

MEDIA USE, BODY IMAGE AND SEXUAL SATISFACTION IN EMERGING ADULTS

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ABSTRACT

Emerging adults in America are avid users of media, including magazines and pornographic film. Use of this media is associated with body dissatisfaction and reduced sexual satisfaction. However, existing research has not examined media use, body dissatisfaction and sexual satisfaction within the same study. Additionally, the effects of pornographic film use on body image have not been extensively studied, and existing research does not adequately consider how reasons for use might relate to effects of viewing this type of media. The present study tests an integrated model of the relationships among media use, body dissatisfaction and sexual satisfaction and examines how reasons for use of pornographic film relate to emerging adults' perceptions of their own bodies and sexual abilities. First, the proposed integrated model was tested separately by gender, using women's magazine use as the media variable for women and pornographic film as the media variable for men. Pornographic film use was not a significant predictor in the men's model. In the women's model, magazine use had a positive, direct effect on sexual satisfaction. Second, chi-square tests were used to determine whether relationships existed between reasons for, and outcomes of, use of pornographic film. Regardless of gender, use of pornographic film for the purpose of "ideas, tips or instruction" was associated with engaging in body comparison. Reasons for use were not associated with reported reactions to engaging in comparison. T-tests were also used to determine if differences existed in BMI and body image among consumers who reported responding with negative self-evaluations versus those who did not respond negatively when comparing their bodies to the bodies of actors in pornographic film. When compared to those who did not respond negatively to body comparison, women who reported reacting negatively to body comparison were higher in drive for thinness and body dissatisfaction while men had higher BMIs, greater drive for low body fat, and greater body dissatisfaction. This study suggests that researchers must consider the

possibility of positive effects and include consumer motivations and other dispositional factors as moderators of effects of viewing pornographic film and other media.

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INTRODUCTION

Emerging adulthood has been conceptualized as a distinct period of the lifespan, beginning around age 18 and lasting into the late 20s (Arnett, 2000; Arnett, 2006). Emerging adulthood is characterized by an intense focus on the self, and it is a time of unparalleled identity development, involving exploration in the areas of love (sexuality and romantic relationships), work (career or vocation), and worldview (politics, religion, etc.) (Arnett, 2000). Sexuality is a prime area of exploration during emerging adulthood (Lefkowitz & Gillen, 2006). In particular, during emerging adulthood, sexual activity becomes normative, as does the desire for intimacy in the form of romantic relationships, which typically include sexual intimacy (Arnett, 2000; Lefkowitz & Gillen, 2006). For American adolescents, the average age of first intercourse is 17, and approximately half of 17-year-olds have had sex; by the age of 19, nearly three-quarters of Americans have had sex (Guttmacher Institute, 2014; Lefkowitz & Gillen, 2006). The number of sexually active Americans increases across emerging adulthood, and by the end of emerging adulthood nearly all Americans report being sexually active (Guttmacher Institute, 2014; Lefkowitz & Gillen, 2006).

Research on sexual health in emerging adulthood has typically focused on risk behaviors (condom use, number of partners, use of birth control, etc.), as well as health-related attitudes (e.g., attitudes regarding premarital and casual sex); however, indicators of sexual-wellbeing, including sexual satisfaction, have been largely ignored (Higgins et al., 2011). Sexual health is not strictly the “absence of disease, dysfunction, or infirmity” but the ability to experience pleasure in the context of safe relationships (WHO, 2015, np). To overlook sexual satisfaction is to ignore a vital aspect of sexual health. Not only is sexual satisfaction a desirable outcome of sexual behavior, but for many people it is a vital part of fulfillment in romantic relationships.

Improved understanding of factors related to sexual satisfaction in emerging adulthood will contribute to efforts to promote sexual health in a more comprehensive manner.

The present study investigates the relationships among media use, body image, and sexual satisfaction in emerging adults. The goal of the present study is to elucidate important factors and processes that impact emerging adults' body image and sexual satisfaction. Media use is a primary focus because of its integral role in the socialization of emerging adults. Magazines and adult film, the media of interest in the present study, are replete with content that has the potential to impact body image and sexual satisfaction. The major sections that follow detail the role of media in the lives of emerging adults, the content of magazines and adult film related to body image and sexuality, and theoretical perspectives and research findings on the effects of using these particular types of media.

Use of Media by Emerging Adults

Emerging adults are avid media users and spend more time with media—between 11 and 12 hours a day—than they do sleeping (Coyne, Padilla-Walker, & Howard, 2015). Internet use is one of the most common forms of media use for emerging adults, but traditional forms of media including television, movies, music and magazines remain popular (Coyne et al., 2015). Information on magazine use specific to emerging adults is difficult to obtain, but reports on the circulation of magazines with target audiences that include emerging adults suggest enduring popularity among emerging adults in the United States. For example, *Glamour*, a fashion magazine with a target audience of women ages 18-49, had total circulation in the U.S. of over 2 million in 2014 (Alliance for Audited Media). Similarly, *Cosmopolitan*, a fashion magazine with a target audience of women ages 18-35, had total circulation in the U.S. of over 3 million in 2014 (Alliance for Audited Media, 2014). *Maxim*, an international men's lifestyle magazine targeting

men ages 18-34, had total circulation in the U.S. of over 2.5 million in 2012 (Alliance for Audited Media, 2012).

Depending on one's definition, pornography has existed for centuries, but mainstream use is a relatively recent phenomenon attributed largely to the advent of the Internet (McKee, Albury, & Lumby, 2008). Millions of pornographic websites now exist, allowing people to easily access pornographic content fairly anonymously and affordably (Carroll et al., 2008; McKee et al., 2008). Intentional exposure to Internet pornography increases steadily across adolescence and into emerging adulthood, and the use of the Internet to access pornography is highest among people ages 18-25 (Buzzell, 2005; Coyne et al., 2015; Wolak, Mitchell, & Finkelhor, 2007). In a large sample of college students, 72% of men and 24.1% of women reported accessing Internet pornography in the past year (Boies, 2002). In a more recent study by Carroll et al. (2008), the majority of emerging adult males in the study (87%) reported using some form of pornography in the past month, and the typical frequency of use was approximately weekly; fewer women reported having used pornography in the past month (31%), and their typical usage was monthly. The high use of pornography during emerging adulthood has been attributed to emerging adults' increased interest in sexuality and relationships (Carroll et al., 2008; Coyne et al., 2015).

Magazines and pornography are different in many respects, yet serve common purposes in the lives of emerging adults. Magazines are considered a more traditional form of popular media and are typically consumed in print form, whereas the widespread use of pornography, typically consumed in audiovisual form (e.g., DVDs, videos on websites), is a more recent occurrence (Coyne et al., 2015). In general, emerging adults rely upon media to self-socialize themselves with regard to issues of sexuality and intimacy (Coyne et al., 2015), and magazines and pornography are often used for the explicit purpose of obtaining information on sexual

topics. Emerging adults report using magazines as a source of information on sexual and reproductive health topics, particularly because such topics are often difficult to discuss with family or friends (Treise & Gotthoffer, 2002; Walsh-Childers, Gotthoffer, & Lepre, 2002). Emerging adults use pornography as a model informing their expectations for sexual encounters and may look to pornography as a source of sexual education (Braithwaite et al., 2013). In particular, pornography is an important source of information for emerging adults with limited experience in sexual relationships (Braithwaite et al., 2013).

Although emerging adults may understand that media depictions are not a perfect reflection of reality, they still rely upon media as a guide for what to expect in the “real world” (Coyne et al., 2015; Steele, 2002), which is disconcerting given the content of popular media. Popular media, including magazines and pornographic film, are filled with messages about sexuality, gender roles, and physical appearance. As mentioned, emerging adults may be particularly sensitive to this content, given their interest in sex and intimate relationships. The following section provides a review of content regarding physical appearance, sexual objectification, sexual scripts, and aggression in magazines and pornographic film.

Media Content

Magazines. In Western culture, particularly in America, ideals for physical attractiveness dictate thinness for women and muscularity for men. Over the last several decades, magazines have increasingly promoted unrealistic standards of physical attractiveness, standards that are unattainable for most people. In the 1980s and 1990s, the body size of cover models for women's magazines became smaller (Sypeck, Gray, & Ahrens, 2003). Similarly, the average weight and body measurements of *Playboy* centerfolds have changed to reflect the thin ideal—the societal standard for the ideal female body as low in body fat with a small waist (e.g., Garner, Garfinkel,

Schwartz & Thompson, 1980). Specifically, Garner et al. (1980) examined changes in body mass and measurements of *Playboy* centerfolds from 1959 to 1978 and found significant decreases in the bust and hip measurements of centerfolds as well as the average weight of centerfolds. In an update to the original study, Wiseman, Gray, Mosimann, and Ahrens (1992) found that the weight of *Playboy* centerfolds stopped declining and leveled off in the 1980s. Wiseman et al. noted that the stabilization of weight was likely because of a floor effect: the average body mass index (BMI; a tool used to approximate body fat based on weight and height) of many centerfolds was often at least 15% below expected weight, a criterion once used in the diagnosis of anorexia nervosa. A later update by van Lenning and VanWesenbeeck (2000) paralleled the findings of Wiseman et al. (1992) by demonstrating that the average BMI and measurements of centerfolds had not continued to decline but had stabilized. However, the average BMI of centerfolds remained quite low at 19.6 across the years 1985 to 1994. For a woman who is 5'5", a BMI of 19.6 would translate into a weight of approximately 118 pounds.

Analogous research on depictions of men suggests an increasing emphasis on muscularity. For example, in a content analysis examining changes in images of male bodies in *Sports Illustrated*, *Rolling Stone*, and *GQ* from 1967 to 1997, Law and Labre (2002) found that male bodies had become increasingly V-shaped (broad shoulders and chest, narrow waist), and images of extreme muscularity progressively increased and peaked in the 1990s. The most common body types featured in these magazines in the 1990s were low in body fat and either somewhat muscular or extremely muscular (Law & Labre, 2002). Similarly, Labre (2005) found images in issues of *Men's Health* and *Men's Fitness* from 1999 to 2003 depicted men who were typically low in body fat and very muscular. For both magazines, greater than 95% of images of men were coded as low body fat (on a scale of 1 = *low* to 3 = *high*). In terms of muscularity,

more than three quarters of images of men were coded as very muscular (on a scale of 1 = *not muscular* to 4 = *unnaturally muscular*).

The idealized images present in magazines display bodies that diverge substantially from the sizes and shapes of bodies among the general population. In a comparison of the BMIs of *Playboy* and *Playgirl* models with the BMIs of American and Canadian adults ages 18 to 24, Spitzer, Henderson, and Zivian (1999) found notable differences among the BMIs of models versus the general public. The BMIs of *Playboy* models were consistently low, belonging to the underweight BMI category (below 18.5) for the years 1977 to 1996, while the average BMIs of North American women increased but remained in the ideal (or average) BMI category (18.5 to 24.9) for Canadian women and at the low end of the overweight category (25.0 to 29.9) for American women (CDC, 2015a; Spitzer et al., 1999). The BMIs of men featured in *Playgirl* increased sharply from 1986 to 1997, with a large proportion of BMIs falling into the overweight category due to their increased musculature (Spitzer et al., 1999). Across the same period, the BMIs of American men changed very little and remained at the high end of the ideal range, while the BMIs of Canadian men increased sharply from solidly within the ideal category to the high end of the ideal range (Spitzer et al., 1999). Although the BMIs of male models in the 1990s did not differ substantially from those of North American men, the increase for models was due to an increase in muscularity, while the increase for men in the general population was due to an increase in body fat (Spitzer et al., 1999). The authors also noted an important point regarding media promotion of gendered body ideals: “While the average BMIs of men and women in the 1990s did not differ a great deal, the body sizes of men and women in the media were found to be hugely different, and becoming more different over time” (Spitzer et al., 1999, p. 560).

Women are not typically directly exposed to ideals for physical appearance present in *Playboy*, as *Playboy* targets audiences of heterosexual men, and women represent only a small fraction of readership. However, similar ideals for physical appearance exist across a range of magazine types, including popular women's magazines. In a study by Bessenoff and Del Priore (2007), the body sizes of models in eleven popular women's magazines were coded using BMI-based silhouettes and then compared with the average BMIs of American women ages 16-74. The average BMI of models, 23.6, was much smaller than that of American women, 28.2, during the same time period (Bessenoff & Del Priore, 2007). Younger models had lower BMIs, and models were also smaller in magazines with a readership comprised mainly of women under 35 years of age (Bessenoff & Del Priore, 2007). Among models ages 20-29, the age category from the study approximately corresponding to emerging adulthood, the average BMI of models was 20.8, while the average BMI of women who regularly read those magazines was 26.8 (Bessenoff & Del Priore, 2007). This means that the young adult women reading the magazines had an average BMI classified as overweight, while the average for models would be at the low end of the normal category. Put in more relatable terms, for a woman who is 5'5" in height, the average BMI of the models would translate into a weight of approximately 125 pounds, while the average BMI of readers would translate into a weight of approximately 161 pounds, a difference of 36 pounds. Given the fact that the prevalence of obesity in American adults increased across the first decade of the 21st century (CDC, 2015b), if a similar analysis was conducted at present, it is likely the differences between models and American women would be even greater.

At the same time that female models were becoming thinner and male models were becoming more muscular, the content of magazines dedicated to appearance and weight sharply increased. The number of dieting articles in popular women's magazines has increased sharply

since the 1950s (Garner et al., 1980; Wiseman et al., 1992). Interestingly, even when a magazine's title and description suggests a focus on health, the content is often more related to physical appearance. For example, Bazzini et al. (2015) analyzed the cover captions of 54 covers of *Men's Health* and 54 covers of *Women's Health* and found that both magazines primarily focused on appearance and weight loss. Covers of *Women's Health* were more likely to contain content on exercising for appearance reasons, while *Men's Health* covers were more likely to contain messages about general exercise. However, both magazines had appearance and weight loss as the most frequently occurring themes (Bazzini et al., 2015). Importantly, messages about appearance and weight were gendered, such that the thin ideal for women was evident in messages encouraging slimming down and focusing on problem areas such as the “butt”, “tush”, or “tummy”, while the muscular ideal for men—the societal standard for the ideal male body as low in body fat but muscular—was evident in messages about improving body parts including the “abs”, “pecs”, “biceps,” and “chest” (Bazzini et al., 2015).

In addition to greater content emphasis on weight and physical appearance, as well as the use of models adhering to gendered standards of physical attractiveness, magazines now also promote unrealistic standards through the use of digital manipulation. In addition to the hours spent by a professional team (e.g., make-up artists, lighting specialists, etc.) during a photo shoot, computers are used to digitally manipulate the images following the photo shoot. Photographs can go through more than 20 rounds of digital manipulation (Media Education Foundation, 2010). Digital manipulation is routinely used to enlarge women's busts, reduce their waists, trim their thighs and arms, and produce images in which women's skin is flawless—free of any scars, blemishes, undesirable lines or wrinkles (Media Education Foundation, 2010; Stice & Presnell, 2007). Furthermore, it is not uncommon for images to combine the “best” features of

multiple models—“one woman’s face, another woman’s hair, another woman’s hands, another woman’s legs”—into one composite image (Media Education Foundation, 2010, np; Stice & Presnell, 2007). Thus, the images in magazines are unrealistic on a number of levels.

Another notable change in media content over the last several decades has been an increase in sexual objectification in magazines. Sexual objectification is when a person is “made into a thing for others’ sexual use, rather than seen as a person with the capacity for independent action and decision making” (APA Task Force, 2007, p. 1). Some ways in which sexual objectification occurs in media include focus on specific body parts, often accompanied by dismemberment, in which the person’s head is not included as a part of the image; depiction of a sexualized person as a commodity; the use of phrases that reduce a person to a body part; and suggestion that the sexual availability of a person is the most important characteristic of the person (Bazzini et al., 2015; Fredrickson & Roberts, 1997; Heldman, 2013). Research has generally found media objectification of women to be more common than objectification of men, and magazine advertisements, in particular, are rampant with objectification (APA Task Force, 2007). For example, Stankiewicz and Roselli (2008) conducted a content analysis of advertisements in 58 top magazines targeting various audiences and interests and found that objectification of women was present most often in men’s magazines (e.g., *Esquire*, *GQ*, *Maxim*, *Men’s Health*), occurring in approximately 76% of advertisements. Objectification was also common in women’s magazines (e.g., *Glamour*, *Cosmopolitan*, *Redbook*, *Good Housekeeping*), occurring in 56% of advertisements (Stankiewicz & Roselli, 2008). Objectification occurred in 64% of advertisements in adolescent girls’ magazines (e.g., *Seventeen*, *J-14*, *Teen Vogue*, *YM*) (Stankiewicz & Roselli, 2008). A particularly disconcerting finding was the simultaneous sexual objectification of women and portrayal of women as victims, including but not limited to being

involved in a violent act, appearing lifeless or unconscious, being overpowered or tricked, or in bondage (for complete coding criteria, see Stankiewicz & Roselli, 2008, p. 584). When women were portrayed as victims (about 10% of the time across all magazine types), they were simultaneously objectified 73% of the time (Stankiewicz & Roselli, 2008). Analysis of images in which victimization was present indicated that women were three times more likely to be depicted as victims than as aggressors (Stankiewicz & Roselli, 2008).

Like magazine advertisements, the content of the magazines themselves (i.e., articles and accompanying photographs) frequently includes objectification. In a content analysis of pictures in *Playboy* and *Cosmopolitan* from 1965, 1975, 1985 and 1995, Krassas et al. (2001) found that women primarily functioned as sex objects in both magazines, though the target audiences and genre of the two magazines differed substantially. In their analysis of the pictures present in *Maxim* and *Stuff*, Krassas et al. (2003) found that women primarily functioned as objects, and that objectification of women was much more common than objectification of men. Similarly, Taylor (2005) found that most articles about sexual topics in men's magazines were accompanied by sexually suggestive pictures of women, normalizing the sexual objectification of women (Taylor, 2005). Pictures of men accompanying articles about sexuality in men's magazines are less common and less explicit than pictures of women (Taylor, 2005).

In addition to objectification being a common aspect of magazine content, magazines are also filled with sexual scripts. Sexual scripts are culturally-informed, gendered frameworks for understanding what constitutes a sexual experience, how to act during sexual encounters, and how sexual experiences should be interpreted (Arnett, 2013; Kim et al., 2007). Popular media promotes a heterosexual script in which women are submissive, function as gatekeepers for sexual activity, are primarily concerned with fulfilling the needs of their male partners, and do

not “expect, demand, or prioritize their own sexual pleasure” (Kim et al., 2007, p. 148). The script for men is one in which men are active as initiators of sexual activity and are assumed to be constantly preoccupied with sex, seeking and willing to engage in sexual activity at any moment (Kim et al., 2007). The heterosexual scripts present in popular media also suggest objectification of women by men is normal, women are primarily valuable because of their physical appearance, and a man's sexual performance reflects his “sexual prowess”, an important aspect of masculinity according to these sexual scripts (Kim et al., 2007). In magazine advertisements, sexual scripts may be implicit, but in other magazine content such messages are often explicit (Krassas et al., 2001, 2003).

Sexual scripts in magazine content are overt in articles containing advice for readers on how to improve one’s sex life or how to please the opposite sex. For example, popular magazines specifically targeting young men (e.g., *Maxim*, *Stuff*, and *FHM*) are often filled with articles describing “what women want” (Taylor, 2005). Magazine content encourages men to consider women’s desires and pleasure in sexual encounters, but such advice is given with the intent of helping men achieve sexual gratification for themselves, through increased frequency of sexual encounters or sexual rewards from their partners, such as fellatio (Taylor, 2005). In women’s and men’s magazines alike, articles describing how to achieve “great sex” communicate the heterosexual script, despite writers’ claims that they are “sexually open and liberal” (Menard & Kleinplatz, 2008, p.17). Women are advised on the kinds of clothes they should wear and how to groom themselves properly, especially with respect to the removal of pubic hair (Menard & Kleinplatz, 2008). In Menard and Kleinplatz’s (2008) analysis, magazine content suggested women’s body image is an important factor in having “great sex”—that women need to have a positive body image to be able to fully enjoy sexual experiences—while men’s body image was

never addressed. Menard and Kleinplatz (2008) noted the irony of this suggestion, given the major emphasis in most magazines, especially women's magazines, on women preparing their physical appearance appropriately in order to be sexually desirable.

While it is often the case that women's magazines communicate traditional sex roles for women, *Cosmopolitan* is considered a prominent example of a women's magazine actively seeking to change the discourse on female sexuality through promotion of empowering sexual scripts for women (Kim & Ward, 2012). However, it is also common for content in women's magazines (including *Cosmopolitan*) to simultaneously convey traditional messages and counter-scripts, creating mixed messages regarding women's sexual assertiveness and appropriate female sexuality (Kim & Ward, 2012). It is unclear whether women are able to decipher these mixed messages, though Kim and Ward's (2012) study suggests it may be possible for women to focus on empowering scripts when mixed messages are present.

Based on the studies described above, it is evident that magazine consumers are provided with narrow, unrealistic models for physical appearance and sexual experiences. The thin ideal for women is evident in frequent images of women with BMIs and body measurements substantially smaller than the measurements of average American women. The muscular ideal for men is prevalent, as male models tend to have broad shoulders, narrow waists, low body fat, and high muscularity. Magazine images and content are likely to encourage attention to and criticism of "real" or average bodies, given the large proportion of content dedicated to weight loss and modification of physical appearance, as well as the use of digital manipulation to create images of flawlessness. In addition, the objectification present in magazines likely encourages consumers, especially women, to be concerned about their bodies specifically in the context of sexual relationships. Finally, the heterosexual scripts in magazines suggest a reality in which

men are sex-obsessed and sexual conquest and skill are integral to a masculine identity, while women's primary role is to attract men with their physical appearance, then, during sex, to prioritize and fulfill their partner's needs.

Pornographic film. Pornographic film, also referred to as adult film, is sexually explicit audiovisual material intended to produce sexual arousal in viewers. Pornographic film has been criticized and scrutinized largely for its objectifying and aggressive content, as well as unrealistic and potentially harmful sexual scripts (e.g., Jensen & Dines, 1998). Pornographic film often contains gender stereotypes (e.g., men are dominant and aggressive), themes of sex without commitment, aggression as a normal part of sexual experiences, and sexual acts considered to be “nonstandard sexual behavior” (e.g., anal sex, BDSM, group sex) (Cummins, 2006; Jensen & Dines, 1998). For example, in an analysis of the content of 436 scenes from 50 randomly selected pornographic films, Brosius, Weaver, and Staab (1993) found that the actors were depicted as casual acquaintances in about 38% of scenes and strangers in about 30% of scenes, suggesting sex without commitment is a common theme. In a more recent analysis of 304 scenes from 50 best-selling pornographic films, Bridges, Wosnitzer, Scharrer, Sun, and Liberman (2010) found that “nonnormative”, potentially harmful sexual acts were fairly common: an “ass-to-mouth” sequence, in which a woman “performs oral sex on a man immediately after he has penetrated her anally” (p. 1072) was present in 41% of scenes; double penetrations—one woman penetrated anally and/or vaginally simultaneously by two men—of any kind were present in 19% of scenes (Bridges et al., 2010).

Popular adult film typically depicts sexual encounters in which men's sexual pleasure is prioritized. For example, one of the most common acts depicted in popular adult film is fellatio (Bridges et al., 2010; McKee, 2005). In scenes involving fellatio, the woman is almost always

kneeling, but the reverse is seldom true (i.e., men do not kneel or assume a subordinate position when performing oral sex on women) (Brosius et al., 1993). Additionally, the end of a scene is typically defined by male orgasm with ejaculation (Brosius et al., 1993), and male orgasm is much more common than female orgasm (McKee, 2005). The “money shot”—when a man ejaculates on the face and/or body of a woman—is often used to end a scene (Jensen & Dines; 1998; Bridges et al., 2010).

Women’s bodies are a primary focus in adult film and commonly objectified (Jensen & Dines, 1998). Scenes often begin with women slowly undressing in front of the camera, or with nude women posing, allowing the camera to focus on specific parts of their anatomy. It is far less common for men to present their bodies in a similar way (Jensen & Dines, 1998). Jensen and Dines (1998) suggest that male bodies are not objectified to the same degree as female bodies because most pornographic film is produced by men, for men, and heterosexuality is assumed; therefore, objectification of male bodies would be homoerotic and threatening to the audience of primarily heterosexual men. Yet, a more recent evaluation of the content of popular pornographic videos on the Internet (Klaasen & Peter, 2015) suggests men are objectified in pornographic film at similar rates, just in different ways. Women tend to be instrumentally objectified, meaning they are predominantly used as a “body or body parts for another person’s sexual gratification,” while men are more likely to be dehumanized through exclusion of their faces (inclusion of only their bodies) (Klaasen & Peter, 2015, p. 722).

