

THE EFFECTS OF VIEWING SEXUALLY EXPLICIT MATERIALS ON MEN'S BODY
IMAGE SATISFACTION, INTEREST IN PURSUING COSMETIC SURGERY, AND BODY
CHANGE BEHAVIORS

by

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ABSTRACT

This study examined the effects of viewing sexually explicit media on men's body image, body change behaviors, and esteem in a randomized experimental study. The purpose was to determine if a cause and effect relationship exists between viewing sexually explicit media and body image dissatisfaction in men. Participants were randomized to one of four conditions. They were asked to view a short media clip and then answer a series of questionnaires assessing their current body change strategies (e.g., pathogenic weight control practices), interest in risky body behaviors (e.g., cosmetic surgery), esteem (i.e., genital, sexual, and self-esteem), and overall body image satisfaction. It was hypothesized that men exposed to the sexually explicit media condition would evidence more dissatisfaction with their bodies, utilize more body change strategies, and have more interest in risky body change behaviors. It was also hypothesized that men exposed to the sexually explicit condition would evidence poorer self-esteem, sexual esteem, and genital esteem relative to participants in the other conditions. The hypotheses were not supported. There were no significant differences among any of the conditions, including a more specific analysis between the control and sexually explicit conditions. As this differs from findings of similar studies with female participants, it is important for future studies to further examine this topic and to identify protective factors that may exist for men who view sexually explicit materials.

TABLE OF CONTENTS

LIST OF TABLES	vii
CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW	1
Social Comparison Theory	2
Sexually Explicit Material	4
Male Body Image	9
Drive Toward Appearance-change Behaviors	11
Penis Enlargement	11
Cosmetic Surgery	12
Anabolic-Androgenic Steroid Use	13
Cosmetic and Weight-loss Products and Advertisements	14
Current Study	15
CHAPTER TWO: METHOD	16
Participants	16
Materials	16
Demographic Questionnaire	16
Screening Measures	17
Body Image Measures:	18
Esteem Measures	20
Other Measures	21

Single Item Measures	22
Procedure	23
Screening Phase	23
Experimental Phase-Time 1	24
Follow-up Phase- Time Two	25
CHAPTER THREE: RESULTS.....	26
Power Analyses.....	26
Differences in Exposure to SEM	27
Potential Covariates.....	27
Hypothesis Testing.....	28
Analyses between SEM Group and Control Group	29
Time 2 Comparisons	30
Follow-up Correlation Analysis Between High vs. Low SEM Viewers.....	31
Supplemental Correlation Analysis.....	31
CHAPTER FOUR: DISCUSSION.....	32
Study Limitations	36
Future Directions.....	39
CHAPTER FIVE: CONCLUSION.....	42
APPENDIX A: IRB APPROVAL LETTER.....	43
APPENDIX B: TABLES	46

REFERENCES57

LIST OF TABLES

Table 1-Number of Men in Each Category for Time Spent per Week Viewing SEM.....	47
Table 2-Means and Standard Deviations of Potential Study Covariates	48
Table 3-Means and Standard Deviations of Dependent Variables	49
Table 4-Means and Standard Deviations of Dependent Variables	50
Table 5-Means and Standard Deviations of Dependent Variables	51
Table 6-Means and Standard Deviations of Dependent Variables	52
Table 7-Multivariate Tests- Repeated Measures MANOVA	53
Table 8-Multivariate Tests- Repeated Measures MANOVA	54
Table 9- Means and Standard Deviations of Dependent Variables: SEM Median Split	55
Table 10- Correlations of Time Spent Per Week Viewing SEM and Study Variables	56

CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW

Sexually explicit material (SEM) is extremely prevalent in most societies and generates \$57 billion annual revenue world-wide; SEM generates \$12–14 billion in the United States alone (Ropelato, 2006). Moreover, studies indicate that approximately 50% of all college students report having viewed SEM (e.g., Boies, 2002), and up to 70% of 18 to 24 year-old male college students visit adult sites monthly (Martindale, 2011). Possibly independent of the pervasive viewing of SEM is the dramatic increase in the last 5-10 years of men’s pursuit of elective cosmetic surgeries and other body enhancement endeavors (Harvey & Robinson, 2003; Morry & Staska, 2001). Surgical procedures that remove excess body fat (e.g., liposuction), myriad types of dieting, penis enlargement procedures, and the use of drugs to “bulk up” – all carry potential health risks. Given that SEM typically portrays male models who are muscular, vigorous, and well-endowed anatomically, two broad questions form the essence of this study: (1) Does viewing SEM decrease in a causal way men’s body image satisfaction?; and (2) Does viewing SEM cause men to desire cosmetic surgery and elevate their interest in pursuing other forms of body enhancement procedures? Most research on SEM has focused on its potential effects on men’s aggression toward women (e.g., Linz, Donnerstein, & Penrod, 1988; Malamuth, Addison, & Koss, 2000; Morrison et al., 2006). Only a few studies have examined the correlation between men’s exposure to SEM and their self-perceptions in terms of physical appearance and sexual functioning (Morrison et al., 2004a; Morrison et al., 2006). No published study has investigated the effects of viewing SEM on men’s body image, genital- and sexual-esteem, and appearance-change behaviors. All considered, given the high rates of SEM viewing among men and their increased pursuit of unnecessary and potentially dangerous body enhancement endeavors, this line of research is both timely and relevant and may have important public health implications.

These effects were explored in the current study via an experimental design grounded in social comparison theory.

Social Comparison Theory

Although the connection between media and men's body dissatisfaction has been studied through the lens of social comparison theory in the past, most of this research has neglected to include SEM. This omission is surprising, given the popularity and ease of watching SEM on the Internet (Morrison et al., 2006). There are no published studies in which SEM has been analyzed for content in terms of its depictions of the male body and then shown to an experimental, randomly assigned group of participants to assess its potential effect on body image or interest in appearance alterations. However, it seems reasonable to assume that the medium's representations of genitalia, physiques, and sexual proficiency are unrealistic. Indeed, Escoffier (2003, p. 539) asserts that commercially prepared SEM is a "dramatic fabrication of sexual activity ... achieved by elaborate editing and montage of the filmed sexual acts themselves." Given such manipulations, it would appear that the images depicted in SEM are quite distant from the reality of most people's physiques and the nature of their erotic lives.

The proposed study follows the theoretical framework of social comparison theory. In the social comparison literature, an individual attempts to enhance self-understanding by comparing themselves to others on various dimensions such as physical appearance (Thompson, Coover, & Stormer, 1999) or personal achievement (Lockwood & Kunda, 1999). Festinger (1954) originally proposed that individuals have a drive to evaluate their opinions and abilities; in the absence of objective, nonsocial criteria, individuals engage in social comparison (i.e., they compare their opinions and abilities to those of other individuals). Moreover, when possible, social comparisons are made with similar others. Since its original formulation, social comparison

theory has undergone a number of revisions including its importance in the dimensions of physical appearance, body image, and dieting (Wheeler & Miyake, 1992).

The target that individuals use for comparative purposes may be universalistic (i.e., a distant target such as a celebrity or model) or particularistic (i.e., a more proximal target such as a friend or acquaintance). In addition, the comparisons that individuals make may be upward (i.e., the target is superior on the dimension of interest), downward (i.e., target is inferior on the dimension of interest), or lateral (i.e., target and individual are comparable on the dimension of interest) (Morrison et al., 2004).

Research suggests that social comparisons on the dimension of physical appearance tend to be upward, rather than downward (Wheeler & Miyake, 1992) and that these comparisons usually produce a decrease in self-ratings of attractiveness. Upward comparison is believed to decrease well-being (Wheeler & Miyake, 1992) and universalistic targets (i.e., famous celebrities, movie actors) are perceived as eliciting greater pressure to conform to idealistic standards of attractiveness than particularistic targets (Irving, 1990). Thornton and Moore (1993) found that male participants exposed to pictures of male models obtained lower scores on a measure of self-rated physical attractiveness compared to controls. Martin and Kennedy (1993) and Richins (1991) discovered similarly that the tendency to compare one's physical appearance to magazine models correlated negatively with self-report evaluations of attractiveness. In terms of appearance-change driven behaviors, Heinberg and Thompson (1992) found that participants who considered celebrities to be an important comparison group in terms of physical appearance were more likely to engage in pathological body weight control practices such as purging to lose weight than those who did not.

Mass media advertisements and programming often portray men who are slim yet muscular, a mesomorphic V-shaped torso, cleanly shaven except for “designer stubble,” with tan and clear skin (Gill, Henwood, & McLean, 2003). Male actors in SEM often are chosen due to these desired, physical characteristics with the added qualification that they possess larger than average genitalia. Therefore, in accordance with social comparison theory, the idealistic images of the male body disseminated by SEM media may be viewed as upward and universalistic target comparisons rather than downward or lateral.

Sexually Explicit Material

As indicated previously, the viewing of SEM is a profoundly common in the United States as well as the rest of the world. The profits generated by the adult entertainment industry in the U.S. exceed profits generated by professional sports, the music entertainment industry, and the yearly combined revenue of NBC and CBS. SEM is fairly mainstream. It is available for free via the internet (Morrison et al., 2006), can be purchased from adult stores across the country, can be accessed and/or purchased through certain cable television providers, and can be purchased for viewing in upscale hotel chains, such as the Hilton, Sheraton, and Marriott.

In the 1970’s and 1980’s, a robust amount of research was dedicated to understanding the effects of SEM on behavior, more specifically, the violent behavior that was hypothesized to ensue as a result of watching SEM. Politicians, activists, religious leaders, and some scientists became concerned that SEM may have deleterious effects on male viewers, leading them to commit more frequent acts of sexual assault. Two schools of thought have emerged about the effects of SEM and whether or not there is a causal connection between SEM and violence against women. On one side of the debate are those who argue that SEM has no harmful effects. In fact, some early research on viewing SEM found it to produce a "cathartic effect" and thereby

to reduce the amount of sexual assault (Ben-Veniste, 1971; Kutchinsky, 1973). As a result, laws restricting the production, sale, and distribution of SEM were relaxed and SEM became a more prevalent part of American culture (Russell, 1993). On the other side of the debate, there are people who have argued that SEM is associated with violence against women and contributes to the high incidence of rape and sexual assault (Russell, 1993). The Meese Commission, contracted by Ronald Reagan in the 1980's, concluded that there was a causal link between viewing SEM and sexual violence toward women (Attorney General's Commission on SEM, 1986). According to the report, viewing SEM changes perceptions of "typical" sexual behavior, trivializes rape, promotes rape myths and directly leads to male aggression toward women. Though the Meese Commission acknowledged that these effects were particularly specific to violent SEM, Ferguson and Hartley (2009) believe these conclusions have been unfairly generalized to include all SEM which is consistent with the fact that several researchers spoke out against the Meese Commission report.

Regarding male sexual violence, Linz, Donnerstein, and Penrod (1987) noted that research suggests that violent SEM, as well as violent horror films, may promote rape trivialization and rape myths, but non-violent SEM does not lead to increases in male sexual aggression. In fact, as noted by Palys (1986), non-violent SEM tends to depict men and women on relatively equal terms. Linz et al., (1987) suggest that the effects of SEM on the causation of male sexual aggression toward women are negligible. Despite the fact that most SEM is not violent, religious leaders, politicians, scholars, and the general public have incited debate about whether exposure to any type of SEM increases the risk of (mainly) male viewers committing future sexual assaults. Evidence of the influence of exposure to SEM on sexual assault is inconsistent at best (Dwyer, 2008; Ferguson & Hartley, 2009; Segal, 1994). Many still contend

that exposure to SEM will increase negative attitudes and dangerous behaviors towards women. Still, there is at least an equal amount of empirical support to support the notion of the “cathartic effect” whereby viewing SEM may actually lessen violent attitudes toward and crimes against women (D’Amato, 2006). It bears noting that other research has demonstrated that some individuals have greater inclinations toward aggression and violence regardless of the type of media they view (e.g., Ferguson, Cruz et al., 2008; Ferguson, Rueda, et al., 2008).

