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Pornography as a Leisure Behavior: An Investigation
of Pornography Use and Leisure Boredom

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A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

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Brigham Young University

December 2009

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ABSTRACT

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Casey B. Schenk

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Master of Science

The purpose of the study was to investigate pornography use in the context of leisure boredom. The sample consisted of $N = 290$ married couples ($N = 580$ individuals) from a large Northwestern city in the United States. When controlling for demographic variables, leisure boredom accounted for 2.2% of the variance within pornography use. Results suggest leisure boredom as a significant predictor of pornography use in married adults. A quadratic effect was also found, suggesting this relationship to be curvilinear. Findings are discussed around the use of leisure theory in pornography scholarship, in this case leisure boredom. Practical applications and suggestions for future research around sex and pornography addiction and therapeutic recreation are discussed.

Key Words: pornography, leisure boredom, leisure behavior, tolerable deviant leisure, leisure lens

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Running head: PORNOGRAPHY AND LEISURE BOREDOM

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Abstract

The purpose of the study was to investigate pornography use in the context of leisure boredom. The sample consisted of $N = 290$ married couples ($N = 580$ individuals) from a large Northwestern city in the United States. When controlling for demographic variables, leisure boredom accounted for 2.2% of the variance within pornography use. Results suggest leisure boredom as a significant predictor of pornography use in married adults. A quadratic effect was also found, suggesting this relationship to be curvilinear. Findings are discussed around the use of leisure theory in pornography scholarship, in this case leisure boredom. Practical applications and suggestions for future research around sex and pornography addiction and therapeutic recreation are discussed.

Key Words: pornography, leisure boredom, leisure behavior, tolerable deviant leisure, leisure lens

Introduction

The phenomenon of pornography is a controversial topic. Wilson (1973) suggests pornography first became a social issue in 1957 when the U.S. Supreme Court ruled that pornography was not protected under the First Amendment (*Roth v. United States*, 354 U.S. 476 (FindLaw, 2008)). As pornography access and revenues have increased exponentially in the past 15 years, so too has concern about pornography's moral implications and potential harmful effects. Although there is a "general consensus that pornography endangers the well-being of others" (Perrin, Madanat, Barnes, Carolan, Clark, Ivins, et al., 2008, p. 11), questions of free speech continue to arise.

It is also argued that pornography is a global public health issue. As such, pornography affects the health of individuals so dramatically that it is beyond their capacity to correct. In terms of policy, it has been proposed that pornography should be handled in a way that protects society instead of focusing on individual rights (Perrin et al., 2008).

The advent of the Internet, cable, and satellite TV virtually eliminates physical and social barriers to pornography consumption. People have access at their fingertips (Cooper, 1998). They do not have to go to a store to purchase a magazine or rent a video, or worry about neighbors seeing a magazine wrapped in black plastic delivered to their home. Furthermore, the Internet has made pornography consumption in the workplace an area of concern (Lighted Candle Society, 2008). This is because pornography falls in the realm of leisure behavior (Shaw, 1999) and is considered tolerable deviant leisure (Stebbins, 1997).

Tolerable deviant leisure is defined by Stebbins (1997) as activities which mildly threaten the moral norms held by members of a society and therefore fail to produce active governmental control. This type of leisure roots in sensory stimulation, and in particular, the creature pleasures

it produces (Stebbins, 1997). Such activities include gambling, the use of cannabis, heavy drinking, and the illicit use of prescription medications for pleasure. Sexually deviant activities that are considered tolerable include cross-dressing, group sex, swinging, patronizing strip clubs, and using pornography (Stebbins, 1997).

Although socially tolerable, participation in these forms of deviant leisure costs both individuals and society (Shinew & Parry, 2005). For example, pornography use is also associated with substance abuse, deviant behavior, and clinical features of depression (Carroll, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008; Mesch, 2009; Ybarra & Mitchell, 2005). Investigating pornography use from a leisure perspective may shed light on reasons for participation in tolerable deviant activities, specifically sexual deviance. Furthermore, Rojek (1999) suggested the study of deviant leisure as an important focal point for leisure scholars.

Leisure theory and literature provide an excellent framework to understand and more carefully examine the phenomenon of pornography. The literature suggests that pornography use, for the most part, is a homebased leisure time activity (Cooper, Delmonico, & Burg, 2000; Cooper, Scherer, Boise, & Gordon, 1999; Dew, Brubaker, & Hays, 2006). It has also been suggested that 47% of families cite pornography use as a problem in their home (Lighted Candle Society, 2008).

