

EXPOSURE TO SEXUAL MEDIA AND COLLEGE STUDENTS' SEXUAL RISK-TAKING  
AND SEXUAL REGRET

BY

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DISSERTATION

Submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy in Communication  
in the Graduate College of the  
University of Illinois at Urbana-Champaign, 2012

Urbana, Illinois

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## **Abstract**

Sexual risk-taking represents a significant health problem among college students. Although media may play an important role in college students' sexual risk-taking, research in this area has been sparse. Using social cognitive theory as the theoretical framework, this dissertation aimed to achieve three goals. First, the study sought to examine how exposure to sexual content in six media (i.e., television, songs, music videos, movies watched at home, movies watched in the theater, and magazines) might be related to college students' sexual risk-taking. Second, the study investigated a list of moderators that might influence the relationship between media exposure and sexual risk-taking. Five moderators (i.e., gender [femaleness], race [whiteness], sensation seeking, positive premarital sexual attitudes, and endorsement of the sexual double standard) were proposed to strengthen the relationship, and three moderators (i.e., school performance, religiosity, and parental monitoring) were proposed to weaken the relationship. Lastly, the study explored whether sexual media exposure may be linked to sexual regret indirectly through its effect on sexual risk-taking.

The main project was an online survey completed by 561 college students. To assist the investigation, three subprojects were conducted beforehand. Subproject 1 employed focus group interviews to generate a measure of sexual risk-taking (i.e., hedonistic, socially destructive, voyeuristic, and nonprotective risk-taking) to be used in the main project. This new measure included a comprehensive list of risky sexual behaviors that went beyond the risks of unintended pregnancy and STIs typically examined in previous research. Subproject 2 conducted a survey to obtain sexual intensity ratings for the media offerings to be used in the main project. The last subproject analyzed the content of the same media offerings to determine the accuracy of the ratings obtained from subproject 2.

The analyses of the main project revealed several main findings. First, exposure to sexual magazines predicted more hedonistic and voyeuristic risk-taking among college students. In fact, it was the only sexual media variable that had a direct relationship with sexual risk-taking. Second, moderating effects were found for sexual music video viewing, sexual song listening, and sexual magazine reading. While sensation seeking and positive premarital sexual attitudes functioned to strengthen the relationship between sexual media exposure and sexual risk-taking, gender (femaleness), school performance, and religiosity functioned to weaken the relationship. Third, sexual magazine reading predicted the most sexual risk-taking (i.e., hedonistic, voyeuristic, and nonprotective risk-taking), directly or indirectly through the moderating effects. Nonprotective risk-taking had the most predictors. Finally, sexual regret was not related to any sexual risk-taking subscales. Therefore, the mediating effect of sexual risk-taking on the relationship between media exposure and sexual regret was not supported. Implications of these findings and suggestions for future research were discussed.

## **Acknowledgements**

This dissertation would not have been completed without the help, encouragement and inspirations from many people. My deepest gratitude goes to my advisor, Kristen Harrison, who is an extraordinary researcher, a great mentor, and a caring friend. I am extremely grateful for all the guidance, encouragement, and generous support she has given me along the way. I am also grateful for my committee members: Dr. Travis Dixon, Dr. David Tewksbury, and Dr. Barbara Wilson. Thank you all for your helpful suggestions and comments on this project, and your dedication to the highest quality of scholarly work. I would also like to express my thanks to all my professors, colleagues, administrative staff, and friends for their time, knowledge, and continued support throughout these years. Special thanks also go to my dearest mom and dad, and my parents-in-law. Your love and prayers are specially treasured in my heart. Last but in no way the least, I wish to express my gratitude to my husband, Lin Zhong, and our son, Kaifeng Zhong. It was your greatest love that got me to the finish line!

## Table of Contents

<b>Chapter 1: Literature Review</b> .....	<b>1</b>
<b>Introduction</b> .....	<b>1</b>
<b>Literature Review</b> .....	<b>6</b>
<b>Theoretical Rationale and Overarching Hypothesis</b> .....	<b>16</b>
<b>Hypotheses Regarding Moderating Variables</b> .....	<b>19</b>
<b>Hypothesis Regarding Sexual Regret</b> .....	<b>27</b>
<b>Chapter 2: Method</b> .....	<b>29</b>
<b>Subproject 1 – Focus Groups</b> .....	<b>29</b>
<b>Subproject 2 – Survey for Sexual Intensity Ratings</b> .....	<b>30</b>
<b>Subproject 3 – Content Analysis</b> .....	<b>32</b>
<b>Main Project - Sample and Recruitment Procedure</b> .....	<b>33</b>
<b>Design</b> .....	<b>34</b>
<b>Measures</b> .....	<b>36</b>
<b>Chapter 3: Results</b> .....	<b>46</b>
<b>Descriptive Statistics</b> .....	<b>46</b>
<b>Hypothesis Testing</b> .....	<b>47</b>
<b>Chapter 4: Discussion</b> .....	<b>57</b>
<b>Measure of Sexual Risk Taking</b> .....	<b>58</b>
<b>Direct Link between Sexual Media Exposure and Sexual Risk-Taking</b> .....	<b>59</b>
<b>Moderating Effects on Sexual Media Exposure and Sexual Risk-Taking</b> .....	<b>63</b>
<b>Relationships between Sexual Media Exposure, Sexual Risk-Taking and Sexual Regret</b> ....	<b>70</b>
<b>Summary and Implications</b> .....	<b>71</b>
<b>Limitations and Future Research</b> .....	<b>74</b>
<b>Tables and Figures</b> .....	<b>79</b>
<b>Appendix A: Scales for Risky Sexual Behavior</b> .....	<b>119</b>
<b>Appendix B: Questionnaire</b> .....	<b>122</b>
<b>Appendix C: Codebook for Sexual Content</b> .....	<b>149</b>
<b>References</b> .....	<b>151</b>

## Chapter 1: Literature Review

### Introduction

Exploring sexual relationships and gender-specific norms is a fundamental task involved in the social development of emergent adults, including college students (Arnett, 2000). Although an increasing interest in sex is natural at this developmental stage, sexual experimentation is frequently accompanied by sexual risk-taking (Lewis, Malow, & Ireland, 1997). Many college students have multiple sexual partners and use contraceptives inconsistently (e.g., Douglas et al., 1997; Eisenberg, 2001). Results from a national survey indicate that 35% of college students reported having had more than five lifetime sexual partners (Douglas et al., 1997). Because this data represent percent of *all* college students, the proportion of *sexually active* college students who engage in these behaviors should be even higher. In addition, while fewer than half of college students (43%) reported a consistent use of condoms, almost one-quarter (24%) said they never did (Eisenberg, 2001).

Sexual risk-taking can lead to many negative consequences. The two most commonly addressed consequences are unplanned pregnancy and sexually transmitted infections (STIs). Findings from the National Campaign to Prevent Teen and Unplanned Pregnancy (2007) reveal that 67% of unwanted pregnancies were experienced by unmarried women aged 24 and younger. Women of college age (18-24 years) have the highest rate of unintended pregnancy (Henshaw, 1992) and are the age group most likely to seek abortions (Alan Guttmacher Institute, 2000). According to the Centers for Disease Control and Prevention (CDC, 2000), two-thirds of STI cases are among people 25 years or younger. While comprising only 25% of the sexually active population, they account for nearly one-half of all new STIs each year (CDC, 2006). In addressing college students in particular, the CDC noted that college students are the “epicenter of the [HIV/AIDS] epidemic” (CDC, 2004). It is estimated that one out of 500 college students contracts

HIV (CDC, 2000). This is consistent with later findings from a study of more than 28,000 college students that indicated that about 2% of them reported being infected with HIV (American College Health Association, 2002).

There are good reasons to believe that mass media may play a critical role in college students' sexual risk-taking. First, studies have shown that media play a significant role in college students' daily lives. Jeong et al. (2005) reported that while high school students spent on average about 4.5 hours per day using media, college students spent 6 hours per day with media (person-hours with either single media use or simultaneous multiple media use). Using television consumption as an example, a survey of 439 college students revealed that about 40% of participants reported watching TV more than six hours per week (BurstMedia, 2007). Regarding music and music video consumption, a study conducted about twenty years ago reported that 76% of female undergraduates and 60% of male undergraduates listened to music three or more hours each day (Strouse & Buerkel-Rothfuss, 1987). With the rise of digital music in recent years, college students have easier access to their favorite songs with less expense. It is likely that they spend even more time with music than before. In a study by Ward (2002), college students reported an average of more than 9 hours per week watching music videos alone.

Second, content analyses show that sexual references and innuendoes are prevalent across a variety of media (Kunkel et al., 2003; Pardun, L'Engle, & Brown, 2005; Ward, 2003). With compelling storylines, appealing images, and physiologically arousing music, media provide numerous examples of sexual and romantic interactions such as dating, initiating sexual activities, and engaging in sexual behaviors consistent with gender role norms (Arnett, 2002; Carpenter, 1998; Ward, 2002). What is lacking in the media, though, is an adequate amount of information about sexual responsibilities and negative consequences from sexual risk-taking behaviors.

According to the previous studies on television programs, the depiction of serious outcomes such as unwanted pregnancy and STIs from unprotected sex occurred in only 0 to 4.8% of all scenes with sexual content (Kunkel et al., 2003; Lowry & Shidler, 1993; Lowry & Towles, 1989a; Lowry & Towles, 1989b; Shidler & Lowry, 1995; Ward, 2003). A content analysis of six media (i.e., television shows, movies, music, Internet sites, and newspapers) by Pardun et al. (2005) revealed that sexually healthy messages in the media emphasizing issues such as contraceptive use, STIs, and negative emotional consequences are quite limited, accounting for only 2% of television sexual content, 2% of Internet sexual content, 4% of magazine sexual content, 4% of newspaper sexual content, 6% of music sexual content, and 9% of movie sexual content.

This would not matter much if college students were mature enough to make good judgments following exposure to media messages. However, research on brain development of emerging adults suggests that this may not be true. Studies have shown that dramatic changes in brain structure continue to take place after the age of 18 (e.g., Bennett & Baird, 2006). Although adolescents have mature logical and language processing abilities (Sowell, Thompson, Holmes, Jernigan & Toga, 1999), the higher-order cognitive capacities such as emotional control, decision-making, and behavioral regulation do not fully develop yet (e.g., Bennett & Baird, 2006; Luna et al., 2001). Findings from recent studies have suggested that the brain development continues well into the mid-twenties (e.g., Bennett & Baird, 2006), and even into the 30s (Lenroot & Giedd, 2006), which means that, for college students who are mostly in the age of 18 to 25 years old, they may continue to mature emotionally and behaviorally. In other words, because the development of brain regions associated with impulse and cognitive control lag, college students may not be fully ready for risk control and responsibility, thereby lacking the ability to make sound judgments about various issues including sexual practices conveyed through media, and thus their

sexual decision making is likely to be influenced not only by their impulses but also by media messages. Given the fact that most college students live in the dorm or in apartments and therefore face few parental constraints, more freedom to initiate sexual intercourse may further heighten their likelihood to engage in sexual risk-taking.

Taken together, the characteristics of sexual content in the media, college students' media use patterns, and their incomplete brain development make it reasonable to expect that media may exert an important influence on college students' sexual risk-taking. Unfortunately, the research on media and sexual risk-taking has been sparse. Among the few studies that do examine the relationship between media use and sexual risk-taking, evidence has generally suggested a positive link (Strouse and Buerkel-Rothfuss, 1987; Chandra et al., 2008). However, one big limitation of this line of research is that there is no standard measure of sexual risk-taking. The current measures of sexual risk-taking are often project-specific with the variable narrowly defined. Up to this point, most studies have focused on risky behaviors related to unintended pregnancies and STIs. Little is known about sexual risk-taking (e.g., sexual assault, reputational damage from videotaped sex) beyond pregnancy and STIs resulting from failure to use contraceptives or condoms. The lack of a validated multidimensional measure of sexual risk-taking makes it hard to compare findings across different studies, and nearly impossible to gain a comprehensive understanding of the media's role in sexual risk-taking. This dissertation project attempts to fill this gap.

Another goal of the present study involves an investigation of the media's relationship with sexual regret. Research has shown that younger adults generally experience more relationship uncertainty than older people (e.g., Jokisaari, 2003), and regret about romantic relationships happens frequently in this age group (e.g., Eshbaugh & Gute, 2008; Oswalt, Cameron, & Koob, 2005). One type of regret involving romantic relationships is sexual regret, a negative feeling that

college students can experience as a consequence of their sexual activities. Oswalt et al. (2005) found that about three-fourths of sexually active college students had regretted at least one sexual experience at some point in their life. Although hookups, defined as casual sexual encounters “between two people who are strangers or brief acquaintances” (Paul, McManus, & Hayes, 2000, p. 76), are common in college life (Lambert, Kahn, & Apple, 2003; Paul & Hayes, 2002), the most frequently indicated feelings by college students after a typical hookup were “regretful and disappointed” (Paul & Hayes, 2002). Similarly, a more recent study of 152 college women (Eshbaugh & Gute, 2008) found that hookups including sexual intercourse significantly predicted sexual regret with effect sizes ranging from 0.20 to 0.26. Previous research has suggested that regretful emotions are negatively related to life satisfaction and physical health (e.g., headaches, chest pains; Jokisaari, 2003). Thus the effects of sexual regret may extend well beyond the casual feelings experienced by young people following a bad decision. As noted earlier, because the brain regions associated with emotional and cognitive control do not fully develop until after college, college students may be unable to make good judgments when deciding whether to model sexual practices observed through the media. With this in mind, sexual risk-taking among college students may be affected by media content without the compensatory influence of thoroughly considered and informed decision-making, so the opportunity for regret after a sexual encounter is high.

It is worth noting that sexual regret may play a key role in inhibiting the previously media-modeled behavior that produces negative consequences. In other words, if sexual media exposure predicts sexual risk-taking, which in turn predicts sexual regret, then regret might put a limit on future sexual risk-taking effects of media exposure. However, if sexual media predicts risk-taking but risk-taking does not predict sexual regret, then regret may not be able to act as a

deterrent to media-modeled risk-taking. In other words, there would be no accompanying disincentive to prevent the media's effects. Clearly, this is an important issue to explore. However, no studies have ever examined the relationship between media exposure, sexual risk-taking, and sexual regret. Thus, this dissertation attempts to fill this gap.

In sum, this dissertation project sought to examine how exposure to sexual content in six media (i.e., television, songs, music videos, movies watched at home, movies watched in the theater, and magazines) is related to college students' sexual risk-taking. To assist the investigation, three subprojects were conducted beforehand, through which a comprehensive measure of sexual risk-taking was developed and sexual intensity ratings for the media offerings were obtained to be used in the main project. Further, because individual factors may influence the relationship between media exposure and sexual risk-taking, another goal of the study was to investigate how the relationship between media exposure and sexual risk-taking varies by different moderators. These moderators will be discussed below. Lastly, this study explored how sexual risk-taking may mediate the relationship between sexual media exposure and sexual regret. Figure 1 illustrates the analytical framework for this study. In the following sections, literature related to media and sexuality is reviewed, after which hypotheses are presented.

## **Literature Review**

**Sexual content in the media.** Content analyses of sexual messages in television (Cope-Farrar & Kunkel, 2002; Heintz-Kowles, 1996; Kunkel, et al., 2003), music/music videos (e.g., Hansen & Hansen, 2000; Pardun, L'Engle, & Brown, 2005), magazines (Walsh-Childers, 1997; Walsh-Childers, Gotthoffer, & Lepre, 2002), and movies (Greenberg, Linsangan, & Soderman, 1993; Pardun, 2002) have consistently shown that sexual content is prevalent across a variety of media. Although sexual references in the media have grown in number and explicitness

over the past two decades, the frequency of discussion and depiction of sexual risks and sexual responsibility remains low (e.g., Ward, 2003).

**Television.** The abundance of sexual imagery in television programming is no surprise. A content analysis of over 1,000 television programs revealed that 64% included sexual content with an average of 4.4 sexual scenes per hour (Kunkel et al., 2003). Prime-time network shows tend to contain even more sexual content (e.g., Kunkel, Cope & Colvin, 1996; Kunkel et al., 2003). When individual program genres are examined, more than two-thirds of all shows in television genres including soap operas (96%), television movies (87%), comedy series (73%), and dramas (71%) contain some form of sexual messages (Kunkel et al., 2003), which means that viewers could hardly avoid sexual content when watching shows in these genres.

Despite the frequency of sexual content on television, there is little information about sexual responsibility and negative consequences associated with sexual risk-taking behaviors (Fisher, Hill, Grube, & Gruber, 2004; Houston, Wartella, & Donnerstein, 1998; Kunkel et al., 2003). Pregnancy prevention and STI prevention are rarely referred to on television programs, yet female characters rarely get pregnant and people seldom contract STIs (e.g., Fisher et al., 2004; Kunkel et al., 2003; Lowry & Shilder, 1993; Shidler & Lowry, 1995). Harris and his associates (1988) reported that, of 15,000 sexual references and innuendoes viewed by young people each year, fewer than 170 involved depictions of abstinence, birth control, pregnancy, or sexually transmitted diseases. Sixteen years later, in a content analysis of 1,276 television shows from the 2001-2002 season, Fisher et al. (2004) found that safer sex messages were rare, occurring in only 6% of all programs and 13% of television shows with references to sexual intercourse.

Research also reveals a high frequency of sexual activities occurring between unmarried partners. Studies show that unmarried couples on television engage in sexual intercourse more

frequently than people who are married, where the rate ranges from as low as 2 to 1 to as high as 23.7 to 1 (e.g., Fisher et al., 2004; Greenberg et al., 1993b; Lowry & Shidler, 1993). In a recent content analysis of 1276 television shows, Fisher et al. (2004) found that not only did sexual intercourse most often occur among unmarried partners, but more than half of the references to sexual intercourse involved couples in a casual rather than committed relationship.

In addition, across many television programs, women are more likely than men to be sexualized and objectified. In music videos, for example, female characters are much more likely than male characters to dress scantily or provocatively (Hansen & Hansen, 2000; Seidman, 1992), and they typically serve as decorative objects designed to attract men (Gow, 1996). Similar findings were reported by Lin (1998) in his analysis of 505 television commercials. He found that women appeared in revealing clothing more than 3 times as often as men ( $M_{women} = 0.27$ ,  $SD_{women} = 0.64$ ;  $M_{men} = 0.08$ ,  $SD_{men} = 0.39$ ), and were more likely than men to be objectified ( $M_{women} = 1.63$ ,  $SD_{women} = 0.78$ ;  $M_{men} = 1.23$ ,  $SD_{men} = 0.55$ ) and portrayed as physically attractive ( $M_{women} = 2.10$ ,  $SD_{women} = 0.60$ ;  $M_{men} = 1.81$ ,  $SD_{men} = 0.47$ ). Grauerholz and King (1997) also reported that about 78% of the sexual harassment behaviors depicted on primetime programming focused on the objectification of women's bodies with sexist and demeaning comments.

**Songs.** Popular music has long been criticized for its sexual content (e.g., Hansen & Hansen, 2000; Stern & Handel, 2001). According to Christenson and Roberts (1998), about 40% of songs most popular among adolescents in the mid 1990s contained references to romantic relationships and sexual behavior. Similarly, in a content analysis of early adolescents' favorite television shows, movies, magazines, newspapers, Internet sites, and music, Pardun et al. (2005) found that popular music lyrics had dramatically more sexual content (40%) than other media (movies: 12%; television: 11%; magazines: 8%; Internet: 6%; and newspapers: 1%). While more

than half of the sexual content in music focused on relationships and 15% was about sexual intercourse, sexually healthy messages that convey information about sexual development, STIs, condoms, contraception, and so on only accounted for 6% of sexual content.

**Music videos.** Often accompanying popular music, the music video is replete with sexual content as well. Content analyses show that since its inception, the music video has been overflowing with sexual content. In the 1980s and 1990s, studies reported that 40-75% of music videos contained sexual imagery (Baxter, De Riemer, Landini, Leslie, & Singletary, 1985; Gow, 1990; Greeson & Williams, 1986; Pardun & McKee, 1995). For example, Baxter et al. (1985) examined the visual portion of music videos. They found that 60% of MTV music videos had at least one occurrence of sexually suggestive content or “the portrayal of sexual feelings or impulses” (p. 337). Greeson and Williams (1986) reported that 47% of the 70 music videos they analyzed in their study featured sexual content, either visually or lyrically. Sommers-Flanagan, Sommers-Flanagan, and Davis (1993) showed that 90% of the 30-second intervals from 40 videos featured implied images of sex.

Most of the published content analyses on this topic were conducted more than 10 to 15 years ago, but modern music videos seem to follow a similar pattern. Smith (2005) argued that today’s music video market is even bolder in depicting sexual content with examples such as *Toxic*, in which Britney Spears dresses seductively with a transparent bodysuit, and *This Love* by Maroon 5, which features “a PG-13 roll in the sheets” (Cave, 2004, p.19). Hansen and Hansen (2000) also reported that nudity, previously verboten, can now be seen in a small number of videos.

Not only are music videos replete with sexual imagery, they also treat sexual relationships in a stereotypical way (Arnett, 2002; Vincent, Davis, & Boruszkowski, 1987). Studies reveal that the depiction of men and women is polarized in terms of sex-role stereotypes. Men are typically

depicted as more domineering, adventurous, and aggressive, whereas women are depicted as more dependent, fearful, and passive (Arnett, 2002; Seidman, 1992). Moreover, men are more likely to be shown as sexual animals with a relentless urge to have sex with women, whereas women are more likely to be shown as sexual objects whose priorities are physical appearance and sexual attractiveness (Arnett, 2002; Hansen & Hansen, 2000). Female characters are much more likely than male characters to wear revealing and provocative clothing (Hansen & Hansen, 2000; Seidman, 1992). For example, in a content analysis of 1942 characters shown in a sample of 182 music videos, Seidman (1992) found that 36.7% of female characters versus only 4.2% of male characters were dressed seductively. Hansen and Hansen (2000) also reported that women (56.3%) were twice as likely as men (27.1%) to be shown wearing sexually provocative clothing in the videos on MTV.

***Movies.*** Research examining the sexual content of feature films has been sparse. However, findings that do exist have provided evidence that sexual messages are abundant within films (e.g., Bufkin & Eschholz, 2000). For example, Bufkin and Eschholz (2000) content analyzed the 50 top-grossing films in 1996. They found that the majority of the movies (60%) showed at least one sex scene. Fifty-seven percent of the movies with an R rating and one third of movies rated PG or PG13 had sex scenes. Despite the abundance of sexual content in these 50 movies, only one sex scene acknowledged the use of protection. In addition, sexual acts are more commonly exhibited between unmarried couples than between spouses. For example, Dempsey and Reichert (2000) examined the top 25 movie video rentals of 1998 and reported that 85% of sexual behavior occurred between unmarried couples whereas only 15% occurred between married partners. Moreover, compared to married couples, sexual behaviors between unmarried couples were more advanced and explicit.

*Magazines.* Sexual content in mainstream magazines is also prevalent, and appears to have increased over the last two decades (e.g., Carpenter, 1998; Scott, 1986). While sexual messages on television are dominated by verbal suggestiveness or innuendo, messages in magazines are more explicit and graphic, often with partially-clad or nude models and specific discussions of dating and love as well as sexual techniques (e.g., Duffy & Gotcher, 1996; Reichert & Carpenter, 2004). Heavy emphasis is placed on the need for women to be sexually desirable and attractive to men (e.g., Garner, Sterk, & Adams, 1998). Findings show that adolescent girls and young women were repeatedly given advice on how to look and dress, and what fashion and beauty products to use in order to attract the attention of men. Topics such as “sexy outfits,” “sexy hair he’ll love,” and “passionate fingernails” (Garner et al., 1998, p. 69) are very common in magazine articles and advertisements, which convey the idea that women should look hot and sexy to be desired by men.

The sexual double standard is frequently promoted in mainstream magazines (e.g., Carpenter, 1998; Duran & Prusank, 1997). As in music videos, the depiction of male and female sexuality is polarized along the sex-role stereotypic dimension. Men are more likely to be shown as sexual agents. It appears that, for them, sex is more important than love and romance. On the contrary, women are more likely to be portrayed as sexual objects, and their sexual desires and appetites are rarely discussed in magazines (Carpenter, 1998; Garner et al., 1998). In addition, although girls and young women are frequently encouraged to please their guys and to teach them emotional intimacy within romantic relationships, discussions with their men concerning issues of pregnancy, birth control, and the danger of STIs are rarely advised in mainstream magazines (i.e., Garner et al., 1998). For example, Garner et al. (1998) examined 175 articles from magazine advice columns targeting at teenage girls over a span of 20 years. Only eight references to birth control and nine mentions of STIs or AIDS were found.

In summary, content analyses of sexual imagery across a variety of media have documented relatively consistent findings (Ward, 2003): media are replete with sexual content, but they provide little information about sexual risks and prevention. The sexual double standard is frequently promoted in the media with the messages that men are sex-driven and women are sexual objects. Sex between unmarried partners, either in a committed or casual relationship, is commonly depicted and glamorized in the media.

In other words, the primary type of sexual behavior shown in the media is risky sex, which is worthy of close attention because it can cause physical, emotional, and social harm. For example, having sex without condoms or contraceptives increases the chances of getting pregnant or contracting an STI. While suffering negative physical consequences, one may also experience emotional turmoil by feeling guilty, anxious or depressed. Similarly, having multiple or casual sex partners may not only present a physical threat (such as unintended pregnancy and STIs), it may also result in negative emotional and social consequences such as getting into trouble with parents, failing to continue a serious relationship with a partner, and/or losing one's good reputation.

**Empirical research on sexual media, sexual risk-taking, and sexual regret.** Since sexual portrayals in the media are abundant yet risky, the question of whether exposure to such content affects individuals' sexual risk-taking has been a great public concern. Despite various indications of media's contributions to young people's sexual risk-taking, there has been limited research in this area. Nevertheless, findings from this line of research have generally demonstrated a link between media exposure and increases in viewers' sexual risk-taking (e.g., Pardun et al., 2005; Strouse & Buerkel-Rothfuss, 1987; Ward & Rivadeneyra, 1999).

Some of these studies have focused on the early onset of sexual intercourse among adolescents. Collins et al. (2004) interviewed adolescents aged 12 to 17 years about their television

viewing habits and sexual experience at baseline and one year later. Findings show that adolescents who watched television shows with more sexual content were twice as likely to initiate sexual intercourse as those who saw fewer shows with sexual content; and the likelihood of engaging in a variety of advanced noncoital activities ranged from fifty percent higher to almost double for the high-exposure group. Similarly, Martino et al. (2006) examined adolescents' exposure to music lyrics and their sexual experience, conducting three surveys over a three-year period with the same sample. Music exposure was measured at Time 2 and used to predict sexual initiation two years later, with past sexual behavior before Time 2 taken into account. It was found that listening to music with sexually degrading lyrics at Time 2 predicted a greater likelihood of intercourse initiation and advanced sexual behaviors at Time 3. In addition, Brown et al. (2006) interviewed equal numbers of black and white male and female adolescents at baseline when they were 12 to 14 years old and two years later when they were 14 to 16 years old. Adolescents' sexual behavior and their exposure to sexual content in four media (i.e., music, movies, television, and magazines) were assessed. Results show that, for white adolescents, exposure to sexual content in the media at baseline was associated with increased sexual activity and increased likelihood of initiating sex in the following two years. However, the relationship was not significant for black adolescents. Rather, they seemed to be influenced more by perceived parental disapproval of teen sex and perceived peer sexual norms than by media exposure.

