AN EXAMINATION OF RELATIONSHIPS BETWEEN EXPOSURE TO SEXUALLY EXPLICIT MEDIA CONTENT AND RISK BEHAVIORS: A CASE STUDY OF COLLEGE STUDENTS

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ABSTRACT

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In spite of its prevalence in the contemporary media landscape, the effects of exposure to sexually explicit materials have received relatively little attention from media and communication scholars. From a Social Cognitive Theory (SCT) perspective, the present study investigated whether the consumption of sexually explicit materials predicts the adoption of risk behaviors, particularly sex- and body image-related risk behaviors. In addition, the study focused on the psychological mechanisms - represented by the Sexual Self-Concept (SSC) - that could facilitate the adoption of said risk behaviors. In order to address these issues, quantitative data was collected using a self-administered online survey design. Also, in response to mounting criticism according to which quantitative research methods could offer only truncated snapshots of individuals' interactions with sexually explicit materials, a second, qualitative data set was collected using a self-administered diary design.

The analysis of the quantitative data revealed that consumption of sexually explicit media content significantly predicts SSC scores. In turn, SSC was found to be a significant predictor of the adoption of sex-related risk behaviors (sex risk partners and sex risk practices). SSC was found to not be a significant predictor of body image health-related risk behaviors. A path model revealed that the SSC moderates the adoption of risk behaviors, thus supporting the theoretically-driven hypothesis that the SSC functions as a psychological mechanism that could facilitate the adoption of risk behaviors. Also, the path model revealed that age and gender significantly predict the adoption of risk behaviors.
Thematic analysis of the qualitative data revealed a complex and nuanced picture of participants' interactions with sexually explicit media content. The underlying assumption of most quantitative studies of pornography is that exposure to pornography is likely to have detrimental effects on consumers; however, the qualitative section of this study demonstrated that, while retaining a sense of the potentially negative influence of pornography, participants identified numerous occasions in which the consumption of sexually explicit media was seen as a beneficial, enriching presence in their lives. Participants in the qualitative phase of this study described positive, negative, and very often ambivalent encounters with sexually explicit material, which creates a more nuanced understanding of how people engage with this type of media content. The overarching theme that emerged in the analysis of the qualitative data was the theme of “ambivalence” manifested by participants both towards pornography per se as well as towards the perceived influence of consumption of pornography on individuals and on romantic relationships.

Along with the theoretical importance of identifying the SSC as a mediating factor in the adoption of risk behaviors, this result allows health campaigns to target precisely the mechanisms that mediate the adoption of risk behaviors. Having more calibrated approach, health campaigns thus designed could reach significantly higher rates of success. The results in the qualitative section of the study call for a reconceptualization of sexually explicit media content and its audiences in a manner that accounts for the vast array of available material, as well as for the active, discriminate approach of the audiences to pornography.
Dedicated to my wife, Elena Solohina, for her unconditional support, endless understanding, and her very sophisticated sense of humor
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CHAPTER I: INTRODUCTION

Manifestations and representations of sexuality seem to have preoccupied human imagination more than most other human behaviors. Ever since the dawn of human history, people from many civilizations carefully - and often artfully - recorded their sexual activities and their ideas about sexuality (Kinsey et al., 1948). The oldest still preserved recording of human sexuality is *Venus of Willendorf*, which represents a female figure with enhanced sexual organs, and is dated to about 30,000 BC (Brown & Bryant, 1989). It was noted that sexuality seems to have been constantly present in entertainment for almost as long as fiction itself (Harris & Barlett, 2009). To provide only a few examples, representations of human sexuality abound in ancient Greek and Roman visual arts (Brown & Bryant, 1989), as well as in written works such as Petronius's *Satyricon* or Apuleius's *Asinus Aureus*, Aristophanes' *Lysistrata*, Chaucer's *Canterbury Tales*, or Shakespeare's *The Taming of the Shrew* (Harris & Barlett, 2009).

Representations of human sexuality abound in non-Western cultures as well. The Konark Sun Temple and Khajurahao group of monuments in Central India are famous for their erotic sculptures. Persian poet, mathematician, and philosopher Omar Khayyam's poetry praised the pleasures derived from eroticism and lust, whereas Vatsyayana's *Kama Sutra* is often described as the definitive work on sexuality in the Sanskrit language. Art from Peruvian ceramic pots dating to about 1500 BC include depictions of explicit human sexual behaviors, and “anal coitus is one of the most common behaviors depicted” (Brewer, 1982, p. 318). Also, many Japanese artists from the seventeenth to the twentieth century produced a type of art known as *Shunga*, which “celebrates the vitality of growing things, as well as the mating of humans and animals” (Brewer, 1982, p. 320).
Sexuality permeates the contemporary media landscape and is prominently featured in mainstream media – on primetime television, television and radio shows, music, soap operas, or literary fiction. For example, a content analysis of five popular American soap operas conducted in 1994 revealed that 10 episodes of each of the five soap operas yielded 333 incidents of sexual activity, with an average of 6.6 acts depicted or talked about each (Greenberg & Hofschire, 2000). Similarly, in an exploratory study of the top 15 television shows watched by young people aged 12 to 17 years in the United States, Cope-Farrar and Kunkel (2002) found that, at program level, 82 percent of programs contained some talk about sex or sexual behavior, while 67 percent of programs had talk about sex, and 62 percent had sexual behavior. Almost half (47%) of all programs included both talk and behavior. Also, the once-upon-a-time taboo topic of pornography has become more prevalent in the contemporary media landscape. “Pornography” and “sex” are reported to be the most heavily searched terms on the Internet, comprising roughly 25 percent of all searches (Carroll et al, 2008). Recent estimates evaluate the profits generated by the pornography industry to revolve around 13 billion dollars in the United States alone in 2006 (IT Facts, 2007), a staggering figure that remained unchanged during the recent Great Recession (Hill, 2009). During the late 1990s some hardcore Internet pornography companies were listed on NASDAQ stock exchange (Morais, 1999).

Although the production, reproduction, and distribution of sexually explicit material can be traced back to the advent of the first technologies that allowed the dissemination of sexual media content on a larger scale, a historical account of pornography is beyond the scope of this project. Instead, this project focuses on the effects of sexually explicit materials as they are easily, readily, and affordably accessible to large numbers of potential consumers. Sexually explicit materials did not acquire the above characteristics until the second half of the twentieth
century, when pornography in print has become more and more available to the public, especially the American public (Brown & Bryant, 1989). Explicit paperback books published until the mid-1960s strictly avoided the use of vulgar terms to describe coitus, genitalia, and other sex-related activity (Brown & Bryant, 1989). Typical pornographic still images depicted scantily clad women with the pubic area carefully hidden from view (Brown & Bryant, 1989). However, by the late 1960s public display of pornographic materials had become more common, including images of simulated sex acts with no exposed genitalia, or nudist magazines that portrayed nude men and women playing and working together (Brown & Bryant, 1989). During the 1960s and especially 1970s, men's magazines like *Playboy* or *Penthouse*, which had been launched in the 1950s, had become mainstream publications, and at the beginning of the following decade Dietz and Evans (1982) identified 1,760 heterosexual pornographic magazines. Also, by the late 1960s a group of magazines began to cater to the gay male audience, typically showing single models with little to no sexual activity implied (Brown & Bryant, 1989). Sexuality was found to be prominently featured in romance novels (Brown & Bryant, 1989), and the 1970 Commission on Obscenity and Pornography reported that paperback fiction represented one of the largest areas of pornography production in the United States (Sparks, 2006). Motion pictures showing nude models – predominantly female models – appeared as early as 1899, and short films depicting sexual acts emerged by the turn of the twentieth century (Slade, 1984). By the 1960s, technology of film became an important and increasingly popular alternative to the printed pornography of the day, by offering pornography to persons willing to visit theatres where these films were being shown, typically by a retail outlet (Buzzell, 2005). The visual pornography industry was quick to adopt and adapt to the invention of the videocassette recorder (VCR) in the late 1970s (Williams, 1989). The technology of VCR required patrons to rent or
purchase videotapes, in some cases available in mainstream video rental outlets. The growing use of personal computer, the growth of home based computing and Internet access in the 1990s eliminated the need for consumers of pornography to go to a retail outlet in order to purchase a film or rent a videotape (Buzzell, 2005). Thus by the late 1990s and the early 2000s sexually explicit media content seemed to be offered to consumers in an ideal “AAA mode” – accessible, affordable, and anonymous (Daneback, Cooper, Manson, 2005). Further development of Web 2.0 technologies allowed the advent of genres like amateur pornography and subgenres like gonzo, reality porn, alt porn, realcore, ecoporn, to name just a few (Paasonen, 2010).

The advent of technologies that allowed reproduction on mass scale of sexually explicit materials enabled mass exposure and consumption of such materials, and turned the production, distribution, and consumption of pornography into a social, political, economic, and cultural issue (Buzzell, 2005). In an early example of an official reaction to mass produced sexual media, Chinese novels dating from the 15th century under Ming Dynasty depicting graphic scenes of human sexuality were destroyed when the Emperor order the country rid of “incestuous and other immoral works” (Brewer, 1982, p. 319). In a more recent example, Hawkins and Zimring (1988) highlighted the role of technology in instigating political reaction to production and consumption of pornography, when the availability and affordability of film and videotape technology changed the erotic industry in the 1970s and 1980s. During these decades, social and political reactions were captured in the work of commissions appointed to investigate the “pornography problem” (Buzzell, 2005), such as the 1970 Commission on Obscenity and Pornography or the 1986 Attorney General's Commission on Pornography, also known as the Meese Commission (Brown & Bryant, 1989). Meese Commission was not involved in the conduct of scientific research on the effects of pornography; rather, it relied on existing research
and data compiled from interviews and examinations of sexually explicit materials (Sparks, 2006). The findings of the Meese Commission were heavily criticized and deemed less of an attempt to reach conclusions based on scientific inquiry and more of an attempt “on the part of the attorney general, Ed Meese, to put some teeth into existing obscenity statutes” (Sparks, 2006, p. 116). The advent of the Internet and the affordability of personal computers in the 1990s have renewed public concerns about pornography (Buzzell, 2005). Consumption of sexually explicit materials is feared to have been increasing exponentially, especially by segments of the population such as children and young adolescents, who should not have access to such media content (Mitchell, Finkelhor, & Wolak, 2003).

Public controversy in recent years has focused on children's access to media with sexually explicit content, their coercion in the creation of such materials, and young people sharing explicit sexual messages or images of themselves or others (Snyder, 2011). An important distinction, however, needs be made between pornography and child pornography. Unlike pornography, which is subjected to relatively strict regulation, but is not illegal as long as it does not meet the criteria for obscenity – defined as the tendency to deprave or corrupt -, child pornography is illegal under federal law and in all states in the United States (Sheldon & Howitt, 2007). The distinction between pornography and child pornography goes beyond mere legal definitions; in fact, it was noted that “child pornography is not pornography in any real sense; [it is] simply the evidence recorded on film or videotape of serious sexual assaults on young children” (Tate, 1992, p. 203, in Sheldon & Howitt, 2007).

While a single phenomenological understanding of sexual desire does not exist (Regan & Berscheid, 1996), in the context of this study sexual desire refers strictly to an interest in sexual activity. Specifically, sexual desire is conceptualized as “a cognitive variable, which can be
measured through the amount and strength of thought directed toward approaching or being responsive to sexual stimuli (Spector, Carey, & Steinberg, 1996, p. 178). Similarly, in this study sexual behaviors were defined as overt manifestations of sexual desire (Spector et al., 1996), and were operationalized as engagement (or likelihood to engage) in certain sexual acts and practices. Scholars adhering to the social constructionist paradigm proposed that sexual behaviors and even sexual desire are not inherently related to the physiological functioning of the human body, but rather determined historically and culturally (Vance, 1991; Giles, 2006). While the radical social constructionist perspective according to which even sexual desire – let alone overt manifestations of sexual desire - is completely detached from the biological functioning of the human body was rejected even within the social constructionist school of thought (Giles, 2006), this perspective emphasizes the role played by historical, cultural, and social factors in the shaping of human sexuality, media featuring prominently as one of these factors.

The ubiquity of sexually explicit content in modern and contemporary media drew the attention of media and communication scholars, echoing the public and political concern with respect to the effects of consumption of pornography on the public in general, and on specific segments of the population in particular. During the 1970s and 1980s, groundbreaking research in the realm of effects of pornography was conducted. For the most part, this body of research attempted to establish causal relationships between exposure to pornography and a number of attitudes towards sexuality and sexual behaviors, generally deemed dangerous, unhealthy and anti-social (Check & Guloien, 1989; Donnerstein & Berkowitz, 1981; Zillmann & Bryant, 1988a; 1988b). More recent research has started to distance itself from the underlying "hypodermic needle" model that seems to have dominated early pornography research, concentrating on issues like the mediating effects of psychological individual predispositions (Malamuth & Impett,
the effects of alcohol ingestion on interpretation of violent pornography (Davis et al., 2006), or adoption of risky sex practices in correlation with exposure to sexually explicit materials (Rogala & Tyden, 2003), to mention just a few.

Although a relatively large body of research dedicated to the effects of pornography on human sexuality has emerged in media and communication studies, Weis (2002) identified a need for more theory-driven research in this area. In a review of studies that content-analyzed sex research academic journals since 1970s until the mid-1990s, Weis noted that these journals tend to favor the publication of data reports, which are descriptive and atheoretical. In contrast, it was noted that studies that propose explanatory inferences or theoretical models are very rare (Weis, 2002).

The present study is concerned with the investigation of particular types of representations of human sexuality, namely sexually explicit material or pornography, two terms that are used interchangeably in this and other studies. Not all sexual imagery falls under the category of sexually explicit materials, as the area of sexual content is fraught with definitional inconsistencies. Sexual content is somewhat of a general and rather vague label “that can refer to something as innocuous as a kiss between two married adults or as horrifying as a brutal rape in a XXX-rated pornographic video” (Sparks, 2006, p. 108). Previous research (Snyder, 2011; Allen et al., 2007; Sparks, 2006), however, defines as pornography material that depicts sexually explicit images in a context that often involves one or more characters in a position of physical and/or psychological dominance over one or more characters. In this study, pornography is seen as including instances of erotica, defined as “material that features explicit sexual content in the absence of violence and without the overt power dynamics that appear in pornography” (Sparks, 2006, p. 108).
Although, as already mentioned, the effects of exposure to pornography were scrutinized by communication scholars, this body of research often lacks specificity and a clear theoretical approach. The present study represents an attempt to address some of these issues. Specifically, the study investigated the effects of consumption of sexually explicit material on the adoption of risk behaviors, with an emphasis on the mechanisms that might enable the adoption of these behaviors.

The study collected baseline data regarding the consumption of sexually explicit materials and their effects among a given population, that is, undergraduate and graduate college students. The decision to use this type of population for data collection was warranted by two considerations. First, understanding how young adults consume pornography is an important area of concern as this age is often “characterized by exploration in the areas of sexuality, romantic relationships, identity, and values, as well as increased participation in risk behaviors” (Carroll et al., 2008, p. 7). Sexuality research literature (Brown & L'Engle, 2009; May et al., 2011; Zilmann, 2000) suggests that traditional sex education is largely ineffective, with young adults turning to pornography as a source of information and education regarding sexuality. Second, the decision to include two groups – undergraduate and graduate students – that are different in terms of average age (NCES, 2012) was based on previous findings suggesting that the sexual self-concept (SSC), which is a central concept in the present study, becomes stable by late adolescence or early adulthood (Aubrey, 2007; Lou et al., 2010).

The study was guided by the social cognitive theory in investigating the effects of exposure to sexually explicit media on the adoption of risk behaviors, and the mediating effect of the sexual self-concept (SSC). Social cognitive theory is a macro-theory that proposes, in summary, that human behavior is influenced by environmental and personal (biological,
affective, and cognitive) factors, as well as by aspects of the behavior itself (Bandura, 1986; Pajares, 2002). The sexual self-concept is a psychological construct that refers to an individual's perception of his or her qualities as a sexual being (Vickberg & Deaux, 2006). These theoretical concepts were discussed in greater detail in the subsequent sections of this dissertation project. In addition, the role of age and biological sex on the adoption of risk-related behaviors in correlation with exposure to pornography were examined.

These explorations provide an important step towards a better understanding of the effects of exposure to sexually explicit material overall, and more specifically a better understanding of the mechanisms that facilitate the adoption of potentially harmful behaviors by individuals who view sexually explicit media content. In turn, knowledge of these mechanisms could have important practical consequences, in addition to the obvious theoretical advancement presented. Specifically, insight of the psychological mechanisms that may facilitate the adoption of risk behaviors could be incorporated in public health campaigns that target such behaviors.

Sexuality studies conducted in the media effects tradition have been recently met with mounting criticism. Qualitative scholars (i.e., Atwood, 2005) increasingly object that media effects studies could only provide truncated pictures of how individuals use sexually explicit material. Specifically, the most prominent objection to media effects studies seems to be that such studies overlook the existence of active audiences whose members actively seek, interact with, and assign various meanings to sexual media. The advent of new technologies provided audiences not only with the opportunity to actively select from a very wide array of choices among sexually explicit genres, but also to create and disseminate their own sexually explicit media content (Paasonen, 2010). Along with amateur pornography and its innumerable subgenres, new forms of sexual content, such as sexting, have become more prominent and
heavily used by young and technologically-savvy audiences. A second, qualitative, data
collection method in the form of a diary was thus designed and implemented in order to provide
active audiences of sexually explicit materials with a venue to discuss their engagement with this
type of media content in a manner that is less rigorously structured and therefore less restrictive
than quantitative designs such as surveys and experiments.

**Theoretical framework**

This study was built upon a theoretical framework or macro-theory, a psychological
construct, and the relationships between them in predicting the adoption of risk behaviors. The
social cognitive theory (SCT) of mass communication provides a conceptual framework that
guides the understanding of the psychosocial mechanisms through which symbolic
communication influences human thought, affect, and action (Bandura, 2009). Sexual self-
concept (SSC) is a psychological cognitive construct that provide guidance to the process of
understanding the links between what individuals perceive as sexually relevant and sexual
behavior (Anderson & Cyranowski, 1994).

In the context of this study, the SCT suggests that individuals will adopt behaviors that
are communicated symbolically by sexually explicit material either *directly* (without any
intervening or moderating variable) or *indirectly*. SCT posits that cognitive factors partly
determine which external factors will be observed, how they will be interpreted, and how they
could be internalized and subsequently translated into behaviors. Thus, SCT guides the
investigation of the psychological mechanisms that facilitate the adoption of said behaviors.
Drawing on previous research (Lou et al., 2010), the present study proposes that the psycho-
cognitive mechanisms that facilitate the effects of exposure to pornography on the adoption of
risk behaviors are the sexual self-concept (SSC) and its four dimensions: sexual self-esteem, sexual self-efficacy, beliefs about the sexual self, and body image self-consciousness during physical intimacy (BISC).

**Social cognitive theory of mass communication**

In broad terms, SCT posits that significant portions of individuals' acquisition of knowledge is directly related to observing others' communication acts and behaviors within the context of social interactions, experiences, and media influences. SCT explains psychosocial functioning in terms of a triadic reciprocal causation (Bandura, 1982). In a transactional view of the self, the society, and the dynamics between them, “personal factors in the form of cognitive, affective, and biological factors, behavioral patterns, and environmental events all operate as interactive determinants that influence each other bidirectionally” (Bandura, 2009, p. 94). SCT describes the human nature as a potentiality that can be modeled by observational experience into a variety of forms within biological limits (Bandura, 2009). Individuals' ability to learn from their environment rests on a number of capabilities: symbolic capability, self-regulatory capability, self-reflective capability, and vicarious capability. While all these capabilities play an important role in the process of acquiring social, cultural, and cognitive knowledge, two are of the utmost importance in the context of this study. Symbolizing capability provides humans with a powerful tool for comprehending their environment and creating and regulating environmental events (Bandura, 2009). However, external factors influence behavior not directly, but via cognitive processes. Cognitive mechanisms decide which factors will be observed, what meaning will be assigned to them, and how these will be translated into behaviors. As Bandura (1982) pointed out, people engage in symbolic communication and use symbols to process and transform transient experiences into cognitive models that serve as guides for judgment and
behaviors. The second important dimension of SCT in the context of this study is the *vicarious capability*. This trait refers to the fact that a culture could never convey its language, mores, norms, or social practices if every member of said culture would have to acquire this knowledge as response consequences to the environment without the benefit of models (Bandura, 2009). In fact, humans have developed a sophisticated capacity for observational learning that allows them to expand their knowledge rapidly through information conveyed to them through a rich variety of models (Bandura, 2009). According to the SCT, almost all behavioral, cognitive, and affective learning from direct experience can also be achieved vicariously, by observing other people's actions and, perhaps more importantly, their consequences (Rosenthal & Zimmerman, 1978). Research repeatedly showed that much social learning occurs via models that exist in one's immediate environment. More importantly for this study, though, is that “a vast amount of information about human values, styles of thinking, and behavior patterns is gained from the extensive modeling in the symbolic environment of the […] media” (Bandura, 2009, p. 98).

Moreover, most people have limited contact with the physical and social contexts in which they live (work in the same setting, travel the same routes, and interact, more or less, repeatedly with the same individuals), therefore their understanding of the larger social context is acquired mostly *vicariously*, without direct experiential corrections (Bandura, 1992). Consequently, according to SCT, people largely act on *images* or representations of reality. Therefore, it was proposed that the more people's representations of reality rely on media's symbolic environment, the greater media's social impact will be (Ball-Rokeach & DeFleur, 1976).

**Sexual self-concept (SSC).** The self-concept is described in psychological literature as individuals' perceptions of themselves – who they are, how they feel, and how they act (Vickberg & Deaux, 2005). The sexual self-concept is one component of the self-concept
(Aubrey, 2007), and is defined as “an individual's perception of his or her qualities in the sexual domain (Buzwell & Rosenthal, 1996, p. 490). The sexual self-concept is “derived from past experience, manifest in current experience, influential in the processing of sexually relevant social information, and gives guidance for sexual behavior (Andersen & Cyranowski, 1994, p. 1092). A number of dimensions of the SSC have been identified and used in research. For example, Buzzwell and Rosenthal (1996) identified three dimensions of the SSC: sexual self-esteem, defined as one's self-evaluation of worth as a sexual being, sexual self-efficacy, defined as perceptions of one's mastery of the sexual world, and beliefs about the sexual self, including sexual interest and anxiety in sexual situations. Aubrey (2007) proposed a fourth dimension of the SSC, body image self-consciousness during physical intimacy (BISC). Schooler et al. (2005) defined BISC as the concern about appearing unattractive and/or fat to the partner during sex and found it to be strongly negatively correlated with sexual assertiveness and sexual self-efficacy.

**Objectives of the study**

In broad terms, the major objective of the present study was to investigate the associations between consumption of sexually explicit material and the adoption of risk behaviors. Also, facing mounting criticism asserting that research rooted in the positivist epistemology and quantitative methods could only present a partial and truncated picture of the role played by pornography in people's lives, this study attempted to better understand how individuals select, use, and make sense of this type of media content. In other words, the study attempted to offer a richer and well-rounded understanding of the complex role of sexually explicit material and to thus depart from a “hypodermic needle” model according to which exposure to media content has almost pre-determined effects on a passive and indiscriminating
audience. Stemming from this broad objective, this study proposed six specific objectives, which are discussed below.

**Objective I: Providing baseline data of current consumption of sexually explicit media content**

The first objective of the study was to collect baseline data regarding consumption of sexually explicit materials, especially in terms of frequency and biological sex distribution. Such data have been offered by previous research (Lo & Wei, 2005; Boies, 2002; Snyder, 2011), but there is significant variation between studies. While the possibility that some of these inconsistencies result from faulty methodological designs cannot be ruled out, an alternative explanation would be that the advent of new technologies play a role in the emergence of specific genres of pornography and of new patterns of consumption of pornography (Buzzell, 2005; Paasonen, 2010), unaccounted for by existing studies. For example, Paasonen (2010) argues that the relatively recent rise of amateur pornography and adjunct subgenres such as gonzo porn, alt porn, or reality porn, has caused important transformations in the production and consumption of pornography, which calls for a rethinking of pornography as a popular media genre and the ways in which its boundaries have become stretched, and perhaps even redrawn. Amateur pornography and its many subgenres are produced by ordinary people as opposed to the professional adult industry. The amateur pornography's low production values come in stark contrast with the glamour, glossiness, and high production values of traditional, professional pornography (Hardy, 2009). However, this is compensated by an increased perceived realism of amateur pornography, which has been found to be a strong predictor of preference for a certain genre and of adoption of recreational attitudes towards sex (Peter & Valkenburg, 2006). Therefore, it is necessary to provide more recent baseline data that might reflect more current
patterns of exposure to sexually explicit media content. Of primary interest was to provide new
data regarding how demographic characteristics of the sample population, such as biological sex,
sexual orientation, sexually active status, level of enrollment, or class standing influenced
patterns of consumption of sexually explicit material. In order to accomplish this first objective,
the following research questions were formulated:

RQ1: How often are respondents exposed to sexually explicit material?

RQ2a: What is the biological sex distribution of respondents who are exposed to sexually
explicit material?

RQ2b: Are there gender differences among respondents in preference expressed for different
types of sexually explicit material?

RQ2c: Are there differences in exposure to SEM based on sexual orientation of the respondents?

RQ2d: Does sexually active/not active status of respondents influence frequency of exposure to
sexually explicit material?

RQ2e: What is the relationship between the level of enrollment of respondents (undergraduate
and graduate) at BGSU and frequency of exposure to sexually explicit material?

Objective II: Investigating the relationship between exposure to sexually explicit material
and sexual self-concept (SSC)

Aubrey (2007) studied the relationships between exposure to sexual television content
(primetime sitcoms, soap operas, music videos, and primetime drama) on college-aged women's
SSC. However, because pornography constitutes a very particular type of media, it is important to study the relationship between sexually explicit material and SSC as well. Therefore, the second objective of this study was to investigate how exposure to pornography correlates with variations in respondents' SSC. Because the sexual self-concept is a composite concept, each of its four dimensions (sexual self-esteem, sexual self-efficacy, beliefs about the sexual self, and body image during physical intimacy) were investigated separately. Given the exploratory nature of this investigation, research questions rather than hypotheses were formulated. The following research questions were thus posited:

*RQ3a*: What is the relationship between frequency of exposure to sexually explicit material and sexual self-esteem?

*RQ3b*: What is the relationship between frequency of exposure to sexually explicit material and sexual self-efficacy?

*RQ3c*: What is the relationship between frequency of exposure to sexually explicit material and beliefs about the sexual self?

*RQ3d*: What is the relationship between exposure to sexually explicit materials and body image during physical intimacy (BISC)?

**Objective III: Investigating the relationships between SSC and risk behaviors**

Previous research (Buzzwell & Rosenthal, 1996; Aubrey, 2007; Andersen & Cyranowski, 1994) has shown that one role played by SSC is to provide guidance for subsequent sexual behavior. However, existing studies have so far focused on the influence of the SSC on attitudes
and behavioral intentions rather than on behaviors per se. Therefore, a third objective of this study was to investigate the relationship between SSC and the adoption of two separate sets of risk behaviors, sex-related risk behaviors and health-related risk behaviors. Again, because the SSC is a composite concept, each of its four dimensions was investigated separately in relationship with both sex- and health-related risk behaviors. Similar to the first set of research questions, because of the exploratory nature of this study, research questions rather than hypotheses were formulated. The following research questions were posited:

*RQ4a:* What is the relationship between sexual self-esteem and the adoption of sex-related risk behaviors?

*RQ4b:* What is the relationship between sexual self-efficacy and the adoption of sex-related risk behaviors?

*RQ4c:* What is the relationship between the beliefs about sexual self and the adoption of sex-related risk behaviors?

*RQ4d:* What is the relationship between body image self-consciousness during physical intimacy (BISC) and the adoption of sex-related risk behaviors?

*RQ5a:* What is the relationship between sexual self-esteem and the adoption of health-related risk behaviors?

*RQ5b:* What is the relationship between sexual self-efficacy and the adoption of health-related risk behaviors?
**RQ5c:** What is the relationship between the beliefs about sexual self and the adoption of health-related risk behaviors?

**RQ5d:** What is the relationship between body image self-consciousness during physical intimacy and the adoption of health-related risk behaviors?

**Objective IV: Investigating pornography exposure and SSC as “predictors” and “causes” of the adoption of risk behaviors**

The fourth objective of the study was to take a step further from merely investigating possible correlations between exposure to pornography, SSC, and risk behaviors. Using a series of linear regressions and a path model, which is a special case of structural equation modeling, the study investigated whether exposure to pornography and the SSC predict the adoption of risk behaviors. Using a path model, the study moved towards establishing causal relationships between exposure to pornography and SSC on the one hand, and the adoption of risk behaviors, on the other hand. Structural equation modeling and its special cases such as path models allow for the establishment of “guarded causality” (DeMaris, 2006) even when the data was collected using methods that are traditionally not associated with causality studies (i.e., surveys). Four hypotheses investigated whether exposure to pornography and SSC predict the adoption of risk behaviors.

**H1:** Increased frequency of exposure to sexually explicit material will predict lower sexual self-concept (SSC) scores.

**H2a:** Higher SSC scores will predict lower health-related risk behavior scores.

**H2b:** Higher SSC scores will predict lower scores on sex-related risk behaviors.
$H3a$: Higher frequency of exposure to sexually explicit material would predict higher health-related risk behavior scores.

$H3b$: Higher scores on exposure to sexually explicit material would predict higher sex-related risk behavior scores.

In addition to testing the hypotheses discussed above, the path model constructed allowed for the establishment of “guarded causal” relationships between exposure to sexually explicit material, SSC, and the adoption of risk behaviors. The most important benefit of the path model was that it facilitated the investigation of how SSC mediates the relationship between viewing pornography and engagement in risk behaviors. Thus the path model revealed that the SSC operates as a psychological mechanism that mediates the adoption of risk behaviors following the consumption of sexually explicit material.

**Objective V: Clarifying the role of biological sex and age on the adoption of risk behaviors**

A fifth objective of the present study was to investigate influence of biological sex on the relationships between consumption of sexually explicit material, SSC, and risk behaviors. As noted above, previous research has suggested that men and women might perceive and interpret sexually explicit material differently. The path model facilitated the investigation of how biological sex impacted the frequency of exposure to sexual media, SSC scores, and the likelihood to adopt risk behaviors.

Also, the model accounted for the role of age in the complex relationships between the frequency of viewing pornography, SSC, and the likelihood to engage in risk behaviors. The following research questions were posited:
RQ6: What is the role of biological sex in the process of adopting sex- and health-related risk behaviors?

RQ7: What is the role of age in the process of adopting sex- and health-related risk behaviors?

Objective VI: Providing a qualitative perspective of people’s use and interpretation of sexually explicit media content

In order to achieve the first five objectives of this study, data were collected using a survey design. However, human sexuality researchers have consistently voiced reservations regarding to the adequacy of quantitative research methods applied to the field of human sexuality (Okami, 2002; Atwood, 2005). Specifically, quantitative data collection methods have been deemed inadequate, “generally involving the performance of experiments that bear little relation to actual conditions in which pornography is consumed. […] Although surveys give a useful snapshot of public opinion, they are limited because of the way they structure the responses of the public through their use of “closed” questions, and because they miss the ambivalence, uncertainty, and inconsistency in the positions people take up in relation to issues of sexuality” (Atwood, 2005, p. 67). Okami (2002) argued that data collection methods that rely on retrospection, like surveys, are problematic because research participants' memories might be faulty. Other researchers indicated that surveys should be regarded with caution as an accurate data collection method because the communication styles of investigators and participants are often mismatched (Lewontin, 1995; Wiederman, 1997). Another issue identified with quantitative methods applied to human sexuality rests with the apparent inconclusiveness and inconsistency of the findings. In fact, it was argued that “inconsistency is the only consistency to
emerge from empirical research which ignores both the semiotic and the social context of images of sexual explicitness” (Segal, 1994, p. 359).

In order to address these paradigmatic and methodological limitations, a second data collection method - diary method - was implemented. This approach provided respondents with the opportunity to report their interactions with sexually explicit material, to explain how they select and how they assign meaning, and to detail the uses they have for sexual media, in an unrestricted, open-ended manner. The diary method used in this study afforded participants to talk about their various engagements with sexually explicit media content in a manner that was less restrictive than that provided by survey and less artificial than the typical setting of experimental designs. Qualitative data collected through the diary method were used to answer the following research questions:

*RQ8:* What did participants use sexually explicit material for?

*RQ9:* What were participants' motivations to view pornography before the latest diary entry?

*RQ10:* How realistic did the participants think the sexual representations were in the material they last viewed?

*RQ11:* How did exposure to sexually explicit material make the participants feel about their own sex lives?

*RQ12:* How did exposure to sexually explicit material make the participants feel about their own bodies?

*RQ13:* How did exposure to sexually explicit material make the participants feel about their own
Definitions of key terms and concepts

Sexually explicit material. While it is certain that representations of human sexuality exist for a large variety of reasons and serve a multitude of purposes, this study employed a functional definition of sexually explicit materials, proposed by Mundorf et al. (2007), who defined them as “media material used or intended to increase sexual arousal” (p. 181). Most studies that investigate pornography, particularly in the media effects framework, use a content-based classification of this type of media. While some variations to this classification exist, reviews of sexually explicit media literature propose that there are three types of sexually explicit media: sexually violent pornography, nonviolent dehumanizing pornography, and nonviolent erotica (Check & Guloien, 1989; Harris & Barlett, 2009). Sexually violent pornography includes materials that portray rape, bondage, torture, sadomasochism, hitting, spanking, hair pulling, and genital mutilation (Harris & Barlett, 2009). Especially during the early stages of pornography research, scholars found compelling evidence that consumption of violent pornography has certain antisocial effects, such as an increased acceptance of “rape myth” in both men and women, an increased acceptance of violence against women, increased rape fantasies, desensitization to sexual violence, increased aggressive behavior towards women in the laboratory setting, and even an increased self-reported willingness to rape (Check & Guloien, 1989; Zillman, 1989). Nonviolent dehumanizing pornography includes depictions of sexual degradation, domination, subordination, or humiliation, especially (but not exclusively) of female performers (Check & Guloien, 1989; Harris & Barlett, 2009). This type of sexually explicit materials “typically presents the woman with few human attributes besides body parts and sexual appetite. Although often verbally abused and degraded, she appears hysterically
receptive and responsive to men's sexual demands. The man appears in the sexually dominant position, and the woman is far more likely than the man to be more exposed or nude” (Harris & Barlett, 2009, p. 305). Erotica consists of portrayals of sexuality that is “entirely mutually consenting and affectionate [...] depicting [sexual intercourse] in a loving, or at least non-coercive, fashion” (Harris & Barlett, 2009, p. 305).

**Sexual Self-Concept (SSC).** Sexual self-concept was defined in psychological literature as a sub-dimension of the self-concept. Self-concept functions as an organizing framework that individuals use to interpret and internalize experiences and informational input from the environment (O'Sullivan et al., 2006). The sexual self-concept, in turn, has been defined broadly as the individuals' perceptions of themselves as sexual beings (Vickberg & Deaux, 2006), or as one's perception of his or her own qualities in the sexual domain (Buzwell & Rosenthal, 1996). Previous research suggests that the SSC might link sexual attitudes and knowledge to sexual behaviors (Lou et al., 2010; Rostosky et al., 2008). Guided by the social cognitive theory, which emphasizes the role played by psychosocial mechanisms through which symbolic communication influences thought, affect, and behavior (Bandura, 2009), this study hypothesized that the SSC represents an important psychological mechanism that mediates the relationship between consumption of pornography and the adoption of risk behaviors.

**Risk behaviors.** Previous research concerning risk-focused media has primarily concentrated on identifying the most effective ways of reducing risk (Pechmann, 2001), of informing people about risk (Rowan, 1995), or how campaigns targeting risk behaviors should be designed in order to achieve the desired goals (Strahan, Spencer, and Zanna, 2005). In terms of risk-promoting media content, some research investigated the correlations between smoking in movies and individuals' inclination to start smoking (Titus-Ernstoff et al., 2008), and the effects
of risk stimuli in video games and high-risk sports on risk related thoughts and inclinations to take risks (Fischer, Guter, and Frey, 2008). Closer to the topic of the present study, Lou et al. (2010) have shown that sexual self-concept significantly predicted sexual risk cognition.

The present study investigated the effects of exposure to sexually explicit materials on the adoption of two types of risk behaviors: *sex-related risk behaviors*, and *health-related risk behaviors*. In this specific context, sex-related risk behaviors refer to sexual behaviors and practices that have been identified as unsafe or high-risk by previous research, such as unprotected sex (May, Feng, and Song, 2011), anal sex (Dosekun & Fox, 2010), group sex (Snyder, 2011), sexual encounters with strangers (Peter and Valkenburg, 2006), anal-to-vaginal entry (May, Feng, and Song, 2011), and an increased number of sexual partners (Zillmann & Bryant, 1988). Two types of sex-related risk behaviors emerged in the analysis: sex risk practices (including sexual practices learned from pornographic materials, group sex, anal sex, and sexual acts that included violence and sadomasochism), and sex risk partners (including total number of sex partners, number of sex partners during the last 12 months, casual sex partners, and number of unprotected sex partners).

*Health-related risk behaviors* consist of a series of practices that were deemed risky by experts, but are not directly related to sexuality, such as overexercising (Levine & Smolak, 2006; Segura-Garcia et al., 2010), artificial tanning (Stapleton et al., 2010), and cosmetic surgery (Gilmartin, 2010). Health risk behaviors related to body image have made the object of considerable attention in media effects research (Levine & Harrison, 2009). Research has shown that exposure to increasingly idealized and unattainable body images in media has had a substantial negative impact on consumers' body image and body satisfaction. Research has demonstrated that constant exposure to media displaying idealized bodies in magazines, on
television, and video games contributed to lower body satisfaction and increased incidence of disordered eating symptoms in women (Levine & Harrison, 2009). Concomitantly, a growing body of research has been showing that men are just as likely as women to be negatively influenced by idealized body images in media. Studies have consistently uncovered correlations between exposure to idealized body images in media such as television, movies, advertisements, magazines, video games, and action figures and body image disturbance in men (Barlett et al., 2008). Body dissatisfaction in men has been shown to contribute to overexercising, abuse of steroids, and plastic surgery (Levine & Harrison, 2009). The present study attempted to address a conspicuous gap in media effects research dedicated to body image, namely, the effects of exposure to sexually explicit material on one's body image and possible adoption of compensatory behaviors such as cosmetic surgery, artificial tanning, and overexercising.

**Biological sex differences.** Pornography effects research only relatively recently turned its attention to the important issue of sex differences in the interpretation and effects of sexually explicit materials. Indeed, the first studies that emphasized gender differences were not published until the early 2000s. Even recent comprehensive reviews of sexual media literature overlook this important aspect (Mundorf et al., 2007; Harris & Barlett, 2009). To an extent, researchers' lack of interest for gender differences in pornography effects is not surprising. Most sexually explicit materials, at least in the traditional form, are created by men for men, although there are some production companies that specialize in pornography for women, like Candida Royale and Femme Productions (Allen et al, 2007). Consequently, the majority of previous research assumed by default that most consumers of pornography were men (Allen et al., 2007). While still scarce, a growing body of research suggests that indeed men and women might engage in consumption of pornography in different patterns, and therefore it is plausible that the effects are
going to be different. For example, Allen et al. (2007) found that men and women may experience the same levels of sexual arousal when exposed to pornography, but their interpretation of the physiological reaction could be different. Specifically, while experiencing arousal, women saw pornography as less emotionally pleasing. Possible explanations may have to do with the fact that women are socialized to experience sexual gratification with caution. The present study attempted to clarify whether consumption of pornography predicts the adoption of risk behaviors differently for men and women.

**Epistemological Assumptions**

Until relatively recently, the majority of studies devoted to sexuality in the field of media and communication adhered epistemologically to the (post)-positivist tradition and used primarily quantitative research methods. The underlying assumption of most quantitative studies that media have “effects” on the audience was deemed incapable to render the complexity of the text-audience relationships, and that, in fact, media effects research rarely, if ever, take into consideration the presence of an “audience” (Attwood, 2005; Segal, 1994). While acknowledging this critique, the author of this study believes that carefully designed quantitative methods can offer valuable results, ranging from snapshots of public opinion on the contentious topic of sexually explicit materials, to identifying frequency and patterns of consumption of sexually explicit materials, and to establish correlation and even causal relationships between exposure to pornography and adoption of risk behaviors. However, in order to address this acknowledged limitation, in addition to the primary data collection method – survey – a second data collection procedure, namely a diary, was used. The diary method provided respondents with a venue to express in their own words and in an unconstrained manner their experiences with sexually explicit materials, their motivations to seek pornography, their use of pornography,
and the meanings that they assign to this type of media content. The adoption of this data collection method was intended to provide sexually explicit materials consumers with a “voice”, to acknowledge the audience of sexually explicit materials, and thus to address at least some of the criticism directed at the post-positivist epistemology and quantitative methodology of the study.