Leisure boredom is a theoretical construct that has been useful in investigating deviant leisure (Gordon & Caltabiano, 1996; Iso-Ahola & Crowley, 1991). Iso-Ahola and Weissinger (1990) define leisure boredom as the perception that available leisure activities fall short of desired psychosocial outcomes. It has also been suggested that leisure boredom may be a “personality predisposition toward sensation seeking [Zuckerman, Kolin, Price, & Zoob, 1964] and low tolerance for constant experiences” (p. 260). Furthermore, individuals dispositionally

prone to leisure boredom will seek relief through types of leisure that include physical activity and risk-taking. If the need for arousal is not met, sensory stimulating activities such as substance abuse may be the result (Iso-Ahola & Crowley). It is plausible that pornography is one of these sensory stimulating activities that are used to relieve leisure boredom through arousal.

Pornography generally occurs during free time (Cooper et al., 2000, 1999; Dew et al., 2006) and is a leisure behavior (Shaw, 1999; Shinew & Parry, 2005; Stebbins, 1997). It clusters with similar deviant behaviors and risk factors as leisure boredom. Furthermore, Stack, Wasserman, and Kern (2004) have criticized the pornography literature and its primary focus on descriptive studies. They have also called for utilizing theory to explain why individuals use pornography. Leisure boredom offers an appropriate theoretical foundation for hypothesizing about why individuals use pornography.

Review of Literature

In 1968 the Commission on Obscenity and Pornography (Commission) invited behavioral scientists to their first meeting. The purpose of the invite was to have experts in behavior present the extant data on the influence of pornography on individuals. The available data fell short of any meaningful indicators (Wilson, 1973). Therefore, under the direction of the Commission, researchers undertook studies to shed light on the impact of pornography. According to Wilson, who was subsequently appointed as executive director and director of research over the Commission, these events mark the beginning of pornography as psychological study.

Two years and dozens of studies later the following recommendation was made to the Commission:

If a case is to be made against “pornography” in 1970, it will have to be made on grounds other than demonstrated effects of a damaging personal or social nature. Empirical

research designed to clarify the question has found no reliable evidence to date that exposure to explicit sexual materials plays a significant role in the causation of delinquent or criminal sexual behavior among youth or adults. (Presidential Commission on Obscenity and Pornography, 1970, p. 139)

Following this recommendation, an influx of scientific inquiry into pornography use, criminal sexual behavior and aggression took place. It should be noted that the Commission was established as a result of public concern over the effects of pornography (Wilson, 1973). In other words, the general public assumed that exposure to pornography had detrimental ramifications. It is upon these assumptions and the findings of the Commission that contradicted these assumptions that scientific inquiry into pornography would rest for the next 25 years.

Allen, D'Alessio, and Brezgel (1995) perhaps best summarize scholarship around the use of pornography from 1970-1995: "The controversy over the impact of pornography revolves around one central issue: whether exposure to pornography increases the subsequent probability of a person engaging in aggressive or violent sexual assaults" (p. 258). They go on to claim that after 25 years of research revolving around this central issue, that essentially, the findings are consistent with the Commission's; namely inconclusive. This central focus, however, seemed to dissipate with the arrival of the internet.

Pornography Findings in the Internet Era

The advent of the Internet not only brought major shifts in daily life, but also in the use and study of pornography. For example, one of the most frequently searched topics on the Internet is "sex." Approximately 4.2 million pornographic Web sites (12% of all Web sites) on the Internet produced revenues reaching 4.9 billion dollars in 2006. Total revenues of all pornographic mediums (video, magazines, pay-per-view, Internet) reached nearly 100 billion

dollars in 2006. Furthermore, 90% of 8-16 year-olds have been exposed to Internet pornography (Ropelato, 2007).

Cooper (1998) attributes the exponential increase in pornography use and revenues to the “Triple-A-Engine.” The Internet offers unprecedented *accessibility* (twenty-four hours a day, seven days a week) to pornography. *Affordability*, the second “A” removes financial barriers to pornography through cheap and even free Web sites. Being able to view Internet pornography from the comfort of one’s home encapsulates the third “A,” *anonymity* (Cooper et al., 2000). The Triple-A-Engine suggests that many barriers to pornography use are virtually removed through the Internet.