Other studies have given attention to the number of sexual partners as a risk behavior. Strouse and Buerkel-Rothfuss (1987) reported that frequent exposure to music videos was related to having more sexual partners among female students ( $\beta = 0.19, p < 0.05$ ), and viewing soap operas was related to having more sexual partners among male students ( $\beta = 0.21, p < 0.05$ ). Somers and Tynan (2006) examined how exposure to sexually suggestive dialogue (SD) and

explicit sexual content (SC) in television may influence high school students' sexual behaviors. The study included 181 Whites, 109 Blacks, and 183 Hispanics. They found that, for White students regardless of gender, the SD/SC composite was related to more sexual intercourse ( $B = 0.35$ ,  $W = 5.07$ ,  $p < 0.05$ ) and a greater number of sexual partners ( $B = 0.35$ ,  $W = 5.10$ ,  $p < 0.05$ ). However, these relationships were not observed for African Americans and Hispanics.

Other studies examined a prospective link between media exposure and reproductive health outcomes. Wingood et al. (2003) conducted a longitudinal study among African American female adolescents. They found that those who watched more rap music videos at baseline were more than 1.5 times as likely to have contracted a new sexually transmitted disease one year later than those who watched fewer rap videos. A more recent longitudinal study surveyed adolescents aged 12 to 17 about their sexual TV exposure and pregnancy over a three-year period (Chandra et al., 2008). Results show that exposure to televised sexual content predicted teen pregnancy, even after controlling for a variety of covariates. Specifically, adolescents who were at the 90<sup>th</sup> percentile of baseline exposure to televised sexual content were twice as likely to be pregnant or get someone pregnant in the subsequent 3 years, compared to those at the 10<sup>th</sup> percentile of television exposure. Thus, both studies provide indirect evidence that greater exposure to media sexual content may be related to more sexual risk-taking.

Previous research on media and sexual risk-taking, both cross-sectional and longitudinal, has revealed important and valuable information. However, there appears to be no standard measure of sexual risk-taking in published literature. As noted earlier, most measures have been project-specific, focusing on some specific risk behavior, but ignoring others (Collins et al., 2004; Strouse and Buerkel-Rothfuss, 1987; Wingood et al., 2003). The lack of a standard measure of

sexual risk-taking makes it difficult to compare results across different studies, and determine the validity of research findings.

Moreover, sexual risk-taking has been narrowly defined within previous studies. In literature within and outside the communication field, most studies that have investigated sexual risk-taking have focused on sexual practices that could lead to physical risks only. Research from various disciplines has examined a variety of indicators of sexual risk-taking including condom avoidance (e.g., Tulloch, McCaul, Miltenberger, & Smyth, 2004), contraceptive avoidance (e.g., Schooler & Ward, 2006), number of sexual partners (e.g., Mendez, Hulsey, & Archer, 2001-02), and alcohol or drug use before and/or during sexual activities (e.g., O'Hare, 2005; Staton et al., 1999), all of which predict a greater likelihood of unintended pregnancy and STIs.

Unintended pregnancy and STIs are indeed important risks, because they can exert a damaging impact on college students' health and future. On the other hand, it is worth noting that sexual risk-taking among young people can cause more harm than just unintended pregnancy and STIs. Sexual assault, reputational harm, privacy loss, and a variety of other risks may not only pose a physical health threat, but also lead to emotional and social harm to young adults. These risks are worthy of attention just like unintended pregnancy and STIs. However, these risks have not yet been linked to media. In addition, while media's relationship with sexual risk-taking is a long-standing concern for sexual media researchers, little attention has been given to media's influence on reflections about one's own sexual behavior. No media studies have ever examined the issue of sexual regret. Given that sexual regret is likely to be predicted by some types of sexual risk-taking (e.g., privacy loss after videotaping sex), it is necessary to understand how media, sexual risk-taking, and sexual regret may be linked together. This dissertation project thus attempted to fill these gaps.

Specifically, this dissertation presents the results of an online survey examining the prospective relationships between college students' exposure to sexual media content and their sexual risk-taking. Participants' sexual media consumption was measured by self-reports of their exposure to sexual content in six media (i.e., television, music videos, music, movies watched at home, movies watched in the theater, and magazines). To assist the investigation, a comprehensive measure of sexual risk-taking in college students was developed beforehand using focus group methods. The main survey also included a list of moderators that may either strengthen or weaken the relationships between sexual media exposure and different types of sexual risk taking. In addition, the survey allowed for tests of the relationship between sexual media exposure, sexual risk-taking and sexual regret. Thus the study makes three contributions to sexual media research. First, this dissertation is the first study in media research to develop a multidimensional measure of sexual risk-taking specifically targeting college students. Unlike previous research that has mainly focused on physically risky behaviors, this study expands the narrow definition of sexual risk-taking by addressing other types of risky sexual behaviors that have not yet been examined. Second, besides a direct link between sexual media exposure and behavioral outcomes, this dissertation also examines how individual differences might influence this relationship. While past research has generally focused on gender and race as moderators (Ward, 2003), this study expands the view to include a variety of other moderators, both demographic and psychological. Lastly, the dissertation contributes to our understanding of an unexplored variable, sexual regret.

### **Theoretical Rationale and Overarching Hypothesis**

Social cognitive theory (Bandura, 1986, 1994, 2002) has been the main theoretical model for much research addressing the relationships between media exposure and viewers' sexual behavior. This theory proposes that people learn new behaviors by observing models and are more likely to model the behaviors that are rewarded or not punished. According to Bandura (1994),

self-regulatory capacity and self-reflective capacity are two of the four unique human characteristics that influence people's ability to learn new behavior. Self-regulatory capacity is the ability to regulate one's own behavior. Individuals are competent to motivate themselves to achieve certain goals. They judge their behavior and respond accordingly. If they don't accomplish the goals they set, they punish themselves for discipline. Self-reflective capacity allows people to monitor and evaluate the validity of their behaviors (Bandura, 1994). A person can judge his or her behavior based on the consequences of that behavior. If the behavior is followed by negative consequences or violates personal standards, the individual is less motivated to perform that behavior again in the future. Here, regret may play a potent role in inhibiting the previously modeled behaviors that produced undesired outcomes.

Observational learning of modeled behavior is a complex process that involves four steps: attention, retention, behavioral production, and motivation. These steps are expected to be operating in the realm of sexual risk-taking as well. Viewers must first pay close attention to the actions to be modeled. Factors such as observers' preferences, arousal level, the attractiveness of the character, perceived similarities between the character and the observer (e.g., gender, age, and race, etc.), the character's accessibility, and identification with the character will positively influence the attentional process (e.g., Bandura, 2002; Harwood, 1997; Hoffner, 1996; Jose & Brewer, 1984). With little doubt, sex in the media attracts attention. What's more, the models involved in sexual activities are most often young adults and teenagers (Kunkel et al., 2003). They are typically young, social and physically good-looking – characteristics that college students tend to find attractive. Therefore, college students should be more likely than other groups (e.g., children, middle-aged people) to identify with these models and pay attention to the risky sexual behaviors they perform.

It is not enough for individuals to simply attend to the modeled behavior. They must retain the information in order for future imitation (Bandura, 2002). This involves a process of converting the information into symbolic representations in memory so it is easy to store, retrieve, and rehearse mentally. Studies reveal that retention can be enhanced through repeated exposure. For example, studies found that repeated exposure to TV violence is positively related to increases in aggressive behavior (e.g., Dominick & Greenberg, 1972; McIntyre & Teevan, 1972). As noted earlier, media messages related to sexual risk-taking are abundant. Thus, repeated exposure to these images is likely to enhance retention. What's more, if it is risky sex, it is probably a wild enough portrayal to remember.

Behavioral production is a process through which symbolic conceptions are converted into actions (Bandura, 2002). In this process, symbolic representations and actions are matched and evaluated for adequacy. The behavior is modified to meet the demands of different circumstances. This adaptive ability allows individuals to produce many variants of the behavior from a single cognitive representation. These enacted behaviors are evaluated and adjusted based on the results of the behaviors. With regard to risky sexual behavior, much of what is portrayed in the media is reproducible. In other words, those images provide a conceptual guide for enacting and modifying the relevant risky behaviors through practice.

The last step of behavioral learning is motivation. For various reasons, people do not always model the behaviors they learn through the media. According to social cognitive theory, there are three types of situations that motivate a person to model behavior (Bandura, 2002). The first incentive motivator is rewards or positive outcomes such as social approval of the modeled behavior. The second motivator is vicarious reinforcement that happens after a person observes the rewards or punishments resulting from another's behavior. If a person perceives a behavior as

favorable or unlikely to be punished, he or she is more likely to be motivated to model that behavior. On the contrary, if the model receive sanctions, the person is more likely to keep away from imitating the behavior. The last motivator is personal values or standards of behavior. Individuals internalize personal values and standards, and use them as guides to regulate the observationally learned behaviors. If behaviors are consistent with one's personal values or standards, these values or standards become increasing incentives to model the learned behavior. However, if behaviors receive personal disapproval, these values or standards then function as deterrents. Thus the behaviors are likely to be rejected as a result. Applying the motivational processes to the media context, sexual messages in the media provide many incentives to model risky sexual behavior. Not only are the actors young and attractive, but also the sexual behaviors are glamorous and recreational with few depictions of sexual risks and undesirable consequences.

In summary, the support of all four steps in the observational learning process by characteristics of sexual portrayals in the media leads to the first and key hypothesis in this study:

*H<sub>1</sub>*: Exposure to sexual content in the media will be positively associated with sexual risk-taking.

### **Hypotheses Regarding Moderating Variables**

Individual factors such as demographics, personal characteristics, and social environment are likely to override the modeling effects by functioning as motivational incentives or disincentives to model risky behaviors through the media. This study attempted to investigate a list of such factors that are likely to strengthen the relationship between sexual media exposure and sexual risk-taking as well as the factors likely to weaken the relationship. They are gender (femaleness), race (whiteness), sensation seeking, premarital sexual permissiveness, endorsement of the sexual double standard, school performance, religiosity, and parental monitoring. Based on previous research establishing their connection to college students' sexuality, gender (femaleness),

race (whiteness), sensation seeking, positive premarital sexual attitudes, and endorsement of the sexual double standard may increase incentives to model risky sexual behavior by self-approving these learned behaviors. On the other hand, school performance, religiosity, and parental monitoring may function as self-regulatory factors to refrain a person from modeling risky behaviors by self-devaluating these conducts. The “strengthening” moderators are discussed first followed by the “weakening” moderators.

**Gender.** Prior research has shown that effects of sexual media content on viewers’ sexual attitudes are often stronger and more consistent among females than among males (e.g., Strouse & Buerkel-Rothfuss, 1987; Strouse, Buerkel-Rothfuss, & Long, 1995; Ward & Rivadeneyra, 1999; Ward, 2002). For example, Strouse and Ruerkel-Rothfuss (1987) found that exposure to music video was associated with more permissive sexual attitudes for female students ( $\beta = 0.23, p < 0.01$ ), but not for male students. Additionally, findings from Ward and Rivadeneyra’s study (1999) indicated that, among females, frequent viewing of prime-time television was related to stronger endorsement of recreational sexual attitudes ( $r = 0.18, p < 0.05$ ), and frequent viewing of television comedies and dramas was related to more sex-role stereotyping ( $r = 0.18, p < 0.05$ ). However, these relationships were not observed among males. Instead, for male participants, exposure to soap operas was negatively associated with endorsement of recreational attitudes toward sex ( $\beta = -0.21, p < 0.05$ ).

Some researchers have argued that perhaps men are more likely than women to approve of the sexual attitudes usually examined in media research. Therefore, a ceiling effect may limit the predictive power of media exposure for men (e.g., Oliver & Hyde, 1993; Ward, 2002). It is unclear whether the same gender differences would appear in the relation between media exposure and sexual risk-taking. As a few studies have shown that males tend to have a greater number of sexual

partners and initiate sex at a younger age than females (e.g., Somers & Tynan, 2006), it seems plausible that men are already more likely than women to engage in risky sexual practices. Because of lacking previous experience of sexual risk-taking than men, the compelling sexual images with few negative consequences in media may seem more appealing to women than to men. As a result, women who have frequent exposure to sexual content in the media would be more likely than men to model the learned behavior through media. In other words, gender (femaleness) would function as a motivational incentive to model sexual risk-taking through media. Thus, the following hypothesis is proposed:

*H<sub>2</sub>*: The relationship between sexual media exposure and sexual risk-taking will be stronger for women than for men.

**Race.** This study sought to examine whether the relationships between media use and sexual risk-taking are different for White students and other students. Research on how race may moderate the effects of media exposure on individuals' sexual behavior has been sparse. Among the few studies in this area, attention has been given mostly to Blacks and Whites. Little comparable data is available on other racial/ethnic groups. According to social cognitive theory, people are more likely to model a behavior when the media characters are perceived to be similar to themselves (Bandura, 2002). Race of the character may influence the perceived similarity of the media user (Jose & Brewer, 1984). In fact, previous studies have shown that African Americans favored black-oriented media (Allen, 2001; Elliott, 2003; O'Connor, Brooks-Gunn, & Graber, 2000) and Hispanics preferred Spanish-language programs. Given that there are many more White models in mainstream media than models of other ethnic groups (Gerbner, Gross, Morgen, Signorielli, & Shanahan, 2002), White audiences may have more media models to identify with, and thus may be more likely to emulate the learned behavior. In other words, race (whiteness) may

function as a motivational incentive to model risky behaviors through media. This assumption is evidenced in previous research on Whites and Blacks indicating that although Black adolescents in general spend more time consuming media than White adolescents do (Roberts & Foehr, 2004), media exert a weaker impact on Black youths' sexual behavior compared to their White counterparts. For example, Somers and Tynan (2006) reported that exposure to sexual dialogue and content in television was associated with frequency of sex ( $B = 0.35$ ,  $W = 5.07$ ,  $p < 0.05$ ) and number of sexual partners ( $B = 0.35$ ,  $W = 5.10$ ,  $p < 0.05$ ) for White adolescents, but not for Black adolescents. A longitudinal study conducted by Brown et al. (2006) also revealed that, for White adolescents but not Black adolescents, exposure to sexual content in the media predicted more advanced sexual behaviors and greater likelihood of intercourse initiation. The sexual behavior of Black adolescents appeared to be more influenced by perceived parental disapproval of teen sex and perceived peer sexual norms. Therefore, based on social cognitive theory and the findings from previous studies, the following hypothesis is proposed:

*H<sub>3</sub>*: The relationship between sexual media exposure and sexual risk-taking will be stronger for White college students than for other college students.

**Sensation seeking.** Because risky sexual behavior is an exciting and novel experience, higher sensation seekers may be more likely to perceive such a behavior in the media as rewarding rather than punishing than lower sensation seekers. Thus, sensation seeking may function as a motivational incentive for individuals to model sexual risk-taking through the media. Research examining the relationships between sensation seeking and sexual risk-taking has found sensation seeking to be significantly associated with greater numbers of sexual partners (e.g., Zucherman & Kuhlman, 2000), greater numbers of one-night stands (e.g., Gaither & Sellbom, 2003), and less consistent contraceptive use (e.g., Sheer & Cline, 1994). Therefore, it is likely that the relationship

between sexual media exposure and sexual risk-taking would be greater among higher sensation seekers because the tendency to engage in novel sexual experiences to achieve a high level of sexual excitement is greater for them. Therefore, the following hypothesis is proposed:

*H<sub>4</sub>*: The relationship between sexual media exposure and sexual risk-taking will be stronger for higher sensation seekers than lower sensation seekers.

**Premarital sexual permissiveness.** Previous studies have found that young people's permissive attitudes toward premarital sex was associated with less satisfaction with their status as a virgin (Baran, 1976a, 1976b), and more and riskier sexual activities (Winslow, Franzini & Hwang, 1992). It is possible that people who already hold permissive attitudes toward premarital sex are more receptive to what they are learning from sexually risky media, because they may perceive those behaviors as fun and a way to stray away from being a virgin (i.e., rewarding). Thus, premarital sexual permissiveness may work as a motivational incentive to model risky sexual behavior through media. The following hypothesis was then proposed:

*H<sub>5</sub>*: The relationship between sexual media exposure and sexual risk-taking will be stronger for students who hold more positive attitudes toward premarital sex than those who hold less positive attitudes toward premarital sex.

**Endorsement of the sexual double standard.** Prior research has reported significant associations between stereotypical sexual attitudes towards gender roles and unsafe sexual behaviors. For example, Pleck, Sonenstein, and Ku (1993) examined the data from their national survey of adolescent males. They found that males who hold traditional male-role norms had a greater number of sexual partners ( $\beta = 0.10, p < 0.01$ ) and reported less consistent use of condoms ( $\beta = -0.12, p < 0.01$ ) than those with nontraditional attitudes toward masculinity, even after controlling for the effects of sociodemographic background and personal characteristics including

age, race, expected completed level of education, church attendance at age 14, family income, and region of the country. Similarly, in a study of 269 male college students, Sinn (1997) reported that masculinity ideology was significantly related to more sexual partners within the past year ( $r = 0.19, p < 0.05$ ). Moreover, Impett et al. (2006) examined the role of espousing norms of traditional femininity in development of sexual health among late adolescent girls. In their study, femininity ideology was conceptualized as inauthenticity in relationships (i.e., a tendency to hide one's own needs and desires in order to maintain a relationship) and body objectification (i.e., being separated from one's own bodily hungers and constantly concerned with how one's body looks to other people). The findings revealed that both inauthenticity in relationships and body objectification were predictive of lower sexual self-efficacy, which in turn predicted less protection behavior during sex. In addition, inauthenticity in relationships was related to less frequent contraception use ( $r = -0.29, p < 0.05$ ), whereas body objectification was related to less frequent condom use ( $r = -0.26, p < 0.05$ ).

A stereotypical portrait of sexual roles is frequently promoted in the media (e.g., Ward, 2003). Men are often depicted as sexual animals with a relentless urge to have sex with women. On the other hand, women tend to be shown as sexual objects whose priorities are physical appearance and sexual attractiveness (Arnett, 2002; Hansen & Hansen, 2000). It seems plausible that people who already endorse the sexual double standard may be more open to these stereotypical portrayals in the media, because the behaviors shown in the media are consistent with their internalized values and standards. These values and standards may then become an incentive to model the learned sexual behavior through media. Therefore, the following hypothesis was posited:

*H<sub>6</sub>*: The relationship between sexual media exposure and sexual risk-taking will be stronger for those scoring higher on a sexual double standard measure than those scoring lower.

**School performance.** School performance is a variable that consistently predicts sexual behavior and sexual risk-taking. Both Collins et al. (2004) and Martino et al. (2006) found in their longitudinal studies that lower school grades at baseline were related to a higher likelihood of initiating sex during the subsequent year. In addition, Bailey, Fleming, Henson, Catalano and Haggerty (2008) reported that academic performance in high school negatively predicted college students' sexual risk-taking (i.e., inconsistent condom use and casual sex). Although previous media studies typically included school performance as a covariate, school performance may serve as a motivational disincentive to weaken the relationship between sexual media exposure and sexual risk-taking. It is possible that college students with better earned grades may have a greater cognitive capacity compared to those with poorer earned grades such that they may be more critical of sexual portrayals shown in the media and be more likely to expect negative consequences (i.e., punishment) that may result from sexual risk-taking. Consequently, they may be less likely than college students with poorer earned grades to model risky sexual behavior learned from the media. Thus, the following hypothesis is proposed:

*H<sub>7</sub>*: The relationship between sexual media exposure and sexual risk-taking will be weaker for students with better earned grades than those with poorer earned grades.

**Religiosity.** Religious communities generally discourage and penalize against sex before marriage (Sherkat & Ellison, 1999). Studies show that a high level of religiosity is related to delayed sexual onset and reduced sexual activity among young people (e.g., Collins et al., 2004; Martino, et al., 2006). Because sexual risk-taking behaviors shown in the media may contradict

their personal values and their own beliefs about sexuality, individuals who are very religious may tend to consciously reject the sexual content, thereby being less likely than those who are less religious to model the risk-taking behaviors depicted in the media. In other words, religiosity may serve as a deterrent to keep college students from modeling the learned sexual behavior through media. Thus, the following hypothesis is proposed:

*H<sub>8</sub>*: The relationship between sexual media exposure and sexual risk-taking will be weaker for students with a higher level of religiosity than those with a lower level of religiosity.

**Parental monitoring.** Parental monitoring is a consistent predictor of sexual risk-taking among children and early adolescents. Many studies have shown that children receiving higher levels of parental monitoring were less likely to initiate sex in preadolescence and more likely to report consistent condom use (e.g., Miller, Benson, & Galbraith, 2001; Romer et al., 1999). Little research has explored the effects of parental monitoring on college students' sexual risk-taking, however. Although most college students live away from parents and experience increased self-governance, it is likely that early parental monitoring in high school would remain influential in college students' lives. For example, one study has found that earlier parental monitoring was related to reduced alcohol consumption in college (Arria et al., 2008). It is plausible that college students who were subject to greater parental monitoring in high school may be able to think about media's sexual portrayals more critically and be more likely to be aware of the potential harm (i.e., punishment) that could result from sexual risk-taking. Consequently, they may be less likely than those students who experienced less parental monitoring to model risky sexual behavior learned from the media. In other words, parental monitoring may function as a motivational disincentive to dampen the relationship between exposure to media sexual content and sexual risk-taking. Therefore, the following hypothesis is proposed:

*H<sub>9</sub>*: The relationship between sexual media exposure and sexual risk-taking will be weaker for college students with a higher level of parental monitoring in high school than students with a lower level of parental monitoring in high school.

### **Hypothesis Regarding Sexual Regret**

Since sexual regret involves an individual engaging in sexual behavior and wishing later that he or she had not done so, it seems unlikely that media exposure exerts a direct influence on sexual regret. Rather, media exposure is likely to link to sexual regret through its impact on sexual behavior. This study focuses on sexual risk-taking and examines how this variable may mediate the relationship between sexual media exposure and sexual regret. Like the previously discussed “weakening” moderators that may act as disincentives to prevent modeled behavior, if the mediating effect is supported, sexual regret may function as a “weakening” outcome that would lessen the likelihood of future modeling of sexual risk-taking. Clearly, this is an important issue that merit close investigation.

**Sexual risk-taking as a mediator.** Social cognitive theory (Bandura, 1994) suggests that people’s self-reflective capacity allows them to monitor the adequacy of their behaviors. A behavior pattern is most likely to be established if results of the behavior are socially approved and self-satisfying. A behavior is likely to be abandoned in the future if it brings negative consequences or violates an individual’s personal standards. Moreover, when a person evaluates his or her behavior as undesirable, emotional distress may occur. The abundant media images of risky sexual behaviors are portrayed as glamorous, fun, and largely consequence-free, which may encourage college students to behave accordingly. However, in real life these behaviors may backfire. When negative consequences occur, the students may then regret having engaged in the behavior that caused them. Therefore, heavier media use should be linked with more regret, not directly but through sexual risk-taking. Therefore, the following hypothesis is posited:

*H<sub>10</sub>*: Sexual risk-taking will mediate the relationship between sexual media exposure and sexual regret.

In summary, as illustrated in Figure 1, the analytical framework for this dissertation is composed of three parts. First, the study sought to examine how exposure to sexual content in six media (i.e., television, songs, music videos, movies watched at home, movies watched in the theater, and magazines) might be related to college students' sexual risk-taking. Second, the study investigated a list of moderators that might influence the relationship between media exposure and sexual risk-taking. Five moderators (i.e., gender [femaleness], race [whiteness], sensation seeking, positive premarital sexual attitudes, and endorsement of the sexual double standard) were proposed to strengthen the relationship, and three moderators (i.e., school performance, religiosity, and parental monitoring) were proposed to weaken the relationship. Lastly, the study explored whether sexual media exposure may be linked to sexual regret indirectly through sexual risk-taking.

## **Chapter 2: Method**

Prior to the start of the main project, three subprojects were conducted. The first subproject was focus group interviews that aimed to generate items for a new scale measuring sexual risk-taking. The second subproject was a survey that attempted to obtain sexual intensity ratings for the media offerings used in the main project. The last subproject was a content analysis of the same media offerings. The goal of this subproject was to determine whether the ratings obtained from the survey accurately reflect the sexual intensity of the content in each media offering.

### **Subproject 1 – Focus Groups**

The purpose of the focus group interviews was to develop a comprehensive measure of sexual risk-taking for college students to be used in the main project. As indicated earlier, the measure was created because a review of the pertinent literature did not produce a standard measure of sexual risk-taking that went beyond the risks of unintended pregnancy and STIs. Four focus groups among students from communication courses were conducted in the fall of 2008. Because sexual risk-taking is a sensitive topic to discuss, and different genders may have different point of views and experiences on sexual risk-taking, male and female students were interviewed separately with two groups of males and two groups of females. Three groups had 4 participants each and one female group had 5 participants. Out of the 17 participants, 12 were undergraduate students and rest were first-year graduate students who just entered into the programs (4 males and 1 female).

The focus group interviews were held in a relaxed and informal setting. Pizzas were offered during the discussions. Each of the focus groups lasted about 1 hour. Participants were informed that the purpose of the focus group was to help the researcher construct items that represent different kinds of sexual risk-taking that college students in general are likely to engage in. Sexual risk-taking in this study was defined as sexual behaviors that could increase risks of

physical, emotional, or social harm. All participants read and signed a consent form before the interview started. In order to guide discussion, a few sexual risk-taking examples were provided beforehand. The researcher took notes during interviews to make sure that all important information was recorded. In the end, a total of 27 items for sexual risk-taking were generated by the focus groups. Sample items included “Having sex while under the influence of alcohol,” and “Having sex with someone who was involved with one of your friends either currently or previously.” These items were then combined with those identified from the literature, ultimately producing a scale of 29 items to capture sexual risk-taking among college students. All the items are shown in Table 1.

### **Subproject 2 – Survey for Sexual Intensity Ratings**

The goal for subproject 2 was to obtain sexual intensity ratings for a list of media offerings that was to be included in the main project. A survey was administered to a sample of 137 undergraduate student “judges,” comprising 99 females and 38 males. They were presented with an extensive list of media offerings for each of the 6 media (i.e., television, music videos, songs, movies watched at home, movies watched in the theater, and magazines). Except for magazines, all media offerings were selected from published lists of weekly top ratings for each medium (e.g., Nielsen ratings and Billboard top 20 albums). Over a four-week period, the researcher recorded media vehicles that were ranked in the weekly top 10 up until a week before the survey. Thirty top vehicles for each medium were then selected to be included in the final measure. The researcher was unable to locate any published list of weekly ratings for magazines, but [allyoucanread.com](http://allyoucanread.com), the largest online database of magazines and newspapers, provides listings of top 10 magazines under various topical categories. This information was thus used to aid the magazine selection for the present study. Research shows that age and gender are closely related to young people’s media choices and their interpretation of the messages (e.g., Brown, White, & Nikopoulou, 1993; Cantor,

Mares, & Hyde, 2001; Ward, 2002; Ybarra & Mitchell, 2005). With this in mind, the top 10 teen magazines, top 10 men's magazines, and top 10 women's magazines were selected. These magazines represented choices of young people of both genders and at different developmental stages. In sum, a total of 180 media offerings (i.e., 30 for each of the 6 media) were included and presented to the student judges for ratings.

