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Exploring the Relationships Between Pornography Consumption, Relationship Satisfaction, Relationship Beliefs, and Masculinity

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Philadelphia College of Osteopathic Medicine

Department of Psychology

EXPLORING THE RELATIONSHIPS BETWEEN PORNOGRAPHY
CONSUMPTION, RELATIONSHIP SATISFACTION, RELATIONSHIP BELIEFS,
AND MASCULINITY

By Benjamin Ryan Barnes Jr.

Submitted in Partial Fulfillment of the Requirements for the Degree of

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DEPARTMENT OF PSYCHOLOGY

Dissertation Approval

This is to certify that the thesis presented to us by Benjamin R. Barnes on the 11th day of May, 2017, in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

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Abstract

Pornography is widely available and consumed in the United States and worldwide. Despite pornography's wide spread use and expansions since the advent of the Internet, the psychosocial problems related to its use are not fully delineated. Previous studies have explored the relationship between pornography consumption and psychosocial variables such as sexual and physical violence against women, misogynistic beliefs, sexual callousness, acceptance of rape myths, and other problematic sexual beliefs and behaviors. Fewer studies have explored pornography use and its impact on relationship variables such as relationship satisfaction and beliefs about relational constructs such as intimacy, passion, and equality/independence. Furthermore, there are limited studies on how pornography consumption relates to constructs such as masculinity and body satisfaction among male users. The current study aimed to explore the relationship between these constructs, as well as further delineate pornography consumption by examining frequency, duration, method, subgenre, and perceived harm. One hundred fifty-six males were recruited from various northeastern universities and through online advertisements. Results demonstrated a significant negative relationship between pornography consumption and relationship satisfaction. Alternatively, body dissatisfaction and masculinity did not relate to pornography use or relationship satisfaction. Exploratory analysis indicated that pornography consumption was not related to perceived harm or opinions about intimacy, passion, or equality/independence. Research and clinical implications of the findings and future directions are discussed.

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Chapter 1: Introduction

Statement of the Problem

Pornography, commonly known as sexually explicit media that intend to elicit sexual arousal, has become widely available and consumed in the United States. The revenue for pornographic materials exceeded \$13 billion in the United States and \$100 billion worldwide in 2006 (Ropelato, 2007). To place its prominence in society into perspective, the revenue of the porn industry exceeded those of Google, Yahoo, Apple, Microsoft, Netflix, Amazon, and eBay combined (Ropelato, 2007). In a 2008 study, approximately 87% of college males and 31% of college females reported viewing pornographic materials at least once per month (Carroll et. al, 2008). For college males who viewed pornography, 50% reported consuming pornography at least once per week and 20% reported consuming every other day or daily (Carroll et. al, 2008). The World Wide Web has made pornography easier to obtain and consume by granting users anonymous access to a wealth of affordable and/or free pornographic materials (Cooper, Scherer, Boies, & Gordon, 1999). The United States Census Bureau (2014) estimates that 78.1% of Americans have access to high-speed Internet in their homes. Consequently, approximately 8 out of 10 Americans have unremitting and anonymous access to millions of pages of explicit content each day. Given the wealth and availability of pornographic materials, it is important to understand its potential effects on its users and society.

Despite pornography's widespread use and expansions since the advent of the Internet, the psychosocial problems related to its use are not fully delineated. Studies have examined pornography in relation to sexual and physical violence against women,

sexual callousness, misogynistic beliefs, acceptance of rape myths, and other problematic sexual beliefs and behaviors (Peter & Valkenburg, 2007; Zillmann & Bryant, 1984).

Unfortunately, there is less research available on the relationships between pornography consumption and functioning within dyadic romantic relationships. Researchers have found some relational problems that are correlated with high pornography consumption. For example, pornography consumption in males has been linked to risky sex behaviors such as having more sex partners and engaging in paid sex (Wright, 2013). According to the Center for Disease Control and Prevention (CDC; 2013), sex with multiple partners and/or commercial sex workers have been associated with an increased risk for contracting sexually transmitted diseases. In committed relationships, men who view pornography regularly are more likely to report less satisfaction in their relationships/marriages (Stack, Wasserman, & Kern, 2004). Satisfying intimate romantic relationships impact the lives of adults significantly. Moreover, healthy relationships are important to one's psychological adjustment and overall quality of life (Khaleque, 2004). Therefore, pornography's potential effects on relationship satisfaction are important to investigate and understand.

Although past studies have found a negative correlation between pornography use and relationship satisfaction, the theoretical framework for understanding this relationship is unclear and mixed within the literature. Most existing theoretical frameworks of this relationship suggest that pornography disseminates myths about sexuality. Moreover, men may acquire these beliefs through social learning. Social learning theory proposes that learning can occur through the observation of behaviors and the outcomes of those behaviors (Bandura, A. Ross, & S. A. Ross, 1961). Wright (2011)

proposed that pornography provides mental scripts that reinforce and glamorize noncommittal sex. Some evidence has shown a link between casual sex and psychosocial problems such as diminished well-being and psychological distress (Bersamin et al., 2014). Pornography rarely glorifies sex with relationship commitment. Instead, it has been found to glorify alternatives to committed relationships such as noncommittal sex, sex with multiple partners, and staying single, among other characteristics counter to commitment (Wright, 2011). Alternatively, research shows that healthy relationship functioning relies partly on the devaluation of relational alternatives (i.e., different partners, multiple partners, or staying single; Maner, Gailliot, & Miller, 2009). Nevertheless, following Wright's (2011) conceptualization, pornography depicts casual sex without relationship commitment as both normal and rewarding. Furthermore, males who view pornography frequently may learn to glorify noncommittal sex through social learning (Wright, 2011). As a result, individuals may be disenchanted with committing to monogamous relationships.

In addition to disseminating beliefs about sex, pornography often glorifies idealized or unrealistic body shapes and proportions. Researchers propose that men who consume pornography may become dissatisfied with their romantic relationships if their existing sexual partners do not meet these unrealistic expectations (Gwinn, Lambert, Fincham, & Maner, 2013). Albright (2008) found that men who viewed pornography were more likely to report more dissatisfaction with their partners' bodies compared to those who do not consume pornography. In addition, males who viewed pornography also reported having less sex with their partners compared to men who did not use pornography (Albright, 2008). In sum, pornography's depiction of unrealistic body

shapes may be linked to lower relationship satisfaction.

More of the existing literature on pornography focuses on the depiction of females than of males. Historically, females have been under greater pressure to adopt gender stereotypes such as unrealistic standards of beauty. Nevertheless, mainstream media also disseminates messages to males about how they should look, think, and behave. Media, including pornography, is a source of societal pressure for males to be mesomorphic (e.g., muscular, “husky,” or brawny; Hargreaves & Tiggemann, 2009). In addition to body shape expectations, media images also inform men on how they *should* behave. Mainstream media often encourage men to be strong, dominant, stoic, and predatory (Jhally, 1999). For example, renowned pick-up artists often use predatory means of obtaining sex from women. Males in most mainstream pornography typically have mesomorphic features and engage in dominant/aggressive behaviors. A content analysis of 45 free Internet pornography videos found that approximately 92% of the videos depicted female actors subjected to at least one degrading sex act. Furthermore, 33% of the videos depicted male actors having complete sexual dominion over female actors (Gorman, Monk-Turner, & Fish, 2010). Ultimately, pornography may send messages to males about how they should look and behave in a sexual context.

Research on the links between pornography consumption, gender-role identity, body image, and relationship satisfaction is sparse. Szymanski and Stewart-Richardson (2014) found that pornography consumption was positively related to hypermasculinity and avoidant/anxious attachment styles. In a study of hypermasculinity, body image, and relationship satisfaction, Daniel and Bridges (2013) found that hypermasculinity was the only variable that could predict relationship satisfaction. Alternatively, a recent empirical

study found that pornography use was positively linked to muscle and fat dissatisfaction and a greater likelihood of being anxious and/or avoidant in romantic relationships (Tylka, 2015). In a qualitative study, men reported using pornography as a frame of reference for their sexual performance and their ideal body types for themselves (Elder, Brooks, & Morrow, 2012). Tylka (2015) proposed that men who find they do not meet these established standards may feel inadequate and avoid intimacy.

Ultimately, there is evidence that pornography damages relationships because it glorifies alternatives to committed relationships, specific sex acts, and partners with unrealistic features. Nevertheless, some studies also suggest that pornography may provide men with scripts on how they should look and behave, which may also have a negative impact on relationship satisfaction.

Relevance to Mental Health Treatment

The relationships between pornography consumption, gender-role identity, and relationship satisfaction have important implications for mental health practitioners, especially those who work with men's issues. As pornography's popularity and consumption continue to rise, it is expected that mental health professionals will have more clients presenting with psychosocial issues related to pornography use (Ayers & Haddock, 2009). Specifically, research in this area can be useful for practitioners who work with men who may have difficulty seeking and maintaining intimate adult relationships due to maladaptive beliefs about gender, sexuality, and/or relationships. Unfortunately, many mental health practitioners are not educated on issues related to pornography use (Ayers & Haddock, 2009). Therefore, it is important for mental health professionals to understand these issues so that they can better serve their clients.

Chapter 2: Literature Review

Pornography: History and Consumption

History, legalization, and dissemination. Even before its legalization and expansion, pornography has been both prevalent and controversial. Sexually-explicit representations of human sexuality have been a part of almost all ancient and modern societies. The primitive petroglyphs from the prehistoric world depicting sex and genitalia, the Venus figurines of the Stone Age, and the erotic Roman artwork excavated from the ancient city of Pompeii in the 1860s are all examples of how sexually explicit depictions have proliferated societies for thousands of years. Earlier depictions of sexuality were largely cultural and religious in nature and it was not until the Victorian era that the modern concept of pornography came to light.

The term *pornography* is derived from the Greek word *pornographos*, which translates to “writing about prostitutes.” Although the etymology of pornography is clear, its definition has been debated both scientifically and legally. Supreme Court Justice Stuart Potter famously said, “I know it when I see it” (*Jacobellis v. Ohio*, 1964, p. 197) when referring to pornography. This comment is analogous to the subjectivity and discretion used by researchers when defining pornography (Hald, Seaman, & Linz, 2014). Consequently, the lack of a unanimous definition is a significant limitation in research on the subject (Manning, 2006). For the purpose of this study, pornography is defined as sexually explicit media (sexualized media such as videos, images, and sexual Internet encounters, such as live camera videos and sexual messaging) that intend to elicit sexual arousal.

The content of pornography has always been more controversial than its

definition. Historically, pornography has been banned and criminalized in certain regions due to cultural and religious ideology. Even today, there are some countries/areas where pornography is illegal. England was the first country to criminalize pornography through the Obscene Publications Act of 1857. Over 100 years passed before Denmark became the first country to legalize pornography. Within this small Scandinavian country, sexually explicit text/written materials were legalized in 1967 and visual forms of pornography were legal by 1969. John Cleland's erotic novel *Fanny Hill* (published in 1748, and known as the first pornographic novel in English prose) is an early example of pornography's legal and social controversy. Its lascivious content led to a stormy backlash in which the author and publisher were arrested. *Fanny Hill* became one of the most widely banned books in history. When *Fanny Hill* arrived to the United States, it was banned initially, and was the center of the first obscenity court case in the United States.

The issue of obscenity continues to be controversial due to its implications of the First Amendment of the *United States Constitution*, the freedom of speech and the press. As it stands, most forms of pornography are legal in the United States so long as the material adheres to laws of obscenity and child protection. For example, according to the Child Protection and Obscenity Act (1998), producers of original pornographic content must keep records proving that individuals depicted are aged 18 or older. As it stands, it is illegal to either distribute or possess visual child pornography (visual sexual depictions of minors). With regard to obscenity, pornographic material can be deemed obscene and subsequently regulated if it meets the criteria set by the Miller test. The Miller test is a tripartite standard that courts use to determine whether something is obscene. Anything

deemed obscene is not protected under the First Amendment. This test was established by *Miller v. California* (1973). The Miller test is as follows:

(a) whether “the average person, applying contemporary community standards” would find that the work, taken as a whole, appeals to the prurient interest, (b) whether the work depicts or describes, in a patently offensive way, sexual conduct specifically defined by the applicable state law, and (c) whether the work, taken as a whole, lacks serious literary, artistic, political, or scientific value. If a state obscenity law is thus limited, First Amendment values are adequately protected by ultimate independent appellate review of constitutional claims when necessary. (*Miller v. California*, 1973, p. 24-25).

The Miller test has been largely criticized due vague expressions such as “the average person” and “community standards.” Because this law is based on “community standards,” material may be deemed obscene in one part of the country but not another. In most cases, pornography may be deemed “indecent” but not illegal since it is protected by First Amendment rights; however, if the material meets the criteria for obscenity, the distribution of the content can result in criminal or civil punishment. Alternatively, obscenity laws only apply to the distribution of materials and not the possession of them. Due to privacy laws, individuals may possess obscene materials so long as they do not distribute them as outlined in *Stanley v. Georgia* (1969). In sum, most pornography is legal in the United States and can be distributed freely to patrons over age 18.

By the 1970s, pornography reached economic relevance with the advent of the videocassette recorder. Its economic and scientific relevance further expanded in the 1990s during the Information and Communication Technology (ICT) revolution

(D'Orlando, 2011). Pornography continued to expand after the diffusion of other home-video mediums such as the Video Home System (VHS), digital versatile disc/digital video disc (DVD), movie rentals, and pay-per-view services. The Internet further expanded the scope and availability of pornography. This expansion has prompted researchers in disciplines such as economics, psychology, sociology, and anthropology to study pornography and its effects on society. Pornography has been researched in terms of its effects on user attitudes and behaviors; the effects that it has on its actors, models, and performers; and its effects on society as a whole (Hald et al., 2014).

Subgenres in pornography. Although many studies assess for frequency of pornography use, studies rarely ask participants to identify the type of pornography that is being consumed. Although professional pornography (i.e., pornographic material that is mass-produced by large studios) typically features actors with idealized features, Internet pornography is very diverse. Pornography can be categorized based on the sexual content and characteristics of the performers. Soft-core pornography tends to be less sexually explicit than hardcore pornography. Pornography has been categorized by various factors including age of the actors/models, race, body types/shape, and sexual acts. For example, pornography that depicts sex between members of different racial groups/ethnicities is categorized as “interracial.” Pornographic representations of women with larger body types (full-figured, overweight, or obese) are dubbed “BBW” (big beautiful women). In addition to performers’ characteristics, pornography is labeled based on the sexual acts. For example, “BDSM” pornography depicts acts of bondage and sadomasochism. Hence, pornography can consist of a range of sexual images or actions ranging from gentle lovemaking to rigorous sex involving violence and rape.

Despite pornography's diversity, only a small number of studies in pornography have explored the different categories/types of pornography. One study found that the use of paraphilic material was positively associated with poor relational problems, whereas those who consumed "mainstream" forms of pornography reported minimal to no intimacy issues (Štulhofer, Buško, & Landripet, 2010).

Despite the diversity in content, the same problems with traditional media may exist in the current Internet age. The Internet has not only made pornography anonymous, accessible, and affordable, it also allows users to upload their own content through websites such as Youporn.com. This form of pornography is now categorized commonly as "amateur" pornography. It could be argued that this allows for the depiction of average or realistic body types; however, Manning (2006) argued that individuals who upload content may use professional pornography as a guide for how they behave in their videos. Manning (2006) further suggested that sex on camera is still a "performance," which is likely to be guided by beliefs of what constitutes pornography. It is also important to note that some professional studios may advertise and label their content under the "amateur" category to appeal to consumers of this genre. Nevertheless, amateur pornography websites typically have a wealth of new content added daily that is loosely regulated. Webmasters cannot feasibly monitor and approve all of the content that people upload. Consequently, individuals visiting these sites could encounter illegal material or criminal activities such as rape or child pornography.

The diversity in pornography may also increase its addictive quality. Consumers can obtain very specific types of pornography that match their individual interests. Although this was possible before the Internet age, the selection on the Internet is vast

and accommodating. Therefore, there is a need for more research that examines the subtypes/categories of pornography as opposed to focusing exclusively on frequency/duration of consumption.

Popularity and function. With pornography's wide availability and various subtypes, its content can appeal to a vast audience. In a 2008 study, approximately 87% of college males and 30% of college females reported viewing pornographic materials at least once per month (Carroll et al, 2008). The number of video rentals featuring hardcore pornography increased from 75 million in 1986 to 665 million by 1996 (Stack et al., 2004). The Internet swiftly expanded the availability of pornography. There were approximately 900 pornographic websites in 1997. Conversely, that number had grown to between 20,000 and 30,000 by 1998 (Stack et al., 2004). By the late 1990s, Internet pornography had amassed \$700 million in revenue (Stack et al., 2004). In sum, pornography is a growing industry and its popularity only grew since the dawn of the Internet.

Behavioral theories such as classical and operant conditioning may explain why pornography is potentially rewarding and habitual. Classical conditioning, also known as Pavlovian conditioning, is a behavioral modification technique in which an innate response to a natural/ biological stimulus is elicited by a previously neutral stimulus through pairing with the biological stimulus. Through classical conditioning, pornography is initially a neutral stimulus, sexual activity (typically masturbation) becomes the unconditioned stimulus and orgasm/gratification is the unconditioned response. After repeated pairings with pornography, pornography becomes associated with orgasm. Through operant conditioning, a procedure in which learning occurs

through consequences/contingencies, pornography becomes a rewarding and repeated activity. Conditioning theories have led researchers to posit that habitual pornography users may eventually need to engage in progressively more deviant/extreme forms of pornography to achieve the same reward/excitement (Cameron & Frazer, 2000; Maric & Barbaree, 2001). Specifically, according to conditioning theories, individuals habituate to the material and will need to graduate to stronger stimuli or modify their behaviors to mirror the pornographic content (Laws & Marshall, 1990). This pathway is comparable to increases in tolerance observed in substance abuse and dependence.

In addition to behavioral theories, researchers have identified several personal and relational factors that may contribute to pornography consumption. Research suggests that pornography is used for a variety of reasons, including fun/entertainment, curiosity, education (sexual learning), sexual tension relief, a prelude to sexual activity, or to intensify masturbation or sex (B. Paul & Shim, 2008; Sabina, Wolak, & Finklehor, 2008). The functions and use of pornography are often different among males and females. B. Paul and Shim (2008) found that males report using pornography for fantasy, boredom, mood management, and relationship issues. Females are more likely to use pornography with their partners as a means to enhance lovemaking (Bridge & Morokoff, 2011; Hald, 2006). Overall, pornography can serve a variety of functions and there is evidence of significant gender differences. For males, pornography appears to be used for autoerotic sexuality. Alternatively, females tend to use pornography for both autoerotic sexuality and to enhance their sexuality in the context of their relationships/dyads.

Although individuals use pornography for a variety of reasons, others may come across sexually explicit materials unintentionally. The Internet has not only increased

pornography's accessibility for intentional use, it also provides a medium for inadvertent exposure to pornography. Inadvertent exposure is defined as coming into contact with pornographic material (e.g., naked bodies or people engaged in sexual acts) while surfing websites, opening e-mail, opening links, or conducting online searches (Mitchell, Finkelhor, & Wolak, 2003). Inadvertent exposure is relevant because individuals do not need to seek out pornography to be subjected to its potential allure and effects. Internet advertisements and peer-to-peer file sharing applications are two ways individuals can be exposed to pornographic material without intent.

As discussed, the Internet provides an anonymous venue for individuals to consume sexually explicit material. Moreover, studies in deindividuation suggest that individuals are more likely to engage in antisocial behaviors when they feel anonymous (Milgram, 1963; Zimbardo, 1969). Joinson (1998) argued that feelings of anonymity may prompt individuals to pursue sexually explicit materials due to the process of deindividuation. Specifically, they ignore social cues (such as the social stigma of using pornography) and respond to more appetitive cues (Joinson, 1998). The literature in this area further supports this notion. For example, using a sample of male university students, Shim and B. Paul (2014) conducted a study using a 2 x 2 design. Participants were given laptops and placed in isolation. Initially, they were told to find an online research article before being asked to complete an online survey. They were randomly assigned to be in situations to evoke feelings of anonymity (i.e., the researchers told them that their online activity would not be monitored and that they should research as they would at home) or situations that made them feel identifiable (i.e., they were told that their computers had webcams and pre-installed software to monitor their Internet

activity). They were then randomly assigned to receive a 10-second pop-up commercial depicting either neutral material or hardcore pornography. At the end of the advertisement/commercial, they were asked if they wanted to view any of the following: soft-core pornography, hardcore pornography, or non-sexual materials. After the participants made their selection, the study ended and they were debriefed. Shim and B. Paul found that participants were more likely to pursue hardcore pornography when they felt anonymous. In summation, the combination of anonymity and availability appears to make pornography particularly palatable to users, even when they do not initially intend to consume.

With both intentional and unintentional exposure, it is clear that pornography has become embedded in American society. *New York Times* editor and writer Pamela Paul (2005) has argued that America has become *pornified*, meaning that pornography and its associated messages are prevalent and influential in shaping people's views on gender and sexuality. Although pornography continues to be debated, there is ample evidence that pornography impacts society significantly. For example, in the fall of 2014, several members of the Pennsylvania general attorney's office and judiciary branch were forced to resign after passing sexually explicit e-mails back and forth to each other (Hollingsworth, 2016). This event became known as the *Porngate Scandal*, and it is a prime example of how pornography has become influential in, and sometimes destructive to, people's lives.

Pornography and Major Controversies

Pornography addiction. The concept of pornography addiction has been debated widely in its definition and conceptualization. To date, there is no specific

diagnosis for problematic pornography use. Pornography and other behavioral or process addictions have been excluded historically from *Diagnostic and Statistical Manual of Mental Disorders (DSM)* publications. *DSM-5* states, “At this time there is insufficient peer reviewed evidence to establish the diagnostic criteria and course descriptions needed to identify these behaviors as mental disorders” (American Psychiatric Association [APA], 2013, p. 481). Conceptually, problematic sexual behaviors such as excessive pornography have been categorized as either impulsive, compulsive, or addictive (Kor, Fogel, Reid, & Potenza, 2013). Despite the lack of consensus regarding a clear conceptualization, individuals who exhibit behavioral addictions like pornography use often characteristics observed in individuals with other behavioral or substance based disorders. These features may include frequent and compulsive use, strong urges before consumption, diminished sense of control over the urges, and continued engagement despite personal distress (Potenza, 2006). Regarding treatment, some compulsive pornography use/addiction research suggests that this issue could be treated with motivational interviewing, cognitive behavioral therapy (CBT), and acceptance and commitment therapy (ACT). Overall, the research is limited, and most studies have categorized pornography use with other sexually compulsive or a problematic online behaviors.

Motivational interviewing. Motivational interviewing is a person-centered treatment modality used to increase motivation and facilitate behavioral change through various interventions, including eliciting change talk, values clarification, and identification of strengths and resources (Miller & Rollnick, 2012). The utility in using motivational interviewing strategies is well documented for substance abuse populations

(Anton et. al, 2006). Giudice and Kutinsky (2007) used motivational interviewing successfully to treat sexually compulsive behaviors such as chronic masturbation, pornography use, and problematic anonymous sex. This study focused on case examples and did not use an experimental design. Giudice and Kutinsky (2007) also noted that clinical judgment and additional interventions should be used to supplement treatment.

Cognitive behavioral therapy. Research on the effectiveness of CBT has shown some promise. Young (2007) posited that individuals who suffer from negative core beliefs may be drawn to the anonymity of the Internet to overcome their perceived personal inadequacies. Furthermore, individuals who demonstrate problematic use may engage in rationalization and/or permission-giving beliefs such as “a few minutes more won’t hurt” (Young, 2007; p. 673). From the behavioral perspective, interventions focus on reducing problematic Internet behaviors while retaining controlled Internet/computer use for legitimate reasons. This is distinctive from abstinence models because computers and Internet use have become such a salient aspect in daily life (Young 2007). It is unreasonable to expect individuals to stop using computers or the Internet altogether; thus, the goal is to reduce the specific problematic behaviors. For pornography, this may entail installing software designed to block pornographic content. Young (2007) examined the effectiveness of CBT for pornography addiction through surveying men who had undergone CBT treatment for pornography addiction. Overall, the results indicated that these interventions were effective; however, experimental methods are still lacking in this area.

Acceptance and commitment therapy. Thus far, the treatment of problematic pornography consumption has had limited controlled trials. ACT falls under the umbrella

of CBT, and focuses on the acceptance of inner experience (i.e., thoughts, feelings, and physiological sensations) and uses behavioral strategies to modify maladaptive behaviors. ACT has been found to be an effective treatment for a variety of mental health disorders (Hayes et al., 2006). Twohig and Crosby (2010) conducted an experiment using ACT to treat problematic Internet pornography consumption with six adult males who endorsed problematic pornography viewing. Participants had an 85% reduction in viewing at post-treatment and 83% maintained their progress at a 3-month follow-up.

In sum, pornography addiction continues to face challenges in nosology and conceptualization. Although some research has shown support for interventions/therapeutic modalities such as motivational interviewing, cognitive restructuring, behavioral modification, and value clarification/acceptance, the study and treatment of problematic pornography must be further explored.

Pornography and sexual violence. Much of the existing research covering the harmful effects of pornography have focused on pornography's role in sexual violence. Infamous serial rapist/killer Ted Bundy requested a final interview with James Dobson before his execution in 1989. In the interview, he warned the world about the dangers of violent hardcore pornography and discussed how his consumption contributed to his heinous crimes. During the interview, he stated,

I'm not blaming pornography. I'm not saying it caused me to go out and do certain things. I take full responsibility for all the things that I've done. That's not the question here. The issue is how this kind of literature contributed and helped mold and shape the kinds of violent behavior. (Dobson, Bundy, & Focus on the Family Films, 1989)

The notion that pornography use can lead to sexual violence has been controversial because it is difficult to isolate causal links between pornography use and sexually violent behavior. Theoretically, individuals can acquire maladaptive behaviors through observational learning. In the context of pornography, social learning theory suggests that pornography can influence attitudes, beliefs, and behaviors because it provides role models and scenarios in which certain behaviors, images, and attitudes are normalized and reinforced. An early study found that males who engaged in date rape reported that they read sexually explicit magazines, such as *Playboy*, *Hustler*, *Penthouse*, *Chic*, *Club*, and *Genesis*, “very frequently” (Warshaw, 1988). Another study found that 40% of abused women reported that their partners used violent pornography (Cramer & McFarlane, 1994). Furthermore, 53% of those women were asked or forced to act out pornographic sex scenes (Cramer & McFarlane, 1994). Although this correlation cannot infer a causal link between these two variables, that study showed that there is some connection between sexual violence and use of sexually explicit material.

The notion that pornography leads to sexual violence has been criticized because there are proportionately low rates of overt sexual violence despite pornography’s widespread use (M. S. Kimmel & Linders, 1996). Shortly after the legalization of written and visual pornography, the rate of violent sex crimes actually decreased (D’Amato, 2005; Kutchinsky, 1991). This led some researchers to believe that pornography was not harmful. Moreover, some even proposed that pornography might serve as a healthy sexual outlet for individuals and be a buffer against real life violence (D’Amato, 2005). From this perspective, individuals use pornography to get prurient impulses “out of their systems” so that they do not act them out in real life. Cook, Fosen, and Pacht (1971)

found that their sample of sex offenders consumed less pornography before their sex crime/incarceration compared to a sample of non-offender college students.

The idea that pornography can serve as a buffer against acting out on inappropriate and antisocial sexual impulses is supported by the Sexual Communication Model (SCM). The SCM suggests that pornography is a natural consequence of human sexuality and is, essentially, harmless. From this perspective, pornography is merely the modern version of sexual expression, just as ancient erotic paintings and sexual relics of the past were the artistic expressions of sexuality during those respective times. Proponents of the SCM believe that the average person has the ability to recognize pornographic material as fictitious and exaggerated forms of sexual behavior (Hald et al., 2014). Furthermore, the SCM suggests that pornography can serve as a safe space to explore prurient urges without acting on them. Overall, not only does the SCM adopt a benign view of pornography, the theory implies that pornography could serve as a surrogate for real-world sexual offences.

Opponent models of the SCM are the Sexual Callousness Model (SCAM) and the Violent Desensitization Model (VDM). The SCAM suggests that repeated exposure to pornography causes individuals to internalize the attitudes, opinions, morals, values, and behaviors depicted in the material (Hald et al., 2014). The SCAM assumes that consumers of pornography lack the cognitive abilities to recognize the fictitious and exaggerated nature of pornography. The VDM suggests that individuals become desensitized to sexual violence due to repeated exposure to pornography. Opponent views of the VDM argue that interest in violent pornography may be a reflection of preexisting tendencies of violence toward women. This is synonymous to the ongoing

debate about media violence and its relation to real violence. It may be that individuals with a predisposition for violence may be drawn to violent material.

Although the Internet has created a space in which a wide variety of pornographic content is accessible, the majority of users may not be viewing pornography with violence or nonconsensual sex. Dr. Bernie Zilbergeld, author of *The New Male Sexuality*, stated, “As for violence, the vast majority of erotic films and other materials contain none. You are far more likely to see a murder or rape and other kinds of mayhem in PG-13 or R-rated movies” (Zilbergeld, 1999, p. 78). Multiple studies have found that only a small percentage of consumers report consuming violent pornography (Hald, 2006; Štulhofer et al, 2010; Ybarra, Mitchell, Hamburger, Diener-West, & Leaf, 2011). Nevertheless, mainstream pornography contains degrading sex acts. Klaassen and Peter (2015) conducted a content analysis of popular online professional and amateur pornography (400 videos that received between 300,000 to 52,600,000 Internet views) and found that violence (except for gagging and spanking) and nonconsensual sex were relatively rare. They found that women tended to be objectified (i.e., women were depicted as instrumental for sex) and submissive, whereas men were depicted as being dominant.

The age of exposure to pornography may be a significant factor in the relationship between pornography and sexual violence. One study found that 93% of males and 62% of females are exposed to pornography before age 18 (Sabina et al., 2008). In the United States, the average age for initial exposure to pornography for males and females is around age 11 (Ropelato, 2007). Alternatively, the average age of pornography exposure in a sample of juveniles who engaged in sex crimes was 7.5 (Wieckowski, Hartsoe,

Mayer, & Shortz, 1998). It may be that the age of exposure to pornography is more relevant to the link between pornography and violence than frequency/duration of one's current use. As children develop, their understanding of gender and sexuality develop as well. Furthermore, pornography may be a notorious factor in shaping these beliefs.

Pornography and sexual attitudes. Although there is mixed research on the role pornography plays in sexual violence, there is a wealth of evidence that pornography consumption in males is associated with maladaptive sexual attitudes, including acceptance of the rape myth, misogyny, and callousness (Chapleau, Oswald, & Russell, 2007; Peter & Valkenburg, 2007; Zillmann & Bryant, 1984). Using a sample of adolescent males, Peter and Valkenburg (2007) found that adolescents who reported using pornography were more likely to view women as sex objects. Another study found that children and adolescents who reported being exposed to pornography tended to have negative views on women and relationships (Flood, 2009). In one study, participants were shown R-rated clips with scenes that objectified women (e.g., striptease scenes from the movies *Showgirls* and *9 1/2 Weeks*) and a control group was not shown anything (Milburn, Mather, & Conrad, 2000). After viewing the movie, participants were asked to read a fake magazine article about stranger and date rape, and were asked questions on their perception of it. Although neither group believed that the woman “got what she wanted (or deserved)” in the stranger rape scenario, those who viewed the R-rated videos were more likely to believe that the victim “got what she wanted (or deserved)” in the date rape scenario (Milburn et al., 2000). These results indicated that pornographic material—even in an R-rated film—can activate and reinforce social scripts in which a woman's pleasure is subordinate to a man's pleasure and that her role is to serve a man's

sexual desires (Milburn et al., 2000).

Methodologically, newer studies that investigate the relationship between pornography use and attitudes must rely on self-report, whereas earlier studies used direct exposure and observation to study the effects of pornography. Zillmann and Bryant (1984) found evidence to suggest that pornography consumption could directly influence beliefs and perspectives. The researchers had participants view 4 hours of videos in which either none of it was pornographic, half of it was pornographic, or all of it was pornographic. Three weeks later, the researchers asked participants questions regarding their support for women's liberation, whether pornography should be kept from children, their estimates of the prevalence of unconventional sex acts, and how much jail time someone should get for rape. Pornography consumption was associated with reduced support for the women's liberation movement, higher endorsement of the belief that pornography did not need to be kept away from children, and higher estimates of what percentage of the population engaged in sadomasochism, group sex, and sex with animals (Zillmann & Bryant, 1984). The groups that were exposed to pornography also recommended significantly less jail time for those who commit rape. Moreover, this effect was found for male and female participants and the results were maintained after a 3-week follow-up. This study was able to show a more direct relationship between pornography exposure and beliefs. Although their preexisting attitudes were not assessed beforehand, participants were randomly assigned into groups, which statistically reduced the chance that the groups were qualitatively different outside of the researchers' manipulation. If controlled laboratory exposure to pornography yielded such lasting changes in beliefs, these effects may be more pervasive with long-term and repeated use.

Researchers were permitted to directly expose participants to pornography in a controlled environment. Because there is evidence that pornography is potentially harmful, replicating such studies today would be unethical. Nevertheless, these results provide supportive evidence that pornography consumption can influence one's beliefs and perspectives.

In summation, there is both correlational and experimental evidence that pornography consumption can affect attitudes and beliefs about gender and sexuality. Although experimental evidence gives greater support for a causal link between pornography consumption and belief/behavior change, it would be unethical to replicate earlier studies due to the wealth of research that elucidates associated risks. Ultimately, it is likely that correlational and observational methods will continue to be used to study these issues.

Gender Roles and Media Influences

Gender roles. To further explore how pornography relates to beliefs about gender, it is important to define gender roles and explore their development. Males and females typically adopt distinct gender roles through experiences and rules within their societies and cultures. Gender roles are defined by the behavioral patterns that males and females are expected to adopt in order to comply with the expectations of their societies. Each society has a set of behaviors, attitudes, and/or personality characteristics that are deemed normal and acceptable. In Western societies, females are typically expected to play a communal role (i.e., nurturing, emotionally sensitive, and oriented to social connectedness) and males are expected to play an agentic role (i.e., an orientation toward action, achievement, dominance, and leadership). Although there have been some

changes to these notions (e.g., more women entering the workforce and progressions within women's rights/liberation movements), these gender role beliefs and expectations continue to proliferate in this society.

Messages about gender and sexuality are not only disseminated through direct experience, but through media outlets as well. Media outlets send messages that insinuate "desirable" behavior, attitudes, and appearance. From the seemingly benign material in family-friendly movies to the salacious material in pornography, these materials arguably reinforce certain gender stereotypes. For example, in a sample of African American adolescents, exposure to music videos was positively associated with higher endorsement of more traditional gender role attitudes (Ward, Hansbrough, & Walker, 2005). This same phenomenon has been found in adolescents who view pornography. Brown and L'Engle (2009) found that early exposure to pornography among adolescent boys and girls was related to less progressive gender role beliefs, meaning that they were more likely to endorse or follow more traditional gender roles. Furthermore, pornography tends to have more effects on the gender beliefs of males, whereas mainstream media tends to influence females' gender role beliefs (Ward, 2003). Zurbriggen and Morgan (2006) speculated that males may pay more attention to pornography and females may pay more attention to mainstream media. Specifically, Zurbriggen and Morgan argued that sexuality in mainstream television might be too mild and/or feminized to maintain the attention of young males.

Masculine ideology. Research supports the notion that media, including pornography, may shape perspectives about gender and sexuality. But what does pornography say to the males who observe individuals of their own gender? Masculine

ideology is defined as attitudes toward traditional male roles that reflect individual beliefs about how men should behave across a variety of settings (Shearer, Hosterman, Gillen, & Lefkowitz, 2005). Traditional masculinity is marked by orientation toward achievement, high social status, toughness, anti-femininity, emotional inhibition, and dominance (Thompson & Pleck, 1986). As boys grow up, they receive messages about what it means to be men. These messages can come from parents/caregivers, teachers, friends, and media. Moreover, behaviors that are deemed “masculine” are rewarded and behaviors that are deemed feminine are punished socially. Experiences can shape male gender beliefs, which inform and shape masculine ideology. A qualitative study found that many fathers feel responsible for their sons’ sexuality. Consequently, fathers may strive to model heterosexuality and reinforce heteronormative behaviors (Solebello & Elliott, 2011). Alternatively, fathers tend to view their daughters as sexually passive and are more accepting of homosexuality of their daughters than they are of their sons (Solebello & Elliott, 2011). In sum, masculine ideology can be shaped within and outside of the home environment.

Masculine ideology has been associated with sexuality and sexual behaviors. For example, Pleck, Sonenstein, and Ku (1993) found that adolescent males who endorsed high masculinity ideology also tended to report having more sex partners and casual sex relationships, and were less likely to use condoms during sexual encounters. In a sample of college students, Shearer et al. (2005) found that masculine ideology was a predictor of risky sexual behavior. Furthermore, masculine ideology was a better predictor of risky sexual behavior (e.g., unprotected sex) than attitudes toward marriage and childrearing. Alternatively, Shearer et al. also found that higher endorsement of status norms (i.e.,

orientation toward success and achieving a high status in society) was associated with a lower probability of risky sex. Shearer et al. argued that the desire for high status could serve as a protective factor against risky sex behaviors. In sum, although some of the findings suggest that masculine ideology is harmful, there is also evidence that some domains of masculinity may be helpful.

Masculine ideology and ethnicity. Masculine identity is a complex concept that may have different implications depending on various cultural and psychosocial factors. For example, masculinity has unique nuances in the African American and Latino communities due to cultural and socioeconomic characteristics (Cassidy & Stevenson, 2005; Torres, Solberg, & Carlstrom, 2002). In one qualitative study, African American male participants viewed masculinity as a reflection of traditional Western masculine norms that are inhibited by psychosocial and systemic obstacles such as racism and oppression (Rogers, Sperry, & Levant, 2015).

Masculine ideology and sexual orientation. In addition to racial and ethnic influences, one's sexual identity can further complicate masculine ideology. Masculinity is diverse and nuanced among gay males because it has implications in both self-perception and mate selection. Many people tend to perceive gay men as feminine or, at least, less masculine than straight men (Maddon, 1997). Despite this stereotype, some gay males value traditional masculinity (Hennen, 2005). S. B. Kimmel and Mahalik (2005) argued that some gay men might even overcompensate for stereotypical public perceptions through hypermasculinity and striving for a muscular physique. Masculinity not only plays a role in how gay males view themselves, but it may also be a factor in mate selection and sexuality. In a study of gay personal ads, Bailey, Kim, Hills, and

Linsenmeier (1997) noted that some gay men described themselves in masculine terms such as “dominant,” “straight-acting,” or “jock.” Moreover, many gay men indicated clear preferences for masculine men over feminine men. In sum, sexuality is yet another complicating factor in understanding masculinity.

Media and body dissatisfaction in men. In addition to media messages about distinct standards of masculinity, there are also media and social pressures for males to be mesomorphic (i.e., having greater than average muscle composition). Moreover, failure to obtain an ideal body type can lead to body dissatisfaction. Body dissatisfaction is defined as the divergence of one’s perceived and ideal body shapes (Grogan, 2006). Historically, media depictions and body dissatisfaction have been studied primarily in females. In a 2008 meta-analysis, Grabe, Ward, and Hyde (2008) found that mass media exposure to the “thin ideal” (i.e., the idea that thinness is a desirable, attractive, and acceptable trait for females) was linked to internalization of the thin ideal, body dissatisfaction, and problematic eating behaviors. Furthermore, Grabe et al. found mild to moderate effect sizes among the 77 studies they analyzed. Although the focus has been on females, there is evidence suggesting that body dissatisfaction in Western men has tripled within the past 25 years (Victorian Government, 2009). Body dissatisfaction among males is a relevant issue for men because it has been associated with problematic eating, steroid use, depression, and low self-esteem (A. E. Field et al., 2005; Olivardia, Pope, Borowiecki, & Cohane, 2004). Depictions of the ideal male body have been increasingly prevalent in modern society. The increase in body dissatisfaction may be linked to growing pressure from media sources for males to be mesomorphic. For example, Pope, Olivardia, Borowiecki, and Cohane (2001) found that the proportion of

undressed men in commercials increased from 3% in the 1950s to 35% by the 1990s. Pornography typically features males with mesomorphic features. Moreover, research suggests that there is some link between pornography consumption and body dissatisfaction. Tylka (2015) found that males who used pornography had a greater dissatisfaction with their body image were more likely to engage in dieting and other weight loss activities. Furthermore, she found that pornography consumption was related to the idealization of the mesomorphic body shape.

Many studies on body dissatisfaction in men have focused on muscularity. Fewer studies have examined the role that pornography plays in satisfaction with their genitalia. Penis size satisfaction has been associated with better erectile function and lower levels of premature ejaculation (Ålgars et al, 2011). Furthermore, penis size dissatisfaction has created a lucrative market of penis enhancement products and potentially risky procedures. Lever, Frederick, and Peplau (2006) argued that repeated exposure to pornography might cause men to overestimate the average penis size. Furthermore, pornographic depictions typically equate large penis size with masculinity (Lever, Frederick, & Peplau, 2006). Lever et al. found that only 55% of men were satisfied with their penis sizes, with 45% reporting that they wanted to be larger and only 0.2% reporting that they wanted to be smaller. Alternatively, 85% of women reported being satisfied with their partners' sizes, which suggests that men may be endorsing sexual insecurities that are not corroborated with their partners. Furthermore, men who reported having a larger than average penis size tended to rate their overall appearance more favorably. Sun, Bridges, Johnason, and Ezzell (2014) found that pornography consumption was linked to sexual insecurities, including insecurities about one's penis

size. In sum, more research is needed in this area because few studies have explored this variable given the pervasive trend for pornography to exhibit larger than average penises.

Body image and ethnicity. As with masculine ideology, body image can be shaped by various cultural factors, such as ethnicity. For example, research has shown that African American females tend to feel less pressure to be thin than their White counterparts (Shoneye, Johnson, Steptoe, & Wardle, 2011). Some studies have found that African Americans are more accepting of larger body types and have a higher acceptable weight threshold (Delores et al., 2012; Rucker & Cash, 1992; Ward, Gray, & Paranjape, 2009). Moreover, larger body types are sometimes glorified and described as “thick” or “voluptuous” rather than “fat” or “obese” among African Americans (Delores et al., 2012). Few studies have examined body image issues in males, and even fewer have examined ethnic nuances in male body image. In one longitudinal study completed with a college sample, males and females did not find any significant differences in body image development between African American, European American, or Latino American individuals (Gillen & Lefkowitz, 2012).

Although little research has been done on men’s subjective view of their body images, some research has found specific ethnic differences in perceptions of male attractiveness. Male attractiveness has been found to be related to factors such as BMI, waist to hip ratio, and waist to chest ratio (Swami & Tovée, 2005). In their investigations, Swami and colleagues (2007) found that Greek women tended to prefer men with smaller body types than their British counterparts. The authors proposed that Greek women are particularly impressed with males who are smaller due to a higher rate of obesity in Greek males. (Swami et al., 2007).

Body image and sexual orientation. Aside from ethnic differences in body

image in males, there is also evidence that sexual orientation may serve as another factor that could influence body image. McArdle and Hill (2009) found that gay men tend to report a smaller ideal weight and endorse more body dissatisfaction than their straight counterparts. Gay men may also experience unique pressures around penis size due to emphasis placed on the body in some gay cultures and the “double presence” of the penis in gay sexual encounters and relationships (Drummond & Filiault, 2007, p. 122). One explanation of this difference between straight and gay males is that many gay cultures may place greater importance of physical appearance (Levesque & Vichesky, 2006).

Other theories of gay masculinity revolve around the notion that gay men are trying to attract male partners and striving for masculinity and a muscular physique are ways to entice potential partners (Martins, Tiggemann, & Kirkbride, 2007). Gay men may place greater emphasis on physical appearance because of their desires to attract other males who use visual cues in mate selection (Siever, 1994). Finally, a drive for muscularity may also serve as a protective factor for gay men. It is well documented that male sexual minorities are at risk for emotional and physical abuse through hate crimes and discrimination (Herek, Gillis, Cogan, & Glunt 1997; Pascoe, 2011). Gay men may also be motivated to build strong bodies in response to these social and environmental threats. In summation, both body dissatisfaction and a greater drive for muscularity may explain why gay and bisexual men make up 10% to 42% of males with eating disorders (Russell & Keel, 2002).

Although studies have found that gay males report higher body dissatisfaction than straight males, this may not be the case for all subcultures within gay culture. The gay community is comprised of a variety of subcultures, some of which have unique

beauty standards and ideologies. For example, men with a larger or even overweight build may be labeled as a “bear” or “cub.” Standup comedian Margaret Cho has been a prominent figure in the lesbian-gay-bisexual-transgender-questioning (LGBTQ) community. In her standup comedy special entitled *Margaret Cho: Beautiful*, she stated, “When you hang out with bears, you know you are going to eat” (Mochado, 2009). Her joke implied that men affiliated with bear culture are proud of their larger figures and will be less likely to adhere to strict diets compared to gay men of other subgroups.

Moreover, some argue that bear culture is a direct resistance against the lean and/or muscular body standards of other gay subcultures (Hennen, 2005). Regarding ideology, men affiliated with bear culture tend to reject body shaming, embrace larger body types and body hair, favor camaraderie over competition, and favor traditional masculinity (Hennen, 2005).

In sum, past research has focused on the depiction of women in pornography; it is possible that the depiction of males is harmful as well. Although the construct of body dissatisfaction may be influenced by cultural variables such as race, ethnicity, and sexual orientation, pornography may be another medium in which males are presented with potentially negative or harmful images and messages about “ideal” body shapes.

Conversely, pornography has become more inclusive through subgenres and/or amateur forms that depict a wide range of body types. This evolution may reveal that “ideal” body shapes are diverse and not uniquely constricted within sexually explicit media.

Pornography Consumption and Romantic Relationships

There is evidence that the depiction of males and females in pornography is somehow damaging to interpersonal relationships. With men, pornography consumption

has been linked to lower relationship satisfaction (Stack et al., 2004), lower sexual satisfaction (Wright, 2013; Štulhofer et al., 2010; Zillmann & Bryant, 1988), lower satisfaction with the body of one's partner (Albright, 2008), and negative beliefs about monogamy (Wright, 2011; Wright, Tokunaga, & Bae, 2014). Unfortunately, extraneous variables may have influenced these findings. Furthermore, since correlational relationships do not support causation between variables, it is possible that a reverse correlation exists and these variables precipitate pornography consumption. For example, it could be that pornography consumption led to lower satisfaction, as the researchers suggest. Alternatively, individuals may be using pornography to fulfill unmet needs (e.g., from unsatisfying relationships, sexual addiction/problems, curiosity, or partners refusing to engage in specific sex acts). Moreover, pornography is not the only outlet that disseminates information about gender, sexuality, and relationships. For example, Ward (2002) found that exposure to sitcoms may influence romantic beliefs.

Furthermore, exposure to sexual music videos has been linked to greater endorsements of sexual double standards and more permissive beliefs regarding premarital sex (Zhang, Miller, & Harrison, 2008). Consequently, it is difficult to isolate pornography consumption as an influential agent in shaping beliefs about gender and sexuality when considering other media sources.

Thus, findings from earlier studies involving direct exposure to pornography better isolate pornography consumption as the variable that influences outcome variables, such as effects on interpersonal relationships. In an early study by Zillmann and Bryant (1988), college students exposed to nonviolent pornography videos over the course of several weeks reported significantly less sexual satisfaction with their intimate partners in

regard to their partners' physical appearances, sexual performance, affection, and sexual curiosity. In addition, the experimental group attributed more importance to sexual activity with diminished emotional involvement. Ultimately, there is correlational and some limited experimental studies suggesting a link between pornography consumption and relationship variables. The current study focused mainly on the relationship between pornography consumption and relationship satisfaction.

Relationship satisfaction. To understand how pornography affects relationship satisfaction, it is important to define and explore the concept. Early studies have shown that secure relationships require commitment, trust, interdependence, and satisfaction (S. S. Hendrick, C. Hendrick, & Adler, 1988; Simpson, 1990). The latter concept, relationship satisfaction, has been studied widely over the past 20 years due to its implications for personal well-being, social functioning, and quality of life (Bradbury, Fincham, & Beach, 2000). Relationship satisfaction is defined as one's subjective evaluation of positive feelings toward one's romantic relationship and partner (Rusbult & Buunk, 1993). Historically, studies in relationship satisfaction have focused on heterosexual married couples (marital satisfaction). Today, it is important to recognize that relationships are diverse and can include individuals who are unmarried, cohabiting, in same-sex relationships, or have other types of nontraditional relationships (Graham, Diebels, & Barnow, 2011).

Secure and satisfying romantic relationships are important to adult quality of life. Individuals who are in committed relationships or married are more likely to have better physical and mental health than those who live alone or are not in committed relationships (Beach, Katz, Kim, & Brody, 2003; Kaplan & Kronick, 2006). The link

between relationship satisfaction and suicide risk further emphasizes the importance for adults to cultivate and maintain satisfying romantic relationships. Generally, suicidal behavior is multifactorial, as it often results from a variety of biological, social, cultural, and psychological influences (Mann et al., 2005). Nevertheless, studies have found that troubled relationships may be a significant risk factor. Stack (2000) noted that relationship quality typically declined within the year of many cases of completed suicides. Till, Tran, and Niederkrotenthaler (2016) examined relationship satisfaction and risk factors for suicide (i.e., suicidal ideation, hopelessness, and depression) among 382 adults in Austria. Their results indicated that individuals who endorsed higher relationship satisfaction tended to endorse lower suicidal ideation, hopelessness, and depression compared to those who reported being single or endorsed lower relationship satisfaction (Till, Tran, & Niederkrotenthaler, 2016).

Ultimately, individuals who are satisfied with their relationships seem to be more likely to stay in their relationships and, subsequently, obtain the associated psychosocial benefits. Relationship satisfaction is also a significant component of relationship continuation (Gottman & Levenson, 1992). Ultimately, research suggests that being satisfied in an adult intimate relationship is important for the health of the relationship and one's personal well-being. Additionally, relationship satisfaction is significantly influenced by sexuality. Healthy expression of sexuality is an integral part of romantic relationships. It is well documented that sexual satisfaction is a significant component of relationship satisfaction (Byers, 2005; Sprecher, 2002; Sprecher, Cate, Harvey, & Wenzel, 2004). For example, increased sexual desire for one's partner has been found to increase one's perceived satisfaction with one's partner (Brezsnyak & Whisman, 2004).

The role of pornography. Sexuality is an important factor in healthy relationships; however, pornography use in the context of committed relationships remains controversial and mixed within the literature. Pornography use has been found to have numerous negative effects on marital relationships (Manning, 2006). Stack, Wasserman, and Kern (2004) analyzed data from the General Social Survey for the year 2000. Using data from 531 male and female respondents who reported using pornography in the last 30 days, Stack et al. found that those who were satisfied with their relationships were 61% less likely to view pornography than those who reported being single or in an “unhappy” relationship. This suggests that there may be a relationship between pornography consumption and relationship satisfaction. Specifically, the study suggested that single participants or those who reported lower relationship satisfaction also tended to use pornography more than those who were in satisfying relationships. Although this shows a correlation between pornography consumption and relationship satisfaction, this is not sufficient evidence to suggest causation between the two variables. Although there is an established link between pornography consumption and lower relationship satisfaction, the underlying pathways are still unclear.

Pornography consumption is not always associated with relationship dissatisfaction. The manner in which it is consumed may moderate this relationship. Bridges and Morokoff (2011) found that males who viewed pornography “as part of lovemaking” (p. 579) with their partners reported higher relationship satisfaction than those who consumed pornography alone. Women who reported viewing pornography with their partners to enhance coitus also reported significantly higher relationship

satisfaction than solitary users. Researchers suggest that solitary use may cause more problems in relationships. Solitary pornography use tends to be kept secret from the partner (Cooper et al., 1999). Furthermore, the aspects of secrecy, extra-dyadic sexual activity, and the fantasy/alternative reality aspect of pornography have led many women to deem male solitary pornography use “disturbing” (Bridges, Bergner, & Hesson-McInnis, 2003). Alternatively, studies have shown that pornography consumption is perceived as benign if the couple deems pornography use as an acceptable alternative to sex (e.g., in cases where the partner is out of town or sexually unavailable; Bridges & Morokoff, 2011). Ultimately, solitary use of pornography is linked to poorer outcomes compared to using pornography as part of the relationship or if both parties agree that it is “acceptable.” Understanding this population is very relevant to this research area because many males tend to use pornography alone and in secret.

Wright (2011) proposed that pornography consumption led to reduced relationship satisfaction because pornography glorifies casual sex. If users internalize these messages and deem casual sex as rewarding, they will, consequently, place less value in monogamy. Sexual script theory has been used to explain how individuals who consume pornography develop a proclivity to engage in or support casual sex. Similar to social learning theory, script theory also posits that individuals learn through models. Sexual scripts are defined as cultural messages about sex and sexuality (Frith & Kitzinger, 2001). Specifically, they are guidelines that outline what sex is and how one should behave in sexual scenarios. Sexual script theory is derived from script theory, which proposes that human behavior is analogous to an actor following a written script. Moreover, scripts give individuals a blueprint of recognizing sexual encounters and how

one should behave in those situations (Frith & Kitzinger, 2001). Wright expanded sexual script theory into a testable model called the $_3$ AM model. The model suggests that sexual media influences sexual behavior through *acquisition*, *activation*, and *application* of sexual scripts. Individuals first *acquire* these scripts through viewing sexual media. Pornography disseminates the belief that casual sex is normal and rewarding. Furthermore, sexualized media continually *activate* this script and keep the script accessible cognitively. Finally, the individual *applies* these scripts to his or her life by following the sexual script. Another study suggested that pornography consumption was related to engaging in increased “hooking up” (e.g., casual sexual encounters without the expectation of future commitment) in a sample of college students (Häggström-Nordin, Hanson, Tydén, 2005). In summation, these findings yield some evidence to support script theory and the negative effects of pornography consumption on romantic relationships.

Pornography and relationship beliefs. Although there is evidence that pornography may lead men to value casual sex over monogamy/commitment, there is a paucity of research on the relationship between pornography consumption and relationship beliefs. Hardcore pornography rarely depicts affection or displays of love (Sun, Bridges, Johnason, & Ezzell, 2014). Instead, it focuses on sexual penetration and orgasm. It is possible that such depictions of sex affects the way users view real relationships. Pornography places more emphasis on sex than other components of relationships such as romance, trust, and love. Research has already found that pornography is associated with negative attitudes about monogamy (Wright, 2011), which is reflective of its content; however, research that examines pornography’s

influences on the way that men prioritize various components of a romantic relationships is lacking.

Summary

Ultimately, pornography is a prevalent and relevant issue in society. Although there is a wealth of information about pornography, sexual violence, and sexual attitudes, there is a paucity of research on how pornography affects relationship satisfaction, male gender role beliefs, and body dissatisfaction. Furthermore, there is even less research on how these variables relate to each other. Finally, although most research on relationship satisfaction has focused on couples or people who have identified being in committed relationships, there is a dearth of research on whether and how pornography influences broad relationship beliefs and expectations of those who have never been in relationships or are currently not in committed relationships.

The Purpose of the Study

The goal of the current study was to examine the relationship between pornography consumption and relationship satisfaction. Furthermore, this study aimed to examine the function that male gender role beliefs and identity have in this relationship. The goal was to contribute to the existing literature on the relationship between pornography and relationship satisfaction and further delineate additional potential mechanisms that contribute to this relationship. Such information may aid mental health practitioners in the treatment of relational issues related to pornography consumption and relationship damage.

Chapter 3: Research Questions and Hypotheses

Research Questions

This quantitative research study sought to address several research questions. Because there is limited information about the role of pornography consumption in relationship satisfaction, masculinity, and body dissatisfaction, the current study examined these relationships. Furthermore, although previous studies have examined how pornography relates to beliefs about gender and sexuality, there is a paucity of research that explores individual beliefs/attitudes about relationship components such as passion, intimacy, and independence. There is also very limited research that explores the different types of pornography consumption. With the increase in anonymous access to an assortment of pornographic material, it is important to obtain a better understanding of the subgenres that are consumed.

Hypotheses

Hypothesis I. It was hypothesized that there would be a negative relationship between pornography consumption and relationship satisfaction in males. Multiple studies have shown that males who consume pornography are more likely to report lower relationship satisfaction (Bridges & Morokoff, 2011; Stack et al., 2004).

Hypothesis II. It was hypothesized that there would be a positive relationship between pornography consumption and masculine ideology. Furthermore, it was postulated that pornography consumption would also be positively related to higher endorsements of stereotypical, rigid beliefs about male sexuality, as observed in previous research (Szymanski & Stewart-Richardson, 2014). Due to cultural nuances in the LGBTQ community, it was unclear whether these factors would influence results.

Ancillary analyses were used to investigate whether there are statistically significant differences between masculine ideology between straight males and sexual minorities.

Hypothesis III. It was hypothesized that there would be a positive relationship between pornography consumption and body dissatisfaction, as observed in previous research (Tylka, 2015). Due to cultural nuances in the LGBTQ community, it was suspected that these individuals may influence results, because previous research indicates that gay men generally report higher body dissatisfaction (McArdle & Hill, 2009). Ancillary analyses investigated whether there are statistically significant differences in body dissatisfaction between straight men and sexual minorities.

Hypothesis IV. It was hypothesized that pornography consumption would have unique predictive power in relationship satisfaction outcomes when controlling for body dissatisfaction and masculine ideology.

Exploratory Analysis I. There is a lack of research on the relationship between pornography consumption and general relationship beliefs. It was hoped that examining how level of pornography consumption is associated with relationship beliefs would be effective in understanding how those who consume more pornography hold different beliefs about relationships than those who consume less or do not consume it at all.

Exploratory Analysis II. There is a paucity of research on the relationship between perceived harm of pornography and pornography use. Exploratory analyses aimed to examine how level of pornography consumption is associated with perceived harm, with the hope that it could be helpful in understanding whether those who consume pornography believe that their behaviors are potentially harmful to relationships.

Chapter 4: Method

Research Design

The current study used a cross-sectional, correlational design to obtain data from a population at a single point in time. Data were collected using a web survey conducted on the SurveyMonkey platform. Cross-sectional research using web surveys allowed for convenient and efficient sampling of large populations. Moreover, participants were able to report anonymously given the sensitive, intimate nature of many items in the survey.

Participants

Inclusion and exclusion criteria. In order to be eligible to participate, individuals had to be males over 18 years in age with a reported eighth grade reading level or higher. Individuals under the age of 18 were excluded from the study because they would have required parental consent. Moreover, the current study focused on adult relationships and sexuality. Individuals who identified as transgendered or any other non-binary gender identity were also excluded from the current study due to their unique trajectory in establishing gender identities. For example, Green (2005) noted that masculinity may be more salient to transgendered males because of the unique process of being chromosomally female, relinquishing the socialized female identity, and adopting a male identity.

Participant demographics. The current study included 156 males between the ages of 18 and 76 with a mean age of 36.76. The participants identified as White (64.1%), Latino (7.7%), Black (14.1%), Asian (10.3%), Native American/Alaskan (1.3%), Multiracial (1.8%), and other (2.6%). Furthermore, they identified as straight (65.4%), gay (16%), bisexual (16%), questioning (0.6%), asexual (0.6%), or other

(1.3%). The current study included those who were currently in relationships (60.9%), currently single but with some relationship history (26.3%), and single individuals with no relationship history (12.8%). Table 1 illustrates the sample’s demographics.

Table 1

Demographic Variables

Characteristics	<i>n</i>	%
Age Range		
18-25	38	24.4
26-30	32	20.5
31-35	19	12
36-40	11	7
41-50	24	15.4
51-64	25	16
65-76	7	4.5
Race/Ethnicity		
White	100	64.1
Latino/Hispanic	12	7.7
Black/African American	22	14.1
Asian/Pacific Islander	16	10.3
Native American/Alaskan	2	1.3
Multiracial	3	1.9
Other	4	2.6
Sexual Orientation		
Straight	102	65.4
Gay	25	16
Bisexual	25	16
Questioning	1	0.6
Asexual	1	0.6
Other	2	1.3
Relationship Status		
Committed	95	60.9
Single (Previously committed)	41	26.3
Single (No relationship history)	20	12.8

Measures

Screening questions. The screening questions were designed to identify individuals who did not meet eligibility criteria for the study. This questionnaire consisted of two items which assessed age and gender. Participants needed to be male and aged 18 years and over. Individuals who did not meet the criteria were disqualified from participating in the online survey.

Demographics. Demographic information included race/ethnicity, sexual orientation, relationship status, and one's desire to be in a relationship. Furthermore, participants were asked to report how long they have been in their current relationship status. They were asked to identify how much they like or would like to be (if single) in committed relationships. Participants chose from 1 (*not at all*) to 5 (*very much*; Appendix A).

Pornography consumption. To measure pornography consumption, participants were asked to report their pornography use by frequency, the medium in which they consume, with whom they consume the material, how enjoyable they find the material, their perception of how harmful the material is to relationships, and the content of the material that they consume (Appendix A). This section consisted of eight items comprised of Likert-type and yes/no questions. Participants were asked initially whether they had ever consumed pornography and given "yes" or "no" response options. Next, participants were asked to report how many days and how many hours they have viewed pornography in the past 30 days. Other researchers have used a similar format in their assessment of pornography consumption (Stack et al., 2004; Tylka, 2015). Participants were asked whether they view pornography alone, with their partners, and/or with

friends. Furthermore, they were asked to report how much they enjoy pornography on a scale of 1 (*not at all*) to 5 (*extremely*). Participants had the opportunity to identify any specific type/category of pornography that they consume from a list of broad categories. Finally, participants were asked how harmful they thought pornography was to relationships and answered on a 5-point Likert-type scale ranging from 1 (*very harmful*) to 5 (*not harmful at all*).

Male gender-role beliefs. Male gender role beliefs were assessed using six out of the seven scales of the Male Role Norms Inventory-Short Form (MRNI-SF; Levant, Hall, & Rankin, 2013). The MRNI-SF is a 21-item scale that measures masculine ideology. For the current study, the third subscale, Negative Attitudes towards Sexual Minorities (NT), was excluded because those items were not relevant for the current study. Restrictive Emotionality (RE), Self-Reliance through Mechanical Skills (SR), Avoidance of Femininity (AF), Importance of Sex (IS), Dominance (DO), and Toughness (T) were the remaining subscales used in the study. Each subscale consists of three items, yielding a total of 18 remaining items for this study. RE assesses one's belief that men should suppress their emotions. A representative question from this subscale is "a man should never admit when others hurt his feelings." SR measures beliefs that men should have mechanical skills. "Men should be able to fix things around the house" is a sample item from this subscale. The AF subscale measures the belief that men should not be feminine. A representative item from scale is, "men should watch football games instead of soap operas." The IS subscale measures the belief that men should be hypersexual. A sample question from this subscale is "a man should always be ready for sex." The DO subscale measures the belief that males should be domineering and

assume positions of leadership. A representative item is “a man should always be the boss.” Finally, subscale T measures the belief that men should be tough. A sample item from this subscale is “when the going gets tough, men should get tough.” The scale uses a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Psychometrically, the scale was found to have excellent internal consistency. Alpha coefficients for the MRNI-R ranged from .75 to .92 for subscale scores, and .96 for the total scale score (Levant, Rankin, Williams, Hasan, & Smalley, 2010; Levant et al., 2007). Good concurrent validity has been demonstrated by correlations with other measures of masculinity, including the Conformity to Masculine Norms Inventory (Mahalik et al., 2003), the Gender Role Conflict Scale (O’Neil, Helms, Gable, David, & Wrightsman, 1986), and the Normative Male Alexithymia Scale (Levant et al., 2006; Levant et al. 2013). The MRNI-R was found to have good construct validity in a large sample of men of various ethnicities and sexual identities (Levant, Hall, McCurdy, 2016). The current study revealed excellent internal consistency between the items in the reduced scale ($\alpha = .93$).

Male sexuality beliefs. Male sexuality beliefs are beliefs about the role that men play in sexual encounters. Two subscales (Sex Equals Performance and Males Orchestrate Sex) from the Stereotypes about Male Sexuality Scale (SAMSS; Snell, Belk, Hawkins, 1986), a self-report measure to index attitudes toward 10 stereotypes about men, was used to measure sexual beliefs about men. The scale uses a 6-point Likert scale with response options ranging from *agree* to *disagree*. The Sex Equals Performance subscale consists of six items that assess beliefs about the importance of sexual performance. A representative question from this subscale is “in sex, it’s a man’s

performance that counts.” The six items of the Males Orchestrate Sex Subscale assess beliefs that men should be dominant or assume a leadership role in sex. A sample item from this subscale is “a man is supposed to initiate sexual contact.” Cronbach alpha values for the 10 subscales range from .63 to .93 with an average of .80 (Snell et al., 1986). The authors did not provide an alpha coefficient for the entire scale. It may be that the authors did not intend to use a summary score for this scale (Thompson, Pleck, Ferrera, 1992). For the current study, the Sex Equals Performance ($\alpha = .79$), Males Orchestrate Sex ($\alpha = .87$), and the combined scale yielded good internal consistency ($\alpha = .89$).

Male body image. Male body image consists of the attitudes that males have about their bodies. Male body image was measured using five items from the Male Body Attitudes Scale-Revised (MBAS-R; Ryan, Morrison, Roddy, & McCutcheon, 2011). This measure contains three subscales, including Muscularity, Body Fat, and Height. To reduce the number of questions in the study, select questions were used from each of the subscales. The resulting questionnaire included the following relevant items: “I think I have too little muscle on my body,” “I feel embarrassed about my muscularity,” and “I feel satisfied with my muscularity” from the Muscularity subscale; “I feel excessively fat” from the Body Fat subscale; and “I am satisfied about my height” from the Height subscale. The scale uses a 5-point Likert-type scale that ranges from 1 (*never*) to 5 (*always*). Many questions from the full scale were repetitive. Furthermore, by eliminating repetitive questions, the entire questionnaire became shorter and more parsimonious. The total scale has been found to have good internal consistency overall (Ryan et al., 2011). The internal consistency for the modified MBAS-R indicated

adequate internal consistency ($\alpha = .66$).

In addition to the MBAS-R, men's satisfaction with their penis sizes was assessed using a single item that read, "I am satisfied with the size of my penis." This item uses a 5-point Likert-type scale that ranges from 1 (*strongly agree*) to 5 (*strongly disagree*). Due to the sensitive nature of the question, individuals were also provided with a sixth option that read, "This question is too sensitive for me to answer."

Relationships beliefs. For this study, relationship beliefs are defined as the beliefs that one perceives as needed to make a relationship healthy. Relationship beliefs were measured using the 39 items from Relationship Beliefs Scale (RBS; Fletcher & Kininmoth, 1992b). The total scale contains 54 items about 18 beliefs (Trust, Communication, Love, Support, Independence, Acceptance, Sex, Equity, Compromise, Relationship Vitality, Commonality, Personal Security, Friendship, Finance, Children, Important Others, Coping, and Respect), each measured with three items using a Likert-type scale ranging from 1 (*do not hold this belief at all*) to 6 (*very strongly hold this belief*). A factor analysis revealed that these 18 beliefs form four factors labeled Intimacy (e.g., "there must be complete honesty between partners"), External Factors (e.g., "money is as important as love in close relationships"), Passion (e.g., "without good sex, relationships do not survive"), and Individuality (e.g., "each partner has a right to absolute privacy;" Fletcher & Kininmoth, 1992a). This study did not include subscales that were included in the External Factors construct. Eliminating these items made the questionnaire more parsimonious and these items were not as relevant to the research questions. Overall, this scale contains broad domains of relationship beliefs and was developed through a qualitative and atheoretical process. The scale was created by

having college students review one of two scenarios of people in happy relationships and identify factors that they believed were important in producing a happy relationship. One scenario was of a couple who had been married for 10 years and had two children and another in which the couple were unmarried and together for 2 years. Participants were informed that the couple was extremely happy and that the relationships were successful. Participants were asked to identify factors that they deemed important in having a happy and successful relationship (Fletcher & Kininmoth, 1992a). Although the scale is atheoretical, it provides a more comprehensive assessment of relationship beliefs compared to other established relationship beliefs scales that measure maladaptive beliefs in relationships exclusively, as seen in the Relationship Belief Inventory (RBI; Eidelson & Epstein, 1982), or anxious/avoidant attachment style, such as the Experiences in Close Relationship-Revised scale (ECR-R; Fraley, Waller, & Brennan, 2000).

Psychometrically, the scale has adequate reliability and validity (Fletcher & Kininmoth, 1992a). For the current study, reliability coefficients indicated good internal consistency across intimacy ($\alpha = .80$), passion ($\alpha = .74$), and independence ($\alpha = .80$). These beliefs are not associated with relationship satisfaction; however, they are associated with behaviors in relationships and love attitudes (Fletcher & Kininmoth, 1992a).

Relationship satisfaction. Relationship satisfaction was measured by the Relationship Assessment Scale (RAS; S. S. Hendrick, 1988). The RAS is a 7-item scale that measures general relationship satisfaction. The scale asks questions such as “in general, how satisfied are you with your relationship (*unsatisfied-extremely satisfied*),” “how good is your relationship compared to most (*poor-excellent*),” and “how well does

your partner meet your needs (*poorly-extremely well*).” The measure uses a 5-point Likert type scale ranging from 1 (*low satisfaction*) to 5 (*high satisfaction*). Total scores range from 7 to 35, with higher total scores indicating greater relationship satisfaction. Item 5 (“To what extent has your relationship met your original expectations?”) was lost during the final construction and distribution of the study. Consequently, the total relationship satisfaction scores ranged from 6 to 30. The measure was normed using undergraduates from a Southwestern university who described themselves as being “in love” (S. S. Hendrick, 1988). The scale was further investigated using 57 college couples (S. S. Hendrick, 1988). The measure was found to correlate with other established measures of relationship satisfaction, such as the Dyadic Adjustment Scale (DAS), which suggests convergent validity (Vaughn & Baier, 1999). Furthermore, this scale is a parsimonious measure of relationship satisfaction due to its brevity (Vaughn & Baier, 1999). For the current study, those who have been in relationships in the past but were not in committed relationships at the time of completing the survey were asked to report on their satisfaction in their most recent relationships. Specifically, they received a modified version of the questionnaire that structured the questions in the past tense (e.g., “how good *was* your relationship compared to most”). Those who reported having no experience in relationships were not presented with these questions. The measure has been found to have acceptable internal consistency ($\alpha = .86$; S. S. Hendrick, 1988). For the current study, reliability analyses indicated good internal consistency ($\alpha = .85$), which is similar to internal consistency measures in past studies. Further analysis indicated that the internal consistency for the original items ($\alpha = .84$) and the modified items ($\alpha = .85$) had comparable internal consistencies when analyzed separately. Furthermore, item

analyses in all conditions did not support the deletion of any items, as very little improvements would have been made to the internal consistency of the measure (see Appendix E).

Procedure

Recruitment. An e-mail describing the study and including a hyperlink to the study survey was sent to 75 northeastern U.S. colleges and universities with a request that the study be shared with undergraduate and graduate students and advertised via LISTSERV. Furthermore, participants were also recruited from historically Black colleges and universities (HBCUs) to obtain a diverse sample. The “snowball” method was also employed, in which participants were encouraged to send the link to others. Other recruitment strategies included posting the survey link on other online mediums/forums, such as Craigslist and Facebook. One Facebook advertisement was placed on a page visited by other psychology students who disseminated the study through the snowball effect. Several advertisements were placed on Craigslist sites for the geographic areas of Philadelphia and State College in Pennsylvania, as well as metropolitan areas in Ohio, New Jersey, New York, Delaware, and Massachusetts. Advertisements were refreshed/updated once every 30 to 45 days. Recruitment took place over the course of 8 months (see Appendices B through D).

Data collection. Data were collected using SurveyMonkey, an online survey tool. Participants reviewed a brief description of the study along with an Internet hyperlink that directed them to the screening questions. The page contained basic information about the study and read, “Click ‘next’ to see if you are eligible.” Participants were given two screening questions to assess their ages and genders. Those

who were not eligible (not male and/or under the age of 18) were taken to a page with a message that said, “Thank you for your interest! Unfortunately, you are not eligible to participate in this study.” After screening, eligible participants were presented with a page that contained information about the purpose of the study, potential risks and benefits of the study, emphasis that participants can withdraw from the study at any time, and information about incentives (i.e., the opportunity to participate in a raffle). Participants clicked “next” if they agreed to participate. Participants who met criteria and agreed to participate were asked to complete sections on demographics, pornography consumption, relationship satisfaction, male gender-role beliefs, male body dissatisfaction, and relationship beliefs. Ideally, these variables would have been given in random order to control for order effects; however, the survey was lengthy, resulting in the decision to assess the more pertinent constructs earlier. Those who reported being in committed relationships in the demographic section answered the relationship satisfaction questions and proceeded normally as stated above. Those who reported being in committed relationships in the past but indicated that they were not currently in relationships were given the revised version of the relationship satisfaction questions, which presented questions based on their most recent relationships and worded questions in the past tense. Those who reported that they had never been in committed relationships did not complete relationship satisfaction questions. Nevertheless, they completed the other sections and their data from the other scales were analyzed to answer other research questions. After completing the survey, participants were provided with a weblink that opened a separate page where participants had the opportunity to provide their e-mail addresses in order to be entered into a raffle to win one of two \$50 electronic

Amazon gift cards. Upon obtaining the data, the e-mail addresses were each assigned a number based on the order in which they were received, and the investigator used a random number generator from www.random.org to determine the winner. This random number generator allowed the investigator to put in a minimum and maximum number and provided a random number within that range. The number generator was used to create two numbers, and the two e-mail addresses that corresponded to those numbers were deemed the winners. The winners were sent a congratulatory message and provided with their gift card codes via separate e-mails. Those who did not win were sent an e-mail stating that they did not win and were thanked for their participation. The data set was downloaded securely and analyzed.

Chapter 5: Results

Statistical Analysis

All statistical analyses were computed using the Statistical Package for the Social Sciences (SPSS). The statistical plan included descriptive statistics, correlational analyses, regression analysis, and multivariate analysis of variance (MANOVA) analyses. A significance level (p -value) of .05 or smaller is deemed statistically significant based on conventional standards for social sciences (Cohen, 1992). The effect size was set at .30 for a medium effect size for correlation and the power level was set a .80 (Cohen, 1992). This analysis determined that a minimum of 68 participants were needed to perform regression analysis and 100 participants were needed to perform a MANOVA analysis for exploratory variables. There were two significant outliers in the data set. The data were analyzed with and without these data points and there were no changes in results during hypotheses testing. Subsequently, these data points were retained.

Pornography Consumption Descriptive Statistics

Frequency and duration. Participants were asked if they ever consumed pornography. All participants reported consuming pornography at some point in their lives. Participants were asked to identify the number of total days and total hours they consumed pornography within the past month. Participants consumed an average of 13.25 hours ($SD = 19.67$) and a mean of 15.94 days within the past 30 days ($SD = 10.18$). Approximately 7% of the participants ($n = 6$) denied using any pornography within the last 30 days. Alternatively, 18% of individuals used pornography daily, and 30 days was the modal value. Further analysis examined the means and standard deviations between individuals in relationships, and are outlined in Table 2.

Table 2

Pornography Consumption in the Past Month by Relationship Status

Relationship Status	Pornography Consumption			
	Days (Frequency)		Hours (Duration)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Committed	14.57	9.81	13.24	22.10
Single (Previously Committed)	18.29	10.35	12.78	15.70
Single (No relationship history)	17.60	10.90	12.71	14.90

Note: Pornography consumption measured in the past 30 days of when the individual completed the survey.

Pornography consumption type/medium. Participants were asked to identify the type of pornography that they consume and were given the option to check all that applied. Participants identified whether they obtained pornography through online resources (97.4%), home video (13.5%), magazines (4.5%), and/or other means (3.8%). No participants reported consuming pornography in a theater.

Involvement of others. Participants were asked whether they consumed pornography alone and/or with others. Nearly all of participants (95.5%) reported using pornography alone, whereas 4.5% did not report solitary use in the past month. Additionally, participants reported using pornography with partners (17.3%), friends (5.8%), and/or others (1.3%).

Subgenres. Participants were asked to identify the categories of pornography that they consume typically. Participants chose between 11 broad categories that included

straight (76.9%), lesbian (35.9%), amateur (37.2%), gay (31.4%), bisexual (26.3%), transsexual (16.7%), fetish/BDSM (19.9%), group sex (34%), solo female (21.2%), solo male (11.5%), hentai/cartoon (13.5%), and other (10.9%).

Perceived enjoyment. Participants were asked to identify how much they enjoyed pornography. Participants reported enjoying pornography to the following degrees: extremely (17.3%), very much (49.4%), somewhat (26.9%), a little (3.8%), and not at all (1.3%).

Perceived harm. Participants were asked to rate how harmful they believed pornography was to relationships. Participants chose whether they believed pornography was very harmful (4.5%), somewhat harmful (20.5%), probably not harmful (16.7%), not harmful at all (32.7%), or neutral (25%). Table 3 depicts frequency data for all of the pornography consumption variables of interest.

Table 3

Frequency Table for Pornography Consumption Variables

Variable	N	%
Ever Consumed		
Yes	156	100
No	0	0
Consumption in Past Month		
None	6	3.8
1-5	32	20.5
6-10	27	17.3
11-15	15	9.6
16-25	38	24.4

Variable	N	%
25-31	35	22.4
Hours in the Past Month		
None	6	3.8
0-1.5	23	14.7
2-5	46	29.5
6-10	36	23.1
11-24	20	12.8
25-50	16	10.3
50-150	9	5.7
Type		
Online	152	97.4
Magazine	21	13.5
Home Video	7	4.5
Other	6	3.8
Others Involved		
Alone	149	95.5
With a Partner	27	17.3
With Friends	9	5.8
In a Theater	0	0
Other	2	1.3

Variable	N	%
Enjoyment		
Extremely	27	17.3
Very Much	77	49.4
Somewhat	42	26.9
A Little	6	3.8
Not at All	2	1.3
Harm to Relationships		
Not Harmful at All	51	32
Somewhat Harmful	26	16.7
Neutral	39	25
Harmful	32	20.5
Very Harmful	7	4.5
Content Categories		
Straight	120	76.9
Lesbian	56	35.2
Amateur	58	37.2
Gay	49	31.4
Bisexual	41	26.3
Transsexual	26	16.7
Fetish/BDSM	31	19.9
Groups	53	34
Solo Female	33	21.2
Solo Male	18	11.5
Hentai/Cartoon	21	13.5
Other	17	10.9

Hypothesis I

To determine whether there was a statistically significant relationship between pornography consumption and relationship satisfaction, a Pearson's r product-moment correlations was computed. A Pearson's r correlation, also known as a linear correlation, is a measure of linear strength and direction between two continuous variables (A. Field, 2009). This analysis did not include individuals without any relationship history, leaving a total n of 136.

Pornography consumption was measured by the number of days and hours that individuals reported using pornography within the past 30 days to measure frequency and duration. Pornography consumption duration (number of hours) violated the assumption of normality (Skewness = 3.37; Kurtosis= 15.98). Data that are positively skewed can be transformed using a log transformation because it suppresses the right tail of the distribution (A. Field, 2009). $\text{Log}(X_i + 1)$ was used since data contained zeroes (individuals who did not consume pornography in the last month), and this significantly reduced the skewness and kurtosis (Skewness = .33; Kurtosis = -.47).

Relationship satisfaction was measured using six items from the RAS scale. Relationship satisfaction also violated the assumption of normality and was negatively skewed (Skewness = -.77); however, the results indicated that many of the participants achieved the maximum total for relationship satisfaction. Scores were reversed to create a positive skew and transformed using a log transformation, $\text{Log}(30 - X_2 + 1)$, as recommended by A. Field (2009). There was minimal reduction in skewness (Skewness = -.64), so original values were used for the analysis, as transformation was not justified.

The results indicated that there was a weak negative relationship between

pornography consumption (number of hours) and relationship satisfaction $r(136) = -.26$, $p = .013$. Ancillary analysis indicated that this correlation existed for individuals who rated their current relationships and those who had to rate their previous relationships retrospectively, $r(95) = -.19$, $p = .03$ and $r(41) = -.40$, $p = .004$, respectively. Table 4 illustrates correlations among the variables of interest for participants who had relationships currently or historically ($n = 136$).

Table 4

Correlations among Main Variables (Participants with Relationship History)

Variable	1	2	3	4	5	<i>M</i>	<i>SD</i>
1. Pornography Frequency (Days)	-----					15.69	10.09
2. Pornography Duration (Hours)	.44**	-----				13.32	20.33
3. Relationship Satisfaction	-.18*	-.26**	-----			22.91	5.70
4. Masculine Ideology	.04	-.01	.04	-----		80.68	23.13
5. Body Dissatisfaction	.05	.13	-.15	.38	-----	12.29	3.84

* $p < .05$; ** $p < .01$

Hypothesis II

To determine whether there was a statistically significant relationship between pornography consumption and masculine ideology, a Pearson's r product-moment correlations was computed. No significant relationships between these variables were found, $r(156) = -.02$; $p = .81$. Masculine ideology ($M = 81.04$; $SD = 23.26$) was measured with the modified MRNI-SF. Ancillary analyses were completed to examine pornography consumption and its relationship to endorsement of stereotypical male sexuality beliefs as measured by two subscales (Sex Equals Performance and Males Orchestrate Sex) from the SAMSS (Snell et al., 1986). Pearson's r product moment correlations revealed that stereotypical male sexuality beliefs ($M = 36.85$; $SD = 10.08$) did not significantly relate to pornography consumption, $r(156) = .004$; $p = .96$.

Masculine ideology was further examined between straight, gay, and bisexual males. Males who identified with another orientation such as asexual or questioning were not included in the analyses because there were not enough participants who identified with those qualifiers ($n < 5$). The remaining participants ($n = 152$) were used to compare masculine ideology between the three groups through an ANOVA analysis. Due to a significant Levene's test, equal variances could not be assumed; therefore, a Brown-Forsythe test was used. ANOVA analysis found significant differences in masculine ideology ($F(2,149) = 16.08$, $p < .001$) between men who identified as straight ($M = 76.98$; $SD = 22.99$), gay ($M = 101.16$; $SD = 14.33$), or bisexual ($M = 76.84$; $SD = 22.31$). Post-hoc tests revealed that gay males endorsed statistically significantly lower rates of masculine ideology compared to straight and bisexual men (lower values indicate higher masculine ideology based on scoring method).

Hypotheses III

To determine whether there was a statistically significant relationship between pornography consumption and body dissatisfaction, a Pearson's r product-moment correlation was computed. The internal consistency for the modified MBAS-R indicated adequate internal consistency ($\alpha = .66$). No significant relationships between these variables were found, $r(156) = .10$; $p = .24$.

In addition to overall body dissatisfaction, individuals were asked to report their satisfaction with their penis sizes. Penis size satisfaction was assessed using a single 5-point Likert-type item. Participants were provided the statement, "I am satisfied and with the size of my penis," and yielded the following outcomes: strongly agree (21.2%), agree (39.7%), neutral (13.5%), disagree (16%), strongly disagree (8.3%), and no response (this question is too sensitive; 1.3%). To determine whether pornography consumption was related to penis size satisfaction, a one-way ANOVA was computed. To use the ANOVA, pornography consumption was transformed into categorical data by separating the data into high and low groups. The separation was made near the 50th percentile point to separate individuals into high and low categories. Individuals who did not answer the question were not included in the analysis, leaving 58 participants in the low group and 96 in the high group ($N = 154$). Due to an insignificant Levene's test, equal variances were assumed. ANOVA analysis did not find significant differences in low ($M = 3.48$; $SD = 1.23$) or high ($M = 3.5$, $SD = 1.24$) consumption based on penis size satisfaction, $F(1,152) = .018$, $p = .89$.

Body dissatisfaction was further examined between straight, gay, and bisexual males. Males who identified with another orientation such as asexual or questioning were

not included in the analyses because there were not enough participants who identified under those qualifiers ($n = 4$). The remaining participants ($n = 152$) were used to compare body dissatisfaction between the three groups through an ANOVA analysis. Due to an insignificant Levene’s test, equal variances were assumed. ANOVA analysis did not find significant differences in body dissatisfaction, $F(2,149) = 1.46, p = .24$, between men who identified as straight ($M = 12.21; SD = 3.68$), gay ($M = 11.80; SD = 4.12$), or bisexual ($M = 13.35; SD = 4.40$). Table 5 depicts correlations between all of the variables of interest.

Table 5
Correlations among Main Variables (All Participants)

	1	2	3	4	<i>M</i>	<i>SD</i>
1.Pornography Consumption (Hours)	-----				13.24	19.68
2.Pornography Consumption (Days)	.47**	-----			15.95	10.18
3.Masculine Ideology	-.02	-.03	-----		81.04	23.26
4. Body Image	.10	.00	.04	-----	12.40	3.87

* $p < .05$; ** $p < .01$

Hypothesis IV

The fourth hypothesis stated that pornography consumption would have unique predictive power on relationship satisfaction after controlling for body dissatisfaction and masculine ideology. The statistical plan included a hierarchical linear regression. Many statistical analyses rely on assumptions about the variables being tested. Furthermore, if these assumptions are not met, the results may produce an over- or underestimation of significance or effect size (Gravetter & Wallnau, 2008). One assumption of regression analyses is that the data are normally distributed. This assumption can be evaluated by inspecting data plots and examining skewness and kurtosis. Another assumption is absence of multicollinearity among the independent variables (i.e., when two variables are so highly correlated that they can be linearly liked and directly predictive of each other [$r \geq .9$]). The goal of the hierarchical multiple regression would have been to use several predictor variables to predict a single outcome variable. Moreover, the predictor variables are entered in steps (or blocks). Regression analyses work on the assumption that there is a linear relationship between the predictor variables and the outcome variable. Bivariate correlation analyses did not reveal linear relationships between relationship satisfaction, masculine ideology, or body image (refer back to Table 4). Consequently, the hierarchical linear regression was not computed.

Exploratory Analysis I

To determine whether different levels of pornography consumption (high vs. low) related to significant differences in relationship beliefs about intimacy, passion, or individuality, a MANOVA was computed. G*Power a priori analysis indicated that 100 participants were needed to generate a medium effect size. One hundred thirty-three

participants completed the necessary items and were included in the analysis. A MANOVA is used to investigate differences among groups when there are multiple dependent variables. Although MANOVA analyses are not as powerful as ANOVA, conducting multiple ANOVAs is not appropriate because doing so would inflate alpha levels and increase the chance for a Type I error (Gravetter & Wallnau, 2008). To use the MANOVA, pornography consumption was transformed into categorical data by separating the groups into high and low categories. Due to missing data, the low pornography consumption group had a total n of 51 and the high consumption group had an n of 81.

The three factors determined by the creators of the RBS (Fletcher & Kininmonth, 1992b), intimacy, passion, and individuality, were included in analyses to determine any differences in pornography consumption across these domains. A MANOVA analysis has several assumptions that must be met to reduce error. A MANOVA assumes that there is a correlation between the dependent variables but not one that would suggest multicollinearity ($r \geq .9$). Fletcher and Kininmonth (1992b) found that the relationship belief constructs are moderately correlated with each other. Pearson's r product correlations were computed between the variables to test for multicollinearity. In the current study, all of the relationship belief variables were significantly correlated, with r -values ranging from .28 to .60 at a $p < .01$ level of significance (refer back to Table 5).

A MANOVA assumes homogeneity of variances for the dependent variables (A. Field, 2009). A Levene's test was computed to test for homoscedasticity during the analysis. Due to an insignificant Levene's test, equal variances were assumed. Another assumption of the F -test is that there is homogeneity of covariance (A. Field, 2009). A

Box’s M Test confirmed the equality of the independent variables. A MANOVA produces a multivariate *F*-statistic, which is the ratio of between-group variability and within-group variability. Put simply, the *F*-statistic gives a ratio of how much the groups differ from each other over how much they vary within themselves (A. Field, 2009). The results indicated that there were no statistically significant differences between high and low pornography consumption in relationship belief factor scores, *Wilks’ λ* = .97, $F(3,128) = 1.39, p = .25$. Table 6 shows the correlations, means, and standard deviations among the relationship belief variables.

Table 6

Correlations, Means, and Standard Deviations among Relationship Belief Variables

	1	2	3	<i>M</i>	<i>SD</i>
1. Passion	-----			14.35	4.65
2. Intimacy	.44**	-----		122.14	26.12
3. Independence	.28**	.60**	-----	26.21	6.34

***p* < .01

Exploratory Analysis II

An exploratory one-way ANOVA was computed to determine whether there were significant differences in pornography consumption between individuals based on the perceived harmfulness of pornography consumption. To use the ANOVA, pornography consumption was transformed into categorical data by separating the groups into high and low categories, as done in previous analyses. One participant skipped the question about perceived harm, leaving 60 participants in the low group and 95 in the high group ($N = 155$). Due to an insignificant Levene's test, equal variances were assumed. There were no statistically significant differences between individuals in the low ($M = 3.65$, $SD = 1.28$) and high ($M = 3.45$, $SD = 1.29$) groups, $F(1,134) = 1.23$; $p = .27$.

Chapter 6: Discussion

General Findings

The goal of the current study was to examine the relationship between pornography consumption and relationship satisfaction. Furthermore, the study intended to obtain a comprehensive understanding of men's pornography use through detailed investigation. Moreover, the study aimed to investigate pornography use with regard to body dissatisfaction and masculine ideology. Another goal of the study was to investigate any relationships between pornography use and general relationship beliefs. The final goal of the study was to determine whether pornography consumption was related to beliefs about the harmfulness of pornography. The outcomes of the current study are relevant for both researchers and clinicians. For researchers, the current study adds to the body of research on this topic and provides more insight into how these variables relate. Clinically, this type of research can help practitioners conceptualize men's issues that may stem from pornography consumption.

Very few studies have explored pornography consumption in detail. The current study found that all participants consumed pornography at some point in their lives and only 3.8% denied using pornography in the past 30 days. Daily pornography use among males was more prevalent in this study (22%) than in previous research. For example, Carroll et al. (2008) found that 16% of individuals used pornography 3 to 5 times per week, but only about 5% of males reported using pornography daily (or almost daily). Outside of survey research, Elderman (2009) examined Internet usage statistics from 2008 and noted that 36% of users visited at least one adult website per month. Furthermore, these individuals visited an average of 7.7 times per month, with each visit

lasting an average of 11.6 minutes (Elderman, 2009). It is important to note that these studies were completed before the expansion of pornographic websites. Therefore, the differences in pornography consumption may be reflective of an increase in pornographic material availability over time.

Regarding the medium or platform, most males in the sample consumed pornography online and the majority used the material alone. None of the participants reported consuming pornography in an adult movie theater, which is not surprising since these establishments have declined exponentially since the advent of home video. The most popular pornography categories among this sample were straight (79.9%), lesbian (35.9%), group sex (34%), and amateur (31.4%). Bridges and Morokoff (2011) conducted one of the few studies that examined pornography in detail. Their findings indicated that heterosexual intercourse was the most popular category, followed by solitary nude women and lesbian sex, respectively. This is not surprising, as the majority of the participants in the current study were straight males. In sum, the frequency and popularity of pornography use corroborates past research.

The results indicated that pornography consumption was negatively related to relationship satisfaction. As pornography consumption increased, relationship satisfaction ratings tended to decrease. This result corroborates other studies that examined these constructs (Bridges & Morokoff, 2011; Stack et al., 2004). Although correlation can be used for predictions, this does not yield enough evidence to suggest a causal relationship. Furthermore, correlations can be affected greatly by the range of scores and outliers (Gravetter & Wallnau, 2008). Additionally, it is possible that pornography consumption led to a reduction in relationship satisfaction, and that males

use more pornography due to lower relationship satisfaction. Because of the weakness of the correlation, it is more likely that there are other extraneous variables influencing both relationships.

Surprisingly, there were no significant relationships between pornography consumption, masculine ideology, or body dissatisfaction. One explanation of this could be attention bias among users. It is possible that straight males, who were the predominant group in the sample, attend primarily to the female actors/models when consuming pornography. Female pornographic actors/models earn significantly more money than their male counterparts in movies marketed to straight men because the females are the primary attractions. This income disparity has even prompted a subset of straight male pornographic actors to participate in gay pornography (dubbed “gay-for-pay”) because those jobs pay males significantly more (Escoffier, 2003). If users are not attending to the male actors, they may not be acquiring or activating scripts about masculine behaviors or body image.

Correlational analysis indicated that neither masculine ideology nor body dissatisfaction significantly related to relationship satisfaction. Szymanski and Stewart-Richardson (2014) found a link between masculine ideology and attachment problems, so it was expected that masculine ideology would be negatively related to relationship satisfaction. Nevertheless, the current study did not yield these results. Although these findings are unexpected, men who endorse higher masculine ideology may be less likely to endorse relationship problems. A prominent feature of traditional masculinity is to deny one’s faults or insecurities and emphasize one’s achievements. This may prompt some men to underreport or deny problems in their relationships or personal insecurities.

The study was designed to mitigate these issues through the consent process and Internet survey design. It is also important to note that past research has shown that males tend to report slightly higher levels of relationship/marital satisfaction compared to females (Jackson, Miller, Oka, & Henry, 2014). The males in this sample tended to report high levels of relationship satisfaction, as evidenced by the negatively skewed data that could not be adequately reconciled with transformation. In conclusion, the relationship between masculine ideology and relationship satisfaction is difficult to explore because masculinity itself is a possible confound.

Supplemental analyses regarding masculine ideology revealed that gay males tended to report lower rates of masculine ideology than straight and bisexual males. It is important to know that gay and bisexual males made up a smaller percentage of the participants, so this result may not be fully generalizable. Masculinity is a complex construct, and is even more complex among sexual minorities. Research has indicated that straight males and females typically do not expect gay males to be masculine (Madon, 1997). Nevertheless, previous research indicates that masculinity is highly relevant and can even be a coveted commodity among some gay males, both in behavior and mate selection (Sanchez, Greenberg, Lui, Vilain, 2010).

Regarding body dissatisfaction, Tylka (2015) found a negative link between dissatisfaction and relationship satisfaction, but the results of the current study did not corroborate those findings. Nevertheless, there was a statistical trend that showed a weak negative relationship between body dissatisfaction and relationship satisfaction approaching significance, $r(136) = -.15; p = .08$, which suggests that there may be some connection between these variables. There are many possibilities why significant effects

were not found. Despite the emerging trend of body image issues in males, males typically face fewer societal pressures to obtain a specific standard of beauty compared to females. Sexual orientation is another potentially confounding variable. Duggan and McCreary (2004) found that exposure to sexually charged images of men was positively related to anxiety about one's physique for gay males but not straight males. Furthermore, previous research has found that gay males tend to report higher body dissatisfaction than their straight counterparts (McArdle & Hill, 2009). Nevertheless, the current study did not find statistically significant differences between body dissatisfaction between straight, gay, and bisexual males during ancillary analysis.

Another explanation for the unexpected findings may be related to the operational definition of body dissatisfaction used in the current study. The modified body image instrument yielded average internal consistency overall; however, the scale examined multiple facets of body dissatisfaction, including height, body fat, and muscularity. For example, one can be satisfied with one's height but dissatisfied with one's muscularity. Overall, it is possible that grouping these constructs into a single variable did not capture these nuances in body dissatisfaction.

The current study examined body dissatisfaction from the individual's perspective and did not explore other related concepts, such as actual body composition or attractiveness (as rated by others or spouses). The current study did not examine body type objectively, making it unclear how much the participants adhered to or deviated from the mesomorphic ideal. Moreover, satisfaction with one's body could relate to attractiveness within the context of one's culture and/or subculture. As discussed, African Americans tend to be more accepting of larger body types. This may be why

African American women tend to report higher weight related body satisfaction than their European American counterparts (Cox et al., 2012; Cox, Zunker, Wingo, Thomas, & Ard, 2010; Flynn & Fitzgibbon, 1998). In the realm of sexual orientation, gay men within the bear culture may be satisfied with larger body types, for both themselves and their partners, that may be deemed less attractive or unacceptable to gay men of other subcultures (Hennen, 2005).

Body image is even more complex because adherence to the cultural ideals does not always yield a positive body image. *People Magazine* voted actor Halle Berry “World’s Most Beautiful Woman” in 2003. Despite receiving accolades regarding her physical appearance, Halle Berry reported lifelong struggles with low self-esteem due to negative early experiences, according to the October 2012 edition of *New York Times Style Magazine*. Rosenblum and Lewis (1999) examined the relationship between body image and attractiveness in a sample of adolescents. They found a weak positive correlation between attractiveness and body image among young adolescents. Nevertheless, the relationship between attractiveness and body satisfaction diminished over time and eventually disappeared by age 18. The authors noted that social reinforcement, external cues, and feedback about attractiveness may play roles in establishing body image; however, body image becomes more resistant to external feedback by adulthood. In sum, the relationship between body image and attractiveness may weaken with age as one’s own perception of one’s body becomes more salient than feedback from others.

Exploratory analysis indicated that there were no significant differences between individuals’ beliefs about the importance of intimacy, passion, and independence. This—

along with the findings related to body dissatisfaction as masculinity—does not support social learning and similar theories that suggest that men incorporate the messages in pornography and assimilate them into their own beliefs. It is possible that age could have influenced the results. The age of the participants in the current study may further explain the lack of significant results across some of the variables. The mean age for the current study was 36.76 and participants ranged from age 18 to 76. Sun et al. (2014) noted that older males (i.e., those closer to age 29) tended to watch less pornography and were less likely to mimic acts in pornography with their partner than younger participants (i.e., those closer to age 18). Furthermore, older males were more likely to enjoy intimate acts such as kissing and caressing and they endorsed fewer sexual insecurities (e.g., insecurities about penis size) than younger males. It is possible that older men have more real-life sexual encounters and maturity, which allow them to better distinguish real sex from the fantasy of pornography.

The final exploratory analysis found that approximately 33% of participants did not believe that pornography posed any threat to relationships, and only 4.5% deemed it very harmful. Furthermore, pornography use was not significantly related to perceived harm of pornography to relationships. This finding suggests that males consume pornography irrespective of their perceptions about the harmfulness of the material. It is possible that the reward of viewing pornography could overpower one's personal beliefs and values.

Implications for Clinical Practice

Mental health clinicians should be aware of the potential link between pornography and relationship satisfaction. In practice, mental health professionals should

further explore and conceptualize how these variables relate specifically to each other. Although significant results were found, this information was not obtained using a clinical sample. Therefore, clinicians will need to individualize conceptualization and treatment due to the complexities involved with understanding these variables.

The moderate correlation between days and hours of pornography consumption further outlines the nuances in frequency and duration. An individual who consumes pornography for several hours over the course of 1 day and someone who consumes for 15 minutes over the course of several days will likely have qualitatively different experiences with pornography. This information is useful for mental health professionals because it reinforces the need to gather comprehensive data about pornography use. From a research perspective, this further supports the need for more standardized measures to assess pornography consumption. Short, Black, Smith, Wetterneck, and Wells (2012) conducted a meta-analysis to determine how pornography use has been measured across studies from 1999 to 2010. Over half of the studies used Likert-type scales to assess frequency. Sixteen percent of those studies used descriptive anchors (e.g., *frequently, never*), 25% used rating based anchors (e.g., *daily, more than 10 times per week*), 29% used specific ranges (e.g., *1-30 minutes per day, 2 to 3 days per week*), and 14% used yes/no questions. Furthermore, many studies assessed pornography use with a single item (Stack et al, 2004; Tylka, 2015) which does not provide a comprehensive description of pornography consumption.

Another key finding of the study showed that there were no significant differences between pornography use and its perceived harm to relationships. Twenty-five percent of participants believed that pornography was harmful. This finding suggests that simply

educating individuals about the potential dangers of pornographic material may not be enough to elicit behavioral change. This is similar to the limited effectiveness of health warning labels on cigarette boxes (Robinson & Killen, 1997). Based on the reward pathways observed in behavioral conceptualizations of pornography use, pornography has the potential to be addictive. Furthermore, individuals engage in addictive behaviors regardless of their knowledge about the potential harm. Carroll et al. (2008) found that about 20% of individuals who consume pornography found their behaviors to be unacceptable. Moreover, in a study of adolescents, 50% males and 32% of females reported experiencing shame related to their pornography consumption (Sabina et al., 2008). This is potentially problematic because research has found that people with greater conflict or dissonance between their values and their sexual behaviors tended to have lower sexual self-esteem (Griffin et al., 2016). Shame is self-deprecating by nature and may cause people to feel “stuck” or unmotivated (Chisholm & Gall, 2015). Furthermore, shame has been linked to lower motivation and fewer attempts to make behavioral changes among individuals with problematic pornography use and other sexual compulsive behaviors (Gilliland, South, Carpenter, & Hardy, 2011; Kraus, Martino, & Potenza, 2006). This concept has been observed in populations of individuals who use pornography despite having conflicting religious beliefs that condemn pornography. Bradley, Grubbs, Uzdavines, Exline, and Pargament (2016) found that individuals who endorse higher religiosity were more likely to report problems relating to their pornography use and more likely to deem themselves as “porn addicts” compared to individuals who identified as atheists or people with lower religiosity. Grubbs, Stauner, Exline, Pargament, and Lindberg (2015) found that daily pornography use was weakly

correlated with anger, and perceiving oneself as a “porn addict” was strongly correlated with depression, anxiety, stress, and anger irrespective to frequency of use. In sum, labeling oneself as a “porn addict” may be more detrimental to one’s mental health than the pornography itself. Consequently, education alone could potentially elicit more distress if not paired with support and supplemental interventions such as motivational interviewing and CBT interventions in the case of problematic pornography use.

Strengths

A significant strength of the current study is the measure of pornography consumption that was developed for this study. The questionnaire used in this study allowed participants to report on their frequency, duration, type/method, enjoyment, and inclusion or exclusion of others. The questionnaire also allowed participants to report on the specific genres of pornography that they consume, which is a component that has been largely absent from past research. This information provided a more comprehensive assessment of pornography consumption. To date, there are limited standardized measures of pornography consumption. Consequently, researchers have constructed their own questions to measure this construct. The current study examined frequency (number of days used) and duration (number of hours used) of pornography use, which revealed some variability.

Another significant strength of the study is the open inclusion criteria and the attempt to obtain a diverse sample. Most of the research in the area of pornography consumption is conducted with heterosexual White males who are typically college students. Allowing all males to participate in the study regardless of sexual orientation, relationship status, or student status was done in an effort to make the results more

generalizable to the full population of males.

Utilizing an Internet survey design has some notable advantages as well. Internet surveys allow researchers to obtain large samples easily. The current study was able to surpass the minimal number of participants needed based on the power analysis. This allowed for greater statistical power during data analysis. Internet surveys also tend to be low cost, convenient, and time efficient (Wright, 2005). Traditional paper surveys can become expensive, even when using a small sample. Moreover, this medium may require researchers to transport test materials, which can create demands for higher cost and travel. In addition, using an online format allowed participants to complete the survey at their leisure, which hopefully improved reporting of sensitive information (e.g., pornography consumption).

Limitations

Despite the advantages of Internet surveys, there are some notable limitations to this method. First, researchers are not present during the administration and completion of the survey due to the anonymity of the Internet. Consequently, this could lead to sampling errors, because the researchers cannot authenticate participants' demographic variables. Individuals may be motivated to engage in such deception when there is a financial incentive (e.g., a raffle). Another limitation of survey research is the practical need for participants to have Internet access. Although approximately 8 out of 10 Americans have high speed Internet access in their homes (United States Census Bureau, 2014), there is a subset of individuals who did not have access to the survey. Moreover, individuals who did not have private Internet access may have been reluctant to answer sensitive questions using a public terminal. Fortunately, this may have been a minor

limitation, because private Internet access can make pornography more accessible and convenient, thus allowing access to the targeted demographic.

Using a modified version of the RAS may have introduced confounds into the study as well. The modifications to the original measure of relationship satisfaction effectively altered the operational definition for relationship satisfaction in this study. For example, individuals who reported on their previous relationships had to discuss their satisfaction with relationships that have ended. Consequently, one could argue that these individuals may be more likely to report lower relationship satisfaction than individuals who reported on their current relationships. Those who reported retrospectively had a slightly lower mean of relationship satisfaction than individuals who were in relationships at the time of the study. The negative correlation between pornography consumption and relationship satisfaction had a higher magnitude among those who rated retrospectively. Nevertheless, ancillary analysis indicated the negative correlation between pornography consumption and relationship satisfaction was statistically significant for both groups.

Other concerns relate to variable distributions and statistical analyses. Pornography consumption in hours was positively skewed and needed to be transformed using a logarithm transformation. Transformation becomes a complex issue because the arithmetic means are transformed into geometric means (A. Field, 2009). Furthermore, relationship satisfaction was skewed because many individuals in the sample reported high rates of relationship satisfaction. This corroborates previous research that suggested that men tend to report higher rates of relationship satisfaction, so this was not surprising (Jackson et al., 2014). Despite these limitations, these statistical nuances likely had

minimal effects on the results. The presence of a negative correlation despite high relationship satisfaction scores makes this finding even more noteworthy.

In addition to psychometric concerns, the study also prioritized cultural and relationship variables and did not focus on other demographic variables such as education level and socioeconomic status. Education level may be a moderating factor in the relationship between pornography consumption and the endorsement of depicted beliefs. For example, Wright and Randall (2014) proposed that pornography use influences one's beliefs about same-sex marriage. They suggested that because pornography portrays free and open sexuality, individuals who consume the materials would adopt similar beliefs. Their results indicated that pornography consumption was related to an increase in support for same-sex marriages; however, this relationship did not exist in individuals who had higher levels of education. Individuals who achieve higher education may be more adept at distinguishing the fanciful and exaggerated nature of pornography from real-life aspects of sex, gender, and relationships. Wright and Randall proposed that educated individuals might consume pornographic materials more critically. Following Wright's (2011) 3AM model, education would mediate the process in which sexual scripts are acquired and activated (Wright & Randall, 2014). This is relevant to the current study because many participants were recruited from graduate and undergraduate colleges and universities. In sum, participants' education levels may have been another variable that influenced some of the findings.

Other limitations include problems with characteristics of the design, the nature of the study, the sample, and some psychometric issues. In cross-sectional designs, individuals are assessed in a single moment in time, providing a "snapshot" of the

sample. This design type does not measure participants' responses before or after this snapshot in time. Consequently, cause and effect relationships cannot be established (A. Field, 2009). In addition to the study design, there may be confounds that arose due to the sexually explicit nature of the study. Participants may have felt compelled to give answers that they deemed socially acceptable (i.e., they may have engaged in impression management). Furthermore, those who chose to participate in this study may have certain characteristics that may be threats to external validity. Wiederman (1999) investigated volunteer bias in human sexuality research and found that individuals who participated tended to be more sexually experienced, hold fewer traditional sexual attitudes, and scored higher on measures of sexual self-esteem. Consequently, it may be that individuals who choose to participate in this type of research may not represent the average consumer of pornography. This potential sampling error could be a threat to external validity; specifically, it may hinder the generalizability of these findings.

Future Directions

The variability in the results suggests that these constructs have complex relationships with each other and warrant future research in the areas of pornography use, relationships, masculinity, and body image. Future research should continue to utilize comprehensive and unified tools to assess pornography consumption because there were significant distributional differences found between frequency and duration. Furthermore, it may be beneficial for researchers to engage in qualitative research on this topic to investigate these differences more comprehensively.

Future studies should continue to strive to obtain diverse samples. Although specific recruitment efforts were made to include diverse groups, the majority of

participants were heterosexual White males, which limits the generalizability of these findings. Sexual orientation is another potential area of future research because fewer studies have been conducted to explore pornography consumption among sexual minorities. Gay pornography has been deemed as a normal and even positive presence within the gay community. Specifically, gay pornography makes up one of the few relevant depictions of homosexual interactions, as gay culture is largely underrepresented in traditional forms of media. Conversely, others note that gay pornography may be damaging due to the depictions. For example, Mercer (2012) discussed how gay pornography sometimes portrays the archetype of the “daddy,” which eroticizes older men and, thus, perpetuates the sexualization of abusive power dynamics. Alternatively, Mercer argued that the sexualization of older males could be conceptualized as a positive movement away from the tendency for popular media to praise youth and devalue maturity. Regarding body image, gay males may be under greater pressures to strive for masculinity and achieve body ideals. Consequently, gay pornography may be yet another medium to glorify these archetypes.

In addition to cultural and sexual complexities regarding pornography use, gender differences among pornography consumers is another important area for future research to explore. Although the goal of the current study was to investigate pornography consumption in males, there is a need to further understand female pornography use. Past research has shown that pornography use among females was not linked to lower relationship satisfaction (Poulsen, 2013). Nevertheless, erotic material marketed to females has recently reached mainstream audiences. For example, novels from the *Fifty Shades* trilogy by E. L. James have recently become popularized and achieved enormous

commercial success. The first two installments of the book series have already received mainstream film adaptations and soundtracks. Furthermore, the films' director, Sam Taylor-Johnson, has already confirmed a film adaptation for the final installment as well (Murphy, 2015). These sexually explicit novels/films contain scenes of sadomasochism in which a male dominates the female protagonist. Although novels depicting bondage and sadomasochism have existed for centuries (e.g., *The Story of O* by Anne Desclos under the pseudonym Pauline Réage and *Sleeping Beauty Quartet* by Anne Rice under the pseudonym A. N. Roquelaure), the *Fifty Shades* trilogy is one of the first to reach commercial success and obtain a mainstream following. Consequently, more research is needed on consumption among females in light of these changes in culture and media.

Few studies have examined pornography consumption with individuals who do not identify within the traditional gender binary. The current study excluded individuals who identified as transgender, gender-fluid, gender-neutral, or other non-binary gender identities due to the unique complexities of masculine ideology and body image in those populations. Nevertheless, future studies should include these populations to better understand these groups.

In addition to exploring diversity in research on pornography, there is also a need for more information about the neurological effects and correlates of pornography consumption. As the field of mental health continues to evolve with technology, means now exist to allow assessment of the neuronal correlates and substrates of pornography consumption. Researchers have already begun looking into this area. For example, Kühn and Gallinat (2014) found that hours of pornography consumption per week was related to less grey matter, less reaction to sexual cues, and fewer connections between areas of

the brain. The authors noted that it is unclear whether pornography use contributed to these cortical differences through frequent, intense stimulation of the nervous system (i.e., neuroplasticity) or if they predispose individuals for higher pornography consumption. Unclear correlations and confounds continue to be significant barriers in developing complex theories of how pornography relates to psychosocial and biological variables. Future studies in pornography should use longitudinal designs to further delineate the trajectories of pornography use and psychosocial problems. Specifically, this could help researchers better identify whether pornography use preceded or developed after any neurological or psychosocial observations.

Conclusions

Overall, pornography is a rapidly growing and ever -changing phenomenon. The current study adds to the body of literature on pornography and, specifically, adds to the burgeoning literature surrounding pornography's impact on relationships. This field of research can guide clinicians in case conceptualization for men with related issues. Future studies should continue to examine these constructs through different methods and designs. Furthermore, future studies should utilize technology and alternative designs to assess pornography consumption in an ethical manner. As it stands, pornography continues to be a complex and controversial construct and more research is needed in light of the ever-changing times.

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Appendix A

Questionnaire

Screening Questions

1. What is your age?

<Numerical Value>

2. What is your gender?

Male

Female

Transman

Transwoman

Other (agender, gender-fluid, etc.)

Demographic Questionnaire

1. What ethnicity or racial group do you most identify (Check all that apply)?

White

Hispanic or Latino

Black or African American

Native American or Native Alaskan

Asian / Pacific Islander

Multiracial

Other

2. What is your sexual orientation?

Straight

Gay

Bisexual

Questioning

Asexual

Other

3. Have you ever been in a monogamous/committed relationship

Yes

No

4. What is your current relationship status?

In a committed/monogamous relationship

Not in a committed/monogamous relationship

5. How long have you been in this relationship status?

- Less than a month
- 1-2 months
- 3-6 months
- 6 months to 1 year
- 1-2 years
- 3-5 years
- 5 years or more

6. How much do you enjoy being (or desire to be) in a committed romantic relationship?

- Not at all
- A little
- Somewhat
- Very Much

Pornography Consumption Questions

1. Have you ever used/ viewed pornography (Sexually explicit material in online, magazine, and/or video format)?

- Yes
- No

2. About how many days have you consumed pornography in the past 30 days? (Whole Number)

3. How many hours did have you consumed pornography in the past 30 days? (Round to the nearest 0.5)

4. What type (Check all that apply)?

- Online/Internet
- Home Video (e.g. DVD's, Blu-Ray, VHS, pay-per view)
- Magazines
- Other

5. Who do you usually watched pornography with? (Check all that apply)

- I watch it alone
- I watch it with partner
- I watch it with friends/ group
- I watch it in a theater
- Other

6. How much do you enjoy pornography?

- Extremely
- Very Much
- Somewhat
- A little
- Not at all

7. Is there any particular type/category of pornography that you use (Check All That Apply)

- Straight
- Lesbian
- Amateur
- Gay
- Transsexual
- Fetish/BDSM
- Group Sex
- Solo/masturbation (female)
- Solo/masturbation (male)
- Cartoon/Animation/Hentai
- Other

8. How harmful do you think pornography is to relationships?

- Very Harmful
- Somewhat harmful
- Neutral
- Probably not harmful
- No harmful at all

Appendix B**Information Letter/E-mail**

Dear Participant:

My name is Benjamin Barnes and I am a fourth-year Clinical Psychology PsyD student at the Philadelphia College of Osteopathic Medicine (PCOM) and I am currently recruiting participants for my dissertation study examining the relationships between pornography use, relationship satisfaction, and gender/relationship beliefs. I am looking **for males aged 18 or over** to participate in the study. Those are the only requirements to participate in the study. You **DO NOT** have to be in a relationship **nor** consume pornography to participate.

If you agree to be in this study, you will be asked to complete a questionnaire that will take about 30-45 minutes of your time. Your participation in this study is completely voluntary and you may decide not to participate or to stop your participation at any point with no questions asked or consequences to you. The items in these questionnaires ask about your experiences, beliefs, and other details about yourself. Click the link below to see if you are eligible!

< SURVEY LINK >

This survey is completely anonymous and at the end of the study, you have the option of providing an email address to participate in a raffle to win one of two \$50 Amazon gift cards. Your contact information **WILL NOT** be associated with any of your answer to assure anonymity and confidentiality. Thank you for your time and consideration!

Benjamin R. Barnes, MA
Responsible Investigator
4th Year Clinical PsyD Student
Philadelphia College of Osteopathic
Medicine
4190 City Avenue
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Appendix C

Online Post

Hello,

My name is Benjamin Barnes and I am a student at the Philadelphia College of Osteopathic Medicine (PCOM) recruiting for my research study on pornography use, relationships, and gender beliefs among males. The only requirement to participate in the study is to be male and over the age of 18 years. You DO NOT have to be in a relationship nor consume pornography to participate! The study consists of a brief anonymous online survey. Your participation in this study is completely voluntary and at the end of the study, you have the option of providing an email address to participate in a raffle to win one of two \$50 Amazon gift cards. Your email address will not be associated with any of your answers to assure anonymity and confidentiality. Click the link below to see if you are eligible! If you have any questions about the study, please contact me, benjaminba@pcom.edu, or the principal investigator, Celine Thompson, PhD, celineth@pcom.edu. Thank you for your time and consideration and feel free to share this post with others!

< SURVEY LINK >

Appendix D

Consent Page

You are eligible to participate in the study! Below is more information about the study. Please read the information and click below to continue!

What is the study about?: You are being asked to take part in a research study regarding the relationships between sexual media use, relationship satisfaction, gender beliefs, and relationship beliefs.

What we will ask you to do?: You are being asked to complete a questionnaire that will take about 30-45 minutes of your time.

Risks and benefits: There is the risk that you may find some of the questions about your sexuality to be sensitive. There are no specific benefits to you, however you may learn more about yourself. Furthermore, your participation can help further research of sexuality, relationships, and gender beliefs.

Raffle: After participating, you will have the option to give an email address so that you can be entered into a raffle to win one of two possible \$50 Amazon Gift Cards.

Your answers will be confidential: The survey is completely anonymous and any sort of report we make public we will not include any information that will make it possible to identify you.

Taking part is voluntary: Taking part in this study is completely voluntary. You may skip any questions that you do not want to answer. If you decide to take part, you are free to withdraw at any time.

Contacts: If you have any questions, please contact either the student researcher or principal investigator.

Benjamin R. Barnes, MA Student Researcher benjaminba@pcom.edu	Celine Thompson PhD Principal Investigator celineth@pcom.edu
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Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study. (Clicking “Next” will indicate that you consent to the study)

Appendix E

RAS Scale Permission Correspondence

Benjamin,

You have my full permission to use the Relationship Assessment Scale (RAS) in your dissertation. For your convenience, I have attached a copy of the scale (with scoring instructions), and two articles relevant to the scale's psychometric properties. We have used the scale online for a few years and have found it to perform similarly to the way it performs in a paper-and-pencil format. So conversion to online is just fine. Best wishes with your work.

Susan Hendrick

Susan S. Hendrick, Ph.D.

Paul Whitfield Horn Professor of Psychological Sciences, Ret.

Texas Tech University

Adjunct Professor of Internal Medicine

Texas Tech University School of Medicine

From: Benjamin Barnes [mailto:benjaminba@pcom.edu]

Sent: Monday, January 05, 2015 3:14 PM

To: Hendrick, S

Subject: RAS Scale

Dear Dr. Susan Hendrick,

I hope you had a warm and peaceful holiday. My name is Benjamin Barnes and I am a Clinical Psychology PsyD student at the Philadelphia College of Osteopathic Medicine (PCOM). I wanted to know if I could have permission to use the Relationship Assessment Scale. I am currently in the early planning stages of my dissertation and I am interested in studying relationship satisfaction in males who consume sexually explicit materials. I believe that the Relational Assessment Scale (RAS) is a good fit for the construct of relationship satisfaction. I am planning to conduct the study through an online survey, so I also wanted to know if I could convert it to online format when I construct the survey. Thank you for your time.

Respectfully Submitted,

Benjamin Barnes

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Benjamin R. Barnes

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PsyD. Clinical Psychology

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