In terms of experimental research on SEM and violence, the results have been consistently mixed. The one consistent finding on this topic is that the type of research methodology used greatly affects the outcome of the study. Linz, Donnerstein, and Penrod (1988) randomly exposed adult college students to an R-rated movie containing sexuality and violence, an R-rated movie containing sexuality, a non-violent sexually explicit film, or a clip of neutral media. The only mild effect was obtained for those who viewed the violent movie who subsequently expressed slightly greater acceptance of rape. Fisher and Grenier (1994) exposed male college students to violent SEM, with both positive (a female enjoying the act) and negative (the female not enjoying the act) outcomes, non-violent SEM, or neutral media. Students were then asked to fill out a questionnaire assessing attitudes toward women, rape myth acceptance, and acceptance of violence. Results indicated no effects on any of the outcomes for either violent or nonviolent SEM. Other experimental studies with similar outcomes have been documented in several meta-analyses (Allen, D’Alessio, & Emmers-Sommer, 2000; Odone-Paolucci, Genuis, & Violato, 2000; Gunter, 2002). Results of these experimental studies reveal that effects appear negligible, temporary, and difficult to generalize to the real world. Studies such as these are also laden with limitations, some of which include validity issues with aggression measures, brief exposure times, complexities of correlating attitudes with behavior, and difficulties in

generalizing results from college students to actual sexual offenders and rapists (Ferguson & Hartley, 2009).

As there has been no conclusive body of literature proving the harmful effects of SEM on men's attitudes and the safety of women, researchers have begun to investigate other topics related to SEM and outcome variables related to well-being. One area of research that has garnered interest is the understanding of how SEM affects body image satisfaction. Initial research in this area investigated how SEM affects the way female viewers or consumers feel about their own body (Vanwesenbeek, 2001). After this line of work, researchers examined how SEM affected male consumers' views of women's bodies. It was believed that consumption of SEM may lead men to reject women's bodies in general due to an expectation that all women should look like and respond to sexual activity in a manner consistent with female actresses in SEM (Weiss & Schneider, 2006).

More recently, a body of literature has developed which explores the correlation between consumption of muscle and fitness magazines and body image satisfaction. Research findings in this area suggest that exposure to muscle and fitness magazines as well as other media depicting well-muscled male models (e.g., magazine advertisements, television and movie actors, etc.), which usually display the ideal male physique, are correlated with decreased body dissatisfaction, increased drive for muscularity, eating pathology, and deficits in self-esteem. The majority of studies have been correlational in design with male participants being asked to describe the types of media they consume (e.g., magazines, videos, internet, etc.) as well as the frequency of such consumption. For example, Hatoum and Belle (2004) found a positive correlation between the number of popular male magazines read (e.g., Men's Fitness) and participants' drive for muscularity, the number of cosmetic products they used per month (e.g.,

moisturizer, hair gel, teeth whitener), and the number of hours they spent exercising per week. Morrison, Kalin, and Morrison (2004) also found that male participants who reported comparing themselves to idealistic targets such as those found in male-oriented media evidenced lower levels of self-esteem. The same participants also were more likely to have reported dieting and using steroids to build muscle mass. One experimental study by Lorenzen, Grieve, and Thomas (2004) found that male participants shown images of muscular models evidenced a significant decrease in level of body satisfaction as determined by a comparison of pre- and post-exposure scores on the Body Assessment Scale.

Despite the relation between media association and male body image found in such research, SEM has almost been ignored in the literature. There have been a few studies that began to explore the relation between SEM exposure and outcome variables associated with body image and body esteem. Morrison et al., (2006) investigated the relation between SEM exposure (in a variety of formats) and body esteem. Although the researchers stated that a non-significant correlation was found between the variables, and subsequently concluded that satisfaction with body parts is not associated with exposure to SEM, they failed to control for the amount of SEM consumed. Despite that the researchers had asked participants to retrospectively recall the amount of SEM consumed during the last month, they compiled data from participants who varied greatly in the amount of SEM exposure. The accuracy of retrospective recall is questionable at best, even when study variables are clearly and appropriately operationalized. As such, these types of studies have limited validity and generalizability. Additionally, on average, participants report low levels of SEM exposure, making it even more difficult to draw adequate conclusions such studies.

In a different research protocol, Morrison et al., (2004) asked adult college students four questions to determine the frequency of exposure to various types of SEM, one pertaining to sexually explicit TV, one pertaining to sexually explicit videos/DVDs, and two pertaining to SEM on the internet. Results revealed a modest, positive correlation between exposure to sexually explicit television/videos and genital self-image, which was contrary to their hypothesis and to the theoretical framework of their study: social comparison theory. Again, having participants self-recall the amount, frequency, and type of SEM they are exposed to is difficult as these variables are hard to control for and accurately assess. Socially desirable responding also may affect this line of research as participants may be hesitant to admit to the true nature of their SEM consumption.

An exhaustive search of the social science literature revealed no published studies in which participants have been exposed to SEM in an experimental, randomized control trial and then assessed regarding levels of body satisfaction, genital esteem, sexual esteem, or frequency and type of appearance-change behaviors. The intent of my study is to address this void in the literature.

Male Body Image

For the purposes of this study, it is important to understand the research literature concerning body image as it pertains specifically to men. Recent research has focused on men who experience dissatisfaction with their bodies (Cohane & Pope, 2001; McCreary & Sasse, 2000; & Pope, et al., 2001) and who desire to alter their appearance through a variety of means (Schuster, Negy, & Tantleff-Dunn, 2013). A large body of literature has shown that men typically desire to be leaner and more muscular (Hildebrandt, Langenbucher, & Schlundt, 2004; McCabe & Ricciardelli, 2004; Morrison, Hopkins, Rowan, & Morrison, 2004; Muth & Cash,

1997; Pope et al. 2002; and Yelland & Tiggemann, 2003) and these body and shape concerns have become central tenants of male body image. Drive for muscularity is one of the most extensively researched topics concerning male body image. According to McCreary and Sasse (2000), men are more likely to associate attractiveness with increased muscle definition and leanness.

Other research pertaining to male body image has illuminated that men are concerned additionally with other unique facets such as size and functionality of genitals and cosmetic concerns (Schooler & Ward, 2006, Tiggemann, Martins, & Churchett, 2008). These concerns have been linked specifically to the development of unhealthy body image in men. A variety of studies have shown that on average, men desired to be leaner, more muscular, have a fuller head of hair, have less body hair, be taller, and have a larger penis (Morrison, et al., 2004; Muth & Cash, 1997; Tiggemann, Martins, & Churchette, 2008; Yelland & Tiggemann, 2003). Perhaps even more importantly, all of these aspects were considered at least moderately important to their notions of physical attractiveness (Tiggemann et al., 2008).

A specific body of literature pertaining to male body concerns has focused on men who have become relatively pathological in their desire to change their physical appearance (Cohane & Pope, 2001; McCreary & Sasse, 2000; Pope, et al., 2001). In an effort to attain Westernized male ideals, some men participate in frequent, sometimes dangerous activities to positively shape their appearance. These activities may include, but are not limited to, the use of steroids, compulsive and excessive exercise, cosmetic surgery, and extreme dieting (Pope, Phillips & Olivardia, 2002).

Drive Toward Appearance-change Behaviors

As men have become more dissatisfied with various body facets, they have begun to experiment with how to alter their physical appearance, perhaps as a way to improve self-esteem and body image satisfaction. These appearance-change behaviors exist in a variety of formats.

Penis Enlargement

Penis size is another area that seems to greatly influence men's body image. Studies have shown that many men consider their penis to be smaller than an average penis (Lee, 1996; Son, Lee, Huh, Kim, & Paick, 2003). Men in these studies also tend to underestimate their own penis size. In a study that included 25,000 men, 45% were dissatisfied with the size of their penis and reported that they wish it were larger in size (Lever, Frederick, & Peplau, 2006). Winter (1989) found that men with larger penises have a better body image, genital image, and have feelings of greater sexual competency. In extreme cases, men with body dysmorphic disorder related to the size and appearance of their genitals frequently develop major depressive episodes and are at risk for suicide (Wylie & Eardley, 2006). The embarrassment and fear of being mocked related to their status may lead to social withdrawal and isolation affecting social, occupational, academic, and overall functioning. It bears noting that 37% of men visiting an andrology clinic reported that their dissatisfaction with their genitals began during their teenage years, after exposure to SEM (Mondaini & Gontero, 2005). In an effort to increase or otherwise alter the size, appearance, and functionality of their genitals, some men are seeking surgical treatments such as penile enlargement surgery, liposuction or suprapubic lipectomy, or surgical "bulking" of the subcutaneous fat through injections. Such procedures carry limited results with complications including disfigurement, scarring, lumpiness, and infection. Additionally, even with surgical intervention, men with psychological complications such as body dysmorphic disorder often are

unsatisfied with the results and almost immediately seek further surgery (Wessells, Lue, & McAninch, 1996).

Cosmetic Surgery

Grogan (2008) reports that men account for 9% of the total cosmetic procedures performed in the United States, with a 2% increase of minimally invasive procedures (i.e., Botox injections, chemical peels, and laser hair removal) from 2007. Men underwent 1,120,803 cosmetic procedures in 2008, which is a 9.7% increase from the year 2000. Pectoral implant surgery has increased 203% from 2007. The most performed procedure for males in 2008 was nose reshaping, followed by eyelid surgery, liposuction, gynecomastia reduction (male breast reduction), and hair transplantation, respectively (ASPS, 2010).

Gynecomastia is the condition of over-developed or enlarged breasts in men. This condition can be the result of hormonal changes, heredity conditions, disease or the use of certain drugs, including anabolic-androgenic steroids (Babigian & Silverman, 2001). Surgical options for gynecomastia reduction have become prevalent over the past decade with many symptomatic patients desiring cosmetic change. Many patients pursue a mastectomy to alter this physical condition-- a surgery that may end in complications such as sensory changes, pain, hematomas, seromas, scarring, breast asymmetry, and wound infection (Steele, Martin, & Place, 2002).

Pectoral implants, another trend in cosmetic surgery for men, are the surgical placement of silicone implants in the upper pectoral muscle (Benito-Ruiz et al., 2008). The exposure of the male body in the media, especially the upper torso, which features large and well-defined pectoral muscles, makes the latter highly desirable as an ideal standard (Pope et al., 2001). Though supported by a plethora of plastic surgery websites and surgical literature, this surgery

has serious risks and complications similar to other plastic surgeries including infection, swelling, anesthesia risks, bleeding, scarring, fluid accumulation, and nerve damage (ASPS, 2010). Bicep implants, calf implants, buttocks implants, testicular implants and various other implant surgeries also have increased dramatically over the last decade (ASPS, 2010). These surgeries are mainly elective, rather than necessary medical procedures (ASPS).

Anabolic-Androgenic Steroid Use

Anabolic-androgenic steroid (AAS) use is a current health problem in many countries (Kanayama, Pope, & Hudson, 2001; Pope & Brower, 2004). AAS use, especially prolonged use, may lead to medical morbidity, suppressed neuroendocrine functioning, hepatotoxicity, and ironically, gynecomastia (Babigian & Silverman, 2001; Brower, 2002; Pope & Brower, 2004; Soe, Soe, & Gluud, 1992). There also are a number of adverse psychiatric conditions related to AAS use including aggression, depression, and in some cases progression to opioid abuse or dependence (Kanayama, Cohane, Weiss, & Pope, 2003; Malone, Dimeff, & Lombardo, 1995; Pope & Katz, 1990). Among the one million boys and men who report having used AAS, many report using these drugs to improve physical appearance outside of athletic purposes (Kanayama, Pope, & Hudson, 2001).

Male AAS users often report body image concerns (Kanayama et al., 2001). Brower et al., (1994) found that 25 out of 35 male weight lifters reported that they did not feel “big enough” and would be likely to try AAS at some point. Blouin and Goldfield (1995) found significantly higher drive for muscularity scores among AAS using bodybuilders relative to non-using bodybuilders. Schwerin et al., (1996) found higher scores on a body dissatisfaction scale among AAS users relative to non-users. Although there is no research yet to support this, it seems likely that long-term AAS users with body image disturbance, who later develop

gynecomastia, may be more likely to undergo surgery to increase self-esteem by improving their physical appearance.