Removal of barriers to pornography has also opened up new lines of research. Research on pornography’s link to violence spans over 25 years. Today, researchers are asking different questions about the effects of pornography. This shift in focus from pornography and violence to possible links between sexual experience, social behaviors, and attitudes, brings greater scientific clarity about the effects of pornography. These recent studies represent more diverse subject selection, including women, adolescents, and children. International samples, particularly in Scandinavia, underscore the importance of culture with regards to pornography use. This provides a broader perspective of pornography use and corresponding effects.

Sexual behavior. Johansson and Hammarén (2007) for example, investigated attitudes about pornography and sexual experience in a sample of Swedish 15-18 year-olds. Results showed significant differences between male and female pornography use and levels of arousal when viewing pornography, with males viewing far more pornography and reporting higher levels of arousals compared to females. Both males and females who had viewed pornography reported significantly more sexual activity than those who had not viewed pornography. These

findings suggest that a link exists between sexual activity and pornography use in this adolescent sample.

Other studies also establish links between pornography use and increased levels of sexual promiscuity. Carroll et al. (2008), in their sample of 817 American university students found that pornography acceptance and use of pornography were predictors of sexual promiscuity and permissiveness. Pornography use and acceptance was related to females' number of lifetime partners and number of partners in the previous year. This did not hold true for males. In terms of sexual promiscuity in a general sense, the Carroll et al. findings are in harmony with Canadian (Morrison, Harriman, Morrison, Bearden, & Ellis, 2004), and Chinese (Lam & Chan, 2007) university student samples as well as American youth (Braun-Courville & Rojas, 2009). Pornography use in males and pornography acceptance in females were related to acceptance of extramarital activity. Based on these findings, Carroll et al. (2008) suggest looking at pornography as not only a behavior, but also as a personal sexual ethic.

Youth and family. Ybarra and Mitchell (2005) used a nationally representative sample to investigate Internet use, caregiver-child relationships, psychosocial characteristics, and pornography seeking behavior of 1,501 youth ages 10 to 17. Those who frequented the Internet the most displayed the most pornography seeking behaviors. Online pornography seeking behavior was related to poor caregiver-child relations, low caregiver monitoring, and higher forms of coercive discipline. It was also significantly related to physical and sexual victimization, delinquent behavior, increased substance abuse, and clinical features of depression compared to nonseekers.

These findings are in harmony with the Carroll et al. (2008) findings regarding university students' substance abuse and pornography use patterns. Furthermore, the clustering of

pornography use with other risk behaviors suggests that pornography use is a risk factor for youth. The Ybarra and Mitchell (2005) findings regarding pornography use and parent-child relations and parenting styles also supports the notion of pornography use being a risk behavior. This research, linking pornography use and clinical features of depression suggest that pornography use may, concomitant to substance abuse and other deviant behaviors, be an outward manifestation of maladaptive internal processes. The Mesch (2009) findings substantiate this claim. He used a nationally representative sample ($n = 998$) of Israeli youth ages 13 to 18 to investigate social bonds of Internet pornography users. Adolescents who used the Internet to seek out pornography were more likely to have low attachment to school, antisocial attitudes, and less commitment to family than students who used the Internet for other purposes. Pornography use was also related to violent attitudes and behavior. Mesch concludes by emphasizing the low social bonds of pornography users to be indicative of membership in deviant subcultures and that pornography use is only one manifestation of this lifestyle.

For many individuals, the discovery of a romantic partner's compulsive pornography use can be quite traumatic. In one study of women who posted letters on an online support page, researchers found this to be the case (Bergner & Bridges, 2002). Upon discovery, these women's self-perceptions changed. They felt worthless, sexually undesirable, weak, and stupid. Furthermore, their perceptions of their romantic partners included words such as liar, selfish, and sick. Where children were involved, the mothers reported seeing the users as failures as fathers. These mothers perceived that their children might have been exposed to pornography, that the father was a poor example, and that pornography use resulted in decreased father availability.

Such rich description gives insight into pornography's potential disruptive influence in romantic relationships. These data, however, are based on reactions of women who perceived

their partners as being heavy pornography users (Bergner & Bridges, 2002). Therefore, clinical diagnoses of sexual addiction, or lack thereof, cannot appropriately be inferred in these cases. A self-selection bias is quite likely considering that the sample was so distressed that they felt a need to post letters on the Internet. Subsequently, Bergner and Bridges conducted a follow-up study with a normative sample of women.