Judges were first asked to indicate whether or not they had been previously exposed to the specific media offering. Those who answered "yes" were then asked to rate sexual intensity<sup>1</sup> for the content of each media offering. Sexual intensity was defined as the amount of sexual content presented implicitly and/or explicitly. This means that a high score was possible for a program (etc.) filled with benign sexual content as well as a program (etc.) without as much sex yet being very explicit. In other words, both types of programs would be rated high on sexual intensity, but for different reasons. The highest score would be obtained by programs with lots of very explicit sexual content. Because music videos are likely to convey sexual messages through lyrics as well as visual images, judges were asked to provide the ratings for lyrical and visual components separately. Therefore, the mean rating of a music video was obtained by averaging these two ratings. Responses to all media vehicles were on 7-point scales ranging from "not at all sexual" to "extremely sexual." In order to facilitate judges' recall of the media offerings, a still color photograph from each media offering was presented under the corresponding title. For music videos, the singer's or band's name was also presented. It was noted that some media offerings were rated by less than 13 judges, or about 10% of the total number of judges. They were, therefore, excluded from the study, yielding a total of 135 media offerings for further analysis (i.e., 27 TV shows, 20 magazines, 23 movies watched at home, 13 movies watched in the theater, 26 music

videos, and 26 songs). Table 2.1 through Table 2.5 illustrate the judges' mean ratings for these remaining media offerings.

One chief limitation of subproject 2 is that the ratings provided by student "judges" were subject to their own memories and perceptions. One cannot be confident about how accurate these ratings were to capture the sexual nature of the media offerings. Thus, it would be very helpful to examine whether the mean ratings are consistent with the actual degrees of sexual intensity of the media offerings. Subproject 3 was designed to serve this purpose.

### **Subproject 3 – Content Analysis**

A content analysis was undertaken to examine the sexual content of the above media offerings. Based on the sexual intensity ratings provided by the judges in subproject 2, the top 3 (i.e. most sexually intense) and bottom 3 (i.e., least sexually intense) media vehicles from each medium were selected. This yielded a total of 6 (media vehicles) X6 (media) = 36 media vehicles for content analysis.

Because media offerings of the 6 media vary considerably in format and length, the units of analysis were defined differently for each type of media. Following Pardun et al.'s definitions (2005), for electronic media including TV shows, movies, and music videos, the unit of analysis was a non-break sequence or camera cut; for magazines, a page was counted as one unit; and for songs, each verse was defined as an individual unit. Sexual intensity of the media offerings was coded by two ways. First, the total amount of sexual content in each media offering was counted. "Sexual content" was defined as any depiction of sexual activity, sexually suggestive behavior, or any talk about sexuality or sexual activity. Second, after exposure to the entire media offering, the coders rated the overall sexual intensity from 1 (not at all sexual) to 7 (extremely sexual).

Five undergraduate students (4 females and 1 males) performed the coding of data to receive credit for their independent study. They were from diverse racial groups including

Caucasian, African American, and Asian. According to Potter and Levine-Donnersterin (1999), a diverse set of coders creates more validity. All coders were trained through a 10-hour process of group discussion of the coding task, group coding of media vehicles, and individual coding of media vehicles. During training, discrepancies were discussed and solved, and the codebook was refined. Diagnostics were run in order to determine when coders were prepared to begin coding individually.

All coders coded 12 identical media vehicles along with their individually assigned coding tasks. The data from these 12 videos were then used to establish reliability for this content analysis. Intra-class correlation coefficient (Fleiss 1981) was computed for *the amount of sexual content* and *overall rating*. Results show that both variables had high intercoder agreement: *amount of sexual content* (0.92), and *overall rating* (0.90). As shown in Table 3, based on the coding results, the top 3 media offerings for each of the 6 media all scored higher than the bottom 3 media offerings on the amount of sexual content as well as the overall sexual intensity rating. Thus, the content analysis results were consistent with the sexual intensity ratings provided by the student “judges” in subproject 2, suggesting that these ratings were adequate to be used in the main project.

### **Main Project - Sample and Recruitment Procedure**

The main project was an online survey that was conducted in the beginning of the spring semester 2009. Participants were undergraduate students from communication and business courses at the University of Illinois at Urbana-Champaign. These students were drawn from the same population as those in the 3 subprojects discussed previously, but they were not part of those samples. All participants received extra credit toward their course grade as compensation for their participation.

Previous research on media and sexual behavior has reported effect sizes ranging from 0.25 to 0.36 (e.g., Brown et al., 2006; Collins et al., 2004; Martino et al., 2006). A power analysis

was conducted beforehand to determine the appropriate sample size for the main project. Results suggested that a sample of at least 200 participants was necessary for a power of 0.80 given an effect size of 0.25. Because many participants may not have initiated sexual intercourse during the time when the project was administered, a substantially larger sample was recruited than the minimum of 200 indicated by the power analysis. Seven hundred and forty-five students participated in the main project. Because this study concerns sexual risk-taking, participants who had never had sexual intercourse were deleted from the data, yielding 561 students to be included for analyses.

Participants ranged from 18 to 29 years old ( $M = 20.31$ ,  $SD = 1.23$ ), with 97% aged 22 or younger. Thirty-five percent of the participants were males and 65% were females. The sample was 8% freshman, 34% sophomore, 35% junior, and 23% senior. Sixty-eight percent of the participants were White, followed by 13% Black, 9% Asian American, 6% Hispanic, and 5% who classified themselves as “other.” Almost half of the sample lived in a single-sex dorm/apartment/house (49%), 41% lived in a co-ed dorm/apartment/house, and only 1% lived with parents. The majority of the participants claimed to be heterosexual (97%), and had married parents (78%). On average, participants estimated about 76% of their friends being sexually active. In addition, the majority of the students were single (99%). Among them, 44% had a serious dating relationship, 15% had casual relationship or multiple relationships, and 40% reported no romantic relationship. Regarding past sexual experience, three fourths of the sample reported having had engaged in sexual intercourse.

## **Design**

The survey was computer-aided. Research has shown that people are more likely to respond to sensitive topics on computer-aided questionnaires than in face-to-face interviews or in the paper-and-pencil format (e.g., Wright, Aquilino, & Supple, 1998). With approval from

instructors, the researcher went to the targeted classes for recruitment. All students in class were invited to participate in the study. Those who were interested in participation provided their names and email addresses on the sign-up sheet. The survey link was later emailed to potential participants so they could take the survey at the time of their convenience by using any computer with Internet access. On the survey homepage, participants were informed that the study was designed to investigate college students' sexual behaviors and their perceptions of various social issues. They were also told that the questionnaire was confidential and their participation was completely voluntary. All participants indicated their consent before they proceeded to the survey.

The following variables were included in the questionnaire: sexual risk-taking, sexual regret, moderators proposed to strengthen the media and risk-taking relationship (including gender (femaleness), race (whiteness), sensation seeking, positive premarital sexual attitudes, and endorsement of the sexual double standard), moderators proposed to weaken the media and risk-taking relationship (including school performance, religiosity, and parental monitoring), exposure to sexual media content, and overall media use. In addition, demographic variables including age, year of class, sexual orientation, parents' marital status, friends' sexual experience, relational status, place of residence, and past sexual experience were included in the questionnaire as controls, because these variables have been linked to sexual behavior in previous research (Brown et al., 2006; Fromme, Corbin, & Kruse, 2008; Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998; Katz, Fortenberry, Zimet, Blythe, & Orr, 2000; Kinnaird & Gerrard, 1986; Winslow et al., 1992). Media exposure questions were assessed last in order to minimize the possibility that answering questions about sexual media would bias reports of sexual attitudes and behaviors. The computer program supporting the survey was designed to prohibit participants from backtracking once they proceeded to the next page.

## Measures

### Criterion variables.

***Sexual risk-taking.*** The measure of sexual risk-taking was 29 items that combined those constructed through focus group discussions (i.e., Subproject 1) and those taken from existing literature. These items were designed in 3 question formats. The first question format (Quantity) asked participants to estimate the number of times they have engaged in various sexual activities or the number of people in different categories with whom they have had sex. Sample items included “How many times have you had sex with someone to get back at an unfaithful partner?” and “How many different casual acquaintances (i.e., someone you know but do not consider to be a boyfriend or girlfriend) have you had sex with?” The second question format (Proportion) asked participants to provide an estimated percentage of the time they have had sex under different situations. Sample items included “If you have had vaginal intercourse, what proportion of the time have you or your partner used a condom?” and “If you have had vaginal intercourse, what proportion of the time have you or your partner used any form of contraception?” The last question format (Category) was based on a multiple-choice design asking participants to choose the best answer. Sample items included “Do you get tested for STDs/HIV annually? (A. Yes; B. No, but I’ve been tested more than once; C. No, but I’ve been tested once; D. No, and I’ve never been tested)” and “Did you feel any negative emotions after losing your virginity? (A. No, I’m still a virgin; B. No; C. Yes, if yes, please describe these negative emotions).” It was noted that a few items derived from the focus groups concerned illegal behaviors that could potentially violate the privacy of the participants. In order to obtain IRB approval, these items were modified in a way that captured the meaning of the original items with no specific illegal behavior mentioned.

Because the 3-format measure of sexual risk-taking involved 3 different response matrices, all items were standardized by transforming them into fractions on a “0-1” scale. To transform

Quantity responses, the number reported by each participant for each item was divided by the maximum number given by any participant for that question. For example, a participant reported having had sex with 3 different casual acquaintances, whereas one of his/her peers reported the highest number (12) in the sample. Thus, the participant who reported 3 would get a final score of  $3/12 = 0.25$ , and the participant who reported 12 would get a final score of 1.00. The second type of sexual risk-taking measure was related to an estimated percentage (i.e., an estimated percent of the time participants have had sex under different situations). To transform Proportion responses, the percentage reported by each participant as a response to a particular question was divided by the highest percentage given by a participant for that question. To transform Category responses, the interval between each option was calculated as  $1 / (\text{number of options} - 1)$ . This practice assumes that the intervals between options are equal in the real world. For example, there was an item asking participants “Do you get tested for STDs/HIV annually?” Four response options were provided: A. Yes; B. No, but I’ve been tested more than once; C. No, but I’ve been tested once; and D. No, and I’ve never been tested. The interval between each option was calculated as  $1 / (4 - 1)$ , which equals 0.33. Therefore, Option A would be coded 1, Option B 0.66, Option C 0.33, and Option D 0. Zero in this type of item communicates the absence of some attribute.

After all the items were transformed into the “0-1” scale, reliability analysis was performed. Six items<sup>2</sup> had unacceptable item-total correlations (all below 0.15). They were therefore deleted from the original list to improve the cohesiveness of the scale. Thus, the remaining 23 items served as the measure of sexual risk-taking with a final internal consistency of 0.70. The range of item-total correlations was 0.18-0.52. To identify the underlying subscales, a principal components factor analysis with varimax rotation was conducted. Factor loadings were set at 0.40 and above on each of the items. Seven factors were extracted with eigenvalues greater than 1.0.

They together accounted for 68.39% of the total variance. The majority of the items loaded on the first four factors, which together accounted for 52.51% of the total variance. Only 2 items loaded on each of the last 3 factors, with no apparent conceptual relationship to one another. Therefore, only the first four factors were used as the components of the four subscales for sexual risk-taking. Two items had cross-loadings on two different factors. They were kept with the factor they loaded higher on, because they were seen to be more congruent with the theme reflected by the factors. The results of the factor analysis are shown in Table 4.

Based on the themes reflected by the items, the 4 subscales were labeled as follows: hedonistic risk-taking, socially destructive risk-taking, voyeuristic risk-taking, and nonprotective risk-taking. Hedonistic risk-taking was represented by 6 items that reflect sexual behaviors with an emphasis on the pursuit of pleasure as the ultimate objective of sex (e.g., “How many different casual acquaintances [i.e., someone you know but do not consider to be a boyfriend or girlfriend] have you had sex with?”). Socially destructive risk-taking was represented by 4 items that reflect sexual behaviors potentially harmful to relationships (e.g., “How many times have you had sex with someone to get back at an unfaithful partner?”). Voyeuristic risk-taking was represented by 4 items that reflect sexual behaviors potentially observable by other people (e.g., “How many times have you had oral sex in a place where you knew there was a good chance someone could observe you?”). Nonprotective risk-taking was represented by 4 items that reflect the extent to which one has sex without using contraceptives or other means of protection (e.g., “If you have had vaginal intercourse, what proportion of the time have you or your partner used a condom?”). Reliability statistics for the subscales are reported in Table 1.

***Sexual regret.*** Regretted sexual experience was assessed using a single-item measure developed by Oswalt et al. (2005). Participants were asked whether they have ever regretted their

decision to engage in sexual activity. Responses were on a 5-point scale ranging from 1 (never) to 5 (always) ( $M = 2.20$ ,  $SD = 0.91$ ). A “not applicable” option was also provided for participants who have not had a particular sexual experience.

**Predictor variables.**

*Exposure to sexual media.* The measure of exposure to sexual media was calculated as overall exposure to the sexual content of specific media offerings for each of the 6 media (i.e., television, music videos, songs, movies watched at home, movies watched in the theater, and magazines). This measure was based on participants’ reported habitual exposure to media offerings as well as sexual intensity ratings of these media offerings provided by the student judges in subproject 2.

The 135 media offerings studied in subproject 2 was included in the main project. Participants were presented with these media offering, and were asked to indicate their habitual exposure to them. For specific TV shows and magazines, they were asked how often they watch each of them. For specific music videos, songs, and movies, they were asked how many times they have been exposed to each of them. Responses to all the items were on a 5-point scale. Depending on the type of the media, the labels on the scale varied. For television shows, they were 0 (never/not this season) to 4 (every week); for magazines, 0 (never) to 4 (every issue); and for music videos, songs, and movies, 0 (never) to 4 (lots of times).

The exposure-frequency scores for the media offerings obtained from the main project were used in conjunction with the mean sexual intensity ratings obtained from subproject 2 in the creation of an index of sexual content exposure for each medium. Modeling the procedure first used by Eron, Huesmann, Lefkowitz, and Walder (1972) for exposure to violent television content, the exposure frequency scores for each participant were multiplied by the mean sexual intensity

ratings provided for each media offering. Because there were 30 offerings for each medium,  $30$  (offerings)  $\times$   $6$  (media) =  $180$  cross-products representing exposure frequency multiplied by sexual intensity ratings were calculated for each participant. The cross-products for each medium were then added for each participant to obtain an index of sexual content exposure for that particular medium. Thus, the 6 measures of exposure to sexual media were weighted by both sexual intensity and exposure frequency. This means that a high score was possible for frequent users of slightly sexual media content as well as occasional users of very sexual media content, while the highest scores would be obtained by frequent users of very sexual media content. This averaging strategy has demonstrated good reliability and predictive validity in media effects research on exposure to sexual music videos (e.g., Zhang et al., 2008), thin-ideal television (e.g., Harrison, 2000) and violent television (e.g., Huesmann, Moise, & Podolski, 1997).

Sexual movies watched at home and sexual movies watched in the theater were measured and examined separately in this study. Without a doubt, one has different viewing experiences when watching movie in theaters as opposed to at home. With the designed darkness, enormous screen, and surround sound effects, the audience in theaters is more likely to be taken deep into the movie's world and watches more intensely. In contrast, one can be easily pulled away from the screen and pay less attention to the movie story while at home because interruptions and distractions could happen more frequently (e.g., ringing door bell and phones). Prior studies have found that viewers with greater involvement with the media sexual content were influenced by the content more than those who involved in the content to a lesser degree (e.g., Ward & Rivadeneyra, 1999). Thus, it is interesting to examine whether the relationships would be different for sexual movie watching in theaters and sexual risk-taking, and sexual movie watching at home and sexual risk-taking.

**Overall media use.** Because media in general are replete with images and messages about sexuality, overall media consumption could predict a person's sexual risk-taking and sexual regret, independent of *sexual media consumption*. Thus overall media consumption was measured for use as a control to determine the extent of the relationship between sexual risk-taking and regret and sexual media exposure specifically. Participants were asked to report the number of hours they spend using each medium (i.e., television, music videos, music, movies watched at home, movies watched in the theater, and magazines) during a typical weekday, Saturday, and Sunday. For each medium, the combined weekday hours were multiplied by 5 and added to the combined hours for Saturday and Sunday. The daily exposure scores for each medium were then calculated by dividing the sum by 7. On average, participants spent 3.57 hours ( $SD = 3.27$ ) daily with songs, 2.85 hours ( $SD = 2.64$ ) with TV, 1.42 hours ( $SD = 1.59$ ) with movies watched at home, 0.77 hours ( $SD = 1.26$ ) with music videos, 0.52 hours ( $SD = 0.88$ ) with magazines, and 0.41 hours ( $SD = 0.80$ ) with movies watched in the theater.

### **Moderators.**

**Sensation seeking.** Sensation seeking was measured using the Sensation Seeking Scale developed by Zuckerman, Eysenck, and Eysenck (1978). This scale has been used in many studies and has demonstrated good validity and reliability (e.g., Arnett, 1996; Palmgreen, Stephenson, Everett, Baseheart, & Francies, 2002; Roberti, Storch, & Bravata, 2003). The scale attempts to capture 4 dimensions: thrill and adventure seeking (e.g., "I sometimes like to do things that are a little frightening"), experience seeking (e.g., "I would like to take off on a trip with no preplanned or definite routes or timetables"), disinhibition (e.g., "I like to date people who are physically exciting"), and boredom susceptibility (e.g., "I get bored seeing the same old faces").

For this study, 1 item from the subscale experience seeking and 3 items from the subscale disinhibition were deleted [i.e., “I have tried marijuana or would like to,” “I often like to get high (drinking liquor or smoking marijuana),” “I like to have new and exciting experiences and sensations even if they are a little unconventional or illegal,” and “I feel best after taking a couple of drinks.”], because these items concerned illegal behavior. This decision was made in order to protect participants’ privacy and to secure approval from the university IRB. Responses to the rest of the items were on a 5-point scale ranging from 1 (not at all like me) to 5 (very much like me). Mean scores for overall sensation seeking were computed across all subscales for each participant, such that higher scores indicated greater sensation seeking. The reliability for each dimension of the modified scale was as follows: thrill and adventure seeking ( $\alpha = 0.87$ ,  $M = 3.17$ ,  $SD = 0.95$ ), experience seeking ( $\alpha = 0.77$ ,  $M = 3.09$ ,  $SD = 0.77$ ), disinhibition ( $\alpha = 0.82$ ,  $M = 3.33$ ,  $SD = 0.82$ ), and boredom susceptibility ( $\alpha = 0.74$ ,  $M = 2.68$ ,  $SD = 0.62$ ). The reliability of overall sensation seeking was  $\alpha = 0.89$  ( $M = 3.08$ ,  $SD = 0.57$ ). The whole scale score was used in this study.

***Premarital sexual permissiveness.*** The Short Form of the Reiss Male and Female Premarital Sexual Permissiveness Scale (Reiss, 1989) was used to measure participants’ attitudes towards premarital sex. This four-item scale has demonstrated high reliability and validity in previous studies (e.g., Schwartz & Reiss, 1995; Whitebeck, Simons, & Kao, 1994). Sample items included “I believe that premarital sexual intercourse is acceptable if one is in a relationship involving strong affection,” and “I believe that premarital sexual intercourse is acceptable even if one is in a relationship without much affection.” Possible responses ranged from 1 (strongly disagree) to 7 (strongly agree). Mean scores across the items were computed, with higher scores indicating more permissive attitudes toward premarital sex ( $\alpha = 0.88$ ,  $M = 4.40$ ,  $SD = 1.67$ ).

***Endorsement of the sexual double standard.*** The Double Standard Scale, created by Caron, Davis, Halteman, and Stickle (1993), was used to assess participants' attitudes toward the endorsement of the sexual double standard. This scale has shown good reliability and validity ( $\alpha = 0.72$ , Caron et al., 1993). Sample items included "It is important that the men be sexually experienced so as to teach the women," and "A woman who is sexually active is less likely to be considered as a desirable partner." Responses to each of the 9 items were on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Mean scores were computed across the items for each participant, such that higher scores indicated a stronger endorsement of the sexual double standard. The reliability of the scale was  $\alpha = 0.85$  ( $M = 2.89$ ,  $SD = 1.19$ ).

***School performance.*** Participants self-reported their grade point averages (GPAs). They were also asked to indicate whether the reported GPA was on a scale of 4 or 5. School performance was then calculated as GPA divided by scale, ranging from a minimum possible score of 0 to a maximum possible score of 1 ( $M = 0.80$ ,  $SD = 0.12$ ).

***Religiosity.*** A three-item scale created by Schooler and Ward (2006) was used to measure religiosity. They validated their scale on 184 male undergraduate students and reported an internal consistency of .89 (Schooler & Ward, 2006). Participants were asked to indicate their responses to 3 questions: "How religious are you?" "How often do you pray?" and "How often do you attend religious services?" Possible responses ranged from 1 (not at all/never) to 5 (very/very regularly). Mean scores across the items were computed, with higher scores indicating stronger religiosity ( $\alpha = 0.87$ ,  $M = 2.86$ ,  $SD = 1.17$ ).

***Parental monitoring during high school.*** A version of Capaldi and Patterson's (1989) Parental Monitoring Scale adapted by Arria et al. (2008) was used to assess parental monitoring during high school. The adapted version by Arria et al. involves minor word changes from the

original scale so it is suitable for older adolescents. This adapted scale was validated on 1253 young people aged 17 to 19 with a reported internal consistency of 0.76 (Arria et al., 2008). The scale measured participants' perceptions of parental rule-setting, strictness, and supervision. Sample items were "When you went to parties, how often did your parents confirm that an adult would supervise the party?" and "When your parents were not home, how often would you leave a note for them about where you were going?" Possible responses ranged from 1 (never) to 5 (all of time). Mean scores were computed across the items for each participant, such that higher scores indicated more parental monitoring during high school. The reliability of the scale was  $\alpha = 0.82$  ( $M = 3.38$ ,  $SD = 0.73$ ).

**Demographics.** Participants were asked to report their age, gender, race/ethnicity, and year of class. Race/ethnicity was assessed using 5 categories: White, Black, Hispanic, Asian American, and "Other". Year of class was assessed by asking participants whether they were a freshman, sophomore, junior, or senior. One personal characteristic, sexual orientation, is known to be associated with young people's sexual behaviors (Garofalo, et al., 1998; Leigh, 1989). Therefore, it was measured as a control. Specifically, participants were asked to indicate whether they consider themselves heterosexual, homosexual, or bisexual. Two other options, "don't know" and "other," were also provided to accommodate participants who were not sure about their sexual orientation or who identified it as something other than heterosexual, homosexual, or bisexual.

A number of categorical social environment variables are known to be related to sexual risk-taking, and therefore were also included in the survey. Parents' marital status was found to be associated with more premarital sexual experience among young adults (Kinnaird & Gerrard, 1986) and early initiation of sex among adolescents (Newcomer & Udry, 1987). Following Strouse et al.'s measure (1995), parents' marital status was assessed by asking participants: "What is your

biological parents' marital status?" The responses included three categories: married and living together, separated, and divorced. Perceived peer norm was found to be predictive of early sexual intercourse (Brown et al., 2006), casual sex, and failure to use condoms (Winslow et al., 1992). This study measured perceived friend's sexual experience as an indicator of perceived peer norm by asking participants to estimate the percentage of their friends who are sexually active. In addition, past research has provided evidence that romantic relationship status was related to sexual risk-taking. For example, Katz et al. (2000) reported that condoms were more likely to be used with new sexual partners than with partners in committed relationships. This study measured romantic relationship status by asking participants to choose the one that applies from 4 items: married, serious dating relationship, casual relationship or multiple relationships, and no romantic relationship. Lastly, place of residence may also be related to sexual risk-taking. Previous studies have found significant relationships between place of residence and risky behaviors such as binge drinking and driving after drinking among college students (e.g., Fromme, Corbin, & Kruse, 2008; Wechsler Dowdall, Davenport, & Castillo, 1995). Given that college students who move away from home have decreased supervision and increased freedom, the opportunity to engage in risky sexual behaviors is present. Therefore, place of residence was included as a control using 5 categories: live with other people in a co-ed dorm/apartment, live with other people in a single sex dorm/apartment, live by yourself, live with parents, and other. The descriptive statistics for all controls were presented in Table 3.

## Chapter 3: Results

### Descriptive Statistics

**Media use.** Participants spent an average of 9.54 hours a day with the six media combined, although their total time spent with media versus no media was most likely less than this, given that they could use multiple media at the same time. Analyses indicate that participants spent the greatest number of hours daily listening to songs ( $M = 3.57$ ,  $SD = 3.27$ ). Next was TV shows ( $M = 2.85$ ,  $SD = 2.64$ ), followed by movies watched at home ( $M = 1.42$ ,  $SD = 1.59$ ), music videos ( $M = 0.77$ ,  $SD = 1.26$ ), magazines ( $M = 0.52$ ,  $SD = 0.88$ ), and movies watched in the theater ( $M = 0.41$ ,  $SD = 0.80$ ).

Referring to the specific media titles, the mean frequency with which participants were exposed to the selected top-ranked media vehicles was generally low. While on average students listened to the selected songs slightly more than “a couple of times” (3.04 on a scale of 1 to 5), they viewed other vehicles (i.e., TV shows, magazines, music videos, and movies) less than “just once” (less than 2.00 on a scale of 1 to 5).

**Sexual behavior.** About 75% of participants reported having had sexual intercourse. This figure is similar to those found in other national surveys for college students of the same age (e.g., American College Health Association, 2002; Eisenberg, 2001). The mean scores of the 4 subscales of sexual risk-taking were quite low (all less than 0.20 on a standardized scale of 0 to 1)<sup>3</sup>, but there was a relatively wide range of scores (i.e., hedonistic risk-taking: 0 to 0.78; socially destructive risk-taking: 0 to 0.88; voyeuristic risk-taking: 0 to 0.51; nonprotective risk-taking: 0 to 1). The majority of participants reported having engaged in at least one kind of risk-taking from each sexual risk-taking subscale. Specifically, 89% of participants engaged in hedonistic risk-taking, 82% engaged in socially destructive risk-taking, 77% engaged in nonprotective

risk-taking, and 74% engaged in voyeuristic risk-taking. These results suggest that college students do not just engage in nonprotective risk-taking. Other types of sexual risk-taking that are given little attention in current research are also common among college students.

**Sexual regret.** Consistent with the findings from previous research (Oswalt, Cameron, & Koob, 2005), the majority of sexually active college students (79%) reported regrets about their sexual decisions at least once. Table 5 presents descriptive statistics for all variables under analysis.

### **Hypothesis Testing**

Hypothesis 1 proposed that exposure to sexual content in the media would be positively associated with sexual risk-taking. To test this hypothesis, four hierarchical linear regression analyses were performed, one for each subscale of sexual risk-taking<sup>4</sup>. In these models, control variables (i.e., age, gender, year of class, race, place of residence, sexual orientation, parents' marital status, friends' sexual experience, relational status, and past sexual experience) were entered in the first block. Variables representing overall media use (i.e., daily exposure to TV shows, magazines, movies watched at home, movies watched in the theater, music videos, and songs) were entered in the second block. On the third block, the sexual media exposure scores for TV shows, magazines, movies watched at home, movies watched in the theater, music videos, and songs were entered to explore the unique predictive influence of each sexual media-content variable after overall media exposure had been taken into account.

As shown in Table 6, many control variables in block 1 and block 2 were significant predictors of at least one of the criterion variables, which justifies their use as controls. Hedonistic risk-taking was positively predicted by male gender, higher estimates of friends' sexual experience, daily movie watching at home, and daily song listening, and negatively predicted by daily music video viewing. Voyeuristic risk-taking was positively predicted by age, being male, lower year in

college, and higher estimates of friends' sexual experience. Nonprotective risk-taking was positively predicted by male gender, being in ethnic minority groups, having divorced parents, being in a committed relationship, and watching movies in the theater on a daily basis.