Cosmetic and Weight-loss Products and Advertisements

In a similar vein, the emergence of beauty products on the market that specifically target men have notably increased. Popular and previously female-dominated brands like Clinique™ and Shieshedo™ have introduced products specifically for male image concerns, including skin care, lotions, hair removal products, and wrinkle treatments. Both Weight Watchers™ and NutriSystem™, two major weight-loss programs, have introduced unique programs for men in the last several years. Both companies use famous, male actors and well-known, male athletes who have lost weight to endorse and sell their product to men. In 1997, men purchased over 3.5 billion dollars worth of beauty products, a large increase from the previous decade during which there were fewer male cosmetic products on the market (Pope et al., 2002). As such, the rise in both cosmetic surgery procedures for men and the purchase and use of male beauty and appearance-related products suggest that concerns of male body image outside the realm of leanness and thinness are becoming the norm.

Taken together, the above research suggests that men should be thin but muscular and practically hairless (with the exception of a thick head of hair). They also should have a large penis, smooth skin, and be wrinkle free, in addition to having the mesomorphic V-shaped body and minimal body fat (Pope et al., 2001). Obviously, few men match this stringent ideal and it is likely that many will start or continue to participate in behaviors or practices aimed to help remedy these seeming inadequacies.

Current Study

A large majority of male college students view SEM on a regular basis. They also are reporting more frequent body dissatisfaction, including numerous body change behaviors and a propensity toward extreme measures like cosmetic surgery. It is important to examine if viewing SEM has a causal effect on such risky health behaviors. The purpose of this study was to investigate the effects of exposure to SEM (in video/DVD format) on the following variables: body satisfaction/body esteem, pathogenic weight control practices, attitudes towards cosmetic surgery, genital esteem, sexual-esteem, and self-esteem. As social comparison theory stipulates that upward comparisons to universalistic targets (e.g., the sort of unrealistic images found in SEM) may heighten the perceived discrepancy between one's actual and ideal selves, it was hypothesized that exposure to SEM would causally increase body image disturbance, the potential for pathogenic weight control practices, and attitudes towards altering appearances. Further, it was hypothesized that exposure to SEM would causally decrease genital-esteem, sexual-esteem, and self-esteem.

CHAPTER TWO: METHOD

Participants

Participants included 274 male undergraduate students from a large Southeastern University. All eligible men were recruited through the university's online-based research recruitment program. Participation was open to all male undergraduate students, aged 18-25, regardless of race or sexual orientation; however, only participants who identified as heterosexual were included in subsequent data analysis as the SEM in this study was heterosexual in design. Participants were pre-screened for clinical-level behaviors and symptoms of depression, eating disorders, and sexual compulsivity in a process described below in the procedural section of this paper. Out of the 274 participants screened, 121 were interested and eligible to participate in the experimental portion of the study. Those participants had a mean age of 19.5 with a standard deviation of 1.6. Regarding ethnicity, 68 (56.2%) self-reported as non-Hispanic White, 34 (28.1%) as Hispanic/Latino, 10 (8.3%) as African-American, 6 (5%) as Asian-American, and 3 (2.5%) as "other." Regarding class standing, 70 (57.9%) self-reported as holding a freshman status, 18 (14.9%) as sophomore status, 25 (20.7%) as junior status and 8 (6.6%) as senior status. Forty one of the 121 experimental study participants returned to complete follow-up measures at Time 2.

Materials

Demographic Questionnaire

Participants were asked to provide their gender (i.e., Male or Transgender); ethnicity (i.e., White, Latino or Hispanic, African American or Black, Asian American or Asian, or Other);

sexual orientation (i.e., Heterosexual, Homosexual, Bisexual, or Other); highest level of education (i.e., Freshman, Sophomore, Junior, or Senior); and their height and current weight.

Screening Measures

Beck Depression Inventory (BDI-II) (Beck, et al., 1996) is a well-used self-report analysis of depressive symptoms. The test contains 21 items, most of which assess depressive symptoms on a Likert scale of 0-3. The two exceptions to this are questions 16 and 18. Question 16 addresses changes in sleeping patterns while question 18 addresses changes in appetite. The scale in these two items consists of 0, 1A, 1B, 2A, 2B, 3A, and 3B. People are asked to report their feelings consistent with their own experiences within the past two weeks. All forms of the inventory are written at the 5th grade reading level (Conoley, 1987). Clinical interpretation of scores is accomplished through criterion-referenced procedures utilizing the following interpretive ranges: 0-13: minimal depression, 14-19: mild depression, 20-28: moderate depression, and 29-63: severe depression (Beck, et al., 1996). A large number of studies demonstrate acceptable internal consistency of items.

The Eating Attitudes Test (EAT-26; Garner, Olmstead, Bohr, & Garfinkel, 1982) assesses anorexic/bulimic-like attitudes and beliefs. The scale consists of 26 items that assess maladaptive eating attitudes and behaviors related to anorexia and bulimia. The EAT-26 has been found to have a high level of concurrent validity and a consistent predictive validity across independent samples and controls; the test also demonstrates a high degree of internal reliability (Garner et al., 1982). Using a 6-point, Likert-type scale that ranges from always (5) to never (0), respondents are asked to rate their agreement with items such as “I am terrified about being overweight.” Higher scores on the EAT represent a greater likelihood of eating pathology.

Duggan and McCreary (2004) report adequate reliability has been demonstrated in men ($\alpha = .87$).

The Kalichman Sexual Compulsivity Scale (KSCS) is a 10-item scale that was designed to determine the sexually compulsive behaviors, preoccupations, and intrusive thoughts of individuals. Kalichman and Rompa (1995; 2001) suggested that the KSCS demonstrated convergent, divergent, and criterion related validity for both men and women. The scoring of the KSCS involves adding the ten responses and dividing the sum by ten (with no reverse scoring). Cooper, Delmonico, & Burg, (2000) utilized the KSCS in their study of cybersexuals to divide the participants into four groups. The research team generated four sets of cut-off scores to determine the subjects' level of pathological behavior: Nonsexually Compulsive (NC), whereby participants scored below 23.78 ($M = 2.38$), one standard deviation from the mean. Moderate Sexual Compulsive (MSC), whereby participants scored between 23.78 ($M = 2.38$) and 29.93 ($M = 2.99$), one and two standard deviations from the mean. Sexually Compulsive (SC), whereby participants in this group scored above 29.93 ($M = 2.99$), two standard deviations above the mean. Cybersex Compulsive (CC), whereby participants in this group scored above 29.93 ($M = 2.99$) and reported spending more than 11 hours per week participating in Internet SEM activities.

Body Image Measures:

The Body Figure Perception Questionnaire (BFPQ; Stunkard, Sorenson, & Schulsinger, 1980) is a measure of body dissatisfaction that contains two sets of male figures. There are nine figures per set, each of which represents an increase in body size ranging from 1 (very thin) to 9 (very overweight). Body dissatisfaction is operationalized as the discrepancy between the figures selected to denote current versus ideal body shape. Scores range from -8 to +8, with positive

scores indicating that participants perceive themselves as overweight (i.e., their current shape is heavier than their ideal shape) and negative scores indicating that participants perceive themselves as underweight (i.e., their current shape is thinner than ideal shape). Adequate test-retest reliability has been demonstrated ($r = .89 - .92$) (Thompson & Altabe, 1991), as well as high inter-rater agreement ($r = .79 - .89$) (Mueller, Joos, & Schull, 1985). Test-retest reliability was .86 in the current study.

The Body Esteem Scale (BES; Franzoi & Shields, 1984) is a 35-point scale that lists aspects of the body, including items such as physical stamina and sexual activities. Participants rate each item on the 5-point scale from “have strong negative feelings” to “have strong positive feelings.” Higher scores indicate greater body esteem. Factor analysis on males yielded three factors: physical attraction, upper body strength, and physical condition (Franzoi & Shields, 1984). The physical attraction subscale assesses men’s attitudes toward facial features and parts of their physiques that appear to largely influence the degree to which they are considered handsome or “good-looking.” The upper body strength subscale assesses men’s attitudes toward their upper bodies, a dimension that can be altered through exercise or the use of steroids. The physical condition subscale assesses men’s feelings about their stamina, agility, and general body strength. Adequate reliability of the BES with males ($r = .78 - .87$) has been demonstrated (Franzoi & Shields). Cronbach’s alpha was .94 in the current study.

The Social Physique Anxiety Scale (SPAS) (Hart, Leary, & Rejeski (1989) is a 9 item, self-report assessment of social physique anxiety. Participants rate each item on a 5-point Likert-type scale ranging from “not at all” (1) to “extremely true for me” (5), with higher scores representing a greater degree of social physique anxiety. A sample item is “I wish I wasn’t so uptight about my physique/figure.” Internal reliability for this scale has been supported in a

number of studies (Bartlewski, VanRaalte, & Brewer, 1996; Hart et al., 1989; Petrie, Diehl, Rogers, & Johnson, 1996). The construct validity of the SPAS also has been supported (Bane & McAuley, 1998; Hart et al., 1989). Cronbach's alpha was .89 in the current study.

The Drive for Muscularity Scale (DMS; McCreary & Sasse, 2000) is a 15-item self-report questionnaire used to assess participants' perception for the need of larger muscles. Respondents are asked to rate the extent to which each item applies to them, using a 6-point Likert-type scale from always (5) to never (0). A sample item is "I think that I would look better if I gained ten pounds in bulk." Higher scores on the DMS represent a greater drive for muscularity. McCreary, Sasse, Saucier, and Dorsch (2004) report high reliability ($\alpha = .87$). Cronbach's alpha was .89 in the current study.

Esteem Measures

The Male Genital Image Scale (MGIS; Winter, 1989) is a 15-item scale that measures how men perceive various aspects of their genitals (e.g., length, circumference, and appearance). The MGIS uses a five-point Likert-type response format (1 = very dissatisfied; 5 = very satisfied), with higher scores representing more favorable genital perceptions. Total scores can range from 15-75. Adequate reliability of the MGIS ($r = .88$) has been demonstrated (Winter, 1989). Cronbach's alpha was .93 in the current study.

The Sexual Esteem Scale (SES; Snell & Papini, 1989) contains 10-items and is designed to measure the value respondents place on themselves as sexual beings (Mayers, Heller, & Heller, 2003). Total scores can range from 0 to 50. A 6-point Likert-type scale will be used for responding to items (0 = not applicable; 5 = very often), with higher scores denoting greater levels of sexual self-esteem. Snell and Papini (1989) report adequate internal consistency for

men, ($\alpha = .93$) and 4-week test-retest reliabilities ranging from .69 to .74 (Snell et al., 1992). Cronbach's alpha was .91 in the current study.

The Rosenberg Self-Esteem Scale (Rosenberg, 1979) is a 10-item questionnaire assessing global self-esteem, with scores ranging from 0 (lowest self-esteem) to 30 (highest self-esteem). Respondents indicate their agreement to the statements using a Likert-type response scale. Scores below 15 suggest the presence of low self-esteem. Scores are tabulated by reverse scoring items 3, 5, 8, 9, and 10 and then adding the scores for a total. A sample item is "I take a positive attitude toward myself." The RSE attempts to measure a person's global self-concept and has been found to have test-retest reliability (two-week interval) of .85 (Rosenberg). This scale is extensively used in the field, and has high internal consistency, test-retest reliability and strong convergent validity with college-aged men (Rosenberg, 1989; Shevlin, Bunting, & Lewis, 1995). Cronbach's alpha was .89 in the current study.

Other Measures

The Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991) will be included in the questionnaire battery to assess social desirability responding. The BIDR contains 40 items to which respondents rate their agreement using a seven-point Likert scale. The BIDR measures two constructs. One construct, self-deceptive enhancement (SDE), assesses the tendency to respond honestly to items, but in a positively biased manner. The other construct, impression management (IM), assesses a deliberate self-presentation and can be viewed as a measure of defensiveness. Scores on both constructs will be combined and treated continuously; higher scores will reflect higher levels of responding to the items in a socially desirable manner. Reliabilities for the BIDR range from .67 (test-retest; five week interval) to .83. Further, the BIDR has been found to correlate .71 with the Marlowe-Crowne scale and .80 with the

Multidimensional Social Desirability Inventory of Jacobson, Kellogg, Cauce, and Slavin (1977). Cronbach's alpha was .79 in the current study.

Single Item Measures

Participants were asked, on a five-point Likert-type scale from never (0) to very often (4), about their use of pathogenic weight control practices (PWCP) in order to assess maladaptive body change strategies. Specifically, they were asked the frequency with which they: vomit to lose weight; used diet pills to lose weight; laxatives to lose weight; used supplements to gain weight; and used steroids to gain weight. Responses to each of the five items were summed. Scores range from 5 to 20, with higher scores denoting greater use of pathogenic weight control practices. Similar items have been used by other researchers investigating males' pathogenic attempts to lose weight (e.g., French et al., 1996; Greenfeld, Quinlan, Harding, Glass, & Bliss, 1987).

Participants responded to two questions, on a five-point Likert-type scale from never (0) to very often (4), to assess interest and experience with cosmetic surgery. Specifically, they were asked "I would consider cosmetic surgery to change or enhance my body" and "Cosmetic surgery would help me look and feel my best." Similar items have been used by other researchers investigating males' interest and experience with these practices (e.g., Schuster, Negy, & Tantleff-Dunn, 2013).

Regarding the presence of social comparisons, participants answered four questions that measured the use of universalistic social comparison when evaluating physical appearance. These items are: (1) "I want to look like the people I see in movies, television shows, and/or music videos;" "When I judge how attractive I am, I compare myself with

actors/actresses/singers that I see on television or in movies"; "When I judge how attractive I am, I compare myself with models in magazines"; and "I compare my body to the bodies of people in movies, television shows, and/or music videos." For the first item, response options will be: 1 = strongly agree, 5 = strongly disagree; for the last three items, 1 = never, 5 = very often.

Responses to these items were summed, with higher scores representing greater use of universalistic social comparison. These items were adapted from the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-3; Thompson, et al., 2004).

Regarding their consumption of SEM, participants were asked to report how frequently they watched such material. They were asked to quantify the number of hours spent watching SEM on a weekly basis (e.g., Less than 1 hour per week, 1-2 hours per week, 3-4 hours per week, etc.). They were also asked, in a yes or no question format, whether they watched SEM every day.

Procedure

Screening Phase

Two hundred seventy four participants signed up for a brief, three measure screening phase via SONA Systems, the university's online research recruitment system. Those participants who scored greater than 20 on the Beck Depression Inventory-II (Beck et al., 1996), indicating a moderate to severe level of depression, were not eligible to participate in the study. Additionally, participants who scored greater than 20 on the Eating Attitudes Test (Garner, 1982), indicating the likely presence of eating pathology, and those who scored greater than 24 on the Kalichman Sexual Compulsivity Scale (Kalichman & Rompa, 2001), indicating moderate

to severe sexual compulsivity, were not eligible to participate. There were zero students eliminated as a result of this screening process.

Experimental Phase-Time 1

Participants who met criteria for the study after the pre-screening process were randomly assigned to one of four groups. The first group was the first experimental condition. This group watched a video clip depicting a “sexually charged” interaction between a male and female. This clip was from the 2011 film “Friends with Benefits.” During this clip, participants were exposed to an idealized, attractive male physique in a sexual situation with a female character. No genitalia was shown. The second group, (experimental condition 2-nudity condition), watched a video clip containing full-frontal male nudity with no sexual intercourse and no sexual innuendo. This clip was from a 2004 film entitled “The First Time I Turned Twenty.” The third group (experimental condition 3-SEM condition) watched a video clip depicting a sexually explicit interaction between a male and a female. This clip was from the 2007 adult film “Behind Closed Doors.” During this clip, participants were exposed to adult film star Jean Val Jean who possesses an idealized, attractive male physique. The clip included male and female genitalia and a male and female actor engaging in explicit sexual intercourse in several different positions. The fourth group was the control condition. This group viewed a video clip of a “neutral” interaction between a male and female from the popular television sitcom “The New Girl.” There was no sexual innuendo or behavior in this clip.

There is an important difference between differentiating between viewing “sexually charged” interactions with partial nudity but no genitalia, viewing genitalia with no sexual intercourse, and watching sexual intercourse combined with exposure to genitalia. The viewing of partial nudity alone limits or prevents exposure to the male physique that would therefore

limit exposure and subsequent social comparison of the independent variable, the naked male physique. The viewing of genitalia without sexual intercourse may produce different effects relative to viewing the act of sexual intercourse.

Participants assigned to each group received information about the nature of the study and the material they were possibly to view during the consent process, both during the online pre-screening process and again when they physically arrived to the session. They also received written consent information that contained the investigator's contact information as well as the contact information for the university counseling center. They were given the opportunity to decline participation at any point during the study with no penalty should the sensitive nature of the material make them feel uncomfortable or upset. The questionnaires took between 30-40 minutes for participants to complete.

Follow-up Phase- Time Two

All 121 participants who completed the experimental portion of this research (Time 1) were given the opportunity to participate in a follow-up phase (Time 2). Participants were invited to return 2-4 weeks after their experimental participation date (i.e., when they viewed a video clip) to complete the same packet of questionnaires they completed at Time 1. They were not asked to view any additional media during Time 2. Out of 121 participants, 41 returned and completed the questionnaires at Time 2.

CHAPTER THREE: RESULTS

It was hypothesized that there would be a causal link between exposure to SEM and increased body image disturbance, pathogenic weight control practices, and attitudes towards cosmetic surgery. Further, it was hypothesized that this exposure to SEM will causally decrease genital-esteem, sexual-esteem, and self-esteem.

Men in condition one (sexually-charged group; $n = 27$) were shown a video of an attractive man and woman engaged in sexual innuendo but with no nudity or sexual activity taking place. Men in condition two (nudity group; $n = 33$) were shown a video of an attractive, nude man not engaged in sexual activity. Men in condition three (sexually explicit material group [SEM]; $n = 30$) were shown a sexually explicit video of an attractive man engaged in sexual activity with a woman. Men in the control condition (control group; $n = 31$) were shown a video of an attractive man speaking with a woman with no sexual innuendo or behavior taking place.

Power Analyses

A sample size was calculated using the GPower3 program (Faul & Erdfelder, 1998) and was based on the small effect size (.10) found in previous research. The suggested sample size for MANOVA with six variables (the maximum number of variables that could potentially be included in an analysis) with a statistical power of .95 and an alpha level of .05 is 119 (Faul & Erdfelder, 1998). Thus, the total sample of 120 participants in this study will provide sufficient power.

Differences in Exposure to SEM

Participants' self-reported weekly exposure to SEM was examined in order to determine if differences exist between individuals who watch SEM more frequently relative to those who consume less. Within the current sample, descriptive statistics revealed that variance for this variable was limited; 49% of the sample reported that they watch SEM less than one hour per week. Forty six percent reported watching between one and two hours per week, 3% watch 3-4 hours weekly, 1% watches 5-6 hours weekly, and less than 1% watches 7-8 hours weekly. Thus, participant differences in pre-study exposure to SEM were not further examined. Please refer to Table 1 for frequencies and percentages related to this analysis.

Potential Covariates

Prior to comparing the four experimental groups on the primary study variables, it was necessary to determine if they differed significantly on extra-study variables that may account for any observed group-mean differences on study variables. The extra study variables were socially desirable response style (as measured by the self-deceptive enhancement and impression management subscales of the Balanced Inventory for Desirable Responding [BIDR]), social comparison, body mass index (BMI), happiness with genitals, self-reported size of genitals, and consumption of sexually-explicit material (SEM).

A multivariate analysis of variance (MANOVA) was performed on the data. The independent variable (IV) = experimental group (sexually-charged, nudity, SEM, and control). The dependent variables (DVs) = self-deceptive enhancement, impression management, social comparison, BMI, happiness with genitals, self-reported size of genitals, and SEM consumption. Because of the potential of making a Type 1 error due to multiple comparisons, Bonferoni

adjustment was made to the alpha level for seven comparisons, with p set at .007 (.05/7). Table 2 shows the means and standard deviations on these study variables as a function of experimental group. Using Wilks' Lambda, experimental group was not associated significantly with an effect on the DVs, $F(24, 276) = .650, p > .007$. None of the univariate tests achieved statistical significance for any of the DVs (all $ps > .007$). Thus, none of the extra-study variables were included in subsequent analyses as covariates.

Hypothesis Testing

The first hypothesis was that there would be a significant effect of the SEM group (experimental group 3) on body image disturbance, pathogenic weight control practices (PWCP), and attitudes (interest) in cosmetic surgery. Body image disturbance was measured by BFPQ, BES, SPAS, and DMS. Pathogenic weight was measured by the composite score based on the average of responses to six single items inquiring about weight. Interest in cosmetic surgery was measured by the composite score based on the average of responses to two single items related to cosmetic surgery.

A MANOVA was performed on the data. The IV = experimental group and the DVs = BFPQ, BES, SPAS, DMS, pathogenic weight score, and interest in cosmetic surgery score. Alpha was set at .008 (.05/6). Experimental group was not associated with a significant effect on the DVs, $F(18, 314) = .757, p > .008$. None of the univariate tests achieved statistical significance (all $ps > .008$). Table 3 shows the means and standard deviations on these study variables as a function of experimental group.

The second hypothesis was that there would be a significant effect of the SEM group (experimental group 3) on genital-esteem, sexual-esteem, and self-esteem. A MANOVA was

performed on the data. The IV = experimental group. The DVs = genital-esteem, sexual-esteem, and self-esteem. Alpha was set at .01 (.05/3). Experimental group was not associated with a significant effect on the DVs, $F(3, 117) = .79, p > .01$. None of the univariate tests achieved significance (all $ps > .01$). Table 4 shows the means and standard deviations on these study variables as a function of experimental group.

Analyses between SEM Group and Control Group

As a means to confirm that no differences on study DVs existed between the two experimental groups that were the primary focus of my study (i.e, the SEM vs. the control groups), two additional MANOVAs were performed on the data. The IV = experimental group (SEM vs. control). In the first MANOVA, the DVs = BFPQ, BES, SPAS, DMS, pathogenic weight score, and interest in cosmetic surgery score. Alpha was set at .008 (.05/6). Experimental group was not associated with a significant effect on the DVs, $F(6, 53) = .271, p > .008$. None of the univariate tests achieved statistical significance (all $ps > .008$). Table 5 shows the means and standard deviations on these study variables as a function of the two extreme experimental groups.

In the second MANOVA, the DVs = genital-esteem, sexual-esteem, and self-esteem. Alpha was set at .01 (.05/3). Experimental group was not associated with a significant effect on the DVs, $F(3, 54) = .835, p > .01$. None of the univariate tests achieved significance (all $ps > .01$). Table 6 shows the means and standard deviations on these study variables as a function of the two extreme experimental groups.

Time 2 Comparisons

Participants who completed the Time 1 condition were invited to return and complete the packet of research questionnaires a second time, within 2-4 weeks of their original participation. Out of 121 participants, 41 participants returned and completed the follow-up data for Time 2. Men in condition one (sexually charged group; $n = 12$), condition two (nudity group; $n = 10$), condition three (SEM group; $n = 11$), and the control condition (control group; $n = 8$) were given the same packet of questionnaires to complete. This was a small sample size, and difficulties with power will be discussed in the limitations section. For the repeated measures MANOVAs, (RM-MANOVA) the within-subjects factors were scores on the dependent variables (i.e., either body image or esteem) at Time 1 and Time 2. The between subjects factor was the video condition (i.e., Condition 1, 2, or 3 or Control Condition).

In the first RM-MANOVA there were no significant differences between Time 1 and Time 2. The comparison between video condition and body image was not significant, $F(15,92) = .89, p > .01$. Similarly, the comparison of Time 1 and Time 2 and video condition revealed to be non-significant, $F(3,37) = .35, p > .01$. The comparison of Time 1 and Time 2 and body image also revealed to be non-significant, $F(5,33) = 1.9, p > .01$. Finally, there was no significant interaction among all three investigated variables (i.e., body image, time, and video condition), $F(15,92) = .92, p < .01$. Table 7 shows the means and standard deviations for this analysis.

In the second RM-MANOVA there were no significant differences between Time 1 and Time 2. The comparison between video condition and esteem was not significant, $F(6, 76) = 2.6, p > .01$. Similarly, the comparison of Time 1 and Time 2 and video condition revealed to be non-significant, $F(3,39) = .40, p > .01$. The comparison of Time 1 and Time 2 and esteem also revealed to be non-significant, $F(2,38) = .97, p > .01$. Finally, there was no significant interaction

among all three investigated variables (i.e., esteem, time, and video condition), $F(6,76) = 1.6$, $p < .01$. Table 8 shows the means and standard deviations for this analysis.

Follow-up Correlation Analysis Between High vs. Low SEM Viewers

Additional analyses were run based on the amount of SEM participants reported watching on a weekly basis. Participants were divided into a median split (utilizing the SPSS median split function) based on the amount of SEM they reported viewing independent of this experiment. A MANOVA was run to compare all study variables to investigate any differences that may exist based on pre-morbid viewing of SEM. The IV = time spent per week viewing SEM outside of the experiment and the DVs = BFPQ, BES, SPAS, DMS, pathogenic weight score, interest in cosmetic surgery score, genital esteem, sexual esteem, and self-esteem. Alpha was set at .001 (.05/9). Experimental group was not associated with a significant effect on the DVs, $F(9, 93) = .76$, $p > .001$. None of the univariate tests achieved statistical significance (all $ps > .001$). Table 9 shows the means and standard deviations on these study variables as a function of time spent viewing SEM.

Supplemental Correlation Analysis

As an additional angle from which to examine whether viewing SEM has any relation with men's body image, interest in cosmetic surgery and other body change behaviors, or genital, sexual, and self-esteem, zero-order correlations were calculated between self-reported time spent per week viewing SEM and all study variables (see Table 10). These analyses were conducted using data from all 121 participants from Time One. Self-reported time spent viewing SEM per week did not correlate significantly with any of the study variables.

CHAPTER FOUR: DISCUSSION

It was hypothesized that heterosexual male participants who were exposed to a sexually explicit media clip would experience higher levels of body image disturbance, pathogenic weight control practices, and increased propensity towards cosmetic surgery relative to those who viewed clips of non-sexually explicit material. Additionally, it was hypothesized that such exposure would also lead to a decrease in genital-esteem, sexual-esteem, and self-esteem in heterosexual men. The data did not support these hypotheses. Taken at face value, the results of this study are encouraging as similar studies with women as well as gay men indicate negative effects of exposure to idealized bodies in various types of media, including sexually-explicit material (Duggan & McCreary, 2004; Vanwesenbeek, 2001).

The hypotheses derived for this study were based on the social comparison literature, originally proposed by Festinger. Previous studies, utilizing both female and male participants, indicate that when individuals compare themselves to idealized targets like those shown in the sexually explicit media clip in this study, body dissatisfaction tends to increase while self-esteem tends to decrease. However, the number of studies where media clips depicting idealized male figures are actually shown to participants in an experimental fashion is limited. Additionally, there are no other studies to date exposing participants to sexually explicit media clips as in this study. There may be something unique about exposing participants to sexually explicit materials in video format that may either protect or limit them in some capacity from experiencing the negative effects others researchers have documented throughout the body image literature (Hatoum & Belle, 2004; Lorenzen, Grieve, & Thomas, 2004; Morrison, Kalin, & Morrison, 2004).

These findings could result from an unstudied protective factor involved in viewing sexually explicit material in video format. The experimental clip in this study depicted consensual sexual intercourse between a man and a woman. Both actors in the film appear to be enjoying the sexual acts. Perhaps somehow watching a man engaged in sexual intercourse with a woman was confidence-boosting for this population of heterosexual males.

As much of the previous research involving idealized media images and body dissatisfaction has been performed either with women or with gay men, perhaps having female nudity in the scene took the focus off of the idealized male image and “protected” the heterosexual male participants from experiencing the typical body dissatisfaction that has been well-documented in the social comparison and body image literature (Duggan & McCreary, 2004; Vanwesenbeeck, 2001). It also is possible that something about the participants viewing a man engaged in sexual intercourse with a woman was arousing. Arousal itself as a variable may have the ability to detract or neutralize the negative effects that have been demonstrated with all-male nude or nearly-nude idealized images in earlier studies (Hatoum & Belle, 2004; Lorenzen, Grieve, & Thomas, 2004; Morrison, Kalin, & Morrison, 2004).

Another possibility is that perhaps the men in this study exhibited a protective factor specifically related to social comparison. As discussed in the framework of this study, social comparison has been shown to be maladaptive to body satisfaction, healthy eating, and health behaviors in other studies (Heinberg & Thompson, 1992; Thompson, Covert, & Stormer, 1999; Thornton & Moore, 1993; Wheeler & Miyake, 1992). It is possible that the men in this study did not objectively or subjectively compare themselves to the idealized male actor in the sexually explicit media clip. Festinger (1954) originally purported that people may not make a comparison if the ability or variable in question (e.g., appearance, sex behaviors) is vastly

dissimilar from their own perceived level of that quality. It has been documented that women and gay men tend to socially compare almost immediately to upward targets, however, there is no literature examining if this behavior takes place in heterosexual men viewing sexually explicit media. If social comparison did not take place, the participants would not have been exposed to the previously discussed negative effects. If this is the case, the lack of support for the hypotheses is appropriate. However, if the participants in the study did socially compare themselves to the idealized male images, this lends support to the idea that heterosexual men are somehow more resilient or experience a protective factor when viewing idealized images in a heterosexual, sexually explicit media clip. Because social comparison was not more specifically qualified in this study, our data do not clarify each participant's investment or engagement in social comparison.

Alternatively, perhaps the participants in this study did engage in social comparison, in similar levels relative to other men in previous studies, yet some other facet of the sexually explicit clip prevented the hypothesized negative effects. For example, each clip shown to participants contained a female actor in addition to the male, idealized target image. Studies in which men are exposed to a naked male physique or to non-nude, idealized male images like those in fitness magazines (Agliata & Dunn, 2004; Duggan & McCreary, 2004; Hautom & Belle, 2004) there usually is no female actor present. If the men in this study did engage in social comparison, perhaps instead of focusing on the size of the actor's genitals or other idealized characteristics, it is possible that they attended to the female body or the act of sexual intercourse occurring on the screen. Perhaps they compared themselves to the male actor's sex behavior, a performance-based quality, rather than focusing on body parts/shape/size (appearance-based quality). Likewise, perhaps the comparison to the sex behavior rather than the appearance was

somehow confidence boosting or protective in nature. Social comparison literature with regard to performance-based comparisons may be different relative to appearance-based quality comparisons, especially if competition is present or develops as a result of social comparison.

Many studies have highlighted the connection between social comparison and competitive motivation (Festinger, 1954; Garcia & Tor, 2009; Garcia, Tor, & Gonzalez, 2006; Johnson & Stapel, 2007). According to Festinger (1954), people have an innate drive to evaluate their own opinions and abilities. To assess where a person stands relative to others and in the absence of a concrete measurement system, we base our comparisons of others in a competitive setting. These social comparisons can help motivate the individual to behave in a competitive manner, aimed at reducing or eliminating such discrepancies that might be damaging to one's ego (Garcia & Tor, 2009). In cases where potential competition of abilities is present, such as in the current with study, individuals may be able to refrain from socially comparing themselves to others, especially if they believe they will fall below the comparison on the variable of interest. It is possible that the participants in the current study, when viewing the sexually explicit clip, did not engage in social comparison as competitive motivation related to the idealized male figure was present.

Another possibility related to the data not supporting the hypotheses may be related to the specific sample of this study. Heterosexual men, presumably like those studied in this research, differ from gay men with regard to body image, drive for muscularity, pursuance of risky health behaviors, and other image-related concerns. Gay men have been found to be more likely to engage in social comparison with others in a way that is similar to women. (Duggan & McCreary 2004; Yelland & Tiggemann, 2003). It is possible that if this study were performed utilizing only gay male participants, that social comparison would be more likely to take place

leading to an increase in body dissatisfaction, PWCP, and interest in cosmetic surgery as well as a decrease in genital, sexual, and self-esteem. It also is possible that if the study were performed with gay men, those participants may have been more likely to focus on the male body in the video clips rather than the female body, thereby possibly eliciting the negative effects originally hypothesized and seen in other body image/social comparison literature. As Siever (1994) pointed out, gay men are similar to heterosexual women in that their desire is to appeal to men. Thus, gay men and heterosexual women likely are more sensitive to their own appearances and body shapes compared to heterosexual men, which may explain why heterosexual men tend to be less preoccupied with their body image. In all likelihood, heterosexual men are cognizant that the women to whom they would like to appeal focus on an array of personal qualities besides physical appearance. Such qualities may include men's emotional availability, warmth, intellect, social status, earning potential, and so on (Siever, 1994). As such, heterosexual men may not be as threatened by the presence of a more physically attractive man and may engage in minimal social comparison.

Finally, using continuous data from all participants in this study (at Time one), no correlations existed between self-reported hours per week viewing SEM and any of the study variables, suggesting further that perhaps viewing SEM has little influence on men's body image, body esteem, interest in body change behaviors or cosmetic surgery.

Study Limitations

There were a fair amount of limitations in this study. This is a study performed with a convenience sample of college undergraduate males. Caution is needed when generalizing these results to other populations; especially those in different age ranges, with different financial

means, different access to risky health behaviors like cosmetic surgery or anabolic steroids, different sexual preferences and experiences, and current body shape and size.

Participants' history or experience with SEM also may be a limitation in this study. While participants were asked to quantify the amount of sexually explicit material they consumed on a weekly basis, this could be further parceled out in future studies with participants being separated into "low or high" consumers. We were unable to examine this in the current study, beyond the median split analyses, due to a lack of variance in the weekly time participants spent viewing SEM. A larger and broader sample size would help in this regard.

Religious or moral views about SEM could also be a limiting factor in this study given that I did not ask participants to rate their acceptance of or intolerance to such material. The length of the SEM media clip may also be a limitation. The clip utilized in this study was about two minutes in length. It is possible that this was too short relative to the actual amount of time a participant would spend viewing SEM during his personal time. Lajeunesse and Deslauriers (2013) reported that male participants in their study watched SEM for approximately 7-10 minutes per sitting. If the video clip utilized in this study was not of sufficient duration, the experiment may have failed to provide adequate exposure to the idealized images and perhaps there was not enough time for the anticipated social comparisons to take place. I do note that previous studies that have examined similar research questions show a decrease in body satisfaction even with extremely brief exposure to idealized images (Leit, Gray, & Pope, 2002), though this study did not utilize sexually explicit target images.

Another major limitation was the type of SEM used in the study. Many studies investigating SEM conclude that the majority of individuals watch directly from the internet.

Most videos are free and are relatively low-cost (Martindale, 2011). As per university stipulations, the SEM shown to students during this experiment was to be a more widely distributed production available on major cable networks. It was a higher-budget film and utilized costumes, props, and other subtle differences like scripting, lighting, timing of sexual positions, and editing. Perhaps the SEM men consume on a regular basis contains less to attend to and therefore it is easier to focus more on the male body.

Further, regarding SEM, a definition about what constitutes "sexually explicit material (SEM)" was not provided to participants in the questionnaires, so there is a possibility that some individuals may not have fully understood any questions related to SEM within the questionnaires.

There were no significant differences between groups with regard to pathogenic weight control practices. This may be a result of the mainly normal weight group of participants who were part of this study. Almost all of the participants (82%) had a BMI in the healthy range, with only 14% being in the overweight category and 4% being in the obese category. It is possible that if a group of overweight or obese men were exposed to the slim but muscular actors in the media clips, they may have endorsed a higher degree of acceptance toward PWCP.

With regard to not finding differences between groups related to a drive for cosmetic surgery, this may be a result of the relatively young participant sample. As men increase in age, they experience more hair loss and a more difficult time losing weight and gaining the muscle mass required for an idealized male body. It may be pertinent to repeat this research with men in more mature age ranges in an effort to see if their perspective changes.

With regard to the exploratory covariates examined in this project, there were no differences between groups related to BMI. Perhaps men place less value on their weight-to-height ratio, caring instead for percentage of body-fat and muscle-to-fat ratio (Cohane & Pope, 2001). With regard to self-reported size and happiness with genitals, it is possible that unless men are truly below average when it comes to genital size, they may be content enough and unlikely to report dissatisfaction. It is also possible that they did not want to accurately assess and report their genital size due to social desirability concerns. Alternatively, because genital size was based on participants' self-report, it was not measured accurately.

With regard to the amount of SEM consumed on a weekly basis, there was not a large amount of variability within this study. Most participants stated that they viewed SEM in video format at least once per week. There were no participants who reported consuming SEM in overtly large doses.

Finally, there may not have been enough power to detect significant effects with regard to the repeated measures analysis between Time 1 and Time 2. Only one third of the original sample size (i.e., 41 participants) returned to complete follow-up measures and as such there were only approximately ten participants per experimental condition for the Time 2 analysis. It would be helpful in future studies to have an equal and appropriate number of participants in both Time 1 and Time 2, allowing for a greater chance to detect significant effects.

Future Directions

Directions for future research should include performing this study with a more diverse sample of participants. The diversity is especially important with regard to age, socioeconomic status, sexual orientation, sexual experiences, and body shape and size. These variables may

have influenced greatly the outcome of this study as there was limited variability in the current participant sample. With regard to age it may be important to determine if the age of male participants viewing SEM influences the results, especially related to risky health behaviors occurring more regularly in more mature populations (e.g., hair transplant surgery). Perhaps the relatively young sample utilized in this study has not yet begun to worry about common male pre-surgical surgery concerns such as hair loss, sagging skin, or excess fat requiring liposuction. Additionally, in many cases individuals older than the college population studied here have more discretionary income for cosmetic and other enhancement surgeries. It may be beneficial to look at socioeconomic factors related to the population being studied as well.

With regard to sexual orientation, it would be worthwhile to include an equal number of heterosexual, gay, and bisexual men in the same study to examine differences among these populations. Looking at a more sexually diverse group of participants in this way also will be important in determining if the current results are solely generalizable to heterosexual men. With regard to sexual experiences, it is possible that men with different sexual histories (e.g., number of partners, length of time since last intercourse, etc.) may have affected the outcome of this study as those variables were not specifically measured. Current body size and shape may also have been a limiting factor. The majority of this sample was considered to be in the normal weight for height ratio. A group of participants who are overweight and/or subsequently discontent with the size and shape of their bodies might have yielded different results.

It would likely be beneficial to include some type of manipulation check within future studies in an effort to measure whether participants are attending to the target stimuli (i.e., the idealized bodies of the male actors featured in the SEM clip). For example, asking several specific questions related to the actors within the questionnaires may clarify if participants are

spending more time viewing the male or female while watching the clips. Eye tracking equipment could also be useful in this regard. Perhaps a modified body satisfaction measure similar to the BFPQ could be utilized, whereby participants are asked to compare their body shape and size with the specific actor or idealized male figure they viewed on the screen. This could create a separation between their figure and the figure of the target comparison, making social comparison more likely to occur.

Another way to improve this line of research is to utilize a more representative SEM clip. As described above, the clip used in this study was likely dissimilar to the mainly internet-based SEM being rapidly consumed by men (Martindale, 2011). This would include free internet pornography, lower budget films, more “homemade” films, more frequent sexual position changes within the scenes, and more scenes involving male orgasm (Martindale). It may be beneficial to utilize a focus group or a qualitative research design to obtain information related to the type of SEM most often being consumed by men.

Last, future researchers might first identify high versus low consumers of SEM to determine if differences exist in social comparison and other outcome variables examined in this study. Approximately half of the consumers in the current study reported viewing SEM on a less than weekly basis; it would be interesting to examine difference between individuals with more frequent consumption relative to those who view SEM less frequently.

CHAPTER FIVE: CONCLUSION

Continued research in the area of men's reactions to SEM is important to better understand the complex relations between the variables of focus in this study as well as additional variables discussed above, with a focus toward improving men's health and well-being. The data did not support the hypotheses; yet they support the notion that SEM does not seem to have negative effects in the domain of body image and risky health behaviors among heterosexual men. Thus, there are rich theoretical implications of the present results amenable to further empirical study.

The results obtained from this study may have important clinical implications. Therapists working with men struggling with eating or body-image concerns should assess and evaluate the extent to which their clients consume and subsequently identify with idealized images in sexually explicit media. Cognitive strategies used to identify, critically examine, and challenge men's reactions to such images may prove fruitful as forms of intervention. If the extent to which men react non-constructively to idealized images can be minimized, maladaptive behaviors, such as pathogenic weight control practices, cosmetic surgery, steroid use and abuse, excessive dieting, compulsive exercise and so on, as well as negative psychological reactions such as the development of poor body images, may ultimately be reduced.

APPENDIX A: IRB APPROVAL LETTER



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Human Research

From: **UCF Institutional Review Board #1
FWA00000351, IRB00001138**

To: **Elizabeth B. Schuster**

Date: **March 13, 2013**

Dear Researcher:

On 3/13/2013 the IRB approved the following modifications / human participant research until 09/25/2013 inclusive:

Type of Review: Submission Response for IRB Addendum and Modification Request Form
Modification Type: Protocol revision, Consent form revision, Addition of survey and 2nd Debriefing Form
Project Title: The Effects of Viewing Sexually Explicit Materials on Men's Body Image Satisfaction and Interest in Pursuing Cosmetic Surgery and other Body Enhancement Procedures
Investigator: Elizabeth B. Schuster
IRB Number: SBE-12-08406
Funding Agency:
Grant Title:
Research ID: N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

If continuing review approval is not granted before the expiration date of 09/25/2013, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a signed and dated copy of the consent form(s). Participants or their representatives must receive a copy of the consent form(s).

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Patria Davis on 03/13/2013 03:56:41 PM EST

A handwritten signature in black ink, appearing to read "B. Davis". The signature is stylized and somewhat cursive.

IRE Coordinator

APPENDIX B: TABLES

Table 1-Number of Men in Each Category for Time Spent per Week Viewing SEM

Weekly Hours Spent Viewing SEM	Frequency	Percent
Less than 1 Hour	79	48.8
1-2 Hours	75	46.3
3-4 Hours	5	3.1
5-6 Hours	2	1.2
7-8 Hours	1	0.6
9-10 Hours	0	0
More than 10 Hours	0	0

Table 2-Means and Standard Deviations of Potential Study Covariates

	Control	Group 1 <i>Sexually Charged</i>	Group 2 <i>Nudity</i>	Group 3 <i>SEM</i>		
	N=26	N=23	N=27	N=30		
Variable	M (SD)	M (SD)	M (SD)	M (SD)	F	Sig
1. SDE	6.4(3.7)	6.1(3.8)	7.4(4.1)	6.9(3.3)	.56	.64
2. IM	6.2(3.7)	5.0(3.1)	5.6(3.4)	5.9(3.1)	.59	.62
3. Social Comparison	5.7(2.9)	5.7(3.0)	5.6(2.0)	5.8(2.3)	.05	.99
4. BMI	23.0(3.7)	24.6(4.1)	24.1(3.0)	24.8(4.0)	1.3	.29
5. Happiness	4.0(.77)	4.0(.56)	3.8(.84)	4.0(.56)	.68	.57
6. Size	4.0(.66)	4.0(.64)	4.1(.81)	4.0(.77)	.07	.98
7. SEM Consumption	.69(.84)	1.1(1.1)	.90(1.1)	1.0(1.1)	.82	.48

* $p < .01$; ** $p < .000$

1. = Self Deceptive Enhancement Index (Subscale of the Balanced Inventory of Desirable Responding), Range: 0-20

2. = Impression Management (Subscale of the Balanced Inventory of Desirable Responding), Range: 0-20

3. = Social Comparison as measured by Sociocultural Attitudes Toward Appearance Questionnaire, Range: 0-17

4. = Body Mass Index derived from self-reported height and weight, Range: 17-45

5. = Self-reported happiness with genitals as measured by the Male Genital Image Scale, Range: 0-5

6. Self-reported size of genitals as measured by the Male Genital Image Scale, Range: 0-5

7. Self-report of amount of SEM viewed on a weekly basis, Range: 0-9

Table 3-Means and Standard Deviations of Dependent Variables

	Control N=30	Group 1 <i>Sexually Charged</i> N=27	Group 2 <i>Nudity</i> N=33	Group 3 <i>SEM</i> N=30		
Variable	M(SD)	M(SD)	M(SD)	M(SD)	F	Sig
1. BFPQ	-1.0(1.1)	.15(1.3)	-.33(1.1)	.27(1.4)	1.5	.22
2. BES	130.3(17.9)	127.9(19.9)	132.6(21.9)	127.2 (16.0)	.51	.67
3. SPAS	23.7(24.3)	24.3 (5.8)	20.5(7.6)	25.4(8.4)	2.4	.08
4. DFM	34.8(13.7)	30.7(14.5)	33.3(14.4)	33.7(15.0)	.42	.73
5. PWCP	.90(.99)	.89(1.2)	.82(1.2)	.87(1.0)	.04	.99
6. CS	.13(.35)	.11(.32)	.21(.48)	.13(.35)	.42	.74

* $p < .01$; ** $p < .000$

- 1. = Body Figure Perception Questionnaire, Range: 0-9
- 2. = Body Esteem Scale, Range: 0-175
- 3. = Social Physique Anxiety Scale, Range: 0-45
- 4. = Drive for Muscularity Scale, Range: 0-75
- 5. = Pathogenic Weight Control Practice Score, Range: 0-24
- 6. = Interest in Cosmetic Surgery, Range: 0-2

Table 4-Means and Standard Deviations of Dependent Variables

	Control N=28	Group 1 <i>Sexually Charged</i> N=28	Group 2 <i>Nudity</i> N=33	Group 3 <i>SEM</i> N=30		
Variable	M(SD)	M(SD)	M(SD)	M(SD)	F	Sig
1. Genital Esteem	48.5(6.1)	46.3(7.1)	48.1(12.1)	48.7(7.1)	.43	.74
2. Sexual Esteem	37.0(7.6)	37.5(7.3)	40.7(8.5)	39.6(6.2)	1.6	.19
3. Self- Esteem	33.9(5.2)	32.9(3.5)	34.6(5.4)	33.8(4.3)	.62	.60

* $p < .01$; ** $p < .000$

1. = Male Genital Image Scale, Range: 0-75

2. = Sexual Esteem Scale, Range: 0-50

3. = Rosenberg Self-Esteem Scale, Range: 0-40

Table 5-Means and Standard Deviations of Dependent Variables

Variable	Control	Group 3	F	Sig
	N=30	N=30		
	M(SD)	M(SD)		
1. BFPQ	-1.0(1.1)	.27(1.4)	1.3	.26
2. BES	130.3(18.0)	127.2(16.0)	.48	.49
3. SPAS	23.7(8.3)	25.4(8.4)	.62	.43
4. DFM	34.8(13.7)	33.7(15.0)	.09	.77
5. PWCP	.90(.99)	.87(1.0)	.02	.90
6. CS	.13(.35)	.13(.35)	.00	1.0

* $p < .01$; ** $p < .000$

1. = Body Figure Perception Questionnaire, Range: 0-9

2. = Body Esteem Scale, Range: 0-175

3. = Social Physique Anxiety Scale, Range: 0-45

4. = Drive for Muscularity Scale, Range: 0-75

5. = Pathogenic Weight Control Practice Score, Range: 0-24

6. = Interest in Cosmetic Surgery, Range: 0-2

Table 6-Means and Standard Deviations of Dependent Variables

Variable	Control	Group 3	F	Sig
	N=28	SEM N=30		
	M(SD)	M(SD)		
1. Genital Esteem	48.5(6.1)	48.7(7.1)	.02	.89
2. Sexual Esteem	37.0(7.6)	39.6(6.2)	2.0	.16
3. Self- Esteem	33.9(5.2)	33.8(4.4)	.00	.96

* $p < .01$; ** $p < .000$

1. = Male Genital Image Scale, Range: 0-75

2. = Sexual Esteem Scale, Range: 0-50

3. = Rosenberg Self-Esteem Scale, Range: 0-40

Table 7-Multivariate Tests- Repeated Measures MANOVA

Effect	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>Sig.</i>
BodyImage*Video	.89	15	92	.58
Time	.06	1	37	.81
Time*Video	.35	3	37	.79
BodyImage*Time	1.9	5	33	.13
BodyImage*Time*Video	.92	15	92	.55

* $p < .01$; ** $p < .000$

Table 8-Multivariate Tests- Repeated Measures MANOVA

Effect	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>Sig.</i>
Esteem*Video	2.6	6	76	.02
Time	2.6	1	39	.12
Time*Video	.40	3	39	.76
Esteem*Time	.97	2	38	.39
Esteem*Time*Video	1.6	6	76	.17

* $p < .01$; ** $p < .000$

Table 9- Means and Standard Deviations of Dependent Variables: SEM Median Split

Variable	SEM 1	SEM 2	F	Sig
	N=45	N=58		
	M(SD)	M(SD)		
1. BFPQ	-.02 (1.2)	-.03 (1.2)	.00	.96
2. BES	130.7 (20.4)	128.3 (19.4)	.37	.54
3. SPAS	24.1 (7.6)	23.2 (7.9)	.36	.55
4. DFM	31.7 (14.2)	34.3 (14.5)	.84	.36
5. PWCP	.73 (.97)	.97 (1.1)	1.2	.28
6. CS	.13 (.34)	.17 (.38)	.29	.59
7. Genital Esteem	48.3 (8.8)	47.2 (8.6)	.42	.52
8. Sexual Esteem	39.6 (7.1)	38.4 (7.8)	.65	.42
9. Self-Esteem	34.4 (4.7)	33.1 (4.8)	1.9	.17

* $p < .01$; ** $p < .000$

1. = Body Figure Perception Questionnaire

2. = Body Esteem Scale

3. = Social Physique Anxiety Scale

4. = Drive for Muscularity Scale

5. = Pathogenic Weight Control Practice Score

6. = Interest in Cosmetic Surgery

7. = Male Genital Image Scale

8. = Sexual Esteem Scale

9. = Rosenberg Self-Esteem Scale

Table 10- Correlations of Time Spent Per Week Viewing SEM and Study Variables

	SEM Time	BFPQ	BES	SPAS	DFM	PWCP	CS	GE	SE	SelfE
1. SEM Time	1									
2. BFPQ	.05	1								
3. BES	-.14	-.25**	1							
4. SPAS	.04	.22*	-.46**	1						
5. DFM	.02	-.27**	.07	.20**	1					
6. PWCP	.01	-.20*	.14	-.02	.63**	1				
7. CS	.09	.01	-.04	.06	.07	-.10	1			
8. GE	-.11	-.08	.54**	-.27**	-.01	.13	-.05	1		
9. SE	-.12	-.20*	.46**	-.38**	.07	.16	-.04	.37**	1	
10. SelfE	-.18	-.23**	.47**	-.58**	-.10	.13	-.12	.30**	.50**	1

* $p < .01$; ** $p < .000$

1. = Body Figure Perception Questionnaire

2. = Body Esteem Scale

3. = Social Physique Anxiety Scale

4. = Drive for Muscularity Scale

5. = Pathogenic Weight Control Practice Score

6. = Interest in Cosmetic Surgery

7. = Male Genital Image Scale

8. = Sexual Esteem Scale

9. = Rosenberg Self-Esteem Scale

REFERENCES

- Agliata, D. & Tantleff-Dunn, S. (2004). The impact of media exposure on male's body image. *Journal of Clinical and Social Psychology, 23*, 7-22.
- Allen, M. D'Alessio, D., & Emmers-Sommer, T. (2000). Reactions of criminal sexual offenders to pornography: A meta-analytic summary. In M. Roleff (Ed.), *Communication Yearbook, 22*, Thousand Oaks, CA: Sage.
- American Society of Plastic Surgeons. (2010). Report of the 2010 Plastic Surgery Statistics. Retrieved 2/1/12 from <http://www.plasticsurgery.org/Documents/news-resources/statistics/2010-statisticss/Top-Level/2010-Fullquickfacts-cosmetic-surgery-minimally-invasive-statistic-demographics.pdf>.
- Attorney General's Commission on Pornography (1986). *Final Report*. Washington, DC: US Department of Justice Author.
- Attwood, F. (2005). What do people do with porn? Qualitative research into the consumption, use, and experience of pornography and other sexually explicit media. *Sexuality and Culture, 9*, 65-86.
- Babigan, A. & Silverman, R. (2001). Management of Gynecomastia due to use of anabolic-androgenic steroids in bodybuilders. *Plastic Reconstructive Surgery, 107*, 240-242.
- Barak, A. & Fisher, W.A. (1997). Effects of interactive computer erotica on men's attitudes and behavior toward women: An experimental study. *Computers in Human Behavior, 13*, 353-369.
- Benito-Ruiz, J., Raigosa, J.M., Manzano-Surroca, M., & Salvador, L. (2008). Male chest enhancement: Pectoral implants. *Aesthetic Plastic Surgery, 32*, 101-104.

- Ben-Veniste, R. (1971). Pornography and sex crime: The Danish experience. *Technical Reports of the Commission on Obscenity and Pornography, 7*, Washington, DC: U.S. Government Printing Office.
- Bergen, R.K. & Bogle, K.A. (2000). Exploring the connection between pornography and sexual violence. *Violence and Victims, 15*, 227-234.
- Blouin, A. & Goldfield, G. (1995). Body image and steroid use in male bodybuilders. *International Journal of Eating Disorders, 18*, 159-165.
- Boies, S., (2002). University students' uses of and reactions to online sexual information and Entertainment: Links to online and offline sexual behavior. *Canadian Journal of Human Sexuality, 11*, 77-90.
- Brower, K. (2002). Anabolic steroid abuse and dependence. *Current Psychiatry Rep, 4*, 377-383.
- Brower, K., Blow, F., and Hill, E. (1994). Risk factors for anabolic-androgenic steroid use. *Journal of Psychiatric Research, 28*, 369-380.
- Cash, T.F. (2001). The psychology of hair loss and its implications for patient care. *Clinics in Dermatology, 19*, 161-166.
- Cash, T.F. (2002). The Situational Inventory of Body-Image Dysphoria: Psychometric evidence and development of a short form. *International Journal of Eating Disorders, 32*, 362-366.
- CBS News (2007).
- Cohane, G. & Pope, H. (2001). Body image in boys: A review of the literature. *International Journal of Eating Disorders, 29*, 373-379.
- Cooper, A., Delmonico, D., & Burg, R. (2000). Cybersex users, abusers, and compulsives: New findings and implication. *Sexual Addiction Compulsivity, 7*, 5-29.

- D'Amato, A. (2006). *Porn up, Rape Down*. Public Law and Legal Theory Research Paper Series. Retrieved 2/3/12 from: <http://anthonydamato.law.northwestern.edu/Adobefiles/porn.pdf>.
- Duggan, S. & McCreary, D. (2004). Body image, eating disorders, and the drive for muscularity in gay and heterosexual men. *Journal of Homosexuality*, 47, 45-58.
- Dwyer, S. (2008). Pornography. In P. Livingstone & C. Plantinga (Eds.), *The Routledge Companion to Philosophy and Film*. New York: Routledge.
- Elliott, R. & Elliott, C. (2005). Idealized images of the male body in advertising: A reader-response exploration. *Journal of Marketing Communications*, 11, 3-19.
- Escoffier, J. (2003). Gay-for-Pay: Straight men and the making of gay pornography. *Qualitative Sociology*, 26, 531-555.
- Ferguson, C., Cruz, A., Martinez, D., Rueda, S., Ferguson, D., & Negy, C. (2008). Personality, parental, and media influences on aggressive personality and violent crime in young adults. *Journal of Aggression, Maltreatment, and Trauma*, 17, 395-414.
- Ferguson, C. & Hartley, R.D. (2009). The pleasure is momentary...the expense damnable? The influence of pornography on rape and sexual assault. *Aggression and Violent Behavior*, 14, 323-329.
- Ferguson, C., Rueda, S., Cruz, A., Fritz, S., & Smith, S. (2008). Violent video games and aggression: Causal relationship or byproduct of family violence and intrinsic violence motivation? *Criminal Justice and Behavior*, 35, 311-332.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2) 117-140.
- Field, A. (2005). *Discovering Statistics Using SPSS*. Thousand Oaks, CA: Sage.
- Fisher, W. & Grenier, G. (1994). Violent pornography, antiwoman thoughts, and antiwoman acts: In search of reliable effects. *Journal of Sex Research*, 31, 23-38.

- Franzoi, S. & Shields, S. (1984). The Body Esteem Scale: Multidimensional structure and sex differences in a college population. *Journal of Personality Assessment, 48*, 173-178.
- French, S. A., Story, M., Remafedi, G., Resnick, M. D., & Blum, R. W. (1996). Sexual orientation and prevalence of body dissatisfaction and eating disordered behaviors: A population-based study of adolescents. *International Journal of Eating Disorders, 19*, 119-126.
- Garcia, S.M. & Tor, A. (2009). The N-Effect: More competitors, less competition. *Psychological Science, 20*, 871-877.
- Garcia, S.M., Tor, A., & Gonzalez, R. (2006). Ranks and rivals: A theory of competition. *Personality and Social Psychology Bulletin, 32*, 970-982.
- Garner, D., Olmstead, M., Bohr, Y., & Garfinkel, P. (1982). The Eating Attitudes Test: Psychometric features and clinical correlates. *Psychological Medicine, 12*, 871-878.
- Gill, R., Henwood, K., & McLean, C. (2003). A genealogical approach to idealized male body imagery. *Paragraph, 26*, 187-200.
- Goodson, P., McCormick, D., & Evans, A. (2001). Searching for sexually explicit materials on the internet: An exploratory study of college students' behaviors and attitudes. *Archives of Sexual Behavior, 30*, 101-118.
- Greenfeld, D., Quinlan, D. M., Harding, P., Glass, E., & Bliss, A. (1987). Eating behavior in an adolescent population. *International Journal of Eating Disorders, 6*, 99-111.
- Grogan, S. *Body Image: Understanding body dissatisfaction in men, women, and children.* Psychology Press, New York, NY, 2008.
- Gunter, G. (2002). *Media sex: What are the issues?* Mahwah, NJ: Lawrence Erlbaum Associates.

- Hart, E., Leary, M., & Rejeski, W. (1989). The measurement of social physique anxiety. *Journal of Sport and Exercise Psychology, 11*, 94-104.
- Harvey, J. & Robinson, J. (2003). Eating disorders in men: Current considerations. *Journal of Clinical Psychology in Medical Settings, 10*, 297-306.
- Hautom, I., & Belle, D. (2004). Mags and abs: Media consumption and bodily concerns in men. *Sex Roles, 51*, 397-407.
- Hildebrandt, T., Langenbacher, J., & Schlundt, D. (2004). Muscularity concerns among men: development of attitudinal and perceptual measures. *Body Image, 1*, 169-181.
- Irving, L. M. (1990). Mirror images: Effects of the standard of beauty on women's self and body-esteem. *Journal of Social and Clinical Psychology, 9*, 230-242.
- Jacobson, L., Kellogg, R., Cauce, A., & Slavin, R. (1977). A multi-dimensional social desirability inventory. *Bulletin of the Psychonomic Society, 9*, 109-110.
- Johnson, C.S. & Stapel, D.A. (2007). No pain, no gain: The conditions under which upward comparisons lead to better performance. *Journal of Personality and Social Psychology, 92*, 1051-1067.
- Kalichman, S. C., & Rompa, D. (1995). Sexual sensation seeking and sexual compulsivity scales: Reliability, validity, and predicting HIV risk behavior. *Journal of Personality Assessment, 65*, 586-601.
- Kalichman, S. C., & Rompa, D. (1995). Sexual sensation seeking and sexual compulsivity scales: Reliability, validity, and predicting HIV risk behavior. *Journal of Personality Assessment, 65*, 586-601.