In this follow up study, Bridges, Bergner, and Hesson-McInnis (2003) investigated romantically involved women's perceptions of their partner's pornography use. Results indicated that two-thirds of the sample had fair to semipositive attitudes towards their partner's pornography use. But, one-third did show signs of distress over their partner's pornography use. Taken together, these two studies paint a mixed picture of pornography's effects on users' romantic partners.

In discussing the implications of their findings, Carroll et al. (2008) paint a clearer picture about pornography's indirect family effects. "[P]ornography use was linked to permissive sexuality and nonmarital cohabitation, two variables that have been found to be associated with less marital stability in future marriages (Dush, Cohan & Amato, 2003; Heaton, 2002; Stanley, Markman, Olmos-Gallo, Peters, Whitton, et al., 2004)" (p. 21). Whether pornography use causes these behaviors, or those who engage in such behaviors are more inclined to view pornography is an interesting question. These correlations, however, have significant implications to the families these individuals may go on to form.

Daneback, Træen, and Månsson (2009), however, offer different insight regarding pornography's effects on romantic partners. In a representative sample of Norwegian heterosexual couples ($N = 399$), they found that 15% of the sample used pornography together to enhance their sexual life. Compared to couples where only one (8.3%) or neither partner (76.7%)

used pornography, these couples had less dysfunctions (negative thinking about self and problems with sexual arousal) and a more permissive erotic climate. Couples where only one partner used pornography experienced the most dysfunction and couples where neither used pornography had the least erotic climate. These findings suggest that when a couple uses pornography to enhance their sexual life, there may be positive effects.

In terms of parenting, both Lam and Chan (2007) and Ybarra and Mitchell (2005) included measures of parenting practices. Chinese university students' pornography use was correlated with low parental involvement. The American study correlated adolescent pornography use with increased coercive parenting and poorer caregiver-child emotional bonds. These findings help in understanding one more dimension of pornography's place in the family, by suggesting that pornography use may be symptomatic of other issues, such as unhealthy parent-child relations.

Culture. The importance of the cultural environment with regards to pornography use is seen in Scandinavian samples. Scandinavia comprises the countries of Denmark, Sweden, and Norway. Hald (2006), for example, attributes the high prevalence of pornography consumption in a nationally representative sample ($N = 688$) of 18-30 year-old heterosexual men and women in Denmark to “a permissive cultural environment, a relaxed and accepting public attitude towards pornography, and an increase in social acceptability to pornography consumption” (p. 582). Since 1975 Sweden has offered free abortions to women in their first trimester (Wallmyr & Welin, 2006). During this same time period youth centers were developed throughout the country to provide teens with sex education, contraception, and gynecological examinations (Häggström-Nordin, Sandberg, Hanson, & Tydén, 2006). Furthermore, adolescent sexuality in

Sweden (Häggström-Nordin, Hanson, & Tydén, 2005), Denmark, and Norway is quite acceptable.

Hald and Malmuth (2008) suggest that “in the context of a highly liberal and sex educated society, pornography’s impact is relatively positive” (p. 622). Using the same Danish sample reported by Hald (2006), they found a significant relationship between hardcore pornography use (media depicting sexual practices) and perceived positive effects, but not negative effects. This relationship was linear and held true for both men and women. These findings make a significant contribution to the literature by underscoring the importance of culture and calling into question the generalizability of studies performed in the United States.

With this in mind, pornography’s influence on individuals in sexually liberal societies should be measured using samples from similar societies. Although the Hald and Malmuth (2008) findings suggest that pornography may contribute to sexual and life satisfaction among sexually liberal individuals, this is inconsistent with other Scandinavian studies. For example, 18 to 19 year-old Norwegian males who self-reported a likelihood of having sex with 13-14 year-old females also reported more alcohol use and alcohol-related problems, higher levels of pornography consumption, and had friends who were interested in child and violent pornography. Furthermore, these males participated in coercive sex, bought sex, were lonely, had poorer relational skills, and greater depressive symptoms (Hegna, Mossige, & Wichstrøm, 2004). These findings, with regard to alcohol use, depressive symptoms, and pornography are in harmony with the Ybarra and Mitchell (2005) nationally representative sample of American youth. This suggests that when it comes to adolescents, the effects of pornography are somewhat ubiquitous in sexually liberal and more sexually conservative societies.