Regarding the sexual media-content variables on step 3, sexual magazine reading was significantly associated with hedonistic and voyeuristic risk-taking, after controlling for demographics, overall media use, and exposure to other sexual media content (i.e., sexual TV viewing, sexual movie watching at home, sexual movie watching in the theater, sexual music video viewing, and sexual song listening). Participants with greater exposure to sexual magazines were more likely to engage in hedonistic and voyeuristic risk-taking. However, exposure to other sexual media content (i.e., sexual TV viewing, sexual movie watching at home, sexual movie watching in the theater, sexual music video viewing, and sexual song listening) was not predictive of any of these three risk-taking variables. No significant relationships were found between sexual media exposure and nonprotective risk-taking. Therefore, hypothesis 1 was supported only for hedonistic and voyeuristic risk-taking.

**Tests of moderation.** Hypotheses 2 through 6 posited that gender (femaleness), race (whiteness), sensation seeking, positive premarital sexual attitudes, and endorsement of the sexual double standard would strengthen the relationship between sexual media exposure and sexual risk-taking. In contrast, hypotheses 7 to 9 proposed that school performance, religiosity, parental monitoring would weaken the relationship between sexual media exposure and sexual risk-taking. To test these hypotheses, hierarchical linear regression analyses were performed. For these analyses, variables entered in the first three blocks were identical to the ones just reported. Terms representing the two-way interactions between sexual media exposure variables and a series of moderators were entered in the fourth block. Hedonistic risk-taking, socially destructive

risk-taking, voyeuristic risk-taking, and nonprotective risk-taking were separate criterion variables.

***Gender as a moderator.*** Hypothesis 2 proposed that the relationship between sexual media exposure and sexual risk-taking would be stronger for women than for men. As shown in Table 7, the interaction between gender and sexual magazine reading was significantly related to hedonistic risk-taking; and the interaction between gender and sexual music video viewing was significantly related to nonprotective risk-taking.

To further examine how gender moderated the effects of sexual media exposure, regression analyses were undertaken for male and female participants separately. As shown in Figures 2 and 3, among males, greater exposure to sexual magazines predicted more hedonistic risk-taking ( $\beta = 0.31, p < .01$ ), and more nonprotective risk-taking ( $\beta = 0.25, p < .05$ ). In contrast, among females, sexual magazine reading had little relationship with hedonistic ( $\beta = 0.02, p > .05$ ) and nonprotective risk-taking ( $\beta = 0.06, p > .05$ ). Therefore, hypothesis 2 was not supported.

***Race as a moderator.*** Hypothesis 3 posited that the relationship between sexual media exposure and sexual risk-taking would be stronger for White college students than for other college students. Because this study attempted to examine the differences between Whites and other students, the students in ethnic minority groups (i.e., Blacks, Hispanics, Asian Americans, and “other”) were combined together and compared with the White category when race was tested as a moderator. Findings show that there was a significant main effect of race on nonprotective risk-taking ( $\beta = .14, p < .01$ ). Non-white students tended to report more nonprotective risk-taking than their White counterparts. A further examination was conducted to see whether and how each ethnic minority group might be different from Whites on nonprotective risk-taking. Four independent sample T-tests were performed, one for each ethnic minority group. It was found that

Blacks engaged in significantly more nonprotective risk-taking than Whites ( $t = -3.79, p < 0.001$ ). Similar finding was also observed between Hispanics and Whites ( $t = -2.34, p < 0.05$ ). However, for Asian Americans and students who identified themselves as “other”, they were not different from Whites on this risk-taking behavior. No significant interaction effect between race and sexual media exposure was observed. This suggests that race did not function as a moderator between sexual media exposure and sexual risk-taking. Therefore, hypothesis 3 was not supported.

***Sensation seeking as a moderator.*** Hypothesis 4 proposed that the relationship between sexual media exposure and sexual risk-taking would be stronger for higher sensation seekers than lower sensation seekers. As shown in Table 8, there were main effects of sensation seeking on hedonistic and voyeuristic risk-taking, suggesting that high sensation seekers tended to report greater hedonistic and voyeuristic risk-taking than low sensation seekers. In addition, the two-way interactions between sensation seeking and sexual magazine reading, and between sensation seeking and sexual music video viewing were both predictive of hedonistic risk-taking. As shown in Figure 4, for higher sensation seekers, greater exposure to sexual magazines was related to more hedonistic risk-taking ( $\beta = 0.31, p < .001$ ). However, for lower sensation seekers, there was no relationship between these two variables ( $\beta = 0.07, p > .05$ ). Regarding the relationship between sexual music video viewing and hedonistic risk-taking, for both higher and lower sensation seekers, media exposure was not a significant predictor ( $\beta_{high\ sensation\ seeking} = -0.04, p > .05; \beta_{low\ sensation\ seeking} = 0.09, p > .05$ ).

The two-way interactions between sensation seeking and sexual magazine reading, between sensation seeking and sexual music video viewing, and between sensation seeking and sexual song listening all predicted voyeuristic risk-taking. As shown in Figure 5, for higher sensation seekers, greater exposure to sexual magazines predicted more voyeuristic risk-taking ( $\beta$

= 0.20,  $p < .05$ ), whereas for lower sensation seekers, there was no relationship between these two variables ( $\beta = 0.13, p > .05$ ). Regarding the relationship between sexual music video viewing and voyeuristic risk-taking, there was little relationship between these two variables for both higher and lower sensation seekers ( $\beta_{high\ sensation\ seeking} = -0.05, p > .05$ ;  $\beta_{low\ sensation\ seeking} = -0.03, p > .05$ ). Similarly, no significant relationship between sexual song listening and voyeuristic risk-taking was found for higher and lower sensation seekers either ( $\beta_{high\ sensation\ seeking} = -0.11, p > .05$ ;  $\beta_{low\ sensation\ seeking} = -0.03, p > .05$ ).

The interaction between sensation seeking and sexual song listening was significantly related to nonprotective risk-taking. As shown in Figure 6, for higher sensation seekers, more sexual song listening was associated with more nonprotective risk-taking ( $\beta = 0.20, p < .05$ ), whereas for low sensation seekers, there was no relationship between these two variables ( $\beta = -0.10, p > .05$ ). Therefore, hypothesis 4 was supported for hedonistic, voyeuristic, and nonprotective risk-taking.

***Premarital sexual permissiveness as a moderator.*** Hypothesis 5 proposed that the relationship between sexual media exposure and sexual risk-taking would be stronger for students who hold more positive attitudes toward premarital sex than those who hold less positive attitudes toward premarital sex. As shown in Table 9, there was no main effect of premarital sexual permissiveness on sexual risk-taking, but significant two-way interaction effects were observed.

First, the interaction between premarital sexual permissiveness and sexual magazine reading predicted voyeuristic risk-taking. As shown in Figure 7, for participants with a higher level of premarital sexual permissiveness, more sexual magazine reading was related to more voyeuristic risk-taking ( $\beta = 0.25, p < 0.01$ ). However, for participants with a lower level of

premarital sexual permissiveness, there was no significant relationship between these two variables ( $\beta = 0.04, p > .05$ ).

The interaction between premarital sexual permissiveness and sexual music video viewing was significantly related to nonprotective risk-taking. Among participants with a higher level of premarital sexual permissiveness, sexual music video viewing was negatively related to nonprotective risk-taking ( $\beta = -0.11, p > .05$ ), whereas among participants with a lower level of premarital sexual permissiveness, sexual music video viewing was positively related to nonprotective risk-taking ( $\beta = 0.06, p > .05$ ). However, neither of these relationships was significant independently.

The interaction between premarital sexual permissiveness and sexual song listening was significantly related to nonprotective risk-taking. As shown in Figure 8, for participants with a higher level of premarital sexual permissiveness, more sexual song listening predicted more nonprotective risk-taking ( $\beta = 0.16, p < .05$ ). In contrast, for participants with a lower level of premarital sexual permissiveness, more sexual song listening predicted less nonprotective risk-taking ( $\beta = -0.17, p < .05$ ). Therefore, hypothesis 5 was supported only for voyeuristic and nonprotective risk-taking.

***Endorsement of the sexual double standard as a moderator.*** Hypothesis 6 proposed that the relationship between sexual media exposure and sexual risk-taking would be stronger for those scoring higher on a sexual double standard measure than those scoring lower. As shown in Table 10, there was no main effect of endorsement of the sexual double standard on sexual risk-taking, but the two-way interaction between endorsement of the sexual double standard and sexual song listening was significantly related to nonprotective risk-taking. However, when examined further, no relationship was found between sexual song listening and nonprotective risk-taking for

participants with both higher and lower endorsement of the sexual double standard ( $\beta_{higher endorsement of the sexual double standard} = -0.11, p > .05$ ;  $\beta_{lower endorsement of the sexual double standard} = 0.12, p > .05$ ). In other words, although these two groups were different from each other, the relationship between sexual song listening and nonprotective risk-taking for either group was not significantly different from zero. Therefore, hypothesis 6 was not supported.

***School performance as a moderator.*** Hypothesis 7 posited that the relationship between sexual media exposure and sexual risk-taking would be weaker for students with better earned grades than those with poorer earned grades. As shown in Table 11, there was a main effect of school performance on hedonistic risk-taking, suggesting that participants with higher earned grades tended to engage in less hedonistic risk-taking than those with lower earned grades.

The interactions between school performance and sexual magazine reading, and between school performance and sexual music video viewing were found to be significantly associated with hedonistic risk-taking. To further examine how school performance moderated the effects, a median split was undertaken on the school performance measure in order to conduct follow-up analyses among participants with higher or lower school performance (median = 0.81 on a scale of 0 to 1). As shown in Figure 9, among students with lower school performance, greater exposure to sexual magazines increased the likelihood of engaging in hedonistic risk-taking ( $\beta = 0.26, p < .01$ ), whereas among students with higher school performance, there was no relationship between these two variables ( $\beta = 0.11, p > .05$ ). Regarding the relationship between sexual music video viewing and hedonistic risk-taking, little relationship was found between these two variables for both higher and lower sensation seekers ( $\beta_{higher sensation seeking} = 0.06, p > .05$ ;  $\beta_{lower sensation seeking} = -0.03, p > .05$ ).

In addition, the interaction between school performance and sexual magazine reading was significantly related to nonprotective risk-taking. As shown in Figure 10, among students with lower school performance, greater exposure to sexual magazines predicted more nonprotective risk-taking ( $\beta = 0.21, p < .01$ ), whereas among students with higher school performance, there was no relationship between these two variables ( $\beta = -.11, p > .05$ ). In sum, hypothesis 7 was supported only for hedonistic and nonprotective risk-taking.

**Religiosity as a moderator.** Hypothesis 8 proposed that the relationship between sexual media exposure and sexual risk-taking would be weaker for students with a higher level of religiosity than those with a lower level of religiosity. As shown in Table 12, there was no main effect of religiosity on sexual risk-taking, but the two-way interactions between religiosity and sexual music video viewing, and religiosity and sexual song listening were significantly associated with nonprotective risk-taking. Among students with a lower level of religiosity, greater exposure to sexual music videos increased the likelihood of engaging in nonprotective risk-taking ( $\beta = 0.15, p < .05$ ), whereas among students with a higher level of religiosity, there was no relationship between these two variables ( $\beta = 0.08, p > .05$ ) (See Figure 11). Regarding the relationship between sexual song listening and nonprotective risk-taking, little relationship was found between these two variables for both higher and lower levels of religiosity ( $\beta_{higher\ religiosity} = -0.08, p > .05$ ;  $\beta_{lower\ religiosity} = 0.09, p > .05$ ). Therefore, hypothesis 8 was supported only for nonprotective risk-taking.

**Parental monitoring as a moderator.** Hypothesis 9 proposed that the relationship between sexual media exposure and sexual risk-taking would be stronger for college students with a lower level of parental monitoring in high school than students with a higher level of parental monitoring in high school. Findings show that there was no main effect of parental monitoring on sexual

risk-taking. No significant interaction effect involving parental monitoring and sexual media exposure was observed either. This suggests that parental monitoring did not function as a moderator between sexual media exposure and sexual risk-taking. Therefore, hypothesis 9 was not supported.

**Sexual risk-taking and sexual regret.** Hypothesis 10 predicted that sexual risk-taking would mediate the relationship between sexual media exposure and sexual regret. If it is indeed a mediator, sexual risk-taking should be significantly related to both sexual media exposure and sexual regret (Baron & Kenny, 1986). A Pearson correlation was performed to examine the associations between sexual risk-taking and both sexual media exposure and sexual regret. Findings reveal that although sexual magazine reading was significantly related to hedonistic ( $r = 0.13, p < .05$ ) and voyeuristic risk-taking ( $r = 0.15, p < .05$ ), sexual regret was related to none of the sexual risk-taking subscales. Thus, sexual risk-taking did not meet the requirements for analysis as a mediator. Therefore, hypothesis 10 was not supported.

In sum, the analyses revealed the following main findings: First, exposure to sexual magazines predicted more hedonistic and voyeuristic risk-taking among college students. In fact, it was the only sexual media variable that had a direct relationship with sexual risk-taking. Second, moderating effects were found for sexual magazine reading, sexual music video viewing, and sexual song listening. While sensation seeking, positive premarital sexual attitudes functioned to strengthen the relationship between sexual media exposure and sexual risk-taking, gender (femaleness), school performance, and religiosity functioned to weaken the relationship. Third, while nonprotective risk-taking had the most predictors, sexual magazine reading predicted the most risk-taking variables (i.e., hedonistic, voyeuristic, and nonprotective risk-taking), directly or indirectly through the moderating effects. Finally, no mediating effects were found for sexual

risk-taking on the relationship between media exposure and sexual regret. In fact, sexual regret was not related to any sexual risk-taking variables. Table 13 summarizes the main effects of sexual media exposure as well as the effects of their interaction with the moderators on sexual risk-taking.

## Chapter 4: Discussion

Sexual risk-taking represents a significant health problem among college students. Although media may play an important role in college students' sexual risk-taking, research in this area has been sparse. This dissertation project sought to examine how exposure to sexual content in six media is related to college students' sexual risk-taking. To assist the investigation, three subprojects were conducted beforehand, through which a comprehensive measure of sexual risk-taking was developed and sexual intensity ratings for the media offerings were obtained to be used in the main project. The dissertation also examined a list of variables that may strengthen or dampen the relationship between sexual media exposure and sexual risk taking. Lastly, the study explored whether sexual media exposure may be linked to sexual regret through its effect on sexual risk-taking.

Several main findings were revealed. First, the sexual risk-taking measure was multifactorial. The prevalence for each of the four types of sexual risk-taking behavior was found to be high among college students. Second, of the six sexual media variables examined in this study, only sexual magazine reading was directly associated with sexual risk-taking. College students with greater exposure to sexual magazines were more likely to engage in hedonistic and voyeuristic risk-taking. Third, although the direct link to sexual risk-taking was only observed for sexual magazine reading, moderating effects on the risk-taking variables were found for sexual magazine reading, sexual music video viewing, and sexual song listening. While sensation seeking and positive premarital sexual attitudes functioned to strengthen the relationship between sexual media exposure and sexual risk-taking, gender (femaleness), school performance, and religiosity functioned to weaken the relationship. However, the function of the moderators was more complicated than expected, occurring with only some sexual media exposure variables but not

others and affecting only some sexual risk taking subscales but not others. Fourth, while nonprotective risk-taking had the most predictors, sexual magazine reading predicted the most sexual risk-taking variables (i.e., hedonistic, voyeuristic, and nonprotective risk-taking), directly or indirectly through the moderating effects. Lastly, sexual risk-taking did not seem to function as a mediator of the relationship between sexual media exposure and sexual regret. In fact, sexual regret was not related to any sexual risk-taking subscales. Thus, this finding suggests that sexual regret may not function act as a disincentive for college students to model risky sexual behavior through media.

### **Measure of Sexual Risk Taking**

The new sexual risk-taking measure was found to be multidimensional. High to adequate internal consistency has been demonstrated for the overall scale and the four factors. Except for nonprotective risk-taking, all other factors (i.e., hedonistic risk-taking, socially destructive risk-taking, voyeuristic risk-taking) were related to sexual risks that go beyond unintended pregnancy and STIs. The majority of the sexually active participants in this study reported having engaged in at least one kind of risk-taking from each sexual risk-taking subscale. This provides evidence that college students do not engage in nonprotective risk-taking only. Other types of sexual risk-taking are also common among them. The results further revealed that more participants were involved in hedonistic risk-taking (89%) and socially destructive risk-taking (82%) than nonprotective risk-taking (77%). This suggests that although nonprotective risk-taking remains a big concern, it may not be the most frequently occurring sexual risk-taking behavior for college students nowadays. Rather, hedonistic and socially destructive risk-taking may be even more popular among this group. Therefore, these types of sexual risk-taking and their subsequent physical, emotional and social consequences all merit close investigation.

Sexual media research has been scant, with no standard measure of sexual risk-taking. One possible reason for this oversight may be that sexual risk-taking is a complex construct to assess. The sexual risk-taking measure developed in this study, although still in its preliminary stage of use, could potentially help researchers conduct more consistent and reliable research in the area of media and sexual socialization, enable comparisons of findings across different studies, and ultimately provide a better and more comprehensive understanding of media's influence on sexual risk-taking among college students. This measure could also be used to examine sexual outcomes in intervention programs that aim at preventing and decreasing risky sexual behaviors among college students. Of course, more research is warranted to test its usefulness and validity.

### **Direct Link between Sexual Media Exposure and Sexual Risk-Taking**

Findings from this dissertation have demonstrated that exposure to sexual content in the media *is* directly associated with sexual risk-taking. However, such direct associations seem to occur only for sexual magazine reading, not for the other sexual media variables. College students who had greater exposure to sexual magazines were more likely to engage in hedonistic and voyeuristic risk-taking. These relationships were significant even after controlling for a wide variety of factors that might otherwise explain the relationships, including personal characteristics, social environment factors, overall media consumption, and sexual exposure scores for television, music videos, songs, movies watched at home, and movies watched in the theater.

Why was sexual magazine reading significantly related to hedonistic and voyeuristic risk-taking, whereas other sexual media exposure variables were not? This question prompts a second look at the types of sexual content in these media. Content analyses have shown that sexual messages in TV, music videos, songs, and movies, although abundant, are typically implicit and sexually suggestive in nature (Ward, 2003), with verbal innuendo (e.g., Kunkel et al., 2003), and portrayals of "sexual feelings or impulses" (e.g., Baxter et al., 1985, p. 337). When sexual

behaviors are depicted, they are mostly flirting, kissing, and erotic touching (e.g., Greenberg, Abelman, & Neuendorf, 1981; Ward, 2003). In contrast, sexual content in mainstream magazines is more graphic and explicit (e.g., Duffy & Gotcher, 1996; Reichert & Carpenter, 2004). Besides featuring frequent images of partially-clad and nude models, mainstream sexual magazines feature an abundance of articles detailing sexual techniques, ways to improve sexual relationships, and other explicit content. In other words, sexual magazines provide specific instructions explaining how to engage in sexual behaviors that are largely left out of other media (i.e., TV, music videos, songs, and movies). Therefore, according to social learning theory, sexual risk-taking behavior may be more likely to be learned and modeled through consumption of magazines than consumption of TV, music videos, songs, or movies, where particular sexual behaviors are rarely depicted.

An alternative explanation for the nonsignificant findings for other media might have been that the media offerings included in this study were not especially popular among the college sample. Although the media offerings were selected based on the published lists of weekly top ratings (e.g., Nielsen ratings and Billboard top 20 albums) for young people, they may not be the most watched or listened to media offerings by college students in particular. In fact, the findings in this study reveal that the mean frequency with which participants were exposed to these media vehicles was very low. Students listened to the selected songs slightly more than “a couple of times”, but viewed other vehicles (i.e., TV shows, magazines, music videos, and movies) less than “just once.” A floor effect may have made it hard to observe significant associations from the data. Whatever the case, further examination of the relationships between exposure to a variety of sexual media and sexual risk-taking seems appropriate.

**Control variables and sexual risk-taking.** Significant associations between daily media exposure and sexual risk-taking were observed. Daily movie watching at home and daily song listening were positively related to hedonistic risk-taking, and daily movie watching in the theater was positively related to nonprotective risk-taking. Surprisingly, daily music video viewing was linked to hedonistic risk-taking negatively such that students who had greater exposure to music videos were less likely to engage in hedonistic risk-taking. This negative association was unexpected, given that music videos are replete with sexual content. This unexpected finding raises questions about how sexual relationships are usually depicted in music videos. Perhaps sexual behavior shown in music videos is more likely to occur between partners with some degree of emotional relationship, and less likely to occur between two strangers or two people with little emotional affiliation. Rather than promoting the idea of having sex just for fun and thrills (as characterized by hedonistic risk-taking), music videos may focus more on romantic relationships yet glamorize sex as a means for achieving intimacy, and for feeling loved and needed. Thus, the more college students watch music videos, the more likely they may be to reject hedonistic risk-taking that emphasizes pleasure as the sole purpose of sex, with little affection involved. Of course, more research is needed to provide evidence for such speculation. It may also be worthwhile to conduct content analyses that focus on not only the amount of sexual content overall, but also the frequency of specific types of sexual behavior portrayed in music videos.

A number of control variables other than overall media consumption were related to sexual risk-taking. Interestingly, one of the strongest predictors of sexual risk-taking was perceived friends' sexual experiences. College students who perceived greater number of friends having sexual experience were more likely to engage in hedonistic and voyeuristic risk-taking. This finding is consistent with previous studies reporting that perceived peer norms were associated

with risky behaviors among adolescents and young adults, such as smoking (e.g., Hu, Flay, Hedeker, Siddiqui, & Day, 1995), drinking (e.g., Prentice & Miller, 1993), and condom use (Winslow et al., 1992).

College students' perception that their friends were having risky sex is likely to be inferred from sources such as media. According to Cultivation Theory, exposure to television's distorted and repetitive images gradually shapes viewers' normative beliefs and attitudes about the real world. The more time people spend watching television, the more their normative beliefs and attitudes reflect the world they see portrayed on television. Because content analyses have shown that media frequently portray risky sex between young and unmarried couples, cultivation theory would predict that college students with greater exposure to such sexual messages are more likely than lighter viewers to overestimate the number of people in their age who are engaging in similar sexual behaviors. In fact, Ward (2002) found that the more college students watched television, the higher their estimates were of risky sexual experiences among their peers.

If college students' perceptions of their friends' sexual experience was indeed influenced by media exposure, then the notion of the "influence of presumed influence" may help explain the process through which the perceived peer experience was significantly associated with sexual risk-taking. Proposed by Gunther and Storey (2003), the theory of the influence of presumed influence posits that people will perceive some influence of media messages on others and as a result will change their own attitudes and behaviors accordingly. In other words, the model proposes a two-stage effect. At the first stage of the model, greater exposure to media messages encourages individuals to assume these messages are reaching a larger audience. They therefore perceive a greater media influence on the opinions and attitudes of others. The second stage of the model goes beyond the perceived influence on others to examine the consequences of such a

perception. It posits that people will react to the perception of a media effect on others by changing their own attitudes and/or behavior. Applying this model to the finding here, it is possible that college students with frequent viewing of risky sexual content in the media tended to think that more of their friends were exposed to and were influenced by the media messages. Consequently, the perceived impact of sexual media content on their friends was in turn influencing their own behavior such that they were more likely to engage in sexual risk-taking themselves. Of course, more research is needed to provide evidence for such speculation.

### **Moderating Effects on Sexual Media Exposure and Sexual Risk-Taking**

Although only sexual magazine reading had a direct relationship with sexual risk-taking, moderating effects were found for sexual music video viewing, sexual song listening, and sexual magazine reading. Sexual magazine reading predicted most sexual risk-taking variables (i.e., hedonistic risk-taking, voyeuristic risk-taking, and nonprotective risk-taking), directly or indirectly through the moderating effects. However, the moderating effects were not found for sexual TV viewing, sexual movie watching at home, and sexual movie watching in the theater. While socially destructive risk-taking was predicted by none of the variables, nonprotective risk-taking had the most predictors. Findings are discussed in detail below based on whether the moderators were proposed to strengthen or weaken the relationship.

**Moderators proposed to strengthen the relationship.** While race (whiteness) and endorsement of the sexual double standard failed to function as moderators, sensation seeking, and positive premarital sexual attitudes strengthened the relationship between sexual media exposure and sexual risk-taking. Contrary to expectation, gender (femaleness) was found to weaken the relationship between sexual media exposure and sexual risk-taking.

Consistent with the hypothesis, sensation seeking functioned as an incentive to model sexual risk-taking through the media. Specifically, for higher sensation seekers, exposure to sexual

magazines was related to more hedonistic and voyeuristic risk-taking; and exposure to sexual music videos was related to more nonprotective risk-taking. However, for lower sensation seekers, the amount of sexual media exposure had no relationship with sexual risk-taking. These results are not surprising, given that sensation seekers are prone to seek novel sexual experiences (Arnold, Fletcher, & Farrow, 2002; Gullette & Lyons, 2005; Zuckerman & Kuhlman, 2000). To higher sensation seekers, sexual risk-taking depicted in the media may be perceived as an exciting and rewarding experience. Consequently, they may be more likely than lower sensation seekers to model media-depicted behaviors.

Positive premarital sexual attitudes also strengthened the relationship between sexual media exposure and sexual risk-taking. For college students who held more positive attitudes toward premarital sex, sexual magazine reading was associated with more voyeuristic risk-taking; and sexual song listening was associated with more nonprotective risk-taking. However, for college students who held less positive attitudes toward premarital sex, sexual media exposure was not related to any sexual risk-taking variables. This finding is consistent with past research reporting that individuals who hold positive attitudes towards premarital sex were more likely to engage in casual sex with less frequent condom use (e.g., Winslow et al., 1992). The present study hypothesized that college students who already hold positive attitudes towards uncommitted sex may be open to risky sexual behaviors portrayed in the media because they are likely to perceive these behaviors as rewarding (e.g., recreational and fun, and a way to shed a stigma of virginity). As a result, they may be more likely to model these behaviors from the media than students who hold less positive attitudes towards uncommitted sex. The finding seems to provide support for this hypothesis.

Unexpectedly, gender (femaleness) was found to weaken instead of strengthen the relationship between sexual media exposure and sexual risk-taking. Specifically, there was no relationship between sexual media exposure and sexual risk-taking for female students. However, the more male students read sexual magazines, the more likely they were to engage in hedonistic and nonprotective risk-taking. Thus, among all media examined in this study, sexual messages in magazines seem to be particularly appealing to male college students, and, according to social cognitive theory, reading these magazines may motivate them to imitate risky sexual behavior depicted in the magazines' pages. It is not clear why sexual magazine reading was not related to sexual risk-taking among female students. Previous content analyses of mainstream magazines have found that women are typically portrayed as sexual objects. They are encouraged to be sexually attractive to men, yet not too sexually active in order to be "a good girl" (Carpenter, 1998; Garner et al., 1998; Ward, 2002). Perhaps this depiction of women's sex role in magazines is likely to discourage female students from engaging in sexual risk-taking.

Previous research has generally found that females are more likely to be affected by sexual media content than males (e.g., Strouse & Buerkel-Rothfuss, 1987; Strouse, Buerkel-Rothfuss, & Long, 1995; Ward & Rivadeneyra, 1999; Ward, 2002). However, the above findings seem to suggest that this may not always be true. The magnitude of effects may depend on the specific type of medium under examination. Previous research typically focused on music videos and television programs such as soap operas and prime-time shows (Strouse & Buerkel-Rothfuss, 1987; Ward & Rivadeneyra, 1999). It is possible that men are less affected by these specific media than are women, but more affected by media such as sexual magazines, that have received less research attention to date. Being more graphic and explicit than analogous messages in other media, sexual messages in magazines may catch men's attention more easily. As a result, they are more likely to

be picked up and consumed by men. Ward (2002) suspected that male-oriented media such as men's magazines and video games may affect men's sexuality more than media genres examined thus far. This study seems to provide supporting evidence for this argument. Of course, more research is needed to replicate the findings.

**Moderators proposed to weaken the relationship.** Consistent with expectation, school performance dampened the relationship between exposure to media sexual content and sexual risk-taking. Specifically, for students with better earned grades, the amount of sexual media exposure had no relationship with sexual risk-taking, whereas for students with poorer earned grades, the more they read sexual magazines, the more likely they were to engage in nonprotective risk-taking. It was proposed that students with better earned grades may be more critical of sexual messages conveyed in the magazines and be more likely to think about potential negative consequences that could result from sexual risk-taking. Consequently, the perceived negative outcomes may deter these students from modeling the types of risky sexual behaviors described and instructed in magazines.

Religiosity was also found to weaken the relationship between sexual media exposure and sexual risk-taking. While sexual music video viewing was positively associated with nonprotective risk-taking for students with a lower level of religiosity, exposure to the same music videos had no relationship with nonprotective risk-taking for students with a higher level of religiosity. As hypothesized, it is plausible that the personal values and beliefs about sexuality for religious people may counteract the sexual content depicted in music videos. Thus, students with a higher level of religiosity may consciously reject the sexual content, thereby being less likely than those with a lower level of religiosity to model risk-taking behaviors shown in music videos. In

short, religiosity appeared to act as a protective buffer to keep college students from modeling sexual risk-taking through music videos.

It was expected that parental monitoring would function as a disincentive to weaken the relationship between sexual media exposure and sexual risk-taking. However, this was not the case. Perhaps the nonsignificant finding was due to the measure of parental monitoring. This study assessed college students' retrospective memories of parental monitoring in high school. It is possible that parental monitoring in high school may become less influential as college students move away from parents and experience more freedom and autonomy. Future research should measure parental monitoring in college or college students' perceived parental control instead to better understand the role of parental supervision in college students' sexual risk-taking.

**Main effects of the moderators.** Among the eight moderators examined in this study, gender (femaleness), race (whiteness), sensation seeking, and school performance were found to have a significant main effect on sexual risk-taking. While Whites and students with better earned grades reported less sexual risk-taking, males and higher sensation seekers reported more sexual risk-taking. These main effects are discussed below.

First, there were significant gender differences on three of the four risk-taking subscales. Specifically, male students reported having had significantly more hedonistic, voyeuristic, and nonprotective risk-taking than female students. Although gender was not predictive of socially destructive risk-taking, the relationship was in the same direction. These findings were consistent with previous research which has documented similar gender differences for risky sexual behaviors (e.g., number of sexual partners, and early initiation of sex; Baumeister, Catanese, & Vohs, 2001; Turchik, & Garske, 2009; Vollrath, Knoch, & Cassano, 1999). While a number of explanations account for this gender difference (Baumeister & Vohs, 2004; Buss, 1998; Eagly,

1987; Wilson & Daly, 1993; Zuckerman, 2007), the evolutionary and social roles perspectives are the two major approaches. An evolutionary perspective views gender-differentiated sexual behavior as a result of sex differences in mating strategies. While pregnancy and child-rearing are costly for women, men can theoretically be free from these responsibilities (Buss 2003). Consequently, men are more likely than women to maximize reproductive outcomes by having sex with different partners (Buss and Schmitt, 1993). In other words, men's evolved nature tend to prefer aggression and risk-taking more than women. In contrast, a social roles perspective argues that these gender differences in sexual behavior may be largely due to the social roles assigned to men and women (Eagly, 1987; Eagly & Wood, 1999). Traditional male gender roles are characterized by dominance, assertiveness, and control, whereas traditional female gender roles are characterized by subordination, cooperation, and compliance (Eagly & Wood, 1999). Thus, men's accommodation to male gender roles may produce more sexual risk-taking behavior than women's to female gender roles. However, some researchers have suggested that such gender differences may be simply due to the influence social desirability on participants' reports of their sexual behavior (Brown & Sinclair, 1999; Fisher, 2007). Traditional gender roles may motivate men to exaggerate their sexual experience while discouraging women to reveal their sexual experience. In other words, sex differences in sexual risk-taking may simply be due to men over-reporting their sexual behaviors and women under-reporting their sexual behaviors.

Second, race was related to nonprotective risk-taking. The findings show that, when having sex, White students were more likely than other students to report using contraceptives or other means of protection. A further examination reveals that while Blacks and Hispanics engaged in significantly more nonprotective risk-taking, Asian Americans and students who identified themselves as "other" were not different from Whites on this risk-taking behavior. Therefore, the

significant differences on nonprotective risk-taking between White students and other students were in fact due to the differences between Blacks, Hispanics and their White counterparts.

It is widely known that STIs and unplanned pregnancy are two major consequences of nonprotective risk-taking. The findings about nonprotective risk-taking may help explain the racial differences on STIs and unplanned pregnancy found in prior research. Previous studies have reported that Black young adults are particularly at risk for HIV infection and other STIs (Centers for Disease Control and Prevention, 2007). For example, African Americans aged 19 to 24 were 20 times as likely as young people in any other ethnic group to be HIV-positive (Morris et al., 2006). African American women were 7 times more likely than White women and 8 times more likely than Hispanic women to be infected with HIV (Centers for Disease Control and Prevention, 2007). Although research about racial differences on unplanned pregnancy has been scant, the few existing studies report that unplanned pregnancy rates were higher for African Americans and Hispanics when compared to Whites. For example, based on national survey data, Henshaw (1998) reported that Black women were almost three times more likely than White women to experience unplanned pregnancy, with the rate for Hispanic women falling in between.

Third, sensation seeking was linked to increased hedonistic and voyeuristic risk-taking. Higher sensation seekers were found to have a greater likelihood of engaging in hedonistic and voyeuristic risk-taking than lower sensation seekers. This finding is consistent with what has been reported in previous studies demonstrating that high sensation seekers are prone to seek novel sexual experiences, and take more sexual risks such as having multiple sexual partners and unfamiliar sexual partners (Arnold et al., 2002; Gullette & Lyons, 2005; Zuckerman & Kuhlman, 2000). An unforeseen result of this dissertation was that sensation seeking was not related to nonprotective risk-taking. This fails to replicate the findings of many prior studies showing that

high sensation seekers participate in more unprotected sexual activities, and use condoms less consistently than low sensation seekers (e.g., Sheer & Cline, 1994). One possible explanation may concern the measure of nonprotective risk-taking used in this study. Among the four items assessing nonprotective risk-taking, three items asked participants to estimate the proportion of the time they or their partners used a condom or any form of contraception when having vaginal or anal intercourse. Such percentage estimations may challenge recall, especially for higher sensation seekers who tend to have many sexual experiences. Consequently, this is likely to bring about inaccurate and unreliable estimates about the frequency of condom and contraceptive use, which would obscure the real differences between higher and lower sensation seekers. Questions designed to ask participants whether or not they use contraception or protection the *last* time they had vaginal/anal intercourse, or a simple scale asking participants to rate how often they use contraception or protection may help facilitate participants' recall and thus result in more accurate responses.

Lastly, school performance negatively predicted hedonistic risk-taking. College students with better academic performance were less likely to engage in hedonistic risk-taking than those with poorer academic performance. This is consistent with previous literature showing that poor school performance predicted more risky sexual behavior such as having sex with multiple partners and having sex with someone known for a very short period of time (e.g., Bailey, 2008). Thus once again, this dissertation provides supporting evidence that school performance can act as a protective buffer against sexual risk-taking.

### **Relationships between Sexual Media Exposure, Sexual Risk-Taking and Sexual Regret**

This dissertation failed to find that sexual risk-taking mediated the relationship between sexual media exposure and sexual regret. As a matter of fact, sexual regret was not related to any types of sexual risk-taking. It is unclear why this is so, but the nonsignificant findings seem to

suggest that sexual regret may not act as a disincentive for college students to model risky behaviors through media. In other words, media effects on sexual risk-taking may proceed unhampered no matter how regretful college students feel about their previous sexual behavior. This finding provides more reason for concern about media effects on risk-taking.

One possible explanation for these findings pertains to the measure of sexual regret. In this study, sexual regret was assessed by a single item asking participants whether they have ever regretted their decision to engage in sexual activity. This measure is, however, likely too broad to capture the specific type of sexual risk-taking that participants feel regretful about. This might explain the failure to find the link between media-modeled risk-taking and sexual regret. To better understand the relationship, a multidimensional measure of sexual regret that is conceptually compatible with the sexual risk-taking subscales is more appropriate.

It is also possible that sexual regret functions as a mediator between media exposure and sexual risk-taking. Risky sexual behavior in the media is typically portrayed as glamorous and fun with potential problems and negative consequences rarely discussed. Thus, exposure to such content focusing on the positive possibilities of sex may decrease college students' unhappiness and disappointment experienced in previous sexual encounter(s), and encourage them to engage in more risk-taking behavior, because that is the "reality" about romantic relationships set up by the media. In other words, media exposure to sexual content may undercut sexual regret, which in turn may lead to more sexual risk-taking. However, because sexual risk-taking and sexual regret was found to be uncorrelated across the board, this speculation is unsupported in this data set. Nevertheless, in future research this possibility might be tested in a longitudinal format.

### **Summary and Implications**

Hedonistic, socially destructive, voyeuristic, and nonprotective risk-taking were all found to be fairly common among college students. Given that these risky behaviors may lead to negative

physical, emotional, and social consequences, there is a pressing need to identify possible factors that might influence college students' sexual decision making. This dissertation provides an important step in understanding the relationship between sexual media exposure and these four types of sexual risk-taking.

Using social cognitive theory as the theoretical framework, this study reveals that frequent exposure to sexual magazines predicted more hedonistic and voyeuristic risk-taking, even after controlling for a wide variety of factors that might otherwise explain the relationships. In addition, sexual magazine reading, sexual music video viewing, and sexual song listening were related to one or more types of sexual risk-taking through select moderators. Sexual magazine reading was the strongest and most consistent predictor of sexual risk-taking. This may be due in part to the graphic and explicit nature of sexual messages in magazines (e.g., Duffy & Gotcher, 1996; Reichert & Carpenter, 2004). Sexual TV viewing, sexual movie watching at home, and sexual movie watching in the theater, on the other hand, were not related to any sexual risk-taking. One reason for the nonsignificant findings might be that the sexual content in TV and movies is generally implicit in nature without specific instructions about how to engage in risky sex. However, it would be premature to conclude that these two media therefore have no influence on college students' sexual risk-taking. Previous studies have repeatedly shown that frequent exposure to TV programs is associated with greater acceptance of casual sex and greater endorsement of the sexual double standard (e.g., Ward, 2002; Ward & Rivadeneyra, 1999). These sexual attitudes influenced by TV viewing may act as moderators and ultimately influence college students' sexual decision-making. Of course, more research is needed to replicate the findings.

The results of this study indicate that socially destructive risk-taking was not related to any of the media variables either directly or indirectly. Perhaps socially destructive risk-taking, unlike

other types of risk-taking, may be rarely portrayed or discussed in the media examined in this study. Therefore, no matter how much sexual media content they are exposed to, college students' tendency to engage in socially destructive risk-taking is unlikely to be influenced by these media. Because socially destructive risk-taking was fairly common among the college students participating in this study, there are clearly other factors surrounding this type of risk-taking behavior that have not yet been identified and examined. Future research may profit from exploring these factors.

Sexual regret was unrelated to sexual risk-taking, suggesting that this particular disincentive may not lessen college students' likelihood of modeling risky sex in the future. Gender (femaleness) and school performance were the only variables in this study that weakened media-modeled sexual risk-taking. Future research should work on identifying more "weakening" factors in order to suggest ways to mitigate negative outcomes from sexual risk-taking.

**Practical implications.** Reducing the amount of sexual content in the media and especially in magazines, or the amount of time that college students are exposed to sexual media, especially magazines, is likely to reduce their chance of engaging in sexual risk-taking. Although media industries have fought public efforts to de-sexualize their products, it is worthwhile to continue to encourage them to include more information about sexual risk and responsibility as well as negative consequences that may result from sexual risk-taking. In addition, educational programs should make college students aware of the distorted sexual messages in the media and educate them to be critical of mainstream sexual media content. The results of this study show that college students are engaging in sexual behavior with risks going beyond unintended pregnancy and STIs. Therefore, educational programs should not only focus on physical health, but also emphasize the emotional as well as the social consequences of sexual risk-taking.

## **Limitations and Future Research**

There are several limitations to this study that need to be addressed. First, this dissertation employed a convenience sample of college students from a Midwestern university. These students have a relatively homogenous background in terms of demographics, value structures, and media use habits. It is possible that college students from other universities in other parts of the country may have different media consumption patterns and are influenced by media content differently. Therefore, the generalizability of findings to the whole population may be limited. It is also possible that sexual risk-taking would be more common among a slightly older population, as they would have had more time to develop a sexual history. Future investigations would further this line of inquiry by testing and replicating these relationships among random, more diverse, and older samples.

Second, this study may lack sufficient statistical power at two-way interactions. As noted earlier, regression analyses revealed a number of interaction effects between sexual media exposure and various moderator variables on sexual risk-taking. However, for many of these two-way interactions, statistical significance for the relationship between media exposure and sexual risk-taking was not found when the individual groups were examined separately and sample size was cut approximately in half. While the null relationships may represent reality, it also seems possible that the nonsignificant results may have been due to inadequate statistical power. For some of these individual-group analyses, the median split of the moderators resulted in a subsample size of less than 200 in each group. Future research would benefit by employing larger samples of the subgroups of interest (e.g., women and men, lower sensation seekers and higher sensation seekers).

Third, the research design of this study was cross-sectional. The researcher depended on participants' self-reported sexual risk-taking behaviors and media consumption habits to learn

about the relationships without investigating how these two variables may change in each participant in over time. Therefore, causal inferences cannot be drawn with confidence from the data. In other words, the researcher is unable to determine whether sexual media exposure drives sexual risk-taking, or whether sexually active media users seek out sexual media content that is consistent with their existing behaviors. While the former seems to be reasonable, selective exposure theory (Klapper, 1960) would suggest that the latter is possible too. According to this theory, people tend to expose themselves to media messages based on their own perspective and interests. Messages consistent with previously held views will be selected, while those arguing against existing views will be ignored. Thus, if this theory is true, college students who already engage in sexual risk-taking are likely to seek out sexual content in the media that is favorable to their predispositions. As a result, their beliefs and attitudes about sexual risk-taking are reinforced and their risk-taking decisions are justified. In future research on this topic, it will be useful to employ a longitudinal design so that we can understand precisely the causal order in these relationships.

Furthermore, the media offerings used in this study may not accurately reflect the most-selected media among this college sample. Media titles were taken from Nielsen data pertinent to 18- to 49-year-olds. As 97% of the sample comprised students aged 22 or younger, their media preferences may be quite different than the preferences of the general 18- to 49-year-old demographics. Future research should allocate more time and resources to accurately select the top choices of media offerings for college students. Perhaps rather than using the published lists of top ratings, asking students themselves to list the specific media vehicles they are exposed most often might be a more viable and reliable approach.

Lastly, this study did not analyze the Internet as a potential information source of risky sex. It is widely known that the Internet provides unparalleled access to sexual content (Cooper, Scherer, Boies, & Gordon, 1999; Freeman-Longon, 2000). With easy accessibility, affordability, and anonymity of online information (Peter & Valkenburg, 2006), the Internet has made it possible for a more frequent and open consumption of more explicit sexual material. Meanwhile, as universities keep expanding Internet accessibility, college students have become the primary Internet users, and their numbers continue to increase (Odell, Korgen, Schumacher, & Delucchi, 2000; Taylor, 1999). For example, a national survey in 1999 revealed that while 56% of all adults in the United States reported using the Internet, 87% of college students were online (Taylor, 1999). Just one year later, a study based on a large survey of 843 students from eight colleges and universities reported that 94% of males and 96% of females used the Internet extensively, spending about 7.1 hours per week for males, and 5.4 hours for females (Odell, Korgen, Schumacher, & Delucchi, 2000). With this in mind, future research to explore the potential effect of Internet use on college students' sexual risk-taking seems warranted.

In conclusion, this dissertation is the first to examine the relationship between sexual media consumption and sexual risk-taking beyond unintended pregnancy and STIs. Results show that exposure to the sexual media content *is* associated with different types of sexual risk-taking, either directly or through key moderators. These findings demonstrate the importance of examining other types of sexual risk-taking that are common among college students yet have been largely overlooked by the current sexual media research. Continuing to ignore these sexual outcomes would delay a thorough understanding of the role played by a variety of media in the sexual socialization of young people.

## Notes

<sup>1</sup>In this survey, participants were also asked to rate how sexually risky the content of each media offering was (“sexually risky” being defined as sexual behavior that increases risks of physical, emotional, and/or social harm.). Results showed that the sexual intensity rating and the sexual riskiness rating were highly correlated for each media vehicle ( $r_{tv} = 0.92$ ;  $r_{magazine} = 0.95$ ;  $r_{movies\ watched\ at\ home} = 0.91$ ;  $r_{movies\ watched\ in\ the\ theater} = 0.95$ ;  $r_{images\ in\ music\ videos} = 0.97$ ;  $r_{lyrics\ in\ music\ videos} = 0.97$ ). This suggests that the more saturated with sexual content a media vehicle is, the more likely it is to carry messages that are sexually risky at the same time. Because the sexual intensity rating and sexual riskiness rating yielded very similar results, only the sexual intensity rating was used in the analyses for this project.

<sup>2</sup>The six deleted items are as follows: 1. Considering unplanned pregnancy, how many times have you got pregnant or got someone pregnant (to your knowledge)? 2. Do you get tested for STDs/HIV annually? 3. Did you feel any negative emotions after losing your virginity? 4. How many times have you engaged in sex as a way to reinforce your sexual identity when you or someone else was questioning your sexual orientation? 5. How many times have you felt shunned by someone who thought you were a prude for declining a sexual opportunity? 6. What proportion of the time have you felt guilty or distressed after a sexual encounter?

<sup>3</sup>It is possible that participants who have not had sexual intercourse may have engaged in other types of sexual risk-taking behavior such as oral or anal sex. Thus, they may still have nonzero risk-taking scores. In this study, only 6 students reported having had oral sex, and 1 student reported having had anal sex. As these numbers are minimal, no further analyses were conducted with these participants.

<sup>4</sup>The four subscales of sexual risk-taking, hedonistic, socially destructive, voyeuristic, and nonprotective risk-taking, represent four unique types of risky sexual behaviors. It is more meaningful to examine each of the subscales separately rather than combining them together as a whole-scale. However, for all hypotheses tested in this study, the researcher included the statistical results of analyses with full scale of sexual risk-taking (see Tables 6-13) in order to provide readers with additional and adequate information about the hypotheses testing.

## Tables and Figures

Table 1. *Items Used to Measure Sexual Risk-Taking Among College Students*

- 
1. Having sex with different casual acquaintances.
  2. Having sex with a stranger.
  3. Having sex while under the influence of alcohol.
  4. Having sex while under the influence of drugs (legal or illegal).
  5. Not getting tested for STDs/HIV regularly.
  6. Having sex with multiple partners within the past 6 months/.
  7. Having sex with multiple partners at the same time/encounter.
  8. Having sex with someone to get back at an unfaithful partner.
  9. Having sexual intercourse in a public setting.
  10. Having oral sex in a public setting.
  11. Having sexual intercourse without using a condom.
  12. Having sexual intercourse without using any form of contraception.
  13. Having anal intercourse without using a condom.
  14. Having oral sex without using condoms/barriers.
  15. Being pregnant or getting some pregnant.
  16. Not using contraception or protection the most recent time of having sexual intercourse.
  17. Being pressured by a partner to engage in vaginal/oral/anal sex when not want it.
  18. Having sex with someone who was involved with one of your friends either currently or previously.
  19. Dealing with legitimate fears of becoming pregnant or getting someone pregnant.
  20. Having nude pictures posted online (e.g., Facebook, Myspace, Girls Gone Wild) or forwarded on cell phones without your consent by an ex or current partner.
  21. Feeling negative emotions after losing virginity.
  22. Having sex as a way to reinforce your sexual identity when you or someone else was questioning your sexual orientation.
  23. Being caught having sex in public.
  24. Allowing yourself to be videotaped during sex.
  25. Flashing your breasts or genitals at a camera or phone with a camera.
  26. Using the “morning-after-pill”.
  27. Feeling guilty or distressed after a sexual encounter.
  28. Feeling shunned by someone who thought you were a prude for declining a sexual opportunity.
  29. Having sex with a partner you had reason to believe could lose his/her temper and assault you physically.
-

Table 2.1 *Sexual Intensity Ratings for TV Shows*

TV Shows	Number of Judges	Sexual Intensity		
		<i>M</i>	<i>SD</i>	Range
“Desperate Housewives”	103	5.14	1.26	1-7
“Grey’s Anatomy”	98	5.07	1.42	1-7
“Two and a Half Men”	76	4.71	1.50	1-7
“Family Guy”	119	4.58	1.40	1-7
“Law & Order”	92	3.96	1.70	1-7
“Brothers & Sisters”	35	3.91	1.46	1-6
“Superstars of Dance”	32	3.81	1.77	1-7
“How I met Your Mother”	40	3.80	1.57	1-6
“American Dad”	37	3.70	1.71	1-7
“The Office”	107	3.61	1.34	1-7
“The Simpsons”	118	3.59	1.43	1-7
“House”	86	3.37	1.38	1-6
“The Big Bang Theory”	30	3.23	1.55	1-6
“CSI”	81	3.06	1.26	1-6
“Survivor”	49	3.02	1.44	1-7
“Cold Case”	35	2.57	1.14	1-5
“NCIS”	27	2.41	1.19	1-5
“60 Minutes”	85	1.78	.96	1-5
“Indianapolis vs. S.D.”	39	1.77	1.09	1-4
“Sunday Night Football”	90	1.72	1.02	1-5
“Barbara Walters”	71	1.68	.97	1-4
“Sugar Bowl”	54	1.67	1.18	1-6
“Rose Bowl Game”	88	1.55	.86	1-4
“Orange Bowl”	47	1.51	.95	1-4
“How the Grinch Stole Christmas”	105	1.48	.76	1-4
“Extreme Makeover: Home Edition”	91	1.29	.65	1-4
“Rudolph”	84	1.08	.42	1-4

Table 2.2 *Sexual Intensity Ratings for Magazines*

Magazines	Number of Judges	Sexual Intensity		
		<i>M</i>	<i>SD</i>	Range
“Penthouse”	37	6.95	.33	5-7
“Playboy”	74	6.81	.66	3-7
“Maxim”	76	6.53	.81	3-7
“Cosmopolitan”	111	5.97	1.36	1-7
“GQ”	67	5.37	1.45	1-7
“CosmoGIRL”	71	4.35	1.37	1-7
“Men’s Fitness”	32	4.34	1.54	1-7
“Seventeen”	99	4.32	1.33	1-7
“Allure”	65	4.32	1.50	1-7
“Elle”	51	4.29	1.39	1-7
“Men’s Health”	39	3.95	1.64	1-7
“Vogue”	76	3.61	1.35	1-6
“J-14”	31	3.03	1.22	1-6
“Esquire”	22	2.95	1.84	1-6
“Teen Vogue”	54	2.83	1.28	1-5
“Girls’ Life”	24	2.42	1.50	1-6
“O, The Oprah Magazine”	31	2.26	1.18	1-5
“Prevention”	14	2.14	.95	1-4
“Cooking Light”	30	1.3	1.12	1-7
“Better Homes & Gardens”	65	1.17	.52	1-4

Table 2.3 *Sexual Intensity Ratings for Movies Watched at Home*

Movies Watched at Home	Number of Judges	Sexual Intensity		
		<i>M</i>	<i>SD</i>	Range
“The House Bunny”	44	5.02	1.56	1-7
“Burn After Reading”	40	4.60	1.55	1-7
“Wanted”	51	4.37	1.62	1-7
“The Women”	29	4.31	1.49	1-6
“Mamma Mia!”	42	3.93	1.28	1-6
“Step Brothers”	79	3.75	1.78	1-7
“The Sisterhood of the Traveling Pants2”	39	3.49	1.27	1-6
“Iron Man”	66	2.86	1.26	1-5
“Get Smart”	37	2.68	.97	1-4
“Eagle Eye”	49	2.67	1.21	1-6
“Tropic Thunder”	52	2.67	1.29	1-5
“Hancock”	51	2.67	1.24	1-6
“Hellboy II: The Golden Army”	16	2.63	1.31	1-6
“The Dark Knight”	121	2.57	1.17	1-5
“The X-Files”	17	2.53	1.50	1-7
“The Mummy: Tomb of the Dragon	22	2.45	1.26	1-6
“Emperor ”				
“The Strangers”	33	2.45	1.50	1-7
“Fred Claus”	22	2.00	1.38	1-7
“The Happening”	21	1.81	1.66	1-7
“The Chronicles of Narnia: Prince Caspian”	34	1.47	.56	1-3
“Wall-E”	64	1.45	.75	1-5
“Dr. Seuss’ Horton Hears a Who!”	26	1.19	.49	1-3
“Kung Fu Panda”	34	1.18	.46	1-3

Table 2.4 *Sexual Intensity Ratings for Movies Watched in the Theater*

Movies Watched in the Theater	Number of Judges	Sexual Intensity		
		<i>M</i>	<i>SD</i>	Range
“Quantum of Solace”	39	4.87	1.26	1-7
“Role Models”	35	4.43	1.54	1-7
“Slumdog Millionaire”	38	3.71	1.39	1-6
“The Curious Case of Benjamin Button”	39	3.64	1.51	1-7
“Twilight”	36	3.36	1.33	1-6
“Four Christmas”	33	3.24	1.23	1-5
“Seven Pounds”	31	3.13	1.34	1-6
“Yes Man”	23	2.78	1.57	1-7
“Marley and Me”	27	2.70	1.30	1-7
“Gran Torino”	40	2.20	1.09	1-5
“Madagascar: Escape 2 Africa ”	18	2.06	1.55	1-7
“Changeling”	18	2.00	1.08	1-5
“Valkyrie”	22	1.36	.66	1-3

Table 2.5 *Sexual Intensity Ratings for Music Videos and Songs*

Name of Song	Artist	Number of Judges	Sexual Intensity Ratings (Visual)			Sexual Intensity Ratings (Lyrical)		
			<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
“Womanizer”	Britney Spears	83	6.10	1.13	2-7	5.00	1.50	2-7
“When I Grow Up”	The Pussycat Dolls	48	5.42	1.29	2-7	3.98	1.53	1-7
“I Kissed a Girl”	Katy Perry	50	5.12	1.73	1-7	5.20	1.71	1-7
“Whatever You Like”	T.I.	51	4.98	1.66	1-7	4.84	1.72	1-7
“Hero”	Enrique Iglesias	43	4.79	1.73	1-7	2.89	1.41	1-6
“Right Now (Na Na Na)”	Akon	24	4.70	1.33	1-7	5.07	1.60	1-7
“Single Ladies (Put a Ring on It)”	Beyonce	83	4.55	1.56	1-7	3.20	1.45	1-7
“London Bridge”	Fergie	21	4.48	1.72	1-7	4.52	1.58	1-7
“Disturbia”	Rihanna	38	4.45	1.31	1-7	3.38	1.43	1-5
“Keeps Gettin’ Better”	Christina Aguilera	16	4.31	1.25	2-6	3.36	1.56	1-6
“Fireman”	Lil’ Wayne	15	4.13	1.68	1-7	4.24	1.58	1-7
“Can’t Believe It”	T-Pain	21	4.10	1.79	1-7	4.26	1.61	1-7
“Rehab”	Rihanna	29	4.00	1.44	1-7	3.20	1.42	1-7
“Hot n Cold”	Katy Perry	41	3.95	1.20	1-7	3.25	1.31	1-7
“Miss Independent”	Ne-Yo	30	3.87	1.48	1-7	3.29	1.65	1-7
“If I Were a Boy”	Beyonce	43	3.49	1.30	1-7	2.89	1.17	1-6
“Live Your Life”	T.I.	30	3.47	1.98	1-7	3.11	1.71	1-7
“Love Lockdown”	Kanye West	35	3.46	1.48	1-6	3.22	1.23	1-5
“Heartless”	Kanye West	31	3.39	1.33	1-6	2.95	1.29	1-6
“So What”	Pink	30	3.37	1.43	1-7	2.98	1.51	1-5
“Love Story”	Taylor Swift	61	2.54	1.15	1-6	2.01	1.01	1-5

Table 2.5 (cont.)

Name of Song	Artist	Number of Judges	Sexual Intensity Ratings (Visual)			Sexual Intensity Ratings (Lyrical)		
			<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
“Better in Time (US Edit)”	Leona Lewis	22	2.36	1.43	1-7	2.16	1.24	1-6
“I’m Yours”	Jason Mraz	33	2.30	1.29	1-5	2.16	1.15	1-6
“7 Things”	Miley Cyrus	29	2.17	1.10	1-5	1.85	.80	1-4
“Crush”	David Archuleta	15	2.13	1.55	1-7	2.18	1.37	1-7
“Just a Dream”	Carrie Underwood	21	2.05	1.53	1-7	1.33	.87	1-5

*Note.* The mean ratings of music videos were calculated by averaging the ratings for lyrics and visuals; and the mean ratings of songs were based on ratings for lyrics only.

Table 3. Amount of Sexual Content and Overall Sexual Intensity Rating Based on Content Analysis of the Top 3 and Bottom 3 Media Offerings

<b>Media Offerings</b>	<b>Type of Media</b>	<b>Ranking</b>	<b>Amount of Sexual Content</b>	<b>Overall Sexual Intensity Rating</b>
Grey's Anatomy	TV show	Top 3	19	6
Two and a Half Men	TV show	Top 3	11	3
Desperate Housewives	TV show	Top 3	13	3
Rudolph	TV show	Bottom 3	0	1
How the Grinch Stole Christmas	TV show	Bottom 3	10	2
Extreme Makeover	TV show	Bottom 3	0	1
Maxim	Magazine	Top 3	44	6
Playboy	Magazine	Top 3	84	6
Penthouse	Magazine	Top 3	104	6
Teen Voices	Magazine	Bottom 3	0	1
Cooking Light	Magazine	Bottom 3	4	2
Better Homes & Gardens	Magazine	Bottom 3	1	1
Wanted	Movies watched at home	Top 3	27	4
Burn After Reading	Movies watched at home	Top 3	29	2
The House Bunny	Movies watched at home	Top 3	239	3
Kung Fu Panda	Movies watched at home	Bottom 3	0	1
Dr. Seuss' Horton Hears a Who!	Movies watched at home	Bottom 3	0	1
Wall-E	Movies watched at home	Bottom 3	0	1
Milk	Movies watched in the theater	Top 3	36	6
Role Models	Movies watched in the theater	Top 3	58	7
Quantum of Solace	Movies watched in the theater	Top 3	23	3
Rab Ne Bana Di Jodi	Movies watched in the theater	Bottom 3	10	2
Punisher: War Zone	Movies watched in the theater	Bottom 3	0	1
The Boy in the Striped Pants	Movies watched in the theater	Bottom 3	0	1

Table 3. (cont.)

<b>Media Offerings</b>	<b>Type of Media</b>	<b>Ranking</b>	<b>Amount of Sexual Content</b>	<b>Overall Sexual Intensity Rating</b>
Trading Places	Music videos	Top 3	64	4
Womanizer	Music videos	Top 3	126	4
When I Grow Up	Music videos	Top 3	202	4
Crush	Music videos	Bottom 3	0	1
Just a Dream	Music videos	Bottom 3	1	1
Imagine	Music videos	Bottom 3	0	1
Right Now (Na Na Na)	Songs	Top 3	3	3
I Kissed a Girl	Songs	Top 3	4	2
Trading Places	Songs	Top 3	9	3
I Stay in Love	Songs	Bottom 3	0	1
Imagine	Songs	Bottom 3	0	1
Just a Dream	Songs	Bottom 3	0	1

Table 4. *Rotated Factor Matrix for Sexual Risk-Taking*

Scale	Hedonistic Risk-Taking	Socially Destructive Risk-Taking	Voyeuristic Risk-Taking	Nonprotective Risk-Taking
How many different casual acquaintances (i.e., someone you know but do not consider to be a boyfriend or girlfriend) have you had sex with?	<b>.59</b>	.02	.12	-.06
How many times have you had sex with a stranger (i.e., someone you didn't know until that day)?	<b>.66</b>	-.01	.28	-.10
How many times have you had sex while under the influence of any kind of substance that could alter your judgment?	<b>.66</b>	.13	.53	.03
How many times have you had multiple sexual partners (i.e., more than one) at the same time/encounter?	<b>.87</b>	.11	.24	.07
How many times have nude pictures of you been posted online (e.g., Facebook, Myspace, Girls Gone Wild) or forwarded on cell phones without your consent by an ex or current partner?	<b>.90</b>	.13	.01	.03
How many times have you used the "morning-after-pill" (RU486)?	<b>.64</b>	.20	-.14	.27
How many times have you had sex with someone to get back at an unfaithful partner?	.10	<b>.90</b>	.08	-.07
How many times have you had sex with a partner you had reason to believe could lose his/her temper and assault you physically?	-.03	<b>.67</b>	-.00	.13
How many times have you had sex with someone who was involved with one of your friends either currently or previously?	.16	<b>.87</b>	.13	-.03
How many times have you had to deal with legitimate fears of becoming pregnant or getting someone pregnant?	.49	<b>.72</b>	.08	.11
How many times have you had oral sex in a place where you knew there was a good chance someone could observe you?	.01	.30	<b>.60</b>	.04

Table 4. (cont.)

Scale	Hedonistic Risk-Taking	Socially Destructive Risk-Taking	Voyeuristic Risk-Taking	Nonprotective Risk-Taking
How many times have you allowed yourself to be videotaped during sex?	.12	-.10	<b>.79</b>	.13
How many times have you gotten caught having sex in a place where you knew there was a good chance someone could observe you?	.27	.24	<b>.65</b>	.11
How many times have you had intercourse in a place where you knew there was a good chance someone could observe you?	-.01	.26	<b>.54</b>	.06
Did you use contraception or protection the most recent time you had sexual intercourse?	.02	.04	.01	<b>.71</b>
If you have had vaginal intercourse, what proportion of the time have you or your partner used a condom?	.06	.08	.06	<b>.68</b>
If you have had vaginal intercourse, what proportion of the time have you or your partner used any form of contraception?	-.02	.02	.12	<b>.71</b>
If you have had anal intercourse, what proportion of the time have you or your partner used a condom?	.22	-.07	.09	<b>.45</b>

Table 5. *Descriptive Statistics for Key Variables*

Variables	Percent or Mean ( <i>SD</i> )	Range (Actual)
<b>Control variables</b>		
Age	20.31 (1.23)	18-29
Gender	35% male 65% female	1= male 2 = female
Year of class	8% freshman 34% sophomore 35% junior 23% senior	1= freshman 2 = sophomore 3 = junior 4 = senior
Race	67% White 13% Black 6% Latino 9% Asian American 5% other	1= White 2 = Black 3= Latino 4 = Asian American 5 = other
Place of residence	41% live with other people in a co-ed dorm, apartment, or house 49% live with other people in a single-sex dorm, apartment, or house 5% live by yourself 1% live with parents 4% specified as other	1= live with other people in a co-ed dorm, apartment, or house 2 = live with other people in a single-sex dorm, apartment, or house 3 = live by yourself 4 = live with parents 5 = other
Sexual orientation	97% heterosexual 0.9% homosexual 1.7% bisexual 0.4% don't know 0.1% other	1 = heterosexual 2 = homosexual 3 = bisexual 4 = don't know 5 = other
Parents' marital status	78% married and living together 5% separated 16% divorced	1= married and living together 2 = separated 3 = divorced
Perceived friends' sexual experience	76% (24.14)	0-100
Relational status	44% serious dating relationship 15% casual relationship or multiple relationships 40% no romantic relationship	1 = serious dating relationship 2 = casual relationship or multiple relationships 3 = no romantic relationship
Past sexual experience	0.85	0-1
Kissing	0.95	0-1
Sexual touching	0.91	0-1
Oral sex	0.80	0-1
Sexual intercourse	0.76	0-1
Daily TV viewing	2.85 (2.64)	0-20
Daily magazine reading	0.52 (0.88)	0-7

Table 5. (cont.)

Variables	Percent or Mean ( <i>SD</i> )	Range (Actual)
Daily movie watching at home	1.42 (1.59)	0-15
Daily movie watching in the theater	0.41 (0.80)	0-7
Daily music video viewing	0.77 (1.26)	0-9.43
Daily song listening	3.57 (3.27)	0-24
<b>Predictor variables</b>		
Sexual TV viewing	5.33 (1.34)	3.04-15.19
Sexual magazine reading	5.49 (1.39)	3.98-12.16
Sexual movie watching	4.22 (0.73)	3.03-9.10
Sexual music video viewing	6.59 (2.99)	3.65-17.81
Sexual song listening	11.15 (3.34)	3.40-17.06
<b>Moderators</b>		
School performance	0.80 (0.12)	.42-1.00
Religiosity	2.86 (1.17)	1-5
Sensation seeking	3.08 (0.57)	1.54-4.81
Parental monitoring	3.38 (0.73)	1-5
Premarital sexual permissiveness	4.40 (1.67)	1-7
Endorsement of the sexual double	2.89 (1.19)	1-7
<b>Criterion variables</b>		
Sexual risk-taking	0.05 (0.07)	0-1
Hedonistic risk-taking	0.02 (0.04)	0-0.78
Socially destructive risk-taking	0.01 (0.05)	0-0.88
Voyeuristic risk-taking	0.02 (0.04)	0-0.51
Unprotective risk-taking	0.16 (0.22)	0-1
Sexual regret	2.20 (0.91)	1-5

Table 6. Summary of Regression Analyses Resulting from Regressing Sexual Risk-Taking on Exposure to Sexual Media

Predictors	Criteria									
	Hedonistic Risk-Taking		Socially Destructive Risk-Taking		Voyeuristic Risk-Taking		Nonprotective Risk-Taking		Sexual Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 1</b>		.04**		.02		.04**		.06***		.07***
Age	.06		.04		.21**		.09		.13	
Gender	-.10*		-.04		-.15***		-.14**		-.17***	
Year of class	-.04		.00		-.20**		-.08		-.11	
Race	.08		.02		.03		.13**		.13**	
Place of residence	-.03		-.06		.02		-.01		-.02	
Sexual orientation	.01		-.02		.00		.04		.03	
Parents' marital status	.04		-.01		.01		.12*		.11*	
Friends' sexual experience	.18***		.09		.11*		.08		.13**	
Relational status	.06		.03		-.08		-.08*		-.07	
Past sexual experience	-.05		.02		-.04		.03		.02	
<b>Block 2</b>		.08***		.01		-.01		.04***		.04**
Daily TV viewing	-.09		-.04		-.02		.07		.04	
Daily magazine reading	.01		.01		.00		-.06		-.05	
Daily movie watching at home	.25***		.03		-.01		.09		.11*	
Daily movie watching in theater	.09		-.06		.03		.19***		.18**	
Daily music video viewing	-.10*		.08		-.07		-.03		-.03	
Daily song listening	.15**		.01		.07		-.06		-.02	

Table 6 (cont.)

Predictors	Criteria									
	Hedonistic Risk-Taking		Socially Destructive Risk-Taking		Voyeuristic Risk-Taking		Nonprotective Risk-Taking		Sexual Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
Block 3		.02**		.02		.01		.00		.01
Sexual TV viewing	.01		.00		-.07		-.04		-.05	
Sexual magazine reading	.20***		.12		.17**		.09		.15**	
Sexual movie watching at home	-.03		-.09		.05		.03		.02	
Sexual movie watching in theater	-.04		.01		-.06		.00		-.01	
Sexual music video viewing	.02		.04		.00		-.03		-.02	
Sexual song listening	-.03		-.09		-.02		.02		-.01	

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

<sup>a</sup> Full scale of risk-taking that combines the four subscales all together.

Table 7. Summary of Regression Analyses on Moderating Effects of Gender on Sexual Media Exposure and Sexual Risk-Taking

Predictors	Criteria									
	Hedonistic		Socially		Voyeuristic		Nonprotective		Sexual	
	Risk-Taking		Destructive		Risk-Taking		Risk-Taking		Risk-Taking <sup>a</sup>	
	Risk-Taking		Risk-Taking		Risk-Taking		Risk-Taking		Risk-Taking	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 1</b>		.04**		.02		.04**		.06***		.07***
Age	.06		.04		.21**		.09		.13	
Gender	-.10*		-.04		-.15**		-.14**		-.17***	
Year of class	-.04		.00		-.20**		-.08		-.11	
Race	.08		.02		.03		.13**		.13**	
Place of residence	-.03		-.06		.02		-.01		-.02	
Sexual orientation	.01		-.02		.00		.04		.03	
Parents' marital status	.04		-.01		.01		.12**		.11*	
Friends' sexual experience	.18***		.09		.11*		.08		.13**	
Relational status	.06		.03		-.08		-.08		-.07	
Past sexual experience	-.05		.02		-.04		.03		.02	
<b>Block 2</b>		.08***		.01		-.01		.10***		.04**
Daily TV viewing	-.09		-.04		-.02		.07		.04	
Daily magazine reading	-.01		.01		.00		-.06		-.05	
Daily movie watching at home	.25***		.03		-.01		.09		.11*	
Daily movie watching in theater	.09		-.06		.03		.19***		.18**	
Daily music video viewing	-.10		.08		-.07		-.03		-.03	
Daily song listening	.15**		.01		.07		-.06		-.02	

Table 7 (cont.)

Predictors	Criteria									
	Hedonistic		Socially		Voyeuristic		Nonprotective		Sexual	
	Risk-Taking		Destructive		Risk-Taking		Risk-Taking		Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 3</b>		.02**		.02		.01		.09		.01
Sexual TV viewing	.01		.00		-.07		-.04		-.05	
Sexual magazine reading	.20***		.12		.17**		.09		.15**	
Sexual movie watching at home	-.03		-.09		.05		.03		.02	
Sexual movie watching in theater	-.04		.01		-.06		.00		-.01	
Sexual music video viewing	.02		.04		.00		-.03		-.02	
Sexual song listening	-.03		-.09		-.02		.02		-.01	
<b>Block 4</b>		.01		.02		.00		.11		.02*
Gender*sexual TV viewing	-.01		-.06		-.02		.04		.02	
Gender*sexual magazine reading	-.16**		-.06		-.09		-.08		-.12*	
Gender *sexual movie watching at home	-.04		.08		.03		.06		.07	
Gender*sexual movie watching in theater	.04		-.00		-.04		-.04		-.04	
Gender*sexual music video viewing	.01		.05		.09		.14**		.15**	
Gender*sexual song listening	.02		.07		.02		-.10		-.07	

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

<sup>a</sup> Full scale of risk-taking that combines the four subscales all together.

Table 8. Summary of Regression Analyses on Moderating Effects of Sensation Seeking on Sexual Media Exposure and Sexual Risk-Taking

Predictors	Criteria									
	Hedonistic Risk-Taking		Socially Destructive Risk-Taking		Voyeuristic Risk-Taking		Nonprotective Risk-Taking		Sexual Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 1</b>	<b>.05**</b>		<b>.02</b>		<b>.07***</b>		<b>.08***</b>		<b>.09***</b>	
Age	.06		.01		.23**		.04		.08	
Gender	-.10		-.03		-.16**		-.14**		-.16**	
Year of class	-.03		.02		-.18*		-.01		-.04	
Race	.09		.01		.00		.14**		.14**	
Place of residence	-.03		-.07		-.01		-.03		-.04	
Sexual orientation	.04		-.03		.00		.00		.00	
Parents' marital status	.05		-.02		.30		.11*		.10*	
Friends' sexual experience	.16**		.08		.50		.09		.12**	
Relational status	.02		.01		-.06		-.16**		-.14**	
Past sexual experience	-.04		-.01		-.02		.10*		.08	
Sensation seeking	.12*		.07		.17**		.05		.09	
<b>Block 2</b>	<b>.11***</b>		<b>.01</b>		<b>.00</b>		<b>.06***</b>		<b>.05***</b>	
Daily TV viewing	-.08		-.03		-.01		.11*		.08	
Daily magazine reading	.00		-.04		.20		-.06		-.06	
Daily movie watching at home	.29***		.05		.03		.06		.11*	
Daily movie watching in theater	.08		-.04		.04		.23***		.21***	
Daily music video viewing	-.10		.07		-.06		-.02		-.02	
Daily song listening	.17**		.01		.08		-.06		-.02	

Table 8 (cont.)

Predictors	Criteria									
	Hedonistic		Socially		Voyeuristic		Nonprotective		Sexual	
	Risk-Taking		Destructive		Risk-Taking		Risk-Taking		Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 3</b>		.04**		.03		.01		.00		.01
Sexual TV viewing	.03		-.01		-.04		-.04		-.04	
Sexual magazine reading	.23***		.15		.17**		.10		.17**	
Sexual movie watching at home	-.04		-.10		.00		.02		-.01	
Sexual movie watching in theater	-.05		.00		-.06		-.02		-.03	
Sexual music video viewing	.01		.05		.01		-.04		-.03	
Sexual song listening	.00		-.12		-.07		.07		.03	
<b>Block 4</b>		.04***		.01		.05***		.00		.00
Sensation seeking *sexual TV viewing	-.07		.04		.04		-.06		-.05	
Sensation seeking *sexual magazine reading	.27***		.04		.22***		.01		.08	
Sensation seeking *sexual movie watching at home	-.03		-.09		-.03		.05		.01	
Sensation seeking *sexual movie watching in theater	-.04		-.04		-.02		.00		-.02	
Sensation seeking *sexual music video viewing	-.13**		.01		-.11*		-.04		-.07	
Sensation seeking *sexual song listening	-.09		-.07		-.16**		.11*		.04	

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

<sup>a</sup> Full scale of risk-taking that combines the four subscales all together.

Table 9. Summary of Regression Analyses on Moderating Effects of Premarital Sexual Permissiveness on Sexual Media Exposure and Sexual Risk-Taking

Predictors	Criteria									
	Hedonistic		Socially		Voyeuristic		Nonprotective		Sexual	
	Risk-Taking		Destructive		Risk-Taking		Risk-Taking		Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 1</b>		.04**		.01		.04**		.06***		.07***
Age	.06		.03		.21**		.10		.13	
Gender	-.11*		-.03		-.15**		-.15**		-.17***	
Year of class	-.04		.00		-.20**		-.09		-.12	
Race	.07		.02		.05		.12*		.13*	
Place of residence	-.03		-.06		.02		-.01		-.02	
Sexual orientation	.01		-.02		.00		.04		.03	
Parents' marital status	.05		-.01		.00		.12*		.11*	
Friends' sexual experience	.19***		.08		.10*		.09		.13**	
Relational status	.06		.02		-.08		-.07		-.07	
Past sexual experience	-.05		-.01		-.03		.07		.05	
Premarital sexual permissiveness	-.01		.03		.05		-.03		-.01	
<b>Block 2</b>		.10***		.01		-.01		.04**		.03**
Daily TV viewing	-.10*		-.04		-.03		.07		.04	
Daily magazine reading	-.03		-.04		-.01		-.03		-.04	
Daily movie watching at home	.25***		.04		-.01		.09		.11*	
Daily movie watching in theater	.10		-.04		.03		.18**		.17**	
Daily music video viewing	-.12*		.05		-.07		-.02		-.03	
Daily song listening	.18***		.02		.08		-.06		-.01	

Table 9 (cont.)

Predictors	Criteria									
	Hedonistic		Socially		Voyeuristic		Nonprotective		Sexual	
	Risk-Taking		Destructive		Risk-Taking		Risk-Taking		Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 3</b>		.03**		.02		.01		-.01		.00
Sexual TV viewing	.00		-.02		-.07		-.04		-.05	
Sexual magazine reading	.21***		.14*		.17**		.08		.15**	
Sexual movie watching at home	-.02		-.08		.05		.03		.01	
Sexual movie watching in theater	-.05		.00		-.07		.02		.00	
Sexual music video viewing	.03		.04		.01		-.03		-.02	
Sexual song listening	-.02		-.10		-.03		.01		-.02	
<b>Block 4</b>		.00		.01		.00		.01		.01
Premarital sexual permissiveness *sexual TV viewing	.02		.01		-.03		.01		.01	
Premarital sexual permissiveness *sexual magazine reading	.07		.05		.12*		.06		.09	
Premarital sexual permissiveness *sexual movie watching at home	-.05		-.04		.01		.07		.05	
Premarital sexual permissiveness *sexual movie watching in theater	-.01		-.01		-.01		-.11		-.10	
Premarital sexual permissiveness *sexual music video viewing	-.06		.05		-.04		-.11*		-.10*	
Premarital sexual permissiveness *sexual song listening	.05		.00		-.06		.13*		.11*	

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

<sup>a</sup> Full scale of risk-taking that combines the four subscales all together.

Table 10. *Summary of Regression Analyses on Moderating Effects of Endorsement of the Sexual Double Standard on Sexual Media Exposure and Sexual Risk-Taking*

Predictors	Criteria									
	Hedonistic		Socially		Voyeuristic		Nonprotective		Sexual	
	Risk-Taking		Destructive		Risk-Taking		Risk-Taking		Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 1</b>		.03**		.02		.04**		.06***		.08***
Age	.07		.04		.22**		.12		.16*	
Gender	-.10*		-.04		-.16**		-.14**		-.17***	
Year of class	-.04		.00		-.21**		-.12		-.14	
Race	.08		.01		.04		.13**		.14**	
Place of residence	-.02		-.06		.02		.01		.00	
Sexual orientation	.01		-.01		.01		.04		.03	
Parents' marital status	.05		-.01		.01		.10*		.10*	
Friends' sexual experience	.17**		.08		.10*		.09		.13**	
Relational status	.06		.03		-.07		-.11*		-.09*	
Past sexual experience	-.04		.03		-.03		.09		.07	
Endorsement of the sexual double standard	-.01		.04		.00		.03		.03	
<b>Block 2</b>		.10***		.01		-.01		.05***		.04***
Daily TV viewing	-.10*		-.04		-.03		.08		.05	
Daily magazine reading	.01		.01		.00		-.04		-.03	
Daily movie watching at home	.26***		.04		.00		.09		.12*	
Daily movie watching in theater	.08		-.06		.02		.21***		.19**	
Daily music video viewing	-.11*		.07		-.07		-.04		-.05	
Daily song listening	.17***		.02		.09		-.06		-.01	

Table 10 (cont.)

Predictors	Criteria									
	Hedonistic Risk-Taking		Socially Destructive Risk-Taking		Voyeuristic Risk-Taking		Nonprotective Risk-Taking		Sexual Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 3</b>		.03**		.02		.01		.00		.01
Sexual TV viewing	.02		.00		-.07		-.01		-.01	
Sexual magazine reading	.20***		.12		.17**		.09		.15**	
Sexual movie watching at home	-.02		-.09		.05		.02		.00	
Sexual movie watching in theater	-.05		.01		-.07		-.01		-.02	
Sexual music video viewing	.02		.04		.00		-.03		-.02	
Sexual song listening	-.02		-.11		-.02		.04		.01	
<b>Block 4</b>		.01		.00		.01		.01		.01
Endorsement of the sexual double standard *sexual TV viewing	-.06		-.02		-.10		-.10		-.11*	
Endorsement of the sexual double standard *sexual magazine reading	-.11		-.01		-.10		.02		-.01	
Endorsement of the sexual double standard *sexual movie watching at home	-.02		-.05		.04		.10		.08	
Endorsement of the sexual double standard *sexual movie watching in theater	.07		.03		.03		-.05		-.03	
Endorsement of the sexual double standard *sexual music video viewing	-.02		.02		.06		.04		.04	
Endorsement of the sexual double standard *sexual song listening	.08		-.06		.06		-.11*		-.09	

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

<sup>a</sup> Full scale of risk-taking that combines the four subscales all together.

Table 11. *Summary of Regression Analyses on Moderating Effects of School Performance on Sexual Media Exposure and Sexual Risk-Taking*

Predictors	Criteria									
	Hedonistic Risk-Taking		Socially Destructive Risk-Taking		Voyeuristic Risk-Taking		Nonprotective Risk-Taking		Sexual Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 1</b>		.05***		.02		.04**		.06***		.08***
Age	.09		.04		.24**		.07		.12	
Gender	-.07*		-.04		-.15**		-.13**		-.15**	
Year of class	-.07		.00		-.23**		-.07		-.10	
Race	.04		.01		.04		.09		.10	
Place of residence	-.04		-.06		.01		-.01		-.02	
Sexual orientation	.00		-.02		.00		.04		.03	
Parents' marital status	.04		-.02		.00		.12**		.11*	
Friends' sexual experience	.16**		.09		.11*		.07		.11*	
Relational status	.05		.03		-.08		-.08		-.07	
Past sexual experience	-.06		.02		-.04		.03		.01	
School performance	-.14**		-.03		-.01		-.08		-.10	
<b>Block 2</b>		.07***		.01		-.01		.04***		.03**
Daily TV viewing	-.10*		-.04		-.03		.06		.03	
Daily magazine reading	.00		.01		.00		-.05		-.04	
Daily movie watching at home	.24***		.03		-.01		.08		.11*	
Daily movie watching in theater	.08		-.06		.02		.20***		.18**	
Daily music video viewing	-.09		.08		-.07		-.03		-.03	
Daily song listening	.14**		.00		.07		-.07		-.03	

Table 11 (cont.)

Predictors	Criteria									
	Hedonistic		Socially		Voyeuristic		Nonprotective		Sexual	
	Risk-Taking		Destructive		Risk-Taking		Risk-Taking		Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 3</b>		.02**		.02		.01		-.01		.01
Sexual TV viewing	.01		.00		-.07		-.05		-.05	
Sexual magazine reading	.20***		.12		.16**		.09		.15**	
Sexual movie watching at home	-.04		-.08		.05		.03		.02	
Sexual movie watching in theater	-.02		.01		-.06		-.01		-.02	
Sexual music video viewing	.02		.04		.01		-.04		-.03	
Sexual song listening	-.04		-.09		-.03		.02		-.01	
<b>Block 4</b>		.02*		.00		-.01		.02*		.02*
School performance *sexual TV viewing	-.03		.01		.03		.08		.07	
School performance *sexual magazine reading	-.14**		.00		-.08		-.19**		-.20***	
School performance *sexual movie watching at home	.07		.03		-.01		.03		.04	
School performance *sexual movie watching in theater	-.01		-.02		.03		.02		.02	
School performance *sexual music video viewing	.12*		.00		.05		.07		.08	
School performance *sexual song listening	.03		.01		.01		.07		.07	

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

<sup>a</sup> Full scale of risk-taking that combines the four subscales all together.

Table 12. *Summary of Regression Analyses on Moderating Effects of Religiosity on Sexual Media Exposure and Sexual Risk-Taking*

Predictors	Criteria									
	Hedonistic Risk-Taking		Socially Destructive Risk-Taking		Voyeuristic Risk-Taking		Nonprotective Risk-Taking		Sexual Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 1</b>		.04**		.02		.04**		.06***		.08***
Age	.06		.04		.21**		.09		.13	
Gender	-.10*		-.05		-.15**		-.16**		-.18***	
Year of class	-.04		.00		-.20**		-.07		-.10	
Race	.08		.01		.04		.11*		.12*	
Place of residence	-.03		-.06		.02		-.02		-.02	
Sexual orientation	.01		-.02		.00		.04		.04	
Parents' marital status	.05		-.01		.00		.13**		.12*	
Friends' sexual experience	.18***		.09		.10*		.09*		.14**	
Relational status	.06		.03		-.08		-.08		-.07	
Past sexual experience	-.05		.02		-.03		.03		.02	
Religiosity	.01		.05		-.04		.09		.08	
<b>Block 2</b>		.08***		.01		-.01		.04***		.03**
Daily TV viewing	-.09		-.04		-.02		.06		.04	
Daily magazine reading	-.01		.01		.00		-.05		-.04	
Daily movie watching at home	.24***		.03		-.01		.08		.11*	
Daily movie watching in theater	.09		-.06		.03		.19***		.17**	
Daily music video viewing	-.10*		.07		-.06		-.03		-.04	
Daily song listening	.16**		.01		.07		-.06		-.02	

Table 12 (cont.)

Predictors	Criteria									
	Hedonistic		Socially		Voyeuristic		Nonprotective		Sexual	
	Risk-Taking		Destructive		Risk-Taking		Risk-Taking		Risk-Taking <sup>a</sup>	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
<b>Block 3</b>		.02**		.02		.01		.00		.01
Sexual TV viewing	.01		.00		-.07		-.05		-.05	
Sexual magazine reading	.19*		.12		.17**		.09		.15**	
Sexual movie watching at home	-.03		-.09		.05		.04		.02	
Sexual movie watching in theater	-.04		.01		-.07		.01		-.01	
Sexual music video viewing	.02		.03		.00		-.04		-.03	
Sexual song listening	-.03		-.09		-.02		.03		.00	
<b>Block 4</b>		-.01		.01		-.01		.01		.01
Religiosity *sexual TV viewing	-.02		-.04		-.02		.00		-.01	
Religiosity *sexual magazine reading	-.02		.05		-.08		-.03		-.03	
Religiosity *sexual movie watching at home	.02		-.01		-.03		-.06		-.06	
Religiosity *sexual movie watching in theater	.03		-.01		.05		.06		.06	
Religiosity *sexual music video viewing	-.07		-.04		.02		-.12*		.10	
Religiosity *sexual song listening	.00		-.08		.05		-.12*		-.11*	

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

<sup>a</sup> Full scale of risk-taking that combines the four subscales all together.

Table 13. Summary of the Sexual Media Related Main Effects and Interaction Effects on Sexual Risk-Taking

Media Variables	Hedonistic Risk-Taking	Socially Destructive Risk-Taking	Voyeuristic Risk-Taking	Nonprotective Risk-Taking	Sexual Risk-Taking <sup>a</sup>
Sexual TV viewing	0	0	0	0	
Sexual magazine reading	+ <b>gender:</b> males (+), females (0).  <b>school performance:</b> better school performance (0), poorer school performance (+).  <b>sensation seeking:</b> higher sensation-seekers (+), lower sensation-seekers (0).	0	+ <b>sensation seeking:</b> higher sensation-seekers (+), lower sensation-seekers (0).  <b>premarital sexual permissiveness:</b> higher premarital sexual permissiveness (+), lower premarital sexual permissiveness (0),	0 <b>gender:</b> males (+), females (0).  <b>School performance:</b> better school performance (0), poorer school performance (+).	+ <b>gender:</b> males (+), females (0).  <b>school performance:</b> better school performance (0), poorer school performance (+).
Sexual movie watching	0	0	0	0	0
Sexual music video viewing	0	0	0	0 <b>religion:</b> higher religiosity (0) lower religiosity (+)	0
Sexual song listening	0	0	0	0 <b>sensation seeking:</b> higher sensation-seekers (+), lower sensation-seekers (0).  <b>premarital sexual permissiveness:</b> higher premarital sexual permissiveness (+), lower premarital sexual permissiveness (-).	0

*Note.* 0 represents a nonsignificant relationship; + represents a significant and positive relationship; - represents a significant and negative relationship; a sign without a parenthesis shows the direction of the main effect of sexual media exposure on sexual risk-taking.  
<sup>a</sup> Full scale of risk-taking that combines the four subscales all together.

Figure 1. Analytical Framework for the Dissertation Project.

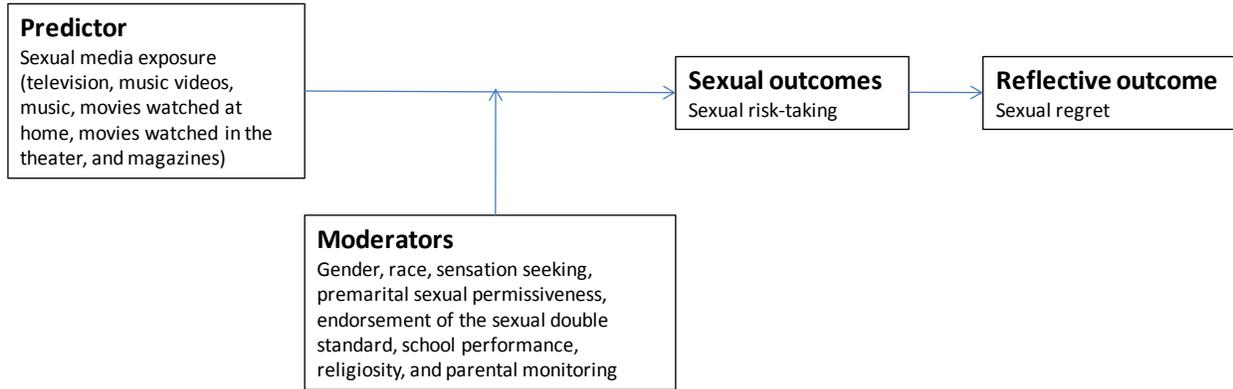
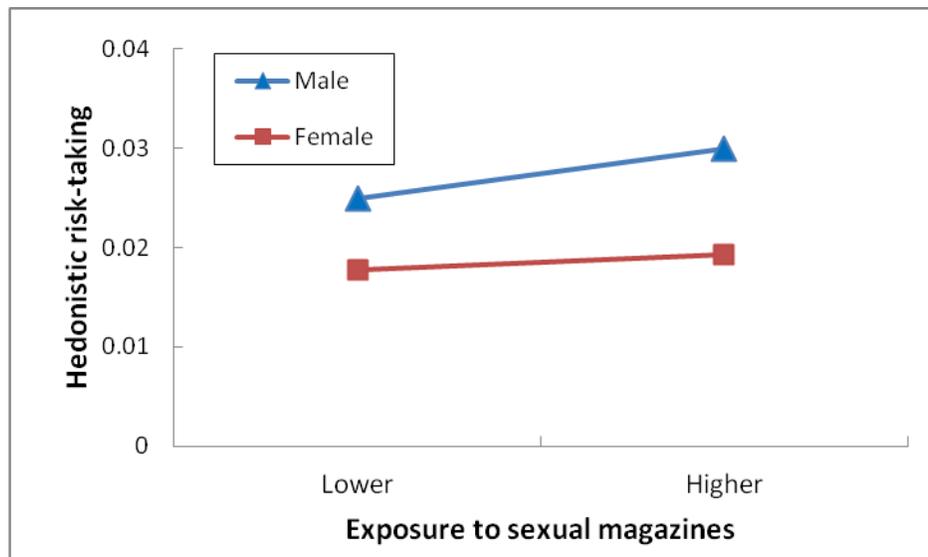
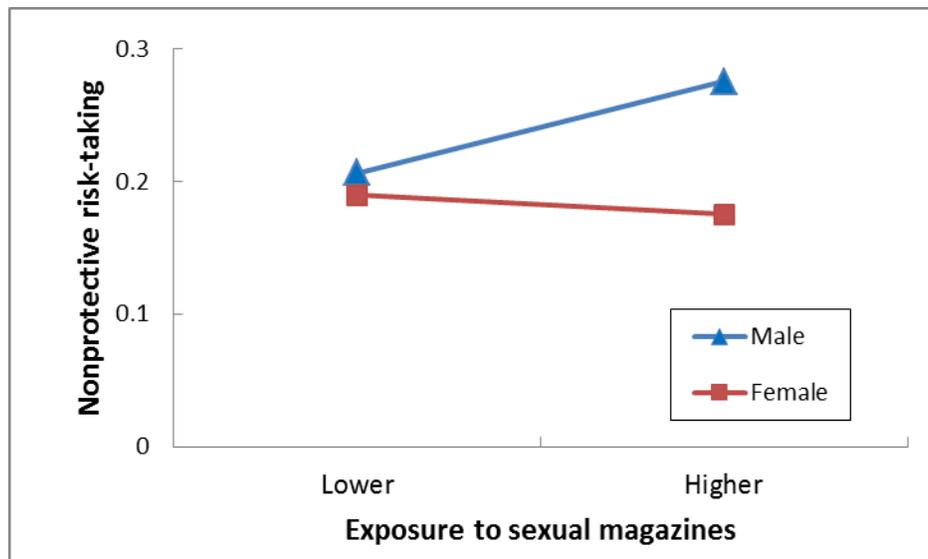


Figure 2. Plot of the Interaction between Gender and Sexual Magazine Reading on Hedonistic Risk-Taking.



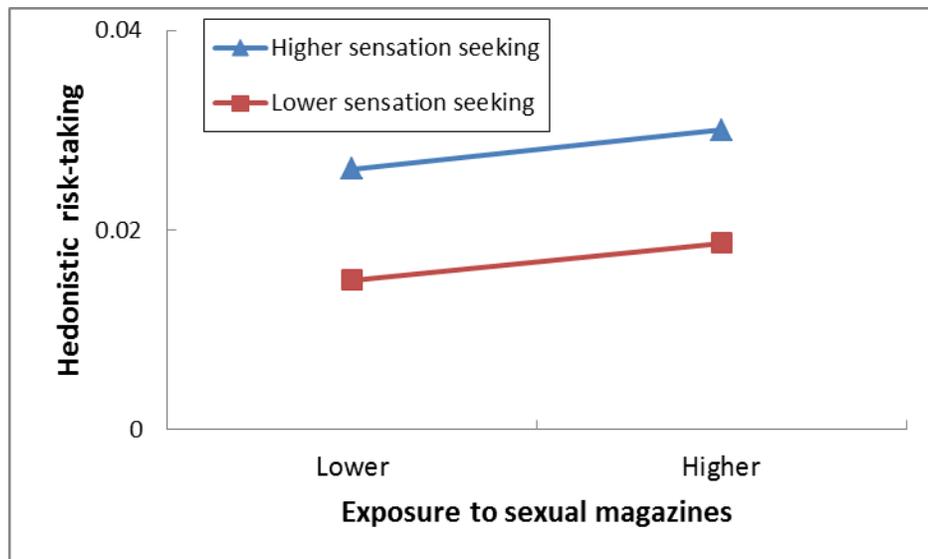
Note. Males:  $M_{higher\ exposure} = 0.030$  ( $SD = 0.04$ ),  $M_{lower\ exposure} = 0.025$  ( $SD = 0.08$ ); Females:  $M_{higher\ exposure} = 0.019$  ( $SD = 0.03$ ),  $M_{lower\ exposure} = 0.018$  ( $SD = 0.02$ ).

Figure 3. Plot of the Interaction between Gender and Sexual Magazine Reading on Nonprotective Risk-Taking.



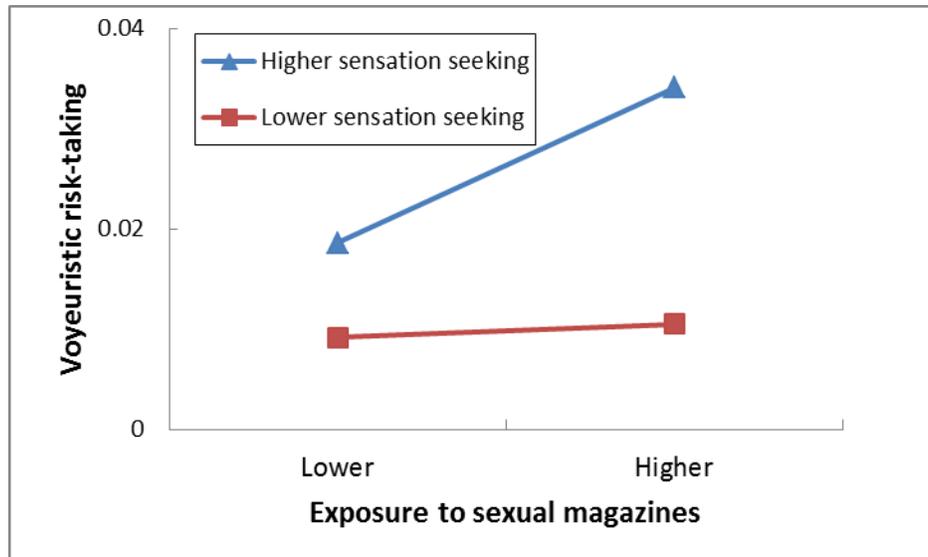
Note. Males:  $M_{higher\ exposure} = 0.275$  ( $SD = 0.28$ ),  $M_{lower\ exposure} = 0.207$  ( $SD = 0.25$ ); Females:  $M_{higher\ exposure} = 0.175$  ( $SD = 0.21$ ),  $M_{lower\ exposure} = 0.190$  ( $SD = 0.22$ ).

Figure 4. Plot of the Interaction between Sensation Seeking and Sexual Magazine Reading on Hedonistic Risk-Taking.



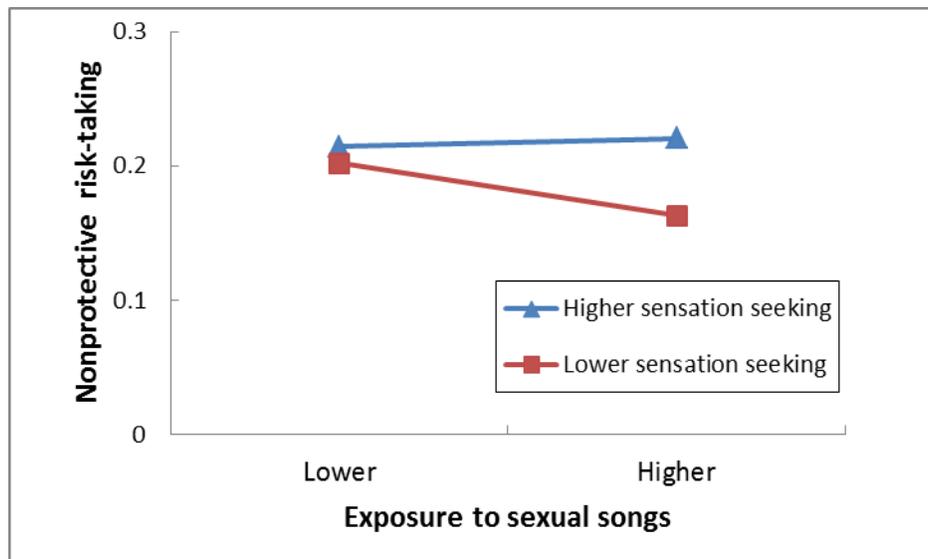
Note. Higher sensation seeking:  $M_{higher\ exposure} = 0.030$  ( $SD = 0.04$ ),  $M_{lower\ exposure} = 0.026$  ( $SD = 0.07$ ); Lower sensation seeking:  $M_{higher\ exposure} = 0.019$  ( $SD = 0.03$ ),  $M_{lower\ exposure} = 0.015$  ( $SD = 0.03$ ).

Figure 5. Plot of the Interaction between Sensation Seeking and Sexual Magazine Reading on Voyeuristic Risk-Taking.



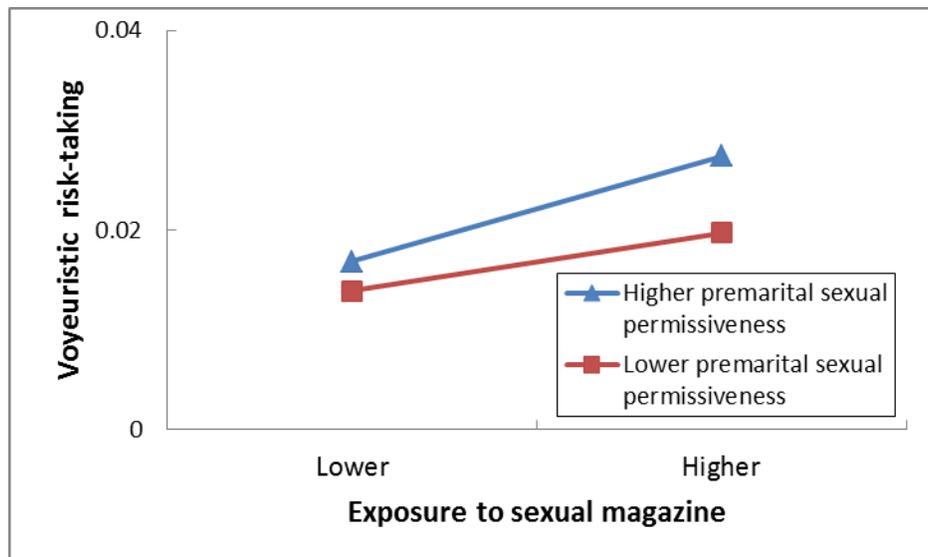
Note. Higher sensation seeking:  $M_{higher\ exposure} = 0.034$  ( $SD = 0.07$ ),  $M_{lower\ exposure} = 0.019$  ( $SD = 0.03$ ); Lower sensation seeking:  $M_{higher\ exposure} = 0.011$  ( $SD = 0.02$ ),  $M_{lower\ exposure} = 0.009$  ( $SD = 0.02$ ).

Figure 6. Plot of the Interaction between Sensation Seeking and Sexual Song Listening on Nonprotective Risk-Taking.



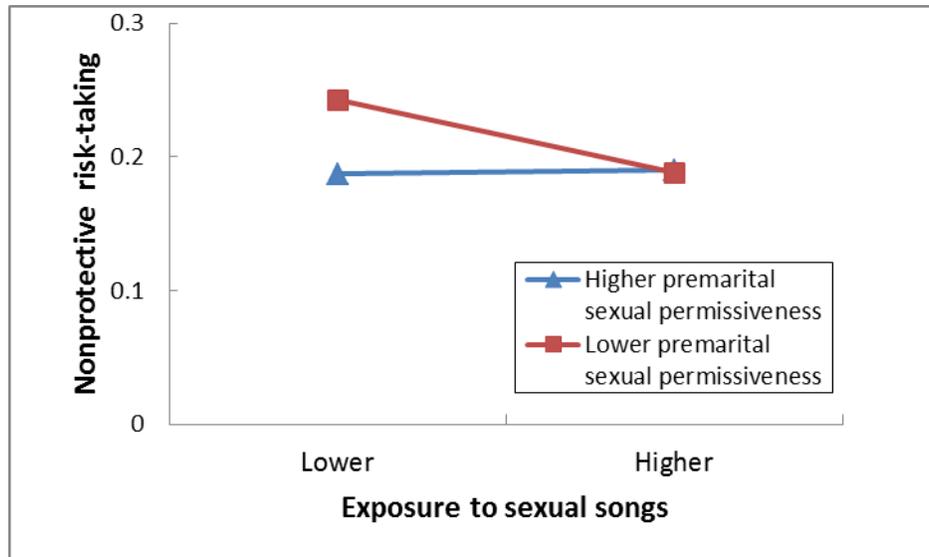
Note. Higher sensation seeking:  $M_{higher\ exposure} = 0.221$  ( $SD = 0.24$ ),  $M_{lower\ exposure} = 0.214$  ( $SD = 0.25$ ); Lower sensation seeking:  $M_{higher\ exposure} = 0.163$  ( $SD = 0.20$ ),  $M_{lower\ exposure} = 0.202$  ( $SD = 0.23$ ).

Figure 7. Plot of the Interaction between Premarital Sexual Permissiveness and Sexual Magazine Reading on Voyeuristic Risk-Taking.



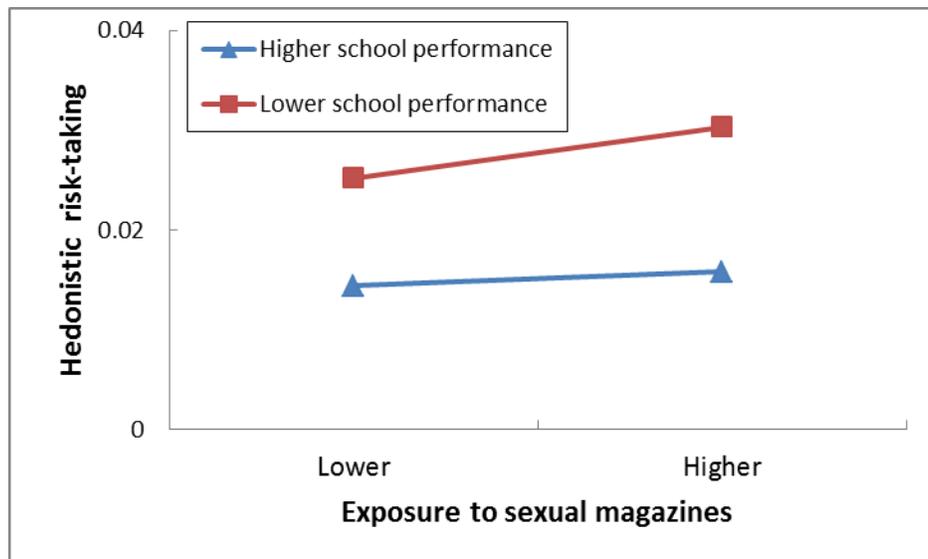
Note. Higher premarital sexual permissiveness:  $M_{higher\ exposure} = 0.027$  ( $SD = 0.06$ ),  $M_{lower\ exposure} = 0.017$  ( $SD = 0.03$ ); Lower premarital sexual permissiveness:  $M_{higher\ exposure} = 0.020$  ( $SD = 0.06$ ),  $M_{lower\ exposure} = 0.014$  ( $SD = 0.03$ ).

Figure 8. Plot of the Interaction between Premarital Sexual Permissiveness and Sexual Song Listening on Nonprotective Risk-Taking.



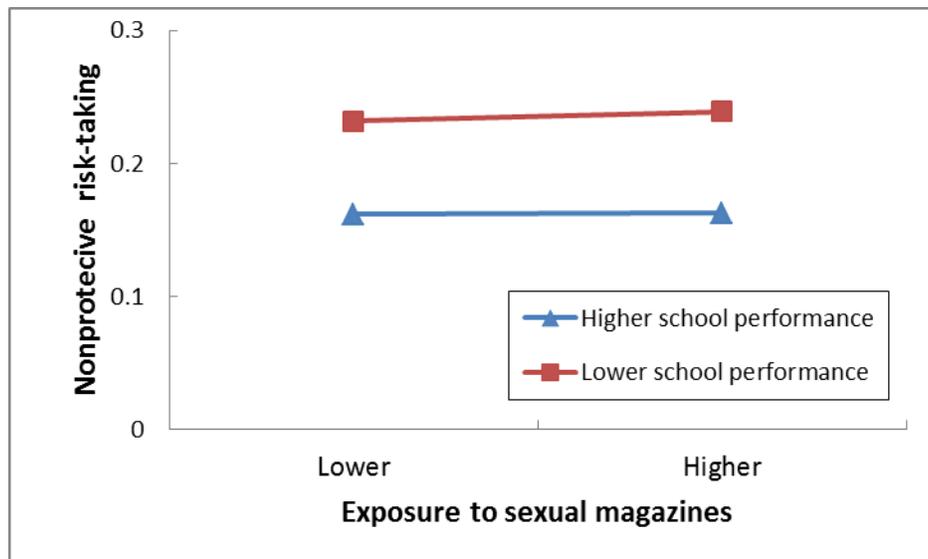
Note. Higher premarital sexual permissiveness:  $M_{higher\ exposure} = 0.190$  ( $SD = 0.21$ ),  $M_{lower\ exposure} = 0.187$  ( $SD = 0.22$ ); Lower premarital sexual permissiveness:  $M_{higher\ exposure} = 0.188$  ( $SD = 0.24$ ),  $M_{lower\ exposure} = 0.243$  ( $SD = 0.26$ ).

Figure 9. Plot of the Interaction between School Performance and Sexual Magazine Reading on Hedonistic Risk-Taking.



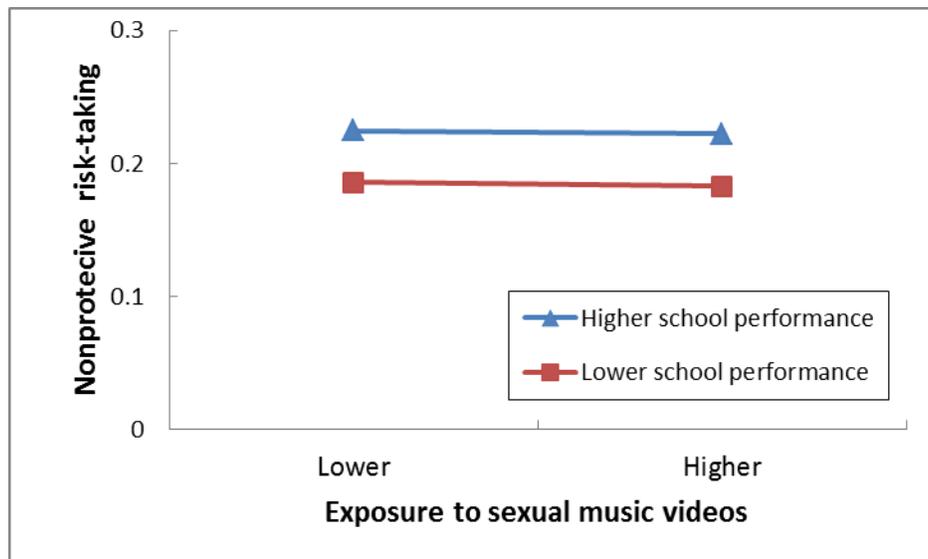
Note. Higher school performance:  $M_{higher\ exposure} = 0.016$  ( $SD = 0.02$ ),  $M_{lower\ exposure} = 0.014$  ( $SD = 0.02$ ); Lower school performance:  $M_{higher\ exposure} = 0.030$  ( $SD = 0.05$ ),  $M_{lower\ exposure} = 0.025$  ( $SD = 0.07$ ).

Figure 10. Plot of the Interaction between School Performance and Sexual Magazine Reading on Nonprotective Risk-Taking.



Note. Higher school performance:  $M_{higher\ exposure} = 0.163$  ( $SD = 0.22$ ),  $M_{lower\ exposure} = 0.162$  ( $SD = 0.18$ ); Lower school performance:  $M_{higher\ exposure} = 0.239$  ( $SD = 0.25$ ),  $M_{lower\ exposure} = 0.232$  ( $SD = 0.26$ ).

Figure 11. Plot of the Interaction between Religiosity and Sexual Music Video Viewing on Nonprotective Risk-Taking.



Note. Higher school performance:  $M_{higher\ exposure} = 0.222$  ( $SD = 0.26$ ),  $M_{lower\ exposure} = 0.225$  ( $SD = 0.26$ ); Lower school performance:  $M_{higher\ exposure} = 0.183$  ( $SD = 0.22$ ),  $M_{lower\ exposure} = 0.186$  ( $SD = 0.21$ ).

## Appendix A: Scales for Risky Sexual Behavior

1. How many different casual acquaintances (i.e., someone you know but do not consider to be a boyfriend or girlfriend) have you had sex with?  
\_\_\_\_\_ Casual acquaintances
2. How many times have you had sex with a stranger (i.e., someone you didn't know until that day)?  
\_\_\_\_\_ Times
3. How many times have you had sex while under the influence of alcohol?  
\_\_\_\_\_ Times
4. How many times have you had sex while under the influence of drugs (legal or illegal)?  
\_\_\_\_\_ Times
5. Do you get tested for STDs/HIV annually?  
[A] Yes  
[B] No, but I've been tested more than once.  
[C] No, but I've been tested once.  
[D] No, and I've never been tested.
6. How many different people have you had sexual intercourse with in the past 6 months?  
\_\_\_\_\_ People
7. How many times have you had multiple sexual partners (i.e., more than one) at the same time/encounter?  
\_\_\_\_\_ Times
8. How many times have you had sex with someone to get back at an unfaithful partner?  
\_\_\_\_\_ Times
9. How many times have you had intercourse in a public setting?  
\_\_\_\_\_ Times
10. How many times have you had oral sex in a public setting?  
\_\_\_\_\_ Times

11. If you have had vaginal intercourse, what proportion of the time have you or your partner used a condom? (Please type in a percentage between and including 0 and 100)

[A] \_\_\_\_\_ I have never had vaginal intercourse

[B] \_\_\_\_\_ percent of the time

12. If you have had vaginal intercourse, what proportion of the time have you or your partner used any form of contraception? (Please type in a percentage between and including 0 and 100)

[A] \_\_\_\_\_ I have never had vaginal intercourse

[B] \_\_\_\_\_ percent of the time

13. If you have had anal intercourse, what proportion of the time have you or your partner used a condom? (Please type in a percentage between and including 0 and 100)

[A] \_\_\_\_\_ I have never had anal intercourse

[B] \_\_\_\_\_ percent of the time

14. If you have had oral sex, what proportion of the time have you or your partner used condoms/barriers while having oral sex? (Please type in a percentage between and including 0 and 100)

[A] \_\_\_\_\_ I have never had oral sex

[B] \_\_\_\_\_ percent of the time

15. Considering unplanned pregnancy, how many times have you got pregnant or got someone pregnant (to your knowledge)?

\_\_\_\_\_ Times

16. Did you use contraception or protection the most recent time you had sexual intercourse?

[A] Yes      [B] No      [C] I have never had sexual intercourse.

17. How many times have you been pressured by a partner to engage in vaginal/oral/anal sex when you didn't want it?

\_\_\_\_\_ Times

18. How many times have you had sex with someone who was involved with one of your friends either currently or previously?

\_\_\_\_\_ Times

19. How many times have you had to deal with legitimate fears of becoming pregnant or getting someone pregnant?

\_\_\_\_\_ Times

20. How many times have nude pictures of you been posted online (e.g., Facebook, Myspace, Girls Gone Wild) or forwarded on cell phones without your consent by an ex or current partner?

\_\_\_\_\_ Times

21. Did you feel any negative emotions after losing your virginity?

[A] No, I'm still a virgin

[B] No

[C] Yes, if yes, please describe these negative emotions

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22. How many times have you engaged in sex as a way to reinforce your sexual identity when you or someone else was questioning your sexual orientation?

\_\_\_\_\_ Times

23. How many times have you gotten caught having sex in public?

[A] I have never had sex in public.

[B] \_\_\_\_\_ Times

24. How many times have you allowed yourself to be videotaped during sex?

\_\_\_\_\_ Times

25. How many times have you flashed your breasts or genitals at a camera or phone with a camera?

\_\_\_\_\_ Times

26. How many times have you used the "morning-after-pill" (RU486)?

[A] Never or not applicable

[B] \_\_\_\_\_ Times

27. What proportion of the time have you felt guilty or distressed after a sexual encounter? (Please type in a percentage between and including 0 and 100)

[A] I have never had a sexual encounter

[B] \_\_\_\_\_ percent of the time

28. How many times have you felt shunned by someone who thought you were a prude for declining a sexual opportunity?

\_\_\_\_\_ Times

## Appendix B: Questionnaire

The following questions ask you for some basic demographic information.

1. What is your age? \_\_\_\_\_
2. Are you:           [A] Male   [B] Female
3. In what year of college are you now? (If it's just after the end of the semester, what year did you just complete)?  
  
[A] Freshman           [B] Sophomore   [C] Junior           [D] Senior
4. Do you consider yourself: [A] White   [B] Black  
  
[C] Latino(a)       [D] Asian American   [E] Other\_\_\_\_\_
5. Are you married?           [A] Yes [B] No  
If NO, are you in a:  
[A] Serious dating relationship (where you define your partner as your boy/girlfriend)  
[B] Casual relationship or multiple relationships   [C] No romantic relationship
6. What is your cumulative GPA up until now?  
\_\_\_\_\_ GPA on a scale of (a) 4 or (b) 5 (please circle one)
7. What is your height? \_\_\_\_\_ feet \_\_\_\_\_ inches
8. What is your weight? \_\_\_\_\_ pounds
9. Do you?  
[A] Live with other people in a co-ed dorm, apartment, or house  
[B] Live with other people in a single-sex dorm, apartment, or house  
[C] Live by yourself  
[D] Live with parents  
[E] Other: \_\_\_\_\_
10. Do you consider yourself?  
[A] Heterosexual  
[B] Homosexual  
[C] Bisexual  
[D] Don't know  
[E] Other: \_\_\_\_\_

**For the following items, please indicate whether you have engaged in the stated behavior with another man/woman. (Remember, your answers are confidential and will be stored in a file with no identifying information.)**

1. Sexual intercourse      [A] Yes      [B] No
2. Sexual touching      [A] Yes      [B] No
3. Kissing      [A] Yes      [B] No
4. Oral sex      [A] Yes      [B] No

**The following questions ask you to *estimate* the frequency of your own sexual experiences as well as the prevalence of sexual experiences among your peers. Please type your answers in the spaces provided.**

22. How many different casual acquaintances (i.e., someone you know but do not consider to be a boyfriend or girlfriend) have YOU had sex with?  
\_\_\_\_\_ Casual acquaintances
23. How many different casual acquaintances do you think the average college GIRL has had sex with?  
\_\_\_\_\_ Casual acquaintances
24. How many different casual acquaintances do you think the average college GUY has had sex with?  
\_\_\_\_\_ Casual acquaintances
25. How many times have YOU had sex with a stranger (i.e., someone you didn't know until that day)?  
\_\_\_\_\_ Times
26. How many times do you think the average college GIRL has had sex with a stranger?  
\_\_\_\_\_ Times
27. How many times do you think the average college GUY has had sex with a stranger?  
\_\_\_\_\_ Times
28. How many times have YOU had sex while under the influence of alcohol?  
\_\_\_\_\_ Times
29. How many times do you think the average college GIRL has had sex while under the influence of alcohol?  
\_\_\_\_\_ Times

30. How many times do you think the average college GUY has had sex while under the influence of alcohol?  
\_\_\_\_\_ Times
31. How many times have YOU had sex while under the influence of drugs (legal or illegal)?  
\_\_\_\_\_ Times
32. How many times do you think the average college GIRL has had sex while under the influence of drugs?  
\_\_\_\_\_ Times
33. How many times do you think the average college GUY has had sex while under the influence of drugs?  
\_\_\_\_\_ Times
34. Do YOU get tested for STDs/HIV annually?
- [A] Yes
  - [B] No, but I've been tested more than once.
  - [C] No, but I've been tested once.
  - [D] No, and I've never been tested.
35. Do you think the average college GIRL gets tested for STDs/HIV annually?
- [A] Yes
  - [B] No, but she's been tested more than once.
  - [C] No, but she's been tested once.
  - [D] No, and she's never been tested.
36. Do you think the average college GUY gets tested for STDs/HIV annually?
- [A] Yes
  - [B] No, but he's been tested more than once.
  - [C] No, but he's been tested once.
  - [D] No, and he's never been tested.
37. How many different people have YOU had sexual intercourse with in the past 6 months?  
\_\_\_\_\_ People
38. How many different people do you think the average college GIRL has had sexual intercourse with in the past 6 months?  
\_\_\_\_\_ People

39. How many different people do you think the average college GUY has had sexual intercourse with in the past 6 months?  
\_\_\_\_\_ People
40. How many times have YOU had multiple sexual partners (i.e., more than one) at the same time/encounter?  
\_\_\_\_\_ Times
41. How many times do you think the average college GIRL has had multiple sexual partners at the same time/encounter?  
\_\_\_\_\_ Times
42. How many times do you think the average college GUY has had multiple sexual partners at the same time/encounter?  
\_\_\_\_\_ Times
43. How many times have YOU had sex with someone to get back at an unfaithful partner?  
\_\_\_\_\_ Times
44. How many times do you think the average college GIRL has had sex with someone to get back at an unfaithful partner?  
\_\_\_\_\_ Times
45. How many times do you think the average college GUY has had sex with someone to get back at an unfaithful partner?  
\_\_\_\_\_ Times
46. How many times have YOU had intercourse in a public setting?  
\_\_\_\_\_ Times
47. How many times do you think the average college GIRL has had intercourse in a public setting?  
\_\_\_\_\_ Times
48. How many times do you think the average college GUY has had intercourse in a public setting?  
\_\_\_\_\_ Times

49. How many times have YOU had oral sex in a public setting?  
\_\_\_\_\_ Times
50. How many times do you think the average college GIRL has had oral sex in a public setting?  
\_\_\_\_\_ Times
51. How many times do you think the average college GUY has had oral sex in a public setting?  
\_\_\_\_\_ Times
52. If YOU have had vaginal intercourse, what proportion of the time have you or your partner used a condom? (Please type in a percentage between and including 0 and 100)
- [A] \_\_\_\_\_ I have never had vaginal intercourse  
[B] \_\_\_\_\_ percent of the time
53. What proportion of the time do you think the average sexually active college GIRL uses a condom when having vaginal intercourse? (Please type in a percentage between and including 0 and 100)
- \_\_\_\_\_ percent of the time
54. What proportion of the time do you think the average sexually active college GUY uses a condom when having vaginal intercourse? (Please type in a percentage between and including 0 and 100)
- \_\_\_\_\_ percent of the time
55. If YOU have had vaginal intercourse, what proportion of the time have you or your partner used any form of contraception? (Please type in a percentage between and including 0 and 100)
- [A] \_\_\_\_\_ I have never had vaginal intercourse  
[B] \_\_\_\_\_ percent of the time
56. What proportion of the time do you think the average sexually active college GIRL uses any form of contraception when having vaginal intercourse? (Please type in a percentage between and including 0 and 100)
- \_\_\_\_\_ percent of the time

57. What proportion of the time do you think the average sexually active college GUY uses any form of contraception when having vaginal intercourse? (Please type in a percentage between and including 0 and 100)

\_\_\_\_\_ percent of the time

58. If YOU have had anal intercourse, what proportion of the time have you or your partner used a condom? (Please type in a percentage between and including 0 and 100)

[A] \_\_\_\_\_ I have never had anal intercourse

[B] \_\_\_\_\_ percent of the time

59. What proportion of the time do you think the average college GIRL who has had anal intercourse has her sexual partner use a condom when having anal intercourse? (Please type in a percentage between and including 0 and 100)

\_\_\_\_\_ percent of the time

60. What proportion of the time do you think the average college GUY who has had anal intercourse uses a condom when having anal intercourse? (Please type in a percentage between and including 0 and 100)

\_\_\_\_\_ percent of the time

61. If YOU have had oral sex, what proportion of the time have you or your partner used condoms/barriers while having oral sex? (Please type in a percentage between and including 0 and 100)

[A] \_\_\_\_\_ I have never had oral sex

[B] \_\_\_\_\_ percent of the time

62. What proportion of the time do you think the average college GIRL who has had oral sex has used barriers/condoms when having oral sex? (Please type in a percentage between and including 0 and 100)

\_\_\_\_\_ percent of the time

63. What proportion of the time do you think the average college GUY who has had oral sex has used barriers/condoms when having oral sex? (Please type in a percentage between and including 0 and 100)

\_\_\_\_\_ percent of the time

64. Considering unplanned pregnancy, how many times have YOU got pregnant or got someone pregnant (to your knowledge)?

\_\_\_\_\_ Times

65. Considering unplanned pregnancy, how many times do you think the average sexually active college GIRL has gotten pregnant?

\_\_\_\_\_ Times

66. Considering unplanned pregnancy, how many times do you think the average sexually active college GUY has gotten someone pregnant?

\_\_\_\_\_ Times

67. Did YOU use contraception or protection the most recent time you had sexual intercourse?

[A] Yes      [B] No      [C] I have never had sexual intercourse.

68. How many times have YOU been pressured by a partner to engage in vaginal/oral/anal sex when you didn't want it?

\_\_\_\_\_ Times

69. How many times do you think the average college GIRL has been pressured by a partner to engage in vaginal/oral/anal sex when she didn't want it?

\_\_\_\_\_ Times

70. How many times do you think the average college GUY has been pressured to engage in vaginal/oral/anal sex when he didn't want it?

\_\_\_\_\_ Times

71. How many times have YOU had sex with someone who was involved with one of your friends either currently or previously?

\_\_\_\_\_ Times

72. How many times do you think the average college GIRL has had sex with someone who was involved with one of her friends either currently or previously?

\_\_\_\_\_ Times

73. How many times do you think the average college GUY has had sex with someone who was involved with one of his friends either currently or previously?

\_\_\_\_\_ Times

74. How many times have YOU had to deal with legitimate fears of becoming pregnant or getting someone pregnant?  
\_\_\_\_\_ Times

75. How many times do you think the average sexually active college GIRL has had to deal with legitimate fears of becoming pregnant?  
\_\_\_\_\_ Times

76. How many times do you think the average sexually active college GUY has had to deal with legitimate fears of getting someone pregnant?  
\_\_\_\_\_ Times

77. How many times have nude pictures of YOU been posted online (e.g., Facebook, Myspace, Girls Gone Wild) or forwarded on cell phones without your consent by an ex or current partner?  
\_\_\_\_\_ Times

78. How many times do you think nude pictures of the average sexually active college GIRL have been posted online (e.g., Facebook, Myspace, Girls Gone Wild) or forwarded on cell phones without her consent by an ex or current partner?  
\_\_\_\_\_ Times

79. How many times do you think nude pictures of the average sexually active college GUY have been posted online (e.g., Facebook, Myspace, or other sites) or forwarded on cell phones without his consent by an ex or current partner?  
\_\_\_\_\_ Times

80. Did YOU feel any negative emotions after losing your virginity?

[A] No, I'm still a virgin

[B] No

[C] Yes, if yes, please describe these negative emotions

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60. Do you think the average sexually active college GIRL felt any negative emotions after losing her virginity?

[A] Yes      [B] No

61. Do you think the average sexually active college GUY felt any negative emotions after losing his virginity?  
[A] Yes [B] No
62. How many times have YOU engaged in sex as a way to reinforce your sexual identity when you or someone else was questioning your sexual orientation?  
\_\_\_\_\_ Times
63. How many times do you think the average sexually active college GIRL has engaged in sex as a way to reinforce her sexual identity when she or someone else was questioning her sexual orientation?  
\_\_\_\_\_ Times
64. How many times do you think the average sexually active college GUY has engaged in sex as a way to reinforce his sexual identity when he or someone else was questioning his sexual orientation?  
\_\_\_\_\_ Times
65. How many times have YOU gotten caught having sex in public?  
[A] I have never had sex in public.  
[B] \_\_\_\_\_ Times
66. How many times do you think the average sexually active college GIRL has gotten caught having public sex?  
\_\_\_\_\_ Times
67. How many times do you think the average sexually active college GUY has gotten caught having public sex?  
\_\_\_\_\_ Times
68. How many times have YOU allowed yourself to be videotaped during sex?  
\_\_\_\_\_ Times
69. How many times do you think the average sexually active college GIRL has allowed herself to be videotaped during sex?  
\_\_\_\_\_ Times
70. How many times do you think the average sexually active college GUY has allowed himself to be videotaped during sex?  
\_\_\_\_\_ Times
71. How many times have YOU flashed your breasts or genitals at a camera or phone with a camera?  
\_\_\_\_\_ Times

72. How many times do you think the average college GIRL has flashed her breasts or genitals at a camera or phone with a camera?  
\_\_\_\_\_ Times
73. How many times do you think the average college GUY has flashed his genitals at a camera or phone with a camera?  
\_\_\_\_\_ Times
74. How many times have YOU used the “morning-after-pill” (RU486)?
- [A] Never or not applicable  
[B] \_\_\_\_\_ Times
75. How many times do you think the average sexually active college GIRL has used the “morning-after-pill”?  
\_\_\_\_\_ Times
76. What proportion of the time have YOU felt guilty or distressed after a sexual encounter? (Please type in a percentage between and including 0 and 100)
- [A] I have never had a sexual encounter  
[B] \_\_\_\_\_ percent of the time
77. What proportion of the time do you think the average sexually active college GIRL has felt guilty or distressed after a sexual encounter? (Please type in a percentage between and including 0 and 100)
- \_\_\_\_\_ percent of the time
78. What proportion of the time do you think the average sexually active college GUY has felt guilty or distressed after a sexual encounter? (Please type in a percentage between and including 0 and 100)
- \_\_\_\_\_ percent of the time
79. How many times have YOU felt shunned by someone who thought you were a prude for declining a sexual opportunity?  
\_\_\_\_\_ Times
80. How many times do you think the average college GIRL has felt shunned by someone who thought she was a prude for declining a sexual opportunity?  
\_\_\_\_\_ Times
81. How many times do you think the average college GUY has felt shunned by someone who thought he was a prude for declining a sexual opportunity?  
\_\_\_\_\_ Times

**The following questions ask about your experience of regrets.**

1. Have you ever regretted your decision to engage in sexual activity?

Never Always  
[A] 1      2      3      4      5

[B] Not applicable because I haven't engaged in sexual activity.

2. Following is a list of reasons for regret about sexual activities. Please choose as many reasons for regret as have applied to you by circling the letter.

- a. resulted in pregnancy
- b. contracted a disease
- c. disagreed with morals and values
- d. realized did not want the same thing as partner
- e. felt alcohol influenced my decision
- f. felt drugs influenced my decision
- g. wanted to wait until marriage
- h. did not use a condom
- i. felt pressured by partner
- j. Other \_\_\_\_\_

**The following questions ask you about your attitudes toward a number of sexual issues. Please respond even if you are not sexually active or have never had sexual experiences before. Using the scale below, please indicate your level of agreement or disagreement with each statement. Keep in mind that there are no right or wrong answers. Also remember that I am interested in your personal opinion.**

1. I believe that premarital sexual intercourse is acceptable if one is in a love relationship.

Strongly disagree Strongly agree  
1 2 3 4 5 6 7

2. I believe that premarital sexual intercourse is acceptable if one is in a relationship involving strong affection.

Strongly disagree Strongly agree  
1 2 3 4 5 6 7

3. I believe that premarital sexual intercourse is acceptable if one is in a relationship involving moderate amounts of affection.

Strongly disagree Strongly agree  
1 2 3 4 5 6 7











**The following questions concern your personality. Please choose the number that best shows how you feel about each statement.**

- |  |   |   |   |  |                       |
|--|---|---|---|--|-----------------------|
| 1. I often wish I could be a mountain climber.   |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 2. I sometimes like to do things that are a little frightening.                          |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 3. I would like to take up the sport of water skiing.                                    |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 4. I would like to try surfing.  |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 5. I would like to learn to fly an airplane  |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 6. I would like to go scuba diving.  |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 7. I would like to try parachute jumping.  |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 8. I like to dive off the high board.  |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 9. I would like to sail a long distance in a small but sea-worthy sailing craft.         |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |
| 10. I think I would enjoy the sensations of skiing very fast down a high mountain slope. |   |   |   |  |                       |
| <b>Not at all like</b>   |   |   |   |  | <b>Very much like</b> |
| <b>me</b>  |   |   |   |  | <b>me</b>             |
| 1  | 2 | 3 | 4 |  | 5                     |



22. I enjoy the company of people who can really let loose.  
**Not at all like me** 1 2 3 4 **Very much like me** 5
23. I often like to get high (drinking liquor or smoking marijuana).  
**Not at all like me** 1 2 3 4 **Very much like me** 5
24. I like to have new and exciting experiences and sensations even if they are a little unconventional or illegal.  
**Not at all like me** 1 2 3 4 **Very much like me** 5
25. I like to date people who are physically exciting.  
**Not at all like me** 1 2 3 4 **Very much like me** 5
26. Keeping the drinks full is the key to a good party.  
**Not at all like me** 1 2 3 4 **Very much like me** 5
27. A person should have considerable sexual experience before marriage.  
**Not at all like me** 1 2 3 4 **Very much like me** 5
28. I could conceive of myself seeking pleasures around the world with the “jet set.”  
**Not at all like me** 1 2 3 4 **Very much like me** 5
29. I enjoy watching many of the “sexy” scenes in movies.  
**Not at all like me** 1 2 3 4 **Very much like me** 5
30. I feel best after taking a couple of drinks.  
**Not at all like me** 1 2 3 4 **Very much like me** 5
31. I can’t stand watching a movie that I’ve seen before.  
**Not at all like me** 1 2 3 4 **Very much like me** 5



**The following questions concern family interactions. Using the scale provided, please indicate your response to each statement.**

**Thinking back to the days when you were in high school...**

1. When you got home from school, how often was an adult there within an hour of you getting home?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

2. When you went to parties, how often was a supervising adult present at the party?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

3. When you wanted to go to a party, how often did your parents confirm that an adult would supervise the party?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

4. How often would your parents know if you came home an hour or more late on weekends?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

5. When you broke a rule set by your parents, for example, coming home past curfew, did your parents take away privileges?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

6. How often before you went out would you tell your parents when you would be back?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

7. When your parents were not home, how often would you leave a note for them about where you were going?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

8. When you went out and your plans unexpectedly changed, how often did you call your parents to let them know?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

9. When you went out, how often did you let your parents know where you planned to go?

<b>Never</b>	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Most times</b>	<b>All of time</b>
1	2	3	4	5

**The following questions ask about your media use habits.**

1. How many hours on average do you spend watching television on a typical weekday?

\_\_\_\_\_ hours

2. How many hours on average do you spend watching television on a typical Saturday?

\_\_\_\_\_ hours

3. How many hours on average do you spend watching television on a typical Sunday?

\_\_\_\_\_ hours

4. How many hours on average do you spend reading magazines on a typical weekday?

\_\_\_\_\_ hours

5. How many hours on average do you spend reading magazines on a typical Saturday?

\_\_\_\_\_ hours

6. How many hours on average do you spend reading magazines on a typical Sunday?

\_\_\_\_\_ hours

7. How many hours on average do you spend watching music VIDEOS on a typical weekday on television, online, etc.?

\_\_\_\_\_ hours

8. How many hours on average do you spend watching music VIDEOS on a typical Saturday on television, online, etc.?

\_\_\_\_\_ hours

9. How many hours on average do you spend watching music VIDEOS on a typical Sunday on television, online, etc.?

\_\_\_\_\_ hours

10. How many hours on average do you spend listening to MUSIC on a typical weekday on the ipod, radio, CD, stereo, etc. (include listening to but not watching music videos on TV)?

\_\_\_\_\_ hours

11. How many hours on average do you spend listening to MUSIC on a typical Saturday on the ipod, radio, CD, stereo, etc. (include listening to but not watching music videos on TV)?

\_\_\_\_\_ hours

12. How many hours on average do you spend listening to MUSIC on a typical Sunday on the ipod, radio, CD, stereo, etc. (include listening to but not watching music videos on TV)?

\_\_\_\_\_ hours

13. How many hours do you spend watching MOVIES AT HOME (i.e., rented videos) on a typical weekday?

\_\_\_\_\_ hours

14. How many hours do you spend watching MOVIES AT HOME (i.e., rented videos) on a typical Saturday?

\_\_\_\_\_ hours

15. How many hours do you spend watching MOVIES AT HOME (i.e., rented videos) on a typical Sunday?

\_\_\_\_\_ hours

16. How many hours do you spend watching MOVIES IN THE THEATER on a typical weekday?

\_\_\_\_\_ hours

17. How many hours do you spend watching MOVIES IN THE THEATER on a typical Saturday?

\_\_\_\_\_ hours

18. How many hours do you spend watching MOVIES IN THE THEATER on a typical Sunday?

\_\_\_\_\_ hours

**Please note that the following questions concern participants' exposure to specific media offerings. The items shown below are just samples of the formatting that were used. In the real online questionnaire, thirty titles for each of the six media (i.e., television, music videos, songs, movies watched at home, movies watched in the theater, and magazines) were included (so there were a total of 150 titles in the questionnaire).**

**A. How often do you watch the following TV shows?**

1. *Grey's Anatomy*



Never/not this season

Every week

1

2

3

4

5

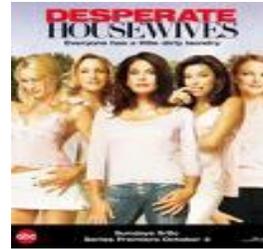
2. *Desperate Housewives*

ARTIST: Lil' Wayne VIDEO: Got Money

Never/not this season

Every week

1 2 3 4 5



**B. How often do you read the following magazines?**

1. *Seventeen*

Never

Every issue

1 2 3 4 5



2. *Cosmopolitan*

Never

Every issue

1 2 3 4 5



3. *Maxim?*

Never

Every issue

1 2 3 4 5



**C. How many times do you watch the following videos?**

1. *Leatherheads*

Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5



2. *Sex and the City – The Movie*

Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5



3. *88 Minutes*

Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5



**D. How many times do you watch the following movies in the theater?**

1. *Eagle Eye*

Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5



2. *Nights in Rodanthe*



Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5

3. *Lakeview Terrace*



Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5

**E. How many times do you watch the following music videos and how many times do you listen to the corresponding songs?**

1. *Got Money*



ARTIST: Lil' Wayne

Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5

2. How many times have you LISTENED to the above song on ipod, radio, CD, etc?

Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5

3. 7 Things

ARTIST: Miley Cyrus



Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5

4. How many times have you LISTENED to the above song on ipod, radio, CD, etc?

Never	Just Once	A Couple of Times	Several Times	Lots of Times
1	2	3	4	5

## Appendix C: Codebook for Sexual Content

### Codebook Variables

1. Coder ID (codeid):

01 = Lauren Asberry

02 = Chelsea Caldwell

03 = Cay Clay

04 = Ademola Faleti

05 = Esther Suejean Kim

06 = Krissy Oliver

2. Media Vehicle Type (mediaty), please circle one below:

A. TV show

B. Magazine

C. Movie

D. Music Video (Visual only)

E. Song

3. Media Vehicle Name (medianam): The name of the TV show, magazine, movie, or music video to be coded.

---

### Unit of Analysis

1. For electronic media including TV shows, movies, and music videos, a non-break sequence or camera cut is counted as one unit.
2. For magazines, a page is counted as one unit.
3. For songs, each verse is counted as one unit.

### Sexual Content:

1. (sexual) Any depiction of sexual activity, sexually suggestive behavior, or any talk about sexuality or sexual activity.

0 = not present

1 = present

Examples include but are not limited to:

- a. Scenes that suggest or seem to elicit sexual arousal (e.g., passionate kissing, provocative or suggestive appearance/dress, sexual talk) and/or appeals to the erotic such as pelvic thrusts, long lip licking, stroking, etc.

- b. Scenes in which genitalia or breasts are being touched, or bodies are touching and moving together in a way suggestive of intercourse.

2. (sxrate) Overall, how sexual would you rate the content of the vehicle?

1            2            3            4            5            6            7

Not at  
all sexual

Extremely  
sexual

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