In addition to the objectification often present in adult film, the bodies of actors in adult film tend to be different from bodies in the general population. Men tend to be muscular, and they typically have larger than average penises (McKee et al., 2008). Women tend to be slim and have larger than average breasts (McKee et al., 2008). Very few actors, male or female, are

overweight in top-selling pornography (McKee et al., 2008). In a qualitative study of Swedish adolescents, the stereotypical representations of men and women were described as ‘Barbie and Hercules’—women have small waists, large breasts and are subordinate to men, while men are muscular and dominant (Mattebo, Larsson, Tyden, Olsson, & Haggstrom-Nordin, 2012). Men in the study discussed the larger-than-average penises and unrealistic lack of body hair of male pornography actors (Mattebo et al., 2012).

Thus, similar to the content of magazines, popular pornographic film depicts the thin ideal for women and muscular ideal for men. However, consumers of lifestyle magazines would not likely see women’s fully exposed breasts, nor would they ever see erect penises or sexual acts in general. Adult film, then, communicates the same general sociocultural ideals for physical appearance as magazines, but with added attention to sexual body parts.

A final area of consideration regarding the content of adult film is depictions of aggression. Aggression toward women is particularly prominent in adult film (Jensen & Dines, 1998; Bridges et al., 2010). The most common type of aggression is physical aggression. Physical aggression typically occurs in the form of spanking, gagging, open-handed slapping and hair pulling (Bridges et al., 2010; Klaassen & Peter, 2015). Other, more extreme types of physical aggression (e.g., choking, whipping, threatening with a weapon) are rare (Bridges et al., 2010; Klaaseen & Peter, 2015). Though less common than physical aggression, verbal aggression also tends to be common in mainstream, popular pornography (Bridges et al., 2010). Verbal aggression typically occurs in the form of insults or name-calling (e.g., “slut”) (Bridges et al., 2010). When aggressive acts occur, the perpetrator is usually male and the target is usually female (Bridges et al., 2010; Klaassen & Peter, 2015). Female actors’ reactions to aggression,

typically neutral or pleasure, seem to suggest women do not mind, and perhaps even enjoy, aggression during sex (Bridges et al, 2010).

Sometimes, women's enjoyment of aggressive acts is ambiguous or may appear to be manufactured (Klaassen, & Peter, 2015). In such cases, aggression *may* constitute a form of violence. There is considerable debate among scholars surrounding definitions of violence in media, particularly what constitutes violence in pornography. The presence of aggression in adult film does not necessarily mean the content can be characterized as violence or victimization. As noted by McKee et al. (2008), defining violence in the context of pornographic film can be particularly difficult because some people request and derive pleasure from aggressive acts such as spanking or hair pulling. Therefore, it has been suggested that a reasonable definition of violence is: a behavior intended to cause harm or injury to another person who does not desire, or seeks to avoid, such treatment (McKee, 2008). McKee et al. (2008) argue that if a person is coerced or is overtly uncomfortable with a behavior, violence is present. If a person has requested or consented to an aggressive behavior, violence is not present (McKee et al., 2008).

As noted, the female actors in adult film often respond to acts of aggression neutrally or with pleasure. This complicates any arguments that might be made about the presence of violence in pornographic film. If the women are enjoying aggressive acts, how can those acts be construed as violence? Such a question is not easy to answer, as an additional consideration is the presence of consent. Did the actors have a discussion about what behaviors they were comfortable with prior to engaging in those behaviors, or was it just assumed that aggressive acts were welcome? Discussions regarding consent seldom, if ever, take place on camera in mainstream pornography. Thus, the issue of violence in adult film is a murky one. Whether aggressive acts constitute violence in adult film largely depends on the definition being used

(Klaassen & Peter, 2015). However, given the frequency of aggressive content, at the least an argument can be made that adult film normalizes aggression in the context of sexual activity. In the absence of explicit discussions between sexual partners, the assumption that aggression is acceptable during sexual activity is problematic.

Given the objectification of women present in popular pornographic film, as well as the fact that pornography is typically made by men for men, it is not surprising that more men report using pornography than do women (Jensen & Dines, 1998; Morgan, 2011). Research consistently finds that men view pornography more frequently than women (Boies, 2002; Buzzell, 2005; Carroll et al., 2008; Cranney, 2015; Goodson, McCormick, & Evans, 2001; O'Reilly et al., 2007; Wolak, Mitchell, & Finkelhor, 2007). Men who use pornography use it weekly or more often than weekly on average, while women who use pornography report average usage as approximately monthly (Carroll et al., 2008). It is possible that some of this difference is due to gender differences in masturbation and the role of pornography in masturbation: men report masturbating more frequently than women (Oliver & Hyde, 1993; Petersen & Hyde, 2010), and most of men's pornography use is solitary, for the purpose of masturbation (Morgan, 2011). Additionally, women tend to have more negative attitudes toward pornography, are less likely to consider pornography use an acceptable behavior, and are often perceived by men as "loose" if they view pornographic materials—reflective of a double standard concerning women's expression of their sexuality (Carroll et al., 2008; O'Reilly et al., 2007).

It is important to note that women likely underreport both masturbation and pornography usage due to the sexual double standard that exists for these behaviors (Peterson & Hyde, 2010). Masturbation and use of pornography are behaviors that are traditionally more acceptable for men than for women (Alexander & Fisher, 2003; Peterson & Hyde, 2010). Experimental

evidence suggests women's lower rates of masturbation and pornography use are at least partially due to false accommodation, the use of self-preservation strategies "to appear consistent with gender role expectations and to avoid the negative consequences of deviating from these expectations" (Alexander & Fisher, 2003, p. 28).

The fact that pornographic film is typically made by men for men has led to questions about how content might differ in films directed by women, or in pornography intended for audiences of women. As far as aggressive content, it seems that not much changes when women are directing. Sun et al. (2008) completed a comparison of scenes from films directed by women versus films directed by men. Aggression was common, regardless of director's gender (Sun et al., 2008). Like Bridges et al. (2010), Sun et al. (2008) found that the most common type of aggression in female-directed adult film was physical in nature, but verbal aggression was also present. Again, the target was nearly always female, and the target's response to aggression was neutral or pleasure (Sun et al., 2008).

Some differences were found between films directed by women and films directed by men, however. One area of difference between films directed by women and films directed by men was the presence of a greater percentage of female perpetrators in films directed by women (Sun et al., 2008). Other differences in content included less fellatio, more cunnilingus, and greater displays of positive behaviors (e.g., caressing, cuddling, kissing) in films directed by women (Sun et al., 2008). Interestingly, extreme forms of physical aggression (e.g., whipping) were actually *more common* in films directed by women (Sun et al., 2008). The authors explained this finding as a possible display of "hyper-masculine traits" intended to earn respect in a male-dominated field: "How best to demonstrate one's allegiance to patriarchy, thereby increasing one's status, than to exhibit one's masculinity by severely violating another woman?"

(Sun et al., 2008, p. 322). In consideration of this finding, a relevant point is that having a woman direct a pornographic film is not equivalent to production of pornographic film by companies openly dedicated to ethical production and representation of diverse sexualities.

The literature on popular adult film suggests that it promotes the following gendered sexual scripts: aggression is part of masculinity and women should submit to, or even enjoy, aggressive acts during sex; men's pleasure is more important during sexual encounters and women function as objects for the purpose of producing arousal and helping men achieve orgasm; women need to be willing to engage in potentially harmful sexual acts in order to satisfy men; and relationships are not an important consideration when it comes to sex. The scripts communicated in adult film may create unhealthy and unrealistic expectations for actual sexual encounters. It is not surprising, then, that pornography use has been found to be associated with a number of negative effects. However, some positive effects have been documented, as well. The following section details the effects of magazine use and adult film use on body image and sexuality. Prior to the description of specific effects of magazines and adult film, a brief synopsis of relevant theory is included to provide a framework for understanding media effects.

Effects of Magazines and Adult Film on Body Image and Sexuality

Theoretical perspectives. Among the most commonly used theories of media effects are Cultivation Theory (Gerbner et al., 2002), Objectification Theory (Fredrickson & Roberts, 1997) and the Uses and Gratifications perspective (Katz, Blumberg, & Gurevitch, 1974; Rubin, 2002). Cultivation theory has primarily been used to describe the impact of heavy exposure to television (Gerbner et al., 2002). According to Cultivation Theory, the more time a person spends with media, the more likely that person is to adopt views of reality that reflect the images and messages present in media (Gerbner et al., 2002). For example, Cultivation Theory has been

applied in studies of the effects of heavy television viewing on attitudes about gender roles and perceptions of “real world” violence. Heavy exposure to television has been found to be related to overestimates of violence in everyday life, stronger belief that the world is a mean and dangerous place (“mean world” syndrome), and greater stereotyping of roles, activities, and personality characteristics along traditional gender lines (Gerbner et al., 2002). Such effects are stronger when media messages are consistent and repetitive (Gerbner et al., 2002).

Application of Cultivation Theory to the topics of body image and sexuality suggests that greater exposure to the content in magazines and adult film would result in greater internalization of the gendered body ideals present in such media, as well as the sexual scripts communicated in these media. Gendered sexual scripts and messages about physical appearance are repetitive and largely consistent across a range of media types including pornographic film, adult magazines, women’s magazines and men’s magazines. Thus, individuals who frequently read magazines or watch adult film would be expected to evaluate themselves and their partners according to the standards for physical attractiveness and expectations for sexual encounters promoted by these media. A survey study by Ward, Epstein, Caruthers, and Merriwether (2011) provides support for Cultivation Theory through the investigation of a mediational model of the relationships between use of various media and sexual risk behaviors in a sample of undergraduate students. More frequent use of magazines and movies was associated with more permissive attitudes and perception of greater risk-taking among peers, and these attitudes were in turn associated with sexual risk behaviors including greater number of partners, greater number of casual partners and inconsistent use of protection (condoms and contraception) (Ward et al., 2011).

Objectification Theory focuses on women’s internalization of sexually objectifying media messages and the consequences of internalizing such messages. According to

Objectification Theory, repeated exposure to media objectification results in self-objectification, in which women take a third-person perspective of their own bodies (Fredrickson & Roberts, 1997). “Habitual monitoring of the body’s outward appearance” is often a result of self-objectification (Fredrickson & Roberts, 1997, p. 180). The tendency to engage in self-conscious body monitoring during sexual activity compromises women’s ability to experience pleasure and reach climax (Fredrickson & Roberts, 1997). In its original form, Objectification Theory focuses on the consequences for women of being repeatedly and ubiquitously objectified, but this theory is also relevant in the lives of men, as objectification of men and promotion of the muscular ideal has become more common in media over the last few decades.

Objectification Theory suggests that greater exposure to magazines and adult film would encourage viewers—notably, women to a greater extent than men—to be critical of their own bodies and sexual performance. Based on Objectification Theory, repeated exposure to objectifying content in magazines and pornographic film would result in adoption of a third person perspective involving body and performance monitoring, which would negatively impact sexual satisfaction. At least two studies provide support for the relationships among media use, internalization, self-objectification, and body monitoring (Tiggeman & Slater, 2015; Vandenberg & Eggermont, 2012), but sexual satisfaction was not included as an outcome in either of these studies.

Tiggemann and Slater (2015) tested a model of the relationships among media use, appearance conversations with friends, self-objectification, body shame, dieting, and depressive symptoms in a cross-sectional sample of early adolescent girls ($M_{\text{age}} = 11.6$). Two media categories—magazines (teen and women’s fashion) and Internet (general use and social media use)—contributed to self-objectification. Magazine use was indirectly associated with self-

objectification through its positive relationship with appearance conversations with friends; Internet use was associated with self-objectification directly, as well as indirectly through its positive relationship with appearance conversations. Television viewing, though included in the model, was not associated with self-objectification directly or indirectly. Self-objectification was associated with greater body shame, and body shame contributed to dieting behavior and depressive symptoms. The results of their study support some of the claims of Objectification Theory; specifically, their study supports the assertion that exposure to objectifying media content contributes to self-objectification, as well as the proposition that self-objectification has negative consequences for women's body image and mental health (Tiggemann & Slater, 2015).

A study by Vandenberg and Eggermont (2012) provides support for another aspect of Objectification Theory: habitual body monitoring as a consequence of self-objectification. Using a cross-sectional sample of over 500 adolescent girls ($M_{age} = 15.6$ years), Vandenberg and Eggermont (2012) tested a path analysis model of the relationships among use of four types of media containing sexually objectifying content (primetime television, music video television, fashion magazines, and social networking sites), internalization of beauty ideals, self-objectification, and body surveillance. Magazine use was the strongest predictor of self-objectification and predicted self-objectification directly, as well as indirectly through its positive relationship with internalization of beauty ideals. Music television, but not primetime television, was indirectly associated with self-objectification through its positive relationship with internalization of beauty ideals. Finally, use of social networking sites was a direct predictor of self-objectification and also indirectly contributed to self-objectification through its relationship with internalization of beauty ideals. Internalization of beauty ideals and self-objectification were both directly associated with greater body surveillance. Furthermore, internalization of beauty

ideals indirectly contributed to body surveillance through its relationship with self-objectification. Thus, as suggested by Objectification Theory, exposure to sexually objectifying media content contributes to self-objectification, and a consequence of self-objectification is habitual body monitoring, referred to as body surveillance in the study by Vandebosch and Eggermont (2012).

Neither the study by Vandebosch and Eggermont (2012) nor the study by Tiggemann and Slater (2015) included sexual satisfaction as an outcome. In the study by Tiggemann and Slater (2015), the impact of self-objectification on sexual satisfaction would not have been appropriate to include in the model, given the age of the adolescents in the sample. Although the sample of adolescents in their study may have been old enough to explore outcomes related to sexuality in the study by Vandebosch and Eggermont (2012), sexual satisfaction was not an outcome of interest. However, research exploring the impact of body monitoring on sexual experiences in samples of adults (e.g., Meana & Nunnink, 2006; Purdon & Watson, 2011; Woertman & van den Brink, 2012) suggests support for the claims of compromised sexual satisfaction put forth in Objectification Theory. Such research is described in depth in a later section.

The Uses and Gratifications (UG) perspective emphasizes the role of individual agency and individual differences in the consumption of media. One of the basic assumptions of the UG perspective is that audiences are not passive recipients of media messages; rather, consumers play an active role in selection of media, and social and psychological factors mitigate media effects (Rubin, 2002). UG assumes that consumers of media select particular media to fulfill social and psychological needs, intending to experience gratification of those needs through the use of the media they have selected (Rubin, 2002). Consumers may, indeed, experience

gratification of their needs as an outcome of their media use, but it is also possible for them to experience effects they did not intend to experience (Rubin, 2002). An example specific to pornography might include using adult film to produce and maintain arousal during masturbation. However, over time, repeated use of adult film could lead to physiological habituation, a situation in which a person is not able to become aroused as easily (Cummins, 2006).

The UG perspective emphasizes that individual and contextual factors impact effects of media use (Rubin, 2002). Valkenburg et al. (2016) explain the UG approach to media effects in the following way, “In other words, not the media but rather the media user is the center point in a process that may bring about a change, the media effect” (p. 320). Individual difference variables that may impact interpretation of media messages and the outcomes of media use include personality factors (e.g., sensation seeking), attitudinal predispositions, developmental factors (e.g., developmentally normative interest in sexuality) and social context (Rubin, 2002; Valkenburg et al., 2016). Additionally, motivations for use are an important consideration when studying media effects (Rubin, 2002). Audience motives impact audience activity, including attention and perception, which in turn impacts possible outcomes of media use (Rubin, 2002).

A research example includes the work of Walsh and Ward (2010), who found differences in connections between magazine use and sexual health knowledge based on readers’ motivations (reading for entertainment purposes or reading for information on sexuality). Among women, reading for entertainment was only associated with global knowledge, while reading for information on sexuality was associated with global knowledge and all five subcategories of knowledge: reproductive, contraceptive, condom use, STD, and HIV/AIDS (Walsh & Ward, 2010). Among men, reading for entertainment was only associated with global knowledge, while

reading for information on sexuality was associated with global knowledge and three subcategories of knowledge: reproductive, contraceptive, and condom use (Walsh & Ward, 2010).

The UG perspective suggests motivations for use, as well as psychological differences among users, are crucial considerations for understanding the impact of media use on consumers. One example of the explicit application of UG to the topic of pornography use comes from Paul (2009), who examined the role of individual difference variables in the consumption and arousal patterns related to Internet pornography in a sample of college students. The individual difference variables included in the study were gender, sensation seeking, dispositional sexual affect (DSA; a construct representing trait-level response to sexual stimuli) and antisocial personality disposition (Paul, 2009). Among men and women in the study, erotophilic DSA and greater impulsive thrill-seeking (an aspect of antisocial personality disposition) were both associated with increased consumption of, and arousal in response to, Internet pornography (Paul, 2009). Among men, greater sensation seeking was associated with increased consumption only; among women, sensation seeking was not related to consumption or arousal in response to pornography use (Paul, 2009). Thus, it is clear individual difference variables play an important role in viewers' selection of, and response to, sexually explicit materials. However, the study by Paul (2009) did not examine the role of specific motivations for use, an important consideration if investigating media effects from the UG perspective. An examination of consumers' reasons for using pornography may help explain observed variability in effects of pornography use, effects which are described at length in the forthcoming section on sexuality. The next two sections provide a detailed account of research exploring the effects of magazine and

pornography use on body image and sexuality. The three theoretical perspectives described above are integrated when appropriate to create dialogue and synthesis of research and theory.

Body image. Among the most widely studied and thoroughly documented effects of media use are internalization of ideals for physical appearance and changes in body image. Internalization is best described as the “extent to which an individual considers the societal norms of size and appearance to be appropriate standards for his or her own size and appearance” (Vandenbosch & Eggermont, 2012, p. 871). Body image refers to a person’s perceptions, thoughts, feelings and behaviors related to his/her physical self, and can be thought of as consisting of four dimensions: perceptual, affective, cognitive, and behavioral (NEDC, 2011). Body image is an integral part of global self-esteem in adolescence and emerging adulthood and remains important throughout adulthood, though its relative importance appears to decrease in middle adulthood (Harter, 2006; Robins & Trzesniewski, 2005; Tiggemann, 2004).

As would be predicted by Cultivation Theory, greater exposure to idealized images in media is associated with greater internalization of the societal ideals of thinness for women and muscularity for men. For example, in a meta-analysis of experimental and correlational studies Grabe, Ward, and Hyde (2008) found media exposure to be associated with women’s greater internalization of the thin ideal. Media exposure included use of magazines, television, and movies, and was most commonly measured as frequency of use or hours per week (Grabe et al., 2008). Across 23 studies, 14 of which focused on magazines, the average effect size of media exposure on internalization of the thin ideal was small to moderate (Grabe et al., 2008). Likewise, Tiggemann and Slater (2015) found that magazine use, music television viewing, and use of social media websites were all positively associated with internalization of beauty ideals in a sample of adolescent girls. Similarly, college men’s use of popular magazines intended for

male audiences has been associated with higher drive for muscularity and belief in the social benefits of being muscular (Hatoum & Belle, 2004). More frequent use of magazines intended for male audiences has also been associated with men's greater endorsement of thinness for women (Hatoum & Belle, 2004). Exposure to idealized images has also been demonstrated to change men's perceptions of ideal levels of muscularity, as well as perceptions of the muscularity of average men, resulting in greater discrepancies between current and ideal levels of muscularity and current muscularity compared to perceptions of peers' muscularity (Leit, Gray, & Pope, 2002).

Exposure to idealized images is strongly associated with changes in body image as well, particularly body satisfaction. Body satisfaction (or dissatisfaction) is an affective aspect of body image, encompassing people's feelings about their "appearance, weight, shape, and body parts" (NEDC, 2011, np). Body dissatisfaction is prevalent in adolescence and increases from adolescence into emerging adulthood (Presnell et al., 2004; Tiggemann, 2004; Quick, Eisenberg, Bucchianeri, & Neumark-Sztainer, 2013). Body dissatisfaction tends to be higher in women than in men across the lifespan, and it tends to be higher among individuals with larger BMI (NEDC, 2011; Tiggemann, 2004). Higher BMI is usually an indication of greater body fat among people in the general population, so people with higher BMIs—especially women—typically have bodies that do not adhere to Western ideals.

Media exposure is a contributor to body dissatisfaction. Groesz et al. (2002) used meta-analytic techniques to examine the main effect of experimental exposure to thin ideal images on body image in women, as well as possible moderators of this effect. Based on 43 independent effect sizes from 25 studies, the main effect of exposure to images of thin models on body image was negative and moderate ($d = -.31$) (Groesz et al., 2002). Grabe et al. (2008) found that media

exposure was associated with lower body satisfaction, or higher dissatisfaction, among women. Across 90 studies, the average effect size of media exposure on body satisfaction was small to moderate (Grabe et al., 2008). Experimental exposure to photos of thin models taken from popular magazines results in decreased body satisfaction in adolescent girls (Durkin & Paxton, 2002) and heightened body self-consciousness in adult women (Wegner, Hartmann, & Geist, 2000). Not only does exposure to idealized images increase women's dissatisfaction with their own physical appearance, but women who view idealized images rate average women as less attractive as well (Richins, 1991). In an experimental study by Richins (1991), female undergraduates who were exposed to advertisements featuring slender, attractive models or the faces of highly attractive models subsequently rated average women as less attractive than did participants who saw the same advertisements without models (Richins, 1991).

Similar research with samples of men suggests men are also susceptible to changes in body image after viewing idealized images. Correlational research on college men's use of popular magazines intended for male audiences suggests higher use is associated with greater body dissatisfaction (Hatoum & Belle, 2004). Furthermore, experimental research provides evidence of a causal role of exposure to muscular images in men's body dissatisfaction (e.g., Baird & Grieve, 2006). Although the effect size was small in their study, exposure to idealized images was very brief, and the authors perceptibly noted that in day-to-day life men are inundated with images of ideal masculine bodies (Baird & Grieve, 2006). In a meta-analysis of experimental research, Blond (2008) found a small average effect of exposure to idealized images on men's body dissatisfaction. Importantly, a substantial portion of the effect sizes included were not significant; however, among only the significant effect sizes, the average effect size was medium, $d = .45$ (Blond, 2008).

As suggested by Blond's (2008) findings, not all research has found exposure to be associated with body dissatisfaction, and media does not impact all consumers uniformly. These findings are in line with the UG perspective, which suggests differences between media users impact their interaction with media and, therefore, the effects of media use. In fact, a number of variables have been found to moderate the effect media use on body image. For example, in the meta-analysis by Groesz et al. (2002), the negative effect of exposure on body image was stronger among adolescents (under 19 years of age) than adults (19 years of age or older), and was stronger among women with a history of body image problems (e.g., presence of eating disorder or high body dissatisfaction) than women without a history of body image concerns (Groesz et al., 2002). In an update of Groesz et al. (2002), Want (2009) examined potential moderators of effect sizes for the impact of experimental exposure to idealized images on appearance satisfaction in women, using 75 independent effect sizes from 47 studies. Pre-existing appearance concerns (e.g., appearance dissatisfaction, public self-consciousness) were a significant moderator: there was a more profound negative effect of exposure on appearance satisfaction among women with high levels of pre-existing appearance concerns, compared to women with medium or low levels of pre-existing appearance concerns (Want, 2009).

Interestingly, in a study by Schooler and Ward (2006), men who viewed pornographic magazines more often actually reported greater satisfaction with their upper body strength and physical condition. One of the explanations offered for this finding was that men with particular ideas about masculinity may be more frequent users of pornographic magazines, and such views of masculinity may also be linked with particular body image attitudes (Schooler & Ward, 2006). The authors speculated that men who are more dissimilar from the muscular ideal may avoid magazines; however, due to the cross-sectional nature of their study, they could not determine

direction of effects (Schooler & Ward, 2006). Additionally, the authors noted that men's pornographic magazines seldom portray men's bodies, thus opportunities for comparison to idealized masculine bodies were likely scarce. This point is relevant, as social comparison is a major contributor to body dissatisfaction in both men and women (Myers & Crowther, 2009).

Social comparison in the context of body image research refers to a person comparing features of his or her physical appearance to the features of another person, such as peers or a model (Dittmar & Howard, 2004; Durkin & Paxton, 2002; Myers & Crowther, 2009). The tendency to engage in social comparison plays an important role in the effects of exposure to idealized images. For instance, Durkin and Paxton (2002) found that the tendency to engage in social comparison contributed to reduced body satisfaction in a sample of 10th grade girls. In a sample of adult women, Dittmar and Howard (2004) found that the tendency to engage in social comparison is a moderator of the relationship between viewing thin images and body anxiety, but only when women have internalized the thin ideal. The connection between social comparison and body dissatisfaction appears to be stronger in women than in men, but the tendency to engage in social comparison is associated with greater body dissatisfaction in men as well (Galioto & Crowther, 2013; Myers & Crowther, 2009).

While there is a substantial body of research exploring the impact of magazine exposure on body image, research on the impact of adult film on body image is less common. Short, Black, Smith, Wetterneck and Wells (2012) reviewed Internet pornography research from the years 2000 to 2010, examining the methodology and content of 46 studies published during that time frame. Only 3 of the 46 studies included any measures related to body image (drive for muscularity, eating and exercise habits). In a review of research on the impact of Internet pornography on adolescents, Owens, Behun, Manning and Reid (2012) noted a dearth of

research focusing on body image and described only two studies with content related to body image, one a qualitative study using individual interviews (Haggstrom-Nordin et al., 2006), another a qualitative study using focus groups (Lofgren-Martenson & Mansson, 2010). Both studies were undertaken to explore the perceived influence of pornography on users, and in both studies unrealistic standards for bodies—especially female bodies—were a theme that emerged (Owens et al., 2012).

Although limited, the available research suggests use of adult film may be detrimental for body image. Some research suggests viewing adult film produces dissatisfaction specifically with sexual body parts. For example, in a sample of men, Morrison et al. (2006) found exposure to Internet pornography to be negatively associated with satisfaction with one's penis, but there was no relationship of pornography use with body image in general. In a similar study that included men and women, Cranney (2015) examined the impact of Internet pornography use (films and photos together) on men's satisfaction with their penises and women's satisfaction with their breasts. More frequent use was associated with men's dissatisfaction with penis size, but there was no relationship between pornography use and breast satisfaction for women (Cranney 2015). However, null findings for women may have been an issue of low power, because women watched pornography far less frequently than men (Cranney, 2015).

More general body dissatisfaction after viewing adult film has also been documented. In a two-wave panel study of Dutch adults, Peter and Valkenburg (2014) found that greater exposure to sexually explicit Internet material resulted in greater general body dissatisfaction as well as dissatisfaction with stomach size, but not penis size, for men; however, for women there was no impact on body dissatisfaction, dissatisfaction with stomach size, or dissatisfaction with breast size. Despite the large sample size, power was an issue in examining effects for women

because women's use of pornography was infrequent (Peter & Valkenburg, 2014). In explaining the null findings for women, the authors also suggested women may be habituated to idealized images of women because such images are more common than idealized images of men; furthermore, the female bodies in pornography may not follow as rigorous standards for physical attractiveness as in other media typically consumed by women (Peter & Valkenburg, 2014).

In what is likely the most thorough exploration of the links among adult film use and body image in men, Tylka (2015) found that adult film use indirectly impacted men's body image. In one mediational model, pornography use predicted internalization of the muscular ideal, and internalization predicted dissatisfaction with body fat and muscularity. In a second model, pornography use predicted greater body monitoring, and body monitoring predicted lower body appreciation. These findings are consistent with Objectification Theory (Fredrickson & Roberts, 1997), which suggests that exposure to objectifying media results in internalization of ideals for physical appearance, habitual body monitoring, and body dissatisfaction.

Use of magazines and adult film has been found to impact emerging adults' ideas about physical attractiveness, is often accompanied by social comparison, and can contribute to body dissatisfaction. Reduced body satisfaction may have implications for sexual health, as sexual experiences necessarily involve bodies. The following section details effects of magazine and adult film use on sexuality, beginning with a discussion of the ways media can impact sexual satisfaction indirectly, through connections with body image.

Sexuality. Objectification theory suggests body monitoring is a result of objectification in media, and body monitoring during sexual encounters compromises pleasure (Fredrickson & Roberts, 1997). In fact, one of the most common problems during sexual encounters is cognitive distraction due to non-erotic thoughts focused on the body or on sexual performance, also

referred to as spectating (Purdon & Watson, 2011). A large body of research suggests women's body dissatisfaction negatively impacts their sexual satisfaction with a partner through heightened self-consciousness during intimacy (Woertman & van den Brink, 2012).

Most research on the relationship between body dissatisfaction and cognitive distraction has focused on women, but men also experience cognitive distraction due to appearance concerns. Meana and Nunnink (2006) found that negative body image was associated with greater appearance and performance-related cognitive distraction in men and women. Women reported greater distraction than men, though, and their greater distraction was attributable to higher frequency of appearance-related concerns (Meana & Nunnink, 2006). Similarly, Purdon and Holdaway (2006) found that women reported more non-erotic thoughts than men, and women reported more appearance-related thoughts while men reported more thoughts about performance. In a more recent study, Purdon and Watson (2011) also found non-erotic thoughts to be a fairly common problem for both men and women. Again, women were somewhat more likely than men to report bodily concerns as the primary content of non-erotic thoughts, while men were somewhat more likely than women to report performance concerns as the primary content of non-erotic thoughts (Purdon & Watson, 2011). Non-erotic thoughts were a significant predictor of sexual functioning (i.e., sexual satisfaction and sexual dysfunction) for men and women (Purdon & Watson, 2011).

Because most previous research had relied upon student samples, Nelson and Purdon (2011) examined the range and frequency of non-erotic thoughts in a community sample. Participants were required to be married or cohabiting with a partner for at least the past two years. Similar to the findings of Purdon and Watson (2011), women were more likely to report bodily concerns, while men were more likely to report performance concerns (Nelson & Purdon,

2011). Women were also more likely than men to report concerns about external consequences (e.g., pregnancy) (Nelson & Purdon, 2011). Non-erotic thoughts contributed to impotence in men and sexual dissatisfaction in women (Nelson & Purdon, 2011).

The content of magazines and adult film may impact sexuality indirectly through effects on body image. Additionally, magazines and adult film may have more direct impacts on aspects of sexuality such as attitudes about casual sex, expectations for sexual encounters, and satisfaction with sexual experiences and sexual partners. For example, Taylor (2006) found undergraduate men's use of magazines intended for male audiences was associated with more varied expectations for intimate behavior, measured by ten commonplace (e.g., passionate kissing) and ten less common or more unusual (e.g., BDSM) sexual behaviors men would expect in a romantic relationship; more frequent use of male-targeted magazines was also associated with more permissive attitudes towards sex. In a large Internet survey of men and women, Carroll et al. (2008) found that users of pornography had significantly more lifetime sexual partners than non-users, and users of pornography were more accepting of casual sex. Likewise, in a survey of college students examining the associations between pornography use, sexual preferences and behaviors, and sexual satisfaction, Morgan (2011) found that frequency of pornography use was positively associated with number of lifetime sexual partners and number of casual sex partners. An important limitation of all three of these studies is that they were correlational, so the association between media use and attitudes may be evidence of selection effects, rather than a causal relationship between media use and permissive attitudes.

Experimental (Zillman & Bryant, 1988) and longitudinal (Peter & Valkenburg, 2009) studies suggest a causal relationship between pornography use and aspects of sexual satisfaction. Zillmann and Bryant (1988) found that experimental exposure to non-violent pornographic film

resulted in lower satisfaction with one's sexual partner, including the partner's performance, appearance, and willingness to engage in novel sexual practices. In a three-wave panel study utilizing a large, representative sample of Dutch adolescents and emerging adults ages 13 to 20, Peter and Valkenburg (2009) found that greater exposure to sexually explicit Internet material was consistently associated with reduced sexual satisfaction, without support for reciprocal causation.

Yet, similar to the findings regarding effects of exposure to idealized images, exposure to adult film does not produce the same effects for all consumers, which is in line with the UG perspective. Some women react with feelings of inadequacy or dissatisfaction with their own bodies, or have concerns about how viewing pornography will impact their partner's satisfaction with their bodies and behaviors (Attwood, 2005; Rasche, 2011). In contrast, other women believe that pornography enables them to gain comfort with and explore their sexuality (Attwood, 2005; Rasche, 2011). For some users, pornography is associated with greater interest in and frequency of sex; for other users, pornography is associated with reduced interest in actual sex and difficulty becoming aroused during sexual encounters (physiological habituation) (Albright, 2008; Cummins, 2006). Often, effects are a mix of positive and negative (Albright, 2008; Rasche, 2011). For example, in Albright's (2008) study, about a quarter of men and a quarter of women reported that their use of Internet pornography had improved their sex lives, usually by making them more open to trying new things and more comfortable talking with their partner about their desires. However, both men and women reported negative effects of pornography use, as well, and these perceived effects varied by gender (Albright, 2008). Women were more likely than men to perceive that their partner's use of pornography made their partner more critical of them and increased pressure to perform, while men were more likely to report that their use of

pornography had made them more critical of their partner and that their use of pornography had made them less interested in actual sex (Albright, 2008).

Some of the differential findings in the study by Albright (2008) are explained by considering effects from the UG perspective. Men and women differed with respect to the reasons for and conditions under which they used pornography. Men typically used pornography for the purpose of arousal during masturbation, while women used pornography more often with a partner to enhance sexual experiences, and women appeared to incorporate their use of pornography into their sexual lives, suggesting they were using pornography as means of increasing their sexual knowledge (Albright, 2008). Thus, not surprisingly, the perceived effects of pornography differed for women and men.

The outcomes of viewing adult film are many and varied, as are the reasons for which consumers view adult film. Adult film is used as a supplement for masturbation, as an educational resource to gain knowledge about sexual techniques and sexual anatomy, as a way of initiating or enhancing sexual experiences with a partner, for entertainment purposes (e.g., reducing boredom), and to satisfy curiosity (Attwood, 2005; Boies, 2002; Goodson et al., 2000; Rasche, 2011). Whether the effects of adult film use vary systematically according to the reasons for which consumers view adult film is an area of little knowledge, so a study exploring this would be worthwhile.

In addition to investigating the role of motivational factors and individual difference variables in effects of adult film use, an examination of the role of motivational factors in the tendency to engage in social comparison when viewing pornographic film would contribute to understanding processes central to audience interaction with pornographic media. Morrison et al. (2006) offered the following questions as important areas of future research: “Are those who

view sexually explicit material for the purpose of distraction or alleviation of boredom less likely to engage in universalistic social comparison than those who view such material for the express purpose of sexual arousal? Does reliance on pornography as a source of information about sexual matters (e.g., Trostle, 1993) increase the likelihood that comparative processes will be triggered?” (p. 220). The present study seeks to answer these and other important questions.

Limitations of Previous Research and Purpose of the Present Study

No known research has examined the relationships among media exposure, body image, cognitive distraction, and sexual satisfaction together in one study. A study testing an integrated model of the theoretical and empirically supported relationships among these variables would substantially contribute to the media effects literature. Ultimately, improved knowledge of the links among these variables can be used in efforts to promote healthy sexuality and better body image in emerging adults.

Research exploring the impact of pornographic film on body image and sexual satisfaction is limited and does not adequately consider reasons for use as related to potential outcomes. Systematic examination of the relationships among reasons for use and outcomes of use, as well as outcomes of use and individual characteristics, will contribute to the literature examining media effects from the UG perspective. A focus on the relationship between reasons for use and the tendency to engage in social comparison will add new knowledge to the existing literature.

The present study consists of two distinct articles. Article 1 primarily draws on Objectification Theory, but also incorporates Cultivation Theory. Article 1 expands on previous research by combining media use, body dissatisfaction, cognitive distraction, and sexual

satisfaction in one model (see Figure 1). The model tests the following hypothesized relationships, formulated based on theory and previous research:

- 1) BMI positively predicts body dissatisfaction.
- 2) Greater media exposure predicts higher body dissatisfaction.
- 3) Higher body dissatisfaction predicts higher cognitive distraction during sexual encounters.
- 4) Higher cognitive distraction predicts lower sexual satisfaction.
- 5) Greater media exposure predicts higher cognitive distraction directly, as well as indirectly through its relationship with body dissatisfaction.
- 6) Higher body dissatisfaction predicts lower sexual satisfaction directly, as well as indirectly through its relationship with cognitive distraction.

BMI was expected to be positively associated with body dissatisfaction because, as previously noted, individuals with greater BMI typically have more body fat proportionally, so their bodies diverge more substantially from societal standards for physical appearance. Based on experimental and correlational evidence, greater media exposure was expected to predict higher body dissatisfaction. The positive relationship between body dissatisfaction and cognitive distraction during sexual encounters was anticipated on the basis of previous research as well as the premises of Objectification Theory. Similarly, higher cognitive distraction was expected to be associated with lower sexual satisfaction on the basis of previous research as well as Objectification Theory. The direct, positive relationship between media exposure and cognitive distraction is based on Cultivation Theory, which holds that repeated exposure to media messages results in internalization of messages; thus, greater media use would be expected to

result in internalization of sexual scripts, which at their core encourage constant evaluation of bodies and performance in the context of sexual encounters. Finally, the direct link between body dissatisfaction and sexual satisfaction was included to allow for the possibility that cognitive distraction was not a full mediator of the relationship between body dissatisfaction and sexual satisfaction.

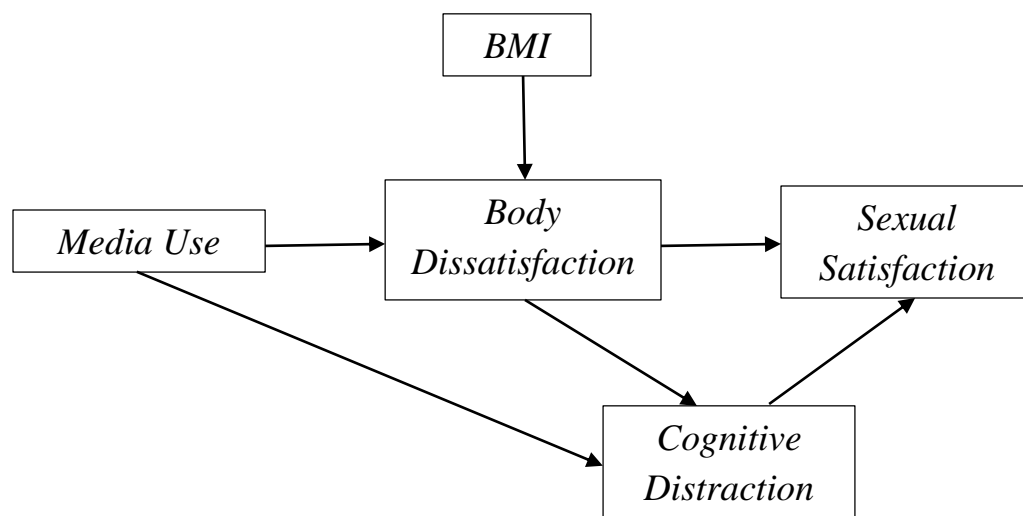


Figure 1. Model of relationships among media use, body dissatisfaction, cognitive distraction, and sexual satisfaction, controlling for BMI.

Article 2 considers adult film use from the UG perspective and addresses the limitations of previous research by exploring how young adults' reasons for using adult film are related to outcomes associated with viewing adult film. The following research questions were answered:

RQ1: To what extent do men and women consciously compare their bodies and sexual abilities to the bodies and abilities of the actors in adult film?

RQ2: Is the tendency to engage in conscious comparison related to the reasons consumers are viewing adult film?

RQ3: Are consumers' reactions after making conscious comparisons to the bodies and abilities of actors in adult film related to the reasons for which consumers are viewing adult film?

RQ4: Are there differences in BMI and body image among consumers who report responding with negative self-evaluations versus those who do not respond with negative self-evaluations when comparing their bodies to the bodies of actors in adult film?

Given the lack of research explicitly investigating how reasons for use of pornography relate to outcomes of use, specific relationships among reasons for use and outcomes of use were not hypothesized. However, the UG perspective suggests the reasons for which consumers use adult film would be expected to vary and to impact outcomes of use, and the impact of adult film use on body image would not be expected to be uniformly negative. Research on other media types suggests individual characteristics such as internalization of societal standards for appearance and existing body dissatisfaction would likely mitigate the impact of adult film use on body image.

METHOD

This project used data collected in 2013 in the Study on Sexuality and Related Topics (SOSRT). The SOSRT was designed to allow investigation of links among sexual attitudes and behaviors, body image and eating behaviors, relationships, and media use. The SOSRT included two waves of data collection approximately one semester, or five months, apart. However, only the first wave of data was analyzed in the two papers.

Procedure

The first wave of the study took place in Fall 2013. The study was advertised using flyers posted in academic and residential buildings at three colleges/universities in a Midwestern community. Flyers had detachable tabs with the survey link provided. The study was also advertised through the student e-mail listserv of the largest institution involved in the study. The recruitment materials listed the following requirements: must be an English-speaking college student at least 18 years of age.

The first page of the online survey was the informed consent document (see Appendix A). After reading the consent information, participants had to check a box indicating consent, then click the “next” button before proceeding with the survey. Failure to check the consent box resulted in an error message and inability to advance to the next page.

On the second page of the survey, participants were asked to indicate their gender, “M” (masculine/male/man), “F” (feminine/female/woman), or “T” (transgender). Because many of the measures in the survey were gender specific, separate versions of the survey were created for men and women. In order to be able to provide the correct version of the survey to participants, the gender question was a required field. Individuals who identified as “T” were asked to select the gender with which they most closely identified.

After survey completion, participants were redirected to a separate survey where they were given the option to register for a chance to win one of ten gift cards, five worth \$25 and five worth \$50, to Target or Best Buy. They could also indicate interest in participating in the second wave of data collection by checking a box stating, “I am willing to participate in the Spring 2014 follow-up survey.” If they were interested in the prize drawing and/or future participation, participants were asked to complete a contact information form which included name, address, e-mail and phone number.

In Spring 2014, participants who had indicated interest in follow-up participation were contacted with an e-mail sent to the e-mail addresses they had provided. A total of 244 participants had provided an e-mail address for follow-up participation; 160 of these individuals completed the second survey for a response rate of 65.6%. Approximately one-third of participants in the first wave of the study completed the second wave of the study. Due to the low response rate in the second wave, only data from the first wave is used.

Participants

A total of 436 people participated in the first wave of the study. Two participants were excluded from analysis because they did not meet the requirement of being a college student. The resulting sample consisted of 434 participants. Nearly all participants ($n = 420$, 96.8%) were students at the institution where the e-mail listserv was used for recruitment. More undergraduates participated than did graduate students, $n = 381$ (87.8%) and $n = 52$ (12.0%), respectively. The mean age of participants was 21.3 years ($SD = 5.09$), and the median age was 20 years. Participants ranged in age from 18 – 61, but the age distribution of the sample was concentrated in the low 20s, with 88.2% of participants under age 25. The racial composition of the sample was fairly homogenous, reflective of the racial composition of the surrounding

community. Most participants identified as European American/Caucasian/White, $n = 396$ (91.2%). Approximately 4.6% of participants ($n = 20$) identified as Asian American/Asian. Other racial groups (African American/Black; Latina/Chicano/Hispanic; Pacific Islander; Middle Eastern; Biracial/Multiracial; Other) did not separately comprise more than 1.5% of the total sample.

The gender distribution of the sample was uneven. More women participated than men, $n = 298$ (68.7%) and $n = 132$ (30.4%), respectively. Less than 1% of the sample identified as transgender. Two of the individuals who identified as transgender most closely identified with “F” (feminine/female/woman); two most closely identified with “M” (masculine/male/man). Thus, a total of 300 participants completed the women’s version of the survey and 134 completed the men’s version.

Most participants were not in a relationship (72.1%) but had recently been sexually active (59.9% within the past six months). As would be expected in a convenience sample, the majority of participants identified as heterosexual (92.2%). For details on relationship status, sexual history, and sexual orientation see Table 1.

Measures

With the exception of adult film variables, descriptive information for study variables is provided in Table 2. Frequencies and percentages for adult film variables are provided in Table 3.

Body mass index (BMI). BMI was computed for each participant using their self-reported height in inches and weight in pounds. The normal range for BMI is 18.5 to 24.9. Below 18.5 is considered underweight, above 24.9 is considered overweight, and 30.0 or above is considered obese (CDC, 2015). Formula: $BMI = (\text{Weight in pounds} / (\text{Height in inches})^2) * 703$.

Although BMI is widely used in body image research, it is not an ideal measure of body composition because it does not involve direct measurement of body fat or muscle mass and does not take into account body size or distribution of body weight (Salafia & Benson, 2013). Additionally, it is important to note that at the same BMI, women tend to have greater body fat than men, and athletes tend to have less body fat than non-athletes (CDC, 2015a). In general, BMI is less accurate among athletes and individuals with a large amount of muscle mass (CDC, 2015a). Other methods (e.g., skinfold thickness) are better measures of body composition; however, given the online survey format of the present study, BMI was the most appropriate and feasible way of assessing participant body composition.

Drive for thinness. Women's drive for thinness was measured with the Drive for Thinness Subscale of the Eating Disorder Inventory (Garner, Olmstead, & Polivy, 1983). The scale consists of 7 items measured on a scale of 0 = *Never* to 5 = *Always*. With the exception of one item, items are worded such that higher values indicate greater drive for thinness (e.g., "I am terrified of gaining weight"; "I am preoccupied with the desire to be thinner"). After reverse-coding the appropriate item, items were summed to create a total score with a possible range of 0 – 35. Reliability was high in the present study, Cronbach's $\alpha = .93$.

Drive for muscularity. Men's drive for muscularity was measured with the attitudes subscale of the Drive for Muscularity Scale (McCreary & Sasse, 2000). The attitudes subscale consists of 7 items, with possible responses from 0 = *Never* to 5 = *Always*. All items are worded such that higher values correspond to greater drive for muscularity (e.g., "I think I would feel more confident if I had more muscle mass"). Scores were created by averaging the 7 items, resulting in possible scores of 0 – 5. Reliability was good in the present study, Cronbach's $\alpha = .88$.

Table 1

Frequencies for Relationship Status, Sexual History, and Sexual Orientation

	<u>Women</u>		<u>Men</u>	
	<i>N</i>	%	<i>N</i>	%
Relationship Status				
Single	214	71.3	99	73.9
Partnered	47	15.7	23	17.2
Engaged	18	6.0	2	1.5
Married	13	4.3	9	6.7
Divorced	3	1.0	3	2.2
Remarried	0	0.0	0	0.0
Cohabiting	21	7.0	2	1.5
Sexual History				
Never sexually active	71	23.7	40	29.9
Sexually active, > 6 months ago	28	9.3	23	17.2
Sexually active, < 6 months ago	148	49.3	61	45.5
Missing	53	17.7	10	7.5
Sexual Orientation				
Straight	274	91.2	126	94.0
Gay	–	–	4	3.0
Lesbian	3	1.0	–	–
Bisexual	22	7.5	4	3.0
Missing	1	0.3	0	0.0

Note. Percentages for Relationship Status do not total 100 (participants could select all that applied).

Body dissatisfaction. Women's body dissatisfaction was measured with the Body Dissatisfaction Subscale of the Eating Disorder Inventory (Garner et al., 1983). The scale

consists of 9 items measured on a scale of 0 = *Never* to 5 = *Always*. Items were coded such that higher scores indicate greater dissatisfaction (e.g., “I think that my thighs are too large”). Items were summed to create a total score with a possible range of 0 – 45. Reliability in the present study was high, Cronbach’s $\alpha = .91$.

Men’s body dissatisfaction was measured with the Male Body Attitudes Scale (MBAS; Tylka, Bergeron, & Schwartz, 2005). The scale consists of 24 items measured on a scale of 1 = *Never* to 6 = *Always*. Items were scored so that higher values indicate greater body dissatisfaction (e.g., “I think my chest should be larger and more defined”; “I feel satisfied with the definition in my arms”, reverse-scored). A total score was computed by averaging across all items, resulting in a possible range of 1 – 6. Reliability was high in the present study, Cronbach’s $\alpha = .95$.

Drive for low body fat. The MBAS includes a subscale measuring men’s drive for low body fat, composed of eight items on a scale of 1 = *Never* to 6 = *Always*. Items were scored so that higher values indicate greater drive for low body fat (e.g., “I am concerned that my stomach is too flabby”; “I think my body should be leaner”). A subscale score was computed by averaging across all eight items. Scores could range from 1 – 6.

Sexual satisfaction. Sexual satisfaction was measured using the New Sexual Satisfaction Scale- Short Version (NSSS-S; Stulhofer, Busko, & Brouillard, 2010). The NSSS-S contains 12 items (e.g., “My ‘letting go’ and surrender to sexual pleasure during sex”; “The quality of my orgasms”) with responses ranging from 1 = *Not at all satisfied* to 5 = *Extremely satisfied*.

Although the original scale included 12 items, only 11 were included in the present study. (Due to a transcriptional error, the item “My partner’s sexual creativity” was not included.)

Participants responded to items after reading the following prompt: “Thinking about your sex life

during the last six months, please rate your satisfaction with the following aspects.” Items were summed to create a total score which could range from 11 – 55. Higher scores indicate higher satisfaction. Reliability was high in the present study (Cronbach’s $\alpha = .91$ for women; Cronbach’s $\alpha = .92$ for men).

Table 2
Descriptive Information for Study Variables

Variable	<u>Women</u>			<u>Men</u>		
	<i>M (SD)</i>	Range	<i>n</i>	<i>M (SD)</i>	Range	<i>n</i>
BMI	24.32 (5.48)	16.27 – 51.49	291	25.42 (5.30)	19.37 – 59.29	131
Women’s Magazines	2.83 (2.56)	0 – 15.00	264	0.37 (0.88)	0 – 5.00	119
Men’s Magazines	0.17 (0.63)	0 – 5.00	264	0.91 (1.41)	0 – 8.00	119
Drive for Thinness	14.43 (9.59)	0 – 35.00	245	-	-	-
Drive for Muscularity	-	-	-	1.90 (1.14)	0 – 5.00	123
Drive for Low Body Fat	-	-	-	3.08 (1.38)	1.00 – 6.00	119
Body Dissatisfaction						
EDI Subscale	22.19 (10.29)	0 – 45.00	246	-	-	-
MBAS	-	-	-	3.07 (1.04)	1.17 – 5.88	115
Sexual Satisfaction	40.39 (9.67)	15.00 – 55.00	166	39.03 (8.46)	11.00 – 55.00	80
Cognitive Distraction	45.15 (22.82)	20.00 – 120.00	163	44.90 (21.06)	20.00 – 115.00	81

Cognitive distraction. Cognitive distraction was measured with the Cognitive Distraction Scale (Dove & Wiederman, 2000), consisting of 20 items used to measure distraction due to performance and appearance concerns during sexual encounters (e.g., “During sexual activity, I am worried about how my body looks to my partner”; “Overall, during sexual activity,

I am distracted by thoughts about my sexual performance”). Participants responded to items after reading the following prompt: “Please circle the answer that best fits how often you agree with each statement. Consider ‘sex’ to refer to your definition of sex.” Response options were from 1 = *Never* to 6 = *Always*, with higher values indicating higher distraction. Items were summed to create a total score, which could range from 20 – 120. Reliability was high in the present study (Cronbach’s $\alpha = .98$ for women; Cronbach’s $\alpha = .98$ for men).

Magazine use. Participants were provided with a list of popular women’s, men’s, and adult magazines and were asked to indicate the frequency with which they read each magazine: *Never*, *Occasionally*, *Often*, or *Very Often*. Numerical values for responses were assigned ranging from 0 = *Never* to 3 = *Very Often*. A total score was created for each of the three magazine types (women’s, men’s, adult) by summing the corresponding individual items. Six popular women’s magazines were initially included: *Cosmopolitan*, *Glamour*, *Allure*, *Women’s Health*, *Redbook*, and *Fitness*. However, reliability analysis and exploratory factor analysis indicated that *Fitness* did not cohere with the other five magazines, so it was ultimately excluded. Five popular men’s magazines were included: *Men’s Health*, *Men’s Fitness*, *Esquire*, *Maxim*, and *FHM*. Totals could range from 0 – 15 for women’s magazines and 0 – 15 for men’s magazines.

Adult film use. Participants were asked, “How often do you view adult film (erotica or pornography)?” Response options ranged from 1 = *Never* to 5 = *Daily*. Participants who selected a response option greater than “*Never*” were provided with a set of additional questions regarding their reasons for viewing adult film (see Appendix B), whether or not they compared their bodies and sexual abilities to the bodies and abilities of the actors (“*Yes*” or “*No*” for each question), and, if comparisons were made, how they felt when they made such comparisons (five ordinal choices, ranging from “*Very Negative*” to “*Very Positive*”, followed by the option of

selecting “*Don’t Know*”). The reasons for use items were constructed by the author based on the author’s intuitive understanding of reasons viewers may use adult film, after reading a large study of Internet pornography use (Albright, 2008) and a Master’s thesis on women’s Internet pornography use (Rasche, 2011).

Analysis Plan

Article 1. A subsample was used, consisting of only those participants who met the following criteria: age 18-30, heterosexual, and had been sexually active within the last six months. Sample restrictions and list-wise deletion resulted in analysis of data from 109 women and 48 men. The sample was restricted to ages 18-30 as approximate constraints for emerging adulthood. Emerging adulthood was originally theorized by Arnett (2000) as encompassing the ages of approximately 18-25. However, among adults enrolled in higher education, extending the age range through the late 20s may be appropriate. Many of the features that characterize emerging adulthood as a distinct period of the lifespan may be a reality for adults pursuing higher education through their late 20s (e.g., delayed marriage, delayed childbearing, and continued dependence on parents for financial support). Additionally, Arnett (2007) seems anchored on age 30 in delineating the upper bounds of emerging adulthood.

Emerging adults attending college are likely to be sensitive to socializing messages around sexuality due to features of the developmental period (i.e. identity development) as well as the college environment. Experiences in higher education often include questioning previously held beliefs and attitudes, exploring different perspectives, and learning about oneself and one’s world (Côté, 2006; Montgomery & Côté, 2006). Not surprisingly, sexual exploration and changes in sexual attitudes are common occurrences during the college years (Lefkowitz, 2006). Thus, a sample of college students ages 18-30 not only encompasses the ages during which

sexual activity becomes commonplace, but also captures a developmental period and a developmental context in which participants are likely to be actively engaging with issues of sexuality in daily life.

Restriction of the sample to heterosexual participants was appropriate because, as discussed in the introductory chapter, mainstream media typically promotes heterosexual scripts. These scripts may not have the same impact on consumers who are not heterosexual, as they may not identify with the content to the same degree. Only participants who had been sexually active within the last six months were included in analysis because the measure of sexual satisfaction is only relevant for sexually active participants and it asked them to reflect on their experiences during the previous six months.

IBM SPSS AMOS version 24.0 was used to test the proposed model (refer to Figure 1). The model contains the following direct regression paths: BMI to body dissatisfaction; media use to body dissatisfaction; media use to cognitive distraction; body dissatisfaction to cognitive distraction; body dissatisfaction to sexual satisfaction; and cognitive distraction to sexual satisfaction. Given these direct paths, indirect relationships present in the model include the effect of media use on cognitive distraction through its relationship with body dissatisfaction, as well as the effect of body dissatisfaction on sexual satisfaction through its relationship with cognitive distraction.

The media variable when testing the model with the sample of women was use of women's magazines. Adult film use was the media variable when testing the model with the sample of men. Due to low frequency of use, the model could not be tested with men's magazine use or with women's use of adult film (refer to descriptive information in Table 2 and Table 3).

Model modifications were made to find the best fitting model. After testing the initial model, nonsignificant paths were removed one at a time, and suggested paths were added based on modification indices, theoretical considerations, and previous research. The following fit statistics were used to determine model fit: RMSEA, standardized RMR (SRMR), and CFI. Good model fit for RMSEA is indicated by values less than or equal to .05, and acceptable fit is between .05 and .08; SRMR should be less than .10 for the model to be considered acceptable; and CFI greater than .90 indicates good fit (Kline, 2005). Chi-square fit statistics were included in order to be able to calculate change in model fit, but were not a primary determinant of overall model fit due to the tendency of this statistic to be significant with large samples.

Article 2. This study used data from all participants ages 18-30. The sample consisted of 287 women and 123 men. Although the first article excluded participants who are not heterosexual, in this article participants of all orientations were included to allow for better power in analysis. Particularly among the subsample of women, further restriction of the sample could have made analysis unfeasible. Analyses were conducted separately for women and men.

RQ1 (“To what extent do men and women consciously compare their bodies and sexual abilities to the bodies and abilities of the actors in adult film?”) was answered using frequency information analogous to the information displayed in Table 3, but with age restrictions applied. RQ2 (“Is the tendency to engage in conscious comparison related to the *reasons* consumers are viewing adult film?”) was answered with a series of chi-square tests for independence, using each of the reasons for use variables separately with the variables measuring body-focused and ability-focused conscious comparison. Additionally, chi-square tests for independence were conducted using a variable representing single versus multiple reasons for use. RQ3 (“Are consumers’ *reactions* after making conscious comparisons to the bodies and abilities of actors in

adult film related to the *reasons* for which consumers are viewing adult film?") was answered with a series of chi-square tests for independence, using the reasons for use variables and the variables measuring reactions to body-focused and ability-focused conscious comparison. Similar to analysis for RQ2, analysis was also conducted using a variable representing single versus multiple reasons for use.

RQ4 ("Are there differences in BMI and body image among consumers who report responding with negative self-evaluations versus those who do not respond with negative self-evaluations when comparing their bodies to the bodies of actors in adult film?") was answered using independent samples t-tests. Participants were grouped according to their reported reactions to making body-focused comparisons with the actors in adult film. The original variable was recoded as follows: *Very Negative* and *Negative* were Group 1 (Negative); *Neutral*, *Positive*, and *Very Positive* were Group 2 (Neutral/Positive). For women, the following variables were tested: BMI, body dissatisfaction, and drive for thinness. For men, the following variables were tested: BMI, body dissatisfaction, drive for low body fat, and drive for muscularity.

Table 3

Frequencies and Percentages for Adult Film Questions

Variable	<u>Women</u>		<u>Men</u>	
	<i>n</i>	%	<i>N</i>	%
Frequency of Use				
Never	155	51.7	17	12.7
A few times a year	55	18.3	20	14.9
A few times a month	25	8.3	29	21.6
A few times a week	11	3.7	42	31.3
Daily	2	0.7	15	11.2
Missing	52	17.3	11	8.2
Body Comparison				
No	43	46.2	44	41.5
Yes	48	51.6	60	56.6
Missing	2	2.2	2	1.9
Feelings About Body After Comparison				
Very Negative	6	12.5	10	16.7
Negative	23	47.9	23	38.3
Neutral	8	16.7	24	40.0
Positive	4	8.3	3	5.0
Very Positive	2	4.2	0	0.0
Don't Know	4	8.3	0	0.0
Missing	1	2.1	0	0.0
Ability Comparison				
No	48	51.6	56	52.8
Yes	44	47.3	50	47.2
Missing	1	1.1	0	0.0
Feelings About Abilities After Comparison				
Very Negative	0	0.0	8	16.0
Negative	14	31.8	11	22.0
Neutral	15	34.5	17	34.0
Positive	11	25.0	11	22.0
Very Positive	2	4.5	1	2.0
Don't Know	2	4.5	2	4.0
Missing	2	4.5	0	0.0

TESTING OF AN INTEGRATED MODEL OF THE RELATIONSHIPS AMONG MEDIA USE, BODY DISSATISFACTION, COGNITIVE DISTRACTION AND SEXUAL SATISFACTION¹

Abstract

Emerging adults in America are avid users of media, including magazines and pornographic film. Use of these media is associated with body dissatisfaction and reduced sexual satisfaction. However, existing research has not examined media use, body dissatisfaction and sexual satisfaction within the same study, despite theoretical and empirical support for relationships among these constructs. The present study tests an integrated model of the relationships among BMI, media use, body dissatisfaction, cognitive distraction and sexual satisfaction. Using data from an online survey study of college students, the proposed model was tested separately by gender, using women's magazine use as the media variable for women and pornographic film as the media variable for men. In the women's model, magazine use had an unanticipated positive, direct effect on sexual satisfaction. Body dissatisfaction was a positive predictor of cognitive distraction, and cognitive distraction was a negative predictor of sexual satisfaction for women, as hypothesized. Pornographic film use was not a significant predictor in the men's model and was removed from the model entirely. The hypothesized relationships between BMI, body dissatisfaction and cognitive distraction for men were supported. The

¹ The material in this chapter was co-authored by Alison Brennan (AB) and Elizabeth Blodgett Salafia (EBS). Compilation of materials for the online survey was completed collaboratively by EBS and AB. Data collection was completed collaboratively by EBS and AB. AB had the primary responsibilities of completion of literature review, data analysis, reporting of results and manuscript preparation. EBS completed substantial editing for content and proper format in all sections of the manuscript and proofread the final version.

present study provides further support for established links among body dissatisfaction, cognitive distraction and sexual satisfaction, particularly among women.

Introduction

Media is omnipresent in the lives of emerging adults and constitutes a major source of socialization. In particular, emerging adults rely upon media to self-socialize in issues of sexuality and intimacy (Coyne, Padilla-Walker, & Howard, 2015). Emerging adults report using magazines as a source of information on sexual and reproductive health topics, particularly because such topics are often difficult to discuss with family or friends (Treise & Gotthoffer, 2002; Walsh-Childers, Gotthoffer, & Lepre, 2002). Similarly, pornography serves as a model informing expectations for sexual encounters, and emerging adults may look to pornography as a source of sexual education (Braithwaite et al., 2013).

Given the content of popular magazines and pornographic film, the reliance of emerging adults on these types of media as a source of education is disconcerting. Use of magazines and pornographic film is associated with internalization of sociocultural ideals for attractiveness, body dissatisfaction and reduced sexual satisfaction. However, existing research has not examined media use, body dissatisfaction and sexual satisfaction within the same study. The present study evaluates an integrated model of the relationships among media use, body dissatisfaction and sexual satisfaction in a sample of college students.

Media content. When reading magazines or viewing pornography, emerging adults are inundated with messages about bodies and sexuality. Much of the content of these types of media promote unrealistic expectations for bodies. The sociocultural thin ideal for women (the ideal female body as low in body fat with a small waist) is apparent in magazines and pornography.

For men, the muscular ideal (the ideal male body as low in body fat but muscular) is promoted in these media.

Female models featured in popular magazines have become thinner in the last several decades, and their bodies are substantially thinner than the bodies of average American women (Bessenoff & Del Priore, 2007; Garner, Garfinkel, Schwartz, & Thompson, 1980; Spitzer, Henderson, & Zivian, 1999; Van Lenning & VanWesenbeeck, 2000; Wiseman, Gray, Mosimann & Ahrens, 1992). For example, Bessenoff and Del Priore (2007) found the average BMI of models ages 20-29 featured in eleven popular magazines was 20.8, whereas the average BMI of women who regularly read those magazines was 26.8. Put in more relatable terms, for a woman who is 5'5", the average BMI of the models would translate into a weight of approximately 125 pounds, while the average BMI of readers would translate into a weight of approximately 161 pounds, a difference of 36 pounds.

Analogous research on depictions of men suggests an increasing emphasis on muscularity. Male bodies featured in popular magazines are typically low in body fat and very muscular (Labre, 2005; Law & Labre, 2002; Leit, Pope, & Gray, 1999). Law and Labre (2002) found that the bodies of men in *Sports Illustrated*, *Rolling Stone*, and *GQ* had become increasingly V-shaped—with broad shoulders and chests, and narrow waists—from 1967 to 1997. In some cases, the degree of muscularity of men featured in magazines would be unattainable for most men without the use of anabolic steroids (Leit et al., 1999).

Pornographic film also depicts the thin ideal for women and the muscular ideal for men, and very few actors are overweight in top-selling pornography (McKee et al., 2008).

Pornographic film communicates the same general sociocultural ideals for physical appearance as magazines, but with added attention to sexual body parts. Female actors tend to have larger

than average breasts, and male actors tend to have larger than average penises (McKee et al., 2008).

The content of magazines dedicated to appearance and weight has increased in recent decades. A substantial amount of content of fashion and fitness magazines, in particular, is devoted to weight loss primarily for the purpose of appearance improvement rather than health (Bazzini et al., 2015). Physical perfection is the standard in magazine images and is achieved through digital manipulation, used to remove any and all undesirable features (e.g., blemishes, cellulite, and wrinkles) and to exaggerate desirable features (e.g., large busts and small waists for women; broad shoulders and muscular abs for men) (Media Education Foundation, 2010; Stice & Presnell, 2007). It is common for images to combine the “best” features of multiple models into one composite image (Media Education Foundation, 2010; Stice & Presnell, 2007).

In addition to messages about ideals for physical appearance, magazines and pornographic film communicate standards for sexual encounters. The sexual scripts promoted in magazines and mainstream pornography typically assume heterosexuality, portray men as actors and women as subjects, emphasize men’s sexual prowess as an important part of masculinity, and suggest women should primarily be concerned with using their physical attractiveness to attract and satisfy men (Kim et al., 2007; Menard & Kleinplatz, 2008; Taylor, 2005). Sexual objectification, particularly objectification of women, is common in magazines and pornography (Jensen & Dines, 1998; Klaasen & Peter, 2015; Krassas, Blauwkamp, & Wesselink, 2001; Krassas, Blauwkamp, & Wesselink, 2003; Stankiewicz & Rosselli, 2008; Taylor, 2005). Sexual objectification typically includes images focusing on specific body parts, often accompanied by dismemberment, in which the person’s head is not included as part of the image or scene; depiction of a person as an object used to achieve sexual gratification, rather than an autonomous

person; and the use of phrases that reduce a person to a body part (Bazzini et al., 2015; Fredrickson & Roberts, 1997; Heldman, 2013).

While consumers likely understand that media depictions may not reflect reality, they still rely upon magazines and pornographic film as a source of information guiding their expectations for physical appearance and sexual experiences (Coyne et al., 2015; Steele, 2002). There are some well documented negative effects associated with viewing popular pornographic film and popular magazines. The effects of magazines and pornographic film are described below, after a brief synopsis of theory used to frame the present study.

Theoretical perspectives. Two theoretical perspectives were utilized extensively in the development of the model being tested in the present study: Cultivation Theory (Gerbner et al., 2002) and Objectification Theory (Fredrickson & Roberts, 1997). According to Cultivation Theory, the more time a person spends with media, the more likely that person is to adopt views of reality that reflect the images and messages present in media (Gerbner et al., 2002). Application of Cultivation Theory to the topics of body image and sexuality suggests that greater exposure to the content in magazines and pornographic film would result in greater internalization of the gendered body ideals present in such media, as well as the sexual scripts communicated in these media. Thus, individuals who frequently read magazines or watch pornographic film would be expected to evaluate themselves and their partners according to the standards for physical attractiveness and expectations for sexual encounters promoted by these media.

Objectification Theory focuses on the consequences of internalizing sexually objectifying media messages. According to Objectification Theory, repeated exposure to media objectification results in self-objectification, in which women take a third-person perspective of

their own bodies and engage in habitual monitoring of their physical appearance (Fredrickson & Roberts, 1997). The tendency to engage in body monitoring during sexual activity compromises pleasure and interferes with reaching climax (Fredrickson & Roberts, 1997). Although originally specific to women, this theory may also be relevant in the lives of men, as objectification of men and promotion of the muscular ideal has become more common in media over the past few decades. Based on Objectification Theory, repeated exposure to objectifying content in magazines and pornographic film would result in adoption of a third person perspective involving body and performance monitoring, which would negatively impact sexual satisfaction.

Media use, body image and sexual satisfaction. Use of popular media has been associated with body dissatisfaction and reduced sexual satisfaction. Greater media exposure is associated with greater internalization of the thin ideal for women and the muscular ideal for men (Grabe, Ward, & Hyde, 2008; Hatoum & Belle, 2004; Leit, Gray, & Pope, 2002; Tiggemann & Slater, 2015). Magazine use has specifically been associated with body dissatisfaction in numerous studies (Grabe et al., 2008; Groesz, Levine, & Murnen, 2002; Hatoum & Belle, 2004). For example, Grabe et al. (2008) found that across 90 correlational and experimental studies, the average effect size of media exposure on body satisfaction in women was small to moderate. Exposure included three categories of media use, one of which was magazines. Effects were not explored separately by media category because homogeneity analyses indicated similar effect sizes across media types (Grabe et al., 2008). Research with samples of men suggests men are also susceptible to changes in body image after viewing idealized images. In a meta-analysis of experimental research, Blond (2008) found a small average effect of exposure to idealized images on men's body dissatisfaction. The majority (13

out of 15) of studies included in this meta-analysis used magazine images as experimental stimuli.

Although limited, available research suggests the use of pornographic film may contribute to body dissatisfaction as well (Cranney, 2015; Morrison et al., 2006; Peter & Valkenburg, 2014; Tylka, 2015). For instance, Morrison et al. (2006) and Cranney (2015) found exposure to Internet pornography to be negatively associated with men's satisfaction with their penises. The study by Cranney (2015) included women, but there was no relationship between pornography use and breast satisfaction among women; however, the author noted low power as an issue relevant to these interpreting these results, because 87% of the sample of women reported never watching pornography. More general body dissatisfaction after viewing Internet pornography was documented among men in a two-wave panel study of Dutch adults (Peter & Valkenburg, 2014). There was no relationship between pornography use and body dissatisfaction among women in the study, but similar to power issue in the study by Cranney (2015), women's use of pornography was infrequent and might explain the null findings. In a thorough exploration of the links among pornographic film use and body image in men, Tylka (2015) found that adult film use indirectly impacted men's body image. In one mediational model, pornography use predicted internalization of the muscular ideal, and internalization predicted dissatisfaction with body fat and muscularity. In another model, pornography use predicted greater body monitoring, and body monitoring predicted lower body appreciation.

Reduced body satisfaction may have implications for sexual satisfaction, as sexual experiences necessarily involve bodies. In fact, one of the most common problems experienced during sexual encounters is cognitive distraction due to non-erotic thoughts focused on the body or on sexual performance, also referred to as spectating (Purdon & Watson, 2011). A large

body of research suggests women's body dissatisfaction negatively impacts their sexual satisfaction through heightened self-consciousness during intimacy (Woertman & van den Brink, 2012). Although most research on the relationship between body dissatisfaction and sexual satisfaction has focused on women, links between appearance concerns, cognitive distraction, and sexual functioning have been found among both men and women (Meana & Nunnink, 2006; Nelson & Purdon, 2011; Purdon & Holdaway, 2006; Purdon & Watson, 2011). Women tend to report greater distraction due to appearance concerns, while men tend to report more distraction due to performance concerns (Meana & Nunnink, 2006; Nelson & Purdon, 2011; Purdon & Holdaway, 2006; Purdon & Watson, 2011).

Research on the direct impact of media on sexual satisfaction is limited, but suggests media use can negatively impact sexual satisfaction. Experimental (Zillmann & Bryant, 1988) and longitudinal (Peter & Valkenburg, 2009) studies suggest a causal relationship between pornography use and aspects of sexual satisfaction. Decreased satisfaction with one's sexual partner—including his/her performance, appearance and willingness to engage in novel sexual practices—has been documented as a result of experimental exposure to pornographic film (Zillmann & Bryant, 1988). Peter and Valkenburg's (2009) longitudinal study evidenced a negative relationship between use of sexually explicit Internet material and sexual satisfaction among Dutch adolescents and young adults, without support for reciprocal causation.

Objectification Theory suggests media use, body image, cognitive distraction and sexual satisfaction should be linked, and there is research evidence for links between many of these variables. At least two studies provide support for the relationships among media use, internalization, self-objectification and body monitoring (Tiggemann & Slater, 2015; Vandenberg & Eggermont, 2012). Tiggemann and Slater's (2015) study supports the assertion

that exposure to objectifying media content contributes to self-objectification, as well as the proposition that self-objectification has negative consequences for women's body image and mental health. Vandebosch and Eggermont (2012) provide support for another aspect of Objectification Theory: habitual body monitoring as a consequence of self-objectification. However, neither study included sexual satisfaction as an outcome. Yet, research exploring the impact of body monitoring on sexual experiences in samples of adults suggests support for the claims of compromised sexual satisfaction put forth in Objectification Theory.

Present study. The present study expands on previous research by combining media use, body dissatisfaction, cognitive distraction and sexual satisfaction in one model (see Figure 2). BMI was expected to be positively associated with body dissatisfaction because individuals with greater BMI typically have more body fat proportionally, so their bodies diverge more substantially from societal standards for physical appearance. Based on experimental and correlational evidence, greater media exposure was expected to predict higher body dissatisfaction. The positive relationship between body dissatisfaction and cognitive distraction during sexual encounters was anticipated on the basis of previous research as well as the premises of Objectification Theory. Similarly, higher cognitive distraction was expected to be associated with lower sexual satisfaction on the basis of previous research as well as Objectification Theory. The direct, positive relationship between media exposure and cognitive distraction is based on Cultivation Theory, which holds that repeated exposure to media messages results in internalization of messages; thus, greater media use would be expected to result in internalization of sexual scripts, which at their core encourage constant evaluation of bodies and performance in the context of sexual encounters. Finally, the direct link between body dissatisfaction and sexual satisfaction was included to allow for the possibility that cognitive

distraction was not a full mediator of the relationship between body dissatisfaction and sexual satisfaction.

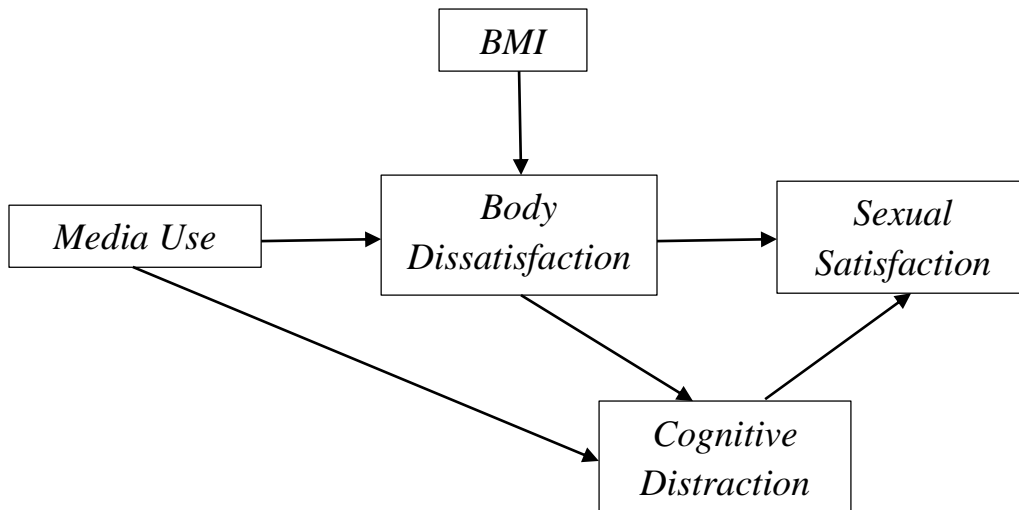


Figure 2. Integrated model of relationships among media use, body dissatisfaction, BMI, cognitive distraction, and sexual satisfaction.

Method

The present study used data collected as part of a larger, online survey study investigating the links among sexual attitudes and behaviors, body image and media use. An institutional review board approved the study.

Procedure. Participants were recruited from three post-secondary institutions in a Midwestern community. Flyers advertising the study were posted in academic buildings and residence halls at all three institutions as well as the student email listserv at the largest institution. Flyers had detachable tabs with the survey link provided.

The first page of the online survey was the informed consent document. Participants could not advance to the next page of the survey unless they checked a box to confirm that they

had read and understood the consent information. The second page of the survey required participants to indicate their gender, “M” (masculine/male/man), “F” (feminine/female/woman), or “T” (transgender). Gender was a required field in order to direct participants to the appropriate version of the survey. Individuals who identified as “T” were subsequently asked to select the gender with which they most closely identified. After completing the survey, participants were redirected to a separate survey in which they could register for a chance to win one of ten gift cards, five in the amount of \$25 and five in the amount of \$50 to local stores.

Participants. The present study included participants who identified as heterosexual, were ages 18-30, and had been sexually active within the last six months. Only those participants who were sexually active within the last six months were included in analysis because the measure of sexual satisfaction is constrained to the previous six months.

The sample included 181 participants, with a gender distribution of $n = 129$ women (71.3%) and $n = 52$ men (28.7%). No participants included in the sample identified as transgender. The majority of participants were undergraduates, $n = 166$ (91.7%), and most attended the largest of the three institutions, $n = 176$ (97.2%). Most participants were single, $n = 113$ (62.4%); few participants were married, $n = 7$ (2.9%). Most participants identified as European American/Caucasian/White, $n = 168$ (92.8%). Approximately 4.4% ($n = 8$) identified as Asian American/Asian. Other racial/ethnic groups did not separately comprise more than 1.7% of the sample. The racial composition of the sample was reflective of the racial composition of the surrounding community.

Measures. *Body mass index (BMI)*. While there are several limitations of using BMI as a measure of body composition (see Blodgett Salafia & Benson, 2013 for a review), given the online survey format of the present study, BMI was the most appropriate and feasible way of

assessing body composition. BMI was computed for each participant using their self-reported height in inches and weight in pounds. The normal range for BMI is 18.5 to 24.9. Below 18.5 is considered underweight, above 24.9 is considered overweight, and 30.0 or above is considered obese (CDC, 2015). Formula: $BMI = (\text{Weight in pounds} / (\text{Height in inches})^2) * 703$.

Magazine use. Participants were provided with a list of popular women's and men's magazines and were asked to indicate the frequency with which they read each magazine, from 0 = *Never* to 3 = *Very Often*. Six popular women's magazines were included: *Cosmopolitan*, *Glamour*, *Allure*, *Women's Health*, *Redbook*, and *Fitness*. Five popular men's magazines were included: *Men's Health*, *Men's Fitness*, *Esquire*, *Maxim*, and *FHM*. A total magazine use score was computed for men by summing the five men's magazines and for women by summing five of the six women's magazines. *Fitness* was excluded from the women's magazines because reliability analysis and exploratory factor analysis indicated that it did not cohere with the other five magazines. Thus, both men and women could have possible total scores ranging from 0 to 15.

Pornographic film use. Pornographic film use was measured with one item, "How often do you view adult film (erotica or pornography)?" Response options ranged from 1 = *Never* to 5 = *Daily*.

Body dissatisfaction. Women's body dissatisfaction was measured with the Body Dissatisfaction Subscale of the Eating Disorder Inventory (Garner et al., 1983). The scale consists of 9 items measured on a scale of 0 = *Never* to 5 = *Always*. Items were coded such that higher scores indicate greater dissatisfaction (e.g., "I think that my thighs are too large"). Items were summed to create a total score with a possible range of 0 – 45. Reliability in the present study was high, Cronbach's $\alpha = .91$.

Men's body dissatisfaction was measured with the Male Body Attitudes Scale (MBAS; Tylka, Bergeron, & Schwartz, 2005). The scale consists of 24 items measured on a scale of 1 = *Never* to 6 = *Always*. Items were scored so that higher values indicate greater body dissatisfaction (e.g., "I think my chest should be larger and more defined"; "I feel satisfied with the definition in my arms", reverse-scored). A total score was computed by averaging across all items, resulting in a possible range of 1 to 6. Reliability was high in the present study, Cronbach's $\alpha = .95$.

Cognitive distraction. Cognitive distraction was measured with the Cognitive Distraction Scale (Dove & Wiederman, 2000), consisting of 20 items used to measure distraction due to performance and appearance concerns during sexual encounters (e.g., "During sexual activity, I am worried about how my body looks to my partner"; "Overall, during sexual activity, I am distracted by thoughts about my sexual performance"). Participants responded to items after reading the following prompt: "Please circle the answer that best fits how often you agree with each statement. Consider 'sex' to refer to your definition of sex." Response options were from 1 = *Never* to 6 = *Always*, with higher values indicating higher distraction. Items were summed to create a total score, which could range from 20 – 120. Reliability was high in the present study (Cronbach's $\alpha = .98$ for women; Cronbach's $\alpha = .98$ for men).

Sexual satisfaction. Sexual satisfaction was measured using the New Sexual Satisfaction Scale-Short Version (NSSS-S; Stulhofer, Busko, & Brouillard, 2010). The NSSS-S contains 12 items (e.g., "My 'letting go' and surrender to sexual pleasure during sex"; "The quality of my orgasms") with responses ranging from 1 = *Not at all satisfied* to 5 = *Extremely satisfied*. Although the original scale included 12 items, only 11 were included in the present study. Participants responded to items after reading the following prompt: "Thinking about your sex life

during the last six months, please rate your satisfaction with the following aspects.” Items were summed to create a total score which could range from 11 to 55. Higher scores indicate higher satisfaction. Reliability was high in the present study (Cronbach’s $\alpha = .91$ for women; Cronbach’s $\alpha = .92$ for men).

Analysis. IBM SPSS AMOS version 24 was used to test the hypothesized model (refer to Figure 1). The model contains the following direct regression paths: BMI to body dissatisfaction; media use to body dissatisfaction; media use to cognitive distraction; body dissatisfaction to cognitive distraction; body dissatisfaction to sexual satisfaction; and cognitive distraction to sexual satisfaction. Given these direct paths, indirect relationships present in the model include the effect of media use on cognitive distraction through its relationship with body dissatisfaction, as well as the effect of body dissatisfaction on sexual satisfaction through its relationship with cognitive distraction.

Due to low frequency of use, the model could not be tested with men’s magazine use or with women’s use of pornographic film (refer to descriptive information in Table 4). Thus, among the sample of women, magazine use was the media variable, and among the sample of men, pornographic film use was the media variable.

Model modifications were made to find the best fitting model. After testing the initial model, nonsignificant paths were removed one at a time, and suggested paths were added only after removal of nonsignificant paths. Suggested paths were added on the basis of modification indices and consideration of theory and previous research. The following model fit statistics are reported: RMSEA, standardized RMR (SRMR), and CFI. Good model fit for RMSEA is indicated by values less than or equal to .05, and acceptable fit is between .05 and .08; SRMR should be less than .10 for the model to be considered acceptable; and CFI greater than .90

indicates good fit (Kline, 2005). Chi-square fit statistics are also included for the purpose of calculating change in model fit, but are not used as a primary determinant of overall model fit. Participants were not included in analysis if they were missing data on any of the variables included in the model. Participants whose data were not included in analysis did not significantly differ in race/ethnicity, educational status, BMI or age from those whose data were included in analysis. Data from 109 women (84.5% of the sample of women) and 48 men (92.3% of men) were ultimately used in analysis.

Table 4
Descriptive Information for Study Variables among Selected Sample

Variable	Women (n = 109)			Men (n = 48)		
	M (SD)	Median	Range	M (SD)	Median	Range
BMI	23.97 (5.19)	22.71	17.23 – 44.28	24.65 (3.45)	24.01	19.37 – 36.61
Magazine use	3.28 (2.60)	3.00	0 – 15.00	0.83 (1.15)	0.00	0.00 – 3.00
Pornographic film use	1.62 (0.91)	1.00	1.00 – 5.00	3.23 (1.21)	3.50	1.00 – 5.00
Body dissatisfaction	23.07 (9.69)	23.00	4.00 – 45.00	2.98 (0.94)	2.83	1.17 – 5.29
Sexual satisfaction	41.46 (7.90)	42.00	20.00 – 55.00	40.71 (6.44)	41.00	22.00 – 55.00
Cognitive distraction	44.83 (22.73)	40.00	20.00 – 120.00	42.04 (16.21)	41.00	20.00 – 106.00

Note. Women’s magazine use was measured with five magazines targeting audiences of women, while men’s magazine use was measured with five magazines targeting audiences of men. Women’s body dissatisfaction was measured with the Body Dissatisfaction Scale of the Eating Disorders Inventory (Garner et al., 1983). Men’s body dissatisfaction was measured with the Male Body Attitudes Scale (MBAS; Tylka et al., 2005).

Results

Descriptive information for study variables is provided in Table 4. Correlations among study variables in model testing among women are displayed in Table 5; correlations among study variables in model testing among men are displayed in Table 6.

Table 5

Correlations among Study Variables in Women's Model

Variable	1	2	3	4	5
1. BMI	1.00				
2. Magazine use	-.12	1.00			
3. Body dissatisfaction	.46***	-.04	1.00		
4. Sexual satisfaction	.13	.16	-.24*	1.00	
5. Cognitive distraction	-.04	.09	.46***	-.37***	1.00

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

Table 6

Correlations among Study Variables in Men's Model

Variable	1	2	3	4	5
1. BMI	1.00				
2. Pornographic film use	-.09	1.00			
3. Body dissatisfaction	.43*	.19	1.00		
4. Sexual satisfaction	.18	-.00	-.10	1.00	
5. Cognitive distraction	.23	.05	.69***	-.24	1.00

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

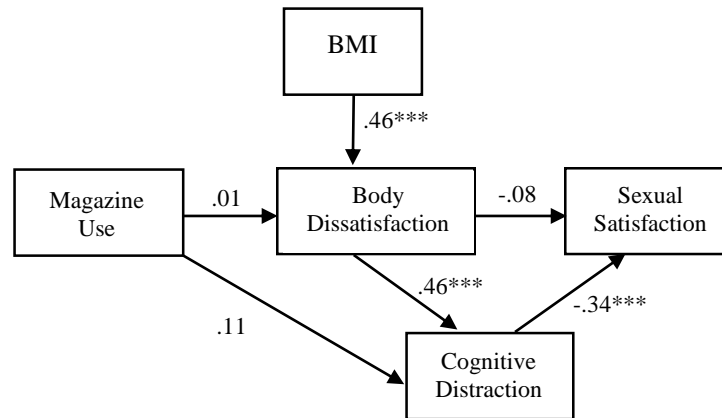
Model testing and modification among women. Model fit for the hypothesized model was poor according to all model fit statistics: CFI = .785, RMSEA = .201, SRMR = .108. Three of the hypothesized regression paths were not significant (refer to Figure 3). The observed covariance matrix is provided in Appendix C. Two modifications were suggested: the addition of a direct path from magazine use to sexual satisfaction (MI = 4.30) and the addition of a direct path from BMI to cognitive distraction (MI = 7.60).

The first path removed from the model was the direct path from magazine use to body dissatisfaction. Following this, a direct path was added from magazine use to sexual satisfaction. Magazine use was expected to be a negative predictor of sexual satisfaction. However, the relationship between magazine use and sexual satisfaction was positive and indicative of a small to medium direct effect of magazine use on sexual satisfaction.

The next regression paths removed were body dissatisfaction predicting sexual satisfaction, followed by magazine use predicting cognitive distraction. Finally, a direct path from BMI to cognitive distraction was added. Given the positive, indirect effect of BMI on cognitive distraction through body dissatisfaction, it was expected that the direct relationship between BMI and cognitive distraction would be positive (larger BMI would be associated with greater cognitive distraction). However, the regression path from BMI to cognitive distraction was negative and indicative of a medium direct effect of BMI on cognitive distraction.

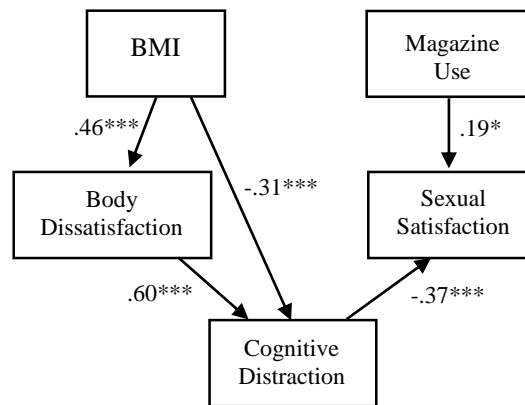
The final model, displayed in Figure 3, had good fit according to all model fit statistics, SRMR = .053, CFI = .961, and RMSEA = .076. Comparison of the chi-square values for the hypothesized model and final model indicate the final model had better fit, ($\chi^2_{\text{diff}} = 13.34$, $df_{\text{diff}} = 1$, $p < .001$).

Hypothesized Model



$$\chi^2 (df = 4) = 21.47, p < .001$$

Final Model



$$\chi^2 (df = 5) = 8.13, p = .149$$

Figure 3. Hypothesized model and final model for the sample of women.

Model testing and modification among men. Model fit for the hypothesized model was good according to all fit statistics, CFI = 1.000, RMSEA = .000, and SRMR = .061. Four of the hypothesized regression paths were not significant (refer to Figure 4). The observed covariance matrix is provided in Appendix C.

Nonsignificant paths were removed one at a time, in order of largest to smallest p-value. After removing the paths from body dissatisfaction to sexual satisfaction, pornographic film use to cognitive distraction, and pornographic film use to body dissatisfaction, the path from cognitive distraction to sexual satisfaction was marginally significant, $r = -.23$, $p = .098$. Although not significant according to the p-value, the regression weight for the path from cognitive distraction to sexual satisfaction was indicative of a small to medium effect. Despite the size of this regression weight, removing this pathway resulted in improved model fit, so the final model, displayed in Figure 4, does not include this regression path. No modifications were suggested in analysis output at any point during the process of model modification.

The final model had good fit according to all fit statistics, CFI = 1.000 and RMSEA = .000, and SRMR = .001. Based on chi square information, the hypothesized model and final model did not differ in model fit ($\chi^2_{diff} = 2.95$, $df_{diff} = 3$, $p = 0.40$). Thus, the final model is the preferable model based on the parsimony principle (Kline, 2011).

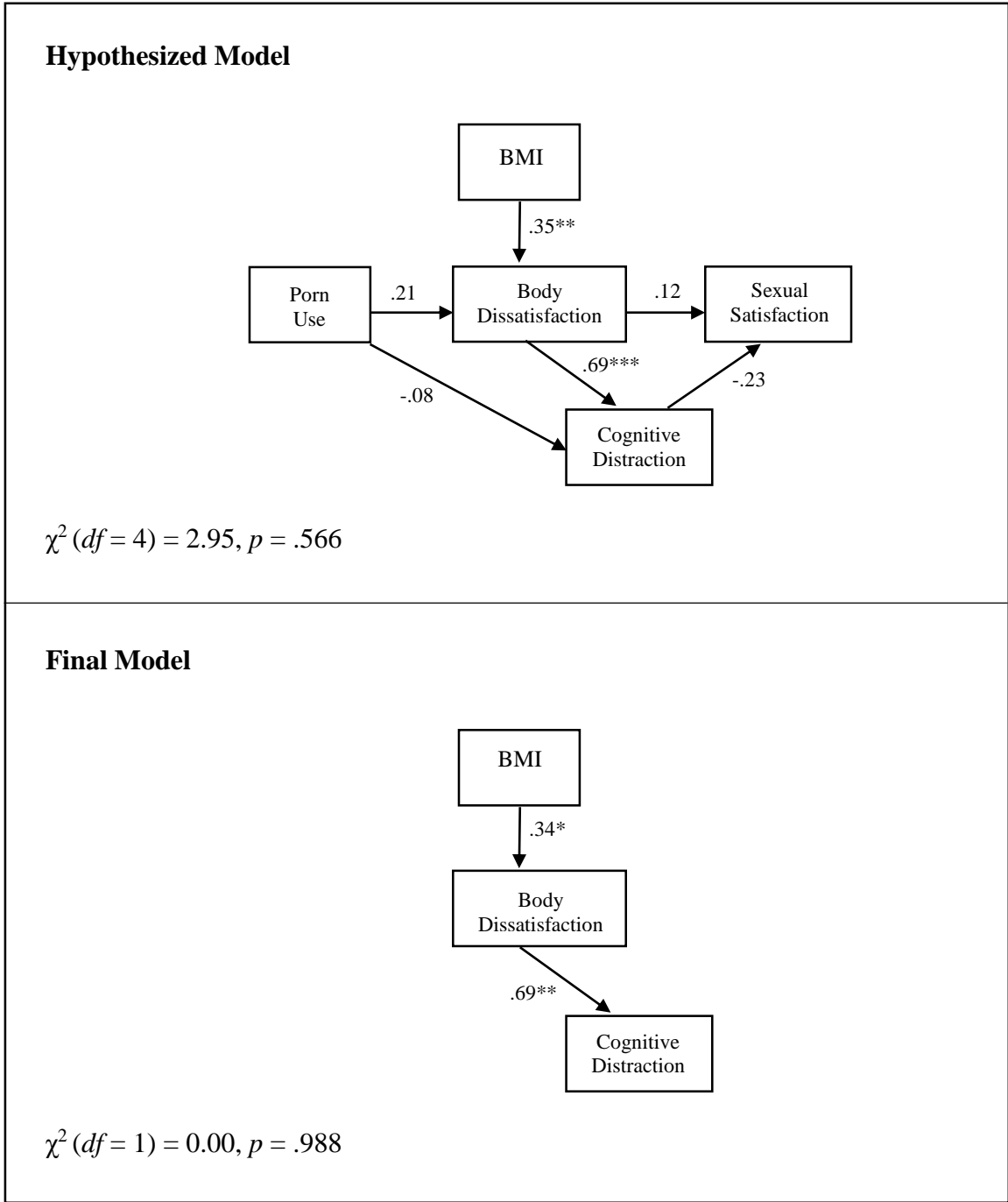


Figure 4. Hypothesized model and final model for the sample of men.

Discussion

In the present study, a model of the relationships among media use, body dissatisfaction, BMI, cognitive distraction and sexual satisfaction was tested in a sample of emerging adults. The model was tested separately for women and men, using women's magazines in model testing among women and pornographic film use in model testing among men.

Interpretation of findings. Findings among women. Among women, body dissatisfaction had an indirect negative effect on sexual satisfaction through its relationship with cognitive distraction, as hypothesized. The strong mediating role of cognitive distraction in the relationship between women's body dissatisfaction and sexual satisfaction in the present study is consistent with the large body of research describing the impact of body image problems on sexual satisfaction through distracting, appearance-focused cognitions during sexual intimacy (Meana & Nunnink, 2006; Nelson & Purdon, 2011; Purdon & Holdaway, 2006; Purdon & Watson, 2011). As suggested by Objectification Theory (Fredrickson & Roberts, 1997), habitual body monitoring does indeed create problems for women during sexual intimacy. However, in the present study, neither body dissatisfaction nor cognitive distraction were related to women's use of popular women's magazines. These findings, inconsistent with expectations based on Objectification Theory, may be due to omitted moderating variables, such as social comparison or self-objectification, described below in a section regarding theoretical considerations.

Although magazine use did not impact body dissatisfaction or cognitive distraction as hypothesized, magazine use was unexpectedly directly associated with sexual satisfaction. This relationship was positive, such that women who reported more frequent use of women's magazines also reported greater sexual satisfaction. This relationship is particularly notable in light of the fact that magazine use was low in general. It is possible that women were able to

focus on messages they found useful in their own sexual and romantic relationships while ignoring other, potentially harmful scripts. Kim and Ward (2012) found that frequent readers of women's magazines endorsed traditional sexual scripts less strongly after brief experimental exposure to *Cosmopolitan* content, while infrequent magazine readers endorsed these scripts more strongly after exposure. Kim and Ward (2012) noted that it is common for content in women's magazine to include traditional sexual scripts as well as counter-scripts, which tell women they have a right to desire sex and assertively engage in sexual activity, without shame or guilt, for their own satisfaction. The findings of the present study lend credence to the interpretations offered by Kim and Ward in their study. In addition, the present study extends the work of Kim and Ward by linking magazine use with sexual satisfaction. Kim and Ward (2012) noted that a positive impact on women's attitudes towards female sexuality did not necessarily translate into positive sexual experiences. The present study seems to suggest the counter-scripts in women's magazines can be applied by women in their own lives in ways that promote their sexual satisfaction.

An additional unexpected finding was the direct, negative relationship between BMI and cognitive distraction. This finding may be indicative of pathological body checking characteristic of individuals with clinically diagnosable eating disorders (Shafran, Fairburn, Robinson, & Lask, 2004). Women who have been diagnosed with anorexia nervosa are usually lower in BMI and engage in more frequent checking of their body shape and weight than women who have no history of eating disorder diagnosis (Shafran et al., 2004). If some of the women included in the study sample had anorexia nervosa (whether diagnosed or undiagnosed) or were subclinical in their symptoms but had been experiencing them for an extended period of time, they may have

been both lower in BMI and higher in body checking, leading to increased cognitive distraction in the context of sexual experiences.

Findings among men. In model testing among men, the hypothesized relationships between BMI and body dissatisfaction and body dissatisfaction and cognitive distraction were supported. Similar to the results among women, body dissatisfaction had a positive direct effect on cognitive distraction among men. This finding is consistent with previous research suggesting problems with body image are associated with cognitive distraction among both men and women (e.g., Meana & Nunnink, 2006). In the present study, the strength of the relationship between body dissatisfaction and cognitive distraction appeared to be similar among women and men. Group comparisons of model fit were not made, but for both groups the direct effect of body dissatisfaction on cognitive distraction was a large effect. However, among men, there was no effect of cognitive distraction on sexual satisfaction which was expected based on previous research (e.g., Nelson & Purdon, 2011). Given the modest sample size, as well as the size of the regression weight between cognitive distraction and sexual satisfaction ($r = -.23$), it is possible that this relationship would have been significant in a study with greater power.

In further consideration of the lack of effect of cognitive distraction on sexual satisfaction, an interesting finding by Purdon and Watson (2011) could provide some insight: although frequency of non-erotic thoughts was associated with sexual satisfaction among college men and women, women experienced greater anxiety as a result of non-erotic thoughts, and only among women was anxiety associated with satisfaction. Perhaps men in the present study experienced cognitive distraction but were less anxious about it, so the impact of cognitive distraction on sexual satisfaction was less detrimental.

An alternative interpretation is that cognitive distraction could have some positive consequences for men. Purdon and Watson (2011) noted that premature ejaculation was the most common sexual problem among young men in their study and that non-erotic thoughts, though unpleasant and distracting, might actually serve to prevent this problem. In other words, among men who experience premature ejaculation, cognitive distraction might actually be beneficial if it helps them delay climax. If this is the case, it is possible that the lack of effect of cognitive distraction on sexual satisfaction is due to a suppressor effect, in which men who benefitted from cognitive distraction effectively cancelled out the otherwise negative relationship between cognitive distraction and sexual satisfaction. Conversely, difficulty reaching climax is more common among young women (Higgins et al., 2011). Given these gender differences, it would seem cognitive distraction might have greater negative consequences among women, for whom reaching climax is more difficult.

In model testing among men, the hypothesized relationships between pornographic film use and body dissatisfaction, and pornographic film use and cognitive distraction, were not supported. Perhaps use of pornographic film was not associated with body dissatisfaction because the bodies of men are not objectified in the types of pornography viewed by men in the present study. If this was the case, men's use of pornographic film might be less likely to result in practices (i.e., self-objectification and habitual body monitoring) that would facilitate dissatisfaction. Jensen and Dines (1998) have suggested that female bodies are routinely objectified in great detail in popular pornographic film while male bodies are not; however, some research indicates objectification of men does occur, albeit of a different variety than objectification of women (Klaasen & Peter, 2015). Whereas objectification of women in pornographic film typically consists of women being used as objects to achieve sexual

gratification, objectification of men typically consists of male actors being dehumanized through exclusion of their faces (Klaasen & Peter, 2015), sometimes referred to as dismemberment.

Without knowing the specific genre or type of pornography used by men in the present study, it is not possible to determine how the content they viewed may diverge from, or be similar to, the content of popular pornographic film. Yet, the lack of support for the hypothesized relationship between pornography use and cognitive distraction is not readily explained. Even if men's bodies are not objectified to the same degree as women's are in pornographic film, the scripts for men regarding the importance of sexual performance should be expected to have some impact related to cognitive distraction, yet this was not the case in the present study.

Theoretical considerations. Given the lack of support in either model for the hypothesized effects of media use on body dissatisfaction and cognitive distraction, an additional consideration is relevant regarding guiding theory used to frame the present study. It is possible the hypothesized direct relationships from media use to body dissatisfaction and cognitive distraction are oversimplifications of complex media effects that cannot be detected without including mediating or moderating variables. A common criticism of Cultivation Theory is its assumption of unidirectional, linear effects (Valkenburg, Peter, & Walther, 2016). If considering media effects from another perspective—Uses and Gratifications (e.g., Kim & Rubin, 1997)—media effects depend on a host of media and audience factors, including audience attention and involvement with content, realism of content, and consumer motivation (Kim & Rubin, 1997; Valkenburg et al., 2016). Thus, by failing to account for moderating variables, potential indirect effects of media use on body dissatisfaction are not captured.

With regard to the lack of effect of media on body dissatisfaction, one possible moderator is social comparison, in which a person compares the features of his or her physical appearance

to those of another person, such as a model (Dittmar Howard, 2004; Durkin & Paxton, 2002; Myers & Crowther, 2009). Previous research suggests social comparison is a moderator of the effect of media images on body dissatisfaction (Dittmar & Howard, 2004; Durkin & Paxton, 2002; Myers & Crowther, 2009). Perhaps media use, whether magazines or pornographic film, is only negatively associated with body dissatisfaction among individuals who engage in social comparison, and those who are able to use media without engaging in comparison are not negatively impacted with respect to their body image.

One possible omitted variable explaining the lack of effect of media use on cognitive distraction and body dissatisfaction in the present study is self-objectification. According to Objectification Theory, self-objectification is a precursor to body monitoring. Self-objectification has been found to be a mediator of the positive effect of magazines on body surveillance (Vandenbosch & Eggermont, 2012) and a mediator of the relationship between magazine use and body shame (Tiggemann & Slater, 2015). Whether self-objectification may serve as a moderator of the effect of magazine use on cognitive distraction is unclear.

Furthermore, if self-objectification is necessary in explaining habitual body monitoring, an additional question is under what conditions—moderating features of the individual, context or media itself—does self-objectification develop?

The file drawer problem and bias in media effects research. Another consideration in interpreting the inconsistency of findings in the present study with previous research is bias in the study and reporting of media effects. Assumptions of harm have been the dominant paradigm in studies of media effects, particularly when the media of interest is pornographic film (McKee et al., 2008). This bias is compounded with a general bias in the formal dissemination of research (the “file drawer problem”), in which studies reporting null findings are passed over for

publication or never submitted for review, resulting in overrepresentation of negative effects in peer-reviewed journals (Rosenthal, 1979). The present study implies that assuming negative effects in research may lead researchers to overlook the potential positive effects media users may experience. Indeed, in the present study, if not for the sophisticated statistical software which suggested a positive direct effect of women's magazine use on sexual satisfaction, this effect may have been overlooked. More attention to nuances of media effects is warranted, and consideration of diverse effects is recommended to avoid negative bias that often exists in research on media effects. Additionally, given the overrepresentation of negative media effects in research literature, null findings should not be disregarded.

Strengths and limitations. The present study is unique in its simultaneous consideration of media use, body dissatisfaction, cognitive distraction and sexual satisfaction. The integration of these constructs within one model is a major strength of the present study. Other strengths include the format of the survey, which allowed for anonymity in responding to questions of a sensitive nature, as well as the use of validated measures of body dissatisfaction, cognitive distraction, and sexual satisfaction. These measures had high reliability in the present study. Additionally, the ages of participants included in the present study are an asset because these participants would likely be categorized as emerging adults. Emerging adulthood is an ideal time to consider media use, body image and sexuality in one study because it is a developmental period characterized by intense focus on the self, use of media for self-socialization, and romantic and sexual exploration (Arnett, 2000; Arnett, 2007; Coyne et al., 2015).

However, several limitations in design and measurement warrant careful consideration. In terms of limitations of the sample, the use of convenience sampling resulted in a relatively homogenous sample with respect to race/ethnicity and sexual orientation. Although consistent

with the geographical area in which the study was conducted, this creates a limitation with respect to external validity. Furthermore, after applying filtering criteria, the sample size was not ideal for complex analysis. The lower response rate among men, in particular, resulted in low power. Additionally, the present study was cross-sectional. The directions of effects in the hypothesized model were based on synthesis of theory and previous research, but the cross-sectional nature of the study limits any claims of causality. Longitudinal analysis would be more appropriate for making causal assumptions.

Measurement of pornographic film use as if it is a single entity does not capture the range of genres represented. The research used in formulation of the proposed model focused on popular pornographic film, but there is great diversity in pornographic film. The content and actors may differ substantially depending on genre. For example, feminist and queer produced pornographic film include diverse bodies and sexualities, and discussions of consent are often deliberately included in final cuts (see Taormino, Shimizu, Penley, & Miller-Young, 2013). It is unlikely that participants in the present study exclusively or even predominantly view feminist or queer pornographic film; however, there is likely diversity in the content of pornographic film viewed by participants. Additionally, given the role of social comparison in body dissatisfaction, the specific content is an important consideration because certain content could potentially facilitate or inhibit social comparison, thereby exerting an indirect effect on body dissatisfaction. For instance, if men were watching pornographic film featuring only women, there would have been no opportunities for social comparison of their bodies to those of male actors, which might explain null findings in the present study. Future research that includes questions about specifics of pornographic film content viewed by participants, including genres and characteristics of actors, may provide insight regarding effects of viewing pornographic film, or lack thereof.

Women's use of pornographic film was uncommon, so pornographic film use could not be included in model testing among women. Women's magazine use was included in model testing, but magazine use was fairly infrequent, as well. Additionally, the survey prompt did not specifically indicate print format, and it is unknown how many women accessed magazine content online, which would reduce exposure to advertisements in comparison to printed magazines.

Finally, magazines and pornographic film are only a portion of the total media consumption of emerging adults. Investigating the integrated model using only magazine use among women, and pornographic film use among men, fails to account for the vast amount of media exposure emerging adults experience each day. Social media, such as Facebook and Twitter, are among the numerous other types of media encountered daily by emerging adults in the United States and warrant consideration.

Conclusions and implications. The present study provides further support for established links between body image and sexuality and has important implications for prevention and intervention. As has been suggested in previous research, among individuals experiencing marked body dissatisfaction and cognitive distraction, therapy to improve body image and/or teach techniques for reducing intrusive cognitions would likely improve sexual satisfaction (e.g., Meana & Nunnink, 2006; Wiederman, 2001). Moreover, prevention of body image problems earlier in development could impact sexual satisfaction in adulthood. The participants in the present study were emerging adults, yet body image problems are often present in early adolescence, and increases in body dissatisfaction are normative during adolescence and into emerging adulthood (Presnell et al., 2004; Quick, Eisenberg, Bucchianeri & Neumark-Sztainer, 2013). Findings from the present study suggests prevention programs for

positive body image could potentially have a positive impact on sexual satisfaction in addition to the typical goal of prevention of eating disorders. To investigate this possibility, program evaluators could include sexual satisfaction in effectiveness studies of body image prevention programs.

The results of the present study also support the inclusion of body image topics in sexual education and suggest comprehensive sexual education efforts go beyond the basics in order to promote sexual health, which is not strictly “the absence of disease, dysfunction, or infirmity” but the ability to experience pleasure and satisfying relationship (World Health Organization, 2015, np). Sexual satisfaction is a vital aspect of sexual health that is often overlooked (Higgins et al., 2011).

Finally, the results of the present study indicate use of popular media does not have a universally negative impact on sexuality. However, the conditions under which media effects are positive rather than negative are not well understood. Future research examining the impact of pornographic film use on body image could approach the topic from a Uses and Gratifications perspective and include potential moderating variables not considered in the present study.

Though not all aspects of the integrated model were supported in the present study, this research represents a valuable contribution through its simultaneous consideration of media use, body image and sexual satisfaction within one study, which has previously not been completed in published, peer-reviewed literature. The strong mediating role of cognitive distraction in the relationship between body dissatisfaction and sexual satisfaction among women provides empirical support for some aspects of Objectification Theory. However, theoretical limitations of Cultivation Theory are evident in the lack of support for the hypothesized direct effects of media use on body dissatisfaction and cognitive distraction. This is not to say that the integrated model

tested in the present study is inherently flawed. Rather, it is possible that inclusion of moderators of media effects would reveal significant effects under certain conditions and for certain users. Thus, Uses and Gratifications may be a more appropriate theoretical perspective that remains to be applied to the media effects portion of the integrated model.

PORNOGRAPHIC FILM USE, SOCIAL COMPARISON AND BODY IMAGE: AN EXPLORATION OF THE ROLE OF REASONS FOR USE²

Abstract

The effects of pornographic film use on body image have not been extensively studied, and existing research does not adequately consider the role of reasons for use. In the present study, relationships were examined among selected reasons for use, retrospective reports of engaging in social comparison to actors, and users' feelings about their bodies and sexual abilities after comparison. Relationships among body image variables and reactions to body comparison were also examined. Regardless of gender, use of pornographic film for "ideas, tips or instruction" was associated with engaging in comparison. Women who reported reacting negatively to body comparison were higher in drive for thinness and body dissatisfaction. Men who reported reacting negatively to body comparison had higher BMIs, greater drive for low body fat, and greater body dissatisfaction. The present study recommends researchers include consumer motivations and other dispositional factors as moderators of effects of viewing pornographic film.

Introduction

Depending on one's definition, pornography has existed for centuries, but mainstream use is a relatively recent phenomenon attributed largely to the advent of the Internet (McKee,

² The material in this chapter was co-authored by Alison Brennan (AB) and Elizabeth Blodgett Salafia (EBS). Compilation of materials for the online survey was completed collaboratively by EBS and AB. Data collection was completed collaboratively by EBS and AB. AB had the primary responsibilities of completion of literature review, data analysis, reporting of results and manuscript preparation. EBS completed substantial editing for content and proper format in all sections of the manuscript and proofread the final version.

Albury, & Lumby, 2008). Millions of pornographic websites now exist, allowing people to easily access pornographic content anonymously and affordably (Carroll et al., 2008; McKee et al., 2008). Intentional exposure to Internet pornography increases steadily across adolescence and into emerging adulthood, and the use of the Internet to access pornography is highest among people ages 18-25 (Buzzell, 2005; Coyne, Padilla-Walker, & Howard, 2015; Wolak, Mitchell, & Finkelhor, 2007). The high use of pornography during emerging adulthood has been attributed to emerging adults' increased interest in sexuality and relationships (Carroll et al., 2008; Coyne et al., 2015). Emerging adults use pornography as a model informing their expectations for sexual encounters and may look to pornography as a source of sexual education (Braithwaite, Coulson, Keddington, & Fincham, 2015).

Emerging adults' reliance on pornography as a source of information to guide their sexual experiences is disconcerting when taking into account the fact that much of the content promotes unrealistic standards for physical attractiveness and problematic models of sexuality. However, the effects of pornography use on body image have not been extensively studied, and existing research does not adequately consider how reasons for use of pornography might relate to effects of viewing this type of media. The present study examines how reasons for use of pornographic film relate to emerging adults' perceptions of their own bodies and sexual abilities, with special attention to the impact of reasons for use on the tendency to engage in social comparison.

Content of pornographic film. Pornographic film, also referred to as adult film, is sexually explicit audiovisual material intended to produce sexual arousal in viewers (McKee et al., 2008). Pornographic film has been criticized and scrutinized for its objectifying and aggressive content, as well as unrealistic and potentially harmful sexual scripts (e.g., Jensen &

Dines, 1998). Pornographic film often contains gender stereotypes (e.g., men are dominant and aggressive), themes of sex without commitment, aggression as a normal part of sexual experiences, and sexual acts considered to be non-normative sexual behavior (e.g., anal sex, “ass-to-mouth”, double penetration, group sex) (Bridges, Wosnitzer, Scharrer, Sun & Liberman, 2010; Brosius, Weaver, & Staab, 1993; Jensen & Dines, 1998).

Popular heterosexual pornographic film typically depicts sexual encounters in which men’s sexual pleasure is prioritized. For example, one of the most common acts depicted in popular heterosexual pornographic film is fellatio (Bridges et al., 2010; McKee, 2005). In scenes involving fellatio, the woman is almost always kneeling, but the reverse is seldom true (i.e., men do not kneel or assume a subordinate position when performing oral sex on women) (Brosius et al., 1993). Additionally, the end of a scene is typically defined by male orgasm (Brosius et al., 1993; Bridges et al., 2010; Jensen & Dines, 1998), and male orgasm is much more common than female orgasm (McKee, 2005).

Women’s bodies are a primary focus in pornographic film and commonly objectified (Jensen & Dines, 1998). Scenes often begin with women slowly undressing in front of the camera, or with nude women posing, allowing the camera to focus on specific parts of their anatomy (Jensen & Dines, 1998). According to Jensen and Dines (1998), it is far less common for men to present their bodies in this way because most pornographic film is produced by men, for men, and heterosexuality of male viewers is assumed; therefore, objectification of male bodies would be homoerotic and threatening to the audience of primarily heterosexual men. Yet, a more recent evaluation of the content of popular pornographic videos on the Internet suggests men are objectified in pornographic film at similar rates, just in different ways (Klaassen & Peter, 2015). Women tend to be instrumentally objectified, meaning they are predominantly used

as a “body or body parts for another person’s sexual gratification,” while men are more likely to be dehumanized through exclusion of their faces (Klaassen & Peter, 2015, p. 722).

The bodies of actors in pornographic film tend to be different from bodies in the general population. Men tend to be muscular, and they typically have larger than average penises (McKee et al., 2008). Women tend to be slim and have larger than average breasts (McKee et al., 2008). Very few actors, male or female, are overweight in top-selling pornography (McKee et al., 2008). In a qualitative study of Swedish participants ranging in age from 16 to 19, the stereotypical representations of men and women were described as ‘Barbie and Hercules’—women have small waists, large breasts and are subordinate to men, while men are muscular and dominant (Mattebo, Larsson, Tyden, Olsson, & Haggstrom-Nordin, 2012). Males in the study also noted the larger-than-average penises of male pornography actors (Mattebo et al., 2012).

Popular pornographic film promotes gendered sexual scripts, including aggression as part of masculinity, submission as appropriate femininity, prioritization of men’s pleasure, and women functioning primarily as objects for the purpose of producing arousal and helping men achieve orgasm. It is important to note that not all pornographic film includes such content. Feminist and queer pornographic film (e.g., Crashpad series) often feature diverse bodies and physical abilities, discussions about consent, and a spectrum of gender expression and sexualities (Taormino, Shimizu, Penley, & Miller-Young, 2013). However, it is unlikely that the majority of pornography viewers are viewing this type of pornographic film. It is not surprising, then, that pornography use has been found to be associated with a number of negative effects. Yet, some positive effects have been documented as well. These effects are described below, after a brief synopsis of the Uses and Gratifications (UG) perspective (e.g., Katz, Blumberg, & Gurevitch, 1974; Rubin, 2002) that guides the present study.

Uses and Gratifications. The UG perspective emphasizes the role of individual agency and individual differences in the consumption of media. A basic assumption of the UG perspective is that audiences are not passive recipients of media messages; rather, consumers play an active role in selection of media, and social and psychological factors mitigate media effects (Rubin, 2002). UG assumes that consumers of media select particular media to fulfill social and psychological needs, intending to experience gratification of those needs through the use of the media they have selected (Rubin, 2002). UG places the user at the center of complex processes that may result in media effects (Valkenburg et al., 2016).

Individual difference variables that may impact interpretation of media messages and the outcomes of media use include attitudinal predispositions, developmental factors and social context (Rubin, 2002; Valkenburg et al., 2016). Additionally, motivations for use are an important consideration when studying media effects (Rubin, 2002). Audience motives impact audience activity, including attention and perception, which in turn impacts possible outcomes of media use (Rubin, 2002). The UG perspective suggests motivations for use, as well as psychological differences among users, are crucial considerations for understanding the impact of media on consumers.

Research on effects of pornography. Research investigating relationships between pornographic film use and body image is rare (Owens, Behun, Manning, & Reid, 2012; Peter & Valkenburg, 2014; Short, Black, Smith, Wetterneck, & Wells, 2012). Although limited, the available research suggests use of pornographic film may be detrimental for body image. Some research suggests viewing pornographic film produces dissatisfaction specifically with sexual body parts. For example, Morrison et al. (2006) found men's exposure to Internet pornography was negatively associated with satisfaction with one's penis, but there was no relationship of

pornography use with body image in general. In a similar study that included men and women, Cranney (2015) examined the impact of Internet pornography use on men's satisfaction with their penises and women's satisfaction with their breasts. Increased use was associated with men's dissatisfaction with penis size, but there was no relationship between pornography use and breast satisfaction for women (Cranney 2015). However, null findings for women may have been an issue of low power due to infrequent use by women in the study (Cranney, 2015).

More general body dissatisfaction after viewing pornographic film has also been documented. In a two-wave panel study of Dutch adults, Peter and Valkenburg (2014) found that greater exposure to sexually explicit Internet material resulted in greater general body dissatisfaction as well as dissatisfaction with stomach size, but not penis size, for men; however, for women there was no impact on body dissatisfaction, dissatisfaction with stomach size, or dissatisfaction with breast size. Despite the large sample size, power was an issue in examining effects for women because women's use of pornography was infrequent (Peter & Valkenburg, 2014). In what is likely the most thorough exploration of the links between pornographic film use and body image in men, Tylka (2015) found that pornography use indirectly impacted men's body image. In one mediational model, pornography use predicted internalization of the muscular ideal, and internalization predicted dissatisfaction with body fat and muscularity (Tylka, 2015). In a second model, pornography use predicted greater body monitoring, and body monitoring predicted lower body appreciation (Tylka, 2015).

Diversity in effects of viewing pornographic film. Pornographic film does not produce the same effects for all consumers. Some women react with feelings of inadequacy or dissatisfaction with their own bodies, or have concerns about how viewing pornography will impact their partner's satisfaction with their bodies and behaviors (Attwood, 2005). In contrast,

other women believe that pornography enables them to gain comfort with and explore their sexuality (Attwood, 2005). For some men and women, pornography is associated with greater interest in and frequency of sex; for others, especially male users, pornography is associated with reduced interest in actual sex and difficulty becoming aroused during sexual encounters, referred to as physiological habituation or, more specific to men, porn-induced erectile dysfunction (PIED) (Albright, 2008; Cummins, 2006; Luscombe, 2016).

The potential negative consequences of pornography use have gained public attention through popular press, including the book *Pornified* (Paul, 2005) and a recent *TIME* article (Luscombe, 2016). Additionally, college students may hear about the negative consequences of pornography through the anti-pornography social movement promoted by Fight the New Drug, which is advertised with t-shirts displaying the message “Porn Kills Love” (Fight the New Drug, 2016). Despite the almost exclusively negative attention in popular media regarding the effects of pornographic film use, effects are often a mix of positive and negative (Albright, 2008). In Albright’s (2008) study, about a quarter of men and women reported their use of Internet pornography had improved their sex lives, usually by making them more open to new experiences and more comfortable talking with their partner about their desires. However, both men and women reported negative effects of pornography use, as well, and these perceived effects varied by gender (Albright, 2008). Women were more likely than men to perceive that their partner’s use of pornography made their partner more critical of them and increased pressure to perform, while men were more likely to report that their use of pornography had made them more critical of their partner and that their use of pornography had made them less interested in actual sex (Albright, 2008).

Some of the differential findings in the study by Albright (2008) can be explained by considering effects from the UG perspective. Men and women differed with respect to the reasons for and conditions under which they used pornography. Men typically used pornography for the purpose of arousal during masturbation (Albright, 2008). Women used pornography more often with a partner to enhance sexual experiences and appeared to incorporate their use of pornography into their sex lives, suggesting they were using pornography as a means of increasing their sexual knowledge (Albright, 2008). The perceived effects of pornography differed for women and men perhaps as a result of different motives for use.

The outcomes of viewing pornographic film are many and varied, as are the reasons for which consumers view pornographic film. Pornographic film can be used as a supplement for masturbation, as an educational resource to gain knowledge about sexual techniques and sexual anatomy, as a way of initiating or enhancing sexual experiences with a partner, for entertainment purposes (e.g., reducing boredom), and to satisfy curiosity (Attwood, 2005; Boies, 2002; Braithwaite et al., 2013; Goodson et al., 2000; Rasche, 2011). Whether the effects of pornographic film use vary systematically according to the reasons for which consumers view pornographic film is an area of little research. Thus, the present study explores this question.

Additionally, the present study is unique in its examination of the role of motivational factors in the tendency to engage in social comparison. Investigation of pornography users' motives for use as possible contributors to social comparison was identified by Morrison et al. (2006) as an important area of research. Social comparison refers to a person comparing features of his or her physical appearance to the features of another person, such as peers or a model (Dittmar & Howard, 2004; Myers & Crowther, 2009). Social comparison is a major contributor to body dissatisfaction in both men and women (Dittmar & Howard, 2004; Durkin & Paxton,

2002; Myers & Crowther, 2009). The connection between social comparison and body dissatisfaction appears to be stronger in women than in men, but the tendency to engage in social comparison has been associated with greater body dissatisfaction in men as well (Galioto & Crowther, 2013; Myers & Crowther, 2009). The present study provides an important incremental contribution to understanding audience interaction with pornographic media by examining social comparison as related to motivations for use.

Finally, in exploring the reactions to social comparison reported by pornography users, a number of individual characteristics were considered, including physical features (e.g., BMI) and body image variables (e.g., drive for thinness, drive for muscularity). These were included because research on other media types suggests individual characteristics such as internalization of societal standards for appearance and existing body dissatisfaction would likely moderate the impact of pornographic film use on body image (e.g., Dittmar & Howard, 2004; Groesz et al., 2002; Want, 2009).

Research questions. The present study systematically examines relationships among reasons for use and outcomes of use, as well as outcomes of use and individual characteristics, with focus on the relationship between reasons for use and the tendency to engage in social comparison. The following research questions guided the present study:

RQ1: To what extent do men and women consciously compare their bodies and sexual abilities to the bodies and abilities of the actors in pornographic film?

RQ2: Is the tendency to engage in conscious comparison related to the reasons consumers are viewing pornographic film?

RQ3: Are consumers' reactions after making conscious comparisons to the bodies and abilities of actors in pornographic film related to the reasons for which consumers are viewing it?

RQ4: Are there differences in BMI and body image among consumers who report responding with negative self-evaluations versus those who do not respond with negative self-evaluations when comparing their bodies to the bodies of actors in pornographic film?

Method

The present study uses data collected as part of a larger, online survey study of undergraduate and graduate students. The study was approved by a university institutional review board.

Procedure. The study was advertised using flyers posted in academic buildings and residence halls at three post-secondary institutions in a Midwestern community. The study was also advertised using the student e-mail listserv at the largest institution included in the study.

The informed consent document was displayed on the first page of the online survey. Participants could not advance to the next page of the online survey unless they checked a box confirming they had read and understood the information. The second page of the survey required participants to indicate their gender, "M", "F" or "T". Because many of the measures were gender specific, participant gender was required in order to direct participants to the appropriate version of the survey. Individuals who identified as "T" were asked to select the gender with which they most closely identified.

After completing the survey, participants were redirected to a separate survey in which they were given the option to register for a chance to win one of ten gift cards to local stores, five in the amount of \$25 and five in the amount of \$50.

Participants. The present study uses data from participants ages 18-30 ($n = 414$). The mean age was 20.46 years ($SD = 2.37$). Nearly all participants were students at the largest of the three institutions ($n = 401$, 96.9%). Most participants were undergraduates ($n = 373$, 90.1%). The racial composition was fairly homogenous, reflective of the composition of the community at large. Most participants identified as European American/Caucasian/White, $n = 382$ (92.3%). Approximately 4.6% ($n = 19$) identified as Asian American/Asian. Other groups did not separately comprise more than 1.5% of the sample.

The sample included more women than men, $n = 287$ (69.3%) and $n = 123$ (29.7%), respectively. Less than 1% of the sample identified as transgender. A total of 289 participants completed the women's version of the survey, and 125 completed the men's version. The majority of participants identified as heterosexual, $n = 382$ (92.3%). Most participants were single (72.2). The majority of participants were sexually active, with 47.6% ($n = 197$) reporting sexual activity within the last six months and 11.1% ($n = 46$) reporting sexual activity over six months ago. Sixty participants (16.7%) were missing data for sexual history. More women than men were missing data for the sexual history variable, $n = 51$ (17.6%) and $n = 9$ (7.2), respectively.

Measures. Pornographic film use. Pornographic film use was measured with one item. Participants were asked, "How often do you view adult film (erotica or pornography)?" Response options ranged from 1 = *Never* to 5 = *Daily*. Participants who selected a response option greater than "Never" were provided with a set of additional questions regarding their

reasons for use of, and interaction with, pornographic film. Participants were asked “For what purposes do you view adult films? (Select all that apply)” and provided with five options, each of which they could select by clicking a box to the left of the listed reason. Reasons included: a) “To get yourself ‘in the mood’ for sexual activity”; b) “To get your partner ‘in the mood’ for sexual activity”; c) “For ideas, tips, or instruction”; d) “As a sexual outlet”; and e) “Other (Please specify)”. The reasons for use items were constructed based on the primary author’s understanding of reasons viewers may use pornographic film, after reading a large study of Internet pornography use (Albright, 2008) and an unpublished Master’s thesis on women’s Internet pornography use (Rasche, 2011).

Participants who indicated viewing pornographic film more often than *Never* were also asked whether or not they compared their 1) bodies and 2) sexual abilities to the bodies and abilities of the actors (*Yes* or *No* for each question). If participants selected *Yes*, they were asked how they felt when they made comparisons. Reactions to comparison were measured with five ordinal choices ranging from *Very Negative* to *Very Positive*, followed by the option of selecting *Don’t Know*.

Body mass index (BMI). BMI was computed for each participant using their self-reported height in inches and weight in pounds. The normal range for BMI is 18.5 to 24.9. Below 18.5 is considered underweight, above 24.9 is considered overweight, and 30.0 or above is considered obese (CDC, 2015). Formula: $BMI = (\text{Weight in pounds} / (\text{Height in inches})^2) * 703$. A number of limitations of BMI as a measure of body composition have been noted (see Blodgett Salafia & Benson, 2013). Other methods (e.g., skinfold thickness) are better measures of body composition; however, given the online survey format of the present study, BMI was the most appropriate and feasible way of assessing participant body composition.

Body dissatisfaction. Women's body dissatisfaction was measured with the Body Dissatisfaction Subscale of the Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983). The scale consists of 9 items measured on a scale of 0 = *Never* to 5 = *Always*. Items were coded such that higher scores indicate greater dissatisfaction (e.g., "I think that my thighs are too large"). Items were summed to create a total score with a possible range of 0 – 45. Reliability in the present study was high, Cronbach's $\alpha = .91$.

Men's body dissatisfaction was measured with the Male Body Attitudes Scale (MBAS; Tylka, Bergeron, & Schwartz, 2005). The scale consists of 24 items measured on a scale of 1 = *Never* to 6 = *Always*. Items were scored so that higher values indicate greater body dissatisfaction (e.g., "I think my chest should be larger and more defined"; "I feel satisfied with the definition in my arms", reverse-scored). A total score was computed by averaging across all items, resulting in a possible range of 1 to 6. Reliability was high in the present study, Cronbach's $\alpha = .95$.

Drive for low body fat. The MBAS includes a subscale composed of eight items, measured on a scale of 1 = *Never* to 6 = *Always*, measuring men's drive for low body fat. Items were scored so that higher values indicate greater drive for low body fat (e.g., "I am concerned that my stomach is too flabby"; "I think my body should be leaner"). A subscale score was computed by averaging across all eight items. Scores could range from 1 to 6.

Drive for thinness. Women's drive for thinness was measured with the Drive for Thinness Subscale of the EDI (Garner et al., 1983). The scale consists of 7 items measured on a scale of 0 = *Never* to 5 = *Always*. With the exception of one item, items are worded such that higher values indicate greater drive for thinness (e.g., "I am terrified of gaining weight"; "I am preoccupied with the desire to be thinner"). After reverse-coding the appropriate item, items

were summed to create a total score with a possible range of 0 – 35. Reliability was high in the present study, Cronbach's $\alpha = .93$.

Drive for muscularity. Men's drive for muscularity was measured with the attitudes subscale of the Drive for Muscularity Scale (McCreary & Sasse, 2000). The attitudes subscale consists of 7 items, with possible responses from 0 = *Never* to 5 = *Always*. All items are worded such that higher values correspond to greater drive for muscularity (e.g., "I think I would feel more confident if I had more muscle mass"). Scores were created by averaging the 7 items and could range from 0 to 5. Reliability was good in the present study, Cronbach's $\alpha = .88$.

Analysis. RQ1 ("To what extent do men and women consciously compare their bodies and sexual abilities to the bodies and abilities of the actors in pornographic film?") was investigated using frequency information. RQ2 ("Is the tendency to engage in conscious comparison related to the *reasons* consumers are viewing pornographic film?") was investigated with a series of chi-square tests for independence, using each of the reasons for use variables separately with the variables measuring body-focused and ability-focused comparison. Additionally, chi-square tests for independence were conducted using a variable representing single versus multiple reasons for use. RQ3 ("Are consumers' *reactions* after making conscious comparisons to the bodies and abilities of actors in pornographic film related to the *reasons* for which consumers are viewing pornographic film?") was investigated with a series of chi-square tests for independence, using the reasons for use variables and the variables measuring reactions to body-focused and ability-focused conscious comparison. Due to low cell counts, reactions to comparison were recoded as follows: *Very Negative* and *Negative* were categorized as "Negative"; *Neutral*, *Positive*, and *Very Positive* were categorized as "Neutral/Positive". Similar

to analysis for RQ2, chi-square analysis was also conducted using a variable representing single versus multiple reasons for use.

Finally, RQ4 (“Are there differences in BMI and body image among consumers who report responding with negative self-evaluations versus those who do not respond with negative self-evaluations when comparing their bodies to the bodies of the actors in pornographic film?”) was investigated with independent samples t-tests. Participants were grouped according to their reported reactions. The original variable was recoded as follows: *Very Negative* and *Negative* were Group 1 “Negative”; *Neutral*, *Positive*, and *Very Positive* were Group 2 “Neutral/Positive”. Women were compared using the following variables: weight in pounds, BMI, body dissatisfaction, and drive for thinness. Men were compared using the following variables: weight in pounds, BMI, body dissatisfaction, drive for low body fat, and drive for muscularity.

All analyses were conducted using IBM SPSS Statistics version 22.

Results

RQ1. Participant responses to the questions regarding body comparison and comparison of sexual abilities are displayed in Table 7, separately by gender. Among 86 women who reported viewing pornographic film more often than *Never*, just over half (53.5%) reported engaging in body comparison, and close to half (47.7%) reported engaging in ability comparison. Among 99 men who reported viewing pornographic film more often than *Never*, more than half (57.6%) reported engaging in body comparison, and slightly more than half (51.5%) reported engaging in ability comparison.

Table 7

Frequencies and Percentages for Pornographic Film Questions among Participants Ages 18-30

Variable	Women		Men	
	<i>n</i>	%	<i>N</i>	%
Frequency of Use				
Never	153	52.9	17	13.6
A few times a year	50	17.3	17	13.6
A few times a month	25	8.7	27	21.6
A few times a week	9	3.1	40	32.0
Daily	2	0.7	15	12.0
Missing	50	17.3	9	7.2
Body Comparison				
No	38	44.2	42	42.4
Yes	46	53.5	57	57.6
Missing	2	2.3	0	0.0
Feelings About Body After Comparison				
Very Negative	5	10.9	10	17.5
Negative	23	50.0	23	40.4
Neutral	8	17.4	21	36.8
Positive	3	6.5	3	5.3
Very Positive	2	4.3	0	0.0
Don't Know	4	8.7	0	0.0
Missing	1	2.2	0	0.0
Ability Comparison				
No	44	51.2	51	51.5
Yes	41	47.7	48	48.5
Missing	1	1.2	0	0.0
Feelings About Abilities After Comparison				
Very Negative	0	0.0	8	16.7
Negative	14	34.1	11	22.9
Neutral	15	36.6	17	35.4
Positive	9	22.0	10	20.8
Very Positive	1	2.4	0	0.0
Don't Know	2	4.9	2	4.2
Missing	0	0.0	0	0.0

RQ2. Among women, the median number of reasons for using pornographic film was two, while the mode was a single reason. The average number of reasons for using pornographic film was 1.70 ($SD = 0.88$). The most frequently selected reason for using pornographic film was “as a sexual outlet” ($n = 46, 53.5\%$), followed by “to get yourself in the mood for sexual activity” ($n = 39, 45.3\%$) and “ideas, tips, or instruction” ($n = 38, 44.2\%$). Use of pornographic film was less common “to get your partner in the mood for sexual activity” ($n = 14, 16.3\%$) or for “other” reasons ($n = 9, 10.5\%$).

Among men, the median number of reasons for using pornographic film was two, while the mode was a single reason for using pornographic film. The average number of reasons for using pornographic film was 1.71 ($SD = 0.79$). The most frequently selected reason for using pornographic film was “as a sexual outlet” ($n = 83, 83.8\%$), followed by “ideas, tips, or instruction” ($n = 39, 39.4\%$), and “to get yourself in the mood for sexual activity” ($n = 32, 32.3\%$). Use of pornographic film for the reasons “other” ($n = 10, 10.1\%$) or “to get your partner in the mood for sexual activity” ($n = 5, 5.1\%$) was less common.

Chi-square results for women are displayed in Table 8; chi-square results for men are displayed in Table 9. Among women, viewing pornographic film for the purpose of “ideas, tips, or instruction” was associated with engaging in body comparison. Women who indicated that they viewed pornographic film for this reason were more likely to engage in body comparison than women who did not report viewing pornographic film for this reason. Similarly, viewing pornographic film for “ideas, tips, or instruction” was associated with engaging in ability comparison among women. Women who reported viewing pornographic film for this reason were more likely to engage in ability comparison than women who did not report viewing pornographic film for this reason.

Table 8

Chi Square Tests for Independence for Women's Reasons for Using Pornographic Film by Engaging in Comparison with Actors

Reason for Use	Body Comparison		Ability Comparison	
	No	Yes	No	Yes
1. To get yourself in the mood for sexual activity				
No	20	25	26	20
Yes	18	21	18	21
Chi square results	$\chi^2 = 0.03, NS$		$\chi^2 = 0.91, NS$	
2. To get your partner in the mood for sexual activity				
No	32	38	38	33
Yes	6	8	6	8
Chi square results	$\chi^2 = 0.04, NS$		$\chi^2 = 0.53, NS$	
3. For ideas, tips or instruction				
No	26	20	33	14
Yes	12	26	11	27
Chi square results	$\chi^2 = 5.23, p = .02, V = 0.25$		$\chi^2 = 14.33, p < .001, V = 0.41$	
4. As a sexual outlet				
No	15	23	20	19
Yes	23	23	24	22
Chi square results	$\chi^2 = 0.93, NS$		$\chi^2 = 0.01, NS$	
5. Other				
No	34	41	39	37
Yes	4	5	5	4
Chi square results	N/A		N/A	
Single reason for use versus multiple reasons for use				
Single reason	20	19	25	14
Multiple reasons	18	27	18	27
Chi square results	$\chi^2 = 1.07, NS$		$\chi^2 = 4.86, p = .028, V = 0.24$	

Note. Due to expected cell counts less than five, results for “Other” are not interpreted.

Table 9

Chi Square Tests for Independence for Men's Reasons for Using Pornographic Film by Engaging in Comparison with Actors

Reason for Use	Body Comparison		Ability Comparison	
	No	Yes	No	Yes
1. To get yourself in the mood for sexual activity				
No	27	40	38	29
Yes	15	17	13	19
Chi square results	$\chi^2 = 0.38, NS$		$\chi^2 = 2.25, NS$	
2. To get your partner in the mood for sexual activity				
No	39	55	48	46
Yes	3	2	3	2
Chi square results	N/A		N/A	
3. For ideas, tips or instruction				
No	29	31	40	20
Yes	13	26	11	28
Chi square results	$\chi^2 = 2.18, NS$		$\chi^2 = 14.00, p < .001, V = 0.38$	
4. As a sexual outlet				
No	10	6	13	3
Yes	32	51	38	45
Chi square results	$\chi^2 = 3.15, NS$		$\chi^2 = 6.76, p = .009, V = 0.26$	
5. Other				
No	39	50	45	44
Yes	3	7	6	4
Chi square results	N/A		N/A	
Single reason for use versus multiple reasons for use				
Single reason	23	24	34	13
Multiple reasons	19	33	17	35
Chi square results	$\chi^2 = 1.55, NS$		$\chi^2 = 15.54, p < .001, V = 0.40$	

Note. Due to expected cell counts less than five, results for “To get your partner in the mood for sexual activity” and “Other” are not interpreted.

Women who selected multiple reasons for viewing pornographic film were more likely to report engaging in ability comparison than women who viewed pornographic film for a single reason. This finding can be attributed to the fact that women who selected multiple reasons for use often included “ideas, tips, or instruction” as one of the reasons for which they used pornographic film, and this reason for use was associated with engaging in ability comparison. Among women who reported multiple reasons for use, 66.7% ($n = 30$) included “ideas, tips, or instruction” as a reason for use, whereas among women who indicated a single reason for use, “ideas, tips, or instruction” was only selected by 21.1% ($n = 8$).

Among men, there were no relationships between any of the reasons for use of pornographic film and body comparison. Two reasons for use were associated with ability comparison among men: viewing pornographic film for “ideas, tips, or instruction” and using pornographic film “as a sexual outlet”. Men who viewed pornographic film for “ideas, tips, or instruction” were more likely to report engaging in ability comparison than men who did not use pornographic film for this reason. Men who report using pornographic film “as a sexual outlet” were more likely to engage in ability comparison than men who did not report using pornographic film for this reason.

Men who selected multiple reasons for use were more likely to report engaging in ability comparison than men who selected only a single reason for use. This finding is likely because men who selected multiple reasons for use were more likely to select “ideas, tips, or instruction” or “as a sexual outlet” as a reason for use, and both of these reasons for use were associated with engaging in ability comparison. Among men who reported multiple reasons for use, 71.2% ($n = 37$) reported using pornographic film for “ideas, tips, or instruction”, whereas only 4.3% ($n = 2$) of men reporting a single reason for use selected “ideas, tips, or instruction” as a reason for use.

Among men who reported multiple reasons for use, 94.2% ($n = 49$) selected “as a sexual outlet” as a reason for use, whereas 72.3% ($n = 34$) of men with a single reason for use selected “as a sexual outlet”.

RQ3. Among women, when analyses could be interpreted, there were no relationships among reasons for use and reported reactions to body comparison or ability comparison. Due to expected cell counts less than five, results for “to get your partner in the mood for sexual activity” and “other” were not interpretable for body comparison, and results for those reasons plus “ideas, tips, or instruction” were not interpretable for ability comparison.

Among men, when analyses could be interpreted, there were no relationships among reasons for use and reported reactions to body comparison or ability comparison. Due to expected cell counts less than five, results for “to get your partner in the mood for sexual activity”, “as a sexual outlet” and “other” were not interpretable for body comparison or ability comparison.

RQ4. Descriptive information and t -test results are displayed in Table 10. Among women, participants who reported reacting negatively to body comparison did not differ in BMI from participants who did not react negatively to body comparison. However, the t -test for weight in pounds approached significance, $t(df = 37.89) = 2.01, p = .052$, suggesting those who reacted more negatively to body comparison tended to be heavier than those who did not. Additionally, women who reported reacting negatively to body comparison reported significantly greater body dissatisfaction, $t(df = 39) = 4.20, p < .001$, and greater drive for thinness, $t(df = 38) = 2.82, p = .008$, than women who did not react negatively to body comparison.

Among men, participants who reported reacting negatively to body comparison were heavier $t(df = 49.19) = 3.36, p = .002$, and had higher BMIs, $t(df = 50.01) = 3.09, p = .003$, than

men who did not react negatively to body comparison. Additionally, men who reported reacting negatively to body comparison had greater body dissatisfaction, $t(df = 53) = 4.97, p < .001$, and greater drive for low body fat, $t(df = 54.28) = 5.39, p < .001$, than men who did not react negatively to body comparison. Compared to men who reported reacting negatively to body comparison, men who did not react negatively to body comparison did not differ in their drive for muscularity.

Table 10
Independent Samples T-test Results

	Negative			Neutral/Positive			<i>t</i> -test
	N	M	SD	N	M	SD	
Women							
†Weight	27	154.78	39.48	13	135.92	19.86	2.01
BMI	27	24.89	6.73	13	21.89	2.84	1.53
Body dissatisfaction	28	29.64	9.04	13	17.31	8.08	4.20***
Drive for thinness	27	22.07	9.76	13	12.92	9.33	2.82**
Men							
†Weight	33	204.94	47.79	24	172.70	23.45	3.36**
†BMI	32	27.88	5.94	24	24.05	3.25	3.09**
Body dissatisfaction	32	4.01	1.09	23	2.72	0.70	4.97***
†Drive for low body fat	33	4.23	1.47	24	2.51	0.94	5.39***
Drive for muscularity	32	1.96	0.77	24	1.71	0.84	1.16

Note. Women's body dissatisfaction was measured with the Body Dissatisfaction Subscale of the Eating Disorders Inventory (Garner et al., 1983). Men's body dissatisfaction was measured with the Male Body Attitudes Scale (Tylka et al., 2005). † Equal variances not assumed.

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

Discussion

Summary and interpretation of findings. The purpose of the present study was to explore the effects of pornographic film use from a UG perspective by examining the role of reasons for pornography use in outcomes of use. Specifically, the study investigated relationships among pornography users' selected reasons for use, retrospective reports of engaging in comparison to the bodies and sexual abilities of the actors, and users' feelings about themselves after making such comparisons. Additionally, relationships among body image variables and reported reactions to making body comparison were examined.

Approximately half of pornographic film users in the present study retrospectively reported engaging in comparison of their bodies and/or sexual abilities to those of the actors in pornographic film. In most cases, body comparisons reportedly resulted in either negative or neutral feelings of users regarding their own bodies. When sexual abilities were the focus of comparison, positive reactions appeared to be somewhat more frequent; however, the predominant reactions reported by users were negative or neutral. In fact, positive reactions to comparison were so infrequent that positive reactions had to be combined with neutral reactions in order to have sufficient sample sizes to perform analyses for RQ3 and RQ4. The predominance of negative reactions and low frequency of positive reactions to comparison would be expected in consideration of the fact that most people in the general public fall short of the ideals for bodies and performance communicated in pornographic film. The bodies of actors in pornographic film are not "average" bodies (McKee et al., 2008), and the combination of professional actors and film editing creates expectations for sexual abilities that are likely not an accurate reflection of most emerging adults' experiences of sex.

Among women, the use of pornographic film for educational purposes (“ideas, tips or instruction”) was associated with greater likelihood of engaging in both types of comparison. In considering this finding from a UG perspective, it would seem that this particular reason for use may impact involvement with pornographic film in a way that facilitates comparison through increased emotional and cognitive readiness to respond (Kim & Rubin, 1997). Use of pornographic film for this particular reason would be classified as an instrumental orientation—the use of specific content to achieve a goal (Kim & Rubin, 1997). Instrumental use facilitates active and purposive involvement and is associated with parasocial interaction (Kim & Rubin, 1997). Individuals who use pornographic film for educational purposes may be more sensitive to the scripts presented or more apt to picture themselves engaging in the behaviors they are viewing, perhaps putting themselves in the place of actors and taking note of the ways they are similar to, or different from the actors.

It is noteworthy that, among women, use of pornographic film for educational purposes made both types of comparison more likely; in contrast, among men, only ability comparisons were more likely. This finding is perhaps due to differences in sexual scripts communicated in pornographic film. Scripts for men tend to emphasize sexual conquest and performance, and inadequate performance is seen as an indictment of one’s masculinity. Scripts for women typically include greater emphasis on physical perfection, but to a lesser degree also emphasize women’s performance—as an object, rather than subject—as crucial for men’s gratification, which is of principal importance in popular pornographic film (Brosius et al., 1993; Bridges et al., 2010; Jensen & Dine, 1998; McKee, 2005). Thus, for men, body comparison may be less likely than performance comparison due to greater salience of scripts communicating the importance of men’s sexual performance.

An additional finding of interest with regard to gender is use of pornographic film “as a sexual outlet”. Men and women both commonly reported using pornographic film for this reason; however, only among men was this reason associated with engaging in comparison. This would suggest gendered patterns of interaction with content, and/or differences in content of pornographic media used for this purpose. If explaining this area of difference between men and women using a UG perspective, it would seem most likely that a gender-based selection effect was present, such that men and women selected pornographic film with somewhat different content when viewing pornographic film for the same reported reasons. Previous research provides little assistance in interpretation of these findings, as research that has included both men and women while exploring outcomes of use (e.g., Albright, 2008) has not compared men and women who were matched in their reasons for viewing pornographic film. Future research could explore features of pornographic film, such as actors and details of scenes, as well as audience interaction with content, when men and women are viewing pornographic film for similar reasons.

Among women and men alike, reasons for use of pornographic film were not related to reported reactions to engaging in body comparison. Rather, reactions to body comparison were related to body image. Women who reported responding negatively to comparison had greater body dissatisfaction and higher drive for thinness than women who did not respond negatively. Men who reported responding negatively to comparison were heavier, had larger BMIs, higher body dissatisfaction, and greater drive for low body fat. Thus, it seems that consumers’ reasons for use of pornographic film may impact their attention to and engagement with certain aspects of the content, but their reactions are dependent upon their individual characteristics and predispositions. As suggested by Kim and Rubin (1997) motivations for use impact audience

attention and involvement, or the way viewers engage with the content (i.e. likelihood of engaging in social comparison in the present study). However, the specific effects of this engagement (i.e. responses to social comparison) are contingent upon individual characteristics and predispositions, which serve as moderators of effects. In the present study, aspects of body image and body size appeared to be moderators. However, one serious caveat in such an interpretation is that direction of effects cannot be established in the present study. It is unclear if individuals who retrospectively reported feeling negative about their bodies after comparison already had larger bodies, higher body dissatisfaction, and greater endorsement of sociocultural ideals coming into the viewing context, or if these differences might actually be a result of their use of pornographic film.

One surprising finding among men was that drive for low body fat differed between individuals who reported negative reactions and those who did not, whereas drive for muscularity did not differ between groups. The muscular ideal for men is dominant in pornographic film, so why would drive for low body fat appear to be important, while drive for muscularity was not? Although historically considered to be more of a problem for women, research suggests that stigmatization of obese men is also common (Carr, Murphy, Batson, & Springer, 2013; Hebl & Turchin, 2005). Obesity stigmatization, also called weight bias (Pearl & Puhl, 2016), is a different experience than failure to obtain ideal levels of muscularity. Individuals who are perceived to be fat are often victims of discrimination or intense social ridicule, while the consequences for not obtaining ideal levels of muscularity are arguably less severe. Not only can obesity stigmatization negatively impact a person's body image through external experiences of stigmatization, but applying weight bias to oneself—referred to as weight bias internalization or self-directed stigma—can produce even worse effects for body image

(Pearl & Puhl, 2016). In an experimental study of overweight and obese men, Pearl and Puhl (2016) found that induction of internalized weight bias produced self-directed stigmatization, which led to greater body dissatisfaction than did eliciting participants' recollection of actual experiences of unfair treatment due to their weight. Pearl and Puhl's (2016) study suggests that internalization of weight bias can exert a profound negative effect on body image. It is possible that men in the present study who reported higher drive for low body fat were higher in internalization of weight bias; however, because internalization of weight bias was not measured in the present study, these suggestions for interpretation are merely speculative.

Strengths, limitations and future directions. The present study provides an incremental contribution to literature on the effects of pornographic film use through its exploration of relationships among reasons for use and outcomes of use. The focus on social comparison in the present study is unique among studies of the effects of pornographic film use. Additional strengths in the present study include the use of validated measures of body dissatisfaction, drive for thinness, drive for muscularity, and drive for low body fat, all of which had high reliability among the study sample; the survey format; and the age of the sample. The anonymous format of the online survey is an asset because this format likely allowed participants to respond more honestly to questions of a sensitive nature. The age and educational status of participants in the present study correspond with emerging adulthood (Arnett 2000; Arnett, 2007), the developmental period during which pornographic film use is most common (Buzzell, 2005; Carroll et al., 2008; Coyne et al., 2015).

Despite these strengths, several limitations exist in design and measurement. The use of convenience sampling resulted in a relatively homogenous sample with respect to sexual orientation and race/ethnicity, consistent with the demographic characteristics of the

geographical region. Subsamples were not large enough to allow for separate analyses.

Furthermore, in some cases the sampling technique resulted in cell sizes too small to allow data to be analyzed, which has been a dilemma in similar research, particularly with women (e.g., Cranney, 2015; Peter & Valkenburg, 2014). Future research could utilize purposive sampling to recruit sufficient numbers of pornographic film users, especially women. Given the sample limitations, any generalizations of the results in the present study should be made with caution.

The retrospective measurement of body and ability comparison required participants to recall past experiences from a holistic perspective, rather than asking them to report on specific recent incidents. A more valid measurement technique would be asking participants to report on specific experiences in “real time”, possibly with event contingent sampling in an experience sampling study (see Hektner, Schmidt, & Csikzentmihalyi, 2007). Experience sampling would also allow for establishment of causality. Causality is assumed in the present study, but the cross-sectional design of the present study does not meet the requirements for establishing causality.

Some additional concerns exist with the measurement of reasons for use, as well as pornographic film use. Measurement of reasons for use did not explicitly include “masturbation” as an option. This was implied in the option “as a sexual outlet”, but some participants did not interpret the option this way, as evidenced by several participants selecting “other” and writing in “masturbation”. Pornographic film use was measured as if a single media type, which ignores the diversity of genres and the actors and plots used within varying genres.

Future research could improve upon the methodological weaknesses of the present study and more thoroughly explore the impact of pornographic film use by employing a longitudinal design, starting in early adolescence. Although pornographic film use is highest among emerging adults, and emerging adults are particularly sensitive to sexual scripts, the age of first exposure to

pornographic content has become increasingly lower as a result of ease of accessing online content, particularly using smart phones (Braithwaite et al., 2015; Coyne et al., 2015).

Employing a longitudinal design using would allow exploration of many relevant factors, including timing of exposure, frequency and chronicity of exposure, specific features of content (genre, actors, acts depicted), motivations for use and interaction with content. The types of motivational factors, individual characteristics, and variations in content that serve as potential moderators of the effects of pornographic film use warrant further investigation.

Finally, research on pornographic film use and sexuality could be expanded to include the impact of use on expectations for physical appearance and sexual performance of sexual partners. Brooks (1995, 1997) has proposed Centerfold Syndrome as a theory of the impact of exposure to sexually objectifying media on men's sexuality. This theory predicts a distinct sexual ideology among men who view pornographic film. Brooks asserts that the Centerfold Syndrome creates problems for men's sexuality and relationships. However, existing research relevant to this theory is sparse and hampered by methodological limitations (see Wright, 2012).

Although the specific beliefs distinctive of Centerfold Syndrome have received mixed support, the possibility of pornographic film use impacting expectations for partners is not just theoretical or speculative. Albright (2008) documented some impacts of pornography use on expectations for sexual partners: 15% of women ($n = 412$) reported feeling pressure to perform the acts their partners had seen online; 9% of women ($n = 232$) felt their partner was more critical of them as a result of viewing pornography; and 9% of men ($n = 788$) reported being more critical of their partner's body as a result of viewing Internet pornography. However, the sample in this study was largely composed of married adults with an average age of approximately 38 years. Adolescents and emerging adults would likely experience stronger

effects of exposure to pornographic film on their expectations for sexual partners due to their reliance upon pornography for sexual socialization. Additionally, the impact of failure to meet partners' expectations would plausibly be felt more sharply among adolescents and emerging adults due to the elevated importance of physical appearance in romantic pursuits, as well as physical appearance playing a more integral role in global self-esteem during these developmental periods.

Conclusions

The present study suggests that individuals who view pornographic film have varied reasons for use, as well as diverse interactions with this particular form of media. As the present study indicates, not all people experience problems as a result of pornographic film use. In fact, some people report positive effects of viewing pornographic film. Yet, some people experience profound challenges personally and in their relationships as a result of viewing pornographic film. Recent media attention to harmful effects of pornography has highlighted the need for more scientific attention to these issues. Such research is crucial for understanding for whom, and under what conditions, pornographic film use creates problems. Without research that anticipates a range of experiences and explores moderators of experiences with pornographic film, educators, practitioners, and the general public are left without any solid recommendations to guide viewing decisions, and policymakers must rely on public opinion.

Based on the present study, a tentative recommendation is that individuals who have internalized sociocultural ideals for appearance, have existing body dissatisfaction, or have bodies that diverge more substantially from sociocultural ideals may want to exercise additional caution in selection of pornographic film or avoid use of popular pornographic film altogether. Alternatively, selection of pornographic film showcasing more realistic bodies and respectful

interactions (e.g., feminist pornography) might be a possible harm reduction strategy. The effectiveness of such a hypothetical harm reduction strategy could be investigated in future research.

DISCUSSION

Summary

The goal of the research completed in this dissertation was to elucidate important factors and processes that impact emerging adults' body image and sexual satisfaction, with the ultimate purpose of working towards the promotion of positive body image and healthy sexuality. Media use was investigated as a prime factor influencing body image and sexuality because of the prominence of media as a socializing influence in the lives of emerging adults. Two types of media commonly used by emerging adults, magazines and pornographic film, were included in the research. The goal of the research was accomplished through two distinct studies examining the impact of media use from different theoretical perspectives. The impact of media use on body image was investigated in both studies because of the centrality of the body in sexuality. In addition, the first part of the research explored the relationship of body image to sexual satisfaction, an indicator of sexual well-being that is often overlooked.

In the first part of the research, an integrated model of the relationships among media use, body dissatisfaction, cognitive distraction and sexual satisfaction was tested. The theoretical perspectives used in the development of this integrated model included Cultivation Theory (Gerbner et al., 2002) and Objectification Theory (Fredrickson & Roberts, 1997). Greater media exposure was expected to positively predict body dissatisfaction and cognitive distraction; body dissatisfaction was expected to predict higher cognitive distraction; and higher cognitive distraction was expected to predict lower sexual satisfaction. The model was tested separately among men and women, using women's magazine use as the media variable for women and pornographic film use as the media variable for men. The models were tested using these

respective media types because women did not view pornographic film frequently enough to allow model testing, and men reported very low magazine usage.

The hypothesized relationship between body dissatisfaction and cognitive distraction was supported in model testing among women as well as men, consistent with previous research findings (e.g., Meana & Nunnink, 2006) as well as Objectification Theory (Fredrickson & Roberts, 1997). However, cognitive distraction was only related to sexual satisfaction in model testing among women. This finding may be due to low power in model testing among men, may reflect unique characteristics of the sample, or could be an indication of differential effects of cognitive distraction on men's arousal and ability to experience climax. In support of the latter explanation, Purdon and Watson (2011) noted that men who are relatively inexperienced sexually are more likely to experience climax earlier than desired during sexual experiences, but cognitive distraction could potentially serve to give them greater control of timing of climax. Conversely, difficulty reaching climax is more common among young women. For example, among a large sample of college students, only 4.8% of men ($n = 39$) reported rarely or never experiencing orgasm during sexual intercourse, while 27.3% of women ($n = 369$) rarely or never experienced orgasm (Higgins et al., 2011). Furthermore, men were twice as likely as women to report always or almost always experiencing orgasm (Higgins et al., 2011). Given these gender differences, it would seem cognitive distraction might have greater negative consequences among women, for whom reaching climax is more difficult. This could explain gender differences in the impact of cognitive distraction on sexual satisfaction among participants in the present study. The findings in the present study imply that Objectification Theory's assertion of compromised sexual pleasure as a result of body monitoring appears to be more accurate for women than men.

Importantly, although formulated based on theory and previous research, media use was not related to body dissatisfaction, cognitive dissatisfaction or sexual satisfaction as hypothesized. Pornographic film use was not related to body dissatisfaction or cognitive distraction among men, and magazine use was not a predictor of body dissatisfaction or cognitive distraction among women but instead had an unexpected positive, direct effect on women's sexual satisfaction. In explaining these findings, the inadequacy of Cultivation Theory to account for the active role of consumers in their interaction with media is an important consideration. Cultivation Theory assumes unidirectional, linear effects, and these assumptions do not account for moderating factors, such as audience attention, interaction with content, and motivations for media use (Valkenburg et al., 2016). By failing to account for moderating variables, potential indirect effects of media use are not captured.

The findings in the second part of the research, which investigated pornographic film use and body image from the perspective of UG (Katz et al., 1974; Kim & Rubin, 1997; Rubin, 2002), demonstrate the importance of incorporating audience motives and characteristics in media effects research. In this second study, relationships were examined among selected reasons for use of pornographic film, engaging in social comparison to both the bodies and abilities of actors in pornographic film, and users' feelings about their bodies and abilities after engaging in comparison. In addition, differences in body image variables were explored between those who reported negative reactions versus those who did not report negative reactions to comparison.

A large proportion of women and men alike reported using pornographic film as an educational tool (for "ideas, tips or instruction"), further demonstrating that emerging adults do use pornographic film for the express purpose of sexual education. The use of pornographic film

for educational purposes was associated with greater likelihood of both body and ability comparison among women, but only ability comparison among men. This is suggestive of attentiveness to the sexual scripts in pornographic film. Scripts for men portray them as subjects whose sexual performance is vital, while scripts for women portray them as objects and emphasize physical appearance.

Another area of difference between men and women emerged with regard to social comparison when using pornographic film “as a sexual outlet”. Although men and women both reported using pornographic film for this reason, only among men was this reason associated with greater likelihood of comparison. For men, use of pornographic film “as a sexual outlet” was associated with ability comparison. It is possible that these findings reflect gender differences in interaction with content or gender differences in selection of content when viewing pornographic film for this reason. Future research is required to determine how content, and interaction with content, might differ among men and women when viewing pornographic film as a sexual outlet, which is presumably the use of pornographic film during autonomous sexual activity (i.e. masturbation).

The consequences of pornographic film use for body image were not uniform, and it was evident that individual characteristics served a moderating role in the effects of comparison. Women who reported reacting negatively to body comparison were higher in drive for thinness and body dissatisfaction than women who did not respond negatively. Men who reported reacting negatively were heavier, had greater BMIs, higher body dissatisfaction and greater drive for low body fat than those who did not respond negatively. These findings parallel research on other media types, especially magazines, in which body image has been identified as a moderator of media effects (Dittmar & Howard, 2004; Groesz et al., 2002; Want, 2009).

Findings in this research showcase the utility of the UG perspective in explaining media effects. UG is comprehensive in its consideration of the possible factors involved in media effects. In UG, cultivation is contingent upon audience attention, motivation, involvement, attitudinal predispositions and individual characteristics (Kim & Rubin, 1997; Valkenburg, 2016). Cultivation is an effect of media use that only occurs under certain conditions (Kim & Rubin, 1997; Valkenburg, 2016). Although the intention was not to pit the theories used in each article against one another as competing theories, UG clearly emerged as a more useful theoretical perspective for framing research questions and explaining findings in the present research.

Integration and Implications

Despite theoretical differences, these studies are complementary in demonstrating diverse interaction with and effects of media in the lives of emerging adults. Not all participants experienced detrimental effects on body image or sexual satisfaction as a result of use of the two popular media types included in the research. In the first study, magazine use among women was actually associated with *greater* sexual satisfaction. In the second study, about half of participants reported engaging in comparison of their bodies and abilities to those of the actors, but outcomes of comparison varied according to differences in body image variables. In considering the two studies together, it would be expected that for women with existing body image problems, using pornographic film as a form of sexual education would produce further dissatisfaction, which would in turn increase cognitive distraction and decrease sexual satisfaction. Unfortunately, these relationships could not be tested simultaneously due to women's infrequent use of pornographic film.

Given the fact that body dissatisfaction is normative among emerging adult women, perhaps women's less frequent use of pornographic film but greater use of magazines comparative to men is a testament to the UG principle of audience selectivity. It is possible that women more frequently choose popular magazines as a form of sexual education than they do pornographic film because they know pornographic film will cause them distress. This seems possible, given Rasche's (2011) qualitative study of perceived effects of internet pornography use among women, in which women voiced preferences and tendencies to seek out pornographic content featuring natural-looking female actresses (especially women without breast implants) and realistic plots, while avoiding content that included overt objectification and extreme aggression. Several women explicitly stated that watching pornography negatively impacted their body image and their feelings about their sexual attractiveness and sexual functioning (Rasche, 2011). However, it is also possible that the double standard and associated stigma surrounding pornography use by women deters women from viewing pornographic film or discourages them from honestly reporting on their use (Peterson & Hyde, 2012). The anonymous format of the survey likely reduced women's apprehension about reporting on their use of pornographic film, but it is unlikely that this barrier was eliminated entirely.

In contrast to women avoiding use of pornographic film, men appear to continue viewing pornographic film despite its negative consequences. It is striking that among the sample of men in this research, a substantial proportion reported negative body image associated with past use of pornographic film, yet the typical frequency of use was a few times a month (median) or a few times a week (mode). Men's reported reactions to body comparison were positive among only 5% of the sample, while over 50% reported either negative or very negative reactions. Given these findings, it is surprising that there was no effect of pornographic film use on body

dissatisfaction in model testing in the first study. This is perhaps related to the omission of moderators of the effect of media use on body dissatisfaction. It is notable that the effect of pornographic film use on body dissatisfaction trended towards significance, $r = .21, p = .108$.

It seems men and women alike would have a lot to gain from access to content that includes actors with more realistic bodies and relationships among men and women that are not “Hercules and Barbie”. Perhaps rather than urging men to stop using pornography, men should be encouraged to act as advocates for more ethical production and equitable content in pornographic film. As the primary consumers of pornographic film, men are in the best position to demand change and could use their greater economic and political capital to act as advocates.

Although the research completed for this dissertation makes valuable contributions to research on effects of pornographic film use, many questions remain unanswered. How might the effects of pornographic film use vary according to the specific content of the media itself? What recommendations can be given to emerging adults who want to continue viewing pornographic film, but are concerned about potential negative consequences? Is it possible to provide a short list of “what to look for” and “what to avoid” as part of media literacy efforts? Providing answers to these questions requires a great deal more research that must employ a UG perspective and allow for the possibility of positive effects. Such a recommendation is much easier articulated than enacted, given the sociopolitical context of the United States.

Pornography research in the sociopolitical context. Historically, researchers have not even considered the possibility of positive effects of pornographic film (McKee et al., 2008). There is substantial attention in popular press to the negative consequences of pornographic film use, but most of this attention relies on anecdotal reports of users experiencing fairly extreme consequences compared to most people who view pornographic film. As discussed in the second

study, some people do indeed experience negative effects that profoundly impact their lives. However, the picture of the effects of pornographic film use that emerges from the popular press is at best incomplete, and at worst intentionally misleading as a result of exclusive focus on harm and negative public opinion about pornographic film.

This preoccupation with harm and negative consequences is part of historical societal ambivalence surrounding pornography. In 1969, the President's Commission on Obscenity and Pornography was charged with the task of determining whether pornographic materials contributed to criminality and other social problems. The committee determined such concerns were unfounded and should not be used as a basis for censorship. The commission's conclusions were rejected by Congress. Even today, researchers who investigate effects of pornographic film are subject to public scrutiny and sometimes ostracized by their own affiliated institutions.

Luscombe (2016) reports:

It's hard even to get funding to study how widespread porn use is, says Janis Whitlock, a former sex educator who is now a researcher in mental health at Cornell University. NIH staff reportedly advise researchers against using the word *sexual* in their funding applications if possible. Neuroscientist Simone Kühn, whose study on porn watching and brain structure was published in the esteemed *JAMA Psychiatry*, says her employers at the Max Planck Institute were unhappy to be associated with it (p. 44).

Yet, the scientific community must have a seat at the table and be taken seriously.

Pornographic film is a multi-billion-dollar industry. Adolescents and emerging adults in America frequently view pornographic film. What advice do we give them? Surely we can do better than to suggest young adults abstain completely. Such efforts have failed with respect to other sexual behaviors, namely the promotion of abstinence from sexual intercourse until marriage.

Furthermore, arguments for censorship are not typically supported in the United States. More research is needed to be able to make recommendations. To be able to equip parents, educators and policymakers with the necessary knowledge to make scientifically-informed recommendations regarding pornographic film use, future research must anticipate a range of experiences and consider moderating features of media content, as well as audience attention, motivation and involvement. Without consideration of these complex factors, it will not be possible to determine for whom, and under what conditions, negative or positive effects are more likely. The research conducted in this dissertation is a step in the needed direction.

Limitations

Several limitations exist in design and measurement in this research. The design was cross-sectional and made use of convenience sampling. Causality was assumed, but the requirement of temporal precedence was not satisfied. The sample consisted primarily of White, heterosexual participants, which limits the generalizability of the results to ethnically or sexually diverse populations. In addition, the use of convenience sampling was not ideal for recruiting sufficient samples of women who regularly viewed pornographic film. Even among men, who are more frequent viewers of pornographic film, the sample size may have impacted detection of significant effects. Future research could improve upon these weaknesses by using a longitudinal design, possibly utilizing experience sampling, and intentionally recruiting individuals who view pornographic film at least occasionally.

The focus on women's magazines as a measure of women's media exposure is a limitation of the research. Reading of print magazines has become less common in recent years, and magazine content is often available online. In the present research, the survey prompt did not specifically indicate print format, and it is unknown how many women accessed magazine

content online. The format of magazine content is an important consideration, in part because the percentage of content devoted to advertisements might differ.

Some limitations in measurement of pornographic film use exist, as well. Pornographic film use was measured as if a single media type, which fails to capture the diversity in content present across a wide range of genres. In addition, asking participants to recall past experiences with pornographic film, rather than having them report on experiences while or shortly after they occur, creates a possibility of recall bias or error in reporting.

Finally, the focus on only magazines and pornographic film is a limitation because the use of other forms of media, particularly social media, is more common among emerging adults. In consideration of null findings in the present research, future research should investigate the role of social media in body dissatisfaction among emerging adults.

Strengths

The integration of media use, body dissatisfaction, cognitive distraction and sexual satisfaction within one model in the first part of the research is unique and is an overall strength of the research completed. In the second part of the research, exploration of relationships among reasons for use and outcomes of use of pornographic film, as well as the focus on social comparison and differences in reactions to comparison, represents an important incremental contribution to scientific understanding of the effects of pornographic film use. Other strengths of the research include the anonymous format of the survey; the use of validated measures of body dissatisfaction, cognitive distraction, and sexual satisfaction, all of which had high reliability in the present study; and the ages and educational status of participants included in the present study, as these are reflective of emerging adulthood as a developmental period.

Conclusion

The research completed herein provides support for the inclusion of body image and media literacy as topics in comprehensive sexual education curricula. Body image is integral to sexual experiences, particularly sexual satisfaction in women. Efforts to promote healthy sexuality must include content to foster positive body image and must begin long before emerging adulthood. Media literacy is an additional component that may help adolescents and emerging adults navigate media messages about bodies and sexuality. Adolescents and emerging adults in the current technological landscape must understand how images are created through digital manipulation and how scenes in film are crafted to be aesthetically pleasing according to dominant sociocultural standards. They must also be taught to recognize the kinds of scripts that could be harmful for body image and sexuality, as well as those that might be beneficial, allowing them to experience greater sexual satisfaction and more fulfilling intimate relationships. After all, “Learning to experience sexual fulfillment is a vital aspect of how young people achieve the developmental task of becoming sexually healthy adults” (Higgins et al., 2011, p. 1644).

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APPENDIX A. INFORMED CONSENT DOCUMENT

NDSU **NORTH DAKOTA STATE UNIVERSITY** 701-231-8268
Department of Human Development and Family Science Fax: 701-231-9645
College of Human Development and Education
NDSU Dept. # 2615
P.O. Box 6050
Fargo, ND 58108-6050

INFORMED CONSENT

Title of research study: Study on Sexuality and Related Topics

This study is being conducted by: Beth Blodgett Salafia, Assistant Professor in the Department of Human Development and Family Science at North Dakota State University; and Alison Brennan, PhD student in the same department at North Dakota State University.

Why am I being asked to take part in this research study?

You are invited to participate in a research study to obtain information about sexual activity, sexual attitudes, relationships, body satisfaction and media use. All English-speaking college students who are at least 18 years old are invited to participate.

What is the reason for doing this study?

The purpose of the present study is to obtain information about some of the factors associated with sexual behaviors, sexual attitudes, and body satisfaction. The information gathered in this study will help researchers to understand the links between sexual activity, sexual attitudes, body satisfaction, relationships, and media use. If you agree to participate in this study, you will be asked to complete an online series of surveys.

Where is the study going to take place and how long will it take?

The surveys will be available online for you to complete at your convenience and will take about 30 to 40 minutes to finish.

What are the risks and discomforts?

We do not know of any significant risks from filling out these surveys. However, it is not possible to identify all possible risks in research procedures, but the researchers have taken reasonable safeguards to minimize any known risks to the participant and minimize the potential for emotional distress as much as possible. There is a small chance that the questions that you will be asked may remind you of memories or past situations that could make you feel uncomfortable. You are free to skip any item or items and can stop filling out the surveys

without penalty or hard feelings. If you experience significant distress while completing the surveys, please contact the counseling center at your university: NDSU Counseling Center (701) 231-7671, MSUM Counseling and Personal Growth Center (218) 477-2227, or Concordia College Counseling Center (218) 299-3514. If you would like additional referrals for counseling, please contact Beth Blodgett Salafia or Alison Brennan.

What are the benefits to me? What are the benefits to other people?

Participating in this study may help you learn more about yourself. However, you may not get any benefit from being in this study. The findings of this study will allow researchers and practitioners to know more about the ways relationships and media use impact body satisfaction, sexual attitudes and sexual behaviors.

Do I have to take part in the study? What are the alternatives to being in this research study?

Your participation in this research is your choice. If you decide to participate in the study, you may change your mind and stop participating at any time without penalty or loss of benefits to which you are entitled. Your decision whether or not to participate will not affect your present or future relationship with North Dakota State University.

Who will see the information that I give?

This study is anonymous. That means that no one, not even members of the research team, will know that the information you give comes from you. Your information will be combined with information from other people in the study. When we write about the study, we will write only about the combined information, and no one will be able to know what your information is. When findings from the study are reported, only general information (e.g., gender and age) will be used.

Will I receive compensation for taking part in this study?

To thank you for your time and effort in this project, you will have the opportunity to enter your name into a drawing for a gift card to Target or Best Buy. There will be a total of ten gift cards (five cards worth \$25 and five cards worth \$50). The online surveys have a link connecting you to another survey where you will provide your name and contact information if you wish to be entered into the drawing. Please note: Your information will in no way be linked to the survey, and the researchers will not be able to connect your identifying information to your responses.

If 100 people complete the survey, your chance of winning a prize will be 10%. If 500 people complete the survey, your chance of winning will be 2%. We anticipate at least 100 people will complete the survey.

What if I have questions?

Before you decide whether to accept this invitation to take part in the research study, please ask any questions that might come to mind now. Later, if you have any questions about

the study, you can contact the researchers: Beth Blodgett Salafia, by email (Elizabeth.Salafia@ndsu.edu) or by phone at (701) 231-7099; or Alison Brennan by email (Alison.Brennan@ndsu.edu) or by phone at (701) 231-9709.

What are my rights as a research participant?

You have rights as a participant in research. If you have questions about your rights or complaints about this research, you may talk to the researcher or contact the North Dakota State University Institutional Review Board by:

- Telephone: 701.231.8908
- Email: ndsu.irb@ndsu.edu
- Mail: NDSU Institutional Review Board, 1735 NDSU Research Park Dr., Fargo, ND 58105

The role of the IRB is to see that your rights are protected in this research; more information about your rights can be found at: www.ndsu.edu/research/irb.

You will be able to complete the survey and the drawing only once.

Documentation of informed consent:

You are freely making a decision whether to be in this research study. Checking this box means that you have read and understood this consent form and have decided to be in this study.

I have read and understand this consent form and have decided to be in this study.

APPENDIX C. COVARIANCE MATRICES FROM MODEL TESTING

Observed Covariances for Study Variables in Women's Model

Variable	1	2	3	4	5
1. BMI	26.735				
2. Magazine use	-1.656	6.699			
3. Body dissatisfaction	22.801	-1.076	93.114		
4. Sexual satisfaction	5.126	3.209	-17.914	61.900	
5. Cognitive distraction	-4.101	5.267	100.416	66.640	512.009

Observed Covariances for Study Variables in Men's Model

Variable	1	2	3	4	5
1. BMI	11.680				
2. Pornographic film use	-0.353	1.427			
3. Body dissatisfaction	1.070	0.205	0.868		
4. Sexual satisfaction	3.838	-0.016	-0.589	40.623	
5. Cognitive distraction	12.609	0.970	10.300	-24.009	257.165