Using a random sample of adult Swedes ($N = 2,450$), Långström and Seto (2006) investigated the prevalence and psychosocial correlates of exhibitionistic and voyeuristic behaviors. This is the first study to utilize a normative sample to investigate these paraphilia-like behaviors. Both voyeurism and exhibitionism were associated with being male, more substance abuse, greater frequencies of masturbation and pornography use, lower life satisfaction, and having more sexual partners. The authors suggest that belonging to a sociocultural subgroup has no bearing on the exhibitionism and voyeurism because the survey was conducted in a sexually liberal country and immigrant status was not significantly related to these paraphilia-like behaviors. In this study, pornography clusters with sexual deviance. This is in harmony with the Stack et al. (2004) American adult sample.

Hald and Malamuth (2008) argue that the effects of pornography are culturally dependent. Their findings on the positive benefits of pornography in a Danish sample seem to give credence to their argument. Given this claim it would be expected that similar findings could be found in other reports on pornography conducted in Scandinavia. This, however, is not the case. Literature from the past five years suggests that the Hald and Malamuth findings are not in harmony with other findings throughout Scandinavia, thus calling into question their claim that pornography is beneficial in a sexually liberal society.

Porn-violence connection. The shift of focus in pornography scholarship has also brought greater clarity to the pornography-violence question. For example, Allen et al. (1995) found in their meta-analysis of 30 works focused on pornography and aggression under laboratory conditions that “pictorial nudity reduces subsequent aggressive behavior, that consumption of materials depicting nonviolent sexual activity increases aggressive behavior, and that media depictions of violent sexual activity generates more aggression than those of nonviolent sexual

activity” (p. 258). This suggests that pornography depicting sexual activity under laboratory conditions may cause aggression. The pictorial nudity findings and aggression reduction suggests that a linear explanation for the relationship between pornography and aggression may be too simplistic.

Oddone-Paolucci, Genius, and Violato (2000), however, claim that the results from their meta-analysis of 46 studies (total $N = 12,323$) from 1962 to 1995 “provide clear evidence confirming the link between increased risk for negative development when exposed to pornography” (p. 48). Their findings suggest a strong link between pornography use, sexual deviancy, sexual perpetration, acceptance of the rape myth, and negative attitudes toward intimate relationships. They further suggest that their findings are stable and generalizable, and that the question of pornography’s influence on violence and families is resolved.

It has also been suggested that the pornography-violence link is mediated by predispositions to aggression. Vega and Malamuth (2007) found that only in the presence of general hostility, hostile masculinity, and impersonal sex were high levels of pornography use predictive of sexual aggression. When these factors were absent, so too was pornography’s predictive power for sexual aggression. These findings highlight the role of individual dispositions and differences in the pornography-violence link.

A more recent study utilized a sample of university students ($N = 512$) to investigate pornography’s influence on women’s sexual coercive behavior (Kernsmith & Kernsmith, 2009). Findings suggest when controlling for various social and personality factors that pornography use is predictive of sexual coercion by women. This includes the use of extortion, deceit, obligation, and emotional manipulation as coercive methods for sex. The only type of coercion that was not significantly influenced by pornography was physical aggression and violence,

suggesting that for women, the pornography-violence link is manifested through more psychological means.

From this second wave of pornography research, the scientific community is better able to understand pornography's influence on individuals. Greater emphasis in research now focuses on pornography's possible connection to sexual behavior, substance abuse, mental health, and even parenting styles rather than the link to sexual aggression and crime. Studies are also showing pornography's influence on the family and romantic partners of consumers. Additionally, an influx in pornography research is being conducted on an international level to determine cultural similarities and differences. Although these studies offer more insight into pornography use than the pornography and violence connection, they, for the most part are descriptive in nature. Theoretical elements are interwoven and used to explain findings. Hypothesis formulation, however, is absent of theoretical guidance.

Pornography and Theory

With a few exceptions, theory in the pornography literature has primarily been used to clarify its link to sexual aggression and violence. Social learning theory (Bandura, 1986) and excitation theory (Zillman, 1971) are two theories that dominate this focal area (see Allen et al., 1995; Bauserman, 1996). Studies that utilize theory to explain why individuals use pornography, however, are quite scant. Furthermore, the use of theory to formulate hypotheses about pornography users' primary motivations is almost nonexistent (Stack et al., 2004).