**Organization of Dissertation**

Chapter II provides an overview of the theoretical frameworks that guided this study, as well as a comprehensive review of literature on relevant concepts and contexts.

Chapter III describes the method phases of the study, along with the population, sample, sampling frameworks, data collection instruments, and the procedures used in data collection and analyses.

Chapter IV describes and reports results from the analysis techniques used to test the hypotheses and to answer the research questions.

Chapter V includes a discussion of the results presented in Chapter IV, along with a summary of conclusions of the study. Also, the chapter included a discussion of the importance, implications, and limitations of the study.
CHAPTER II: THEORETICAL FRAMEWORK AND CONTEXT

Theoretical framework

This study was built upon a theoretical framework or macro-theory (SCT), a psychological construct (SSC), and the relationships between them in predicting the adoption of risk behaviors. Social cognitive theory (SCT) discusses the social foundations of thought and action and posits that behaviors and behavioral changes are the result of three types of intertwined factors: personal, behavioral, and environmental (Bandura, 1986). The sexual self-concept (SSC) includes attitudes, behaviors, and feelings regarding sexuality, along with perceptions of one's own attractiveness and self-worth (Breakwell & Millward, 1997; Murry et al., 2005). Both social cognitive mechanisms and the sexual self-concept have been shown to facilitate and predict the adoption of a variety of attitudes and behaviors (e.g., Anderson et al., 2003; Bandura, 2004; Lou et al., 2010; Houlihan et al., 2008), so it is important to determine if the same holds true in the particular context of sexually explicit media.

Social cognitive theory. Social cognitive theory emphasizes the role played by psychosocial mechanisms thorough which symbolic communication influences human thought, affect, and behavior (Bandura, 2009). The central tenet of social cognitive theory proposes that human behavior is influenced by environmental and personal (biological, affective, and cognitive) factors, and also by aspects of the behavior itself (Bandura, 1986; Chrisholm-Burns & Spivey, 2010; Glanz et al., 2002).

Personal factors include beliefs of personal self-efficacy, which is considered the foundation of human motivation and action (Bandura, 2004). In other words, people must believe
that they have the power to enact change in order for it to happen. This construct gauges an individual's perceived ability to overcome challenges and obstacles that may influence behavior. Another personal factor is the outcome expectation, related to the individual's beliefs about costs and benefits of adopting a certain behavior. When outcome expectations are positive, the chances of engaging in the behavior are greater (Bandura, 2004).

*Behavioral factors* also influence change in behavior practices. Short-term realistic goals are the most effective in enacting behavioral changes. Behavioral factors reflect the plans or goals an individual develops to enact behaviors at a future point in time (Bandura, 2004).

Finally, *environmental factors* that influence behavior include social support and barriers to behavior adoption. Social support regards the extent to which others facilitate an individual's adoption of certain practices and behaviors (Bandura, 2004). Conversely, environmental barriers, which can be personal, social, and structural, measure the effects of diverse impediments to adopt a certain behavior. Greater number of environmental impediments predicts reduced likelihood of adoption of the desired behavior (Ramirez, Kulinna, & Cothran, 2010).

Further, social cognitive theory proposes that the ability and willingness to modify attitude and behavior is dependent on four interrelated capabilities: symbolizing capability, self-regulatory capability, self-reflective capability, and vicarious capability (Bandura, 2009).

The *symbolizing capability* provides individuals with the ability to understand the environment and, importantly, to create and regulate environmental events (Bandura, 2009). It is important to stress that external events influence attitudes and behaviors through the mediation of cognitive factors, rather than directly. Cognitive factors “determine which environmental events will be observed, what meaning will be conferred to them, whether they have any lasting
effects, what emotional impact and motivating power they will have, and how the information they convey will be organized for future use” (Bandura, 2009, p. 95). Using the symbolizing capability, people gain understanding of causality between variables in their environment, acquire new knowledge, devise solutions to problems and estimate likely outcomes, without having to go through a potentially taxing trial and error process (Bandura, 1986).

The **self-regulatory** capability refers to the individuals' ability to substitute self-regulation for external sanctions (Bandura, 1986). People are not only knowers and performers, but also self-reactors, that is, they have the ability to anticipate the effects and consequences of their acts and to adjust their behaviors accordingly. Very often, self-regulation is founded “on a negative feedback system in which people attempt to reduce the disparities between their perceived performance and an adopted standard” (Bandura, 2009, p. 95).

The **self-reflective capability** refers to individuals' ability to reflect upon themselves and the adequacy of their own thoughts and actions. According to this construct, people are not just actors or agents of action, but also self-examiners of their actions, thoughts, and decisions (Bandura, 1986; 2009). This refers to individuals' capability to distinguish between accurate and erroneous thinking, which is reached and refined through the self-reflective capability. Self-reflective capability occurs via a number of thought verification mechanisms. Social cognitive literature highlights the role played by enactive verification (relying on the adequacy of the match between individuals' thoughts and the result of the actions that they result in), vicarious verification (the witnessing of other people's actions and their consequences), and social verification (occurring when individuals check the validity and reliability of their thoughts against what other individuals believe) (Bandura, 1986; 2009). Through vicarious and social verification, social cognitive theory offers potential explanation of the mechanisms that enable
the adoption of faulty thinking and deviant behavior. For example, verification of thought by comparison with media-shaped version of social reality can foster misconceptions of people, places, things, or interactions (Hawkins & Pingree, 1982; Morgan, Shanahan, & Signorielli, 2009). Furthermore, social verification can foster distorted views of reality if the shared beliefs of the reference groups with which one identifies are peculiar (Bandura, 2009; Hall, 1987). Among the self-referent thoughts, self-efficacy, or people's belief in their efficacy to control the events in their environment is viewed in social cognitive literature as central and pervasive (Bandura, 2009; Chrisholm-Burns & Spivey, 2010). In other words, unless people believe that they can produce the desired effects as a direct consequence of their actions, there will be reduced motivation to act (Bandura, 2009). Efficacy beliefs “influence whether people think self-enhancingly or self-debilitatively, optimistically or pessimistically; what courses of action they choose to pursue; the goals they set for themselves and their commitment to them; how much effort they put forth in given endeavors; the outcomes they expect their efforts to produce; how long they persevere in front of obstacles […] and the accomplishments they realize” (Bandura, 2009, p. 97).

Finally, the *vicarious capability* refers individuals' advanced capacity for observational learning, which enables them to acquire knowledge rapidly and with relatively little effort through information transmitted by a variety of models (Bandura, 2009). Rosenthal and Zimmermann (1978) show that indeed virtually all behavioral, cognitive, and affective learning from direct experience can be just as well acquired vicariously from observing other people's or models' actions and their consequences. Very importantly, a large amount of information about values, perspectives, styles, or behavior patterns stems from the extensive modeling in the symbolic environment of media (Adoni & Mane, 1984; Gerbner, 1972; Morgan, Shanahan, &
Signorielli, 2009). It is important to emphasize symbolic modeling's significant reach and social impact. Unlike experiential learning, “in [symbolic] observational learning a single model can transmit new ways of thinking and behaving simultaneously to countless people in widely dispersed locales” (Bandura, 2009, p. 98). Furthermore, the more people's images of reality depend upon the media symbolic environment, the greater is its social impact (Ball-Rokeach & DeFleur, 1976).

It would be inadequate, however, to define abstract modeling as a mere process of mimicry. Modeling provides not only guidance and psychosocial skills that allow the performance of a variety of activities, but also offers rules for generative and innovative behavior (Bandura, 2009). Social cognitive literature distinguishes between higher and lower order abstract modeling. In the higher order modeling, learners extract not only the desired behaviors, but also the specific rules that govern the actions exhibited by models (Bandura, 1986). Once the rule is integrated, learners use it to generate new instances of behavior that go beyond what they observed.

An extensive body of research has been dedicated to the vicarious motivators that prompt individuals to adopt certain attitudes and to act upon them. Special attention has been given to disinhibitory effects of social justification and outcomes accompanying modeled transgressive behavior (Anderson et al., 2003; Zillmann & Bryant, 1994). Fischer, Guter, and Frey (2008) used the General Aggression Model, based on Bandura's social cognitive theory, to show that exposure to risk-promoting media content prime other semantically risk-related thoughts, emotions, and behavioral reactions, which might provide the initial trigger for actual risky behavior. Social cognitive theory proposes that transgressive behavior is regulated by social sanctions and self-sanctions (Bandura, 1986; 2009). Social sanctions prompt individuals to
refrain from engaging in transgressive behavior because such conduct would subject them social
censure. *Self-sanctions* prevent people from engagement in transgressive behavior because it
would violate their own moral standards (Bandura, 2009). However, media models, via symbolic
modeling, can alter perceived social sanctions by the manner in which consequences - or lack
thereof – of transgressive behavior are portrayed. For example, in a content analysis of sexual
behaviors in popular American sitcoms, Collins et al (2003) found that the vast majority of
scenes with sexual content failed to depict the responsibilities concomitant with sexual activity
or to note the risks of pregnancy or sexually transmitted diseases. In a correlational study,
Beullens and van den Bulck (2008) found strong positive correlation between exposure to risk-
glorifying media and positive attitudes toward both risky driving and willingness to take risks in
traffic situations using a sample of adolescent participants. These findings corroborate previous
media research that emphasizes the role of affective, as opposed to cognitive, mechanisms in the
adoption of attitudes and behaviors framed as desirable and attractive in media content (Melkote,
2009).

Social cognitive theory tenets offered guidance to this study in its attempt to shed light
over the mechanisms that favor the adoption of risk behaviors following exposure to
pornography. Specifically, the study inquired whether individuals who consume pornography are
more likely to adopt, via abstract modeling, attitudes, practices, and behaviors displayed in
sexually explicit material. Also, the study investigated whether social cognitive theory assertion
that external influences affect behavior via cognitive processes held true. Specifically, the study
investigated whether exposure to pornography is correlated with variations in respondents'
sexual self-concept and, furthermore, if sexual self-concept variations are correlated with the
adoption of risk-related behaviors.
**Sexual self-concept.** Bandura's social cognitive theory highlights the role played by cognitive constructs in the selection and interpretation of events that occur in an individual's environment, as well as the motivating effects that these events will have on subsequent behaviors (Bandura, 2009). In the context of the effects of sexually explicit materials on individuals' behaviors, such mediating role may be played by a composite cognitive psychological construct, the sexual self-concept (SSC).

Psychological literature proposes that self-concept functions as an organizing framework that individuals use in order to interpret experiences and input from the environment (O'Sullivan et al., 2006). An important aspect of the self-concept is its inherent flexibility. Some authors described it as a rather fluid construct, having the ability to change when challenged with new information from external sources (Markus & Wurf, 1987). Self-concept is seen as a multifaceted construct, representing an integration of a dynamic core and a number of peripheral concepts, as well as idealized “possible selves” (Markus & Nurius, 1986; O'Sullivan et al., 2006). Among such peripheral self-concepts previous research mentions academic self-concept, athletic self-concept, and sexual self-concept (Bryne, 2002). Simply put, the sexual self-concept (SSC) refers to an individual's view of himself or herself as a sexual person (O'Sullivan et al., 2006).

The current conceptualization of the SSC is relatively recent in psychological literature. Buzzwell and Rosenthal (1996) identified a paucity of research on how individuals, adolescents in particular, conceptualize their sexual self, and especially on the possible links between the sexual self and sexual behaviors. This dearth of research is indeed surprising, given the importance of sexuality in adolescent development identity and of the centrality of sexuality for adolescents (Buzwell, Rosenthal, & Moore, 1992). The SSC is a component of the self-concept,
which in turn is broadly defined as the individuals' perceptions of themselves (Vickberg & Deaux, 2005). The sexual self-concept is defined as an individual's perception of his or her qualities in the sexual domain (Buzwell & Rosenthal, 1996, p. 490). The SSC is "derived from past experience, manifest in current experience, influential in the processing of sexually relevant social information, and gives guidance for sexual behavior (Andersen & Cyranowski, 1994, p. 1092). Buzwell and Rosenthal (1996) identified three dimensions of the SSC: sexual self-esteem, sexual self-efficacy, and sexual attitudes.

The sexual self-esteem was defined as one's evaluation of his/her worth as a sexual being. The link between sexual self-esteem and sexual behavior has been insufficiently researched, and the results have been inconclusive at best (Lou et al., 2010). Rosenthal, Moore and Flynn (1991) found the sexual self-esteem to be a predictor of sexual risk-taking with a stable partner (increased sexual self-esteem predicting greater sexual risk-taking); however, the study found that the total percentage of variance accounted for was less than 10 percent, which suggests that other variables might explain the increased likelihood of adopting sexual risk behaviors.

The second component of SSC, sexual self-efficacy, or sexual assertiveness, was defined as perception of mastery of one's sexual environment (Aubrey, 2007). Self-efficacy has been considered an important aspect of contraceptive behavior, as that behavior consists of a set of acquired skills (Gilchrist & Schinke, 1983). Indeed, contraceptive self-efficacy has been shown to influence contraceptive behavior (Rosenthal et al., 1991). Also, Rostosky et al. (2008) found that higher levels of resistive self-efficacy were associated with higher level of sexual self-esteem.
A third component of SSC identified by Buzzwell and Rosenthal (1996) is an individual's perception of his/her own sexual image. The most prominent dimension of this component is sexual anxiety, which has been shown to be a predictor of sexual risk-taking. More specifically, Brunch and Hynes (1987) found that sexual anxiety is positively correlated with lack of sexual discussion and decreased likelihood to use contraception among adolescents. Rostosky et al. (2008) found that males reported higher levels of sexual anxiety and lower levels of resistive self efficacy than women, and that adolescent males may lack confidence in their ability to manage sexual relationships with a partner. The study suggests that these findings are indicative of male sexual scripts that describe male sexual desire as something that cannot and should not be resisted, especially in the presence of a willing partner. In such a situation, the study suggests healthy sexual decisions may be sacrificed in favor of scripted gender expectations.

Although not included in Buzzwell and Rosenthal's seminal article (1996), Aubrey (2007) proposes that feelings about one's own body constitute another important dimension of SSC, especially for females. Schooler et al. (2005) found that body image self-consciousness during physical intimacy (BISC), which is the concern about appearing unattractive and/or fat to one's sexual partner, was strongly negatively correlated with sexual assertiveness and sexual self-efficacy. This finding builds on previous research, which found that women that experienced more body image self-consciousness were more likely to report avoidance of sexual activity because of fear and anxiety (Wiederman, 2000). La Rocque and Cioe (2011) also examined the relationship between body image and sexual avoidance. In line with previous research, they found that those with a more negative body image displayed a greater tendency to avoid sexual activity. Furthermore, sexual esteem, sexual satisfaction, and sexual desire appeared to mediate
this relationship. It is important to note that although the majority of this line of research predominantly investigated women’s body image in relationship with sexual anxiety and sexual avoidance, Faith and Schare (1993) found that both men and women who viewed their bodies in more negative terms were likely to avoid sexual activity. Among men, research consistently found higher prevalence of negative body image in certain populations, such as gay men (Kaminski et al., 2005) and male athletes (Sundgot-Borgen & Torstveit, 2004) than in the general male population. However, it is possible, as some studies suggest, that the Western culture places greater emphasis on appearance for men than in previous decades (Tiggemann, 2002), so it is feasible to assume that males feel more pressure than before to acquire a certain ideal physique. There is also research suggesting that contemporary males are very motivated to attain very lean and muscular body types (Oehlhof et al., 2009), and also that men may believe that women desire more muscular men than they actually do (Grieve et al., 2005). Body image self-consciousness during physical intimacy (BISC) has been so far predominantly studied with female populations; however, in order to shed light over the intricate relationships between body image and human sexuality, body image research needs to include both females and males. The above noted study of La Rocque and Cioe (2011), found body image dissatisfaction to be related to sexual avoidance in both men and women; however, they found women to report higher levels of body image investment than men, and higher levels of self-consciousness focus on their bodies and desire to conceal certain aspects of their appearance during sexual activity. These findings are promising, but media research is only at the early stages of investigating body image for both men and women. The present study investigated the relationships between sexually explicit media exposure, BISC, and risk behaviors for men and women alike.
Previous research consistently found correlations between SSC and likelihood to engage in risk-related behaviors or attitudes. For example, Lou et al. (2010) found that SSC has a positive influence on sexual risk cognition, that is, adolescents with positive SSC have more knowledge about sexual risk. This finding is in line with the results of Salazar et al. (2004), who noted that adolescents' sexual self-concept was associated with their perception of unprotected sex refusal. In other words, a more positive SSC was found to be correlated with higher importance assigned by adolescents to knowledge about safe sex and with higher perception of the risk of unprotected sex. As the present study is concerned with the possible links between pornography, SSC, and risk behaviors, it is important to investigate what role, if any, media exposure has on SSC. Aubrey (2007) sought to clarify the effects of television sexual content on college-aged women's sexual self-concept. The study did not focus on the effects of pornography, but of sexual content on mainstream television (soap operas and primetime TV drama). Aubrey's study found that television exposure and sexual self-concept were correlated. Exposure to soap operas, primetime TV dramas, and the amount of TV viewed per day negatively influenced the sexual self-concept, suggesting that, in general, TV viewing was damaging the sexual self-concept of college-aged women. Aubrey's study also indicated that positive sexual self-concept is positively correlated with safe sex practices. It is, therefore, possible, that exposure to TV programming deflates the sexual self-concept, which, in turn, can cause women to act with less self-efficacy (decreased willingness to initiate sex, sexual guilt, not use a condom). As previous research suggests that a positive SSC is associated with safer sexual practices such as use of condoms, a willingness to take initiative, and less sexual guilt (Chambers, 2004), “it is possible that TV exposure deflates the sexual self-concept, which, in turn, could cause women to act with less sexual self-efficacy (i.e., decreased willingness to
initiate sex), feel negatively about their sexual interactions (i.e., sexual guilt), and engage in unsafe sexual practices (i.e., not use a condom)” (Aubrey, 2007, p. 176). However, the effect of exposure to sexually explicit media content on SSC had never been investigated, which was one objective of the present study.

Context

Literature reviews of sexually explicit media research generally conclude that the relatively sizeable body of research on the effects of exposure to sexually explicit media can be clustered into three major classes or broad dependent variables: arousal, attitudinal changes, and behavioral changes (Oddone-Paolucci, Genuis, & Violato, 2000; Mundorf, D’Alessio, Allen, & Emmers-Sommer, 2007; Harris & Barlett, 2009).

The first of these classes, arousal, is also the one that seems to have received the least attention from media and communication scholars, judging from the number of studies published. Research in this area is guided by functional definitions of pornography such the one proposed by Mundorf et al. (2007), who defined it as “media material used or intended to increase sexual arousal” (p. 181). Aside from its practicality, however, this definition has some limitations, as the effects of exposure to pornography go beyond mere sexual arousal. Sexual arousal was defined as “a heightened physiological state that energizes sexual behavior” (Harris & Barlett, 2009, p. 307). In most cases, sexual arousal is measured via self-ratings, but a more direct and intrusive means of observation is through physiological measures such as penile tumescence, vaginal lubrication, or temperature (Harris & Bartlett, 2009).

Recent research investigated sexual arousal as an effect of exposure to pornography in conjunction with other variables. For example, in a meta-analysis of studies dedicated to the connections between the psychological and physiological reactions to sexually explicit material,
Allen et al. (2007) found that sexual arousal, measured by genital blood volume increase, was the same for men and women, but that psychological reactions to the sexual arousal was different. Specifically, both men and women labeled the experience as emotionally positive; however, the level of positive psychological response was significantly smaller for women than for men. Also, in an experimental study, Davis et al. (2006) found sexual arousal along with ingestion of alcohol to be strong predictors of women's acceptance of “rape myth”. Finally, some studies of sexual arousal related to exposure to sexually explicit content investigated what is known as the „catharsis effect“. The catharsis effect proponents argue that consuming pornography facilitates the expression of sexual urges, leading to a decrease in sexual arousal. However, empirical support in favor of the catharsis effect is virtually nonexistent (Harris & Barlett, 2009). If anything, viewing pornography increases sexual arousal, therefore after viewing pornography individuals who view pornography may be more inclined to engage in sexual behavior (Harris & Barlett, 2009).

Attitudinal change

Studies investigating the effects of pornography on attitudes toward sexuality have been conducted using both experimental and non-experimental designs (Mundorf et al., 2007). Within this larger area of study, the effects of pornography on a variety of dependent variables, such as acceptance of “rape myth”, attitudes toward contraception, or women's self-concept, have been investigated. As mentioned above, previous researched established a strong negative correlation between exposure to sexual content in mainstream media and the SSC – higher exposure to sexuality on mainstream television was found to be associated with lower (deflated) sexual self-concept (SSC). Other studies, however, found that exposure to certain TV programming can have a positive impact on adoption of health-related behaviors. In a national survey of American
adolescents, Collins et al. (2003) found that 65% of respondents who had viewed an episode from the popular sitcom *Friends* recalled the depiction of condom failure that resulted in pregnancy. The authors conclude that entertainment television can serve as a health sex educator in certain circumstances. However, content analyses of primetime television showed that, more often than not, sexual behaviors on TV are not associated with any consequences. For example, Cope-Farrar and Kunkel (2002), in a content analysis of top fifteen TV shows watched by young people aged 12 to 17 found that 75 percent of characters involved in sexual behaviors did not experience any clear consequences, and that, of the minority that experienced some consequences, 75 percent were positive. In a recent study, Snyder (2011) found that use of pornography was positively related to positive attitudes towards unprotected vaginal and anal sex acts.

One of the dependent variables that received consistent attention from scholars was the attitude towards sexuality, especially in relation with intention to engage in sexual activities. Overall, research found that exposure to pornography was likely to be associated with positive attitudes toward sex and increased likelihood to engage in sexual behavior. Chia (2006) in a study of perceived media effects on peers, as well as perception of peer norms, found that media influence and peer influence complement each other as well as they influence adolescents' sexuality. In addition to their direct effect on adolescents' sexual attitudes, sex-related media was found to produce a significant indirect effect that encouraged greater sexual activities of adolescents. The indirect effect – known as the influence of perceived media influence (IPI) - operates in addition to the direct effect. In short, the study found that teenagers infer peer norms from a „falsely” perceived media influence, accommodate the misconceived peer norm, and embrace permissive attitudes toward premarital sex and uncommitted sex. Also, Lo and Wei
(2005), in a representative sample of Taiwanese adolescents, found that exposure to sexually explicit media, especially internet pornography, was related to greater acceptance of sexual permissiveness and greater self-reported intention to engage in sexually permissive behavior. Malamuth and Impett (2001) came to similar conclusions, that is, exposure to sexually explicit content is likely to affect people's judgments and attitudes regarding sexual behaviors (premarital and extramarital sex). This seems to apply to all age categories, adolescents, young adults, and adults alike. The authors also posit that the effects of pornography should not be seen in a „hypodermic needle” manner, proposing that these effects are moderated by many other variables, such as family communication styles, cognitive style, and personality/psychological characteristics. When pornography effects do occur, their degree and sometimes even their direction of influence are likely to vary as a function of such moderators. Similarly, Peter and Valkenburg (2006) investigated the effects of exposure to pornography, more precisely sexually explicit online materials, on adolescents' recreational attitudes towards sex, that is, on sexuality conceptualized as purely physical activities in which the fulfillment of one's own sexual pleasure is more important than interpersonal or relational aspects. The authors found that exposure to online pornography, via the perceived realism of such materials, was associated with more pronounced recreational attitudes towards sex. Specifically, when adolescents view online pornography more often, they tend to perceive the material as realistic. This perception, in turn, is associated with more recreational attitudes towards sex.

One of the most important and consistent area of study under this larger class of attitudinal change is the relationship between pornography and the development of sexually aggressive attitudes. This area received considerable attention especially during the early stages of pornography research, and still continues today. In one seminal study, Zillman (1989) found
that prolonged exposure to pornography fosters a preference for explicit content that feature less common forms of sexuality, including forms that include some degree of violence or pseudo-violence. Also, the study found that prolonged exposure to both violent and non-violent SEM promotes insensitivity towards victims of sexual violence, it trivializes rape, it promotes men's belief of having the propensity for forcing particular sex acts on reluctant female partners, and it promotes men's belief of being capable of committing rape. Findings like these were replicated in many other studies, such as Zillman and Bryant (1984), Check & Guloien (1989), or Bogaert (2001). Other effects were uncovered. For example, Kenrick, Gutierres, and Goldberg (1989) found that men reported that they loved their partners less after watching SEM featuring highly attractive models. In fact, in an experimental design, both men and women were found to report less satisfaction with their appearance, sexual curiosity, and sexual performance, after being exposed to SEM (Zillman & Bryant, 1988).

Using an experimental design, Davis et al. (2006) investigated the relationship between women's exposure to violent pornography (an eroticized description of rape) and their attitudes towards “rape myth”. Alcohol was used as a potential mediating variable. The study found that women were more likely to accept “rape myth”, especially if the victim's response to the assault was ambiguous, rather than overt disgust. Also, women who had had alcoholic drinks as part of the experimental design were less likely than sober women to describe the event as rape. Alcohol consumption focused participants on instigator sexual cues rather than inhibitory violence cues resulting in reduced perceptions of rape. Also, women who had had alcoholic drinks self-reported greater sexual arousal in response to the scenario, which might have been another intervening variable.
Behavioral effects

In contrast to effects of viewing pornography on attitudes, which have been investigated through both experimental and non-experimental designs, behavioral effects have been studied predominantly via experiments (Mundorf et al., 2007). Under this area of study, multiple dependent variables have been investigated.

One such dependent variable is the offline behaviors that occur in response to exposure to online pornography. Boies (2002) found that the number of offline sex partners was negatively correlated to online sex information seeking. Also, online sexual exploration was almost entirely restricted to solitary activities as indicated by very few people having online partners compared to offline. Finally, male respondents agreed that viewing online pornography fulfilled their sexual fantasies and improved their offline relationships. Also, Daneback, Cooper, and Manson (2005) explored the correlation between the amount of time spent online for online sexual activities (OSA) and number of sex partners during the past year. The study found that those who engage in OSA were more likely to be sexually active offline, having had a greater number of sex partners in real life during the past year. One possible explanation is that those with higher interest in sex engage in both cybersex and real life sex. Also, those who see sexuality as a key aspect of a successful relationship might want to see if their sexual interests are compatible with those of a potential partner (Daneback, Cooper, & Manson, 2005). Somewhat similarly, Snyder (2011) found a positive correlation between use of pornography and the number of unprotected partners, and greater number of sex partners in general. Also, a positive correlation was found between use of pornography and anti-commitment attitudes, even controlling whether the respondents were living with a sexual partner or not (Snyder, 2011). However, these data are correlational, not causal, so it is possible that people with anti-commitment values are choosing
to view pornography in part because it is consistent with their values and sexual lifestyle preferences (Snyder, 2011).

Along with viewing sexually explicit materials effects on one's number of partners, studies of how engagement in consumption of pornography affects relationships have been conducted. For example, in an online survey, Schneider (2003) found that, among those impacted by their spouse/partner cybersex activities, such behavior was cited as a contributing factor in separation and divorce. The majority of these couples refrained from engaging in sexual intercourse associated with feelings of isolation, anger, low self-esteem, betrayal, and humiliation resulting from the partner's consumption of sexually explicit materials.

An intensely debated correlation is the one between consumption of sexually explicit material and rape and other sexual crimes. Many studies have attempted to establish such correlations, but the debate is far from being settled. Some studies claimed to have found a correlation between the availability of pornography and an increase in rape rate (Jaffe & Strauss, 1987, in Henry & Barlett, 2009). However, other studies contradict such findings: Fisher and Barak (2001) report that between 1995 and 1999, the exponential increase in availability and use of pornography in the United States was associated with a consistent and substantial decrease in the rate of forcible rape. Of course, this finding must be interpreted with caution. For example, this finding does not include any report of sexual crimes other than forcible rape, such as date, domestic, or statutory rape. Yet, even newer studies continued to find strong correlations between exposure to pornography and sexual aggression (Vega & Malamuth, 2007). However, the authors prompt caution in interpreting these results, insisting that causal interpretation of data must consider the possibility that pornography may be a spurious marker for other risk factors—sexually aggressive individuals may generally be more hostile, anti-social individuals who could
also seek to consume more violent pornography than individuals who do not possess sexually aggressive behavioral traits.

During the last decade researchers started investigating the effect of consumption of pornography on sexual risk behaviors. Rogala & Tyden (2003) report to have found that women who had been exposed to pornography were more likely to have had engaged in anal sex, a practice considered unhealthy and hazardous by medical practitioners. Similarly, May et al. (2011) found that almost all internet pornography users reported adopting at least one high risk sexual practice after exposure. Also, the same study found that frequent users of pornography are adopting high-risk sexual behaviors, such as not using condoms, multiple partners, anal to vaginal entry, insertion of objects, and violence during sex. Findings such as these were replicated by other studies (Cope-Farrar, 2002; Snyder, 2011).

**Risk behaviors**

In social sciences studies of risk the emphasis is placed not necessarily on risk per se, but on perceptions of risk and how these perceptions shape individuals' understanding of health and health-related concerns, policymaking ranging from food safety to energy and natural resources, or intimate relationships and sexuality (Pidgeon, Kasperson, & Slovic, 2003). The study of risk in social sciences was prompted by the apparent gap between what experts evaluate as risky and how non-professional people think about risk (Kasperson et al., 2003). Many of the risks most prominent in the view of the public are not those that – according to statistical data – actually result in high accident figures, high mortality rates, severe health impacts, and so on. Various other factors - social, psychological, ethical, and cultural - than those data influence risk perception, risk behavior, and risk management (Kasperson et al., 2003). Therefore, technical risk analysis is increasingly complemented by approaches proposed by social sciences. Today,
the most commonly studied facets of risk perception are particular sorts of hazards (technologies, activities, health issues, substances), specific risks (nuclear energy, GM foods, diseases, smoking) and judgments of risk aspects (perceived magnitude of risk and risk acceptance) (Pidgeon, Kasperson, & Slovic, 2003).

In the context of this study, risk-taking will be defined as “one's purposive participation in some form of behavior that involves potentially negative consequences or losses (social, health, monetary, interpersonal) as well as perceived positive consequences or gains” (Ben Zur & Zeidner, 2009, p. 110). Risk-taking behaviors can be observed in a number of domains, such as unhealthy living (alcohol and drug abuse), unhealthy sex practices (promiscuous or unprotected sex), road traffic (reckless driving, drunk driving, racing), or extreme sports (Fischer et al., 2011).

An exhaustive discussion of the roles played by media in how risks are perceived by individuals was not an objective of this study. However, it is important to mention that media have been described as both risk amplification and risk attenuation factors (Frewer et al., 2002; Binder at al., 2011; Lewis & Tyshenko, 2009; Wolfers & Kok, 2011). The role of risk-promoting and risk-glorifying media content has been repeatedly examined. For example, Beullens and van den Bulck (2008) found a positive correlation between exposure to risk-glorifying media and positive attitudes towards risky driving and willingness to take risks in traffic situations. In an experimental design, Fischer et al. (2009) found that playing risk-glorifying video racing games (vs. non-risk-related neutral games) led to riskier decision making (financial decision) providing first piece of evidence that the effects of risk-glorifying media content are not necessarily domain-specific. Potts et al. (1994) found that children who had watched TV programs with frequent risk taking reported elevated levels of willingness to take physical risks compared to
those who watched programs with infrequent risk-taking depictions, or those who saw none at all.

This study investigated the effects of viewing SEM on the adoption of risk-related behaviors, more precisely two types of risk: sex-related risks and health-related risks.

Sex-related risk behaviors

Sexuality research shows that pornography include many instances, and indeed insists on depictions of what experts deem „risk” or potentially harmful behaviors. For example, Bridges et al. (2010) conducted a content analysis of popular pornographic videos and found that of the total number of scenes analyzed, 88 percent contained physical aggression in the form of spanking, gagging, and slapping. May et al. (2011) noted that through exposure to pornography, particularly internet pornography, viewers are exposed to glorified risk behaviors such as group sex, “creampie” (internal ejaculation), anal-to-vaginal entry, and double penetration. Also, Snyder (2011) highlighted the reluctance of pornography production companies to have performers use condoms during sexually explicit scenes, relying instead on frequent testing to protect performers. A study of young African American female adolescents (aged 14 through 18) found that exposure to pornographic movies was correlated with negative attitudes towards using condoms and contraceptives (Wingood et al., 2001).

In this specific context of this study, sex-related risk behaviors refer to sexual behaviors and practices that have been identified as unsafe or high-risk by previous research. Such instances of sex-related risk behaviors include group sex (Snyder, 2011), anal sex (Dosekun & Fox, 2010), unprotected sex (May, Feng, & Song, 2011), promiscuous sex (Peter and Valkenburg, 2006), anal-to-vaginal entry (May, Feng, & Song, 2011), and an increased number
of sexual partners (Zillman & Bryant, 1988). Such risky sexual practices and behaviors have been deemed prevalent and normative in contemporary pornographic materials (Snyder, 2011).

*Health-related risk behaviors*

A substantial body of research has been devoted to risk behaviors related to body image, particularly in the context on media effects on body image disturbances (Levine & Harrison, 2009). Research has shown that constant exposure to idealized body images in media has had a negative impact on consumers' body image and body satisfaction, and could lead to disordered eating symptoms (Groesz, Levine, & Murnen, 2002; Harrison, Taylor, & Marske, 2006). While initial research efforts in this area were concentrated on the effects of exposure to unattainable body images on women, a growing body of research suggests that men could be just as likely as women to be impacted by constant exposure to idealized body images in media such as television, movies, video games, advertisements, and magazines (Barlett et al., 2008). The incessant promotion of unattainable body ideals in various media has been linked to body dissatisfaction and risk behaviors adopted in order to meet these idealized body images. The relationships between exposure to such media images and symptoms of body image disturbance, disordered eating, and risk behaviors have been well documented (for a review, see Levine & Harrison, 2009).

The effects of exposure to idealized body images in media such as fashion, health, and adult magazines, television shows, soap operas, music videos, movies, advertisements, or video games have been consistently studied. To date, however, there is no study focusing on the effects of exposure to body images in sexually explicit materials, with the notable exception of magazines such as *Playboy* (Garner et al., 1980) and *Playgirl* (Leit, Pope, & Gray, 2001). In
addition, content analyses of body images and messages about body images promoted in sexually explicit media content have yet to be conducted. The dearth of such research is surprising, given that pornography is a popular media genre that prominently features naked male and female bodies. Anecdotal evidence indicates that pornographic performers – both males and females – adhere to idealized body images that are present across the media spectrum. Indeed, the once-clear boundaries between pornography and mainstream media culture have more recently become blurry, as pornography's visibility has increased in a process termed *pornification* (Nikunen & Paasonen, 2007; Reist, 2008), described as “the expansion and success of porn industry and play with hard-core representations in fashion, advertising, and other fields of popular culture” (Nikunen & Paasonen, 2007, p. 30).

In the context of this study, *health-related risk behaviors* refer to a series of practices that were deemed hazardous by experts, but are not directly related to sexuality or sexual acts. Such high risk practices include overexercising (Levine & Smolak, 2006; Segura-Garcia et al., 2010) abuse of laxatives, diuretics, diet pills, overexercising (Levine & Smolak, 2006), artificial tanning (Stapleton et al., 2010), and cosmetic surgery (Gilmartin, 2010). Drawing on previous research that indicated that exposure to idealized body images in media was linked to body image disturbance and adoption of body image-related risk behaviors, the present study hypothesized that higher frequency of exposure to sexually explicit materials predicted higher likelihood of adoption of risk behaviors like overexercising, artificial tanning, and cosmetic surgery.
CHAPTER III: METHODOLOGY AND DESIGN

Restatement of Research Questions and Hypotheses

Two data collection phases - a survey design and a diary design - were employed to gather data in order to examine the patterns of exposure to sexually explicit material of two groups – undergraduate and graduate students at Bowling Green State University – and to investigate the potential influence of exposure to this type of media content on the adoption of health- and sex-related risk behaviors. Based on a review of literature and noting the dearth of theory-driven studies that investigated the relationship between exposure to sexually explicit material, Sexual Self-Concept (SSC), and the adoption of potentially harmful behaviors and practices, the following research questions were posited:

*RQ1.* How often are respondents exposed to sexually explicit material?

*RQ2a:* What is the biological sex distribution of respondents who are exposed to sexually explicit material?

*RQ2b.* Are there gender differences among respondents in preference expressed for different types of sexually explicit material?

*RQ2c:* Are there differences in exposure to SEM based on sexual orientation of the respondents?

*RQ2d:* Does sexually active/not active status of respondents influence frequency of exposure to sexually explicit material?
RQ2e: What is the relationship between the level of enrollment of respondents (undergraduate and graduate) at BGSU and frequency of exposure to sexually explicit material?

A set of four related research questions investigated the relationship between exposure to sexually explicit materials and the four sub-dimensions of the sexual self-concept (SSC):

RQ3a. What is the relationship between frequency of exposure to sexually explicit material and sexual self-esteem?

RQ3b. What is the relationship between frequency of exposure to sexually explicit material and sexual self-efficacy?

RQ3c. What is the relationship between frequency of exposure to sexually explicit material and beliefs about the sexual self?

RQ3d. What is the relationship between exposure to SEM and body image during physical intimacy (BISC)?

Another objective of this research project was to investigate the relationships between the sub-dimensions of SSC and the adoption of sex-related risk behaviors. The following four related research questions were posited:

RQ4a. What is the relationship between sexual self-esteem and the adoption of sex-related risk behaviors?

RQ4b. What is the relationship between sexual self-efficacy and the adoption of sex-related risk
behaviors?

**RQ4c.** What is the relationship between the beliefs about sexual self and the adoption of sex-related risk behaviors?

**RQ4d.** What is the relationship between body image self-consciousness during physical intimacy (BISC) and the adoption of sex-related risk behaviors?

The study also investigated the relationships between the four sub-dimensions of the SSC and the adoption of health-related risk behaviors. Consequently, four related research questions were formulated:

**RQ5a.** What is the relationship between sexual self-esteem and the adoption of health-related risk behaviors?

**RQ5b.** What is the relationship between sexual self-efficacy and the adoption of health-related risk behaviors?

**RQ5c.** What is the relationship between the beliefs about sexual self and the adoption of health-related risk behaviors?

**RQ5d.** What is the relationship between body image self-consciousness during physical intimacy and the adoption of health-related risk behaviors?

One major objective of the study will be to take a step beyond investigating mere correlations between exposure to sexually explicit material, SSC, and risk behaviors.
Specifically, a path model was proposed in order to investigate exposure to sexually explicit material and the Sexual Self-Concept as *predictors* of the adoption of risk behaviors. The path model, which is a special case of structural equation modeling, allowed for the establishment of guarded causal relationships between these variables. Four related hypotheses were proposed to evaluate the effects of exposure to sexually explicit media content on sex- and health-related risk behaviors, accounting for the potentially mediating role of SSC.

**H1:** Increased frequency of exposure to sexually explicit material will predict lower sexual self-concept (SSC) scores.

**H2a:** Higher SSC scores will predict lower health-related risk behavior scores.

**H2b:** Higher SSC scores will predict lower scores on sex-related risk behaviors.

**H3a:** Higher frequency of exposure to sexually explicit material would predict higher health-related risk behavior scores.

**H3b:** Higher scores on exposure to sexually explicit material would predict higher sex-related risk behavior scores.

In addition, using the path model discussed above, the study investigated the role of respondents' biological sex and age in the process of adopting risk behaviors. The following research questions were posited:

**RQ6.** What is the role of respondents' biological sex in the process of adopting sex- and health-related risk behaviors following the exposure to SEM?
RQ7. What is the role of age in the process of adopting risk behaviors following the exposure to SEM?

An argument has repeatedly been made by human sexuality researchers that most research generated in the media effects tradition offers only an incomplete and fragmented view of how people use, interact with, and make sense of sexually explicit media content (Atwood, 2005). Specifically, not only the methods employed by media effects scholars were deemed limited and inefficient, but also “the notion that media texts have „effects” on their audiences is now widely deemed by media theorists and researchers as a very crude and simplistic view of text-audience relationships” (Atwood, 2005, p. 67). In addition, the methods used to investigate the effects of consumption of sexually explicit media on people's attitudes and behaviors were deemed inadequate. For example, some authors considered that the experimental conditions under which these effects were studied are artificial and bear little resemblance to the actual conditions in which people watch pornography. While surveys are seen as being partly useful in generating snapshots of the public opinion (Atwood, 2005), this data collection method too is considered limited and inefficient in capturing the “ambivalence, uncertainty, and inconsistency” in people's reception, interpretation, and relation with sexually explicit material (Bragg & Buckingham, 2002, p. 7). In order to circumvent these limitations of the media effects research tradition and quantitative methods, authors such as Atwood (2005), Segal (1994), or Hardy (2004) proposed that qualitative methods, which tend to be smaller in scale, but richer in detail and information, be used instead of experiments and surveys in order to investigate people's consumption of sexually explicit material. One such qualitative approach is the diary method, which has been used before as a data collection method in studies concerning human sexuality (McLaws et al., 1990). McLaws et al. (1990) reported that, when comparing a recall instrument
(in the form of a questionnaire) to a diary method as simultaneous data collection instruments for sexuality behaviors, the recall instrument showed higher reliability over the diary method, especially with respect to infrequent sexual practices. However, the study found the recall instrument (questionnaire) to have lower reliability for high frequency sexual practices, a finding suggesting that the diary method, which requires participants to record their behaviors immediately after enacting them, the diary may be a more accurate data collection method for behaviors that occur with high frequency. Other studies (Coxon, 1988; Coxon, 1999) have found recall (questionnaire) and self-report (diary) measures to have complementary biases, but self-completed sexual diaries were found to have the advantage of reducing retrospective bias, with the sexual diary method likely to yield more accurate data than the retrospective questionnaire approach.

In order to address the methodological and epistemological reservations discussed above a set of research questions were proposed and qualitative data were collected. Aside from the adequacy of diary as a data collection method in sexuality studies, its implementation in the present research project afforded participants who viewed pornography a venue to express their interaction with sexually explicit material in a less restrictive manner compared to the highly structured and perhaps restrictive instrument represented by the survey. Thus, participants were presented with an instrument that retained a significant degree of structure and rigor, but also allowed them to discuss in detail their engagement with sexually explicit material in a manner that facilitated the emergence of information potentially unknown to this point. The following research questions were posited:

*RQ8.* What do participants normally use sexually explicit material for?
RQ9. What were participants' motivations to view pornography before the latest diary entry?

RQ10. How realistic did the participants think the sexual representations were in the material they last viewed?

RQ11. How did exposure to sexually explicit material make the participants feel about their own sex lives?

RQ12. How did exposure to sexually explicit material make the participants feel about their own bodies?

RQ13. How did exposure to sexually explicit material make the participants feel about their own sexual skills?

Research Design

In order to answer the research questions and test the hypotheses presented above, two research designs were implemented: a survey and a diary. The survey was employed to collect information about individuals' demographic and psychographic characteristics, their frequency of SEM exposure, and the presence of risk behaviors in their lives.

Population and sampling

The target population for the study was 17,706, consisting of all undergraduate students (N = 14,807) and graduate students (N = 2,899) at Bowling Green State University (National Center for Education Statistics, 2012). Because sexual self-concept (SSC), a central concept in
this study and a possible predictor of sexual behavior, becomes stable in late adolescence and early adulthood, the campus student population was likely to provide an appropriate context for this study. More specifically, comparing the two specific subgroups mentioned above – undergraduate and graduate students -, which normally constitute different age groups, might yield revealing results with respect to the strength of the effects of exposure to SEM on the sexual self-concept. The study aimed for a sample size of at least 376 subjects, in keeping with statistical requirements for a population of 17,700, a confidence level of 95% and a confidence interval of +/- 5. This sample size also satisfied the requirement for the path model, a special case of structural equation modeling, which was used to test the direct and indirect effects of biological sex, age, frequency of exposure to pornography, and SSC on the adoption of risk behaviors. Structural equation modeling literature indicates that a sample size of at least 200 cases is adequate for this type of statistical analysis (Hox & Bechger, 2010; Lei & Wu, 2007).

For the diary method, the sample consisted of 10 participants, a figure similar to with previous research that used diary as a data collection method (McLaws et al., 1990). For both data collection methods, a convenience sample was used.

Like other data collection methods in social sciences, surveys have a number of strengths and weaknesses. One strength particularly important in light of this study is that survey research makes relatively large samples feasible (Baxter & Babbie, 2004). Normally, experimental designs deal with much smaller samples than surveys (Wimmer & Dominick, 2011), but having a large number of cases is important for both descriptive and exploratory variables, especially when multiple variables are going to be analyzed simultaneously (Baxter & Babbie, 2004). As this study is both descriptive and exploratory, it was important that a larger sample than those used for experimental designs would need to be used. Another strength of surveys is that they are
more flexible than experiments. Many questions could be asked on a given topic, which offers researchers considerable flexibility in analyzing the data. While experimental designs are more rigid and require researchers to commit in advance to a certain operational definition of a concept, survey designs allow researchers to construct operational definitions from the respondents' answers (Baxter & Babbie, 2004). This characteristic is particularly important to this project, again due to its partly exploratory nature. Finally, survey design allows for rigor with respect to measurement. Many, if not all, concepts, are ambiguous in nature (Wimmer & Dominick, 2011). Therefore, various respondents assign different meanings to the same concepts. Survey requires researchers to apply the same definitions uniformly to all participants and impute the same intent to all respondents giving a certain answer (Baxter & Babbie, 2004). Survey research does not solve the epistemological problem of ambiguity of concepts, but it does bring about a rigor of measurement that is absent from other data collection methods, perhaps with the exception of experiments.

There are weaknesses associated with survey designs as well. First, the requirement for standardization, which was already mentioned as a strength, can be seen as a weakness as well. Standardized items often represent the least common denominator (Baxter & Babbie, 2004) in assessing people's attitudes, desires, or understandings. Therefore, surveys can appear superficial in their coverage of complex topics. Stemming from this weakness, surveys have been labeled as detached from the social and cultural contexts in which respondents live. People live in certain social and cultural settings that influence their patterns of exposure to and interpretation of sexually explicit material. Surveys were deemed less apt to capture the social and cultural contexts compared to other data collection designs, particularly qualitative methods such as ethnography or in-depth interview. Finally, just like experiments, surveys are subject to
artificiality (Baxter & Babbie, 2004), a weakness that becomes most prominent when attitudes, actions and behaviors are measured. Surveys do not measure actual communicative action, but self-reports or recalled action or intention to act.

The second data collection instrument of this study, the diary, was used to address some of the shortcomings of the survey design. Specifically, the diary format afforded respondents the opportunity to describe their experiences and interactions with sexually explicit materials in an unrestricted and less artificial manner. Also, previous research (McLaws et al., 1990; Okami, 2002) shows that respondents are more likely to remember and report less frequent and perhaps less usual sexual experiences and practices when they use a diary format as opposed to a highly structured tool like a survey.

Survey questionnaire design

Most questions in the survey are drawn from previous research cited in the review of literature (see Aubrey, 2007; May, 2011; Snyder, 2011), as well as existing psychometric scales, adopted either in the original or in adapted form (Snell & Papini, 1989; Noar, Morokoff, & Redding, 2002; Wiederman, 2000).

The questions listed below are part of the survey instrument. However, the items presented in this section do not follow the order in which they appear in the survey as they were seen by the respondents; their order here instead reflects the order of the research questions listed in the dissertation proposal. For a complete version of the survey instrument see Appendix A.

Demographics. Based on the review of literature, biological sex and age are likely to influence the impact of exposure to SEM on the adoption of risk behaviors. Data regarding sexual orientation of participants was collected, as previous research suggests sexual orientation may be
correlated with the frequency of exposure to pornography. In addition, respondents were asked to report their sex, age, level of enrolment, and class standing at Bowling Green State University. Also, because the study investigated the respondents' engagement in actual sexual behaviors, participants were asked if they considered themselves to be sexually active. The demographics section of the survey comprised the following items:

- Please indicate the last two digits of your birth year
- What is your biological sex?
  
  ( ) Female  ( ) Male
- What is your sexual orientation?
  
  ( ) Heterosexual  ( ) Bisexual  ( ) Homosexual  ( ) Other
- Do you consider yourself sexually active
  
  Note: “Sexually active” means engaging regularly in vaginal, oral, or anal sex acts with other person or persons.
  
  ( ) Yes  ( ) No
- What is your level of enrollment at BGSU?
  
  ( ) Undergraduate  ( ) Graduate
- Please indicate your class standing.
  
  ( ) Freshman  ( ) Sophomore  ( ) Junior  ( ) Senior

**Exposure to pornography.** This study assessed self-selected and intentional consumption of SEM, intentionality being an important component of media influence (Brown, 2000). However, because of the sensitive nature of the questions included in this section and the difficulty some participants might have admitting that they purposefully watch pornography, the intentionality of SEM consumption was not emphasized. Instead, participants were simply instructed to respond
in reference to instances in which they viewed pictures or movies of nude individuals, pictures or movies of people having sex (or appearing to have sex), written or audio materials that describe individuals having sex, or real-life nude individuals (Morgan, 2011). The term ”pornography” was used instead of “sexually explicit materials” in the questionnaire, because college students are probably more familiar with this term than with “sexually explicit material” and would therefore be more comfortable answering questions about a term that they are comfortable with than with a rather ambiguous and potentially misleading term like “sexually explicit material” (Morgan, 2011). Frequency of consumption of pornography was assessed using the following question:

- How often do you view pornography”?

Note: “Pornography” means pictures or movies of nude individuals, pictures or movies of people having sex (or appearing to have sex), or real-life nude individuals.

( ) Never  ( ) Rarely  ( ) 2-3 times per month  ( ) Once per week  ( ) 3-4 times per week
( ) Every day  ( ) Multiple times a day

The types of pornography preferred by users, along with the frequency with which these types of pornography are accessed, were investigated using the following question:

How often have you used/viewed the following types of pornography during the last 12 months?

( ) Never  ( ) Rarely  ( ) 2-3 times a month  ( ) Once a week  ( ) 3-4 times a week  ( ) Every day  ( ) Multiple times a day

- Magazines
• Books
• Pay-per-view videos
• Purchased videos
• Rented videos
• Free online videos (Xvideos.com, Youporn.com, Redtube.com, etc.)
• Free photos
• Commercial (paid-for) videos
• Telephone hotlines
• Erotic videogames
• Erotic webcams
• Erotic chatrooms/forums
• Sexting
• Other

**Sexual self-concept (SSC).** The sexual self-concept is a multifaceted construct. While authors differ on the dimensions that make up SSC, this study followed Aubrey's (2007) proposition according to which SSC consists of four sub-constructs: sexual self-esteem, individuals' perception of self-sexual image, sexual self-efficacy, and body image self-consciousness during physical intimacy (BISC). Each of these sub-dimensions was measured separately.

**Sexual Self-Esteem** was measured using a modified version of Snell and Papini's (1989) sexual self-esteem scale, consisting of 5 items (Aubrey, 2007). The original scale was made up of 10 items and was part of a larger instrument titled the Sexuality Scale. Ratings were averaged to compute the Sexual Self-Esteem measure. Using a 5-point Likert-type scale ranging from “1 -
Strongly agree” to “5 - Strongly disagree”, respondents were asked to read and rate the following statement:

Please select the single, best answers that indicate how much you agree/disagree with the following statements:

- I am a good sexual partner.
- I am not very confident in sexual encounters.
- I am better at sex than most other people.
- I sometimes have doubts about my sexual competence.
- I would rate my sexual skill quite highly.

_Sexual self-efficacy_ was measured using three different scales corresponding to the multiple facets of this sub-dimension identified in literature, namely STD/contraceptive self-efficacy, resistive self-efficacy, and situational self-efficacy.

STD/contraceptive self-efficacy was measured using the 4-item Sexual Assertiveness Scale developed by Noar, Morokoff, & Redding (2002). Ratings were averaged in order to compute the STD/Contraceptive self-efficacy scale. Using a 5-point Likert-type scale ranging from “1 - Strongly agree” to “5 - Strongly disagree”, respondents were asked to read and rate the following statements:

Please choose the single, best answer of how much you agree/disagree with each of the following statements:

- I make sure that my partner and I use a condom when we have sex.
- I have sex without a condom if my partner wants.
- I insist on using a condom if I want to, even if my partner doesn't like them.
• I refuse to have sex if my partner refuses to use a condom.

Resistive sexual self-efficacy was measured using a modified 6-item Self-Efficacy Scale developed by Cecil and Pinkerton, 1998. The original scale consisted of 9 items, but three items pertaining to drug abuse in relationship with resistive sexual self-efficacy were considered irrelevant for this study and therefore were dropped. Ratings were averaged in order to compute the resistive self-efficacy scale. Respondents were presented with the following questions which they were asked to answer using a 5-point Likert-type scale, ranging from “5 - Very sure” to “1 - Not at all”.

Please choose the single, best answer for how sure you are of the following statements:

• How sure are you that you would be able to say no to having sexual intercourse with someone you have known for a few days or less?
• How sure are you that you would be able to say no to having sexual intercourse with a person you have dated for a long time?
• How sure are you that you would be able to say no to having sexual intercourse with someone you want to date again?
• How sure are you that you would be able to say no to having sexual intercourse with someone with whom you already had sexual intercourse?
• How sure are you that you would be able to say no to having sexual intercourse with someone who you are in love with?
• How sure are you that you would be able to say no to having sexual intercourse with someone who is pushing you to have sexual intercourse?
Finally, situational sexual self-efficacy was measured using a 4-item scale that is drawn from similar scales used by Zimmerman et al. (2008) and Rostosky et al. (2008). Ratings were averaged in order to compute the situational self-efficacy scale. Respondents were instructed to use a 5-point Likert-type scale ranging from “1 - I definitely can't do this” to “5 – I definitely can do this” to evaluate the four items:

- Please choose the single, best answer for how sure you are of the following statements:
- How sure are you that you would tell someone that you don't want to go someplace with because something sexual might happen?
- How sure are you that you would decide not to make out with someone because you think it might lead to sexual intercourse?
- How sure are you that you would tell someone that you don't want to have sex now, but you might want in the future?
- How sure are you that you would resist participating in sexual acts (practices) that you are unsure about, that your partner seems to like?

Individual’s perception of self sexual image was measured using one of the more frequently used conceptualization of this variable, namely sexual anxiety (Aubrey, 2007). Sex anxiety was measured using Janda's (1980) Sex Anxiety Inventory. The original inventory consists of 25 items in a forced-choice format, with one alternative representing an anxiety response and the other a nonanxiety response. However, the present study used a slightly modified version of the inventory, consisting of only 22 items (3 items from the original scale were considered irrelevant for this study and were therefore dropped). The final scale was computed by summing up the ratings of the 22 items. The Sex Anxiety Scale included the following items:
• Extramarital sex
   ( ) is OK if everyone agrees. ( ) can break up families.

• Sex
   ( ) can cause as much anxiety as pleasure. ( ) on the whole is good and enjoyable.

• Masturbation
   ( ) causes me to worry. ( ) can be a useful substitute to sex.

• After having sexual thoughts
   ( ) I feel aroused. ( ) I feel jittery.

• When I engage in petting
   ( ) I feel scared at first. ( ) I thoroughly enjoy it.

• Initiating sexual relationships
   ( ) is a very stressful experience. ( ) causes me no problem at all.

• Oral sex
   ( ) would arouse me. ( ) would terrify me.

• I feel nervous
   ( ) about initiating sexual relationships. ( ) about nothing when it comes to members of
   the opposite sex. (is this about sex?)

• When I meet someone I'm attracted to
   ( ) I get to know him or her. ( ) I feel nervous.

• When I was younger
   ( ) I was looking forward to having sex. ( ) I felt nervous about the prospect of having
   sex.

• When others flirt with me
   ( ) I don't know what to do. ( ) I flirt back.

• Group sex
( ) would scare me to death. ( ) might be interesting.

- If in the future I committed adultery
  ( ) I would probably get caught. ( ) I wouldn't feel bad about it.

- I would
  ( ) feel too nervous to tell a dirty joke in mixed company. ( ) tell a dirty joke if it were funny.

- Dirty jokes
  ( ) make me uncomfortable. ( ) often make me laugh.

- When I awake from sexual dreams
  ( ) I feel pleasant and relaxed. ( ) I feel tense.

- When I have sexual desires
  ( ) I worry about what I should do. ( ) I do something to satisfy them.

- If in the future I committed adultery
  ( ) it would be nobody's business than mine. ( ) I would worry about my spouse finding out.

- Watching a pornographic movie
  ( ) wouldn't bother me. ( ) would make me nervous.

- Casual sex
  ( ) is better than no sex at all. ( ) can hurt many people.

- Extramarital sex
  ( ) is sometimes necessary. ( ) can damage one's personal life.

- Sexual advances
  ( ) leave me feeling tense. ( ) are welcomed.

- When I have sexual relations
  ( ) I feel satisfied. ( ) I worry about being discovered.
Body image self-consciousness during physical intimacy was measured using a shortened version of the 15-items BISC Index (Wiederman, 2000). The original index was created to measure women's body image during intimacy, and included three items that were designed specifically for female respondents. Because the present study used a sample population that included both men and women, the three gender-specific items of the original scale were excluded, and the remaining twelve gender-neutral items were included in the questionnaire.

Also, in the original scale items were written such that respondents with or without any sexual experience involving a partner could respond. An example of such an item is “During sexual activity, I am (would be) concerned about how my body looks to my partner”. However, the present study was interested in actual, manifest behavior and not in projections of possible future behaviors, therefore the “would be” syntagm was eliminated. Responses to all items were recorded on a 5-point Likert-type scale ranging from “Never” to “Always”, so that 0 = “Never”, 1 = “Rarely”, 2 = “Sometimes”, 3 = “Often”, 4 = “Usually”, and 5 = “Always”. In this way, higher scores indicated greater body image self-consciousness. The following items were presented to respondents:

Please choose the single, best answer:

- I would feel very nervous if a partner were to explore my body before or after having sex.
- The idea of having sex without any covers over my body causes me anxiety.
- During sexual activity, I am concerned about how my body looks to my partner.
- The worst part of having sex is being nude in front of another person.
- During sexual activity, it is difficult not to think how unattractive my body is.
- I feel very uncomfortable walking around the bedroom, in front of my partner, completely nude.
- The first time I have sex with a new partner, I worry that my partner will get turned off by seeing my body without clothes.
- If a partner were to put an arm around my waist, I would think, "My partner can tell how fat I am".
- I only feel comfortable enough to have sex if it were dark so that my partner could not clearly see my body.
- I prefer having sex with my partner on top so that my partner is less likely to see my body.
- I have a difficult time taking a shower or a bath with a partner.
- I feel anxious receiving a full-body massage from a partner.

**Risk behaviors.** The present study investigated how exposure to sexually explicit materials predicted the adoption of risk behaviors. Specifically, the adoption of two categories of risk behaviors was investigated, namely sex-related risk behaviors and health-related risk behaviors. In order to measure respondents' likelihood to engage in these behaviors, three indices partially drawn from previous research were devised (two indices for sex-related risk behaviors and one for health-related risk behaviors). For these three measures, given the lack of previous tested scales, the construction of new indices through the simple accumulation of scores assigned to individual options, rather than the assignment of scores to patterns of responses, as is the case of scales, was preferred.

*Sex-related risk behaviors.* In order to measure the respondents' inclination to engage in what experts deem sexual practices and behaviors that can have negative consequences on the
individuals who adopt them, 2 indices were designed. Four items, corresponding to the Sex Risk Partners Index, asked respondents to provide numerical responses. Another four items, corresponding to the Sex Risk Practices Index consisted of dichotomous (yes/no) questions. The following questions corresponding to the Sex Risk Partners Index were asked:

- With how many persons have you had sexual intercourse?
- Defining casual sex as sexual intercourse with someone with whom you are not in a monogamous relationship, how many casual sex partners have you ever had?
- In the past 12 months, how many individuals that you did not know before have you had sex with?
- How many persons have you had unprotected sex (that is, without using a condom) with in the past 12 months?

The following questions corresponding to the Sex Risk Practices Index were asked:

- Have you ever tried a new sexual position that you learned from porn movies or pictures?
  
  ( ) Yes  ( ) No

- Have you ever engaged in group sex (or sex with multiple partners)?
  
  ( ) Yes  ( ) No

- Have you ever engaged in anal sex?
  
  ( ) Yes  ( ) No

- Have you ever incorporated sadomasochism or violence in your sex life?
  
  ( ) Yes  ( ) No
Health-related risk behaviors. While there are many behaviors that can pose a threat to individuals' health, body image literature focuses on aspects or behaviors such as artificial tanning, cosmetic surgery, or extreme exercising. In order to assess individuals' likelihood to adopt such behaviors, the following five questions were asked:

Which of the following cosmetic surgery procedures, if any, would you consider having in the future?

Note: please select all that apply.

( ) Mammoplasty (i.e., breast augmentation, breast reduction, breast lift, etc.)
( ) Buttock augmentation (i.e., buttock implant, buttock lift, etc.)
( ) Abdominoplasty (i.e., tummy tuck)
( ) Rhinoplasty (nose job)
( ) Rhytidectomy (face lift, brow lift, cheek lift)
( ) Liposuction
( ) Lip augmentation
( ) Chemical peel
( ) Other
( ) None

Participants' use of artificial tanning salons were measured using the following question:

• How often, if ever, do you go to tanning salons?

( ) Never    ( ) Rarely    ( ) Once a month    ( ) 2-3 times a month    ( ) Once a week
( ) Multiple times a week
Overexercising has consistently been identified in literature as a growing risk behavior (Segura-Garcia et al., 2010). Segura-Garcia et al. (2010) counted as overexercising or exercise dependence individuals who spent more than 1.5 hours at least 3 times a week at the fitness room. The present study, however, did not measure the amount of time spent at the gym, but only the frequency of exercising. The responses “every day” and “multiple times a day” to the following question were counted as overexercising in the subsequent analysis:

- How often do you exercise (at the gym, at home, outdoors, etc.)?
  
  ( ) Never   ( ) Rarely   ( ) Once a month   ( ) 2-3 times a month   ( ) Once a week
  
  ( ) 2-3 times a week   ( ) Every day   ( ) Multiple times a day

**Diary design**

Human sexuality researchers (e.g., Coxon, 1994) have pointed out that large numbers of people have kept a diary at some point in their lives, and diaries are often used to confide the most intimate details of one's life (Okami, 2002). The open-ended recording inherent in the diary format makes it ideal for qualitative data collection; moreover, diaries may be written in the participants' own communication style (Okami, 2002), thus circumventing the restrictions imposed by a rigidly structured data collection format like the survey.

Individuals who were invited to participate in the diary format met two criteria: a) they were sexually active, and b) they viewed pornography with some regularity. Participants were contacted through email. The purpose of the study was described to them, along with instructions with respect to the diary procedure. Special emphasis was placed on the anonymity and confidentiality of their responses. Respondents were presented with a list of questions and instructed to answer them in an open-ended manner. In their diary entries, they were asked to
answer the following questions, each roughly corresponding to the research questions formulated for the qualitative section of this study:

1. What do you normally use pornography for?
2. Why did you watch/read/use the material (i.e., what motivated you to do it)?
3. How realistic did you think the sexual acts depicted in the material were?
4. How did watching/reading/using the material make you feel about your own sex life?
5. How did watching/reading/using the material make you feel about your body?
6. How did watching/reading/using the material make you feel about your sexual skill?

In addition, participants were asked to indicate what type or types of sexually explicit materials they used every time they chose to make a diary entry. Also, participants were not required to provide an answer to the first question more than once, at the outset of their participation in the study.

Data collection

The proposal for this research project, which included the survey questionnaire and the diary format, and the information sheet describing the study and other supporting documents were submitted for review and approval to the Bowling Green State University Human Subjects Review Board (HSRB). Following the expedited review procedure, the project received the HSRB approval to commence the data collection process on August 21st, 2012.

Survey

Once the HSRB approval was received, the survey was created on the survey website SurveyMonkey.com. The website allows for automated email messages and data collection, and is integrated with the Statistical Package for the Social Sciences (SPSS), the statistical software
that was used for the analysis of the data. The information sheet describing the study and
respondents' rights were included as the first page of the survey. By clicking on the “Next”
button at the bottom of the first page, respondents attested that they were at least 18 years of age
and agreed to participate in the study. While the sample included respondents that were younger
than 18 years of age, it was decided to prevent such respondents from taking the survey due to
the sensitive nature of the questions that make up the questionnaire.

As discussed in the introduction and the review of literature, there were reasons to
believe that age is an important demographic factor in the possible influence of SEM on the
decision whether to adopt risk behaviors. Therefore, two subpopulations normally belonging to
distinct age groups were included in the study, namely, undergraduate and graduate students at
Bowling Green State University. In order to increase the response rate, undergraduate students
were offered an incentive in the form of extra course credit points. Arrangements were made
with instructors after the HSRB approval was granted, and undergraduate students received an
invitation to participate in the study via email. The email contained a brief description of the
project and a link to the survey hosted by SurveyMonkey.com. In addition, a listserv containing
the email addresses of BGSU graduate students, obtained from BGSU's Office of Institutional
Research, was created. Graduate students received the same email as the undergraduate students
via the listserv. After the HSRB approval was received, the process of collecting quantitative
data started.

Pretest of survey questionnaire

A structured questionnaire was used as the quantitative data collection tool. The
questionnaire was developed and informed by a comprehensive review of literature. Before the
The pretest of the questionnaire had two goals: to identify potential technical problems with the online format of the survey, and to identify any potential problems with the questions that comprised the structured questionnaire (e.g., irrelevant questions, inappropriate vocabulary or wording, etc.). For the pretest stage, at the end of the survey respondents were given access to an open-ended section where they were invited to express concerns, suggestions, and to ask questions. A convenience sample of 22 respondents was selected for the pretest stage.

Diary

A subsample of participants was invited to keep a diary in which they documented their frequency of viewing sexually explicit material, their motivations to view sexually explicit material, the uses they have for sexually explicit materials, the meaning they assign to the material, the perceived realism of sex acts presented in SEM, and the perceived influence of exposure to the material on their sexual lives. In order to boost participation, incentives in the form of gift cards with values up to $30 were offered to volunteers.

Participants were presented with a list of open-ended questions and invited to keep a diary regarding their exposure to and involvement with SEM. Over a period of four weeks, respondents were instructed to make a diary entry after each instance in which they had viewed pornography. Although the frequency with which participants made entries was left at their choice, and was ultimately determined by how often they viewed sexually explicit material, volunteers were told that making around two entries per week would be ideal. By the end of the fourth week, respondents were expected to turn in at least eight diary entries. Similar to the survey, the diary had an online form and was hosted by the same data collection website,
SurveyMonkey.com. Participants in the diary data collection process received an email with a brief description of the project. The email also contained a link to the online diary. Participants were instructed to access the online diary format by using the same link each time they wanted to make a diary entry.

**Analysis**

All quantitative data were imported into SPSS from the SurveyMonkey.com website, and the statistical analyses discussed below in some detail were conducted to answer the research questions and test the hypotheses. Statistical significance for the appropriate research questions was tested at $p \leq .05$.

*RQ1* asked “How often are respondents exposed to sexually explicit material?” To answer this question, the frequencies of exposure to sexually explicit materials reported by respondents were reported.

*RQ2a* asked “What is the sex distribution of respondents who are exposed to sexually explicit materials?” Similar to the first research question, the frequency distribution of female and male respondents’ exposure to SEM were reported. Also, chi-square test was used to test the differences between the two groups, i.e., males and females.

*RQ2b* asked “Are there gender differences in preference expressed for different types of sexually explicit material?” First, descriptive statistics were reported to illustrate the gender distribution of preference for a number of types of pornography (print, purchased online/offline videos, hotlines, webcams, & chatrooms, free online videos, free online photos, videogames, sexting, and other). Then, a chi-square test was used to learn whether there were gender differences in preference for each of the aforementioned types of pornography.
RQ2c asked “What is the sexual orientation distribution of exposure to sexually explicit material?” First, descriptive statistics were reported in the form of mean of exposure to pornography for each of four groups: homosexual, bisexual, heterosexual, and other. Then, to test the mean differences between these groups, a one-way analysis of variance (ANOVA) was attempted. However, because the assumption of homogeneity was violated, the variable “sexual orientation” was recoded into a new two-category variable, containing categories “heterosexual” and “non-heterosexual”. An independent samples t-test was performed to test the mean differences in frequency of exposure to pornography between these two categories.

RQ2d asked “Does sexually active/not active status influence frequency of exposure to sexually explicit material?” Frequencies in exposure to pornography were first reported; then, a chi-square test was used to test the differences between the groups “sexually active” and “not sexually active”.

RQ2e asked “What is the relationship between the level of enrollment (undergraduate and graduate) at BGSU and frequency of exposure to sexually explicit material?” Descriptive statistics regarding the mean consumption of pornography of each group (undergraduate and graduate students) were reported. Then, an independent samples t-test was used to test the differences between the two groups. Also, descriptive statistics were reported regarding the mean consumption of pornography of the four class standings among undergraduate students (freshmen, sophomores, juniors, and seniors). A one-way analysis of variance (ANOVA) and a post hoc Bonferroni test were used to test the differences between these four groups.

RQ3a asked “What is the relationship between frequency of exposure to sexually explicit material and sexual self-esteem?” RQ3b asked “What is the relationship between frequency of
exposure to sexually explicit material and sexual self-efficacy?”. \(RQ3c\) asked “What is the relationship between frequency of exposure to sexually explicit material and beliefs about the sexual self?”. \(RQ3d\) asked “What is the relationship between exposure to SEM and body image during physical intimacy (BISC)?”. Pearson's \(r\) correlations were run to answer these questions. Statistical significance for the appropriate research questions was tested at \(p \leq .05\).

\(RQ4a\) asked “What is the relationship between sexual self-esteem and the adoption of sex-related risk behaviors?”. \(RQ4b\) asked “What is the relationship between sexual self-efficacy and the adoption of sex-related risk behaviors?”. \(RQ4c\) asked “What is the relationship between the beliefs about sexual self and the adoption of sex-related risk behaviors?”, and \(RQ4d\) asked “What is the relationship between BISC and the adoption of sex-related risk behaviors?”. Similar to the previous set of research questions, Pearson's \(r\) correlations were run to answer these questions. Statistical significance for the appropriate research questions was tested at \(p \leq .05\).

\(RQ5a\) asks “What is the relationship between sexual self-esteem and the adoption of health-related risk behaviors?”. \(RQ5b\) asks “What is the relationship between sexual self-efficacy and the adoption of health-related risk behaviors?”. \(RQ5c\) asks “What is the relationship between the beliefs about sexual self and the adoption of health-related risk behaviors?”, and \(RQ5d\) asks “What is the relationship between BISC and the adoption of health-related risk behaviors?”. Pearson's \(r\) correlations were run to answer these questions. Statistical significance for the appropriate research questions was tested at \(p \leq .05\).

\(H1\) posited that “Increased frequency of exposure to sexually explicit material will predict lower sexual self-concept (SSC) scores”. \(H2a\) proposed that “Higher SSC scores will predict lower health-related risk behavior scores”. \(H2b\) posited that “Higher SSC scores will predict lower health-related risk behavior scores”. H2b posited that “Higher SSC scores will predict lower health-related risk behavior scores”.
scores on sex-related risk behaviors”. H3a proposed that “Higher frequency of exposure to sexually explicit material would predict higher health-related risk behavior scores”, and H3b posited that “Higher scores on exposure to sexually explicit material would predict higher sex-related risk behavior scores”. These hypotheses were tested using linear regressions.

*RQ6* asked “What is the role of biological sex in the process of adopting sex- and health-related risk behaviors?” *RQ7* asked “What is the role of age in the process of adopting sex- and health-related risk behaviors?”. These questions were answered using the analysis provided by the path model discussed in the next chapter. The path model was used to learn the role of biological sex and age on the adoption of risk behaviors both directly and via the mediation of exposure to sexually explicit material and the sexual self-concept (SSC).

*RQ8* asked “What do participants normally use sexually explicit material for?”. *RQ9* asked “What were participants' motivations to view pornography before the latest diary entry?”. *RQ10* asked “How realistic did the participants think the sexual representations were in the material they last viewed?”. *RQ11* asked “How did exposure to sexually explicit material make the participants feel about their own sex lives? *RQ12* asked “How did exposure to sexually explicit material make the participants feel about their own bodies?”. *RQ13* asked “How did exposure to sexually explicit material make the participants feel about their own sexual skills?”. These research questions were answered using the thematic analysis of the qualitative data collected using the diary method.
CHAPTER IV: RESULTS

This study was divided into two method phases. The first was a survey of undergraduate and graduate students at Bowling Green State University, Ohio. The second phase consisted of a diary that participants were required to maintain, documenting their engagement with sexually explicit material. All participants in the second phase were graduate students at Bowling Green State University.

The following section describes the sample used in the first phase of the study, the statistical analyses methods and tests used to answer the research questions and test the hypotheses, as well as the results of those tests. Statistical significance for appropriate research questions were tested at $p \leq .05$. IBM SPSS Statistics 20 and AMOS Graphics 20 were the two statistical software used for the analysis of the quantitative data.

Data analyses and results

Survey data was collected between September and October 2012 at Bowling Green State University. After the data cleaning and screening process, preliminary analyses were conducted to examine basic frequency output for the variables of interest, to recode and compute the necessary composite measures using the raw data, and to confirm the validity of existing measures and scales using the present data.

Profile of Survey Respondents

The profile of respondents to the survey used in the present study is presented below. Roughly 3000 undergraduate and graduate students at Bowling Green State University were contacted in September 2012. Undergraduate students were contacted with the assistance of the
instructors teaching a general education basic course and other courses at Bowling Green State University. The instructors provided the students with the link to the online location of the survey. Undergraduate students were offered extra credit points as an incentive for their participation. A list of the email addresses of all graduate students at Bowling Green State University was obtained from the BGSU's Office of Institutional Research. Subsequently, a listserv was created and all Bowling Green State University graduate students received an email with an invitation to participate in the study. The total number of participants was 660 graduate and undergraduate students, yielding a response rate of 22 percent. However, 49 cases were excluded from the analysis. Ten of the dropped cases were not over the age of 18 years and were automatically excluded. Another thirty cases were excluded because the participants withdrew before offering answers to a significant number, if any, of the questions included in the survey. Finally, an additional nine cases were excluded after having been identified as multivariate outliers using the Mahalanobis distance scores method (Kline, 2010).

As seen in Figure 1, of the total number of respondents ($n = 611$), 64.2% were female ($n=392$) and 35.8% were male ($n=219$).

Figure 1: Biological sex distribution of participants
As seen in Table 1, 89.3% \((n = 543)\) of respondents identified as heterosexual, 4.3% \((n = 26)\) identified as bisexual, 4.8% \((n = 29)\) identified as homosexual, and 1.6% \((n = 10)\) chose “Other” as sexual orientation.

Table 1

*Sexual Orientation of Respondents*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual</td>
<td>543</td>
<td>89.3</td>
<td>89.3</td>
<td>89.3</td>
</tr>
<tr>
<td>Bisexual</td>
<td>26</td>
<td>4.3</td>
<td>4.3</td>
<td>93.6</td>
</tr>
<tr>
<td>Homosexual</td>
<td>29</td>
<td>4.8</td>
<td>4.8</td>
<td>98.4</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>1.6</td>
<td>1.6</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>608</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

As seen in Table 2, 28.2% \((n = 172)\) of participants were not sexually active and 71.8% \((n = 437)\) of participants were sexually active. Being sexually active was operationalized as engaging in vaginal, oral, or anal sex acts with other person or persons.

Table 2

*Sexually Active Status of Participants*

<table>
<thead>
<tr>
<th>Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inactive</td>
<td>172</td>
<td>28.2</td>
<td>28.2</td>
<td>28.2</td>
</tr>
<tr>
<td>Active</td>
<td>437</td>
<td>71.8</td>
<td>71.8</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>609</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
As seen in Table 3, of the total number of participants who were included in the analysis ($n = 611$), 53.2% ($n = 325$) were undergraduate students, and 46.8% ($n = 286$) were graduate students.

Table 3

*Level of Enrollment of Respondents*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>325</td>
<td>53.2</td>
<td>53.2</td>
<td>53.2</td>
</tr>
<tr>
<td>Graduate</td>
<td>286</td>
<td>46.8</td>
<td>46.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>611</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

As seen in Table 4, of the 325 undergraduate participants, 33.8% ($n = 110$) were freshmen, 30.2% ($n = 98$) were sophomores, 20% ($n = 65$) were juniors, and 16% ($n = 52$) were seniors.

Table 4

*Undergraduate Participants’ Class Standing*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>110</td>
<td>33.8</td>
<td>33.8</td>
<td>33.8</td>
</tr>
<tr>
<td>Sophomore</td>
<td>98</td>
<td>30.2</td>
<td>30.2</td>
<td>64.0</td>
</tr>
<tr>
<td>Junior</td>
<td>65</td>
<td>20.0</td>
<td>20.0</td>
<td>84.0</td>
</tr>
<tr>
<td>Senior</td>
<td>52</td>
<td>16.0</td>
<td>16.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>325</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Measures and variables

*Exposure to sexually explicit material.* Frequency of exposure was measured using one item that asked “How often do you view pornography?” Answers were recorded on a 7-point Likert-type scale ranging from “Never” to “Multiple times a day”. The frequency distribution of exposure to sexually explicit material is illustrated in Table 5.

Table 5

*Frequency of exposure to sexually explicit material*

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>164</td>
<td>26.8</td>
<td>30.3</td>
</tr>
<tr>
<td>Rarely</td>
<td>158</td>
<td>25.9</td>
<td>29.2</td>
</tr>
<tr>
<td>2-3 times per month</td>
<td>74</td>
<td>12.1</td>
<td>13.7</td>
</tr>
<tr>
<td>Once per week</td>
<td>52</td>
<td>8.5</td>
<td>9.6</td>
</tr>
<tr>
<td>3-4 times per week</td>
<td>60</td>
<td>9.8</td>
<td>11.1</td>
</tr>
<tr>
<td>Every day</td>
<td>20</td>
<td>3.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Multiple times a day</td>
<td>14</td>
<td>2.3</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>542</td>
<td>88.7</td>
<td>100</td>
</tr>
</tbody>
</table>

As seen in Figure 2 the analysis indicated a slightly skewed distribution (skeweness = .899), but it was not severe enough to constitute a violation of various assumptions built in the inferential statistics techniques that were subsequently performed. The mean score of frequency of exposure to pornography was 1.63 (SD = 1.63).

To assess the different types of sexually explicit materials (SEM) used, participants were asked to indicate which of 14 types of SEM they watched during the last 12 months. The types of SEM were mostly based on those identified in past research (e.g., Peter & Valkenburg, 2007; Morgan, 2011) and included: magazines, books, pay-per-view videos, purchased videos, rented
videos, free online videos, free online photos, commercial (not free) online videos, and

Figure 2

*Histogram of exposure to sexually explicit material*

telephone hotlines. In addition, some new types were included in the questionnaire: erotic videogames, erotic webcams, erotic chat rooms, and sexting\(^1\). However, some of the aforementioned categories seemed to be disfavored by respondents and registered very few responses; therefore, these categories were collapsed into broader types: print (including books and magazines), purchased or rented online and offline videos (including pay-per-view videos, purchased videos, rented videos, and online purchased videos), and interactive services (telephone hotlines, chat rooms, and erotic webcams). Thus eight types of pornography emerged (see Table 6) and were introduced in the analysis: print, purchased or rented online and offline videos, interactive services, free online videos, free online photos, erotic videogames, sexting, and “other”.

\(^1\) Sexting “refers to the digital transmission of sexually suggestive or sexually explicit photographs or videos, intended for personal use, through a medium that affords a reasonable expectation of privacy, such as a text message or personal email” (Lampe, 2013, p. 704)
Table 6

*Type of pornography exposure during the last 12 months*

<table>
<thead>
<tr>
<th>Type of Pornography</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print</td>
<td>34</td>
<td>6.3</td>
</tr>
<tr>
<td>Purchased/rented online and offline videos</td>
<td>21</td>
<td>3.9</td>
</tr>
<tr>
<td>Interactive services (webcams, hotlines, chat rooms)</td>
<td>25</td>
<td>4.6</td>
</tr>
<tr>
<td>Free online videos</td>
<td>220</td>
<td>40.8</td>
</tr>
<tr>
<td>Free online photos</td>
<td>104</td>
<td>19.3</td>
</tr>
<tr>
<td>Erotic videogames</td>
<td>7</td>
<td>1.3</td>
</tr>
<tr>
<td>Sexting</td>
<td>106</td>
<td>19.7</td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>538</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Sexual Self-Esteem* was measured using a modified version of Snell and Papini's Sexual Esteem subscale, which is originally part of a larger instrument, the Sexuality Scale (Snell & Papini, 1989). Principal component confirmatory factor analysis was employed to verify whether the structure of the scale fits the present dataset. The analysis confirmed the presence of one factor with eigenvalue 2.86 and accounting for 57.25 percent of the variance behind the five items that make up the Sexual Self-Esteem measure (See Table 7). The loadings of each component are shown in Table 8. Responses were measured on a 5-point Likert scale ranging from “1 – Strongly Agree” to “5 – Strongly Disagree”. Items 1, 3, and 5 were reverse-coded so a higher score indicated higher sexual self-esteem. The internal consistency coefficient Cronbach's \( \alpha \) of the five items was .79. The final variable was computed by averaging the ratings of the five
items that made up the scale labeled Sexual Self-Esteem ($M = 3.41; SD = .839$). As seen in Figure 3, this variable had a slightly skewed distribution (skewness = -.257). However, the skewness was not severe enough to constitute a violation of the assumptions built in the inferential statistics techniques that were subsequently performed.

Figure 3

*Score distribution of Sexual Self Esteem*

![Image of a histogram showing score distribution of Sexual Self Esteem]

Table 7

*Principal component confirmatory analysis of Sexual Self-Esteem Scale*

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Variance</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>2.863</td>
<td>57.255</td>
</tr>
<tr>
<td>2</td>
<td>.962</td>
<td>19.246</td>
</tr>
<tr>
<td>3</td>
<td>.557</td>
<td>11.134</td>
</tr>
<tr>
<td>4</td>
<td>.427</td>
<td>8.543</td>
</tr>
<tr>
<td>5</td>
<td>.191</td>
<td>3.821</td>
</tr>
</tbody>
</table>
Table 8

*Component matrix of the Sexual Self-Esteem Scale*

<table>
<thead>
<tr>
<th>Indicator Variable</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am a good sexual partner.</td>
<td>.773</td>
</tr>
<tr>
<td>I am not very confident in sexual encounters.</td>
<td>.564</td>
</tr>
<tr>
<td>I am better at sex than most other people.</td>
<td>.843</td>
</tr>
<tr>
<td>I sometimes have doubts about my sexual competence.</td>
<td>.666</td>
</tr>
<tr>
<td>I would rate my sexual skill quite highly.</td>
<td>.891</td>
</tr>
</tbody>
</table>

Eigenvalue: 2.86
Variance: 57.25%
Cronbach’s $\alpha$: .79

*Sexual Self-Efficacy* is a composite measure consisting of three subscales: resistive sexual self-efficacy, STD/contraceptive sexual self-efficacy, and situational sexual self-efficacy. The responses to 6 items that make up the resistive sexual self-efficacy scale were measured on a 5-point Likert type scale, ranging from “1 – very sure” to “5 – not at all”. All six items were reverse coded so that higher scores indicated higher resistive self-efficacy.

The responses to the 4 items that make up the STD/contraceptive sexual self-efficacy scale were measured on a 5-point Likert type scale, ranging from “1 – Strongly disagree” to “5 – Strongly agree”. The second item on the scale, “I would have sex without a condom if my partner wants it”, was reverse-coded so that on all 4 items higher scores indicated higher sexual self-efficacy.

The responses to the 4 items of which situational sexual self-efficacy consists of were recorded on a 5-point Likert type scale, ranging from “1 – I definitely can't do this” to “5 – I definitely can do this”. None of the four items needed reverse coding, higher scores indicating higher situational self-efficacy.
In keeping with previous research, sexual self-efficacy was first treated as a single, composite measure. A confirmatory factor analysis using principal components extraction and varimax rotation was employed to verify whether the structure of the instrument fits the current dataset. The analysis confirmed the presence of three factors with eigenvalues greater than 1.0 corresponding to the three sub-components of the sexual self-efficacy measure, accounting for 68.63% of the variance. Table 9 reports the variables and factor loadings for the three factors.

<table>
<thead>
<tr>
<th>Indicator Variable</th>
<th>Factor 1 (Resistive)</th>
<th>Factor 2 (STD)</th>
<th>Factor 3 (Situational)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No sex with stranger</td>
<td>.655</td>
<td>.142</td>
<td>.295</td>
</tr>
<tr>
<td>No sex with date (1)</td>
<td>.818</td>
<td>.035</td>
<td>.147</td>
</tr>
<tr>
<td>No sex with date (2)</td>
<td>.886</td>
<td>.097</td>
<td>.116</td>
</tr>
<tr>
<td>No sex previous partner</td>
<td>.834</td>
<td>.040</td>
<td>.123</td>
</tr>
<tr>
<td>No sex romantic partner</td>
<td>.862</td>
<td>.104</td>
<td>.103</td>
</tr>
<tr>
<td>No sex pushy partner</td>
<td>.640</td>
<td>.132</td>
<td>.335</td>
</tr>
<tr>
<td>Always use condom</td>
<td>.010</td>
<td>.843</td>
<td>-.009</td>
</tr>
<tr>
<td>No condom</td>
<td>.147</td>
<td>.807</td>
<td>.038</td>
</tr>
<tr>
<td>Insist on using condom</td>
<td>.081</td>
<td>.831</td>
<td>.102</td>
</tr>
<tr>
<td>No sex without condom</td>
<td>.136</td>
<td>.839</td>
<td>.115</td>
</tr>
<tr>
<td>Not go somewhere</td>
<td>.222</td>
<td>.069</td>
<td>.835</td>
</tr>
<tr>
<td>Not kiss someone</td>
<td>.206</td>
<td>-.048</td>
<td>.787</td>
</tr>
<tr>
<td>Not have sex now</td>
<td>.097</td>
<td>.147</td>
<td>.808</td>
</tr>
<tr>
<td>Not sexual practices</td>
<td>.206</td>
<td>.071</td>
<td>.763</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>5.26</td>
<td>2.50</td>
<td>1.84</td>
</tr>
<tr>
<td>Variance</td>
<td>37.6%</td>
<td>17.9%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Total variance: 68.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach's α</td>
<td>.90</td>
<td>.86</td>
<td>.83</td>
</tr>
</tbody>
</table>

Three scales (STD sexual self-efficacy, resistive sexual self-efficacy, and situational sexual self-efficacy) were computed by averaging the ratings of the items that represented the three corresponding factors. All scales showed high levels of reliability (STD sexual self-
efficacy, Cronbach's $\alpha = .86$, $M = 3.7$, $SD = 1.03$; Resistive sexual self-efficacy, Cronbach's $\alpha = .90$, $M = 3.52$, $SD = 1.10$; Situational sexual self-efficacy, Cronbach's $\alpha = .83$, $M = 3.95$, $SD = .83$). Because these three scales were used both independently and as a single measure, a composite variable labeled Sexual Self-Efficacy was next computed by averaging the ratings of the three sub-scales – STD sexual self-efficacy, resistive self-efficacy, and situational self-efficacy ($M = 3.72$, $SD = .71$). As seen in Figure 4, the distribution of the variable was moderately skewed (skewness = -.416), but the skewness was not severe enough to constitute a violation of the assumptions for the analysis methods subsequently employed. The internal consistency coefficient Cronbach's $\alpha$ of the composite measure Sexual Self-Efficacy was .86.

Figure 4

Histogram of Sexual Self-Efficacy distribution

Beliefs about the sexual self was measured in keeping with previous research using a marginally modified version of the Sex Anxiety Inventory (Janda & O'Grady, 1980). The modified version of the inventory consists of 22 items in a forced-choice format, with response
choice one (1) representing an anxiety response and response choice zero (0) a nonanxiety response. Items 2, 3, 5, 6, 8, 11, 12, 13, 14, 16, 17 and 21 were reverse coded (for a copy of the Sex Anxiety Inventory see Appendix I). The responses to the 22 items that make up the inventory were summed, higher scores indicating higher sexual anxiety ($M = 9.04, SD = 4.26$).

As seen in Figure 5, this variable's distribution was slightly skewed (skewness = .449), however, not severely enough to pose a threat to the validity of the analyses subsequently performed. The internal consistency coefficient Cronbach's $\alpha$ of the Sex Anxiety Inventory was .81.

Figure 5

*Score distribution of the Sex Anxiety Inventory*

---

*Body Image Self-Consciousness during Physical Intimacy (BISC)* scale (Wiedermann, 2000) was developed to measure women's body image during physical intimacy and originally consisted of fifteen items. Of the original fifteen items, twelve were gender-neutral (i.e., “The
first time I have sex with a partner I worry that my partner will get turned off by seeing my body without clothes”) and three were female-specific (i.e., “I feel that having a different breasts size would make me more attractive to a partner”). In the present study, the three gender specific items were dropped and the instrument was administered to both female and male participants. A principal component confirmatory factor analysis was used to test the factor structure of the twelve items of BISC (See Table 10). The analysis extracted one factor with eigenvalue greater than 1.0, accounting for 66.7% of the total variance of the 12 items. The factor had an eigenvalue of 8.002.

Table 10

*Component matrix of the BISC index*

<table>
<thead>
<tr>
<th>Indicator Variable</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would feel very nervous if a partner were to explore my body before or after having sex.</td>
<td>.728</td>
</tr>
<tr>
<td>The idea of having sex without any covers over my body causes me anxiety.</td>
<td>.834</td>
</tr>
<tr>
<td>During sexual activity I am concerned about how my body looks to my partner.</td>
<td>.771</td>
</tr>
<tr>
<td>The worst part of having sex is being nude in front of another person.</td>
<td>.900</td>
</tr>
<tr>
<td>During sexual activity, it is difficult not to think how unattractive my body is.</td>
<td>.868</td>
</tr>
<tr>
<td>I feel very uncomfortable walking around the bedroom, in front of my partner, completely nude.</td>
<td>.791</td>
</tr>
<tr>
<td>The first time I have sex with a partner, I worry that my partner will get turned off by seeing my body without clothes.</td>
<td>.805</td>
</tr>
<tr>
<td>If my partner were to put an arm around my waist, I would think, “My partner can tell how fat I am”</td>
<td>.786</td>
</tr>
<tr>
<td>I could only feel comfortable enough to have sex if it were dark so that my partner could not clearly see my body.</td>
<td>.872</td>
</tr>
</tbody>
</table>
I prefer having sex with my partner on top so that my partner is less likely to see my body.
I would have a difficult time taking a shower or a bath with a partner.
I would feel anxious receiving a full-body massage from a partner.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eigenvalue</td>
<td>8.002</td>
</tr>
<tr>
<td>Variance</td>
<td>66.7%</td>
</tr>
<tr>
<td>Cronbach's α</td>
<td>.95</td>
</tr>
</tbody>
</table>

The BISC scale was then created by averaging the ratings of the BISC items ($M = 1.36$, $SD = 1.17$). The internal consistency coefficient Cronbach's $\alpha$ of the BISC scale was .95.

Responses to the items that make up the BISC scale were recorded on a 6-point Likert scale, ranging from “0 – Never” to “5 – Always”. Higher scores indicated higher body self-consciousness during physical intimacy. As seen in Figure 6, the score distribution of the BISC scale was moderately skewed (skewness = 1.09).

*Sexual Self-Concept* is a composite measure that was computed by averaging the ratings of the individual dimensions of this concept: sexual self-esteem, sexual self-efficacy, beliefs about the sexual self, and BISC ($M = .575$, $SD = .126$). Figure 8 illustrates the loadings of the dimensions that make up the latent variable Sexual Self-Concept. Instead of using separately each individual item that make up the latent variable “Sexual Self-Concept”, items were gathered up, or parceled, into subgroups corresponding to each subscale used for SSC: sexual self-esteem, resistive sexual self-efficacy, situational sexual self-efficacy, STD sexual self-efficacy, sexual anxiety, and BISC. Parceling is a widely used but debated technique (Little et al., 2002). Parceling instead of using individual items in structural equation modeling and
related techniques such as path modeling is recommended because items parcels allow for more parsimonious models, it diminishes the impact of various sources of sampling error, and because item parcels are less likely to violate the assumption of normal distribution than individual items (Little et al., 2002; Peter & Valkenburg, 2008).

The parameters of the covariance structure analysis model are estimated by the method of maximum likelihood (ML). Global indices of fit suggest that the model proposed retain an acceptable degree of fitness based on two recommended model fit indices: the comparative fit index (CFI) was .99 and the root mean square error of approximation estimate (RMSEA) of .061 indicate a hypothesized model adequately fitting the data (90% confidence interval .013 - .116). The chi-square-distributed test statistic for the hypothesized model was as follows: $\chi^2 = 6.57, p = .04$. Figure 7 illustrates the loadings of the dimensions that make up the latent variable Sexual Self-Concept.
Figure 7

*Loadings of dimensions on latent variable Sexual Self-Concept*

Model fit: $\chi^2 = 4.37$, df = 2, p > .05, RMSEA = .04 (90% confidence interval = .00 - .10), pclose > .05, CFI = .99, SRMR = .018

*Sex-related risk behaviors* were measured using two different indices: Sex Risk Partners Index and Sex Risk Practices Index. Both these indices were created for this study, drawing on previous research, especially May (2011) and Snyder (2011). Each of the two indices consists of four items. The Sex Risk Partner Index was made up of the following variables: 1) number of casual sex partners during the last 12 months; 2) total number of individuals with whom respondents have had sex; 3) number of individuals with whom respondents have had casual sex during the last 12 months; 4) total number of partners with whom respondents have had unprotected sex with. These four ratio-level items were first checked for outliers and all cases with z-scores larger than 3.0 were excluded from the analysis. Then, the four variables were
recode into ordinal variables, responses being grouped into 5 categories (0 – None; 1 – 1 through 3; 2 – 4 through 8; 3 – 9 through 13; 4 – 14 through highest). Frequency distributions of these four variables are presented in Table 11 through Table 14.

As seen in Table 11, 21.8 percent \((n = 133)\) had no sexual partner during the last 12 months, whereas 66.6 percent \((n = 407)\) had between 1 and 3 sex partners during the last 12 months. Figure 8 illustrates the score distribution of this variable.

Table 11

*Frequency distribution of Sex Partners during the last 12 months variable*

<table>
<thead>
<tr>
<th>Number of Sex Partners During the Last 12 Months</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative Valid</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>133</td>
<td>21.8</td>
<td>22.6</td>
<td>22.6</td>
</tr>
<tr>
<td>1-3</td>
<td>407</td>
<td>66.6</td>
<td>69.2</td>
<td>91.8</td>
</tr>
<tr>
<td>4-8</td>
<td>43</td>
<td>7.0</td>
<td>7.3</td>
<td>99.1</td>
</tr>
<tr>
<td>9-13</td>
<td>3</td>
<td>.5</td>
<td>.5</td>
<td>99.7</td>
</tr>
<tr>
<td>14-highest</td>
<td>2</td>
<td>.3</td>
<td>.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>588</td>
<td>96.2</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 12 indicates that among the participants in this study, 15.5 percent \((n = 95)\) had no sex partner, whereas 42.6 percent \((n = 260)\) had between 1 and 3 sexual partners. An important category was represented by those who had between 4 and 8 sexual partners, 22.1 percent \((n = 135)\). The last two categories had considerably lower frequencies: 7 percent \((n = 43)\) of the respondents indicated that they had between 9 and 13 sexual partners, and 5.6 percent \((n = 34)\) had 14 sex partners or more. Figure 9 illustrates the score distribution of this variable.
Figure 8

*Histogram of score distribution of number of sex partners during the last 12 months*

![Histogram](image)

Table 12

*Frequency distribution of total number of sex partners variable*

<table>
<thead>
<tr>
<th>Total Number of Sex Partners</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>95</td>
<td>15.5</td>
<td>16.8</td>
<td>16.8</td>
</tr>
<tr>
<td>1-3</td>
<td>260</td>
<td>42.6</td>
<td>45.9</td>
<td>62.6</td>
</tr>
<tr>
<td>4-8</td>
<td>135</td>
<td>22.1</td>
<td>23.8</td>
<td>86.4</td>
</tr>
<tr>
<td>9-13</td>
<td>43</td>
<td>7.0</td>
<td>7.6</td>
<td>94.0</td>
</tr>
<tr>
<td>14-highest</td>
<td>34</td>
<td>5.6</td>
<td>6.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>567</td>
<td>92.8</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
As seen in Table 13, 41.1 \((n = 251)\) percent of the respondents had no casual sex partners, whereas 32.4 percent \((n = 198)\) had between 1 and 3 casual sex partners. The other categories had much lower frequencies: 12.3 percent \((n = 75)\) had between 4 and 8 casual sex partners, 6.2 percent \((n = 38)\) had between 9 and 13 casual sex partners and 2.3 percent \((n = 14)\) reported that they had 14 or more casual sex partners. Figure 10 illustrates the score distribution of this variable.

As seen in Table 14, 43.4 percent \((n = 265)\) of the respondents reported that they did not have unprotected sex with any partner, and 48.6 percent \((n = 297)\) had unprotected sex with one to three partners. Also, 3.4 percent \((n = 21)\) had unprotected sex with 4 to 8 partners. Only 0.2
percent of the participants indicated that they had unprotected sex with 9 through 13 partners, and 0.3 indicated that they had unprotected sex with 14 or more partners.

Table 13

*Frequency distribution of Casual Sex Partners variable*

<table>
<thead>
<tr>
<th>Casual Sex Partners</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>251</td>
<td>41.1</td>
<td>43.6</td>
<td>43.6</td>
</tr>
<tr>
<td>1-3</td>
<td>198</td>
<td>32.4</td>
<td>34.4</td>
<td>78.0</td>
</tr>
<tr>
<td>4-8</td>
<td>75</td>
<td>12.3</td>
<td>13.0</td>
<td>91.0</td>
</tr>
<tr>
<td>9-13</td>
<td>38</td>
<td>6.2</td>
<td>6.6</td>
<td>97.6</td>
</tr>
<tr>
<td>14-highest</td>
<td>14</td>
<td>2.3</td>
<td>2.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>576</td>
<td>94.3</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Figure 10

*Histogram of score distribution number of casual sex partners*
Figure 11 illustrates the score distribution of this variable. This variable's distribution was moderately skewed (skewness = .887), but the skewness was not severe enough to constitute a violation of the assumptions of the statistical analyses subsequently performed.

Table 14

*Frequency distribution of Unprotected Sex Partners variable*

<table>
<thead>
<tr>
<th>Unprotected Sex</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>265</td>
<td>43.4</td>
<td>45.2</td>
<td>45.2</td>
</tr>
<tr>
<td>1-3</td>
<td>297</td>
<td>48.6</td>
<td>50.7</td>
<td>95.9</td>
</tr>
<tr>
<td>4-8</td>
<td>21</td>
<td>3.4</td>
<td>3.6</td>
<td>99.5</td>
</tr>
<tr>
<td>9-13</td>
<td>1</td>
<td>.2</td>
<td>.2</td>
<td>99.7</td>
</tr>
<tr>
<td>14-highest</td>
<td>2</td>
<td>.3</td>
<td>.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>586</td>
<td>95.9</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Figure 11

*Histogram of score distribution number of unprotected sex partners*
Sex Risk Partners Index \((M = 3.7, SD = 2.6)\) was computed by summing up the scores of each of the four items discussed above. The index's distribution has a moderate positive skewness (skewness = .72). Figure 12 illustrates the frequency distribution of the Sex Risk Partners Index.

**Figure 12**

*Histogram of score distribution number of the Sex Risk Partners Index*

The Sex Practices Risk Index also consisted of four items, measured at a nominal (dichotomous) level. Specifically, participants were asked whether 1) they have ever had tried a sexual position or practice learned from pornographic movie or picture; 2) they have ever engaged in group sex; 3) they have ever engaged in anal sex; 4) they have ever incorporated violence or sadomasochism in their sex life. Answers were recorded on a 0-1 (dichotomous) scale, “1” indicating the presence of a risk practice. The Sex Practices Risk Index \((M = 1.04, SD = 1.05)\) was computed by summing up the scores of the four dichotomous items. Frequency
distribution of the Sex Risk Practices Index was moderately positively skewed (skewness = .77). Figure 13 illustrates the frequency distribution of the Sex Risk Practices Index.

Figure 13  
*Histogram of score distribution number of the Sex Risk Practices Index*

As an additional precautionary measure, a confirmatory factor analysis was used to confirm whether two factors exist behind the eight items that were used to measure sex-related risks. The analysis confirmed the presence of two factors with eigenvalue greater than 1.0, accounting for 56.2% of the variance (see Table 15). Table 16 reports the variables and factor loadings for the two factors, along with the corresponding eigenvalues and explained variance.

The first four factors correspond to the Sex Risk Partners Index, and the last four to the Sex Risk Practices Index.²

² Internal reliability measures, such as Cronbach’s α, do not apply to formative measures, such as indexes. Measures of internal reliability are recommended for scales, which are different from indexes in a number of ways. For examples, a change in the value of one of the indicators of an index is not necessarily expected to be associated with
Table 15

Principal component exploratory factor analysis of Sex-Related Risk Behaviors Index

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>3.367</td>
<td>42.089</td>
</tr>
<tr>
<td>2</td>
<td>1.129</td>
<td>14.119</td>
</tr>
<tr>
<td>3</td>
<td>.963</td>
<td>12.038</td>
</tr>
<tr>
<td>4</td>
<td>.719</td>
<td>8.987</td>
</tr>
<tr>
<td>5</td>
<td>.688</td>
<td>8.599</td>
</tr>
<tr>
<td>6</td>
<td>.590</td>
<td>7.376</td>
</tr>
<tr>
<td>7</td>
<td>.359</td>
<td>4.488</td>
</tr>
<tr>
<td>8</td>
<td>.184</td>
<td>2.304</td>
</tr>
</tbody>
</table>

Table 16

Rotated component matrix of the Sex-Related Risk Behaviors Index

<table>
<thead>
<tr>
<th>Indicator variable</th>
<th>Factor 1 (Sex Partners)</th>
<th>Factor 2 (Sex Practices)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex Partners (all)</td>
<td>.734</td>
<td>.078</td>
</tr>
<tr>
<td>Sex Partners (12 months)</td>
<td>.864</td>
<td>.474</td>
</tr>
<tr>
<td>Casual Sex Partners</td>
<td>.648</td>
<td>.468</td>
</tr>
<tr>
<td>Unprotected Sex Partners</td>
<td>.793</td>
<td>.044</td>
</tr>
<tr>
<td>New Sexual Position</td>
<td>.291</td>
<td>.517</td>
</tr>
<tr>
<td>Group Sex</td>
<td>.237</td>
<td>.525</td>
</tr>
<tr>
<td>Anal Sex</td>
<td>.134</td>
<td>.706</td>
</tr>
<tr>
<td>SM/Violence</td>
<td>-.044</td>
<td>.713</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>3.37</td>
<td>1.13</td>
</tr>
<tr>
<td>Variance</td>
<td>42.01%</td>
<td>14.12%</td>
</tr>
<tr>
<td>Total variance</td>
<td>56.2%</td>
<td></td>
</tr>
</tbody>
</table>

Health-related risk behaviors were measured using an index consisting of the following variables identified in previous research as body image-related risk behaviors: cosmetic...
procedures, artificial tanning, and overexercising. Specifically, respondents were asked to answer three questions regarding health risk behaviors and practices related to body image.

The first question asked respondents to indicate how likely it was that they were going to undergo cosmetic surgery in the near future. The answers were recorded on a 7-point Likert scale ranging from “0 – Not at all” to “6 – Definitely”.

The next question asked participants how often they go to tanning salons. Again, the answers were recorded on a Likert scale ranging from “0 – Never” to “5 – Multiple times a week”.

The third item asked participants how often they exercise (at home, at the gym, or outdoors). Answers were recorded on a Likert scale ranging from “0 – Never” to “7 – Multiple times a day”.

Then, the Health-Related Risk Behaviors Index ($M = 4.32$, $SD = 2.12$) was created by summing the ratings of the three variables that represented the factor discussed above. Figure 14 illustrates the frequency distribution of the Health-Related Risk Behaviors Index.

Figure 14

*Histogram of frequency score distribution of the Health-Related Risk Behaviors Index*
Quantitative Data Analysis

Research question 1 asked how often respondents were exposed to sexually explicit material. As seen in Table 17, about 27% of the respondents stated that they never watched pornography, whereas close to 26% watched pornography rarely. About 12% watched 2-3 times per month, while 18% viewed pornography at least once per week or more often. At the other end of the spectrum, 14 respondents (or 2.3%) reported that they watched sexually explicit material multiple times a day.

Table 17

<table>
<thead>
<tr>
<th>Frequency of exposure to sexually explicit material</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>164</td>
<td>26.8</td>
<td>30.3</td>
<td>30.3</td>
</tr>
<tr>
<td>Rarely</td>
<td>158</td>
<td>25.9</td>
<td>29.2</td>
<td>59.4</td>
</tr>
<tr>
<td>2-3 times per month</td>
<td>74</td>
<td>12.1</td>
<td>13.7</td>
<td>73.1</td>
</tr>
<tr>
<td>Once per week</td>
<td>52</td>
<td>8.5</td>
<td>9.6</td>
<td>82.7</td>
</tr>
<tr>
<td>3-4 times per week</td>
<td>60</td>
<td>9.8</td>
<td>11.1</td>
<td>93.7</td>
</tr>
<tr>
<td>Every day</td>
<td>20</td>
<td>3.3</td>
<td>3.7</td>
<td>97.4</td>
</tr>
<tr>
<td>Multiple times a day</td>
<td>14</td>
<td>2.3</td>
<td>2.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>542</td>
<td>88.7</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Additionally, a dichotomous variable was created in order to measure respondents' overall exposure to sexually explicit material, regardless of frequency. The original variable that measured the frequency of exposure was recoded to indicate whether respondents either watched sexually explicit material, at least occasionally, or they never did. As seen in Table 18, 26.8% of participants reported that they never watched pornography ($n = 164$), whereas 73.2% ($n = 447$) watched pornography at least occasionally.
Research question 2a asked what the biological sex distribution of respondents who viewed sexually explicit material was. Similar to the first research question, the frequency distribution of female and male respondents' exposure to sexually explicit material is reported in Table 19. Among female respondents, 37.2% ($n = 146$) never watch sexually explicit material, and 62.8% ($n = 246$) watch pornography at least occasionally. Table 19 also shows that among male respondents 8.2% ($n = 18$) never watched pornography, whereas 91.8% ($n = 201$) watch pornography at least occasionally.

Table 19

Cross-tabulation of exposure to sexually explicit material by biological sex

<table>
<thead>
<tr>
<th>PornExp</th>
<th>Biological Sex</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>No</td>
<td>Count</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>% within Biological Sex</td>
<td>37.2%</td>
</tr>
<tr>
<td>Yes</td>
<td>Count</td>
<td>246</td>
</tr>
<tr>
<td></td>
<td>% within Biological Sex</td>
<td>62.8%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>392</td>
</tr>
<tr>
<td></td>
<td>% within Biological Sex</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

$\chi^2 = 60.28$ ($df = 1$, $N = 611$), $p < .001$. 
In terms of the differences among males and females in rates of viewing pornography, the proportion of men who watch pornography at least occasionally \((p = .92, SD = .275)\) was higher than the proportion of women who watch pornography \((p = .63, SD = .484)\). A Pearson chi-square test indicated that the difference was statistically significant, \(\chi^2 = 60.28 \ (df = 1, N = 611), p < .001\).

Research question 2b asked if there are gender differences in preference for the types of sexually explicit material included in the analysis. Analysis revealed no gender differences in terms of preference for print, videogames, and sexting. However, analysis showed that female and male participants were different in their preferences for purchased online/offline videos, hotlines, webcams & chat rooms, free online videos, free online photos, and “other” types of sexually explicit material. Table 20 summarizes the gender differences in terms of types of pornography use and includes chi-square statistics indicating differences in use by gender.

Table 20

*Tests of gender differences in types of sexually explicit media use*

<table>
<thead>
<tr>
<th>SEM type</th>
<th>Women</th>
<th>Men</th>
<th>(\chi^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print (magazines &amp; books)</td>
<td>24 (7%)</td>
<td>10 (5.2%)</td>
<td>.675</td>
</tr>
<tr>
<td>Purchased online/ offline videos</td>
<td>8 (2.4%)</td>
<td>13 (6.8%)</td>
<td>6.38*</td>
</tr>
<tr>
<td>Hotlines, webcams &amp; chatrooms</td>
<td>9 (2.6%)</td>
<td>16 (8.4%)</td>
<td>9.09*</td>
</tr>
<tr>
<td>Free online videos</td>
<td>72 (21.1%)</td>
<td>148 (76.3%)</td>
<td>156.07*</td>
</tr>
<tr>
<td>Free online photos</td>
<td>30 (8.8%)</td>
<td>74 (38.3%)</td>
<td>68.30*</td>
</tr>
<tr>
<td>Videogames</td>
<td>2 (0.6%)</td>
<td>5 (2.6%)</td>
<td>3.82</td>
</tr>
<tr>
<td>Sexting</td>
<td>68 (19.9%)</td>
<td>38 (19.8%)</td>
<td>.002</td>
</tr>
<tr>
<td>Other</td>
<td>8 (2.7%)</td>
<td>13 (7.6%)</td>
<td>5.77*</td>
</tr>
</tbody>
</table>

Note: *\(p < .05\).*
Research question 2c inquired about the differences in exposure to sexually explicit material based on sexual orientation of the respondents. As seen in Table 21, participants who identified themselves as homosexual had the highest mean and the largest variance of exposure to pornography ($M = 2.8$, $SD = 2.14$), followed by participants who identified their sexual orientation as “Other” ($M = 2.4$, $SD = 2.06$). Meanwhile, bisexual participants ($M = 1.65$, $SD = 1.5$), and heterosexual participants ($M = 1.56$, $SD = 1.57$) had lower means and variances in their exposure to pornography.

Table 21

*Frequency of exposure to sexually explicit material by sexual orientation*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual</td>
<td>485</td>
<td>1.56</td>
<td>1.57</td>
<td>.07155</td>
</tr>
<tr>
<td>Bisexual</td>
<td>23</td>
<td>1.65</td>
<td>1.49</td>
<td>.31188</td>
</tr>
<tr>
<td>Homosexual</td>
<td>25</td>
<td>2.80</td>
<td>2.14</td>
<td>.42817</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>2.38</td>
<td>2.07</td>
<td>.73040</td>
</tr>
</tbody>
</table>

In order to test the differences in consumption of sexually explicit material by sexual orientation, a one-way ANOVA was attempted. However, the Levene's test of homogeneity was significant, which indicates that equal variances cannot be assumed. The significance of the Levene test can be attributed to the discrepancy in size between the four sexual orientation groups. Therefore, the original sexual orientation variable was recoded into new, a heterosexual/non-heterosexual variable (see Table 22), all participants who identified themselves as homosexual, bisexual, or other being grouped into one category, i.e., non-heterosexual.
Table 22

*Frequency of exposure to sexually explicit material by sexual orientation (heterosexual/non-heterosexual)*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Std. error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual</td>
<td>485</td>
<td>1.5567</td>
<td>1.57570</td>
<td>.07155</td>
</tr>
<tr>
<td>Non-heterosexual</td>
<td>56</td>
<td>2.2679</td>
<td>1.93053</td>
<td>.25798</td>
</tr>
</tbody>
</table>

An independent sample t-test was used to examine the differences in consumption of pornography by sexual orientation recoded as heterosexual/non-heterosexual. As seen in Table 23, the analysis found the difference to be statistically significant, equal variances not assumed ($t = -2.65$, $df = 63.74$, $p < .05$).

Table 23

*Independent samples t-test of differences in exposure to pornography by sexual orientation*

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-2.656</td>
<td>63.744</td>
</tr>
</tbody>
</table>

Research question 2d asked whether one's status as sexually active or was associated with one's consumption of sexually explicit material. Respondents who were not sexually active made up 28.2% ($n = 172$) of all respondents, and sexually active respondents made up 71.5% ($n = 437$) of all participants. Of the sexually not active respondents, 34.9% ($n = 60$) never watched
pornography, whereas 65.1% \((n = 112)\) watch pornography at least occasionally. Among the sexually active respondents, 23.6% \((n = 103)\) never watched pornography and 76.4% \((n = 334)\) watched SEM at least occasionally (see Table 24). The proportion of sexually active respondents who watched pornography was higher than the proportion of respondents who never watch pornography. A Pearson chi-square test indicated that the difference was statistically significant, \(\chi^2 = 8.06 \ (df = 1, \ N = 609), \ p < .001.\)

Table 24

Cross-tabulation of exposure to sexually explicit material by sexually active status

<table>
<thead>
<tr>
<th>PornExposure</th>
<th>Sexual Active</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Count</td>
<td>60</td>
<td>103</td>
</tr>
<tr>
<td>% within Sexual Active</td>
<td>34.9%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Count</td>
<td>112</td>
<td>334</td>
</tr>
<tr>
<td>% within Sexual Active</td>
<td>65.1%</td>
<td>76.4%</td>
</tr>
<tr>
<td>Count</td>
<td>172</td>
<td>437</td>
</tr>
<tr>
<td>% within Sexual Active</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

\(\chi^2 = 8.06 \ (df = 1, \ N = 609), \ p < .001.\)

Research question 2e investigated the relationship between the level of enrollment (undergraduate and graduate) at Bowling Green State University and exposure to sexually explicit material. As seen in Table 25, the analysis showed that graduate students had higher mean of exposure to sexually explicit material \((M = 1.86, \ SD = 1.64)\) than undergraduate students \((M = 1.46, \ SD = 1.6)\), and the difference was statistically significant \((t = -2.82, \ df = 540, \ p = \leq .005)\) (see Table 26).
Table 25

*Frequency of exposure to sexually explicit material by level of enrollment*

<table>
<thead>
<tr>
<th>Level of enrollment</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEM frequency</td>
<td>1.00 Undergraduate</td>
<td>304</td>
<td>1.4605</td>
<td>1.59984</td>
</tr>
<tr>
<td>SEM frequency</td>
<td>2.00 Graduate</td>
<td>238</td>
<td>1.8571</td>
<td>1.64476</td>
</tr>
</tbody>
</table>

Table 26

*Independent samples t-test of differences in consumption of pornography by level of enrollment*

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances</td>
<td>.066</td>
<td>.797</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>not assumed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Among undergraduate students, seniors had the highest mean of exposure to sexually explicit material ($M = 2.45, SD = 1.67$), followed by sophomores ($M = 1.43, SD = 1.63$), juniors ($M = 1.41, SD = 1.43$) and freshmen ($M = 1.01, SD = 1.42$) (see Table 27).

Table 27: *Frequency of exposure to sexually explicit material by class standing*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>100</td>
<td>1.0100</td>
<td>1.41774</td>
<td>.14177</td>
</tr>
<tr>
<td>Sophomore</td>
<td>95</td>
<td>1.4316</td>
<td>1.62855</td>
<td>.16709</td>
</tr>
<tr>
<td>Junior</td>
<td>58</td>
<td>1.4138</td>
<td>1.42699</td>
<td>.18737</td>
</tr>
<tr>
<td>Senior</td>
<td>51</td>
<td>2.4510</td>
<td>1.67707</td>
<td>.23484</td>
</tr>
<tr>
<td>Total</td>
<td>304</td>
<td>1.4605</td>
<td>1.59984</td>
<td>.09176</td>
</tr>
</tbody>
</table>
A one-way between groups ANOVA indicated that the differences in means of exposure to sexually explicit material by class standing were statistically significant \[ F (3, 300) = 10.005, \\ p = < .001 \] (see Table 28).

**Table 28**  
*Analysis of variance of exposure to sexually explicit material by class standing*

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>70.535</td>
<td>3</td>
<td>23.512</td>
<td>10.005</td>
</tr>
<tr>
<td>Within Groups</td>
<td>704.992</td>
<td>300</td>
<td>2.350</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>775.526</td>
<td>303</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen in Table 29, a Levene's test of homogeneity of variances was significant, indicating that equal variances are not assumed.

**Table 29**  
*Levene’s Test of Homogeneity of Variances of Class Standing*

<table>
<thead>
<tr>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.111</td>
<td>3</td>
<td>300</td>
<td>.027</td>
</tr>
</tbody>
</table>

*p < .05.*

However, a Welch's robust test of equality of means was significant (see Table 30), which indicates that at least some of the pairwise comparisons are significant. A post hoc Bonferroni test indicated that seniors had higher means of exposure to sexually explicit material than juniors, sophomores, and freshmen (see Table 31).
Table 30

*Welch’s robust test of equality of means of exposure to sexually explicit material by class standing*

<table>
<thead>
<tr>
<th>Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welch</td>
<td>9.123</td>
<td>3</td>
<td>141.765</td>
</tr>
</tbody>
</table>

a. Asymptotically F distributed.

Table 31

*Post hoc Bonferroni test of the effects of class standing on the frequency of exposure to sexually explicit material*

<table>
<thead>
<tr>
<th>Class Standing</th>
<th>Class Standing</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>Sophomore</td>
<td>-.42158</td>
<td>.21963</td>
<td>.335</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>-.40379</td>
<td>.25301</td>
<td>.669</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>-1.44098*</td>
<td>.26378</td>
<td>.000</td>
</tr>
<tr>
<td>Sophomore</td>
<td>Freshman</td>
<td>.42158</td>
<td>.21963</td>
<td>.335</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>.01779</td>
<td>.25545</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>-1.01940*</td>
<td>.26611</td>
<td>.001</td>
</tr>
<tr>
<td>Junior</td>
<td>Freshman</td>
<td>.40379</td>
<td>.25301</td>
<td>.669</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>-.01779</td>
<td>.25545</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>-1.03719*</td>
<td>.29427</td>
<td>.003</td>
</tr>
<tr>
<td>Senior</td>
<td>Freshman</td>
<td>1.44098*</td>
<td>.26378</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>1.01940*</td>
<td>.26611</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>1.03719*</td>
<td>.29427</td>
<td>.003</td>
</tr>
</tbody>
</table>

*. The mean difference is significant at the 0.05 level.

Research questions 3a through 3d inquired the relationship between exposure to sexually explicit material and the four dimensions of the sexual self-concept (SSC). The answers to these research questions are summarized in Table 32 and Table 33. Research question 3a asked what
the relationship was between exposure to sexually explicit material and sexual self-esteem. Analysis showed that the two variables were significantly correlated, \( r = .110, p < .05 \) (see Table 32), in other words, as the scores of exposure to sexually explicit material increase, the scores on sexual self-esteem also increase. This indicates that increase in exposure to sexually explicit material is associated with increased levels of sexual self-esteem.

Research question 3b asked what the relationship between exposure to sexually explicit material and sexual self-efficacy was. This relationship was measured in two different ways. Firstly, sexual self-efficacy was treated as a single, composite variable. Analysis showed that frequency of exposure to sexually explicit material and sexual self-efficacy treated as a composite variable were significantly negatively correlated, \( r = -.362, p < .001 \) (see Table 32), that is, as exposure to sexually explicit material increase in frequency, the scores of sexually self-efficacy decrease, and vice-versa.

Secondly, the correlations between STD sexual self-efficacy, resistive sexual self-efficacy, situational sexual self-efficacy and frequency of exposure to pornography were analyzed separately. The analysis showed that the exposure to sexually explicit material and STD self-efficacy were significantly negatively correlated \( (r = -.199, p = < .001) \) (see Table 32). Exposure to sexually explicit material and resistive self-efficacy were also negatively correlated \( (r = -.359, p = < .001) \) (see Table 38), and so were exposure to sexually explicit material and situational self-efficacy \( (r = -.197, p = < .001) \) (see Table 32). The analyses thus showed that as scores on sexually explicit material exposure variable increased, the scores on STD, resistive, and situational self-efficacy decreased, and vice versa.

Research question 3c asked what the relationship was between frequency of exposure to sexually explicit material and beliefs about sexual self, measured in this study as sexual anxiety.
Analysis revealed that the two variables were significantly negatively correlated, $r = -0.441$, $p < 0.001$ (see Table 33). The analysis showed that as scores on sexually explicit material exposure increased, the scores on the sexual anxiety variable decreased. This indicates that increases in sexually explicit exposure are associated with lower sexual anxiety levels and vice versa.

Research question 3d asked what the relationship was between frequency of exposure to sexually explicit material and body image self-consciousness during physical intimacy (BISC). Analysis indicated that BISC and frequency of exposure to sexually explicit material were significantly negatively correlated, $r = -0.143$, $p < 0.001$ (see Table 33), that is, as the scores of one variable increased, the scores of the other variable in the analysis decreased. In other words, higher levels of exposure to sexually explicit materials were associated with lower levels of BISC, and vice versa.

Finally, the association between frequency of exposure to sexually explicit material and the composite variable Sexual Self-Concept was investigated. The two variables were found to be significantly negatively correlated, $r = -0.450$, $p < 0.001$. In other words, as exposure to pornography increased in frequency, the scores of SSC decreased, and vice-versa.

Table 32

*Bivariate correlations between frequency of exposure to sexually explicit material and components of the Sexual Self-Concept (Pearson’s r)*

<table>
<thead>
<tr>
<th></th>
<th>PornFreq</th>
<th>SelfEsteem</th>
<th>SSE</th>
<th>STD</th>
<th>Resistive</th>
<th>Situational</th>
</tr>
</thead>
<tbody>
<tr>
<td>PornFreq</td>
<td>1</td>
<td>.110*</td>
<td>-.362**</td>
<td>-.199**</td>
<td>-.359**</td>
<td>-.197**</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
Table 33

*Bivariate correlations between frequency of exposure to sexually explicit material and components of the Sexual Self-Concept (Pearson’s r)*

<table>
<thead>
<tr>
<th></th>
<th>PornFreq</th>
<th>SexAnxiety</th>
<th>BISC</th>
<th>SSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PornFreq</td>
<td>1</td>
<td>-.441**</td>
<td>-.143**</td>
<td>-.450**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

Research questions 4a through 4d investigated the relationship between the four dimensions of SSC and the adoption of sex-related risk. As previously indicated, sex-related risk was measured using two indices, namely Sex Risk Partners Index and Sex Risk Practices Index. The correlations of these two indices with SSC were analyzed separately. The relationships are summarized in Table 34a through Table 35b.

In response to research question 4a, sexual self-esteem and Sex Risk Partners Index were found to be significantly positively correlated, $r = .339$, $p < .001$ (See Table 34a), which means that, as scores of sexual self-esteem increase, the scores of Sex Risk Partners Index also increase.

Also, sexual self-esteem and Sex Risk Practices Index were found to be significantly positively correlated, $r = .284$, $p < .001$ (See Table 35a), meaning that an increase in sexual self-esteem is correlated with an increase in Sex Risk Practices Index scores.

In response to research question 4b, analysis revealed that sexual self-efficacy and Sex Risk Partners Index were also significantly inversely correlated, $r = -.335$, $p < .001$ (see Table 34a). The negative correlations between Sex Risk Partners Index and the three factors behind sexual self-efficacy, discussed in the preceding section, were also found to be significant (see Table 34a), meaning that as the Sex Risk Partners Index scores increase, the scores of the three factors behind sexual self-efficacy decrease, and vice-versa.
Correlational analysis showed that Sex Risk Practices Index and sexual self-efficacy were also significantly inversely correlated, \( r = -.295, p < .001 \) (see Table 35a). The negative correlations between Sex Risk Practices Index and the three factors behind sexual self-efficacy were also found to be significant (see Table 35a), meaning that as the Sex Risk Practices Index scores increase, the scores of the three factors behind sexual self-efficacy decrease, and vice-versa.

In response to research question 4c, analysis indicated that sexual anxiety and the Sex Risk Partners Index were significantly negatively correlated, \( r = -.439, p < .001 \) (see Table 34b). Also, sexual anxiety and the Sex Risk Practices Index were found to be significantly negatively correlated, \( r = -.414, p < .001 \) (see Table 35b). This indicates that as the Sex Risk Practices Index and the Sex Risk Partners Index scores increase, the scores on sex anxiety decreased, and vice-versa.

Research question 4d asked what the relationship was between body image self-consciousness during physical intimacy (BISC) and sex-related risk behaviors. Lastly, the analysis showed that BISC and Sex Risk Partners Index were significantly inversely correlated, \( r = -.182, p < .001 \) (see Table 34b), and so were BISC and Sex Risk Practices Index, \( r = -.131, p < .001 \) (see Table 35b). This indicates that as Sex Risk Partners Index and Sex Risk Practices Index scores increase, BISC score decrease, and vice-versa.

Table 34a: *Bivariate correlations between Sex Risk Partners Index behaviors and components of the Sexual Self-Concept (SSC) (Pearson’s r)*

<table>
<thead>
<tr>
<th></th>
<th>SexRiskPartners</th>
<th>SelfEsteem</th>
<th>SSE</th>
<th>STD</th>
<th>Resistive</th>
<th>Situational</th>
</tr>
</thead>
<tbody>
<tr>
<td>SexRiskPartners</td>
<td>1</td>
<td>.339**</td>
<td>-339**</td>
<td>-329**</td>
<td>-.252**</td>
<td>-.114**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
Research questions 5a through 5d investigated the relationships between the components of sexual self-concept and health-related risk behaviors. These relationships are summarized in Tables 36 and 37. In answer to research question 5a, analysis revealed that health-related risk
behaviors and sexual self-esteem were negatively correlated, but the relationship did not bear statistical significance, $r = -.005, p = \text{n.s.}$ Research question 5b asked what the relationship was between health-related risk behaviors and sexual self-efficacy. First, the relationship was analyzed individually for the three components of the Sexual Self-Efficacy concept. Analysis revealed that the variables were positively correlated, but the relationships were not statistically significant (See Table 36). Then, the relationship between the Sexual Self-Efficacy as a single variable and health-related risk behaviors was investigated. The two variables were also found to be positively correlated, the relationship being statistically non-significant ($r = .043, p = \text{n.s.}$).

Research question 5c asked what the relationship was between the beliefs about sexual self (measured in this study as sexual anxiety) and the adoption of health-related risk behaviors. As with the previous relationships, analysis showed that the two variables were positively correlated, and that the relationship was not statistically significant ($r = .062, p = \text{n.s.}$) (see Table 37). In response to research question 5d, health-related risk behaviors and BISC were positively correlated, ($r = .037, p = \text{n.s.}$). These relationships were found to be statistically non-significant (see Table 37).

Table 36

| Bivariate correlations between health-related risk behaviors and components of the Sexual Self-Concept (Pearson’s r) |
|---|---|---|---|---|---|---|
| HealthRisk | SelfEsteem | SSE | STD | Resistive | Situational |
| HealthRisk | 1 | -.005 | .043 | .006 | .079 | .001 |
Hypothesis 1 predicted that increased frequency of exposure to sexually explicit material will predict lower sexual self-concept (SSC) scores. Bivariate regression analysis was used to test this hypothesis. The results of the regression indicated that the predictor, that is, frequency of exposure to sexually explicit material, explained 20.2% of the variance ($R^2 = .202$, $F (1, 539) = 136.67, p < .001$). As seen in Table 38, it was found that higher frequency of exposure to sexually explicit materials significantly predicted lower SSC scores ($b = -.19$, $t (539) = -11.69$, $p < .001$). For every one unit of increase of exposure to pornography, SSC scores decreased by .19. Hypothesis 1a was supported.

Table 37

*Table 37*

**Bivariate correlations between health-related risk behaviors and components of the Sexual Self-Concept (Pearson’s r)**

<table>
<thead>
<tr>
<th></th>
<th>HealthRisk</th>
<th>SexAnxiety</th>
<th>BISC</th>
<th>SSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>HealthRisk</td>
<td>1</td>
<td>.062</td>
<td>.037</td>
<td>.049</td>
</tr>
</tbody>
</table>

Table 38

**Table 38**

*Linear regression predicting SSC scores using exposure to SEM as predictor*

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.638</td>
<td>.005</td>
<td></td>
<td>118.215</td>
<td>.001</td>
</tr>
<tr>
<td>PornFreq</td>
<td>-.210</td>
<td>.020</td>
<td>-.406</td>
<td>-11.691</td>
<td>.001</td>
</tr>
</tbody>
</table>

$R^2 = .202$ (Adjusted $R^2 = .201$)
Hypothesis 2a predicted that higher SSC scores will predict lower health-related risk behavior scores. Linear regression analysis showed SSC scores explain 0.2% of variance ($R^2 = .002$) of health-related risk behavior scores and that the regression model was not significant, $F(1, 574) = 1.367, p = .243$. Analysis showed that SSC scores did not significantly predict the adoption of health-related risk behaviors ($b = .079, t(574) = 1.16, p = .243$). Hypothesis 2a was not supported (see Table 39).

Table 39

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.242</td>
<td>.041</td>
<td>5.879</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>SSC</td>
<td>.079</td>
<td>.068</td>
<td>.049</td>
<td>1.169</td>
<td>.243</td>
</tr>
</tbody>
</table>

$R^2 = .002$ (Adjusted $R^2 = .001$)

Hypothesis 2b predicted higher SSC scores will predict lower scores on sex-related risk behaviors indices. Sex-related risk behaviors were measured in terms of sex risk partners (Sex Risk Partners Index) and sex risk practices (Sex Risk Practices Index). Linear regression analysis was used to test this hypothesis.

First, the Sex Risk Partners Index was regressed on the SSC. Results of the regression indicated that the predictor (SSC) explains 14.6% of the variance ($R^2 = .146$) of the Sex Risk Partners Index, and that the regression model was significant ($F (1, 543) = 92.63, p < .001$). It was found that higher SSC scores significantly predicted lower likelihood of adoption of sex-related risk behaviors ($b = -9.67, t(543) = -9.625, p < .001$). The linear regression equation showed that for every unit of increase of SSC scores, sex-related risk behaviors scores decrease by 9.67 units (see Table 40a).
Table 40a

*Linear regression using SSC scores to predict the adoption of sex risk partners*

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>9.357</td>
<td>.471</td>
<td>19.86</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>SSC</td>
<td>-9.771</td>
<td>.796</td>
<td>-.466</td>
<td>-12.27</td>
<td>.001</td>
</tr>
</tbody>
</table>

$R^2 = .217$ (Adjusted $R^2 = .216$)

Next, the Sex Risk Practices Index was regressed on the SSC. Results of the regression indicated that the predictor (SSC) explains 11.8 of the variance of the Sex Risk Practices Index ($R^2 = .118$), and that the regression model was significant ($F(1, 560) = 74.65, p < .001$). It was found that higher SSC scores significantly predicted lower likelihood of adoption of sex-related risk behaviors ($b = -3.462, t(560) = -8.64, p < .001$). The linear regression equation showed that for every unit of increase of SSC scores, sex-related risk practices index scores decrease by 3.4 units (see Table 40b). Hypothesis 2b was supported.

Table 40b

*Linear regression using SSC scores to predict the adoption of sex risk practices*

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.130</td>
<td>.244</td>
<td>12.838</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>SSC</td>
<td>-3.462</td>
<td>.401</td>
<td>-.343</td>
<td>-8.640</td>
<td>.000</td>
</tr>
</tbody>
</table>

$R^2 = .118$ (Adjusted $R^2 = .116$)

Hypothesis 3a predicted that higher frequency of exposure to sexually explicit material would predict higher health-related risk behavior scores. Linear regression analysis showed that frequency of exposure to sexually explicit material explains 8.2% of variance of health-related risk behavior score ($R^2 = .082$) and that the regression model was significant ($F(1, 540) = 48.06$, $p < .001$).
Analysis indicated that higher frequency of exposure to sexually explicit material does not predict higher likelihood of engagement in health-related risk behaviors ($b = -0.207, t(540) = -6.93, p < .001$). As seen in Table 41, the analysis suggests that for every unit of increase in exposure to sexually explicit material, health-related risk behavior scores decrease by .21 units. Individuals with higher exposure to sexually explicit material are in fact less, not more, likely to adopt health-related risk behaviors. Hypothesis 3a was not supported.

Table 41

**Linear regression using exposure to SEM to predict the adoption of health-related risk behaviors**

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.339</td>
<td>.010</td>
<td>34.502</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>PornFreq</td>
<td>-0.207</td>
<td>.030</td>
<td>-0.286</td>
<td>-6.932</td>
<td>.001</td>
</tr>
</tbody>
</table>

$R^2 = .082$ (Adjusted $R^2 = .080$).

Hypothesis 3b predicted higher scores on exposure to sexually explicit materials will predict higher sex-related risk behavior scores. Sex-related risk behaviors were measured in terms of sex risk partners (Sex Risk Partners Index) and sex risk practices (Sex Risk Practices Index). Linear regression analysis was used to test this hypothesis.

First, the Sex Risk Partners Index was regressed on the frequency of exposure to sexually explicit material. Results of the regression indicated that the predictor (exposure to sexually explicit material) explains 2.5% of the variance ($R^2 = .025$) of the Sex Risk Partners Index, and that the regression model was significant ($F(1, 510) = 13.26, p < .001$). It was found that higher frequency of exposure to sexually explicit material significantly predicted higher scores on the Sex Risk Partners Index ($b = 1.82, t(510) = 3.64, p < .001$). The linear regression equation
showed that for every unit of increase of exposure to sexually explicit material, the Sex Risk Partners Index score increase by 1.82 units (see Table 42). This hypothesis was supported.

Table 42

*Linear regression using exposure to sexually explicit material to predict the Sex Risk Partners Score*

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.340</td>
<td>.163</td>
<td>20.478</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>PornFreq</td>
<td>1.821</td>
<td>.500</td>
<td>.159</td>
<td>3.641</td>
<td>.000</td>
</tr>
</tbody>
</table>

\[ R^2 = .025 \text{ (Adjusted } R^2 = .023) \]

Next, the Sex Risk Practices Index was regressed on the frequency of exposure to sexually explicit material. Results of the regression indicated that the predictor (exposure to sexually explicit material) explains 21% of the variance of the Sex Risk Practices Index \( (R^2 = .210) \), and that the regression model was significant \( (F (1, 527) = 140.04, p < .001) \). The analysis revealed that higher frequency of exposure to sexually explicit material significantly predicted higher scores on the Sex Risk Practices Index \( (b = 2.08, t(527)= 11.83, p < .001) \). The linear regression equation showed that for every unit of increase of exposure to sexually explicit material, the Sex Risk Practices Index score increase by 2.08 units (see Table 43). Hypothesis 3b was supported.
Table 43

*Linear regression using exposure to sexually explicit material to predict the Sex Risk Practices Score*

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.585</td>
<td>.058</td>
<td>10.073</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>PornFreq</td>
<td>2.082</td>
<td>.176</td>
<td>.458</td>
<td>11.834</td>
<td>.000</td>
</tr>
</tbody>
</table>

$R^2 = .210$ (Adjusted $R^2 = .208$)

A path model (see Figure 15) was constructed in order to answer research questions 6 and 7, and also to provide a broader understanding of how exposure to pornography along with age and gender influence the adoption of risk behaviors. Figure 15 presents the parsimonious model of the effects of exposure to sexually explicit material on the adoption of sex- and health-related risk behaviors both directly and indirectly via the Sexual Self-Concept (SSC). Although SSC is represented in the model as a manifest variable, it is, in fact, a latent variable whose structure was confirmed via confirmatory factor analysis (see Figures 7). Items parceling was preferred to using individual items for reasons mentioned above: item parceling allows for more parsimonious models, it limits sampling error, and it reduces the possibility of violation of the assumption of normal distribution (Little et al., 2002; Peter & Valkenburg, 2008). In addition to describing the moderating effects of SSC on the adoption of risk behaviors following the consumption of sexually explicit material, the model also accounts for the effects of age and gender on the adoption of sex- and health-related risk behaviors.

The parameters of the covariance of the path model are estimated by the method of maximum likelihood (ML). A well-fitting model should have a comparative fit index (CFI) $\geq .95$
and a root mean square error of approximation (RMSEA) ≤ .06. Global indices of fit suggest that the model proposed fit the data well based on the two recommended model fit indices: the comparative fit index (CFI) was 1.000, and the root mean square error of approximation estimate (RMSEA) of .001 indicates a hypothesized closely fitting the data (90% confidence interval .000 - .063), $p_{close} = .874$. The chi-square statistic was $\chi^2 = 2.469$, $df = 3$, $p = .481$. Structural equation modeling literature recommends that SEM and other special cases of SEM, like path models, be run with complete datasets (Kline, 2010). Because some variables in the dataset had missing data, a single imputation of values using the EM (Expectation-Maximization) algorithm (Scheffer, 2002) was performed to generate a dataset without missing data, as recommended by Byrne (2010). The EM imputation produced a complete dataset in SPSS, which was then imported into AMOS. The unstandardized regression weights are reported in Table 44, and the standardized regression weights are shown in Figure 15.

Table 44

Regression weights of path model

Regression Weights: (Group number 1 - Default model)

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PornFreq &lt;--- Gender</td>
<td>.273</td>
<td>.015</td>
<td>17.820</td>
<td>***</td>
</tr>
<tr>
<td>PornFreq &lt;--- Age</td>
<td>.003</td>
<td>.001</td>
<td>2.915</td>
<td>.004</td>
</tr>
<tr>
<td>SSC &lt;--- Gender</td>
<td>-.052</td>
<td>.009</td>
<td>-5.794</td>
<td>***</td>
</tr>
<tr>
<td>SSC &lt;--- Age</td>
<td>-.002</td>
<td>.001</td>
<td>-3.454</td>
<td>***</td>
</tr>
<tr>
<td>SSC &lt;--- PornFreq</td>
<td>-.146</td>
<td>.019</td>
<td>-7.518</td>
<td>***</td>
</tr>
<tr>
<td>SexRiskPractices &lt;--- Gender</td>
<td>-.261</td>
<td>.093</td>
<td>-2.809</td>
<td>.005</td>
</tr>
<tr>
<td>HealthRisk &lt;--- SSC</td>
<td>-.311</td>
<td>.072</td>
<td>-4.353</td>
<td>***</td>
</tr>
<tr>
<td>Path</td>
<td>Estimate</td>
<td>S.E.</td>
<td>C.R.</td>
<td>P</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------</td>
<td>-------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>SexRiskPartners &lt;--- Age</td>
<td>.067</td>
<td>.015</td>
<td>4.543</td>
<td>***</td>
</tr>
<tr>
<td>SexRiskPartners &lt;--- PornFreq</td>
<td>.629</td>
<td>.531</td>
<td>1.184</td>
<td>.236</td>
</tr>
<tr>
<td>SexRiskPartners &lt;--- MSex</td>
<td>-.924</td>
<td>.243</td>
<td>-3.803</td>
<td>***</td>
</tr>
<tr>
<td>SexRiskPractices &lt;--- Age</td>
<td>.032</td>
<td>.006</td>
<td>5.664</td>
<td>***</td>
</tr>
<tr>
<td>SexRiskPractices &lt;--- SSC</td>
<td>-1.611</td>
<td>.406</td>
<td>-3.966</td>
<td>***</td>
</tr>
<tr>
<td>HealthRisk &lt;--- Age</td>
<td>-.003</td>
<td>.001</td>
<td>-2.764</td>
<td>.006</td>
</tr>
<tr>
<td>SexRiskPartners &lt;--- SSC</td>
<td>-10.448</td>
<td>1.063</td>
<td>-9.827</td>
<td>***</td>
</tr>
<tr>
<td>hlthrisk07 &lt;--- PornfreqNew01</td>
<td>-.131</td>
<td>.036</td>
<td>-3.669</td>
<td>***</td>
</tr>
<tr>
<td>hlthrisk07 &lt;--- MSex</td>
<td>-.110</td>
<td>.016</td>
<td>-6.738</td>
<td>***</td>
</tr>
<tr>
<td>SexRiskPractices &lt;--- PornfreqNew01</td>
<td>2.065</td>
<td>.203</td>
<td>10.171</td>
<td>***</td>
</tr>
</tbody>
</table>

Research question 6 asked what the role of biological sex in the process of adopting sex- and health-related risk behaviors was. The model presented here allows for the evaluation of direct, indirect, and total effects of an independent variable on a dependent variable. The direct effect of gender on the Sex Risk Partners Index (b = -.924, S.E. = .243, p < .001) shows that as gender goes up one unit (that is, from female to male), Sex Risk Partners Index decreases by approximately .92 units (see Table 45). In other words, the model seems to suggest that men are less likely than women to adopt sex risk practices. However, the indirect effect of gender on Sex Risk Partners Index is 1.13 (see Table 46). In other words, due to the mediation of frequency of
Figure 15. Path model: Influence of pornography, age, and gender on adoption of sex- and health-related risk behaviors

Model fit: $\chi^2 = 2.469$, df = 3, $p > .05$, RMSEA = .000 (90% confidence interval = .00 - .063), pclose $> .05$, CFI = 1.00, SRMR = .0126. Note: The figure above shows the standardized regression weights.

exposure to pornography and SSC, as gender goes from female to male, Sex Risk Partners index score goes up by 1.13 units. Specifically, the indirect effect of gender on the adoption of sex risk partners through exposure to sexually explicit material shows that as gender goes up one unit, from female to male, Sex Risk Partners Index score goes up by 0.1701 units. This effect is reported by AMOS and can also be calculated by multiplying the direct effects of gender on frequency of exposure to sexually explicit material and the direct effects of frequency of exposure to sexually explicit material on Sex Risk Partners ($0.27 \times 0.63 = 0.1701$). The indirect effect of gender on the adoption of sex risk partners through the mediation of SSC is ($-0.05 \times -10.45$) = .522, meaning that as gender goes from female to male, Sex Risk Partners Index scores
increases by .522 units. The indirect effect of gender on sex risk practices through the mediation of frequency of exposure to pornography and SSC is (.27 * -.15 * -10.45) = 0.423, indicating that as gender goes from female to male, through the mediation of exposure to pornography and SSC, Sex Risk Partners Index score increases by 0.423 units. Cumulating all indirect effects, the total indirect effect of gender on sex risk partners is 1.13, that is, as gender moves from female to male, Sex Risk Partners Index score increases by 1.13 units.

The total effects of gender on Sex Risk Partners Index is .207, that is, due to both direct (unmediated) and indirect (mediated) effects of gender on Sex Risk Partners, when gender goes up by 1 unit, Sex Risk Partners Index scores go up by .207 (see Table 47). The analysis thus shows that men are more likely than women to engage in this type of sex risk practices.

Table 45

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>PornFreq</td>
<td>.003</td>
<td>.273</td>
</tr>
<tr>
<td>SSC</td>
<td>-.002</td>
<td>-.052</td>
</tr>
<tr>
<td>SexRiskPartners</td>
<td>.067</td>
<td>-.942</td>
</tr>
<tr>
<td>HealthRisk</td>
<td>-.003</td>
<td>-.110</td>
</tr>
<tr>
<td>SexRiskPractices</td>
<td>.032</td>
<td>-.261</td>
</tr>
</tbody>
</table>

The direct effect of gender on the Sex Risk Practices Index (b = -.261, S.E. = .093, p < .001) indicates that as gender increases by one unit (that is, from female to male), Sex Risk
Practices Index decreases by .26 units (see Table 45). However, the AMOS output shows that the indirect effect of gender on Sex Risk Practices Index is .711. In other words, due to the indirect effect (mediation) of gender through frequency of exposure to pornography and SSC, as gender goes from female to male, Sex Risk Practices index score goes up by .711 units. The indirect effect of gender on Sex Risk Practices through frequency of exposure to sexually explicit material is (.27 * 2.06) = 0.56. The indirect effect of gender on Sex Risk Practices through SSC is (-.05 * -1.61 = 0.08). The indirect effect of gender on Sex Risk Practices mediated by exposure to pornography and SSC is (.27 * -.15 * -1.61) = 0.065. The total indirect effect of gender on sex risk practices is (0.531 + 0.13 + 0.0937) = .711. Thus, cumulating all indirect effects, the total indirect effect of gender on sex risk practices is .711 (see Table 46), that is, as gender moves from female to male, Sex Risk Practices Index score increases by .711 units through the mediation of frequency of exposure to sexually explicit material and SSC.

The total effect of gender on Sex Risk Practices Index is .450, that is, due to both direct (unmediated) and indirect (mediated) effects of gender on Sex Risk Practices, when gender goes up by 1 unit (from women to men), Sex Risk Practices Index score increases by .450 units (see Table 47). The analysis thus shows that men are more likely than women to engage in this type of sex risk practices.

Table 46

*Indirect effects of gender and age on frequency of exposure to sexually explicit material, SSC, sex-related risk behavior and health-related risk behavior*

<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>
Table 47

*Total effects of gender and age on frequency of exposure to sexually explicit material, SSC, sex-related risk behavior and health-related risk behavior*

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC</td>
<td>-.001</td>
<td>-.040</td>
</tr>
<tr>
<td>SexRiskPartners</td>
<td>.027</td>
<td>1.131</td>
</tr>
<tr>
<td>HealthRisk</td>
<td>.000</td>
<td>-.007</td>
</tr>
<tr>
<td>SexRiskPractices</td>
<td>.011</td>
<td>.711</td>
</tr>
</tbody>
</table>

The direct effect of gender on health-related risk behaviors (b = -.11, S.E. = .016, p < .001) indicates that as gender goes up one unit (from female to male), Health Risk Index score decreases by .11 units (see Table 45). This suggests that males are less likely than females to adopt health risk behaviors related to body image. The indirect effect of gender on the Health Risk Index score mediated by exposure to pornography is (.27 * -.13) = - 0.035, meaning that through the mediation of frequency of exposure to sexually explicit material, as gender goes from female to male, the Health Risk Index score decreases by 0.035 units. The indirect effect of
gender on the Health Risk Index score mediated by SSC is \((-0.06 \times -0.25) = 0.015\). In other words, through the mediation of SSC, as gender goes from female to male, the Health Risk Index score increased by 0.015 units. The indirect effect of gender on the Health Risk Index through the mediation of both exposure to pornography and SSC is \((0.27 \times -0.16 \times -0.25) = 0.010\). Total indirect effect of gender on Health Risk Index score is \((-0.035 + 0.014 + 0.010) = -0.01\) (see Table 46).

The total effects of gender on Health Risk Index is -0.117, that is, due to both direct (unmediated) and indirect (mediated) effects of gender on Health Risk Index, when gender goes up by 1 unit, from female to male, Health Risk Index scores decrease by 0.117 (see Table 47). Analysis thus shows that women are more likely than men to adopt body image-related health risk behaviors through the mediation of exposure to pornography and the sexual self-concept.

Research question 7 asked what the role of respondents' age in the process of adopting sex- and health-related risk behaviors in the context of exposure to sexually explicit material was. The model shows that age has a direct effect on the Sex Risk Partners Index score, \((b = 0.06, \text{S.E.} = 0.015, p < .001)\). This result suggests that as age increases by one unit (or one year), the Sex Risk Partners Index score also increases by 0.06 units. However, the indirect effect of age on Sex Risk Partners Index score through the mediation of pornography exposure is \((0.003 \times 0.63) = 0.0018\). The indirect effect of age on Sex Risk Partners Index through the mediation of SSC is \((-0.003 \times -10.45) = 0.0313\). The indirect effect of age on Sex Risk Partners Index through the combined mediation of pornography exposure and SSC is \((0.003 \times -0.15 \times -10.45) = 0.004\). Total indirect effect of age on Sex Risk Partners Index is 0.027 (see Table 46). Total effect of age on Sex Risk Partners Index is 0.094 (see Table 47). In other words, due to both direct (unmediated) and indirect (mediated) effects of age on Sex Risk Partners Index, when age goes up by one unit (or one year), Sex Risk Partners Index goes up by 0.094 units. This finding suggests that older
participants in the present study were slightly more likely than younger participants to engage in this type of sex risk.

In addition, the model indicates that the age has a direct (unmediated) effect on Sex Risk Practices Index \((b = 0.032, \text{S.E.} = 0.006, p < 0.001)\). This finding indicates that as age increases by one year, the Sex Risk Practices Index score increases by approximately 0.3 units. The indirect effect of age on the Sex Risk Practices Index through the mediation of pornography exposure is \((0.003 \times 2.06) = 0.006\). The indirect effect of age on the Sex Risk Practices Index through the mediation SSC is \((-0.003 \times -1.61) = 0.004\). The indirect effect of age on Sex Risk Practices Index through the combined mediation of pornography exposure and SSC is \((0.003 \times -0.15 \times -1.61) = 0.0007\). Total indirect effect of age on Sex Risk Practices Index is 0.011. Total effect of age on Sex Risk Practices Index is 0.043 (see Table 47). Due to both direct (unmediated) and indirect (mediated) effects of age on Sex Risk Practices Index, when age goes up by one unit (or one year), Sex Risk Practices Index goes up by 0.043 units. As with the precedent index, this finding suggests that older participants in the present study were slightly more likely than younger participants to engage in this type of sex risk.

Finally, the model offers insight into the effect of age on the adoption of health-related risk behaviors. As seen in Table 45, age has a very small, but significant, direct effect on Health Risk Index scores \((b = -0.003, \text{S.E.} = 0.001, p < 0.05)\). The indirect effect of age on the Health Risk Index via the mediation of exposure to pornography is \((0.004 \times -0.126) = 0.0004\). The indirect effect of age on Health Risk Index through the mediation of SSC was \((-0.003 \times -0.31) = 0.0009\). The indirect effect of age on Health Risk Index through the combined mediation of pornography exposure and SSC is \((0.004 \times -0.16 \times -0.240) = 0.00013\). Total indirect effect of age on Health Risk Index score is \((0.0004 + 0.0007 + 0.00013) = 0.0012\). Total effect of age on Health Risk Index is -
.002 (see Table 54). In other words, due to both direct (unmediated) and indirect (mediated) effects of age in Health Risk Index, when age goes up by one year, Health Risk Index score decreases by .002 units. As age increases, health-related risks decrease, but the effect of age on this variable is very weak.

**Qualitative Data: Diary Method**

In addition to the quantitative data collected via the survey procedure, qualitative data was collected and analyzed with the twofold goal of providing a more in-depth understanding of individuals' engagement with sexually explicit material, and also to address the limitations of survey data collection, discussed in Chapter III. In order to achieve these goals, individuals invited to participate in this section of the present study were instructed to keep a diary about their engagement with sexually explicit material. The diary data collection method is recommended when the activities of interest are either spontaneous or secretive/solitary, so that attempts to observe them directly would be inefficient and even unethical (Lindlof & Taylor, 2002).

**Procedure**

The data collection process started in September 2012 and was completed in March 2013, when saturation was reached. Participants were provided with a link to the online location of the diary and were asked to provide detailed answers to six questions after each occasion when they had watched sexually explicit material. The six questions were: 1. “What do you normally use sexually explicit materials/pornography for?”; 2. “Why did you watch/read/use the material?”; 3. “How realistic did you think the sexual acts depicted in the material were?”; 4. “How did watching/reading/using the material make you feel about your own sex life?”; 5. “How did
watching/reading/using the material make you feel about your body?”; and 6. “How did watching/reading/using the material make you feel about your sexual skill?”. In addition, participants were asked to indicate what type or types of sexually explicit materials they used every time they chose to make a diary entry. Also, participants were not required to provide an answer to the first question more than once, at the outset of their participation in the study.

Participants were asked to make an entry after each time when they had watched, read, or engaged in any way with sexually explicit material. A frequency of two such entries per week was indicated as ideal in the instructions for the participation, for a total of four weeks. Since no formal guideline about a sufficient number of messages or idea units necessary for thematic analysis exists, the data collection process was kept open, participants were recruited and data were analyzed until thematic saturation was achieved (Glasser & Strauss, 1967; McCormack & Coulson, 2009). In this study, saturation was reached when it became apparent in the preliminary data analysis that more data did not necessarily lead to more information. In other words, saturation was achieved when the analysis of new data stopped generating new codes or categories, but only increased the frequency of already existing categories. This is because only one occurrence of a piece of data is necessary for it to become part of the analysis framework, rather than the frequency with which a piece of data occurs (Mason, 2010). This approach is characteristic of qualitative research, which is primarily concerned with meaning, and not with making generalizable knowledge claims, as is the case with most quantitative research (Crouch & McKenzie, 2006).
Profile of Diary Participants

All the participants were graduate students at Bowling Green State University. A total of 10 participants made diary entries for periods of time varying from one day to five weeks. Four participants were female and six were male. The number of diary entries contributed by each participant varied in range from one entry to eight entries. Specifically, six participants completed the process, making 8 diary entries each; two participants made two entries each; and another two participants made one entry each. Weekly reminders were sent via email to all the participants. Those who withdrew or stopped making entries did not offer an explanation for their withdrawal from the study. In order to encourage participation, individuals who completed the process were offered a monetary incentive in the form of $30 gift cards.

Data Analysis

An inductive thematic analysis of the diary entries was conducted in three stages of coding: open, axial, and selective (Glasser & Strauss, 1967; Strauss & Corbin, 1990). The first stage of the thematic analysis approach involves open coding, or breaking down the data into as many idea units as possible (Lindlof & Taylor, 2002).

The goal of open coding is to break down raw messages into individual units that convey a single idea (Strauss & Corbin, 1990). In the present study, some units were entire paragraphs, other were single sentences or even independent phrases or words. The open coding resulted into 502 distinct idea units from the original 51 diary entries. For example, the following entry was made in response to the question “How realistic did you think the sexual acts depicted in the material were?”:
The porno films consisted of women finding "real" men to have sex with. I think that it was unrealistic because I have never experienced three girls who randomly want to have sex with strangers. I like it because it is kind of exciting to think that that many women would like to get with one person. The acts themselves were pretty straightforward sex positions.

This response was broken down into three idea units:

1. “The porno films consisted of women finding "real" men to have sex with. I think that it was unrealistic because I have never experienced three girls who randomly want to have sex with strangers.”,

2. “I like it because it is kind of exciting to think that that many women would like to get with one person.”,

3. “The acts themselves were pretty straightforward sex positions.”

Next, the axial coding, corresponding to the integration stage of thematic analysis (Lindlof & Taylor, 2002), was used to further breakdown the 502 idea units. Axial coding involves the creation of categories around which the data are grouped together based on similar themes (Strauss & Corbin, 1990). The purpose of the axial coding in this analysis was to determine how individuals engage with sexually explicit materials, how they assign meaning to sexually explicit content, and to identify the frequency of the categories extracted from the data. Some of the categories discussed below originate in the literature review, previous research, and theoretical guidance. In a comprehensive review of internet pornography use research, Short et al. (2012) found that among the most frequent uses of pornography advanced by pornography research were entertainment, education, information seeking, curiosity, distraction, stress release,
explore sexual fantasies, or improvement of sex life. Some of these functions mentioned in previous research partly guided the data analysis in this study, particularly the creation of the codebook described below. However, following the inductive approach that characterizes much of the qualitative research, most categories emerged as original categories during data analysis, as expected.

At this stage, a codebook was created. A codebook “is a tool for the development and evolution of a coding system and is an important means for documenting the codes and the procedures for applying them” (Weston et al., 2001, p. 395). The main purpose of the codebook is to list all categories, code names for all categories, examples of all categories, and the frequency of each category in the dataset (Lindloff & Taylor, 2002). As no similar study has been conducted before, most categories and labels present in the codebook emerged from the coding of the present dataset.

The axial, or theoretical, coding performed here sought to integrate theoretical guidance provided by the social cognitive theory with categories emerging from the data. These categories, discussed in further detail in the next section, pertain to the manner in which social cognitive theory suggests that individuals may be influenced by observing others' symbolic communication acts and behaviors in the context of media exposure, in this case exposure to sexually explicit content. For example, the categories that emerged in the thematic analysis indicate how participants receive and interpret norms, standards, and practices proposed in sexually explicit content with respect to body ideals or sexual adequacy. Primarily, the axial coding was employed in order to answer the research questions proposed for the qualitative phase of this study. The diary entries were guided by six questions to which participants were expected to provide responses, each of the six questions corresponding to a research question
posed in the study. In the next section, the categories that emerged from the inductive thematic analysis are presented separately for each of the research question that guided the inquiry.

The final coding process involved selective coding, used to integrate the axial categories into overarching themes pervading the diary entries that followed the exposure to sexually explicit material. The selective coding corresponds to final stage of the grounded theory approach, the process of dimensionalization (Lindlof & Taylor, 2002). Dimensionalization “involves identifying properties of categories and constructs. Once a category has been defined, the analyst may explore its attributes or characteristics along continua or dimensions” (Spiggle, 1994, p. 494).

**Sexually Explicit Material Use Categories**

Research question 8 asked what participants normally used sexually explicit material for. Table 48 summarizes the categories that emerged in the axial coding process in response to this question, along with the number and percentage of idea units corresponding to each category. As the table shows, stimulation (either with or without partner) and sexual release/self-gratification were the categories with the highest number of idea units, or, in other words, the most common motivations for participants to view pornography. These were followed by stress or boredom release/escapism (16.6%), and by entertainment (13.3%). Viewing sexually explicit material for stimulation could occur in the absence of a sexual partner, as seen in the example presented in Table 48, but also in the presence of a partner, as in the following example:

I have used it with a partner before, but it was just to try watching it while we were intimate, and didn't become habitual.
In contrast to these relatively high frequency categories, diary participants rarely indicated habit (6.6%), sexual education/entertainment (3.3%), or following adult performers (3.3%) as motivations to seek sexually explicit content.

Table 48

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulation (with or without partner)</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>Release (stress, boredom)/Escapism</td>
<td>5</td>
<td>16.6%</td>
</tr>
<tr>
<td>Release (sexual)/Self-gratification</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>Sex information/education</td>
<td>1</td>
<td>3.3%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>4</td>
<td>13.3%</td>
</tr>
<tr>
<td>Habit</td>
<td>2</td>
<td>6.6%</td>
</tr>
<tr>
<td>Pushing boundaries without risk</td>
<td>2</td>
<td>6.6%</td>
</tr>
<tr>
<td>Following performers</td>
<td>1</td>
<td>3.3%</td>
</tr>
<tr>
<td>Negative effect (disgust, frustration, negative comparison)</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 49 lists all the axial categories that were present in the entries made by respondents in response to research question 8, along with a brief example of each. Although the category labeled here “Negative effect” cannot be seen as a motivation to view pornography, it was still retained as a category, because 10 percent of the total number of idea units posted in response to
this question indicated a negative feeling or comparison associated with exposure to sexually explicit content. All the examples provided in this section retain the original form in which they were submitted to the online diary, including typographical, grammatical, or spelling errors.

Table 49

*Sexually explicit material use categories*

<table>
<thead>
<tr>
<th>Category</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulation (with partner or without partner)</td>
<td><em>I think porn does make me feel turned on more quickly because I can focus on thinking about sex more easily.</em></td>
</tr>
<tr>
<td>Release (stress, boredom)/Escapism</td>
<td><em>I think I normally use porn to alleviate stress, as a form of escapism.</em></td>
</tr>
<tr>
<td>Release (sexual)/Self-gratification</td>
<td><em>I love to shoot my wad. I enjoy having orgasms.</em></td>
</tr>
<tr>
<td>Sex information/education</td>
<td><em>Also, I use porn to become familiar or satisfy my curiosity about sexual acts I don't really know about. It's a lot easier to watch porn that shows how to use toys or different positions than to ask someone about it. Then I can still find out about it without feeling uncomfortable having to ask someone.</em></td>
</tr>
<tr>
<td>Entertainment</td>
<td><em>I also attend some gay clubs that have dancers that could be seen as being sexually explicit (as well as screens</em></td>
</tr>
</tbody>
</table>
portraying sexually explicit material-used for entertainment [sic].

Habit

[...] this is not a frequent thing anymore but when necessary: relieve stress, boredom, or by perhaps something or someone that activates this side of thinking.

Pushing boundaries without risk

In my youth, I went to many shock websites that would both have sexual material as well as disturbing videos of people getting hurt or humors [sic] videos [...] I really enjoy looking at images that push the boundaries of what is acceptable in everyday culture.

Following performers

[...] but I am also interested in actors and whatnot now. I follow a few porn stars on twitter and go to their blogs occasionally as well.

Negative effect (disgust, frustration, negative comparison)

I wish I'd had more sex partners in my life, and porn helps me ease that frustration [...] Does porn alleviate frustration, or does it just emphasize the sources of frustration?

Research question 9 inquired what prompted participants to view pornography before they made their last entry. Table 50 summarizes the categories that emerged from the diary entries in response to this question through the process of axial coding, along with the number and the percentage of idea units corresponding to each category. As seen in the table below, sexual release was the most frequent reason for engagement with sexually explicit content.
Sexual release was occasionally described by participants as “safe sexual release”, like in the following example:

I am single and do not want to rush into a relationship which involves physical proximity at this stage. This to me is the most safe and private way of temporarily satiating an urge.

Sexual release category was followed by another type of release, stress or boredom release, occasionally identified as a form of escapism by participants (21.2%). Substitution for sexual partners made up 14.1% of the messages posted in response to this research question. Also, sex education/information seeking was indicated as an important reason for watching sexually explicit material (11.5%), followed by entertainment (7.1%) and habit (6.2%). Although not motivations to watch pornography per se, a number of entries mentioned that exposure to this type of content had a positive effect on them (3.5%) or, conversely, a detrimental effect (2.6%).

Also, a significant category, participation (4.4%), is reported here because it occurred relatively frequently in the diary entries. This category refers to the instances in which participants mentioned their participation in this study as a motivation to watch pornography.

Table 50

*Number and percentage of idea units in motivation to use sexually explicit material categories*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulation (with partner)</td>
<td>7</td>
<td>6.2%</td>
</tr>
<tr>
<td>Category</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Release (sexual/safe release)</td>
<td>26</td>
<td>23%</td>
</tr>
<tr>
<td>Release (stress/boredom)/Escapism</td>
<td>24</td>
<td>21.2%</td>
</tr>
<tr>
<td>Substitution</td>
<td>16</td>
<td>14.1%</td>
</tr>
<tr>
<td>Participation</td>
<td>5</td>
<td>4.4%</td>
</tr>
<tr>
<td>Sex education/Information seeking</td>
<td>13</td>
<td>11.5%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>8</td>
<td>7.1%</td>
</tr>
<tr>
<td>Habit</td>
<td>7</td>
<td>6.2%</td>
</tr>
<tr>
<td>Negative/questionable effect</td>
<td>3</td>
<td>2.6%</td>
</tr>
<tr>
<td>Positive effect</td>
<td>4</td>
<td>3.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>113</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 51 describes the axial categories that were present in the entries made by respondents in response to research question 9, along with a brief example of each. As mentioned above, the categories “Negative effect” and “Positive effect” were retained because they have a combined frequency of 6.1% of all categories emerged in response to research question 9.
Table 51

*Motivation to use sexually explicit material categories*

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulation (with or without partner)</td>
<td><em>We found a porn video that showed a female using anal beads by herself [...] Then my partner became turned on, and he continued to watch porn while I gave him a blow job.</em></td>
</tr>
<tr>
<td>Release (sexual/safe release)</td>
<td><em>I had had sexual dreams and so when I woke up I thought I should watch porn to help me masturbate.</em></td>
</tr>
<tr>
<td>Release (stress/boredom)/Escapism</td>
<td><em>I decided to watch a porno video because it was close to bedtime and I needed a way to relax. It helps me get my mind off of other issues in my life.</em></td>
</tr>
<tr>
<td>Substitution</td>
<td><em>I used the material because I was back home after visiting my partner and I wanted to watch a video that reflected some of the things we did.</em></td>
</tr>
<tr>
<td>Participation</td>
<td><em>I needed to watch something pornographic for another survey [sic] entry.</em></td>
</tr>
<tr>
<td>Sex education/Information seeking</td>
<td><em>I was curious to see what updates are currently in the industry. Positions, types of etc.</em></td>
</tr>
<tr>
<td>Entertainment</td>
<td>I use websites that prioritize milf videos. I enjoy looking at women who are older and still have great bodies and love to fuck.</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Habit</td>
<td>I have a lot of time at night to myself these days, so porn has become a frequent thing.</td>
</tr>
<tr>
<td>Negative/questionable effect</td>
<td>I probably watch too much porn when my partner isn't around, but I don't think it effects [sic] my everyday life very much.</td>
</tr>
<tr>
<td>Positive effect</td>
<td>It was one of the better experiences I've had with porn. Sometimes it just adds to the frustration or stress. But this time it was good.</td>
</tr>
</tbody>
</table>

Research question 10 asked how realistic the participants thought were the sexual representations portrayed in sexually explicit media that they viewed. Table 52 summarizes the categories that emerged from the analysis of the diary entries submitted in response to this question through the process of axial coding.
Table 52

*Number and percentage of idea units in perceived realism of sexually explicit material categories*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived lack of realism (sexual acts)</td>
<td>21</td>
<td>19.6%</td>
</tr>
<tr>
<td>Perceived lack of realism (scenario/setting)</td>
<td>15</td>
<td>14%</td>
</tr>
<tr>
<td>Perceived realism (sexual acts)</td>
<td>32</td>
<td>29.9%</td>
</tr>
<tr>
<td>Perceived realism (scenario/setting)</td>
<td>12</td>
<td>11.2%</td>
</tr>
<tr>
<td>Perceived realism (body image)</td>
<td>4</td>
<td>3.7%</td>
</tr>
<tr>
<td>Perceived lack of realism (body image)</td>
<td>7</td>
<td>6.5%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>4</td>
<td>3.7%</td>
</tr>
<tr>
<td>Sex education/information</td>
<td>2</td>
<td>1.8%</td>
</tr>
<tr>
<td>Disgust/fear</td>
<td>4</td>
<td>3.7%</td>
</tr>
<tr>
<td>Ambivalent effects (repulsive/attractive)</td>
<td>3</td>
<td>2.8%</td>
</tr>
<tr>
<td>Fantasy without risk</td>
<td>3</td>
<td>2.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>107</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
As seen in Table 52, nearly 30% of idea units pertaining to this research question deemed the sexual acts depicted in the sexually explicit content watched to be realistic, and 11.2% described the narrative, scenario, or the setting of the sexual acts depicted to also be realistic. Concomitantly, close to 20% of the entries presented the sexual acts watched as lacking in realism. 14% of all idea units deemed unrealistic the scenario, narrative, or the setting of the sexual acts. Some participants also commented on the realism of the bodies of performers present in the sexually explicit material. Thus, 6.5 percent of the comments deemed the bodies of the performers to be unrealistic, and 3.7 percent perceived the body images as realistic. The perceived lack of realism of sexual acts and scenarios were sometimes deemed as positive and entertaining by the participants, such as in this example:

The porno films consisted of women finding "real" men to have sex with. I think that it was unrealistic because I have never experienced three girls who randomly want to have sex with strangers. I like it because it is kind of exciting to think that that many women would like to get with one person.

In other instances, however, the perceived realism of the sexual acts, scenarios, or body images were considered positive by some participants: “[The acts were] very real. The idea of realness has more arousal appeal to me.”

Although participants were specifically asked to comment on the realism of the sexual acts and scenarios viewed, other categories became apparent in the analysis, such as entertainment (3.7%), sex education/information (1.8%), disgust or fear provoked by exposure to the material (3.7%), as well as the pervasive category of ambivalent effects (repulsive/attractive) (2.8%). All these categories along with brief examples are listed in Table 53 below.
Table 53

*Perceived realism of sexually explicit material categories*

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived lack of realism (sexual acts)</td>
<td><em>The acts seemed so fake. One woman was just rolling on the bed, another was on a balcony stripping, and another was doing the splits on her bed. These acts just seemed to feel acted out not really intimate or personal, and the women's faces were so fake too. They were biting their lips, and smiling, acting as if they were so turned on by themselves, and I don't really think people perform for themselves like that.</em></td>
</tr>
<tr>
<td>Perceived lack of realism (scenario/setting)</td>
<td><em>The video showed one woman in a public restroom servicing two penises throw [sic] glory holes (holes in the wall). I don't think this is that realistic or common. I think this might be more of somebody's fantasy, but I have never heard anyone say they have actually been to or know someone whose [sic] been to a place where this happens.</em></td>
</tr>
<tr>
<td>Perceived realism (sexual acts)</td>
<td><em>The acts were pretty realistic because I was looking for videos that reflected what I had done the weekend before. It [sic] mostly of couples having sex in multiple different positions.</em></td>
</tr>
<tr>
<td>Dimension</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Perceived realism (scenario/setting)</td>
<td><em>I also think the location was realistic. The couple was just on a bed, not some wild location, but where most people probably have sex.</em></td>
</tr>
<tr>
<td>Perceived realism (body image)</td>
<td><em>It was kind of realistic. It depicted a woman in her mid-thirties, looking like a normal woman in her mid-thirties, giving a blow job to a man who looked very much like someone who could have well been her boyfriend or husband.</em></td>
</tr>
<tr>
<td>Perceived lack of realism (body image)</td>
<td><em>The videos I watched included lesbian and threeway (mff) acts. The lesbian porn involved two plastic looking girls who fucked each other with strap-ons. Sometimes this type of porn seems less real because one can't tell if the girls actually like it.</em></td>
</tr>
<tr>
<td>Entertainment</td>
<td>* [...]Very unrealistic but funny.*</td>
</tr>
<tr>
<td>Sex education/information</td>
<td><em>Probably the hottest thing about the video was that it was something that my partner and I might really do someday if we had a threesome.</em></td>
</tr>
<tr>
<td>Disgust/fear</td>
<td><em>I went to pornhub.com to look for a video, but I was so disturbed by this video that played automatically advertising punish.com. In it this girl was being held down by one guy, while another guy was touching her and she was protesting but then said she was coming. [...] I feel that these acts were so violent towards women, and really create fear in me. [...] it was gross.</em></td>
</tr>
</tbody>
</table>
Ambivalent effects (repulsive/attractive)  
I don't know why I watched it because it kind of made me feel a little ill. However, that didn't stop me from masturbating to it.

Fantasy without risk  
I think that this partially satisfies my masculine brain to spread my seed. I can do that from the comfort of my home without the chance of getting STDs or having to deal with meeting lots of new people just to have sex with. I prefer it this way.

Research question 11 asked how exposure to sexually explicit material made participants feel about their own sex lives. As seen in Table 54, 41% of the idea units submitted in response to this question indicated that participants felt their own sex lives compared favorably to the sexually explicit content which they had viewed prior to making the diary entries. For example, a participant mentioned that exposure to the material made him/her feel that their life was safer and more comfortable than the representations of sexuality present in the sexually explicit material:

It made me feel really glad that I have one partner who I trust and feel comfortable with, and who would never not [sic] listen to me when we are together sexually.
Other participants suggested that exposure to pornography had a positive effect on their lives by inviting more openness: “It [exposure to sexual content] encouraged more sexual openness, confidence with my sexual partner, and even risky (but safe) behavior.”

However, as seen in Table 54, 26 percent of the entries posted suggested that, following the exposure to sexually explicit material, some participants felt their own lives compared negatively to sexuality portrayed in the material. For example, one participant wrote that, while watching pornography with his/her partner, he/she was intimidated by the display of skillful and adventurous sexuality of pornographic performers:

[…] once he continued to watch porn, I felt intimidated by the presence of porn. I tried to block these feelings out and just focus on pleasing him. I don't want him to question the quality of our sex life based on porn. I mostly feel insecure about what he's thinking about if we are adventurous enough in bed.

In addition to these larger categories, 12.3% of entries suggested that exposure to the sexually explicit material had no effect on how they perceived their own sex lives, whereas 9.6 percent indicated that the effect was rather ambivalent or neutral. 2.7 percent of cases indicated that participants felt disgust towards the sexually explicit material, a category that was present in response to other questions too. In addition, 4.1 percent of entries revealed sexual release in relationship with the exposure to sexually explicit material, and 1.3 percent suggested stress release as an effect of said exposure. Table 55 lists all the categories emerged in the axial coding and illustrates each category with a brief example.
Table 54

*Number and percentage of idea units in comparison to sexually explicit material categories*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive comparison</td>
<td>30</td>
<td>41.1%</td>
</tr>
<tr>
<td>Negative comparison</td>
<td>19</td>
<td>26.01%</td>
</tr>
<tr>
<td>Ambivalent/neutral</td>
<td>7</td>
<td>9.6%</td>
</tr>
<tr>
<td>No perceived effect</td>
<td>9</td>
<td>12.3%</td>
</tr>
<tr>
<td>Release (sex)</td>
<td>3</td>
<td>4.1%</td>
</tr>
<tr>
<td>Release (stress)</td>
<td>1</td>
<td>1.3%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>1</td>
<td>1.3%</td>
</tr>
<tr>
<td>Disgust (towards the sexually explicit content)</td>
<td>2</td>
<td>2.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Table 55

Comparison to sexually explicit material categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive comparison</td>
<td><em>I felt more safe</em> [sic] <em>about my sex life. At least I know who I am hooking up with, but</em> [sic] <em>just faceless strangers in a public bathroom.</em></td>
</tr>
<tr>
<td>Negative comparison</td>
<td><em>Also, my boyfriend is long-distance so it sucks to watch other people having sex when I can't as much as I would like to.</em></td>
</tr>
<tr>
<td>Ambivalent/neutral</td>
<td><em>This video gave me mixed feelings about my sex life. I sometimes feel tired of watching porn to please myself rather than actually having sex with my long-distance boyfriend.</em></td>
</tr>
<tr>
<td>No perceived effect</td>
<td><em>No change</em> [after exposure]. <em>Still confident, overall.</em></td>
</tr>
<tr>
<td>Release (sex)</td>
<td><em>I don't really need the videos to help me imagine what sexual acts I have done, but it is nice to have when you are by yourself with nobody to share with.</em></td>
</tr>
<tr>
<td>Release (stress)</td>
<td><em>It felt good to have something to help me relive my events from the past weekend.</em></td>
</tr>
<tr>
<td>Entertainment</td>
<td><em>I find sexual porn watching as gratifying fun. I also enjoy watching busty women always have sex. I imagine their sex</em></td>
</tr>
</tbody>
</table>
lives as more lively than other women because of their thick physiques.

Disgust (towards the sexually explicit content)

*It made me think that sometimes I watch things that only kind of turn [sic] me on. This video sort of grossed me out because it just was so unrealistic and she seemed to not be enjoying herself. I don't watch these types of videos very often because of that feeling of shame I associate with watching something that is seemingly sex negative.*

Research question 12 asked how exposure their viewing of sexually explicit material made them feel about their own bodies. As seen in Table 56, the axial coding revealed that the 92 idea units posted by participants in response to this question were grouped in 9 distinct categories.

**Table 56**

*Number and percentage of idea units in the effects on body image categories*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative comparison</td>
<td>29</td>
<td>31.5</td>
</tr>
<tr>
<td>Positive comparison</td>
<td>25</td>
<td>27.1</td>
</tr>
<tr>
<td>No perceived effect</td>
<td>15</td>
<td>16.3</td>
</tr>
</tbody>
</table>
The most prevalent category was negative comparison (31.5%), that is, after exposure participants compared their own bodies negatively to those seen in the sexually explicit material, such as the following example: “I just don't know so many women don't have stretch marks and cellulite. That is probably what I most closely look for and worry about on my own body.”

Occasionally, the exposure to the material would trigger comparisons not only between the viewer's body and those of the performers, but also between the viewer's partner's body and those seen in the sexually explicit material:

Like I mentioned in a previous answer, it reminded me of my previous relationships. It made me think of how my partners body. She's not my type, but I love her and sometimes I wish I had what I used to have. Although I used to have a lot of crazy and drama.
The next most present category was positive comparison following exposure to sexually explicit material (27.1%). Most often the comparison referred to the viewer's body, such as in the following example: "But, the dude in the video I watched was in worse shape than me, and yet he didn't seem to have any issues having a partner like that hot milf."

However, the positive comparison would occasionally refer to the viewer's partner's body: “It is nice to have a male [partner] who doesn't look disgusting and super unrealistic.”

A considerable percentage of the idea units present in response to this question (16.3%) suggested no perceived effect of exposure to sexually explicit content on one's body image. Conversely, 4.3% of the idea units acknowledge some form of influence of pornography on self body image. Also, 7.6% of the idea units indicated that the prevalent body images present in sexually explicit material are unrealistic, whereas 3.3 % considered some of these images to be realistic.

Similar to the previous research questions, some participants interpreted the sexual representations in the materials that they viewed as physically threatening and potentially harmful, such as in this example:

It [the sexually explicit material] made me feel very nervous about my body. I sometimes think that vaginal penetration can be painful by itself if there is not enough foreplay, so the idea of double penetration seemed highly unlikely to happen with my body. It also made me feel like my body is subject to so much objectifying by men, especially because of the lack of emotional connection
visible in this video, so I felt that my body needs to be protected from men out there who won't respect me.

A complete list of the categories present in response to the question regarding the effects of exposure on body image is presented in Table 57, along with a brief example for each.

Table 57

Effects on body image categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative comparison</td>
<td><em>Like I need to lose some pounds. I'm not very happy with the way I look.</em></td>
</tr>
<tr>
<td>Positive comparison</td>
<td><em>The chicks in this video ain't got nothin [sic] on me. :) I mean I know my partner finds me sexy and I know what about me he finds sexy and I have no problem flaunting it! Screw everything else lol</em></td>
</tr>
<tr>
<td>No perceived effect</td>
<td><em>This time it was not about my body but his, didn't make any judgments, [I] was merely web browsing and exploring.</em></td>
</tr>
<tr>
<td>Disgust/fear</td>
<td><em>I was no longer turned on. It made me feel very unsafe about my body, as if I have to protect my body from people with bad intentions. I kind of felt like crying, because I hate rape culture and this video caught me so off-guard when I was looking for other porn. I felt powerless by this video because it made me aware of my small size and</em></td>
</tr>
</tbody>
</table>
vulnerability especially around more than one man.

<table>
<thead>
<tr>
<th>Learning/Information</th>
<th>I guess I don't know a lot about my body and it's potential for being expanded.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived lack of realism</td>
<td>I also feel that my body is more like a normal body and I think that I can differentiate between my more realistic body and the bodies I see in porn.</td>
</tr>
<tr>
<td>Perceived realism</td>
<td>The people on the video were of average weight, height, etc.</td>
</tr>
<tr>
<td>Pornography perceived influence</td>
<td>I do shave my genitals and back area, which is probably a reflection of porno's influence, but it also seems less messy. Oral sex is a lot more enjoyable when both partners have at least trimmed up. I feel like porn is just one factor in the many choices I make in my everyday life.</td>
</tr>
<tr>
<td>Entertainment</td>
<td>I like living in the fantasy of the video, but it doesn't really seem to effect [sic] my own understanding of myself.</td>
</tr>
</tbody>
</table>

Research question 13 asked how exposure to sexually explicit material made the participants feel about their own sexual skill. The process of axial coding identified 87 idea units grouped into 11 distinct categories in response to this question, reported in Table 58.
Table 58

*Number and percentage of idea units in effects on perception of sex skills categories*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive comparison</td>
<td>23</td>
<td>26.4%</td>
</tr>
<tr>
<td>Negative comparison</td>
<td>12</td>
<td>13.8%</td>
</tr>
<tr>
<td>Ambivalent/neutral comparison</td>
<td>18</td>
<td>20.6%</td>
</tr>
<tr>
<td>No perceived effect</td>
<td>14</td>
<td>16.1%</td>
</tr>
<tr>
<td>Disgust/shock/fear</td>
<td>5</td>
<td>5.7%</td>
</tr>
<tr>
<td>Physical discomfort</td>
<td>2</td>
<td>2.3%</td>
</tr>
<tr>
<td>Perceived lack of realism</td>
<td>7</td>
<td>8.04%</td>
</tr>
<tr>
<td>Perceived realism</td>
<td>1</td>
<td>1.14%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>1</td>
<td>1.14%</td>
</tr>
<tr>
<td>Education/reflection on own sex life</td>
<td>3</td>
<td>3.44%</td>
</tr>
<tr>
<td>Release (sexual)</td>
<td>1</td>
<td>1.14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>87</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
The most prevalent category was positive comparison (26.4%), that is, after viewing the material participants thought their own sexual skill compared positively to the sexually explicit material. Often, participants contextualized the sex scenes viewed and highlighted the idea that the sexual skill favored in sexually explicit material does not equate sexual mastery:

I didn't think the male performers I watched displayed any form of sexual mastery. They got their dicks hard and used that to torment women (who were very much enjoying that degradation).

Some diary entries seemed to be differentiating between “porn skills” and “sexual, as illustrated by the following example:

I think that it does not reflect on me because I have a different skill set where I focus on licking and suckling and not as much on pounding a pussy with a giant cock. For that reason, I focus on the skills I can do instead of the porn skills of deep dickin [sic] a tight white pussy.

However, in 13.8% of cases participants seemed to perceive their own sexual skills as inferior to those viewed in the explicit material. Within this category there seemed to be consistent concern among participants with regard to how exposure to pornography, and specifically to certain sexual practices, might affect their romantic relationships:

I don't know if I could ever try anal beads, so I was afraid that my boyfriend was going to ask this question, but he didn't. If he had, I think I would have felt like he was questioning my sexual skill potential.
The potential danger posed to romantic relationships by the adoption of sexual practices and behaviors present in sexually explicit material is discussed at some length, as seen in the following example:

However, it can be dangerous. In the past I've done some rather kinky things and that might explain, in part, the dissolution of that relationship. Of course, it was all consensual and it was initiated by both parties, but I felt some sort of guilt and maybe even disgust for myself and my partner. That's very uncomfortable.

In 20.6% of cases, however, the effect of exposure to pornography had a less clear effect than in the categories described before, the idea units suggesting neutral or ambivalent comparisons between the participants' sexual skills and those viewed in the explicit material. Also, 16.1% of the idea units indicated no perceived effect or comparison made by the participants between their sexual skills and those shown in the sexually explicit material.

The analysis also revealed in the case of this question the presence of a category that occurred in the cases of most other questions previously discussed, the category of shock/disgust/fear (5.7%). The category was retained here because its prevalence throughout the analysis, although it does not specifically address the question of how exposure to pornography influences one's perception of one's own sexual skills. The sense of shock is apparent in entries like the following one:

I really didn't think about sexual skill watching this video. I was just so disgusted and shocked that there is a whole website devoted to sexually punishing women. […] I am afraid of the market that watches and enjoys these videos.
Exposure to pornography, however, was sometimes seen by participants in this study not only in terms of mere comparison, but also as a source of information, education, or even contextualization of their sexual lives (3.44%):

Like any skill that one would learn through a video, watching such sexually explicit content does give me ideas that I might want to implement at some point in life with my partner. But there are certain things that I feel weird about being a woman and I think it has something to do with my dominating nature in bed.

Diary entries also discussed how realistic sexual acts, behaviors, and practices seen in the explicit material were. Two categories emerged in the process of axial coding, perceived lack of realism (8.04%) and perceived realism (1.14%). Other categories with low frequency were entertainment (1.14%), sexual release (1.14%), and discomfort (2.3%). A list of all categories and a brief example for each are presented in Table 59.

Table 59

Perception of sex skills categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive comparison</td>
<td><em>It made me feel good that I could please my partner in real life in a similar way that these actors were being please [sic] on the screen.</em></td>
</tr>
<tr>
<td>Negative comparison</td>
<td><em>I wish I had the same confidence like that guy. He seemed normal, they weren't doing any crazy stuff, he did not humiliate</em></td>
</tr>
</tbody>
</table>
her or anything like that. So, like I said above, the scene seemed quite realistic, at least in terms of the sexual stuff that was going on. But I'm not sure if I could have that matter-of-fact attitude towards sex, at least not during the first, or first few times when I'd have sex with a new partner [...] I almost always have bumpy starts with new sex partners.

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambivalent/neutral comparison</td>
<td>This video did not challenge how I feel about my sexual skill. Like I said, the actors didn't do anything I wasn't unfamiliar with or capable of doing.</td>
</tr>
<tr>
<td>No change</td>
<td>No change. I am confident in my skills, but again, I could always improve upon them.</td>
</tr>
<tr>
<td>No perceived effect</td>
<td>Didn't ponder too much about skill because at this point of watching the video and my reflections upon it were rather of the somber type. I could hardly think about skill at this point.</td>
</tr>
<tr>
<td>Disgust/shock/fear</td>
<td>So blowjobs are not visually appealing to watch, whereas if I was really into my guy, I would not mind doing it voluntarily. But the fact that in the video some girls are asked to do it makes me a little angry.</td>
</tr>
<tr>
<td>Physical discomfort</td>
<td>The people in the video seemed to be physically in shape to endure uncomfortable-looking positions for long periods of time.</td>
</tr>
<tr>
<td>Perceived lack of realism</td>
<td>I have no regrets, because the videos are extremely unrealistic and I know either my partner or myself might not be very</td>
</tr>
</tbody>
</table>
enthusiastic to try what the animated characters do.

Perceived realism  | Well, I'm not sure how "realistic" that is. Other than that, it was rather normal sex, nothing extreme or kinky.

Entertainment     | Like I said, it isn't that the people in the video displayed some kind of awesome skill. It just felt like they were having fun.

Education/reflection on own sex life | [...] but for something like a threesome (which I have not done) it has allowed me to think about the practicality of it...the who goes where, what seems to seem fun, etc.

Release (sexual)  | I was just looking for a way to relax.

---

Themes of engagement with sexually explicit material

The final stage of grounded theory approach, selective coding, was used to identify the conceptual themes that were present in the dataset, in an effort to understand in broader terms how individuals use, make sense of, and engage with sexually explicit material. At a higher level of abstraction, the overarching theme that seems to permeate the participants' diary entries is the ambivalent or dialectical interpretation given by consumers to messages present in the sexually explicit material. This omnipresent theme was noted by previous scholarship on pornography (Atwood, 2005; Cottle et al., Hardy, 1998; Shaw, 1999). Along with this all-encompassing
theme, five other themes that emerged in the analysis can be grouped into two separate
categories: themes pertaining to the interpretation of the sexually explicit content per se, and
themes pertaining to how participants interpreted the exposure to sexually explicit material in
light of their own lives and personal experiences.

Themes pertaining to sexually explicit content

Theme 1: Ambivalence towards pornography. In line with previous research, the analysis
revealed a vast array of attitudes toward pornography, ranging from very positive to very
negative attitudes, including explicit and implicit ambivalence. In the present study, along with
diary entries that explicitly expressed the opinion that pornography is harmless and even has
positive effects, or, conversely, that pornography is harmful and can have negative effects, many
other entries expressed more nuanced attitudes toward sexually explicit material. The
ambivalence towards pornography was expressed in the diary entries in various manners, among
which the most prominent was the acknowledgment that some images and/or messages presented
in the explicit content are problematic, even disturbing, and yet attractive and appealing. The
ambivalence toward such prevalent imagery in pornography is illustrated by the following two
examples:

Example 1:

Lately I have been attracted to watching animated porn, for some strange reason, I
love the fact that almost all of what they show is fabricated. Yet they are a turn
on, sometimes even makes you laugh. There is a certain amount of torture
element in them as well, especially the Hentai ones.
Example 2:

I didn't think the male performers I watched displayed any form of sexual mastery. They got their dicks hard and used that to torment women (who were very much enjoying that degradation). I don't need that. But why do I watch things like those?

These findings confirm previous research. For example, Cottle et al. (1989) in a review of national surveys found the attitudes towards pornography to be ambivalent and contradictory. Other studies, however, found pornography audiences to be more polarized. For example, Lottes et al. (1993) found the attitudes towards sexually explicit material to be more polarized, with participants displaying either strongly negative or strongly positive views of SEM.

Theme 2: Realism vs. lack of realism. In line with previous research, the selective coding revealed the prominent dialectic theme of realistic/unrealistic representations of sexuality in sexually explicit material. These characteristics were applied to both sexual acts and practices, as well as to body images. The perception of sexually-charged images as either realistic or lacking in realism seemed to play an important mediating role in the process of assigning meaning to the material. Some entries showed appreciation for the artificiality, fantasy-like quality of the material, and the overall lack of realism of some of the sexually explicit content. Such entries indicated that the material was sought for entertainment purposed and, in the process, acknowledged and praised the lack of realism of such material. For example, one diary entry described the sexually explicit material just watched as “very unrealistic but funny”. However, other entries indicated a preference for sexually explicit material with a more pronounced realist dimension:
They [the videos] were realistic and that's usually my taste for such sexually explicit materials. Fake and exaggerated pornography is not of any interest to me.

Some entries, however, displayed a more ambivalent and contradictory attitude towards the lack of realism exuded by (some) sexual content:

Not realistic at all. I looked at some pictures showing a young blond woman gagging on a dude's big dick. Then he fucked her brutally and subjected her to some pretty humiliating things. In the end, he put a toilet seat around her head. She seemed to be enjoying herself immensely. Of course it's bullshit, but it's also hot, in a strange way.

While other studies investigated the perceived realism, or lack of, associated with sexually explicit material (Loftus, 2002; Peter & Valkenburg, 2006), audiences' preference for or ambiguity towards high vs. low realism in pornography seems to be an area in need of further exploration.

**Theme 3: Educative vs. repulsive.** The selective coding process revealed that the participants were also divided with regard to pornography as a source of information and sexual education. Consistent with previous research (Shaw, 1999; Ciclitira, 2002; Palac, 1998), some participants in this study indicated that exposure to sexually explicit material can function both as a learning experience and a source of empowerment that can enrich and even liberate their lives. However, also similar to previous scholarship (Cowan et al., 1989) some participants in the study asserted that sexually explicit content can be a source of fear, shame, disgust and even oppression. Some diary entries expressed a strong dislike for the way in which porn performers, especially - but not exclusively - women, were portrayed in sexually explicit media. Such entries emphasized the
idea that the violence and degradation to which women are subjected in pornography significantly contribute to the creation and perpetuation of rape culture and normalization of violence, particularly towards women:

In it [video] this girl was being held down by one guy, while another guy was touching her and she was protesting but then said she was coming. I feel that these acts were so violent towards women, and really create fear in me. I think these sexual acts happen in terms of rape and sexual assault, not in ways that women feel turned on by them like the video depicted.

Themes pertaining to use and effects of sexually explicit material

**Theme 4: Beneficial vs. detrimental to relationships.** Although not asked directly to do so in the diary entries, participants consistently reflected on the possible impact of exposure to pornography on their present or past relationships. As with the themes discussed above, ambivalence dominated this theme too. Thus, some diary entries asserted that exposure to sexually explicit material broadened the sexual landscape of their romantic relationship. Viewing pornography with a romantic partner was sometimes described as liberating and a source of inspiration for adopting new sexual practices, including experimenting sex with multiple partners:

The idea that my partner could find something in a porno that we'd both enjoy makes me love him that much more. He and I always say we both know this is just the beginning of our sex life. Things like this make me know how much more is out there and how he and I might be able to enjoy not just each other but have the possibility of adding other people in some day.
While acknowledging its potentially detrimental effects, consumption of pornography was also described as beneficial to monogamous relationships by providing a strategy of controlling temptation to have sex with other people outside the dyadic relationship:

I find it arousing to think about from time to time, but I think it can be really destructive if not thought out. I tend to be a serial monogamous type person and I used to feel like that was silly because having sex with new people is fun. However, now I am pretty ok with it and am happy to have porn that satisfies that other need.

Concomitantly, viewing pornography with or without a partner occasionally described as potentially detrimental for the relationship, or used it as an explanation for past failed relationships. Specifically, some participants expressed fear that their partners would compare them unfavorably to sex performances present in sexually explicit material, or that the partners would ask them to adopt sex practices with which they would not be comfortable. Also, one participant attributed the deterioration and eventually the failure of a previous romantic relationship to the adoption of risky or humiliating sexual practices directly connected to viewing pornography:

In the past I did, on a few occasions, some crazy and disgusting things. I mean, nothing too extreme or anything like that, but I'm glad that that relationship is over. It's good to experiment with sex and to push conventions, but for me at least it's hard to be in a relationship with someone with whom you played water sports.

**Theme 5: Beneficial vs. detrimental to individuals.** In addition to discussing the effects of viewing sexually explicit content on their dyadic relationships, participants in the study
constantly commented on and evaluated the effects of exposure to pornography on themselves as individuals, not as part of romantic relationships. As was the case with the previous themes, this theme too is dominated by ambiguity towards the perceived effects of pornography. Along with cases in which participants compared themselves either favorably or unfavorably to sexually explicit material, there were many cases in which diary entries displayed a more nuanced or ambivalent perception of the potential effects of pornography. It is important to note that very often participants refuted the idea that such exposure had any effect on them, participants noting: “my sex life and porn are separate matters.”, or “No change in my own sex life. I still feel fine about my overall sexual prowess.”

In addition, some diary entries seem to imply the importance of agency in selecting various types of pornography and actively engaging in interpreting/negotiating the meaning of the sexual content for the consumers. Thus, in certain instances it became apparent that even if initial exposure to the material could have a negative effect on the consumer (that is, the participant compared himself/herself unfavorably to the models in the sexually explicit material), the final outcome of the engagement with the material could be positive through active negotiation: “Many [photos and videos] were inspiring to work out and be fit like the people in the photos.”, or “The women [in the explicit material] are physically attractive, makes me want to do the same. It makes me want to workout [sic] & look good just as they do.”

Even in some cases in which participants indicated that they had compared themselves unfavorably to the sexually explicit material, the meaning of the material was not accepted indiscriminately, but negotiated humorously:
I feel fine about my sex life because I am not having any sex. I think the negative aspect is the fact that the majority of porn actors are better looking than me and make me feel fat as shit, which I already am. I really enjoy watching people have sex who are more attractive than me. They seem to enjoy having sex with more passion because of the flexibility of their bodies and their commitment [sic] to sucking and fucking.

This finding is in line with previous research (Hardy, 1998; Hardy, 2004) and refutes older scholarship on pornography, which seemed to favor a “hypodermic needle” approach to the consumption of sexually explicit material by an indiscriminating audience.
CHAPTER V: DISCUSSION AND CONCLUSION

Purpose and Conceptual Framework of the Study

The broad research objective of this study was to investigate the associations between, and ultimately the influence of, consumption of sexually explicit media content on the adoption of risk behaviors. Of primary importance was the investigation of the moderating role played by the psychological construct Sexual Self-Concept (SSC), defined in literature as an individual's perception of his or her qualities in the sexual domain, in the process of adopting risk behaviors following the exposure. In addition, the roles of gender and age in the adoption of risk behaviors were investigated. Social cognitive theory suggests that individuals acquire knowledge through the observation of others' symbolic communication acts and behaviors within the context of social interactions, experiences, and media influences (Bandura, 1982). The prevalence of exposure to sexually explicit content in the lives of adolescents and adults alike has been well documented. Concomitantly, recent studies, such as Bridges and Morokoff (2010) highlighted the prevalence of risk and abusive behaviors present in sexual media, especially in sexually explicit material or pornography. Therefore, the present study sought to investigate whether consumption of sexually explicit media content indeed facilitates the adoption of risk behaviors, and, if so, to uncover the psychological mechanisms that moderate these processes. Acknowledging mounting criticism according to which quantitative research could only provide a limited understanding of the interplay between consumption of sexually explicit media, attitudes toward sexuality, and sexual behaviors, a qualitative data set was also collected and analyzed. In order to provide a more thorough understanding of the relationships between viewing sexually explicit material and the adoption of risk behaviors, the following specific objectives were proposed.
Restatement of study’s objectives

**Objective I:** The first objective of this study was to provide more current baseline data regarding consumption of sexually explicit material. While such data have been reported by previous research, recent scholarship (Paasonen, 2010) suggests that the advent of new technologies might have influenced not only the patterns of consumption of sexually explicit material, but could also have helped the emergence of new „sub-genres” of pornography, previously ignored by researchers. These new sub-genres could cater to and be sought after by new audiences that traditionally were not considered primary consumers of pornographic material. Of primary interest here was to establish how various demographic characteristics of the sample, such as biological sex, sexual orientation, sexually active status, level of enrollment in college, or class standing influenced patterns of consumption of sexually explicit material.

**Objective II:** The second objective of the study was to investigate the relationships between exposure to sexually explicit material and Sexual Self-Concept (SSC). While the relationships between SSC and sexual images present on mainstream television have been studied before (Aubrey, 2007), there is very limited research in the context of sexually explicit media, or pornography. Because SSC is a composite concept, each of its four sub-dimensions – sexual self-esteem, sexual self-efficacy, beliefs about the sexual self, and body image during physical intimacy were initially investigated separately in relation with sexually explicit material. Then, the correlational relationship of SSC as a single, composite measure with consumption of sexually explicit material was also investigated.

**Objective III:** The third objective of this study was to investigate the relationships between SSC and two separate sets of risk behaviors – sex-related risk behaviors and health-related risk
behaviors. Because SSC is a composite concept, each of its four sub-dimensions was treated separately in relation to SSC. However, as SSC was also used as a single measure in subsequent analyses, the relationships between SSC as a single measure and the two sets of risk behaviors were investigated.

**Objective IV:** The fourth objective of the study was to take a step further from merely investigating correlations between exposure to sexually explicit material, SSC, and risk behaviors. Specifically, it was inquired whether exposure to sexually explicit material and SSC predict the adoption of risk behaviors. These relationships were investigated in two ways. First, linear regressions were run in order to test a series of hypotheses regarding the role of exposure to pornography and SSC as predictors of risk behaviors. Second, a path model was proposed in order to investigate the possible “guarded causal” role of consumption of sexually explicit material and SSC as predictors of the adoption of sex- and health-related risk behaviors. The path model proposed in the study, also identified as a “guarded causal model” (DeMaris, 2006), permitted the testing of causal relationships between variables, even though causal relationships are traditionally associated with experimental and not with survey data, as is the case of the present study. The proposed model allowed for the testing of the effects of viewing sexually explicit material on the adoption of sex- and health-related risk behaviors. In addition, the model accounted for the mediating effects of SSC on the effects of consumption of sexually explicit content on the adoption of risk behaviors.

**Objective V:** The fifth objective of this study was to investigate the role of age and biological sex on the adoption of risk behaviors in the context of consumption of sexually explicit material. The proposed path model facilitated the investigation of the effects of age on the frequency of exposure to sexually explicit material, on the SSC scores, and on sex-related risk behaviors. The
model also accounted for effects of biological sex on the frequency of exposure to sexually explicit material, SSC scores, and risk behaviors.

**Objective VI:** The sixth objective of the study was to address reservations expressed by sexuality researchers with respect to the adequacy of using quantitative research methods applied to the field of human sexuality, especially in a media and communication context. Specifically, researchers such as Okami (2002) and Atwood (2005) asserted that quantitative methods only paint a truncated picture of how individuals seek, use, and interpret sexually explicit material. In order to address these limitations of quantitative research, a second data collection method, i.e., diary, was employed in order to collect qualitative data regarding people's engagement with sexually explicit media. Thus, participants were provided with a venue through which they expressed their thoughts about personal engagement with such media content, especially their immediate reactions to it. Perhaps more importantly, participants were encouraged to reflect on and write about the perceived influence of viewing pornography on their sexual lives, body image, sexual skills, and the perceived realism of sexual acts presented in the sexually explicit material. In broad terms, the sixth objective of this study was to address the limitations inherent in employing quantitative data and to provide a more in-depth, fuller understanding of how individuals use and interpret sexually explicit media.

**Restatement of Research Questions and Hypotheses**

In order to achieve the first five objectives, the following research questions and hypotheses were posited:

*RQ1:* How often are respondents exposed to sexually explicit material?

*RQ2a:* What is the biological sex distribution of respondents who are exposed to sexually explicit material?
explicit material?

**RQ2b:** Are there gender differences among respondents in preference expressed for different types of sexually explicit material?

**RQ2c:** Are there differences in exposure to SEM bases on sexual orientation of the respondents?

**RQ2d:** Does sexually active/not active status of respondents influence frequency of exposure to sexually explicit material?

**RQ2e:** What is the relationship between the level of enrollment of respondents (undergraduate and graduate) at BGSU and frequency of exposure to sexually explicit material?

**RQ3a:** What is the relationship between frequency of exposure to sexually explicit material and sexual self-esteem?

**RQ3b:** What is the relationship between frequency of exposure to sexually explicit material and sexual self-efficacy?

**RQ3c:** What is the relationship between frequency of exposure to sexually explicit material and beliefs about the sexual self?

**RQ3d:** What is the relationship between exposure to SEM and body image during physical intimacy (BISC)?

**RQ4a:** What is the relationship between sexual self-esteem and the adoption of sex-related risk behaviors?
RQ4b: What is the relationship between sexual self-efficacy and the adoption of sex-related risk behaviors?

RQ4c: What is the relationship between the beliefs about sexual self and the adoption of sex-related risk behaviors?

RQ4d: What is the relationship between body image self-consciousness during physical intimacy (BISC) and the adoption of sex-related risk behaviors?

RQ5a: What is the relationship between sexual self-esteem and the adoption of health-related risk behaviors?

RQ5b: What is the relationship between sexual self-efficacy and the adoption of health-related risk behaviors?

RQ5c: What is the relationship between the beliefs about sexual self and the adoption of health-related risk behaviors?

RQ5d: What is the relationship between body image self-consciousness during physical intimacy and the adoption of health-related risk behaviors?

H1: Increased frequency of exposure to sexually explicit material will predict lower sexual self-concept (SSC) scores.

H2a: Higher SSC scores will predict lower health-related risk behavior scores.

H2b: Higher SSC scores will predict lower scores on sex-related risk behaviors.
\(H3a\): Higher frequency of exposure to sexually explicit material will predict higher health-related risk behavior scores.

\(H3b\): Higher scores on exposure to sexually explicit material will predict higher sex-related risk behavior scores.

\(RQ6\): What is the role of biological sex in the process of adopting sex- and health-related risk behaviors?

\(RQ7\): What is the role of age in the process of adopting sex- and health-related risk behaviors?

In order to achieve the sixth objective of this study, the following research questions were posited:

\(RQ8\): What do participants normally use sexually explicit material for?

\(RQ9\): What were participants' motivations to view pornography before the latest diary entry?

\(RQ10\): How realistic did the participants think the sexual representations were in the material they last viewed?

\(RQ11\): How did exposure to sexually explicit material make the participants feel about their own sex lives?

\(RQ12\): How did exposure to sexually explicit material make the participants feel about their own bodies?

\(RQ13\): How did exposure to sexually explicit material make the participants feel about their own sexual skills?
The following section provides a detailed discussion of each objective in relation to its corresponding research questions and hypotheses. Implications of the findings and suggestions for future directions of research are discussed.

DISCUSSION OF RESULTS

**Objective I: Baseline data of current consumption of sexually explicit media content**

In response to research question 1, this study found that 73.2% \( (n = 447) \) of participants, regardless of biological sex, viewed pornography at least occasionally. This figure is somewhat higher compared to data reported by similar studies. For example, in two survey studies, Bridges and Morokoff (2010) and Morgan (2011) reported that 63.5% and 67.4% of the participants respectively had viewed sexually explicit media content. Also, Braun-Courville & Rojas (2009) found that 55.4% of the adolescents participating in their study reported that they had been exposed to sexually explicit websites. The specific demographic characteristics of the sample used in this study, namely college students, might explain the higher percentage of individuals who viewed sexually explicit media content. For example, one study (O'Reilly, Knox, & Zusman, 2007) found that over 90% of the college students participating in their study viewed pornography. Also, the higher percentage of individuals who viewed sexually explicit material may be attributed to the inclusion of heterosexual, homosexual, bisexual, and other sexual orientation in the sample. As it will be discussed below, non-heterosexual participants in the study reported higher frequency of exposure to sexually explicit content compared to heterosexual participants. However, studies that reported lower percentages of individuals who...
viewed pornography (Bridges and Morokoff, 2010; Morgan, 2011) included only heterosexual participants in their samples.

In terms of frequency of exposure, close to 60% of participants indicated that they either never viewed pornography or that they did so rarely ($M = 1.63, SD = 1.63$). At the other end of the spectrum, only 3.3% and 2.3% of the participants reported that they watched pornography daily or multiple times a day. These findings closely mirror data reported by recent research (May et al., 2011; Morgan, 2011).

In response to research question 2a, the present study found that 37.2% ($n = 146$) of the female participants never watched sexually explicit material, whereas 62.8% ($n = 246$) reported that they watched pornography at least occasionally. Among male participants, 8.2% ($n = 18$) never watched pornography, whereas 91.8% ($n = 201$) watched pornography at least occasionally. The difference in exposure to pornography between male and female participants was statistically significant. These results corroborate with previous research to the extent that most previous research found that men were far more likely than women to watch pornography, and also to watch pornography more frequently than women do (Buzzell, 2005; Cameron et al., 2005; Peter & Valkenburg, 2006; Lo & Wei, 2005; May et al., 2011; Morgan, 2011). However, the present study found a higher percentage of women who reported watching sexually explicit media content than previous research. For example, a survey of Dutch adolescents found that 40% of girls who participated in the study sought websites with sexual content (Peter & Valkenburg, 2006). Similarly, a survey of Taiwanese adolescents found that only 20% of girls had accessed sexually explicit websites (Lo & Wei, 2005). More recently, May et al. (2011) in a survey of undergraduate college students in the United States reported an almost identical
percentage of male participants who viewed pornography as this study (92.2%), but a considerably lower percentage of females who watched sexually explicit material (34%).

The differences between the present study's and previous research findings could be in part explained by the inclusion in this study of types of pornography other than Internet pornography, whereas the previously cited studies focused mostly on participants' access and use of sexually explicit websites. Similar to the present study, Morgan (2011) included in her study, along with internet sex websites, types of pornography such as magazines and books with sexual content, telephone hotlines, purchased and pay-per-view videos, and other outlets. It is likely that the more inclusive operational definition of sexually explicit material contributed to Morgan's study finding a higher percentage of women accessing and using pornography than the previous research. Still, the percentage of women who ever viewed pornography reported by Morgan (2011), namely 50.0%, was lower than the one found by the present study. Also, the overall increase in percentage of participants who reported seeking sexually explicit material on the internet over the years may be attributed to the increased availability of personal computers and internet connections (Buzzell, 2005). Hald (2006) found that the most common location for accessing websites with sexual content was in the home. However, it is possible that some participants in studies that enrolled samples of college students did not have permanent access to personal computers and high speed internet connections at home, but gained access to computers and internet connections once they became college students, internet access being quasi-universal on college campuses. Thus, it is possible that college students' frequency of exposure to sexually explicit material is influenced by unrestricted access to high speed internet connections and personal computers. However, this hypothesis was not tested in the present study.
In response to research question 2b, this study found no significant difference between gender in preference for print, videogames, and sexting as sexual content. However, men preferred purchased online/offline videos, hotlines, webcams, and chat rooms, free online videos, free online photos, and “other” types of sexually explicit media more so than women did, and the differences were statistically significant. These findings are very similar to those reported by Morgan (2011) and Peter and Valkenburg (2007). In addition to the previous research, the present study included the category of “sexting”, defined as “the digital transmission of sexually suggestive or sexually explicit photographs or videos, intended for personal use, through a medium that affords a reasonable expectation of privacy, such as a text message or personal email” (Lampe, 2013, p. 704). Close to 20% of both men and women in the present study indicated sexting as one of the preferred category of sexually explicit content, making it the second most preferred category among female participants after free online videos and the third most favored type among male participants, after free online videos and free online photos.

Future research needs to investigate not only the prevalence of sexting among adolescents and young adults, but also the content of sexting as sexually explicit media, along with its potential effects.

In response to research question 2c, descriptive statistics showed that participants who identified themselves as homosexual had the highest mean of consumption to sexually explicit material, followed by participants who declared their sexual orientation as “other”. Bisexual and heterosexual participants had much lower means of consumption, with heterosexuals having the lowest mean among the four groups included in the study. This descriptive finding is in line with some previous research. For example, Duggan and McCreary (2004) also found that for each of five categories of pornography (viewed or purchased pornographic magazines, viewed or
purchased pornographic videos, and viewed internet pornography), homosexual men reported significantly more consumption than heterosexual men. However, because of sampling issues, the present study could not establish significant differences between the four sexual orientation groups (i.e., homosexual, bisexual, heterosexual, and other). Specifically, the numerical imbalance in representation of each group constituted a violation of the assumptions of ANOVA, which could have established whether significant differences in mean consumption of pornography existed between these four groups. The four categories above were recoded into two groups, heterosexual and non-heterosexual. The mean consumption of pornography of the non-heterosexual group \((M = 2.26, SD = 1.93)\) was higher than that of the heterosexual group \((M = 1.55, SD = 1.57)\), and an independent sample t-test showed that the difference was significant. Consistent with previous research (Duggan & McCreary, 2004), this result might suggest that consumption of sexually explicit material could be more accepted in the non-heterosexual community, or that is more acceptable to admit consumption of pornography among non-heterosexual individuals. Another explanation for the higher exposure to pornography among non-heterosexual individuals could be that many individuals, especially adolescents and young adults, turn to sexually explicit material as a source of sex information (Li & Michael, 1996; Trostle, 1993; Rogala & Tyden, 2003; May et al., 2011); yet, with heterosexuality still seen as normative and with limited information resources for non-heterosexuals via the traditional means of sexual socialization (i.e., sex education classes, parents, or even mainstream media content), it is possible that non-heterosexuals turn to pornography in larger numbers than heterosexuals do in order to learn about sexuality. More focused research about the needs and uses by non-heterosexual individuals of sexually explicit media content is therefore necessary.
In response to research question 2d, analysis revealed that sexually active participants in the study were more likely to view sexually explicit material than sexually non-active participants, and the difference was statistically significant. This finding corroborates previous research, such as Pardun, L'Engle, and Brown (2005), who in a study of adolescents' use of sexual media reported that the more media an individual saw, the more likely he or she were to be sexually active and to anticipate sexual activity. Still, it is unclear whether sexually active individuals seek and use more sexual media than sexually non-active individuals, or whether exposure to sexually explicit content determine users to become sexually active. As previous research demonstrates, there is no universal use of sexually explicit material (Peter & Valkenburg, 2006). Therefore, it is possible that sexually active and sexually non-active individuals seek and use pornography for different reasons. For example, sexually non-active individuals may consume pornography as a substitute for sex partners, whereas sexually active individuals may seek sexual content as a source of information about sexuality. This perspective corroborates with previous research indicating that sexually active individuals who also are heavy users of sexually explicit media perceive positive effects of the consumption on their sex lives, including increased sexual knowledge and more positive attitudes towards sex (Hald & Malamuth, 2008).

Research question 2e investigated the relationship between the level of enrollment (undergraduate and graduate) and exposure to sexually explicit material. The analysis showed that graduate students had a higher mean of consumption of sexual media than undergraduate students did, and the difference was statistically significant. In addition, the analysis found that, among undergraduate students, seniors had a higher mean of consumption of sexual media content than all other class standings (i.e., juniors, sophomores, and freshmen), and the
difference was statistically significant. While it is unclear what caused these results, it can be cautiously inferred that age explains at least in part the results. The mean age of undergraduate students ($M = 19.8$) was considerably lower than the mean age of graduate students ($M = 27.9$). Among undergraduate students, the mean age of seniors ($M = 21.9$) was higher than the mean age of juniors ($M = 20.7$), sophomores ($M = 19.6$), and freshmen ($M = 18.6$). The effect on age on frequency of exposure to sexually explicit material needs to be further investigated, as previous findings tend to be contradictory. For example, Peter and Valkenburg (2008) did not find support for the hypothesis that older adolescents were exposed more frequently to sexually explicit online material compared to younger adolescents. Similarly, Bridges and Morokoff (2010), using an indirect measure of age (that is, number of children in a couple indicating older age) found no significant correlation between age and sexual media frequency of use. However, some of these findings are inconclusive and perhaps even inexact. For example, Buzzell (2002) in a study of Internet pornography use found that as age of participants increased the proportion of persons who had reported use of pornography declined. However, in the case of Buzzell's study, there may be other factors accounting for the decrease of use of sexually explicit material as age increases. The study was conducted more than a decade ago, when internet access was not as widespread as it is today. It is feasible that a decade ago internet access and digital technology literacy decreased with age. Therefore, it is possible that lack of technological skills is a more adequate explanation for the decrease in internet pornography consumption as age increases. Other studies, however, found that older adolescents expose themselves more frequently to sexually explicit online material than younger adolescents do (Cameron et al., 2005). Also, as it will be discussed later, the present study found that age has a direct effect on frequency of exposure to sexually explicit material (i.e., increase in age was associated with a slightly higher
frequency of exposure to pornography). As already discusses, it is possible that different groups, including different age groups, might seek and use sexually explicit material for different reasons.

**Objective II: Relationship between exposure to sexually explicit material and sexual self-concept (SSC)**

Corresponding to Objective II, research questions 3a through 3d investigated the correlational relationship between exposure to sexually explicit material and the four sub-dimensions of the sexual self-concept (SSC). The relationships between exposure to pornography and SSC were investigated, for each of the four sub-dimensions of the concept, as well as treating SSC as a single, composite measure. Although the effects of sexual media content have received substantial empirical attention, most of these research efforts focused on examining the relationships between media exposure and sexual permissiveness (Collins et al., 2004; Pardun, L'Engle, & Brown, 2005). These studies attempted to establish direct effects of media exposure on sexual permissiveness and other sexual behaviors. However, the present study sought to investigate whether media exposure, more precisely exposure to sexually explicit media, is related to people's sexual self-concept, defined as a psychological mechanism that could play an important mediating role between exposure to media content and the adoption of certain sexual behaviors and practices. To date, no other study has investigated the relationships between consumption of sexually explicit media content and SSC. However, Aubrey (2007) found that exposure to primetime television with sexual - but not sexually explicit - content predicted college women's SSC. Specifically, Aubrey found that exposure to soap operas, prime-time dramas, and amount of television viewed significantly predicted a deflation in college women's SSC.
The present study found that frequency of exposure to sexually explicit material was negatively correlated with SSC, that is, as the values of sexually explicit media exposure increased, the values of the SSC concept decreased. The relationship was significant. This finding is important not only because there is no prior research regarding the correlations between consumption of pornography and the SSC, but especially because of its practical implications. The SSC was defined operationally as consisting of four sub-dimensions: sexual self-esteem, sexual self-efficacy, beliefs about the sexual self, and body image self-consciousness during physical intimacy (BISC). As stated, the analysis found that frequency of exposure to sexually explicit material and SSC were inversely correlated. With the exception of sexual self-esteem, which was found to be positively correlated with the frequency of exposure to sexually explicit materials, all other components of the SSC were found to be negatively correlated with exposure to pornography. In other words, it can be said that an individual who is a heavy consumer of sexually explicit material is more likely than a light viewer of pornography to have lower sexual self-efficacy, beliefs about the sexual self, or BISC scores. Also, a heavy viewer is more likely than a light viewer or a person who never watches pornography to have lower (deflated) overall SSC scores.

The finding of this study has practical implications for health campaigns targeting risk behaviors, particularly sex risk behaviors. For example, since one dimension of SSC is STD self-efficacy, health campaigns could target those behaviors that put individuals at risk for sexually transmitted disease in conjunction with exposure to sexually explicit material. At this stage, though, it was not attempted to establish causal relationships between frequency of exposure to sexually explicit material and SSC. Since only correlations were investigated at this stage of this study, it cannot be posited that increased exposure to pornography caused lowered SSC scores.
(for example, lower STD self-efficacy or lower sexual self-esteem). Because direction of influence is not accounted for in correlational analyses, it is possible that higher SSC scores results in lower frequency of consumption of pornography, or complete avoidance of it. As it will be discussed later, the present study attempted to move closer to establishing causal relationships between viewing pornography and SSC, as a more thorough understanding of how sexually explicit content influences people's perception of their sexual self could better inform campaigns designed to counter the potentially detrimental effects of sexually explicit media.

**Objective III: SSC and risk behaviors**

Corresponding to Objective III, research questions 4a through 4d investigated the relationships between SSC and sex-related risk behaviors. The three of the four components of SSC – sexual self-efficacy, beliefs about the sexual self, and BISC - were found to be inversely correlated with both types of sex risks investigated in this study, i.e., sex risk partners and sex risk practices. The relationships were significant. One component of the SSC, i.e., sexual self-esteem, was found to be positively correlated with the sex-related risk behaviors indices. In other words, higher overall SSC scores were correlated with lower sex risk scores. This finding partially corroborates previous research. For example, in a study regarding sexual attitudes among adolescents, Lou et al. (2010) found that SSC significantly predicts sexual risk cognition. Specifically, the study found that adolescents with higher sexual self-concept have higher sexual risk cognition. Salazar et al. (2004) found support for the hypothesis that higher SSC scores in adolescents were correlated with higher importance placed on safe sex and higher perception of the risks associated with unprotected sex. The relationships between SSC and risk behaviors, however, are far from being clarified, as studies investigating these relationships revealed inconclusive and even contradictory findings. In a study focusing on the influence of SSC on risk
behaviors, Houlihan et al. (2008) in a study of African American adolescents found that a positive SSC predicts earlier sexual onset; in turn, the early sexual onset significantly predicts engagement in sexual risk behaviors. While at this stage the present study only attempted to establish correlations between SSC and risk behaviors, its findings seem to contradict Houlihan et al. (2008) results. Specifically, the correlations found by the present study suggest that individuals with higher SSC scores are less likely to engage in risk behaviors. These differences could be attributed to two factors: first, Houlihan et al. study used a different, less complex operationalization of the self-concept; second, in contrast with the majority of the research examining associations between the self-concept and risk behaviors (including the present study), Houlihan et al. (2008) did not focus on self-concept as an antecedent to risk behaviors. Instead, Houlihan et al.'s study conceptualized the relation between self-concept and risk behaviors as reciprocal and dynamic, with the self stemming in part from observations and evaluations of one's own behaviors. The present study takes the opposed theoretical approach, SSC being conceptualized a precursor of risk behaviors, which is likely to have caused some of the differences in the findings of the two studies.

Future research should focus on the nature of the relationships between self-concept and risk behavior not only from the perspective of an important theoretical advancement, but also because of the obvious practical implications. Health campaigns targeting risk behaviors, particularly sex risk behaviors, could tailor their messages in order to boost SSC either as a single psychological construct, or various components of the SSC (i.e., sexual anxiety, sexual self-efficacy, or BISC). These types of health campaigns could be especially effective among adolescents and young adults, because these individuals are at a stage where they are more likely
than older individuals to experiment identity formation (Erikson, 1981) and experimentation with risk behaviors (Wills & Stoolmiller, 2002).

Also corresponding to Objective III, research questions 5a through 5d investigated the relationships between SSC and health-related risk behaviors. The analysis found that SSC as a single concept and health-related risk behaviors were inversely weakly correlated, and the correlation was not significant. The SSC sub-dimensions taken individually and health-related risk behaviors were also not significantly correlated.

To date, no study focused on the relations between SSC and health risk behaviors as defined in this study. As previously mentioned, the present study conceptualized as “health-related risk behaviors” a series of behaviors deemed risky by experts, and related to body image. These behaviors were artificial tanning, overexercising, use of diet pills, dietary/body building supplements, or laxatives in an attempt to control weight, and cosmetic surgery. The effects of exposure to media messages about the ideal body images have been well-documented. A substantial body of research has been devoted to the effects of exposure to idealized body images on women, but studies investigating similar effects on men have become more frequent in recent years. Yet, the multitude of studies that investigated the effects of exposure to idealized and unattainable body images for men and women in media have stopped short of including in the research the effects of exposure to body images as presented in sexually explicit media – a type of media that conspicuously features naked male and female bodies. To date, no content analysis of the body images and messages about body images promoted in sexually explicit media content has been published. Yet, anecdotal evidence seems to indicate that most pornographic actors and actresses adhere to the idealized body images present across the media spectrum. Reist (2008) contended that the sexualization, even pornification of the contemporary culture has significantly
contributed to a dramatic rise in cosmetic surgery procedures among adolescents and young women. Still, in the absence of a rigorous analysis of the messages about desirability and body ideals in pornography, the direct or indirect effects of exposure to such media on the likelihood to adopt health-related risk behaviors in an attempt to attain a certain body image are difficult to be investigated. The present study took an exploratory approach and attempted to investigate the correlations between exposure to sexually explicit material and an index of health risk behaviors related to body image. Also, the correlations between the SSC and the health-related risk behaviors index were analyzed. These variables however were found to be very weakly correlated and not statistically significant, suggesting that a more adequate measure of health risk behaviors related to body image may be needed. Such an index would be significantly improved if informed by a rigorous content analysis of body image in sexually explicit material.

**Objective IV: Pornography exposure and SSC as “predictors” and “causes” of the adoption of risk behaviors**

One major objective of the present study was to take a step further from investigating correlations between risk behaviors, consumption of sexually explicit material, and SSC. Specifically, the study attempted to determine whether exposure to pornography and the sexual self-concept predict and perhaps even cause the adoption of risk behaviors. In order to achieve this objective, two methodological approaches were taken. First, a series of linear regressions were run in order to test hypothesis 1 through hypothesis 3b. Hypothesis 1 proposed that increased frequency of exposure to sexually explicit material will predict lower sexual self-concept (SSC) scores. This hypothesis was supported. This was in line with previous research on the subject. For example, Baran (1976) found that
perceived reality of sexuality on television programming positively predicted dissatisfaction with one's own sex life among teens, regardless of biological sex. Also, Aubrey (2007) found that frequency of exposure to primetime television programming such as soap operas, prime-time dramas, and music videos with sexual (but not sexually explicit) content predicted a deflation in college women's sexual self-concept. The present study found a similar pattern between media exposure and SSC; however, the research study focused on sexually explicit media instead of primetime television, and found that frequency of pornography consumption predicted SSC scores regardless of the biological sex of the participants. An interesting direction of study would investigate whether the perceived reality of sexual acts and situations in pornography mediates the relationship between consumption of pornography and the SSC.

Hypothesis 2a proposed that individuals with higher SSC scores will predict lower health-related risk behavior scores. This hypothesis did not find empirical support. This finding does not corroborate previous related research. Duggan & McCreary (2004) found that consumption of media that promotes idealized and unrealistic body types such as muscle and fitness magazines was positively correlated with body dissatisfaction for gay and heterosexual men, and exposure to pornographic magazines was positively correlated with social physique anxiety for gay men. While no study to date investigated the relationship between SSC and body image-related health risk behaviors, theory and previous research suggest that a link might exist. The effects of media images on how both men and women perceive themselves and their bodies, along with the influence of these images on both individuals' self-esteem and their health-related habits such as eating, exercising, and body alteration techniques are well documented (Lin & Kulik, 2002; Pope et al., 2000). In an attempt to uncover potential links between exposure to pornography and health risk, it was hypothesized in the present study that SSC might mediate
this relationship. However, as already stated, this hypothesis did not find support. One reason for the lack of support of this hypothesis might rest with the lack of previous research focusing on body types promoted as attractive or desirable in contemporary sexually explicit media. Such research would have allowed for the construction of a more refined Health Risk Index in the context of this study. Also, it is possible, as previous research suggests, that the effects of exposure to pornography on self-body image could be stronger among gay men than heterosexual men. However, this hypothesis did not differentiate between effects on heterosexual vs. non-heterosexual participants, nor did it account for the possible moderating role of gender. Future research needs to focus on a systematic analysis of body types and messages about body desirability in the very popular medium of pornography. Also, research needs to approach the topic of the effects of exposure to pornography on body image and attitudes towards one's own body in a more comprehensive manner, in order to include heterosexual audiences in this type of research, along with categories that traditionally are not associated with exposure to pornography, such as women or couples in stable, monogamous relationships.

Hypothesis 2b, which proposed that individuals with higher SSC scores will predict lower scores on sex-related risk behaviors found support when tested for both types of sex risk behaviors included in this study, i.e., sex risk partners and sex risk practices. Although no prior study specifically tested whether SSC predicted the adoption of sex risks as defined in the present study, this finding seems to be consistent with and even to further what was already known about the relationship between SSC and risk. As already discussed, in a structural equation model study, Lou et al. (2010) found that SSC significantly predicted sex risk cognition. Similarly, Rostosky et al.’s (2008) results suggest that adolescents who have a positive self-concept are more likely to be able to translate their knowledge of sexual risk into safe sex
behaviors. However, no existing study has operationalized sex risks in the manner of this study, especially in terms of distinguishing between sex risk practices and sex risk partners. This finding could have practical implications in the context of campaigns that target sex-related risk behaviors. Specifically, rather than targeting undesirable and risky behaviors directly, campaigns could attempt to boost SSC or dimensions of SSC, such as sexual self-esteem, or sexual self-efficacy, in an effort to curb risk behaviors that are predicted by these dimensions of the sexual self-concept.

Hypothesis 3a proposed that higher frequency of exposure to sexually explicit material would predict higher health-related risk behavior scores. This hypothesis was not supported by data. In fact, the analysis suggested that higher frequency of exposure to sexually explicit material predicts lower Health Risk Index scores. This result seems counter-intuitive and contradicts somewhat related previous research that shows that exposure to idealized and unrealistic body image in media predicts dissatisfaction with one's own body. However, while previous research found attitudinal changes following exposure to idealized body images, no research was conducted on behavioral changes as a consequence of exposure to sexually explicit material. Previous body image scholarship has established, however, that exposure to media that favor thin-figured women may contribute to women's body dissatisfaction, which in turn has been implicated in eating disorders such as anorexia or bulimia (Garner et al., 1980; Stice et al., 1994). However, the present study did not focus on pathologic behaviors such as eating disorders, but on behaviors that, while potentially posing a risk to one's health, are not inherently pathologic. There could be a number of explanations for the lack of support for this hypothesis. First, it is possible that the effects of exposure to idealized media images are more visible in the case of extreme behaviors such as anorexia or bulimia nervosa than in the case of more
acceptable, yet risky, behaviors such as overexercising or cosmetic surgery. Also, it is possible that the effects of media exposure on behaviors are mediated by gender, which will be discussed next. It is also plausible that the index used to gauge body image-related risk behaviors in this study needs further refinement and a stronger theoretical foundation. Finally, as already mentioned, there is an acute need for a systematic analysis of body image in pornography, especially contemporary, digital pornography, which seems to be preferred by the majority of consumers, as finding of this and other studies have consistently shown.

Hypothesis 3b, which proposed that individuals with higher scores on exposure to sexually explicit material would predict higher sex-related risk behavior scores, was supported for both sex risk practices and sex risk partners. In other words, the analysis indicated that individuals who consume increased amounts of pornography are more likely to engage in sex practices deemed hazardous by health experts, such as anal sex, group sex, or violent and sadomasochist sexual acts, or to have greater numbers of sex partners, casual sex partners, or unprotected sex partners. This hardly surprising finding is consistent with previous research, such as Rogala & Tyden (2003), Peter & Valkenburg (2007), May et al. (2011), or Snyder (2011). The implications of this finding are broad in scope. Theoretical frameworks such as social cognitive theory and cultivation theory have long discussed the mechanisms through which behaviors experienced vicariously through media exposure become internalized and subsequently translate into behavioral acts. In addition, social cognitive theory posits that whether an individual will adopt a behavior that he or she experienced vicariously via media exposure depends largely on whether the act that they witnessed was punished or rewarded. As Bridges et al. (2010) found in a content analysis of popular pornographic videos, aggression, violence, and other types of risk behaviors are prevalent in this type of media. Specifically, of the
total number of scenes the authors analyzed, 88 percent contained physical aggression (primarily in the form of spanking, gagging, and slapping), and close to 50 percent contained verbal aggression, mostly name-calling. The study also found that perpetrators of aggression were mostly male pornographic stars, whereas targets of aggression were usually women. In the pornographic videos analyzed, women most often showed overt pleasure in response to aggression. Through increased exposure to media messages, consumers come to adhere to social norms, which are distorted representations of reality. In the context of this study, health campaigns that attempt to curb sex-related risk behaviors could design messages that demystify sexual acts and practices that are promoted as the norm in contemporary sexually explicit material. For example, health campaigns could try to design messages that convey the idea that practices such as unprotected sex, group sex, or violence in sexual relationships do not constitute the norm, but rather extreme and dangerous behaviors whose frequency in pornography is very unlikely to be mirrored in real life.

In addition to the series of linear regressions discussed above, a special case of structural equation modeling - a path model - was designed in order to paint a broader picture of the relationships between exposure to sexually explicit materials, SSC, and risk behaviors. While the model confirmed most of the findings of the regression analyses, it draws attention to the fact that the links between the variables in the model are not segmented and do not exist in a vacuum, but are interrelated. The most important benefit of the path model designed for this rests with uncovering of some of the mechanisms that facilitate the adoption of risk behaviors, specifically, the Sexual Self-Concept (SSC). The linear regression analysis confirmed hypothesis H3b, which predicted that individuals with higher exposure to sexually explicit materials would be more likely to adopt sex-related risk behaviors. The path model, however, is useful in not only
confirming this finding, but also in highlighting the mediating mechanisms that facilitate this relationship. Thus, the direct (unmediated) effect of exposure to pornography on Sex Risk Partners Index is .63, but the total effect of consumption of sexually explicit material on sex risk partners (such as total number of sex partners, number of casual sex partners, or number of partners with whom participants have had unprotected sex), both directly and via the SSC mediation, is 2.29. In other words, as exposure to pornography increased by one unit, through the SSC mediation, Sex Risk Partners Index increases by 2.29 units. Similarly, the direct (unmediated) effect of exposure to pornography on the adoption of sex risk in the form of sex risk practices (such as group sex, anal sex, or the incorporation of violence and sadomasochism in sex life) is 2.06. However, when considering the unmediated effect of pornography along with the mediation of SSC, the total effect of pornography on the Sex Risk Practices Index increases to 2.15. This result shows that indeed SSC is one of the psychological mechanisms that facilitate the adoption of this type of risk behaviors. This is a result with both theoretical and practical implications. Alongside the obvious theoretical advancement of this finding, this result allows health campaigns to target precisely the mechanisms that mediate the adoption of risk behaviors. Having a more focused and more calibrated approach, health campaigns thus designed should meet significantly higher rates of success.

**Objective V: Clarifying the role of biological sex and age on the adoption of risk behaviors**

The path model allowed for the investigation of biological sex and age role in the relationship between the exposure to sexually explicit material and adoption of risk behaviors. The analysis showed that men were more likely than women to adopt sex risk behaviors in both forms included in this study (i.e., sex risk partners and sex risk practices), via the mediation of exposure to sexually explicit material and SSC. This finding is consistent with previous research,
and it maps out the path through which biological sex is related to likelihood of adopting the sex-related risks included in the study. In structural equation modeling language, the indirect effects of biological sex on risk behaviors take place through the mediator variables “frequency of exposure to sexually explicit material” and “Sexual Self-Concept”, which are presumed to transmit some of the causal effects of biological sex onto risk behaviors.

Specifically, the path model indicates that men are more likely than women to watch pornography, which in turn has a mediating effect on SSC scores, which finally translates to higher sex risk behaviors for males. This finding represents an important theoretical advancement, as very few prior studies investigated the relationships between the exposure to sexual media content and the sexual self-concept. The closest previous study that researched this relationship, i.e., Aubrey (2007), found that exposure to sexual media content predicted lower SSC scores, but only college women were included in the study. The present study, however, included both women and men in the sample and found that pornography consumption and the SSC mediated the relationship between biological sex and sex-related risk behaviors for both men and women, and the strength of the relationship was different for the two biological sexes.

Also, the model showed that, due to both direct and indirect effects of gender on health-related risks, when gender went from female to male, Health Risk Index decreased by 0.118 units. In other words, the model predicted that women were more likely than men to adopt risk behaviors related to body image. This finding partly corroborates with previous research, which shows that women may be particularly vulnerable to media influences into internalizing unrealistic body image ideals and consequently adopt unhealthy behaviors ranging from use of dietary pills, use of laxatives, overexercising, cosmetic surgery, to extreme and pathologic conditions such as bulimia and anorexia nervosa. This finding underlines the necessity of more
research focused on the effects of pornography on women, especially in terms on the effects of women's perception of their own body and sexuality. Traditionally, men have been considered the primary consumers of pornography, which partly explains the dearth of research regarding the effects of pornography on women. At the same time, more research is needed on the effects of pornography on men's perception of their own body. Risk behaviors associated with body image among men is another area that necessitates more research, because body image symptomatology has been extensively researched in women and not sufficiently in men.

In addition to contextualizing and providing a clearer understanding of the effects of biological sex on the adoption of risk behaviors through the mediation of exposure to sexually explicit material and SSC, the model allowed for the clarification of the role of age on the adoption of risk behaviors. Specifically, the path model showed that age had a total effect of 0.1 on the Sex Risk Partners Index score, and a total effect of .041 on the Sex Risk Practices Index score. In other words, the small positive effect suggests that older individuals are slightly more likely than younger individuals to adopt sex-related risk behaviors. However, this finding should be regarded with caution, because this study used a sample with a low median age of 22, while the US median age is 37.2 years of age (US Census, 2010). Further research is necessary to reveal whether the trend identified here continues for older ages or whether a plateau is reached after which age ceases to significantly predict the adoption of risk behaviors.

The path model shows that age has a very small total effect of -.002 on the adoption of health-related risks behaviors, meaning that an increase of one unit (or one year) in age predicts a decrease of .002 units in the Health Risks Index score. It is possible that age indeed has a very limited effect on the adoption of body image-related risks behaviors such as cosmetic surgery, overexercising, or use of dietary pills or supplements. At the same time, it is possible that the
incidence of such behaviors increases for older age groups which were not sufficiently represented in the present study. Longitudinal studies and studies with more inclusive samples in terms of age groups could shed light over the relationships between age and body image-related risk behaviors, especially in the context of exposure to sexually explicit material.

**Objective VI: Providing a qualitative perspective of people’s use and interpretation of sexually explicit media content**

The qualitative section of this study was designed in order to address mounting criticism directed at the use of quantitative methods in researching human sexuality, especially in a media consumption context. Specifically, survey and experimental studies conducted in the media effects tradition were deemed incapable to provide a well-rounded and in-depth understanding of human sexuality, and, in the context of the present study, of how people select, interact with, and understand sexually explicit media. In contrast, it was asserted, qualitative methods such as in-depth interviews, focus groups, or diaries would provide individuals with an opportunity to talk about their various engagements with pornography in a less restricted manner than that provided by surveys and in a less artificial environment than experimental settings.

The analysis of the qualitative data collected for this study indeed helped to create a more diverse picture of the ways in which individuals use and engage with sexually explicit material. The quantitative section of this study focused predominantly on hazardous outcomes associated the consumption of sexual media. Based on an extensive review of literature, the foundational assumption of the first part of this study was that exposure to pornography usually functions as a precedent to behaviors that are detrimental to one's health and well-being. Using this premise as a starting point, the quantitative section of this study was, in broad terms, an effort to uncover the
mechanisms that facilitate the adoption of risk behaviors. However, the qualitative data collected and analyzed in this study yielded a much more diverse, even unconventional, understanding of people's use of sexually explicit material. While retaining a sense of the potentially negative influence of pornography in their lives, participants in the qualitative data collection process identified numerous occasions in which the consumption of sexually explicit media was seen as a beneficial, enriching presence in their lives. Participants in the qualitative phase of this study described positive, negative, and very often ambivalent encounters with sexually explicit material, which creates a more nuanced understanding of how people engage with this type of media content.

The overarching theme that emerged in the axial coding stage of the data analysis was ambiguity, which referred to both the sexually explicit media content per se, and to the perceived influence of said material on the participants, either as individuals or as part of dyadic relationships. While ambiguity or ambivalence were mentioned in broad terms in previous research, the analysis of the qualitative data performed as part of this study uncovered how ambivalence manifests itself at specific levels of engagement with sexually explicit material.

The first theme that emerged in the data analysis refers to participants' ambivalence towards pornography per se. Previous research paid little attention to how consumers of pornography feel about the material that they watch, instead focusing primarily on the effects of exposure to pornography on attitudes towards sexuality and sexual behaviors. However, how one feels about sexually explicit material could be a factor that regulates frequency of consumption of pornography, types and genres of pornography sought, or likelihood of internalizing messages present in the sexually explicit media. Participants in the study expressed a large array of attitudes towards pornography, ranging from seeing pornography as innocuous, entertaining, or
even beneficial to one's general well-being, to deeming it dangerous and deleterious. More interesting, perhaps, and more numerous, were feeling of ambiguity towards pornography. Repeatedly, participants would indicate that they would find certain videos repulsive, disturbing, and simultaneously attractive. This is an important finding which could help refine instruments and scales used in quantitative studies of sexually explicit material. Most contemporary studies on pornography do not distinguish between various types and genders of pornography, and also do not account for users' evaluations of various type of sexually explicit content. Yet, in search of pornography effects on consumers' behaviors, it is possible that different types of sexual content (for example, softcore photos vs. hardcore videos) could have different effects. More importantly, attitudes towards the sexually explicit materials viewed could moderate their potential effect on consumers' attitudes towards sexuality and sexual behaviors. The ambivalence manifested by participants in this study towards pornographic material should be incorporated in future research in order to provide a more refined understanding of people's interactions with sexual media.

The second theme that was identified in the analysis referred to the realism vs. lack of realism perceived by participants in relation to the sexual acts, body image, and scenarios of the sexually explicit material that they had viewed. The presence of this theme among diary entries was prominent, accounting for 113 out of the total 501 idea units (22.5 percent). The majority of these idea units were expressed in response of a diary question that specifically asked participants to evaluate the realism or lack of realism of the material watched, but 18 such idea units were entered in response to questions that were referring to other aspects of engagement sexual media content. This highlights participants' preoccupation and interest for the perceived realism, or lack of realism, of their choice of pornography.
In addition to evaluating the perceived realism, participants often commented on their interpretation of the perceived realism of the material. Again, ambivalence seemed to dominate these comments. Some entries showed an appreciation for materials that lacked in realism, particularly with regard to sexual acts and scenarios, and less so with respect to body images. Seeking materials with low perceived realism seemed to be often associated with entries that indicated as motivation for watching pornography stress release, escapism, fantasy, and entertainment. Conversely, several entries indicated little interest in material with low perceived realism. It would be interesting to establish whether participants who sought material with high perceived realism used the material for purposes other than entertainment, stress release, or escapism – for example, for educational or information-seeking purposes. The analysis of the present data did not reveal such associations, but more focused research may be necessary to investigate the use of sexually explicit material in light of the perceived realism of the material viewed.

The third theme that emerged in the analysis refers to participants' ambivalence towards sexual media either as a reliable source of education and information about sexuality, or, on the contrary, as a distorted reflection of human sexuality inspiring fear and revulsion. This is an important finding in understanding the role played by sexually explicit material in people's lives. As noted in the literature review, adolescents and young adults turn in large numbers to pornography to learn about human sexuality, sexual practices and behaviors. This approach was reflected in the data provided by the participants in this study, although in a relatively modest amount (19 idea units, corresponding to approximately 4 percent of the total number of idea units). In addition to the instances in which participants acknowledged that they sought sexually explicit materials as a source of information and education, information about sexuality may be
sought and received indirectly, when participants compared themselves to performers seen in the material, or when they compared their sex lives to the sexual practices present in the material. In this context, if sought for and relied on as a source of information, it is possible that exposure to pornography creates social norms and expectations that may not be conducive to healthy lifestyles and general well-being. In contrast with cases of participants who indicated that pornography is a source of education and empowerment in their lives, however, there were cases in which participants clearly identified pornography as a source of shame, fear, and disgust. One participant opined that constant exposure to sexual content that glorifies violence against women and portrays humiliation and abuse as desirable and even invited by women can contribute to a the creation and maintaining of rape culture, a culture in which violence becomes normalized. Thus, the analysis showed that, in addition to being a potential source of education and enrichment in one's life, sexually explicit media can also function as a means of conveying distorted, hazardous information about sexuality and sexual practices.

Early research on pornography focused mostly on the effects of consumption of sexual media content on individuals. However, more recently, researchers started investigating the influence of pornography on relationships, and how individuals in romantic relationships use and integrate sexual media in their lives. Some initial studies (i.e., Bergner & Bridges, 2002) found that individuals, and particularly women, were likely to perceive their male partner's use of pornography as detrimental to the relationship. More recent studies found that, however, watching pornography with the romantic partner may be associated with higher sexual satisfaction in the relationship (Maddox et al., 2009). These finding corroborate with one major theme that emerged in the analysis of the qualitative data of the present study. Participants were not asked specifically to comment on the perceived influence of pornography on their
relationships, but data shows that this was a major preoccupation reflected in many diary entries, which constituted the fourth theme that emerged in the data analysis. Some participants considered that watching pornography with their partner lead to an improvement of their overall relationship satisfaction. This finding is hardly surprising, being relatively frequently mentioned in literature. Moreover, clinicians and couple therapists have endorsed the use of sexually explicit material in couples as a means to improve relation satisfaction and intimacy (Striar & Bartlik, 1999). However, in keeping with the overarching theme of ambivalence that permeates participants' engagement with pornography, other entries suggested that the impact of pornography on their relationship satisfaction might be questionable. Some entries even identified exposure to pornography as the trigger for eventual relationship dissolution. This finding again draws attention to the fact that sexually explicit media may convey very different messages about sexuality, and these messages could be interpreted in very different manners by consumers. Also, as previous research found, exposure to pornography can have deleterious effects on relationship satisfaction when the material is viewed alone (Maddox, 2009). Therefore, caution then must be exerted in recommending consumption of pornography as a means of improving sexual and relationship satisfaction. Future research should attempt to establish the frequency of viewing sexually explicit media alone and with a partner for individuals who are in romantic relationships. Also, future research could consider examining both partners in a couple. Including both partners in the study could allow for a better understanding of how partners together negotiate the meaning of sexual media content. Also, such research could learn whether similar or dissimilar preferences different types of sexual media content reflects, or even influences, general relationship satisfaction. Such knowledge, in
turn, could help refine and calibrate therapeutic approaches that recommend use of pornography as a means of improving sexual and relationship satisfaction in couples.

Lastly, another important finding of this study highlights the ambivalence of the perceived influence of pornography on individuals (outside of dyadic relationships). An important aspect of this theme was that frequently participants disputed the idea that consumption of pornography has an effect on them. The assertion of agency in seeking, selecting, and assigning meaning to sexually explicit content is an important aspect revealed by this study, thus challenging or at least prompting caution regarding the “effects” of pornography on people's attitudes and behaviors. Analysis showed that agency was manifest not only in selecting the type of material to be viewed, but also in interpreting the meaning of the material or negotiating the influence of the material on the individual viewing it. As discusses in the preceding chapter, a number of diary entries showed that participants would sometimes expressed a desire to work out or lead a healthier lifestyle in order to achieve a look similar to those present in the sexually explicit material, even though the initial reaction to seeing the material was comparing themselves negatively to the performers. Occasionally, when the immediate perceived consequence of viewing the explicit material was negative, sometimes evoking feelings like loneliness or sexual/body inadequacy, such negative feelings were negotiated in a humorous manner, presumably in an effort to alleviate the stress caused by such thoughts or feelings. Remarkably, the number of idea units expressing positive feelings, perceived positive influence of pornography, or positive comparison to the sexually explicit material viewed (78 idea units, or approximately 15.5 percent of the total number of idea units) exceeded the number of idea units expressing negative feeling or perceived deleterious consequences of watching pornography (60 idea units, corresponding roughly to 12 percent). In
addition, 40 idea units (close to 8 percent) expressed more ambivalent feelings towards the influence on pornography. This finding reinforces the position according to which the presence of pornography in people's lives and their use of it are far more diverse and difficult to categorize than most existing research has been suggesting. In light of these findings, criticism directed at research efforts to find effects of exposure to sexually explicit materials on individuals' attitudes and behaviors, using standardized instruments and experimental designs seems at least partly justified.

Limitations of the Study

Sampling

In an attempt to prevent low participation rates in light of the sensitive nature of the topic, random sampling was sacrificed in favor of convenience sampling, leading to overall low external validity of the study. Thus, one limitation of this study was the representativeness of the sample to the Bowling Green State University population. The present study should be seen as a case study pertaining to the student sample recruited for data analysis. The findings of this study cannot be generalized to the entire Bowling Green State University student population or to the general population of the United States. Also, 64.2 percent of participants in the study were women, and 35.8 percent were men. Biological sex distribution was thus skewed in favor of women, when compared to the biological sex distribution of the student population of 54.9% women and 45.1% men (National Center for Education Statistics, 2013). However, the mean age of participants in the study was very close to the data provided by NCES (2013). Also, the small size \( n = 10 \) of the sample enrolled in the qualitative data collection constitutes a limitation of the study. While no clear guidelines exist with respect to acceptable sample sizes in qualitative
research, in a review of qualitative research methods literature Mason (2010) found that the mean sample size of 560 qualitative studies was 31. Other researchers proposed that qualitative research rarely needs more than 20 participants (Green & Thorogood, 2009). However, there is widespread acceptance the concept of saturation as a means of determining sample size in qualitative research (Glaser & Strauss, 1967) rather than relying on predetermined sample sizes.

**Operationalization of health-related risk behaviors**

Another limitation was in the operationalization of health-related risk behaviors. The Health Risk Index was created for this study and included items related to body image issues. Because the study focused on an area that had not been researched before, I chose to create a new index instead of relying on one of the existing instruments of measuring body image. However, the analysis revealed weak correlations between the Health Risk Index and other variables. Also, the hypothesis that predicted that individuals with higher frequency of exposure to sexually explicit material would be more likely to adopt health-related risk behaviors was not supported. As already mentioned, The Health Risk Index was constructed in the absence of systematic research of body image messages proposed in pornography, especially contemporary pornography. For example, it would be very useful to know the incidence of pornography performers who have used body alteration techniques, such as cosmetic surgery procedures, or the body types and sizes promoted in sexually explicit material as ideal and desirable. Such knowledge would better inform the process of creating a more adequate measurement of body image-related risk behaviors associated with exposure to sexually explicit material. Of course, it is possible that exposure to pornography bears little influence on the incidence of this type of risk behaviors, but this conclusion cannot be drawn in the absence of a more refined and adequate measurement instrument.
Operationalization of sexually explicit material

Another limitation of the study was the operationalization of sexually explicit material. As revealed in the qualitative section of the study, people actively select certain types of pornography and reject others. This study took into account types of pornography differentiated by their various technical supports (online videos, online photos, printed pornography, sexting, etc.), but, in the fashion of virtually all previous research, it did not differentiate between types of pornography in terms of genre and content. As Paasonen (2010) showed, the advent of digital technologies was followed to a flourishing of new genres and subgenres of pornography, most of them produced outside the established adult industry. The majority of research body dedicated to sexual media, including the present study, has failed so far to take into consideration the likely differences between amateur sub-genres of pornography, and pornography produced by the adult industry. Preliminary studies such as Paasonen (2010) suggest that the content of amateur pornography may be substantially different from professional pornography, in terms of sexual scripts, body image messages, and overall realism. It is likely, too, that the public of professional pornography may be different from the public of amateur or consumer-generated sexual media. Future research must address these issues which might change our understanding of how individuals interact with pornography and different genres of pornography may influence their consumers.

Implications of Results

This study was designed in response to calls for more research focusing on the relationships between exposure to pornography and adoption of risk behaviors, with an emphasis on the psychological mechanisms that may facilitate the adoption of said behaviors. In addition,
because of the fast-changing nature of digital technologies which can yield new patterns of consumption and new genres of sexual media, baseline data was collected and compared to previous findings. Also, the study addressed mounting criticism according to which quantitative studies of consumption of pornography are only capable to offer, at best, limited insights of how individuals use and integrate sexual media in their lives.

The analysis established that frequency of exposure to pornography was negatively correlated with the sexual self-concept (SSC). This finding is consistent with previous research, which also showed that exposure to sexual (but not sexually explicit) media was correlated with deflated SSC scores. In addition, the analysis has shown that SSC was negatively correlated with sex-related risks, measured in this study as risk practices and risk partners. Also, SSC was found to be weakly correlated with health risks related to body image. By investigating these correlations, the present study took an exploratory step towards uncovering the mechanisms that could facilitate the adoption of risk behaviors following the consumption of sexual media content.

Furthermore, the analysis showed that exposure to pornography and SSC are not just merely correlated with risk behaviors. Frequency of exposure to pornography and SSC were shown to predict the adoption of risk behaviors. This set of findings revealed that SSC constitutes a set of psychological mechanisms that precedes and facilitates the adoption of risk behaviors following the consumption of pornography. This is an important finding with both theoretical and practical implications. On a theoretical level, this study contributes to a better understanding of how exposure to a specific type of media content influences individuals' behaviors. On a practical level, the findings of this study offers guidance to health campaigns
aimed to curb the adoption of risk behavior via the targeting of psychological mechanisms that favor the adoption of behaviors that are detrimental to one's health and well-being.

The study has also taken exploratory steps towards building more precise instruments to measure risk behaviors, particularly sex-related risk behaviors. Sexual risk behaviors were previously measured in a less precise manner. For example, Snyder (2011) included in a measure of sex behaviors variables such as number of unprotected vaginal sex acts, number of unprotected partners, number of strangers with whom participants had sex, number of oral sex acts, and number of protected and unprotected anal sex acts. However, the present study found that a more accurate measurement of sexual risk behaviors distinguishes between sexual risk practices and sexual risk partners. Sexual risk practices included behaviors that experts deem hazardous, such as group sex, anal sex, or elements of violence and sadomasochism during sexual acts. Sexual risk partners refer to the number of partners with whom participants had unprotected sex, casual sex, number of sex partners during the last 12 months, and total number of sex partners. As already discussed, correlational analysis showed frequency of exposure to pornography and SSC to be significantly inversely correlated with sex risk practices and sex risk partners. Also, the regression and path models demonstrated that exposure to pornography and SSC scores are strong predictors of these two types of sex-related risk behaviors. Still, the sex-related risk indexes proposed in this study should be regarded with caution. In order to ascertain the reliability and validity of the two related indexes, specific tests would have to be conducted (i.e., test-retest reliability, content validity, construct validation), which should make the object of future research.

Baseline data collected as part of this study has shown some variation compared to previous reports. The present study found an overall higher consumption of pornography among
participants compared to most previous research, but this finding should be interpreted with caution given the non-representative sample used in the study, as well as the sample being drawn from a college student population. Also, the study found a higher percentage of women who watch pornography compared to previous reports. As already mentioned, the study's low external validity prevents this finding from being generalizable, but the possibility that consumption of pornography has become more acceptable regardless of traditional gender norms should not be discounted. The study also found that non-heterosexual participants reported higher exposure to pornography compared to heterosexual participants. However, it should be noted that preliminary research suggests that pornography produced for non-heterosexual audiences may be different in content from pornography created for heterosexual consumers. Also, while the vast majority of sexually explicit material is designed for a predominantly male audience, there is a growing presence of pornography catering to a female audience, which also is very different from the typical male-oriented sexual media content. Therefore, future research must depart from conceptualizing pornography as “one size fits all”. Instead, researchers should focus on how different types of pornography cater to different audiences and how these audiences use and assign meaning to various genres of pornography.

On Atwood (2005) objections to quantitative studies rooted in the media effects research tradition, the study complemented the quantitative approach to this topic with a relatively novel diary data collection design. Data collection was designed as a guided diary in which participants were instructed to answer in an open-ended manner a number of questions regarding their use of pornography and the perceived influence of consumption of the sexually explicit material. The thematic analysis of the data revealed a more complex and nuanced understanding of how individuals use and make sense of pornographic content compared to most quantitative studies,
including the quantitative phase of the present study. Undoubtedly, much of the difference in results has to do with the very different epistemological stances – the quantitative phase having taken a deductive approach, whereas the qualitative phase was rooted in an inductive approach towards the research process.

In broad terms, the diary data and the subsequent thematic analysis have shown that the use of pornography by diary participants was very diverse, whereas participants' attitudes towards the perceived influence of the explicit material were highly ambivalent. Ambiguity was the overarching, dominant theme that permeated virtually all dataset taken as a whole. Some participants commented that, in particular instances, the pornography was a positive presence in their lives, inspiring attitudes and practices seen as highly beneficial to individuals and relationships alike. Concomitantly, other participants perceived pornography as a source of anguish and frustration, again pertaining to both individuals and relationships. Most diary entries, however, had a more nuanced perspective on the influence of sexually explicit material on their lives. As previously discussed, this finding suggests that the conceptualization of pornography and pornography audiences as uniform is obsolete. The advent of digital technologies has made pornography accessible to audiences that were not traditionally associated with pornography consumption. These new audiences seem to have been largely ignored by research on pornography, particularly studies rooted in the media effects tradition. Also, digital technologies have provided audiences with the means to produce their own sexually explicit material, and to unrestrictedly distribute it to similar audiences. The presence of newer audiences of pornography was suggested in the quantitative section of this study, which found that a higher percentage of women view pornography than other studies reported. In fact, recent studies other than the present one have been reporting higher percentages of women who seek and view
pornography compared to studies published a few decades ago. This seems a clear indication of changing structures of pornography audiences, yet media and communication research has been slow in tapping this new and promising venue of study. An example of consumer-generated sexual media content is sexting. In the quantitative section of the study, close to 20 percent of participants indicated that they use sexting at least occasionally, this being the second most frequently used type of sexual media, after free online videos. This finding was mirrored in the qualitative section of the study – more than 17 percent of the instances that prompted a diary entry were constituted by sexting, the third most frequently used type of sexual media, after free online videos and free online photos. The convergence of the quantitative and qualitative findings strongly suggests that sexting – in the larger context of consumer-generated sexual content – has become very popular and widespread among younger audiences. Yet little is known, apart from anecdotal evidence and some highly publicized instances of misuse or abuse of sexting, about the potential influences – if any – of this burgeoning type of sexual media content. Also, the present study have not accounted in either of its section for the very popular and ever-growing sub-genre of “amateur” pornography. While widely acknowledged, few, if any, quantitative studies have conceptualized possible differences between professional and amateur pornography, and thus possible differences among their effects. Furthermore, it is plausible that the structure of the audiences of these different types of pornography could be different. Future research must start to take into account these differences.

Apart from uncovering some psychological mechanisms that could facilitate the adoption of risk behaviors in the context of consumption of pornography, it is possible that the present study opened up more questions than it managed to offer definitive answers. This conclusion seem to be convergent with a recent observation by Bennett and Iyengar (2009), who posited that
an era of minimal effects could soon return to the field of mass communication field. In support
to this postulate, they cited more diverse audiences who now have much more variety of media
choices, which leads to increased difficulty in measuring and predicting changes in attitudes and
behaviors in the aggregate. Bennett and Iyengar were referring to news media sources, but the
findings of this study, especially from the qualitative section of it, clearly suggest that this
conclusion applies to sexually explicit media audiences and their increasingly diverse choices.
Yet focused research in pursuit of these new questions is worth conducting, especially in the
context of clear indications that more audiences seek and use more types of sexual media, with
impacts that remain largely unknown.
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APPENDIX A: WEB VERSION OF SURVEY DESIGN

1. Sexually Explicit Media Usage (Alex Stana)

Hello,

My name is Alex Stana and I am a doctoral candidate in the School of Media and Communication at Bowling Green State University. As part of my dissertation project, I am conducting a study about the relationships between people's use of sexually explicit media, their sexual behaviors, their perception of their sexuality and other people's sexuality, and their demographic characteristics (age and sex). In order to study these relationships, I have contacted via email a sample of BGSU undergraduate and graduate students. I received your email address either from the Office of Institutional Research or from your instructor.

I am asking you to please take the survey as the completion of this project will benefit society by uncovering the mechanisms through which a controversial type of media content may influence people's behaviors. There is no monetary award for filling out this survey, but you could be eligible for extra credit points for your participation. In case you are eligible for extra credit but do not want to participate in the study, the instructor will provide you with an alternative way of earning an equal number of extra credit points. Your instructor will inform you how many extra credit points you will earn by taking the survey. If you are unsure if you are eligible for extra credit or how many extra credit points you will receive upon completion of the survey, please contact your instructor before taking the survey.

Your participation will involve providing answers to a web-based survey. I estimate that completing the survey will take, on average, between 15 and 20 minutes. You should know that the anticipated risks of taking the survey will not exceed those encountered in daily life. However, the possibility of experiencing emotional discomfort or distress as a consequence of taking the survey cannot be completely ruled out. In the very unlikely eventuality that you experience any emotional unpleasantness or distress, I recommend that you contact the Department of Psychology’s Psychological Services Center, BGSU’s Counseling Center, or BGSU’s Health Services. Contact information and telephone numbers of these services are provided at the end of this consent form.

If you do not complete the survey within seven days after you have received the first email, you will receive a second email asking you to do so. Finally, a third reminder will be sent out via email after another seven days after the second reminder. This means that you will be contacted up to three times over a period of fourteen days.

Your participation is confidential, and your responses will remain anonymous. The survey has been designed using SurveyMonkey.com, which collects and stores data without providing me with the means to track answers back to a particular respondent. SurveyMonkey.com will automatically generate two folders, one in which answers are stored and a different one in which email addresses are stored. I will at no point in time be able to match respondents names with their email addresses. Once the process of data collection is finished and the instructors are provided with the email addresses of students who opted to complete the survey for extra credit points, all email addresses will be removed from my database. In order to protect your privacy, please remember to clear your browser’s cache and page history after you have submitted the questionnaire.
Your participation is completely voluntary. This means that you can, at any time, withdraw your consent and stop participating in the study, without having to provide an explanation and without incurring any penalty. Also, deciding to participate or not will not have any influence on your grades or your relationship with your instructors or with Bowling Green State University. During the process of taking the survey, you may skip any question that may make you uncomfortable. The present study will benefit the most if you provide answers to all the questions, but please do so only to the extent to which you are comfortable and confident.

Finally, the survey is designed only for participants that are eighteen or older. If you are not eighteen or older, I ask you that you do not participate. Additionally, please email me and I will remove your email address from the list of potential participants.

If you have any comments or questions regarding this research project, please contact me (Alexandru Stana) at astana@bgsu.edu or call me at 419-372-5347. You can also contact my advisor, Dr. Serina Mucklow, at 419-372-9224 or at melkote@bgsu.edu. If you have any questions or concerns about your rights as a participant in this project, please contact the Chair, Human Subjects Review Board (HSRB) at hsb@bgsu.edu or at 419-372-7716.

Student Health Services
174 Health Center Building, Ridge St., Bowling Green, OH 43402
Telephone: 419-372-2711

Counseling Center
104 College Park Office Building
Bowling Green State University
Bowling Green, OH 43402
Telephone: 419-372-2061

Psychological Services Center
Psychology Building, Suite 300
Department of Psychology
Bowling Green State University
Bowling Green, OH 43402
Telephone: 419-372-2540

Thank you for your time!

Sincerely,
Alexandru Stana

Note: BY CLICKING "NEXT" YOU INDICATE THAT YOU ARE ABOVE 18 YEARS OLD AND THAT YOU VOLUNTARILY CONSENT TO PARTICIPATE IN THIS RESEARCH INVESTIGATION.
2. Sexually Explicit Media Usage (Alex Stana)

*1. Are you over eighteen years of age?

☐ Yes
☐ No
### 3. Sexually Explicit Media Usage (Alex Stana)

Note: Some of the questions in this survey assume that you have had or are currently engaged in sexual activity. If you have never had sex, you may skip these questions that do not apply or answer them in a way that predicts how you think you would react if you were engaged in sexual activity.
4. Sexually Explicit Media Usage (Alex Stana)

2. Please indicate the last two digits of your birth year

3. What is your biological sex?
   ○ Female
   ○ Male

4. What is your sexual orientation?
   ○ Heterosexual
   ○ Bisexual
   ○ Homosexual
   ○ Other

5. Do you consider yourself sexually active?

Note: "Sexually active" means engaging regularly in vaginal, oral, or anal sex acts with other persons or persons.
   ○ Yes
   ○ No

6. What is your level of enrollment at BGSU?
   ○ Undergraduate
   ○ Graduate
5. Sexually Explicit Media Usage (Alex Stana)

7. Please indicate your class standing.

- [ ] Freshman
- [ ] Sophomore
- [ ] Junior
- [ ] Senior
6. Sexually Explicit Media Usage (Alex Stana)

8. How likely is it that you are going to have one of the following procedures done in the future?

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Not at all</th>
<th>Very unlikely</th>
<th>Unlikely</th>
<th>Not sure</th>
<th>Likely</th>
<th>Very likely</th>
<th>Definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mammoplasty (breast augmentation, breast reduction, breast lift)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Buttock augmentation (butt implant, buttock lift)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Abdominoplasty (tummy tuck)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Rhinoplasty (nose job)</td>
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<tr>
<td>Rhytidectomy (face lift, brow lift, cheek lift)</td>
<td></td>
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<tr>
<td>Liposuction</td>
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<tr>
<td>Eyelid surgery</td>
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<tr>
<td>Lip augmentation (Resylane, etc.)</td>
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<tr>
<td>Chemical peel</td>
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<tr>
<td>Botox injections</td>
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<tr>
<td>Laser hair removal</td>
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<tr>
<td>Microdermabrasion (removal of superficial layers of skin with a revolving abrasive tool)</td>
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</tr>
<tr>
<td>Other</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

9. How often do you go to tanning salons?

- Never
- Rarely
- Once a month
- 2-3 times a month
- Once a week
- Multiple times a week
10. How often do you exercise (at the gym, at home, outdoors, etc.)?

- Never
- Rarely
- Once a month
- 2-3 times a month
- Once a week
- 2-3 times a week
- Every day
- Multiple times a day

11. Defining casual sex as sexual intercourse with someone with whom you are not in a monogamous or committed relationship, how many casual sex partners have you ever had?

12. In the past 12 months, how many individuals have you had sex with?

13. How many people have you had unprotected sex (without using a condom) with in the past 12 months?

14. With how many people have you ever had sexual intercourse?

15. Have you ever tried a new sexual position that you learned from pornographic movies or pictures?

- Yes
- No

16. Have you ever engaged in group sex (or sex with multiple partners)?

- Yes
- No

17. Have you ever engaged in anal sex?

- Yes
- No
18. Have you ever incorporated violence or sadomasochism in your sex life?

☐ Yes
☐ No
7. Sexually Explicit Media Usage (Alex Stana)

19. Please choose the single, best answer of how much you agree with each of the following statements:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would make sure that my partner and I use a condom when we have sex.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I would have sex without a condom if my partner wants.</td>
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</tr>
<tr>
<td>I would insist on using a condom if I want to, even if my partner doesn't like them.</td>
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</tr>
<tr>
<td>I would refuse to have sex if my partner refuses to use a condom.</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
20. Please choose the single, best answer for how sure you are of the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very sure</th>
<th>Pretty sure</th>
<th>Somewhat sure</th>
<th>A little sure</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>How sure are you that you would be able to say no to having sexual intercourse with someone you have known for a few days or less?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>How sure are you that you would be able to say no to having sexual intercourse with someone you have dated for a long time?</td>
<td></td>
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<tr>
<td>How sure are you that you would be able to say no to having sexual intercourse with someone you want to date again?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>How sure are you that you would be able to say no to having sexual intercourse with someone with whom you have already had sexual intercourse?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>How sure are you that you would be able to say no to having sexual intercourse with someone you want to fall in love with?</td>
<td></td>
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</tr>
<tr>
<td>How sure are you that you would be able to say no to having sexual intercourse with someone who is pushing you to have sexual intercourse?</td>
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</tr>
</tbody>
</table>
21. Please select the single, best answer for how sure you are about each of the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>I definitely can't do this</th>
<th>I can't do this</th>
<th>I'm not sure whether I can or can't do this</th>
<th>I can do this</th>
<th>I definitely can do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>How sure are you that you would be able to tell someone that you don’t want to go somewhere because something sexual might happen?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How sure are you that you would be able to decide not to kiss someone because you might think it might lead to sexual intercourse?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How sure are you that you would be able to tell someone that you don’t want to have sex now, but you might want in the future?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How sure are you that you would be able resist participating in sexual acts (practices) that you are unsure about, but your partner seems to like?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
8. Sexually Explicit Media Usage (Alex Stana)

22. Extramarital sex
   ○ is OK if everyone agrees
   ○ can break up families

23. Sex
   ○ can cause as much anxiety as pleasure
   ○ on the whole is good and enjoyable

24. Masturbation
   ○ causes me to worry
   ○ can be a useful substitute

25. After having sexual thoughts
   ○ I feel aroused
   ○ I feel jilted

26. When I engage in petting (that is, non-penetrative sexual activity)
   ○ I feel scared at first
   ○ I thoroughly enjoy it

27. Initiating sexual relationships
   ○ is a very stressful experience
   ○ causes me no problem at all

28. Oral sex
   ○ would arouse me
   ○ would terrify me

29. I feel nervous
   ○ about initiating sexual relationships
   ○ about nothing when it comes to members of the opposite sex

30. When I meet someone I'm attracted to
   ○ I get to know him or her
   ○ I feel nervous
31. When I was younger
   - I was looking forward to having sex
   - I felt nervous about the prospect of having sex

32. When others flirt with me
   - I don't know what to do
   - I flirt back

33. Group sex
   - Would scare me to death
   - Might be interesting

34. If in the future I committed adultery
   - I would probably get caught
   - I wouldn't feel bad about it

35. I would
   - Feel too nervous to tell a dirty joke in mixed company
   - Tell a dirty joke if it were funny

36. When I awake from sexual dreams
   - I feel pleasant and relaxed
   - I feel tense

37. Dirty jokes
   - Make me uncomfortable
   - Often make me laugh

38. When I have sexual desires
   - I worry about what I should do
   - I do something to satisfy them

39. If in the future I committed adultery
   - It would be nobody's business
   - I would worry about my spouse finding out

40. Watching a pornographic movie
   - Wouldn't bother me
   - Would make me nervous
41. Casual sex
- is better than no sex at all
- can hurt many people

42. Sexual advances
- leave me feeling/ense
- are welcome

43. When I have sexual relations
- I feel satisfied
- I worry about being discovered
9. Sexually Explicit Media Usage (Alex Stana)

44. Please choose the single, best answer:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Usually</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would feel very nervous if a partner were to explore my body before or after having sex.</td>
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<tr>
<td>The idea of having sex without any covers over my body causes me anxiety.</td>
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<tr>
<td>During sexual activity I am concerned about how my body looks to my partner.</td>
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<tr>
<td>The worst part of having sex is being nude in front of another person.</td>
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<tr>
<td>During sexual activity, it is difficult not to think how unattractive my body is.</td>
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<tr>
<td>I feel very uncomfortable walking around the bedroom, in front of my partner, completely nude</td>
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<tr>
<td>The first time I have sex with a partner, I worry that my partner will get turned off by seeing my body without clothes.</td>
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<tr>
<td>If my partner were to put an arm around my waist, I would think, &quot;My partner can tell how fat I am&quot;.</td>
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<tr>
<td>I could only feel comfortable enough to have sex if it were dark so that my partner could not clearly see my body.</td>
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<tr>
<td>I prefer having sex with my partner on top so that my partner is less likely to see my body.</td>
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<tr>
<td>I would have a difficult time taking a shower or a bath with a partner.</td>
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<tr>
<td>I would feel anxious receiving a full-body massage from a partner.</td>
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<tr>
<td>I feel that having a different breast size would make me more attractive to a partner.</td>
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</tbody>
</table>

(female only)
While having sex I am concerned that my hips and thighs appear larger than they actually are. (female only)

If a partner were to put a hand on my buttocks I would think, "My partner can feel my fat." (female only)

If a partner were to put a hand on my abdomen (belly) or my chest, I would think, "My partner can feel my fat." (male only)

I feel that being more muscular, lean, or shaped would make me a more attractive partner. (male only)

I feel that if my penis were of a different size, I would be more sexually successful. (male only)
10. Sexually Explicit Media Usage (Alex Stana)

45. Please select the single, best answers that indicate how much you agree with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am a good sexual partner.</td>
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<tr>
<td>I am not very confident in sexual encounters</td>
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<td></td>
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<tr>
<td>I am better at sex than most other people</td>
<td></td>
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<td></td>
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<tr>
<td>I sometimes have doubts about my sexual competence</td>
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<tr>
<td>I would rate my sexual skill quite highly</td>
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</tbody>
</table>
11. Sexually Explicit Media Usage (Alex Stana)

45. How often do you view pornography?

Note: "Pornography" means pictures or movies of nude individuals, pictures or movies of people having sex (or appearing to have sex), or real-life nude individuals.

- Never
- Rarely
- 2-3 times per month
- Once per week
- 3-4 times per week
- Every day
- Multiple times a day

47. How often have you used/viewed the following types of pornography during the last 12 months?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>2-3 times a month</th>
<th>Once a week</th>
<th>3-4 times a week</th>
<th>Every day</th>
<th>Multiple times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Books</td>
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<td>Pay-per-view videos</td>
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<tr>
<td>Purchased videos</td>
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<tr>
<td>Rented videos</td>
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<tr>
<td>Free online videos (Xvideos.com, Youporn.com, Redtube.com, etc.)</td>
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<td>Free photos</td>
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<td>Commercial (paid-for) videos</td>
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<td>Telephone hotlines</td>
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<tr>
<td>Erotic videogames</td>
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<tr>
<td>Erotic webcams</td>
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<tr>
<td>Erotic chatrooms/forums</td>
<td></td>
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APPENDIX B: WEB VERSION OF DIARY DESIGN

Sexually Explicit Media diary (Alex Stana)

Bowling Green State University

Hello,

My name is Alex Stana and I am a doctoral student in the School of Media and Communication here at Bowling Green State University. As part of my dissertation project, I am interested in investigating the relationships between people’s use of sexually explicit media, their sexual behaviors and their perception of their sexuality and other people’s sexuality. In particular, I am interested in learning the meanings people attach to sexually explicit media and their use for this type of media content. In order to study these variables, I am using several data collection methods, one being the diary method.

I am asking you to please keep the diary as the completion of this research project will benefit society by uncovering the mechanisms through which this contentious type of media – sexually explicit media, or SEM – may influence people’s behaviors. If you decide to participate, I will offer you a gift card to thank you for your participation. You will receive the gift card from me, the instructor of your class will have no means of knowing if you participated in the study or not. Also, your participation is completely voluntary. This means that you can, at any given time, withdraw your consent and stop participating in the study, without having to provide an explanation and without incurring any penalty. Deciding to participate or not will not have any influence on your grades or on your relationship with your instructors and with Bowling Green State University. Your participation will involve providing entries to a web-based diary. If you agree to participate, you will be asked to keep a diary over a period of four weeks. Ideally, you should have no less than two entries per week. I estimate that each entry should take between 5 and 10 minutes to complete. You should know that the anticipated risk of keeping the diary will not exceed those encountered in daily life. However, the possibility of experiencing emotional discomfort or distress as a consequence of keeping the diary cannot be completely ruled out. In the very unlikely eventuality that you experience any emotional unease or distress, I recommend that you contact the Department of Psychology’s Psychological Services Center, BGSU’s Counseling Center, or BGSU’s Health Services. Contact information and telephone numbers of these services are provided at the end of this consent form.

As the diary is web-based, a link that will redirect you to the diary location is provided to you. The diary consists of 7 questions pertaining to people’s use of sexually explicit material. Specifically, the questions ask what motivates people to watch sexually explicit materials, how these materials make them feel about their own sex (e.g., how realistic sexually explicit material seem to be). I would like you to provide answers to these questions, based on your experience, to the best of your ability, in the format provided here. You will be able to use the same link every time you make an entry. Also, you will receive a reminder every week via email.

Your diary entries will remain anonymous. The diary format has been designed using SurveyMonkey.com. This website collects and stores data without providing me with any means to track answers back to a particular respondent. Two separate folders will be created on SurveyMonkey.com one in which your answers will be stored, and a different one in which your email will be stored. This way I will know that a certain person submitted a diary entry, but at no point in time will I be able to match a participant’s diary entries with his or her email address. Once the process of data collection is finished and participants who completed the diary have received the gift card, all email addresses will be removed from my database. In order to protect your privacy, please remember to clear your browser’s cache and page history after you have submitted the questionnaire.
During the process of keeping the diary, you may skip any question or subject that could make you uncomfortable. This research project will benefit the most if you provide answers to all questions that guide the diary, but please do so only to the extent to which you are comfortable and confident.

Finally, the diary is designed only for participants who are eighteen or of age and older. If you are not eighteen yet, I ask you to not participate. Additionally, please email me and I will remove your email from the list of potential participants.

If you have any comments or questions regarding this research project, please contact me (Alexandru Stana) at astana@bicon.bgsu.edu or call me at 660-997-6347. You can also contact my advisor, Dr. Sanjiva Meikle, at 419-372-8524 or at meikle@bgsu.edu. If you have any questions or concerns about your rights as a participant in this project, please contact the Chair, Human Subjects Review Board (HSRB) at hsrbc@bgsu.edu or at 419-372-7716.

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116 Health Center Building, Ridge St., Bowling Green, OH 43402
Telephone 419-372-2271

Counseling Center
104 College Park Office Building
Bowling Green State University
Bowling Green, OH 43403
Telephone 419-372-2061

Psychological Services Center
Psychology Building Suite 350
Department of Psychology, Bowling Green State University
Bowling Green, OH 43402

Thank you for your time.

Sincerely,
Alexandru Stana

Note: By clicking "Next" you indicate that you are above 18 years old and that you voluntarily consent to participate in this research investigation.
Sexually Explicit Media diary (Alex Stana)

As already noted, I would like you to keep a diary about your engagement with sexually explicit material. Ideally, you should have at least two diary entries per week, for a total of four weeks. Each time you want to make an entry, please click on the link I provided you with. It will bring you on the SurveyMonkey.com website.

Making an entry will consist of your answers to a number of questions. Most questions are formulated in an open-ended manner, so you can be as elaborate as you want in answering them. If a question makes you uncomfortable or unsure, or if you find it irrelevant, please feel free to skip it. Also, there is one question (Question 1) that you do not have to answer more than once throughout the whole period during which you will be keeping the diary.

1. 1. What do you normally use sexually explicit materials/porn for?

Note 1: "Sexually explicit materials" or porn means pictures or movies of nude individuals, pictures or movies of people having sex (or appearing to be having sex), real-life nude individuals, or texts with sexual themes.

Note 2: You do not have to answer this question more than once for the entire time that you are keeping the diary. However, if you have already answered it but you feel that you have something to add, please do so.
2. What types of sexually explicit materials did you most recently read/watch/used?

Note: Please choose all that apply.

☐ Magazines
☐ Books
☐ Pay-per-view videos
☐ Rented videos
☐ Purchased videos
☐ Free online videos (Xvideos.com, Youporn.com, Redtube.com, etc.)
☐ Commercial (paid for) videos
☐ Free online photos
☐ Commercial (paid for) photos
☐ Telephone hotlines
☐ Erotic videogames
☐ Erotic webcams
☐ Erotic chatrooms/forums
☐ Sexting

Other (please specify)
Sexually Explicit Media diary (Alex Stana)

3. Why did you watch/read/use the material?

Note: Please give an elaborate, detailed answer about what prompted you to use sexually explicit material this time.

4. How realistic did you think the sexual acts depicted in the material were?

Note: Please feel free to comment, elaborate, and give examples.
5. How did watching/reading/using the material make you feel about your own sex life?

Note: Please give an elaborate, detailed answer.

6. How did watching/reading/using the material make you feel about your body?

Note: Please give an elaborate, detailed answer.
7. How did watching/reading/using the material make you feel about your sexual skill?

Note: Please give an elaborate, detailed answer.
APPENDIX C: HUMAN SUBJECTS REVIEW BOARD APPROVAL LETTER

BGSU
BOWLING GREEN STATE UNIVERSITY
Office of Research Compliance

DATE: August 22, 2012
TO: Alexandru Stano
FROM: Bowling Green State University Human Subjects Review Board
PROJECT TITLE: [350130-4] "Where did you learn that? Pornography exposure as a predictor of adoption of risk behaviors" A dissertation proposal
SUBMISSION TYPE: Amendment/Modification
ACTION: APPROVED
APPROVAL DATE: August 21, 2012
EXPIRATION DATE: June 27, 2013
REVIEW TYPE: Expedited Review
REVIEW CATEGORY: Expedited review category # 7

Thank you for your submission of Amendment/Modification materials for this project. The Bowling Green State University Human Subjects Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

The final approved version of the consent document(s) is available as a published Board Document in the Review Details page. You must use the approved version of the consent document when obtaining consent from participants. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that you are responsible to conduct the study as approved by the HSRB. If you seek to make any changes in your project activities or procedures, those modifications must be approved by this committee prior to initiation. Please use the modification request form for this procedure.

You have been approved to enroll 391 participants. If you wish to enroll additional participants you must seek approval from the HSRB.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. All NON-COMPLIANCE issues or COMPLAINTS regarding this project must also be reported promptly to this office.

This approval expires on June 27, 2013. You will receive a continuing review notice before your project expires. If you wish to continue your work after the expiration date your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date.

Good luck with your work. If you have any questions, please contact the Office of Research Compliance at 419-372-7716 or hrs@bgsu.edu. Please include your project title and reference number in all correspondence regarding this project.
This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Bowling Green State University Human Subjects Review Board's records.
DATE: November 28, 2012

TO: Alexandru Stefan

FROM: Bowling Green State University Human Subjects Review Board

PROJECT TITLE: [350130-5] "Where did you learn that? Pornography exposure as a predictor of adoption of risk behaviors" A dissertation proposal

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED

APPROVAL DATE: November 28, 2012

EXPIRATION DATE: June 27, 2013

REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 7

Thank you for your submission of Amendment/Modification materials for this project. The Bowling Green State University Human Subjects Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Modifications Approved:

Increase the number of participants to 670.

Please note that you are responsible to conduct the study as approved by the HSRB. If you seek to make any changes in your project activities or procedures, those modifications must be approved by this committee prior to initiation. Please use the modification request form for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. All NON-COMPLIANCE issues or COMPLAINTS regarding this project must also be reported promptly to this office.

This approval expires on June 27, 2013. You will receive a continuing review notice before your project expires. If you wish to continue your work after the expiration date, your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date.

Good luck with your work. If you have any questions, please contact the Office of Research Compliance at 419-372-7776 or hsrb@bgsu.edu. Please include your project title and reference number in all correspondence regarding this project.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Bowling Green State University Human Subjects Review Board's records.
Hello,

My name is Alex Stana and I am a doctoral student in the School of Media and Communication here at Bowling Green State University. As part of my dissertation project, I am interested in investigating the relationships between people’s use of sexually explicit media, their sexual behaviors, and their perception of their sexuality and other people’s sexuality. In particular, I am interested in learning the meanings people attach to sexually explicit media and their use for this type of media content. In order to study these variables, I am using several data collection methods, one being the diary method.

I am asking you to please keep the diary as the completion of this research project will benefit society by uncovering the mechanisms through which this contentious type of media – sexually explicit media, or SEM – may influence people’s behaviors. If you decide to participate, I will offer you a gift card to thank you for your participation. You will receive the gift card from me after the completion of the diary, and the instructor of your class will have no means of knowing if you participated in the study or not. Also, your participation is completely voluntary. This means that you can, at any given time, withdraw your consent and stop participating in the study, without having to provide an explanation and without incurring any penalty. Deciding to participate or not will not have any influence on your grades or on your relationship with your instructors and with Bowling Green State University.

BGSU HSIRB - APPROVED FOR USE
IRBNet ID #: 355130
EFFECTIVE: 06/21/2012
EXPIRES: 06/20/2013
Your participation will involve providing entries to a web-based diary. If you agree to participate, you will be asked to keep a diary over a period of four weeks. Ideally, you should have no less than two entries per week. I estimate that each entry should take between 5 and 10 minutes to complete. You should know that the anticipated risk of keeping the diary will not exceed those encountered in daily life. However, the possibility of experiencing emotional discomfort or distress as a consequence of keeping the diary cannot be completely ruled out. In the very unlikely eventuality that you experience any emotional unpleasantness or distress, I recommend that you contact the Department of Psychology's Psychological Services Center, BGSU's Counseling Center, or BGSU's Health Services. Contact information and telephone numbers of these services are provided at the end of this consent form.

As the diary is web-based, a link that will redirect you to the diary location is provided to you. The diary consists of 7 questions pertaining to people's use of sexually explicit material; specifically, the questions ask what motivates people to watch sexually explicit materials, how these materials make them feel about their sex lives, or how realistic sexually explicit material seems to be. I would like you to provide answers to these questions based on your experience, to the best of your ability, in the format provided here. You will be able to use the same link every time you make an entry. Also, you will receive a reminder every week via email.

Your participation is confidential, and your diary entries will remain anonymous. The diary format has been designed using SurveyMonkey.com. This website collects and stores data without providing me with any means to track answers back to a particular...
respondent. Two separate folders will be created on SurveyMonkey.com: one in which your answers will be stored, and a different one in which your email will be stored. This way I will know that a certain person submitted a diary entry, but at no point in time will I be able to match a participant's diary entries with his or her email address. Once the process of data collection is finished and participants who completed the diary have received the promised gift card, all email addresses will be removed from my database. In order to protect your privacy, please remember to clear your browser’s cache and page history after you have submitted the questionnaire.

During the process of keeping the diary, you may skip any question or subject that could make you uncomfortable. This research project will benefit the most if you provide answers to all questions that guide the diary, but please do so only to the extent to which you are comfortable and confident.

Finally, the diary is designed only for participants who are eighteen of age and older. If you are not eighteen yet, I ask you to not participate. Additionally, please email me and I will remove your email from the list of potential participants.

If you have any comments or questions regarding this research project, please contact me (Alexandru Stana) at astana@falcon.bgsu.edu or call me at 860-997-8347. You can also contact my advisor, Dr. Srinivas Melkote, at 419-372-9324 or at melkote@bgsu.edu. If you have any questions or concerns about your rights as a participant in this project, please contact the Chair, Human Subjects Review Board (HSRB) at hsrb@bgsu.edu or at 419-372-7716.
**Student Health Services**
116 Health Center Building, Ridge St., Bowling Green, OH 43402
Telephone: 419-372-2271

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<th>Counseling Center</th>
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Thank you for your time.

Sincerely,
Alexandru Siana

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Note: By clicking "next" you indicate that you are above 18 years old and that you voluntarily consent to participate in this research investigation.
Hello,

My name is Alex Stana and I am a doctoral student in the School of Media and Communication at Bowling Green State University. As part of my dissertation project, I am conducting a study about the relationships between people’s use of sexually explicit media, their sexual behaviors, their perception of their sexuality and other people’s sexuality, and their demographic characteristics (age and sex). In order to study these relationships, I have contacted via email a sample of BGSU undergraduate and graduate students. I received your email address either from the Office of Institutional Research or from your instructor.

I am asking you to please take the survey as the completion of this project will benefit society by uncovering the mechanisms through which a controversial type of media content may influence people’s behaviors. There is no monetary award for filling out this survey, but you could be eligible for extra credit points for your participation. In case you are eligible for extra credit but do not want to participate in the study, the instructor will provide you with an alternative way of earning an equal number of extra credit points. Your instructor will inform you how many extra credit points you will earn by taking the survey. If you are unsure if you are eligible for extra credit or how many extra credit points you will receive upon completion of the survey, please contact your instructor before taking the survey.

Your participation will involve providing answers to a web-based survey. I estimate that completing the survey will take, on average, between 15 and 20 minutes. You should know that the anticipated risks of taking the survey will not exceed
those encountered in daily life. However, the possibility of experiencing emotional discomfort or distress as a consequence of taking the survey cannot be completely ruled out. In the very unlikely eventuality that you experience any emotional unpleasantness or distress, I recommend that you contact the Department of Psychology's Psychological Services Center, BGSU's Counseling Center, or BGSU's Health Services. Contact information and telephone numbers of these services are provided at the end of this consent form.

If you do not complete the survey within seven days after you have received the first email, you will receive a second email asking you to do so. Finally, a third reminder will be sent out via email after another seven days after the second reminder. This means that you will be contacted up to three times over a period of fourteen days.

Your participation is confidential, and your responses will remain anonymous. The survey has been designed using SurveyMonkey.com, which collects and stores data without providing me with the means to track answers back to a particular respondent. SurveyMonkey.com will automatically generate two folders, one in which answers are stored, and a different one in which email addresses are stored. I will at no point in time be able to match respondents' names with their email addresses. Once the process of data collection is finished and the instructors are provided with the email addresses of students who opted to complete the survey for extra credit points, all email addresses will be removed from my database. In order to protect your privacy, please remember to clear your browser's cache and page history after you have submitted the questionnaire.

Your participation is completely voluntary. This means that you can, at any time, withdraw your consent and stop participating in the study, without having to provide
an explanation and without incurring any penalty. Also, deciding to participate or not will not have any influence on your grades or your relationship with your instructors or with Bowling Green State University. During the process of taking the survey you may skip any question that may make you uncomfortable. The present study will benefit the most if you provide answers to all the questions included in the survey, but please do so only to the extent to which you are comfortable and confident.

Finally, the survey is designed only for participants that are eighteen of age or older. If you are not eighteen or older, I ask you that you do not participate. Additionally, please email me and I will remove your email address from the list of potential participants.

If you have any comments or questions regarding this research project, please contact me (Alexandru Stana) at astana@falcon.bgsu.edu or call me at 860-997-0347. You can also contact my advisor, Dr. Srinivas Melkote, at 419-372-9324 or at melkote@bgsu.edu. If you have any questions or concerns about your rights as a participant in this project, please contact the Chair, Human Subjects Review Board (HSRB) at hsrb@bgsu.edu or at 419-372-7716.

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Bowling Green, OH 43403
Telephone: 419-372-2540

Thank you for your time.
Sincerely,
Alexandru Stana

Note: BY CLICKING "NEXT" YOU INDICATE THAT YOU ARE ABOVE 18 YEARS OLD AND THAT YOU VOLUNTARILY CONSENT TO PARTICIPATE IN THIS RESEARCH INVESTIGATION.