- Kanayama, G., Barry, S., Hudson, J.I., & Pope, H.G. (2006). Body image and attitudes toward male roles in anabolic-androgenic steroid users. *American Journal of Psychiatry*, *163*, 697-703.
- Kanayama, G., Cohane, G., Weiss, R., & Pope, H. (2003). Past anabolic-androgenic steroid use among men admitted for substance abuse treatment: An underrecognized problem? *Journal of Clinical Psychiatry*, *64*, 156-160.
- Kanayama, G. Pope, H., and Hudson, J. (2001). "Body Image" drugs: A growing psychosomatic problem. *Psychotherapy and Psychosomatics*, *70*, 61-65.
- Kirchmeyer, R. H. (2009). An Examination of Body Dissatisfaction and Media Exposure. *Masters Theses & Specialist Projects*, *126*. <http://digitalcommons.wku.edu/theses/126>
- Kutchinsky, B. (1973). The effect of easy availability of pornography on the incidence of sex crimes: The Danish experience. *Journal of Social Issues*, *29*, 163-181.
- Lajeunesse, S.L. & Deslauriers, J.M. (2013). The male perspective on pornography: From fantasies to realities. *Sexologies*, *22*, 32-41.
- Lee, P. A. (1996). Survey report: Concept of penis size. *Journal of Sex and Marital Therapy*, *22*, 131-135.
- Leit, R. A., Gray, J. J., & Pope, H. G. (2002). The media's representation of the ideal male body: A cause for muscle dysmorphia? *International Journal of Eating Disorders*, *31*, 334-338.
- Leit, R. A., Pope, H. G., & Gray, J. J. (2001). Cultural expectations of muscularity in men: The evolution of playgirl centerfolds. *International Journal of Eating Disorders*, *29*, 90-93.
- Lever, J., Frederick, D., & Peplau, L. (2006). Does size matter? Men's and Women's Views on

- Penis Size Across the Lifespan. *Psychology of Men & Masculinity*, 7, 129–143.
- Levert, N.P. (2007). A comparison of Christian and non-Christian males, authoritarianism, and their relationship to internet pornography addiction/consumption. *Sexual Addiction and Compulsivity*, 14, 145-166.
- Linz, D., Donnerstein, E., & Penrod, S. (1987). The findings and recommendations of the Attorney General's commission on pornography: Do the psychological "facts" fit the political fury? *American Psychologist*, 42, 946-953.
- Linz, D., Donnerstein, E., & Penrod, S. (1988). Effects of long-term exposure to violent and sexually degrading depictions of women. *Journal of Personality and Social Psychology*, 55, 758-768.
- Lockwood, P., & Kunda, Z. (1999). Increasing the salience of one's best selves can undermine inspiration by outstanding role models. *Journal of Personality and Social Psychology*, 76, 214–228.
- Lorenzen, L., Grieve, F., & Thomas, A. (2004). Exposure to muscular male models decreases men's body satisfaction. *Sex Roles*, 51, 743-748.
- Lottes, I., Weinberg, M., & Weller, I. (1993). Reactions to pornography on a college campus: For or against? *Sex Roles*, 29, 69-89.
- Malamuth, N., Addison, T., & Koss, M. (2000). Pornography and sexual aggression: Are there reliable effects and can we understand them? *Annual Review of Sex Research*, 11, 26-91.
- Malone, D., Dimeff, R., Lombardo, J., & Sample, B. Psychiatric effects and psychoactive substance use in anabolic-androgenic steroid users. *Clinical Journal of Sports Medicine*, 5, 25-31.
- Martin, M. & Kennedy, P. (1993). Advertising and Social Comparison: Consequences for

- Female Pre-Adolescents and Adolescents. (*Psychology and Marketing, 10*, 513-530).
- McCabe, M. & Ricciardelli, L. (2004). Body image dissatisfaction among males across the lifespan: A review of past literature. *Journal of Psychosomatic Research, 56*, 675-685.
- McCaulay, M., Mintz, L., & Glenn, A. A. (1988). Body image, self-esteem, and depression-proneness: Closing the gender gap. *Sex Roles, 18*, 381-391.
- McCreary D., & Sasse, D. (2000). An Exploration of the Drive for Muscularity in Adolescent Boys and Girls. *Journal of American College Health, 48*, 297-304.
- Mondaini, N. & Gontero, P. (2005). Idiopathic short penis: myth or reality? *BJU International; 95*, 8-9.
- Morrison, T.G., Ellis, S.R., Morrison, M.A., Bearden A., & Harriman, R.L. (2006). Exposure to sexually explicit material and variations in body esteem, genital attitudes, and sexual esteem among a sample of Canadian Men. *The Journal of Men's Studies, 14*, 209-222.
- Morrison, T.G., Harriman, R., Morrison M.A., Bearden, A., & Ellis, S.R. (2004a). Correlates of exposure to sexually explicit material among Canadian post-secondary students. *The Canadian Journal of Human Sexuality, 13*, 143-156.
- Morrison, T., Hopkins, C., Rowan, E.T., & Morrison, M. (2004b). Muscle Mania: Development of a New Scale Examining the Drive for Muscularity in Canadian Males. *Psychology of Men and Masculinity, 5*, 30-39.
- Muth, J. L., & Cash, T. F. (1997). Body-image attitudes: What difference does gender make? *Journal of Applied Social Psychology, 27*, 1438-1452.

- Odone-Paolucci, E., Genuis, M., & Violato, C. (2000). A meta-analysis of the published research on the effects of pornography. In C. Violato & E. Odone-Paolucci (Eds.) *The changing family and child development*, Aldersshot, England: Ashgate Publishing Ltd.
- Palys, T. (1986). Testing the common wisdom: The social content of video pornography. *Canadian Psychology*, 27, 22-35.
- Paulhus, D. L. (1991). Balanced inventory of desirable responding. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 37–41). San Diego: Academic Press.
- Paxton, S., Wertheim, E., Gibbons, K., Szmukler, G., Hillier, L., & Petrovich, J. (1991). Body image satisfaction, dieting beliefs, and weight loss behaviors in adolescent girls and boys. *Journal of Youth and Adolescence*, 20, 361-379.
- Peter, J. & Valkenburg, P.M. (2009). Adolescents' exposure to sexually explicit internet material and sexual satisfaction: A Longitudinal Study. *Human Communication Research*, 35, 171-194.
- Pleck, J., Sonenstein, F., and Ku, L. (1993). Masculinity ideology and its correlates. In S. Oskamp & M. Costanzo (Eds.), *Gender issues in contemporary society* (pp. 85-110). Newbury Park, CA: Sage.
- Pliner, P., Chaiken, S., & Flett, G. L. (1990). Gender differences in concern with body weight and physical appearance over the life span. *Personality and Social Psychology Bulletin*, 16, 263-273.
- Pope, H. & Brower, K. (2004). Anabolic-androgenic steroid abuse, in *Comprehensive Textbook of Psychiatry*, 8th Ed., volume 1. Edited by Sadock, B. & Sadock, V. Philadelphia, Lippincott Williams and Wilkins, 1318-1328.

- Pope, H. & Katz, D. (1990). Homicide and near homicide by anabolic steroid users. *Journal of Clinical Psychiatry, 51*, 28-31.
- Pope, H., Olivardia, R., Borowiecki, J.J., & Cohane, G.H. (2001). The growing commercial value of the male body: a longitudinal survey of advertising in women's magazines. *Psychotherapy and Psychosomatics, 70*, 189-192.
- Pope, H., Phillips K., & Olivardia, R. (2002). *The Adonis Complex: How to Identify, Treat, and Prevent Body Obsession in Men and Boys*. New York, NY: Simon and Schuster.
- Richins, Marsha L. (1991). Social Comparison and the Idealized Images of Advertising. *Journal of Consumer Research, 18*, 71-83.
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.
- Schooler D. & Ward, L.M. (2006)- Average Joe's: Men's Relationships With Media, Real Bodies, and Sexuality. *Psychology of Men & Masculinity, 7*, 27-41.
- Schuster, E., Negy, C., & Tantleff-Dunn, S. (2013). The Effects of Appearance-Related Feedback on Body Dissatisfaction, Eating Pathology and Body Change Behaviors in Men. *Psychology of Men and Masculinities*, In press.
- Schwerin, M., Corcoran, K., Fisher, L., Patterson, D., Askew, W., Olich, T., & Shanks, S. (1996). Social physique anxiety, body esteem, and social anxiety in bodybuilders and self-reported anabolic steroid users. *Addictive Behaviors, 21*, 1-8.
- Segal, L. (1994). False promises-Anti-pornography feminism. In M. Evans (Ed.), *The Woman Question*, 2nd ed. Thousand Oaks, CA: Sage.
- Siever, M. D. (1994). Sexual orientation and gender as factors in socioculturally acquired vulnerabilities to body dissatisfaction and eating disorders. *Journal of Consulting and Clinical Psychology, 62*, 252-260.

- Soe, K., Soe, M., & Gluud, C. (1992). Liver pathology associated with the use of anabolic steroids in bodybuilders. *Liver, 12*, 73-79.
- Snell, W. E., Fisher, T. D., & Schuh, T. (1992). Brief report: Reliability and validity of the Sexuality Scale—A measure of sexual-esteem, sexual-depression, and sexual-preoccupation. *Journal of Sex Research, 29*, 261-273.
- Snell, W. E., & Papini, D. R. (1989). The Sexuality Scale: An instrument to measure sexual-esteem, sexual-depression, and sexual-preoccupation. *Journal of Sex Research, 26*, 256-263.
- Son, H., Lee, H., Huh, J., Kim, S. W., & Paick, J. (2003). Studies on self-esteem of penile size in young Korean military men. *Asian Journal of Andrology, 5*, 185–189.
- Steele, S.R., Martin, M.J., & Place, R.J. (2002). Gynecomastia: Complications of the subcutaneous mastectomy. *American Surgery, 68*, 210-213.
- Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review. *Psychological Bulletin, 128*, 825-848.
- Stunkard, A., Sorenson, T, Schulsinger, F. (1980). Use of Danish adoption register for the study of obesity and thinness. In: S. Kety (Ed.), *The Genetics of Neurological and Psychiatric Disorders*, New York: Raven Press.
- Tiggemann, Martins & Churchett. (2008). Beyond Muscles: Unexplored Parts of Men’s Body Image. *Journal of Health Psychology, 13*, 1163-1172.
- Thompson, J. K., Covert, M. D., & Stormer, S. M. (1999). Body image, social comparison, and eating disturbance: A covariance structure modeling investigation. *International Journal of Eating Disorders, 26*, 43-51.

- Thornton, B., & Moore, S. (1993). Physical attractiveness contrast effect: Implications for self-esteem and evaluations of the social self. *Personality and Social Psychology Bulletin, 19*, 474-480.
- Vanwesenbeeck, I. (2001). Psychosexual correlated of viewing sexually explicit sex on television among women in the Netherlands. *The Journal of Sex Research, 38*, 361-368.
- Weiss, R. & Schneider, J.P. (2006). *Untangling the Web: Sex, Porn and Fantasy Addiction in the Internet Age*. New York, NY: Alyson Books.
- Wessells, H., Lue, T., & McAninch, J. (1996). Penile length in the flaccid and erect states: Guidelines for penis augmentation. *Journal of Urology, 156*, 995-997.
- Wheeler, L. & Miyake, K. (1992). Social comparison in everyday life. *Journal of Personality and Social Psychology, 62*, 760-773.
- Winter, H.C. (1989). *An examination of the relationships between penis size and body image, genital image, and perception of sexual competency in the male*. Unpublished doctoral dissertation, New York University.
- Wylie, K.R. & Eardley, I. (2007). Penile size and the “small penis syndrome.” *BJU International, 99*, 1449–1455.
- Yelland, C. & Tiggemann, M. (2003). Muscularity and the gay ideal: Body dissatisfaction and disordered eating in homosexual men. *Eating Behaviors, 4*, 107-116.