Social learning/cognitive theory. Social learning theory posits that media learning is a vicarious experience and "serves as a vehicle for learning appropriate and inappropriate forms of behavior" (Allen et al., 1995, p. 262). Pornography objectifies women through its portrayal of positive rewards (pleasure, sexual gratification) resulting from impersonal and sometimes violent

sexual behavior. It is contended that violent pornography legitimizes sexual coercion and aggression by depicting such actions as appropriate and rewarding (Allen et al., 1995; Bauserman, 1996).

Allen et al. (1995), using social learning theory, hypothesized that exposure to violent pornography would increase aggressive behavior under laboratory conditions. They also hypothesized that subjects exposed to nonviolent pornography would not experience such increases. Their meta-analysis of 30 studies confirmed the first hypothesis but contradicted the second. In other words, individuals exposed to nonviolent forms of pornography also had increased levels of aggression. Allen et al. suggest that this contradictory finding “demonstrates some potentially fundamental problems with that approach [social learning theory] as a complete explanation for the effects reported” (p. 271).

Social learning theory is also used to explain higher levels of sexual activity in subjects who consume more pornography. Morrison et al. (2004) found that nonvirgin Canadian university students used far more pornography than their virgin counterparts. Furthermore, nonvirgin females who reported higher levels of pornography use also reported more frequent sexual activity than nonvirgins who reported lower levels of pornography use. Whereas other studies report similar findings (see Carroll et al., 2008; Johansson & Hammarén, 2007; Lam & Chan, 2007), this study sets itself apart by using established theory to formulate hypotheses about this phenomenon. Their findings suggest pornography is indeed a teacher of appropriate and inappropriate behavior.

Social cognitive theory (Bandura, 1986) posits a reciprocal relationship between humans and their environment. Although media does in fact help to shape human cognition and behavior, this influence is mediated by existing values and beliefs. When looking specifically at

pornography use, social cognitive theory is interested in outcome expectations (anticipated outcome of behavior) and expectancies (value placed on behavior and outcome). In other words, measuring outcome expectations and expectancies for pornography use may help to predict use and identify motivations behind use.

Goodson, McCormick, and Evans (2001) measured Internet pornography use as well as outcome expectations and expectancies in a sample of 506 undergraduate students. They found significant correlations between both outcome expectations ($r = .41, p < .01$) and expectancies ($r = .43, p < .01$) and Internet pornography use. This suggests that the higher the anticipated outcome and value placed on a behavior, the more likely one will engage in that behavior. A strong relationship between outcome expectations and expectancies ($r = .62, p < .01$) does however, suggest multicollinearity and thus suggests that these variables are measuring the same construct. Reported findings imply that social cognitive theory can be used to predict Internet pornography use. It should also be noted that the Goodson et al. work represents one of the few studies not investigating the pornography-violence link that utilizes theory to formulate hypotheses.

Excitation transfer theory. Bauserman (1996) contends that excitation transfer theory is probably the most relevant framework for explaining sexual aggression during and shortly after pornography use. According to Zillman (1971), excitation transfer happens after an individual is physiologically aroused. Residual arousal persists a few minutes after stimulation ceases. This increases the likelihood of intensified reactions to subsequent stimuli. This framework has been used to guide numerous experimental studies wherein researchers intentionally agitate subjects exposed to different forms of pornography in order to measure levels of aggression.

Conceptually, excitation transfer theory does not differentiate between sources of arousal (Bauserman, 1996). For example, an individual who just finished working out may become quite aggressive to minor agitating stimuli, whereas before working out this may not have occurred. Furthermore, empirical evidence suggests other weaknesses. The Allen et al. (1995) meta-analysis of experimental studies looking into aggression post pornography viewing contradicts the basic inferences of excitation transfer theory. Comparing three different types of pornography, (a) pictorial nudity, (b) nonviolent pornography, and (c) violent pornography, they found that both forms of pornography increased aggression levels. Pictorial nudity, however, decreased levels of aggression. This finding suggests that excitation transfer theory may not be appropriate to explain sexual aggression during and post pornography viewing.

Underlying motivations. