465			
School-based sex. Ed. Program	.303			
FACTOR 2				13.58%
Sexually Explicit or Erotic Material		.891		
Internet Pornography		.762		
Media		.756		
FACTOR 3				7.334%
Initial Sexual Experience			.587	
Online Websites or Materials			.432	
Significant Other without Intercourse			.361	
Social Media			.352	
Friends or Peers			.337	
CUMULATIVE VARIANCE				47.95%

Lastly, the variable Media encompassed movies, magazines, television, and music. All of these sources are considered a type of media for the learner of sexual knowledge. Factor 3 was given the label Personal Experiences because each source involved participation by the learner. For instance, a learner would be an active participant in an initial sexual experience, gaining sexual knowledge from an online website requires an internet search by the learner. Likewise, gaining knowledge from a



significant other through conversation or through a sexual experience other than intercourse requires personal participation. Personal participation by a learner is also required when interacting with social media (Facebook, Twitter, etc.) and also through personal interaction with friends or peers to gain sexual knowledge.

#### Research Question One

The first question this research addressed was mode of transmission of sexual knowledge, or how individuals in this study learned about sex. The options for sources of sexual knowledge can be seen in Chapter 3, Table 1. Descriptive analysis revealed some particular sources to be utilized more than others. When considering Respected Sources, school-based sexual education and parents or caregivers were recognized as being used by many participants (65.34% and 46.31%). When considering Media Sources, participants reported that they learned from all of these sources at a somewhat equal rate (media = 54.55%, internet pornography = 51.14%, SEEM = 45.74%). When considering Personal Experiences, participants reported some sources as having been learned from more than others (friends or peers = 75.57%, online websites or materials = 62.5%, an initial sexual experience = 55.97%). Results from this analysis can be found in Table 4.

#### Research Question Two

The second research question in this study sought to uncover if a particular source of sexual knowledge was considered influential to a participant at the time one learned about sex and also at the time of data collection.

Table 4

*Means of Mode of Transmission of Sexual Knowledge*

Mode of Sexual Knowledge	N	%
<b>Respected Sources</b>		
School-based Sex Ed. Program	230	65.34
Parents/Caregivers	163	46.31
Doctor, Nurse, Other Healthcare Professional	103	29.26
Mentor or Family Friend	88	25.00
Family Member, Not Parent or Sibling	86	24.43
Brother or Sister	70	19.89
Community Organization or Program	55	15.63
Religion or Religious Leaders	60	17.05
<b>Media Sources</b>		
Media	192	54.55
Internet Pornography	180	51.14
Sexually Explicit or Erotic Material	161	45.74
<b>Personal Experience Sources</b>		
Friends/Peers	266	75.57
Online Websites or Materials	220	62.50
Initial Sexual Experience	197	55.97
Social Media	136	38.64
Significant Other w/o Intercourse	128	36.36

Table 5 shows the past and present influence of Respected Sources as reported by participants. When considering Respected Sources, it can be observed, that in the past, a higher percentage of participants learned about sex from school-based sexual education programs and parents/caregivers than other types of Respected Sources. Yet, when participants reflected on what source they considered influential now, they reported those to be parents/caregivers and doctors, nurses, or other healthcare providers.

Table 5

*Influence of Respected Sources*

Mode of Sexual Knowledge	Influential Then		Influential Now	
	N	%	N	%
School-based Sex. Ed. Program	110	31.25	27	7.67
Parents/Caregivers	76	21.59	43	12.22
Doctor, Nurse, Other Health Pro.	61	17.33	40	11.36
Family Member, Not Parent/Sibling	56	15.90	16	4.55
Religion or Religious Leaders	56	15.90	20	5.68
Mentor or Family Friend	45	12.78	17	4.83
Brother or Sister	45	12.78	17	4.83
Community Org./Program	39	11.08	22	6.25

Table 6 shows the past and present influence of Media Sources as reported by participants. Participants viewed these sources to be similarly influential (approximately 20%). These sources remained influential, albeit to a lesser extent, as participants aged except for SEEM. This source (SEEM) was seen to lose its influence to a greater degree than either internet pornography or media.

Table 6

*Influence of Media Sources*

Mode of Sexual Knowledge	Influential Then		Influential Now	
	N	%	N	%
Internet Pornography	62	17.61	48	13.63
Media	57	16.19	49	13.92
Sexually Explicit/Erotic Material	57	16.19	39	11.08

Table 7 shows the past and present influence of Personal Experience Sources as reported by participants. The only source that remained most influential to approximately 27% of participants across time was friends and peers. This table also affirms the results of Tables 5 and 6 in which one can see that regardless of the sources of sexual knowledge, participants considered it to have lost influence as time passed.

Table 7

*Influence of Personal Experience Sources*

Mode of Sexual Knowledge	Influential Then		Influential Now	
	N	%	N	%
Friends or Peers	96	27.27	60	17.05
Initial Sexual Experience	74	21.02	42	11.93
Online Websites or Materials	71	20.17	43	12.22
Significant Other W/O Intercourse	55	15.63	33	9.38
Social Media	44	12.50	38	10.80

Research Question Three

The third research question asked in this study was related to the sexual attitudes of the participants. Information about participant sexual attitudes was gathered using the BSAS. The BSAS can be found in Appendix D. Participants were asked to read statements concerning sex and then respond to them using a 5-point Likert scale with options of (1) strongly disagree with the statement, (2) moderately disagree with the statement, (3) neutral-neither agree nor disagree with the statement, (4) moderately agree with the statement, and (5) strongly agree with the statement.

The instrument produces scores for four subscales: Permissiveness, items 1-10, Birth Control, items 11-13, Communion, items 14-18, and Instrumentality, items 19-23 (Hendrick, Hendrick, & Reich, 2006). The Permissiveness subscale measures an individual's permissiveness towards an open relationship. The Birth Control subscale measures responsibility in birth control. The Communion subscale measures attitudes towards the importance of intimacy and connectedness with a sex partner. Lastly, the Instrumentality subscale measures an individual's attitude towards enjoying the physical act of sex.

Table 8 presents the attitudes of participants as defined by the subscales of the BSAS. Analysis suggested that the sample data has a neutral attitude, possibly in slight disagreement, when it comes to permissiveness ( $M = 2.78$ ). Meaning, this sample neither agreed nor disagreed with an open sexual relationship. When considering instrumentality, the study participants' attitude was one of neither disagreement nor agreement that a sexual relationship is simply for physical pleasure ( $M = 3.27$ ). Results concerning communion in a relationship suggested that the attitude of participant's was one that is in moderate agreement that connectedness is necessary for a sexual relationship ( $M = 3.89$ ).

Table 8

*Sexual Attitudes of Participants Using the BSAS*

Attitude	N	M	SD	Skewness
Permissiveness	352	2.78	1.02	.235
Birth Control	352	4.26	0.90	-1.234
Communion	352	3.89	0.81	-.596
Instrumentality	352	3.27	0.92	-.055

Lastly, when looking at attitudes about birth control, the sample population was in moderate agreement that birth control is a necessary part of a sexual relationship ( $M = 4.26$ ).

Table 9 presents a paraphrase of each question in the BSAS that is related to the subscale Permissiveness. The questions are arranged in descending order according to the means. The table also shows what percent of the sample population agreed with the statements in this subscale.

Table 9

*Subscale Permissiveness of BSAS*

Permissiveness	N	M	SD	% Agree
10. Okay for sex to be just physical release.	352	3.52	1.24	56.60
2. Casual sex is acceptable.	352	3.34	1.41	52.00
1. Don't need to be committed to a person to have sex with.	352	2.93	1.51	39.80
9. Possible to enjoy sex and not like the sex partner very much.	352	2.89	1.43	38.90
6. Okay for sex to be exchange of favors if both people agree.	352	2.83	1.45	36.10
4. One-night stands are enjoyable.	352	2.84	1.38	33.20
8. Fewer problems if people could have sex more freely.	352	2.80	1.40	32.40

Table 9—*Continued*

Permissiveness	N	M	SD	% Agree
7. The best sex is with no strings attached.	352	2.40	1.35	19.90
5. Okay to have sex with more than one person at a time.	352	2.11	1.36	19.00
3. I would like to have sex with many partners.	352	2.16	1.31	17.30

Table 10 presents a paraphrase of each question in the BSAS that is related to the subscale Birth Control. The questions are arranged in descending order according to the means. The table also shows what percent of the sample population agreed with the statements in this subscale.

Table 10

*Subscale Birth Control of BSAS*

Birth Control	N	M	SD	% Agree
11. Birth control is part of responsible sexuality.	352	4.35	1.02	81.80
13. Males should share responsibility for birth control.	352	4.23	1.04	75.60
12. Females should share responsibility for birth control.	352	4.21	1.04	75.00

The majority of respondents (81.8%) agreed that birth control is part of responsible sexuality. Three-quarters of respondents agreed that both men (75.6%) and women (75%) should share responsibility for birth control.

Table 11 presents a paraphrase of each question in the BSAS that is related to the subscale Communion. The questions are arranged in descending order according to the means. The table also shows what percent of the sample population agrees with the statements in this subscale.

Table 11

*Subscale Communion of BSAS*

Communion	N	M	SD	% Agree
15. Sex between people deeply in love is the ultimate interaction.	352	4.15	1.05	77.00
17. Sex is very important part of life.	352	4.06	1.07	74.70
16. At best, sex is the merging of two souls.	352	4.05	1.09	72.40
18. Sex is intensive/overwhelming experience.	352	3.64	1.13	59.40
14. Sex is closest communication between two people.	352	3.57	1.30	58.00

Approximately three-quarters of the respondents agreed that a sexual encounter between two people deeply in love is the ultimate human interaction (77%), that sex is a



very important part of life (74.7%), and that at its best, sex seems to be the merging of two souls (72.4%). Over half of the respondents agreed that sex is usually an intensive, almost overwhelming experience (59.4%) and that sex is the closest form of communication between two people (58%).

Table 12 presents a paraphrase of each question in the BSAS that is related to the subscale Instrumentality. The questions are arranged in descending order according to the means. The table also shows what percent of the sample population agreed with the statements in this subscale.

Table 12

*Subscale Instrumentality of BSAS*

Instrumentality	N	M	SD	% Agree
21. Main purpose of sex is to enjoy oneself.	352	3.49	1.20	51.40
22. Sex is primarily physical.	352	3.37	1.28	51.40
19. Sex is best when one lets go and focuses on one's own pleasure.	352	3.41	1.22	48.90
23. Sex is primarily a bodily function.	352	3.10	1.27	37.80
20. Sex is primarily the taking of pleasure from another person.	352	2.98	1.18	29.80

Approximately half of the respondents agreed that the main purpose of sex is to enjoy oneself (51.4%), that sex is primarily physical (51.4%), and that sex is best when you let yourself go and focus on your own pleasure (48.9%). When asked to answer the

question that sex is primarily a bodily function, like eating, 37.8% of participants agreed with the statement. Roughly 30% of participants agreed that sex is primarily the taking of pleasure from another person (29.8%).

#### Research Question Four

The fourth research question in this study asked the question are the sources of sexual knowledge identified by participants related to gender and cultural background.

To determine if sources of sexual knowledge were related to gender, an independent sample t-test was conducted. This analysis revealed that none of the three sources (Respected, Media, and Personal Experience) were statistically significantly related to gender. These results can be found in Table 13.

Table 13

#### *Independent Sample T-Test Results for Gender and Three Sources*

Group	N	Mean	SD	t	df	p	CI		ES(d)
							Lower	Upper	
Respected Sources									
Male	107	2.50	2.34	.384	346	.701	-38.676	57.452	.0000
Female	241	2.41	1.98						
Media Sources									
Male	107	1.66	1.29	1.458	346	.146	-7.661	51.575	.0061
Female	241	1.44	1.29						
Personal Experience Sources									
Male	107	1.88	1.35	-.484	346	.629	-37.901	22.940	.0006
Female	241	1.96	1.32						

However, a chi-square analysis of each source within Respected Sources, Media Sources, and Personal Experience Sources found three sources of sexual knowledge that were statistically significant related to gender. These three sources were religion or religious leaders, friends or peers, and internet pornography. When considering religion or religious leaders, a statistically significant greater number of males (23.4%) than females (14.5%) learned about sex from this source. When considering friends or peers, chi-square analysis indicated that a statistically greater number of females (81.3%) more than males (63.6%) learned about sex from friends or peers. When considering internet pornography, a statistically significant greater number of males (59.8%) more than females (47.3%) learned about sex from internet pornography.

These analyses indicated that both males and females learn about sex at a fairly even rate when the source is a school-based sexual education class, a doctor, nurse, or other healthcare professional, a community organization or program, a parent or caregiver, a mentor or family friend, a brother or sister, a family member who was not a parent or sibling, a significant other without the use of intercourse, sexually explicit or erotic materials, online websites or materials, media entertainment, an initial sexual experience, or social media. A full description of these results can be found in Table 14.

The fourth research question in this study was also interested in understanding the relationship between sources of sexual knowledge identified by participants and cultural background. The study utilized three demographic characteristics to define cultural background including ethnicity, religious affiliation during formative years, and setting of living during formative years.

To determine if sources of sexual knowledge were related to the first aspect of cultural background (ethnicity), a one-way ANOVA was conducted. The ANOVA showed that the relationship between Respected Sources and ethnicity was significant  $F(4, 342) = 6.370, p < .001$ .

Table 14

*Chi-square Analysis of Gender and Sources of Sexual Knowledge*

Source	Gender	N	% Agree	df	$\chi^2$	p	V
<b>Respected Sources</b>							
*Religion/religious leaders	Male	25	23.40	1	4.06	.044	.108
	Female	35	14.50				
School-based sex. ed.	Male	70	65.40	1	.001	.980	.001
	Female	158	65.60				
Doctor, nurse, healthcare prof.	Male	33	30.80	1	.115	.735	.018
	Female	70	29.10				
Community org. or program	Male	20	18.70	1	.968	.325	.053
	Female	35	14.50				
Parents/caregivers	Male	44	41.10	1	1.64	.200	.069
	Female	117	48.60				
Mentor/family friend	Male	27	25.20	1	.004	.947	.004
	Female	60	24.90				
Brother/sister	Male	20	18.70	1	.125	.723	.019
	Female	49	20.30				
Family member, not parent or sibling	Male	29	27.10	1	.474	.491	.037
	Female	57	23.70				

Table 14 – *Continued*

Source	Gender	N	% Agree	df	$\chi^2$	p	V
<b>Media Sources</b>							
*Internet pornography	Male	64	59.80	1	4.64	.031	.115
	Female	114	47.30				
Sexually explicit or erotic materials	Male	55	51.40	1	2.03	.154	.076
	Female	104	43.20				
Media entertainment	Male	59	55.10	1	.043	.836	.011
	Female	130	53.90				
<b>Personal Experience Sources</b>							
*Friends/peers	Male	68	63.60	1	12.79	.000	.192
	Female	196	81.30				
Online websites or materials	Male	68	63.60	1	.054	.816	.013
	Female	150	62.20				
Initial sexual experience	Male	61	57.00	1	.060	.807	.013
	Female	134	55.60				
Social media	Male	41	38.30	1	.002	.962	.003
	Female	93	38.60				
Sig other (w/o intercourse)	Male	32	29.90	1	3.14	.076	.095
	Female	96	39.80				

*Note.* Statistically significant difference indicated by asterisk (\*).

The strength of the relationship ( $\eta^2 = .084$ ) between Respected Sources and ethnicity, as assessed by  $\eta^2$  was medium (Cohen, 1988). This indicated that 8.4% of the variances in Respected Sources may be explained by ethnic differences. Descriptive statistics and

ANOVA results can be seen in Tables 15 and 16. Media Sources and Personal Experience Sources were not related to ethnicity.

Follow-up tests were conducted to evaluate pairwise differences among the means. Because Levene's test of equality of error variances was significant,  $F(5, 346) = 5.45, p < .001$ , it was assumed that that variances were not homogenous and post hoc comparisons were conducted with the use of the Games-Howell test.

Table 15

*Descriptive Statistics of Three Sources and Ethnicity*

Variable/Sources	Group	N	Mean	SD
Respected	African American	84	3.29	2.52
	Latino/Hispanic	115	2.30	1.93
	Asian	55	1.40	1.58
	Caucasian	65	2.63	1.99
	Multiracial	28	2.04	1.48
Media	African American	84	1.58	1.32
	Latino/Hispanic	115	1.53	1.32
	Asian	55	1.13	1.20
	Caucasian	65	1.77	1.28
	Multiracial	28	1.36	1.28
Personal Experience	African American	84	1.88	1.37
	Latino/Hispanic	115	1.97	1.33
	Asian	55	1.58	1.23
	Caucasian	65	2.15	1.35
	Multiracial	28	2.07	1.36

Table 16

*Analysis of Variance Results (Sources and Ethnicity)*

Variable	Source	SS	MS	df	F	p	$\eta^2$
Respected Source	Between	129.83	25.97	4	6.370	.000	0.084
	Within	1410.39	4.08	342			
	Total	1540.22		346			
Media Source	Between	13.99	2.78	4	1.675	.140	0.023
	Within	577.94	1.67	342			
	Total	591.93		346			
Personal Experience Source	Between	11.27	2.25	4	1.282	.271	.018
	Within	608.23	1.76	342			
	Total	619.50		346			

The mean amount of sources (out of 16) for African American participants ( $M = 3.29$ ,  $SD = 2.52$ ) was significantly higher than that of Latino/Hispanic ( $M = 2.30$ ,  $SD = 1.93$ ), Asian ( $M = 1.40$ ,  $SD = 1.58$ ), and Multiracial ( $M = 2.04$ ,  $SD = 1.48$ ) participants. The mean amount of sources for Latino/Hispanic participants was significantly higher than that of Asian participants. Lastly, Asian participants mean amount of sources was significantly lower than Caucasian participants ( $M = 2.63$ ,  $SD = 1.99$ ). These results can be found in Table 17.

To determine more specifically the relationship between Respected Sources and ethnicity, a series of chi-square tests for independence were conducted. These results are presented in Table 18.

Table 17

*Post-hoc Comparisons (Sources and Ethnicity)*

Variable	Group	N	Mean	2	3	4	5
Respected	1 African American	84	3.29	*	***		*
	2 Latino/Hispanic	115	2.30		*		
	3 Asian	55	1.40			**	
	4 Caucasian	65	2.63				
	5 Multiracial	28	2.03				

Note. \*p<.05, \*\*p<.01, \*\*\*p<.001

Results indicated statistically significant ethnic differences when considering the sources religion or religious leaders, a doctor, nurse, or other healthcare professional, parents or primary caregiver, and a mentor or family friend.

Table 18

*Chi-square Analysis of Ethnicity and Respected Sources of Sexual Knowledge*

Source	Group	N	% Agree	df	$\chi^2$	p	V
<b>Respected Sources</b>							
*Religion/religious leaders	AfricanAmer.	23	27.4	5	18.148	.003	.227
	Latin/Hispanic	12	10.4				
	Asian	6	10.9				
	Caucasian	17	26.2				
	Multiracial	2	7.1				
School-based sex. ed.	AfricanAmer.	59	70.2	5	8.843	.115	.159
	Latin/Hispanic	72	62.6				
	Asian	30	54.5				
	Caucasian	50	76.9				
	Multiracial	16	57.1				



Table 18 – *Continued*

Source	Group	N	% Agree	df	$\chi^2$	p	V
*Doctor, nurse, healthcare prof.	AfricanAmer.	36	42.9	5	17.965	.003	.226
	Latin/Hispanic	32	27.8				
	Asian	6	10.9				
	Caucasian	21	32.3				
	Multiracial	6	21.4				
Community org. or program	AfricanAmer.	21	25.0	5	8.950	.111	.159
	Latin/Hispanic	17	14.8				
	Asian	5	9.1				
	Caucasian	8	12.3				
	Multiracial	4	14.3				
*Parents/caregivers	AfricanAmer.	51	60.7	5	24.251	.000	.262
	Latin/Hispanic	51	44.3				
	Asian	12	21.8				
	Caucasian	29	44.6				
	Multiracial	18	64.3				
*Mentor/family friend	AfricanAmer.	30	35.7	5	19.356	.002	.234
	Latin/Hispanic	30	26.1				
	Asian	3	5.5				
	Caucasian	20	30.8				
	Multiracial	4	14.3				
Brother/sister	AfricanAmer.	24	28.6	5	8.410	.135	.155
	Latin/Hispanic	25	21.7				
	Asian	7	12.7				
	Caucasian	8	12.3				
	Multiracial	5	17.9				
Family member, not parent or sibling	AfricanAmer.	32	38.1	5	16.818	.005	.219
	Latin/Hispanic	25	21.7				
	Asian	8	14.5				
	Caucasian	18	27.7				
	Multiracial	2	7.1				

*Note.* Statistically significant difference indicated by asterisk (\*).

When considering religion or religious leaders, both African Americans and Caucasians reported learning from this source at a similar rate (27%). Approximately 10% of Latino/Hispanic and Asian participants reported learning about sex from this source. When considering a doctor, nurse, or other healthcare professional, approximately 40% of African American participants reported learning from this source versus other ethnicities. The source parents or caregivers was reported as having informed 60% of African American and Multiracial participants, approximately 45% of Latino/Hispanic and Caucasian participants, and approximately 20% of Asian participants. When considering the source family friend or mentor, approximately 30% of African Americans, Latino/Hispanic, and Caucasian participants, 15% of multiracial participants, and 5% of Asian participants reported learning about sex from this source.

To determine if sources of sexual knowledge were related to the second aspect of cultural background (religious affiliation during formative years), a one-way ANOVA was conducted. The ANOVA showed that the relationship between Respected Sources and religious affiliation during formative years was significant  $F(4, 327) = 2.688, p < .05$ . The strength of the relationship ( $\eta^2 = .031$ ) between Respected Sources and religious affiliation, as assessed by  $\eta^2$  was small (Cohen, 1988). Only 3.1% of the variance in respected sources may be explained by religious affiliations. Descriptive statistics and ANOVA results can be seen in Tables 19 and 20.

Table 19

*Descriptive Statistics of Three Sources and Religious Affiliation*

Variable/Sources	Group	N	Mean	SD
Respected	Protestant	92	2.80	2.26
	Catholic	99	2.44	1.97
	Orthodox Christian	35	2.80	2.17
	Eastern	19	1.74	2.13
	Agnostic/Don't Know	87	1.97	1.87
Media	Protestant	92	1.32	1.31
	Catholic	99	1.46	1.28
	Orthodox Christian	35	1.71	1.34
	Eastern	19	1.47	1.26
	Agnostic/Don't Know	87	1.68	1.31
Personal Experience	Protestant	92	1.95	1.42
	Catholic	99	1.94	1.32
	Orthodox Christian	35	1.80	1.26
	Eastern	19	2.16	1.43
	Agnostic/Don't Know	87	1.83	1.25

Table 20

*Analysis of Variance Results (Sources and Religious Affiliation)*

Variable	Source	SS	MS	df	F	p	$\eta^2$
Respected Source	Between	45.535	11.384	4	2.688	.031	0.031
	Within	1385.103	4.236	327			
	Total	1430.639		331			
Media Source	Between	7.635	1.909	4	1.128	.343	0.014
	Within	553.353	1.692	327			
	Total	560.988		331			
Personal Experience Source	Between	2.384	.596	4	.338	.852	0.004
	Within	576.905	1.764	327			
	Total	579.289		331			

Media sources and personal experiences sources are not related to religious affiliations.

Follow-up tests were conducted to evaluate pairwise differences among the means. Because Levene's test of equality of error variances was not significant,  $F(4, 327) = 1.356, p = .249$ , it was assumed that the variances were homogenous and post hoc comparisons were conducted with the use of the Tukey test. Post-hoc analysis revealed significant differences of means between Protestant and Eastern religions, Protestants and those who identified as unsure or Agnostic, and between Orthodox Christian and unsure or Agnostic. These results can be found in Table 21.

To determine more specifically the relationship between Respected Sources and religious affiliation during formative years, a series of chi-square tests for independence were conducted.

Table 21

*Post-hoc Comparisons (Sources and Religious Affiliation)*

Variable	Group	N	Mean	2	3	4	5
Respected	1 Protestant	92	2.80			*	*
	2 Catholic	99	2.44				
	3 Orthodox Christian	35	2.80				*
	4 Eastern	19	1.74				
	5 AgnosticDontKnow	87	1.97				

*Note.* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Results indicated statistically significant religious affiliation differences when considering the source religion or religious leaders. Approximately half (46.6%) of

participants who grew up Protestant reported learning about sex from a religious leader or religion. This is a much a greater rate than Catholic (25.9%), Orthodox Christian (15.5%), Agnostic or those who grew up unsure of their religious affiliation (10.3%), and Eastern religious participants (1.7%). Results can be seen in Table 22.

To determine if sources of sexual knowledge were related to the third aspect of cultural background (setting of living during formative years), a one-way ANOVA was conducted. The ANOVA showed that the relationship between the three sources and setting of living during formative years was not significant. Descriptive statistics and ANOVA results can be seen in Tables 23 and 24.

Table 22

*Chi-square Analysis of Religious Affiliation and Respected Sources of Sexual Knowledge*

Source	Group	N	% Agree	df	$\chi^2$	p	V
<b>Respected Sources</b>							
*Religion/religious leaders	Protestant	27	46.6	4	19.731	.001	.244
	Catholic	15	25.9				
	Orth. Christ.	9	15.5				
	Eastern	1	1.7				
	Agnost/DK	6	10.3				
School-based sex. ed.	Protestant	64	29.5	4	5.171	.270	.125
	Catholic	70	32.3				
	Orth. Christ.	22	10.1				
	Eastern	10	4.6				
	Agnost/DK	51	23.5				
Doctor, nurse, healthcare prof.	Protestant	32	33.0	4	8.220	.084	.157
	Catholic	33	34.0				
	Orth. Christ.	12	12.4				
	Eastern	3	3.1				

Table 22 – *Continued*

Source	Group	N	% Agree	df	$\chi^2$	p	V
	Agnost/DK	17	17.5				
Community org. or program	Protestant	17	32.1	4	1.600	.809	.069
	Catholic	15	28.3				
	Orth. Christ.	6	11.3				
	Eastern	4	7.5				
	Agnost/DK	11	20.8				
Parents/caregivers	Protestant	49	31.8	4	7.936	.094	.155
	Catholic	44	28.6				
	Orth. Christ.	19	12.3				
	Eastern	4	2.6				
	Agnost/Dk	38	24.7				
Mentor/family friend	Protestant	29	35.8	4	5.826	.213	.132
	Catholic	20	24.7				
	Orth. Christ.	11	13.6				
	Eastern	3	3.7				
	Agnost/DK	18	22.2				
Brother/sister	Protestant	16	25.0	4	3.904	.419	.108
	Catholic	22	34.4				
	Orth. Christ.	10	15.6				
	Eastern	3	4.7				
	Agnost/DK	13	20.3				
Family member, not parent or sibling	Protestant	24	30.8	4	1.285	.864	.062
	Catholic	23	29.5				
	Orth. Christ.	9	11.5				
	Eastern	5	6.4				
	Agnost/DK	17	21.8				

*Note.* Statistically significant difference indicated by asterisk (\*)

Table 23

*Descriptive Statistics of Three Sources and Setting of Living*

Variable/Sources	Group	N	Mean	SD
Respected	Rural	63	2.35	2.06
	Suburban	150	2.41	2.08
	Urban	105	2.46	1.98
	Innercity	34	2.59	2.62
Media	Rural	63	1.68	1.31
	Suburban	150	1.41	1.29
	Urban	105	1.57	1.29
	Innercity	34	1.50	1.33
Personal Experience	Rural	63	2.08	1.37
	Suburban	150	1.83	1.29
	Urban	105	1.98	1.34
	Innercity	34	1.97	1.40

Table 24

*Analysis of Variance Results (Sources and Setting of Living)*

Variable	Source	SS	MS	df	F	p	$\eta^2$
Respected Source	Between	1.421	.474	3	.107	.956	.000
	Within	1538.803	4.422	348			
	Total	1540.224		351			
Media Source	Between	3.871	1.290	3	.764	.515	.007
	Within	588.058	1.690	348			
	Total	591.929		351			
Personal Experience Source	Between	3.128	1.043	3	.589	.623	.005
	Within	616.369	1.771	348			
	Total	619.497		351			

Because no statistically significant findings resulted from the one-way ANOVA, post-hoc analysis and chi-square tests for independence were not conducted.

#### Research Question Five

The fifth research question in this study questioned if sexual attitude is related to gender and cultural background. Sexual attitude was measured by the BSAS. The instrument produces scores for four subscales: Permissiveness, Birth Control, Communion, and Instrumentality. A higher score indicates a greater tendency of correspondence to the aspect of sexual attitude being measured. Table 25 presents the results of this analysis.

The Permissiveness subscale includes 10 items that assess a person's attitude about casual sex. Descriptive statistics suggest that, in this study, females more than males adopted a permissive sexual attitude. However, both were fairly neutral about this attitude with the average score for females being 3.4, suggesting a slight agreement with the attitude, and an average score for males being 2.8, suggesting neutrality.

The Birth Control subscale includes three items which assess attitudes about birth control responsibility. Both males and females moderately disagreed with the questions on this subscale, indicating that both genders disagreed that birth control is a part of responsible sexuality. Females ( $M = 1.6$ ) more than males ( $M = 2.0$ ) disagreed that birth control is a part of responsible sexuality.



Table 25

*BSAS Subscales and Gender*

Subscale	N	Mean	Label
Permissiveness			
Male	107	2.80	Neutral
Female	241	3.40	Neutral
Birth Control			
Male	107	2.00	Moderately Disagree
Female	241	1.60	Moderately Disagree
Communion			
Male	107	2.10	Moderately Disagree
Female	241	2.10	Moderately Disagree
Instrumentality			
Male	107	2.70	Neutral
Female	241	2.70	Neutral

The Communion subscale includes five items that assess a person's attitude related to emotional meaning and emotional importance of sex. Both males and females moderately disagreed that sex has emotional meaning and importance ( $M = 2.1$ ).

The Instrumentality subscale includes five items which focus on sexual pleasure. Both males and females reported neutral attitudes about sex being for physical pleasure only ( $M = 2.7$ ).

To determine if sexual attitude was related to gender, an independent sample t-test was conducted. This analysis revealed that two sexual attitudes (Permissiveness and Birth Control) were statistically significant related to gender. Results indicated that females (3.41) more than males (2.80) had a higher agreement with the attitude of Permissiveness. These results can be found in Table 26.

Table 26

*Independent Sample T-Test Results for Gender and Sexual Attitudes*

Group	N	Mean	SD	t	df	p	CI		ES(d)
							Lower	Upper	
Permissiveness									
Male	107	2.80	1.02	-5.269	346	.000	-.82954	-.37855	.11465
Female	241	3.41	.97						
Birth Control									
Male	107	2.03	1.06	4.124	346	.000	.22120	.62465	.10256
Female	241	1.61	.79						
Communion									
Male	107	2.09	.89	-.289	346	.773	-.21455	.15955	.09510
Female	241	2.12	.78						
Instrumentality									
Male	107	2.69	.97	-.494	346	.622	-.26221	.15700	.10657
Female	241	2.74	.89						

To determine if sexual attitude was related to the first aspect of cultural background (ethnicity), a one-way ANOVA was conducted. The ANOVA showed that no statistically significant relationship existed between any of the four attitudes and ethnicity. Descriptive statistics and ANOVA results can be seen in Tables 27 and 28. Because no statistically significant findings were a result of the one-way ANOVA, post-hoc analysis and chi-square tests for independence were not conducted.

Table 27

*Descriptive Statistics of Sexual Attitude and Ethnicity*

Variable/Sources	Group	N	Mean	SD
Permissiveness	African American	84	3.29	1.09
	Latino/Hispanic	115	3.15	1.00
	Asian	55	3.39	.81
	Caucasian	65	3.03	1.06
	Multiracial	28	3.27	1.16
Birth Control	African American	84	1.79	.92
	Latino/Hispanic	115	1.76	.94
	Asian	55	1.85	1.00
	Caucasian	65	1.57	.73
	Multiracial	28	1.62	.86
Communion	African American	84	2.19	.83
	Latino/Hispanic	115	2.06	.80
	Asian	55	2.19	.84
	Caucasian	65	1.97	.75
	Multiracial	28	2.23	.89
Instrumentality	African American	84	2.78	1.03
	Latino/Hispanic	115	2.66	.88
	Asian	55	2.80	.80
	Caucasian	65	2.57	.92
	Multiracial	28	3.01	.93

Table 28

*Analysis of Variance Results (Sexual Attitudes and Ethnicity)*

Variable	Source	SS	MS	df	F	p	$\eta^2$
Permissiveness	Between	4.756	1.189	4	1.136	.339	.013
	Within	357.985	1.047	342			
	Total	362.741		346			
Birth Control	Between	3.109	.777	4	.952	.434	.011
	Within	279.100	.816	342			
	Total	282.209		346			
Communion	Between	2.816	.704	4	1.060	.376	.012
	Within	227.030	.664	342			
	Total	229.846		346			
Instrumentality	Between	4.873	1.218	4	1.446	.218	.017
	Within	288.088	.842	342			
	Total	292.961		346			

To determine if sexual attitude was related to the second aspect of cultural background (religious affiliation during formative years), a one-way ANOVA was conducted. The ANOVA showed that the relationship between Permissiveness and religious affiliation was significant  $F(4, 327) = 4.458, p < .01$ . Beyond this, the relationship between Birth Control and religious affiliation was significant  $F(4, 342) = 3.229, p < .05$ . The strength of the relationship ( $\eta^2 = .051$ ) between Permissiveness and religious affiliation during formative years, as assessed by  $\eta^2$ , was medium (Cohen, 1988). This indicated that religious affiliation accounted for 5.1% of the variance. The strength of the relationship ( $\eta^2 = .038$ ) between Birth Control and religious affiliation during formative years, as assessed by  $\eta^2$ , was small (Cohen, 1988). This indicated that 3.8% of the variance in Birth Control may be explained by religious affiliation.

Communion and instrumentality are not related to religious affiliation. Descriptive statistics and ANOVA results can be seen in Tables 29 and 30.

Table 29

*Descriptive Statistics of Sexual Attitude and Religious Affiliation*

Variable/Sources	Group	N	Mean	SD
Permissiveness	Protestant	92	3.46	1.10
	Catholic	99	3.31	.94
	Orthodox Christian	35	3.30	.96
	Eastern	19	3.24	.96
	Agnostic/Don't Know	87	2.86	.97
Birth Control	Protestant	92	1.68	.87
	Catholic	99	1.90	.97
	Orthodox Christian	35	1.57	.78
	Eastern	19	2.11	1.13
	Agnostic/Don't Know	87	1.54	.74
Communion	Protestant	92	2.14	.79
	Catholic	99	2.05	.76
	Orthodox Christian	35	2.05	.77
	Eastern	19	2.39	.98
	Agnostic/Don't Know	87	2.06	.81
Instrumentality	Protestant	92	2.81	.95
	Catholic	99	2.67	.84
	Orthodox Christian	35	2.58	.87
	Eastern	19	2.63	.83
	Agnostic/Don't Know	87	2.75	.95

Table 30

*Analysis of Variance Results (Sexual Attitude and Religious Affiliation)*

Variable	Source	SS	MS	df	F	p	$\eta^2$
Permissiveness	Between	17.733	4.433	4	4.458	.002	.051
	Within	325.158	.994	327			
	Total	342.891		331			
Birth Control	Between	9.955	2.489	4	3.229	.013	.038
	Within	252.032	.771	324			
	Total	261.988		331			
Communion	Between	2.115	.529	4	.813	.518	.010
	Within	212.645	.650	324			
	Total	214.760		331			
Instrumentality	Between	2.001	.500	4	.616	.652	.007
	Within	265.668	.812	327			
	Total	267.669		331			

Follow-up tests were conducted to evaluate pairwise differences among the means. Because Levene's test of equality of error variances was not significant,  $F(4, 327) = .885, p > .05$  when considering Permissiveness and religious affiliation, it was assumed that variances were homogenous and post hoc comparisons were conducted with the use of the Tukey HSD test. When considering Birth Control and religious affiliation, Levene's test of equality of error variances was significant,  $F(4, 327) = 4.049, p < .005$ . It was assumed that variances were not homogeneous and therefore post-hoc comparisons utilized the Games-Howell test.

The mean level of agreement with an attitude of Permissiveness for participants who grew up Protestant ( $M = 3.46, SD = 1.10$ ) or Catholic ( $M = 3.31, SD = .94$ ) was significantly higher than those who identified as agnostic or unsure during childhood ( $M$

= 2.86,  $SD = .97$ ). The mean amount of agreement with an attitude of Birth Control was significantly higher for participants who grew up Catholic ( $M = 1.90$ ,  $SD = .97$ ) when compared to those who grew up agnostic or unsure of religion ( $M = 1.53$ ,  $SD = .74$ ) during childhood. These results can be found in Table 31.

Table 31

*Post-hoc Comparisons (Sexual Attitude and Religious Affiliation)*

Variable	Group	N	Mean	2	3	4	5
Permissiveness	1Protestant	92	3.46				***
	2Catholic	99	3.31				*
	3Ortho. Christ.	35	3.30				
	4Eastern	19	3.24				
	5Agnostic/DK	87	2.86				
Birth Control	1Protestant	92	1.68				
	2Catholic	99	1.90				*
	3Ortho. Christ.	35	1.57				
	4Eastern	19	2.11				
	5Agnostic/DK	87	1.54				

*Note.* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

To determine more specifically the relationship between Permissiveness and religious affiliation during formative years, a series of chi-square tests for independence were conducted. Results indicated statistically significant religious affiliation during formative years differences when considering a Permissive sexual attitude.

When considering the statement “I do not need to be committed to a person to have sex with him/her”, participants raised as agnostic or unsure of faith (55.2%) were most likely to agree with this followed by those who identified as Catholic (44.4%).

Participants who identified as spending their formative years in an Eastern religion (36.8%) agreed with the statement. The lowest agreement with this statement was from Orthodox Christians (28.5%) and Protestants (25%).

When considering the statement “casual sex is acceptable”, again those who grew up agnostic or unsure of faith agreed with this statement the most (70.1%). This was followed by Orthodox Christian (54.3%), Catholic (49.5%), Eastern religious (47.4%), and Protestant (36.9%).

When considering the statement “I would like to have sex with many partners”, those who identified as agnostic or unsure agreed with this statement at a higher rate (21.8%) than Orthodox Christians (17.2%), Catholics (16.2%), Protestants (14.1%), and Eastern religious (5.3%).

When considering the statement “Sex as a simple exchange of favors is okay if both people agree to it”, those who grew up agnostic or unsure and those from an Eastern religious background agreed to this statement at about the same rate (48.3% and 47.4% respectively). This was followed by Protestant (31.5%), Orthodox Christian (31.4%), and Catholic (27.3%).

The statement “It is okay for sex to be just good physical release” was agreed to by half of the participants who identified as Catholic (53.5%), Eastern (52.7%), Protestant (48.9%), and Orthodox Christian (48.6%). Almost three-fourths of agnostic or unknown religious participants agreed with this statement (71.3%). Results can be seen in Table 32.



Table 32

*Chi-square Analysis of Permissiveness and Religious Affiliation*

Source	Group	N	% Agree	df	$\chi^2$	p	V
<b>Permissiveness</b>							
*1. Don't need to be committed to have sex with.	Protestant	23	25.0	16	39.193	.001	.172
	Catholic	44	44.4				
	Ortho. Christ.	10	28.5				
	Eastern	7	36.8				
	Agnostic/DK	48	55.2				
*2. Casual sex is acceptable.	Protestant	34	36.9	16	42.962	.000	.180
	Catholic	49	49.5				
	Ortho. Christ.	19	54.3				
	Eastern	9	47.4				
	Agnostic/DK	61	70.1				
*3. I would like to have sex with many partners.	Protestant	13	14.1	16	28.172	.030	.146
	Catholic	16	16.2				
	Ortho. Christ.	6	17.2				
	Eastern	1	5.3				
	Agnostic/DK	19	21.8				
4. One-night stands are enjoyable.	Protestant	29	31.5	16	12.705	.694	.098
	Catholic	26	26.3				
	Ortho. Christ.	14	40.0				
	Eastern	6	31.6				
	Agnostic/DK	33	37.9				
5. Okay to have sex with more than one person at a time.	Protestant	15	16.3	16	15.676	.476	.109
	Catholic	18	18.2				
	Ortho. Christ.	7	20.0				
	Eastern	3	15.8				
	Agnostic/DK	17	24.1				
*6. Okay for sex if exchange of favors if both people agree.	Protestant	29	31.5	16	26.868	.043	.142
	Catholic	27	27.3				
	Ortho. Christ	11	31.4				
	Eastern	9	47.4				
	Agnostic/DK	42	48.3				

Table 32 – *Continued*

Source	Group	N	% Agree	df	$\chi^2$	p	V
7. The best sex is with no strings attached.	Protestant	21	22.8	16	24.616	.077	.136
	Catholic	20	20.2				
	Ortho. Christ	6	17.1				
	Eastern	3	15.8				
	Agnostic/DK	14	16.0				
8. Fewer problems if people could have sex more freely.	Protestant	26	28.3	16	21.031	.177	.126
	Catholic	25	25.2				
	Ortho. Christ.	11	31.4				
	Eastern	5	26.3				
	Agnostic/DK	41	47.1				
9. Possible to enjoy sex and not like the sex partner very much.	Protestant	34	37.0	16	20.991	.179	.126
	Catholic	31	31.3				
	Ortho Christ.	12	34.3				
	Eastern	8	42.1				
	Agnostic/DK	43	49.4				
*10. Okay for sex to be just physical release.	Protestant	45	48.9	16	28.909	.025	.148
	Catholic	53	53.5				
	Ortho. Christ	17	48.6				
	Eastern	10	52.7				
	Agnostic/DK	62	71.3				

*Note.* Statistically significant difference indicated by asterisk (\*).

To determine more specifically the relationship between Birth Control and religious affiliation during formative years, a series of chi-square tests for independence were conducted. Results indicated no statistically significant differences in religious affiliation during formative years when considering a sexual attitude that reflects appropriate birth control use. Results can be seen in Table 33.

Table 33

*Chi-square Analysis of Birth Control and Religious Affiliation*

Source	Group	N	% Agree	df	$\chi^2$	p	V
<b>Birth Control</b>							
11. Birth control is part of responsible sexuality	Protestant	77	83.70	16	21.559	.158	.127
	Catholic	77	77.70				
	Ortho. Christ.	29	82.90				
	Eastern	13	68.40				
	Agnostic/DK	77	88.50				
12. A woman should share responsibility for birth control.	Protestant	70	76.10	16	21.326	.166	.127
	Catholic	69	69.70				
	Ortho. Christ.	32	91.50				
	Eastern	12	63.20				
	Agnostic/DK	68	78.20				
13. A man should share responsibility for birth control.	Protestant	71	77.20	16	20.143	.214	.123
	Catholic	69	69.70				
	Ortho. Christ.	30	85.80				
	Eastern	11	57.90				
	Agnostic/DK	71	81.60				

To determine if sexual attitude was related to the third aspect of cultural background (setting of living during formative years), a one-way ANOVA was conducted. The ANOVA showed no statistically significant relationship existed between any of the four attitudes and setting living during formative years. Descriptive statistics and ANOVA results can be seen in Tables 34 and 35. Because no statistically significant findings were a result of the one-way ANOVA, post-hoc analysis and chi-square tests for independence were not conducted.

Table 34

*Descriptive Statistics of Sexual Attitude and Setting of Living*

Variable/Sources	Group	N	Mean	SD
Permissiveness	Rural	63	3.20	1.10
	Suburban	150	3.26	1.01
	Urban	105	3.15	1.03
	Inner-city	34	3.27	.94
Birth Control	Rural	63	1.60	.80
	Suburban	150	1.66	.84
	Urban	105	1.90	1.01
	Inner-city	34	1.83	.95
Communion	Rural	63	2.01	.87
	Suburban	150	2.11	.79
	Urban	105	2.19	.83
	Inner-city	34	1.98	.80
Instrumentality	Rural	63	2.66	.90
	Suburban	150	2.78	.97
	Urban	105	2.67	.83
	Inner-city	34	2.82	.96

Table 35

*Analysis of Variance Results (Sexual Attitudes and Setting of Living)*

Variable	Source	SS	MS	df	F	p	$\eta^2$
Permissiveness	Between	.751	.250	3	.237	.871	.002
	Within	367.613	1.056	348			
	Total	368.364		351			
Birth Control	Between	5.211	1.737	3	2.167	.092	.018
	Within	278.995	.802	348			
	Total	284.207		351			
Communion	Between	1.860	.620	3	.933	.425	.007
	Within	231.166	.664	348			
	Total	233.026		351			
Instrumentality	Between	1.274	.425	3	.504	.679	.004
	Within	293.002	.842	348			
	Total	294.276		351			

## Research Question Six

The last question this research sought to answer sought to discover what, if any, relationship existed between sources of sexual knowledge and sexual attitude. A canonical correlation analysis was used to explore the relationship between these sets of variables.

Zero order correlations between sources of sexual knowledge and sexual attitude are shown in Table 36. Correlations between sources of sexual knowledge range from .24 to .50 and correlations between sexual attitudes range from .14 to .39. The range of correlations between sources of sexual knowledge and sexual attitude were all negative (-0.12 to -0.34).

Table 36

*Inter-correlations between Sources of Sexual Knowledge and Sexual Attitude*

	Mean	SD	Sources		Attitudes			
			2	3	4	5	6	7
<b>Sources Knowledge</b>								
1Respected	2.43	2.09	.24**	.37**	-.20**	-.12*	-.18**	-.23**
2Media	1.51	1.30	-	.50**	-.34**	-.14*	-.17**	-.13*
3Personal Experience	1.93	1.33		-	-.34**	-.19**	-.21**	-.23**
<b>Sexual Attitudes</b>								
4Permissive	2.78	1.02			-	.14**	.14**	.39**
5Birth Control	1.26	0.90				-	.34**	.15**
6Communion	3.89	0.81					-	.28**
7Instrumentality	3.27	0.92						-

*Note.* \* $p < .05$ , \*\* $p < .01$

To examine the relationship between sources of sexual knowledge and sexual attitude, a canonical correlation was performed. Canonical loadings, standardized coefficients, canonical correlation, and within set variance (% of variance) are shown in Table 37. Three possible canonical functions were identified. Only one canonical correlation was seen as significant and thus interpreted. This canonical correlation was 0.45 (20% of the overlapping variance). Therefore, only the first canonical correlation accounted for the significant relationship between sources of sexual knowledge and sexual attitudes.

Canonical loadings of 0.3 (absolute value) are interpreted (Tabachnick & Fidell, 2001). Sources of sexual knowledge that were correlated with the first canonical variate were Respected Sources, Media Sources, and Personal Experiences. Sexual attitudes that were correlated with the first canonical variate were Permissiveness, Birth Control,

Communion, and Instrumentality. The first canonical correlation indicated that high scores in Permissiveness (0.88), Birth Control (0.44), Communion (0.54), and Instrumentality (0.56) were associated with low scores in Respected Sources (-0.59), Media Sources (-0.79), and Personal Experiences (-0.87).

Table 37

*Canonical Correlations Analysis for Sources of Sexual Knowledge and Sexual Attitude*

Set 1 Variables	1	Canonical Loadings		Standardized Canonical Coefficients		
		2	3	1	2	3
Respected Sources	-0.59	0.66	-0.47	-0.28	0.77	-0.70
Media Sources	-0.79	-0.54	-0.27	-0.45	-0.86	-0.64
Personal Experience Sources	-0.87	0.11	0.47	-0.54	0.26	1.05
% of Variance	0.58	0.25	0.17			
Redundancy	0.12	0.01	0.00			
<u>Set 2 Variables</u>						
Permissiveness	0.88	0.29	0.00	0.75	0.71	0.04
Birth Control	0.44	-0.14	-0.70	0.21	-0.07	-0.96
Communion	0.54	-0.25	0.43	0.32	-0.04	0.76
Instrumentality	0.56	-0.76	0.04	0.15	-1.02	-0.05
% of Variance	0.39	0.19	0.17			
Redundancy	0.08	0.10	0.00			
Canonical Correlation	0.45	0.16	0.04			
Wilk's	0.78	0.97	0.99			
Chi-Square	87.17	9.57	0.46			
<i>df</i>	12	6	2			
<i>p</i>	<.001	.144	.796			

The canonical variates appear to suggest that less engagement by participants with Respected Sources, Media Sources, and Personal Experience Sources indicated more

agreeability with a Permissive attitude, more agreeability with a responsible Birth Control Attitude, more agreeability with an attitude of Instrumentality, and more agreeability with an attitude of Communion in sexuality. Therefore, results of the analysis suggested that less engagement with any type of Respected Sources, Media Sources, or Personal Experience Sources was indicative of more agreeability with the four sexual attitudes put forth by the BSAS.

### **Summary of Major Findings**

Several main findings were drawn from the analyses of these six research questions. The main findings will be presented in bullet point format at the end of each section to increase ease of reading.

#### **Question One**

*How do individuals in this study learn about sex?* When considering sources deemed Respected Sources, school-based sexual education and parents or caregivers were recognized as being used by many participants (65.34% and 46.31%). When considering Media Sources, participants reported that they learned from all of these sources at a somewhat equal rate (media = 54.55%, internet pornography = 51.14%, SEEM = 45.74%). When considering Personal Experiences, participants reported learning from some sources more than others (friends or peers = 75.57%, online websites or materials = 62.5%, an initial sexual experience = 55.97%).

- Most used Respected Sources: School-based sexual education program and parents or caregivers.
- Most used Media Sources: Media, internet pornography, and SEEM were equally used.



- Most used Personal Sources: Friends or peers, online websites, and lastly an initial sexual experience.

## Question Two

*To what extent have these sources of knowledge influenced participants' knowledge of sex when learned during formative years and currently?* When considering Respected Sources, participants reported that, in the past, school-based sexual education programs and parents/caregivers were most influential. However, at the time of information gathering, they reported those to be parents/caregivers and doctors, nurses, or other healthcare providers were most influential. When considering Media Sources, all of the sources were seen as similarly influential (approximately 20% at time of learning). These sources remained influential, albeit to a lesser extent as participants aged, except for SEEM. This source (SEEM) was seen to lose its influence to a greater degree than either internet pornography or media. When considering Personal Experience Sources, the only source that remained most influential to approximately 27% of participants across time was friends and peers.

- Most influential Respected Sources: Past = School-based sexual education and parents or caregivers. Present = Parents or caregivers and doctors, nurses, or other healthcare professionals.
- Most influential Media Sources: Past and current found that all sources were influential, however a decline in SEEM was seen in the current stage.
- Most influential Personal Sources: The only source that remained influential were friends or peers.

### Question Three

*What are the sexual attitudes of the participants in the study?* Analysis suggested that the data sample has a neutral attitude, possibly in slight disagreement, when it comes to permissiveness ( $M = 2.78$ ). When considering instrumentality, the data sample population attitude was one of neither disagreement nor agreement that a sexual relationship is simply for physical pleasure ( $M = 3.27$ ). Results concerning communion in a relationship suggested that the attitude of participant's was one that is in moderate agreement that connectedness is necessary for a sexual relationship ( $M = 3.89$ ). Lastly, when looking at attitudes about birth control, the sample population was in moderate agreement that birth control is a necessary part of a sexual relationship ( $M = 4.26$ ).

- Neutral attitude of Permissive.
- Neutral attitude of Instrumentality.
- Moderate agreement with attitude of Communion.
- Moderate agreement with attitude of Birth Control.

### Question Four

*Are sources of sexual knowledge related to gender and cultural background?*

While none of the EFA sources (Respected, Media, and Personal Experience) were significantly related to gender, several of the sources that made up these categories were significantly related to gender. When considering religion or religious leaders, a statistically significant greater number of males (23.4%) than females (14.5%) learned about sex from this source. When considering the friends or peers, chi-square analysis indicated that a statistically significant greater number of females (81.3%) more than males (63.6%) learned about sex from friends or peers. When considering internet

pornography, a statistically significant greater number of males (59.8%) more than females (47.3%) learned about sex from internet pornography.

When considering religion or religious leaders, both African Americans and Caucasians reported learning from this source at a similar rate (27%), while this source was only 10% for Latino/Hispanic and Asian participants. When considering a doctor, nurse, or other healthcare professional, approximately 40% of African American participants reported learning from this source versus other ethnicities, which reported this source at a lower rate. The source parents or caregivers was reported as having informed 60% of African American and Multiracial participants, 45% of Latino/Hispanic and Caucasian, and approximately 20% of Asian participants. When considering the source family friend or mentor, approximately 30% of African Americans, Latino/Hispanic, and Caucasian participants, 15% of multiracial participants, and 5% of Asian participants reported learning about sex from this source. When considering religious affiliation and sources of sexual knowledge, the only significant source was religious leaders or religion. Approximately half (46.6%) of participants who grew up Protestant reported learning about sex from a religious leader or religion. This is a much a greater rate than Catholic (25.9%), Orthodox Christian (15.5%), Agnostic or those who grew up unsure of their religious affiliation (10.3%), and Eastern religious participants (1.7%). There was no significant relationship found between setting of living during formative years and sources of sexual knowledge.

- No relationship between gender and Respected, Media, and Personal Experience Sources.

- African American and Caucasian participants learned about sex from religious leaders at the same rate. This was less for Latino/Hispanic and Asian participants.
- African Americans learned about sex from doctors, nurses or healthcare professionals at a higher rate than other ethnicities.
- African American, Multiracial, Latino/Hispanic, and Caucasian participants learned about sex from parents or caregivers. Asians utilized this source at a much lower rate.
- African American, Latino/Hispanic, and Caucasian participants learned about sex from a family friend/mentor at a higher rate than Multiracial and Asian participants.
- Half of participants who identified as Protestant during their formative years learned about sex from religion or religious leaders, a higher rate than other religions.
- No relationship was found between source of sexual knowledge and setting of living during formative years.

#### Question Five

*Is sexual attitude related to gender and cultural background?* The analysis revealed that only two sexual attitudes (Permissiveness and Birth Control) were statistically significant related to gender in that females more than males agreed with an attitude of sexual Permissiveness and females more than males disagreed with an attitude of Birth Control as a part of a sexual relationship. No relationship was found between sexual attitude and either ethnicity or setting of living during formative years. Religious affiliation was seen to have a statistically significant relationship with the attitudes of

Permissiveness and Birth Control. The mean level of agreement with an attitude of Permissiveness for participants who grew up Protestant or Catholic was significantly higher than those who identified as agnostic or unsure during childhood. The mean amount of agreement with an attitude of responsible Birth Control was significantly higher for participants who grew up Catholic when compared to those who grew up agnostic or unsure of religion during childhood.

- Females more than males agreed with an attitude of Permissiveness.
- Males more than females agreed with an attitude of Birth Control.
- No relationship existed between ethnicity and sexual attitude.
- No relationship existed between setting of living and sexual attitude.
- Participants who identified as Catholic or Protestant during formative years had a higher agreement with an attitude of Permissiveness than other religions.
- Participants who identified as Catholic during formative years had a higher agreement with an attitude of Birth Control.

#### Question Six

*Is there a relationship between the source of sexual knowledge and sexual attitude?* Canonical correlation suggested that less engagement with any type of Respected Sources, Media Sources, or Personal Experience Sources was indicative of more agreeability with the four sexual attitudes – Permissiveness, Birth Control, Instrumentality, and Communion – put forth by the BSAS.

- Less engagement with any source indicated a higher agreement with all attitudes on the BSAS.

## **Summary**

In this chapter, results of the research analysis were presented. First, the data sample population's demographic characteristics were described. Then, results of each research question were discussed. Finally, the major findings were summarized. Chapter 5 will provide an overall summary of the research, a discussion of the results, and implications in light of the answered research questions and existing literature.

## CHAPTER 5

### SUMMARY, DISCUSSION, AND IMPLICATIONS

#### **Introduction**

This chapter will begin by summarizing the information presented in the preceding chapters. The purpose of the study, along with a summary of the literature review, will be presented. Following this, the methodology and findings of this study will be offered. The majority of this chapter will be utilized to discuss the findings of this research in light of existing literature. Limitations will also be presented. The chapter will conclude with a discussion concerning implications for the clinical setting and future research opportunities.

#### **Purpose of the Study**

The purpose of this study was six fold: (1) to identify how people learn about sex, (2) to identify the extent the sources of knowledge influence participants' knowledge of sex when learned in the formative years and in their current life, (3) to identify the sexual attitudes of the participants, (4) to identify if the source of sexual knowledge is related to gender and cultural background, (3) to identify how sexual attitude is related to gender and cultural background, and (6) to identify presence of relationship between how individuals acquire knowledge about sex and a personal attitude about sex.

## **Summary of the Literature Review**

### **Sexual Knowledge**

Sexual knowledge is the acquired understanding of issues of sexuality including reproduction, menstruation, contraception, use of contraception, and STIs including HIV. Sexual knowledge is important to adolescent and individual development for several reasons. First, to educate about STIs in an attempt to promote safe sex. Second, sexual knowledge is an important component in the reduction of teen pregnancy. Third, sexual knowledge is also important in the sexual decision making process. Lastly, sexual knowledge focuses on preparing learners for a point in life when they will want to engage in a sexually consensual relationship and express sexuality by being in relationship with another person. The interaction of sexual knowledge helps to guide a person in making decisions regarding beliefs, values, and commitment in a sexual relationship.

### **Sources of Sexual Knowledge**

Currently, there is no consistent mode of introducing the topic of sex to an individual who has not previously learned about the topic. However, much literature exists that provides information about the transmission of sexual knowledge. Transmission of sexual knowledge is defined as how one learns or gains knowledge about sexuality. Sources of sexual knowledge may be categorized into two classes: formal sources and informal sources. Formal sources are those that include educators, healthcare professionals, religious institutions or community organizations. Informal sexual sources are those that include people in the daily lives of individuals (peers, friends, and family), internet, internet pornography, and movies or television.



Research has shown that a majority of sexual education and modes of transmission of sexual knowledge are focused on sexual behaviors (Kirby, 2002a) and abstinence (Baily & Wolf, 2015). However, issues of concern surrounding sexuality are still present in the lives of young adults. For instance, Kirby (2001) reported that teen pregnancy rates are declining but that, at the time of his research, more than four in ten teenage girls become pregnant at least once before they reached the age of twenty, translating to 900,000 teen pregnancies annually. The CDC reported that, in 2012, a total of 305,388 infants were born to females aged 15-19 years (Martin et al., 2013). Weinstock and colleagues (2004) noted that adolescents account for one-quarter of the sexually active population while also accounting for approximately 18.9 million cases of STIs in the United States as found from results gathered in 2000. These numbers clearly present an issue that needs addressed.

It is thought that formal and informal sources have the ability to form attitude or behavior about sexuality. The source has the ability to act as a reinforcement as the learner experiences internal or external responses to the behavior. In the same respect, if a learner experiences reinforcement to a positive behavior or attitude about sexuality, it is likely that behavior will be enhanced and utilized in the future. To date, little, if any, research exists about attitude-based modes of sexual knowledge even though research (Kraus, 1995) indicates that attitude can significantly predict future behavior.

### Sexual Attitudes

As seen in some of the research presented previously, behavior is closely considered in research related to outcomes of sexuality. It is my belief, and the belief of others, that attitude and behavior are related and thus attitude needs to be considered

when studying sexuality. There is various research available as to how attitude and behavior are related (Glasman & Albarracin, 2006; Kraus, 1995; McLeod, 2009). This research is important to this study because it provides a rationale for shaping attitudes about sexuality rather than focusing on behavioral aspects of education. The literature suggests that attitude can be a major component in dictating future behavior and is therefore important when considering transmission of sexual knowledge and sexual knowledge sources.

### Cultural Considerations

Another major contributing factor of sexuality is that of specific cultural norms. Culture is composed of many things – country of origin, family of origin, religious background, ethnicity, and other factors. Many individuals are unaware of the impact culture can have on areas of their life, especially sexuality. Much research exists concerning the influence that cultural factors have on sexual development and sexuality in general (Meston & Tierney, 2010; Okazaki, 2010; Shoveller et al. 2004; Stephens & Few, 2007). An understanding of how culture effects one's mode of sexual knowledge, as well as sexual attitude, could provide a framework to present sexual knowledge that is culture specific.

### **Methodology**

The present study employed a non-experimental, correlational research design utilizing a survey research method. Participants completed surveys that measured sexual attitude and gathered information about mode of transmission of sexual knowledge, the mode's influence, and demographic information. This work employed several statistical analysis methods to address the six research questions that guided the study. These

methods included EFA, descriptive statistics, independent sample t-tests, one-way ANOVA, chi-square, and canonical correlation to examine the presence and type of relationship amongst the variables. Information about transmission of sexual knowledge was collected through a sexual knowledge tool (Appendix D). Sexual attitude was measured using the BSAS (Appendix D). Demographic information was gathered using a demographic questionnaire (Appendix C). The research sample was collected using convenience sampling. Participants were recruited via QuestionPro, an online service that provides researchers with the ability to create and distribute surveys to target populations.

## **Findings and Discussion**

### **Demographic Characteristics of Sample**

A total of 399 individuals completed the surveys. However, some of these cases were excluded from the data analysis because they did not meet the study's criteria. A total of 352 participants, age 18-30, were able to remain in the study. Approximately two-thirds of respondents identified as female (69.3%) while approximately one-third of the respondents identified as male (30.7%). Approximately one-third of respondents identified as Latino/Hispanic (32.7%), followed by African-American (23.9%), Caucasian (18.5%), and Asian (15.6%). During the formative years, approximately 18% of the participants reported living in a rural area, 42% reported living in a suburban area, 30% reported living in an urban area, and 10% reported living in an inner-city. Approximately 26.4% of the population identified as Catholic. Roughly 22.2% of the respondents identified with some facet of Protestantism and nearly 10% of the population

identified as religious other than Protestantism. Lastly, about 41.5% of the sample identified as non-religious.

### Research Question One

The first research question in this study asked how participants learned about sex or gained sexual knowledge. In this study, participants reported a variety of sources of sexual knowledge. When considering Respected Sources, participants reported gaining sexual knowledge from a school-based sexual education program (65%), parents/caregivers (46%), doctor, nurse, or other healthcare professional (29%), mentor or family friend (25%), family member, not parent or sibling (24%), brother or sister (20%), community organization or program (16%), and religion or religious leaders (17%). These results can be seen in Table 4 in the previous chapter. When considering Media Sources, participants reported gaining sexual knowledge from all sources at a fairly consistent rate (media [55%], internet pornography [51%], and SEEM [46%]). When considering Personal Experience Sources, participants reported gaining sexual knowledge from friends/peers (76%), online websites or materials (63%), initial sexual experience (56%), social media (39%) and significant other without the use of intercourse (36%). The highest reported sources within Respected Sources, Media Sources, and Personal Experience Sources include friends and peers (76%), school-based sexual education (65%), and online websites or materials (63%).

The finding from this study concerning peers and friends as a main source of sexual knowledge is supported by existing literature (Bleakley, Hennessy, Fishbein, & Jordan, 2009; Kaiser Family Foundation, 2000). Literature also exists which promotes the idea that media (Bleakley et al., 2009; Sutton, Brown, Wilson, & Klein, 2002) plays a

key role in informing individuals about sexual knowledge. However, participants reported that online websites or materials versus media was a main source of sexual knowledge. These results do not strictly align with existing research but one study (Rideout et al., 2010) found that among 7<sup>th</sup>-12<sup>th</sup> graders, 55% reported that they had looked up health information online in order to gain more knowledge about something that was affecting them or someone they knew. Research also supports the idea of school-based sexual education being a main source of sexual knowledge (Bleakley et al., 2009).

These results were not surprising in light of existing literature on how individuals learn about sex. However, it does highlight that the main sources of sexual knowledge for individuals are not what this study considered Respected Sources. These results indicate that parents and caregivers, healthcare professionals, mentors, religious leaders, family members, and community programs are not educating children at crucial times. Rather, individuals are seeking out peers and the internet to gain sexual knowledge.

### Research Question Two

The second research question in this study addressed to what extent sources of sexual knowledge influenced participants' knowledge of sex when learned about and at the time of survey completion. An overall finding concerning this question was that, over time, participants reported that all of the sources of sexual knowledge lost influence for participants.

When considering Respected Sources, participants noted that, at the time of gaining sexual knowledge, school-based sexual education (31%) and parents or primary caregivers (22%) were considered the most influential. At the time of data collection,

Respected Sources that participants self-reported as influential were parents and primary caregivers (12%) and doctors or other healthcare professionals (11%).

When considering Media Sources and learning about sex during the formative years, at the time of learning, internet pornography was self-reported as most influential (18%). Both media and SEEM were reported as nearly equally influential (16%). At time of data collection, internet pornography and media were reported as most influential (14%), while the influence of SEEM had decreased minimally (11%).

When considering Personal Experience Sources, participants reported that, at the onset of sexual knowledge and at time of data collection, three sources remained the most influential. At time of learning, these were friends or peers (30%), an initial sexual experience (21%), and online websites or materials (20%). At time of data collection these were friends or peers (17%), online websites of materials (12%), and an initial sexual experience (12%); however, the influence of these three sources had decreased.

While previous research has observed sexual behaviors related to sources of sexual knowledge, little, if any, research exists concerning a person's subjective understanding of the influence of a particular source. Based on the idea of sexual socialization (Shtarkshall et al., 2007), participants' beliefs about sexuality were formed from interactions with society, tools of sexual knowledge, and personal experiences.

### Research Question Three

The third research question that guided this study addressed the sexual attitudes of participants in the study. The four attitudes produced by the BSAS were Permissiveness, Birth Control, Communion, and Instrumentality. The Permissiveness subscale measures an individual's permissiveness towards an open relationship. The Birth Control subscale

measures responsibility in birth control. The Communion subscale measures attitudes towards the importance of intimacy and connectedness with a sex partner. Lastly, the Instrumentality subscale measures an individual's attitude towards the physical act of sex.

The participants in this study had a neutral/slight disagreement attitude when considering Permissiveness, meaning that they neither agreed nor disagreed with an open sexual relationship ( $M = 2.78$ ). When considering the attitude Birth Control, participants moderately agreed with sexual responsibility ( $M = 4.26$ ). The participants in this study moderately agreed with an attitude of Communion or idealistic sexuality ( $M = 3.89$ ). When considering the attitude of Instrumentality participants were neutral, meaning they neither agreed nor disagreed that a sexual relationship is more than just physical pleasure ( $M = 3.27$ ). Taken together, this information describes the sample population as one which was neither permissive nor strict, takes seriously that birth control is a necessary part of sexual responsibility, slightly thinks sex can be used for emotional connectedness, and is neutral about sex being just for physical pleasure.

Several reasons exist for the presence of these types of attitudes within the data population. The first is that the source by which the participants learned about sex may have informed their beliefs or attitudes about sex (over 50% of participants learned about sex from either a school-based sexual education program, media, internet pornography, friends or peers, online websites or materials, and an initial sexual experience). Another reason may be the presence of specific experiences (sexual education, modeling by others, and education by trusted peers) participants have engaged in throughout life that have informed their attitude (Shtarkshall et al., 2007).

#### Research Question Four

The fourth research question guiding this study sought to uncover if the sources of sexual knowledge identified by participants were related to gender and cultural background (ethnicity, religious affiliation during formative years, and setting of living during formative years). While none of the EFA sources (Respected, Media, and Personal Experience) were significantly related to gender, several of the sources that made up these categories were related to gender.

When considering religion or religious leaders, a statistically significant greater number of males (23.4%) than females (14.5%) learned about sex from this source. One reason for this may be that more males than females are ordained as religious leaders. For instance, David Masci (2014) of Pew Research Center reported that, as of 2012, only 11% of American congregations were led by a female and that this figure has been consistent since 1998. One may assume that a female in their formative years may be uncomfortable being educated about sexuality by a male religious leader. Therefore, more males than females may be more apt to receive sexual education by a religious leader or religious organization.

When considering the friends or peers, chi-square analysis indicated that a statistically significant greater number of females (81.3%) more than males (63.6%) learned about sex from friends or peers. This is similar to other findings in which females reported talking about sex and sex-related topics with their best friends at a greater rate than was reported by males (Lefkowitz, 2012).

When considering internet pornography, a statistically significant greater number of males (59.8%) more than females (47.3%) learned about sex from internet



pornography, which is in line with existing research. For instance, Sabina and colleagues (2008) reported in their study that 93% of males, compared to 62% of females, were exposed to internet pornography and that males, more than females, were exposed at an earlier age and viewed more often.

Beyond gender differences, aspects of cultural background played a role in sources of sexual knowledge. When considering the source religion or religious leaders, both African Americans and Caucasian participants reported learning from this source at a similar rate (27%). This finding was in contradiction to existing research which has suggested that African Americans have higher levels of religious participation than non-Hispanic Whites (Chatters, Taylor, Bullard, & Jackson, 2010). Latino/Hispanic and Asian participants reported learning about sex from religion or religious leaders at a similar rate (10%).

When considering a doctor, nurse, or other healthcare professional, approximately 40% of African American participants reported learning from this source versus other ethnicities. This result is supported by an existing study which found that African American adolescents had more conversations about sexuality with their healthcare providers than other ethnicities (Alexander et al., 2014).

The source parents or caregivers was reported as having informed 60% of African American and Multiracial participants, 45% of Latino/Hispanic and Caucasian participants, and approximately 20% of Asian participants. Some existing studies have noted ethnic differences in talking to parents and caregivers about sex. For instance, Hoff, Greene, and Davis (2003) noted that African Americans reported learning about sex from parents at a greater rate (60%), than Latino participants (42%) and Caucasian

participants (37%). Further, Kao, Guthrie, and Loveland-Cherry (2007) reported that, among Asian American families, sexuality and sexual health are considered taboo and thus minimal conversation occurs surrounding this topic. In support of the low rate at which Asian participants reported gaining sexual knowledge from parents, Lee et al. (2013) found in their study that parents were the least reported source of sexual education.

When considering the source family friend or mentor, approximately 30% of African American, Latino/Hispanic, and Caucasian participants, 15% of multiracial participants, and 5% of Asian participants reported learning about sex from this source.

When considering religious affiliation and sources of sexual knowledge, the only significant source was religious leaders or religion. Approximately half (46.6%) of participants who grew up Protestant reported learning about sex from a religious leader or religion. This is a much a greater rate than Catholic (25.9%), Orthodox Christian (15.5%), Agnostic or those who grew up unsure of their religious affiliation (10.3%), and Eastern religious participants (1.7%). This finding may be in part due to teachings that were present in specific religious settings. For instance, Protestant religions often offer youth groups in which sexuality, specifically abstinence, is taught to adolescent parishioners. Similarly, the Catholic faith is known for their opposition to contraceptive use and it can therefore be assumed that at least the birth control aspect of sexuality is discussed within this religion. Because Orthodox Christian and Eastern religion practices are more traditional in nature, it is assumed that it was taboo for these faith systems to educate about sexuality. Lastly, as those who grow up unsure of faith or agnostic would

have had minimal, if any, interactions with religion or religious leaders, it was expected that they would report low learning for this source.

The last finding from this question found no significant relationship between setting of living during formative years and sources of sexual knowledge. This may have been due to the same sources being present no matter if a participant grew up in a rural, suburban, urban, or inner-city setting.

#### Research Question Five

The fifth research question in this study addressed the presence of a relationship between sexual attitude and gender, as well as sexual attitude and cultural background (ethnicity, religious affiliation during formative years, and setting of living during formative years).

The analysis revealed that only two sexual attitudes (Permissiveness [females more than males] and Birth Control [males more than females]) were statistically significant related to gender. In regards to Permissiveness, the findings of this study are in contradiction to some existing literature. Hendrick and colleagues (2006) reported that, when using the BSAS, males more than females agreed with a Permissive sexual attitude. Additionally, other authors have reported that females more than males are less interested in a casual sexual relationship (England & Bearak, 2014; Sprecher, Trager, & Sakaluk, 2013). However, a study by Martin and Mak (2013) revealed that females, more than males, have a more progressive and open-minded sexual attitude. One reason the results of gender and Permissiveness are unsupported more than supported by much literature may be due to the sexual double standard. While this double standard is talked about often in literature, the female participants in this study may have identified as

having a Permissive attitude because they did not subscribe to the idea of a sexual double standard or felt that they had the freedom to openly report their attitudes.

When considering an attitude of Birth Control and gender, males more than females in this study agreed with an attitude of responsible sexuality. Historically, society has put forth that birth control is the responsibility of the female partner in a sexual encounter. However, when presented with the prospect of a male method of birth control a large range (44-83%) of male participants in one study stated they would use a male contraceptive pill (Martin et al., 2000). Another study (Heinemann, Saad, Wiesemes, White, & Heinemann, 2005) showed that more than 60% (out of 9,000 participants) of males in Spain, Germany, Mexico, and Brazil reported a willingness to use a male contraceptive if available. Accordingly, using the two methods currently available (condoms and vasectomy), males in the U.S. account for one-third of total contraceptive use (Mosher, Martinez, Chandra, Abma, & Willson, 2004). Based on this literature, it could be assumed that the males in this study would like to take responsibility for, or relieve their partners of, stress when it comes to contraception use in a sexual encounter.

Religious affiliation was seen to have a statistically significant relationship with the attitude of Permissiveness. The mean level of agreement with an attitude of Permissiveness for participants who grew up Protestant or Catholic was significantly higher than those who identified as agnostic or unsure during childhood. This result is at odds with existing literature that has historically posited that religion is associated with less permissiveness (Hong, 1983; Jenson, Newell, & Holman, 1990; Rostosky, Regnerus, & Wright, 2003). Several possibilities exist for these results. The first is that the

restrictiveness of conservative traditions, such as Catholicism and Protestantism, may have inadvertently created an adverse reaction to restrictive thinking, thus encouraging a more liberal attitude on the subject of permissiveness. For example, if a child or adolescent is raised in a conservative Protestant or Catholic home, one might rebel from the strict, sexually restrictive home and adopt a sexually permissive attitude once adulthood is reached, thus impacting how adults taking the surveys in this study may have reported higher rates of Permissiveness. The second reason includes a shift in sexual culture. Much of the data about religion and permissiveness is dated and speaks only to premarital sexual intercourse. Since the historical data was gathered, a shift to a more sexually accepting culture may have taken place. For instance, in the U.S., the age of marriage and childbearing has been increased while the age of puberty has decreased. This has led to individuals being physiologically able to reproduce but not mentally ready to “settle down” (Bogle, 2007; Garcia & Reiber, 2008). Brief, uncommitted sexual encounters between partners not in a committed relationships have emerged due to social shifts that have taken place in the last 100 years (Garcia, Reiber, Massey, & Merriwether, 2013).

Religious affiliation was seen to have a statistically significant relationship with the attitude of Birth Control. The mean amount of agreement with an attitude of Birth Control was significantly higher for participants who grew up Catholic when compared to those who grew up agnostic or unsure of religion during childhood. While at first glance these results may cause confusion due to Catholic Church promoting non-use of birth control, the results coincide with other existing literature (Davidson, 2014; Hill, Siwatu, & Robinson, 2014). In support of this, Catholic leaders report that parishioners view the

church's teaching on birth control as obsolete (Filteau, 2014). Beyond this, one study (Jones & Dreweke, 2011) produced data that showed that, of the women in their study, 98% of those who had ever had intercourse and identified as Catholic reported using some method of birth control other than natural family planning. This information, coupled with social change regarding sexual encounters at a younger age, create a generation in which birth control is seen a necessary part of sexuality.

Regarding the other aspects of cultural background beyond religious affiliation, no relationship was found between sexual attitude and either ethnicity or setting of living during formative years. Other research has suggested that ethnic differences exist in sexual attitudes (Ahrold & Meston, 2010; Leiblum, Wiegel, & Brickle, 2003; Rinehart, Yeater, Musci, Letourneau, & Lenberg, 2014). One reason this study's results may be different could be due to the level of acculturation the participants have experienced (Leiblum et al., 2003). The research that exists about setting of living and sexual attitudes has been set in international settings and is therefore not applied to this study. One reason the results of this study appear acceptable is due to the fact that currently, individuals have comparable access to the world around them through the internet and therefore have the same amount of information that could contribute to attitude development.

#### Research Question Six

The final research question in this study sought to provide information about the relationship between sources of sexual knowledge and sexual attitude. The results of canonical correlation suggested that less engagement with Respected Sources, Media Sources, and Personal Experience Sources by participants was indicative of greater

agreement with attitudes of Permissiveness, Birth Control, Communion, and Instrumentality.

These results make sense in a certain capacity. Less engagement with any source of sexual knowledge would be presumed to lead to a higher attitude of Permissiveness. However, existing research suggests that sources of sexual knowledge have an impact on a person's underlying beliefs about sex. For instance, Bleakley et al. (2009) found that learning about sex from parents, family, and religious leaders (Respected Sources) was associated with beliefs indicative of delayed sex (Permissiveness). Their study also found that media, friends, and peers (Media and Personal Experience Sources) were associated with beliefs that increased the likelihood of sexual intercourse (Permissiveness). In disagreement with results from the current study, Lo and Wei (2005) found that higher engagement with pornography (Media Sources) was indicative of positive attitudes of casual sexual relations (Permissiveness).

When one considers sources of sexual knowledge and an attitude of Birth Control as a responsible part of sex, results are less clear. In disagreement with the results of the current study, another study (Moran & Corley, 1991) found that participation in a sexual education class (Respected Sources) was associated with increased condom use (Birth Control). One could also make the case that higher interaction with all three Sources (particularly sexual education, doctor, religion, media, peers or friends, social media, and initial sexual experience) would be indicative of a higher attitude of Birth Control.

When considering a higher association with Communion (emotional connectedness in sex), it would be understandable that less interaction with Sources could be related. For instance, many sources may desensitize a person's emotional response to

sexual connection (parents/caregivers, siblings, religion, SEEM, internet pornography [Peter & Valkenburg, 2010], media, social media, friends or peers, significant other without intercourse, and an initial sexual experience). Therefore, if a person is less engaged with these sources, the individual has the opportunity to form their own opinions about the emotional connection that sexual intercourse can produce.

A sexual attitude of Instrumentality highlights the physical benefits of sexual intercourse. The results of canonical correlation concerning sources of sexual knowledge and Instrumentality purport that less engagement with the three Sources is related to a higher attitude of sex as a means for physical pleasure. This is understandable as less engagement with Sources that suggest that sex is about emotional closeness, procreation, or connecting with another, may lead a person to view sex as focusing on pleasure oneself can obtain or simply experiencing physical pleasure. However, it is important to note that some research (Peter & Valkenburg, 2010) found that when a person engaged with SEEM or internet pornography, their perceptions were often altered and led them to view sex as casual and physical rather than relational and affectionate (Instrumentality).

### **Limitations**

The current study is not without limitations. The first of these includes the fact that all of the variables were assessed using self-report measures. This may have resulted in subjects answering prompts in a socially desirable way versus in a manner that reflected their true beliefs or experiences. However, the nature of the variables made self-report measures necessary in order to gather subjective information.

Another limitation was the wording in one of the questionnaires used in this study. It may not have been clear to participants what “influence” referred to (Appendix



D: “mark which of the following sources had influence on your knowledge of sex when you learned about sex and its influence now”). It may have been unclear to participants if “influence” referred to influence on sexual behavior or influence on sexual attitude.

Another limitation to the study was the use of online data collection. Using QuestionPro, or any other online survey tool, offers disadvantages. These include the inability to reach respondents who do not have access or experience with online surveys, meaning that online surveys include biases inherent to the collection of the data (O’Neill, 2004). Also, survey fraud is a possibility with online surveys, as some individuals participate in surveys simply for the incentive offered versus contributing the advancement of knowledge.

Lastly, while this study was informative about the relationship of and between certain variables, the current study was non-experimental in design and therefore does not offer the ability to make direct cause-and-effect statements regarding the statistical results.

### **Implications**

As researchers, educators, mental health professionals, and lay people better understand sexuality and sexual attitudes, they will be better able to serve the people they encounter. The current research offers several implications for professional practice and future research.

Despite the importance of sexual education for individuals, my experience as a mental health practitioner has been that that many people avoid talking about the topic of sex. It is understandable as some age groups are uncomfortable discussing this matter. Also, how sex is still considered an unmentionable topic in some religious groups and

cultures. This study highlighted the fact that mental health professionals need to be engaging their clients, especially youth, about the topic of sex and sexuality. The current study noted that more individuals reported learning about sex from media, internet pornography, an initial sexual experience, online materials or websites, and friends or peers than from parents or primary caregivers, doctors, nurses or other healthcare providers, religion or religious leaders, family members, mentors, siblings, or community programs or organizations. This research offers the call to mental health professionals to change this pattern and become a familiar source of sexual knowledge to the populations they serve.

#### Implications for Practice

- 1) Professionals should recognize that they play a role in educating youth and young adults about sexual behavior and attitudes and thus should be trained within their educational programs to impart sexual knowledge that aligns with a client's values to their clients and parents of clients (Q1).
- 2) Professionals need to be partnering with those outside of the field of psychology, specifically with those in the healthcare field and those who hold positions of influence within religious systems, to appropriately educate individuals about sexual behaviors and attitudes. People in these positions significantly impact males and African Americans (Q2, Q4, and Q5).
- 3) Professionals need to be discussing pornography and the impact of pornography on a client's attitude and conceptualization of a sexual relationship with clients beginning at an early age (Q2 and Q4)

- 4) Professionals need to be addressing expectations and assumptions concerning sexual intercourse, birth control, emotional impact, and physical aspect of intercourse with their clients, especially those who are younger and forming attitudes about sexual behaviors. Clients should have a clear understanding of how attitude can shape behavior (Q3).
- 5) Professionals need to be facilitating conversation with clients in an effort to be aware of how cultural background impacts sexual attitudes and behaviors (Q4).
- 6) Professionals should utilize questions about sexual attitudes and sources of sexual knowledge in intake sessions and invite clients to engage in conversation about this topic.
- 7) Professionals need to be talking with males at the same or higher rate at which they talk with females about birth control (Q5).
- 8) Professionals need to be educating clients about how different sources of sexual knowledge can impact sexual attitude (Q1 and Q6).

#### Implications for Future Research

The present study also has implications for future research.

- 1) The literature review revealed gaps in the knowledge available about sexual attitude as much research has been devoted to sexual behavior. Although this study adds to the body of knowledge surrounding sexual attitude, more research is needed to promote a greater focus shift from behavior to attitude.
- 2) Future research should examine more closely the relationship between engagement with specific sources and a decreased attitude of Permissiveness.

- 3) Future research should utilize qualitative methods to collect narrative from the participants to avoid any confusion about sources of sexual knowledge and the influence of the sources.
- 4) Future research should utilize qualitative methods to gain understanding about how participants perceive the impact of their cultural background on sexual attitude.

## APPENDICES

APPENDIX A  
APPROVAL LETTERS

Date: 11/19/2015

**Re: Permission to Conduct Research Using QuestionPro**

To whom it may concern:

This letter is being produced in response to a request by Esther Hooley (hooley@andrews.edu), a student at your institution who wishes to conduct a survey using QuestionPro in order to support her research. The student has indicated that she requires a letter from QuestionPro granting her permission to do this. Please accept this letter as evidence of such permission. Students are permitted to conduct research via the QuestionPro platform provided that they abide by our Terms of Use, a copy of which is available on our website at:

<http://www.questionpro.com/help/2.html>

QuestionPro is a self-serve survey platform on which our users can, by themselves, create, deploy and analyze surveys through an online interface. We have users in many different industries that use surveys for many different purposes. One of our most common use cases is students and other types of researchers using our online tools to conduct academic research.

If you have any questions about this letter, please contact us at the email address below.

Sincerely,

QuestionPro Inc.

January 29, 2016

Esther Hooley  
Tel: 847-707-0127  
Email: [esther.m.hooley@gmail.com](mailto:esther.m.hooley@gmail.com)

**RE: APPLICATION FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS**  
IRB Protocol #:16-008 Application Type: Original Dept.: Graduate Psychology & Counseling  
Review Category: Exempt Action Taken: Approved Advisor: Carole Woolford-Hunt  
Title: The Relationship Between Sexual Knowledge, Sexual Attitude and Culture.

Your IRB application for approval of research involving human subjects entitled: *"The Relationship Between Sexual Knowledge, Sexual Attitude and Culture"* IRB protocol # 16-008 has been evaluated and determined Exempt from IRB review. You may now proceed with your research.

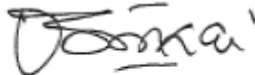
Please note that any future changes (see IRB Handbook pages 11-12) made to the study design and/or informed consent form require prior approval from the IRB before such changes can be implemented. In case you need to make changes please use the attached report form.

While there appears to be no more than minimum risks with your study, should an incidence occur that results in a research-related adverse reaction and/or physical injury, (see IRB Handbook pages 12) this must be reported immediately in writing to the IRB. Any research-related physical injury must also be reported immediately to the University Physician, Dr. Reichert, by calling (269) 473-2222.

We ask that you reference the protocol number in any future correspondence regarding this study for easy retrieval of information.

Best wishes in your research.

Sincerely,



Mordekai Ongo  
Research Integrity & Compliance Officer



APPENDIX B  
INFORMED CONSENT

## **Informed Consent**

### **Purpose**

You are invited to participate in a research project titled “The Relationship Between Transmission of Sexual Knowledge, Sexual Attitude, and Culture.” The purpose of this research project is to examine the relationship between how people learn about sex, their attitude about sex, and cultural background.

### **Researchers**

This research is being conducted by Esther M. Hooley, a PhD student at Andrews University in Berrien Springs, Michigan. The research is being supervised by Dr. Carole Woolford-Hunt, PhD. Results from this research will be used in Esther M. Hooley’s dissertation and may be published in professional literature or presented at conferences.

### **Procedure**

If you choose to participate in this research, you will be asked to complete a survey that asks questions about sex and yourself. It will take approximately 20 minutes to complete the survey.

### **Participation**

In order to participate, you must be over the age of 18 years of age. Your participation in this study is completely voluntary. It is your choice whether to participate or not. You may discontinue the survey at any time.

### **Risks, Benefits, and Compensation**

There is no foreseeable risks or benefits associated with participation in this research. However, as the subject of the research is sensitive, if you feel upset at any time, you can call this toll free number 1-800-273-TALK (8255). As will all surveys taken through this company, if you choose to complete the survey you will be awarded points which are later redeemable for prizes.

### **Confidentiality**

Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

### **Contact Information**

If you have questions at any time about the survey, your participation in this research, or your rights as a participant, you may contact the principle investigator, Esther M. Hooley at (847) 707-0127 or [esther.m.hooley@gmail.com](mailto:esther.m.hooley@gmail.com). You may also contact the research advisor Dr. Carole Woolford-Hunt at (269) 471-3473 or [cwh@andrews.edu](mailto:cwh@andrews.edu).

### **Consent**

Thank you very much for your time and participation. Please start the survey by clicking on the Continue button below. By clicking this button, you are giving your consent to participate in the research described above.

APPENDIX C  
DEMOGRAPHIC QUESTIONNAIRE

## DEMOGRAPHIC QUESTIONNAIRE

### Formative Years (Childhood)

Year of birth? \_\_\_\_\_

#### Household structure

- Single-parent
- Two-parent
- Primary caregiver grandparent
- Foster home
- Other \_\_\_\_\_

#### Setting of living

- Rural
- Suburban
- Urban
- Inner-city

#### Religious Affiliation

- Evangelical Protestant
- Mainline Protestant
- Historically Black Protestant
- Catholic
- Mormon
- Orthodox Christian
- Jehovah's Witness
- Other Christian \_\_\_\_\_
- Jewish
- Muslim
- Buddhist
- Hindu
- Other World Religion \_\_\_\_\_
- Unaffiliated Religion \_\_\_\_\_
- Atheist
- Agnostic
- Don't know
- Other \_\_\_\_\_

Which of the following ethnic groups do you most identify with?

- African American (USA)
- African American (Caribbean)
- African
- Latino/a American
- Latino/a
- Hispanic
- Asian American
- Asian
- Caucasian
- Multiracial
- Other \_\_\_\_\_

Type of school you attended the longest

- Private
- Private and religious
- Public
- Homeschool
- Other \_\_\_\_\_

Was your school same gender?

- Yes
- No

Size of student body of school attended the longest

- 0-50
- 50-100
- 100-200
- 200-400
- 400-600
- 600-1000
- 1000+

## DEMOGRAPHIC QUESTIONNAIRE

### Current

#### Level of education

- Some high school
- Graduated high school
- Some college
- Graduated college
- Some graduate school
- Graduated graduate school

#### Religious Affiliation

- Evangelical Protestant
- Mainline Protestant
- Historically Black Protestant
- Catholic
- Mormon
- Orthodox Christian
- Jehovah's Witness
- Other Christian \_\_\_\_\_
- Jewish
- Muslim
- Buddhist
- Hindu
- Other World Religion\_\_\_\_\_
- Unaffiliated Religion\_\_\_\_\_
- Atheist
- Agnostic
- Don't know
- Other\_\_\_\_\_

#### Sexual orientation

- Heterosexual or straight
- Gay or lesbian
- Bisexual
- Other\_\_\_\_\_

#### Marital status

- Single
- Married
- Divorced
- Widowed

- Other \_\_\_\_\_

**Annual Income**

- Less than \$35,000
- \$35,000 – \$50,000
- \$50,000 – \$100,000
- \$100,000 – \$150,000
- More than \$150,000

Location of place where you have lived the longest \_\_\_\_\_

What is your gender?

- Male
- Female
- Transgender
- Other \_\_\_\_\_

APPENDIX D

SURVEYS



## Brief Sexual Attitudes Scale

Listed below are several statements that reflect different attitudes about sex. For each statement fill in the response on the answer sheet that indicates how much you agree or disagree with that statement. Some of the items refer to a specific sexual relationship, while others refer to general attitudes and beliefs about sex. Whenever possible, answer the questions with your current partner in mind. If you are not currently dating anyone, answer the questions with your most recent partner in mind. If you have never had a sexual relationship, answer in terms of what you think your responses would most likely be.

For each statement:

**A** = Strongly agree with statement

**B** = Moderately agree with the statement

**C** = Neutral - neither agree nor disagree

**D** = Moderately disagree with the statement

**E** = Strongly disagree with the statement

1. I do not need to be committed to a person to have sex with him/her.
2. Casual sex is acceptable.
3. I would like to have sex with many partners.
4. One-night stands are sometimes very enjoyable.
5. It is okay to have ongoing sexual relationships with more than one person at a time.
6. Sex as a simple exchange of favors is okay if both people agree to it.
7. The best sex is with no strings attached.
8. Life would have fewer problems if people could have sex more freely.
9. It is possible to enjoy sex with a person and not like that person very much.
10. It is okay for sex to be just good physical release.

11. Birth control is part of responsible sexuality.
  12. A woman should share responsibility for birth control.
  13. A man should share responsibility for birth control.
  14. Sex is the closest form of communication between two people.
  15. A sexual encounter between two people deeply in love is the ultimate human interaction.
  16. At its best, sex seems to be the merging of two souls.
  17. Sex is a very important part of life.
  18. Sex is usually an intensive, almost overwhelming experience.
  19. Sex is best when you let yourself go and focus on your own pleasure.
  20. Sex is primarily the taking of pleasure from another person.
  21. The main purpose of sex is to enjoy oneself.
  22. Sex is primarily physical.
  23. Sex is primarily a bodily function, like eating.
-

## Sexual Knowledge Tool

Please check “Agree” or “Disagree” to the statement(s) which best applies to your experience. Additionally, mark which of the following sources had influence on your knowledge of sex when you learned about sex and its influence now.

- 1.) I learned about sex through a school-based sexual education class
  - Agree
  - Disagree
  - Influential then
  - Influential now
  
- 2.) I learned about sex from a doctor, nurse, or other healthcare professional.
  - Agree
  - Disagree
  - Influential then
  - Influential now
  
- 3.) I learned about sex from my religion or religious leader.
  - Agree
  - Disagree
  - Influential then
  - Influential now
  
- 4.) I learned about sex through a community organization or program.
  - Agree
  - Disagree
  - Influential then
  - Influential now
  
- 5.) I learned about sex from my friends or peers.
  - Agree
  - Disagree
  - Influential then
  - Influential now
  
- 6.) I learned about sex from my parent(s) or caregiver(s)
  - Agree
  - Disagree
  - Influential then
  - Influential now

- 7.) I learned about sex from a mentor or family friend
- Agree
  - Disagree
  - Influential then
  - Influential now
- 8.) I learned about sex from my brother or sister.
- Agree
  - Disagree
  - Influential then
  - Influential now
- 9.) I learned about sex from a family member who was not a parent or sibling
- Agree
  - Disagree
  - Influential then
  - Influential now
- 10.) I learned about sex from a significant other without the use of intercourse
- Agree
  - Disagree
  - Influential then
  - Influential now
- 11.) I learned about sex from internet pornography.
- Agree
  - Disagree
  - Influential then
  - Influential now
- 12.) I learned about sex from sexually-explicit or erotic materials
- Agree
  - Disagree
  - Influential then
  - Influential now
- 13.) I learned about sex from online websites or materials.
- Agree
  - Disagree
  - Influential then
  - Influential now
- 14.) I learned about sex from media entertainment including movies, television, magazines, or music.
- Agree
  - Disagree

- Influential then
- Influential now

15.) I learned about sex from an initial sexual experience

- Agree
- Disagree
- Influential then
- Influential now

16.) I learned about sex from social media

- Agree
- Disagree
- Influential then
- Influential now

## REFERENCE LIST

## REFERENCE LIST

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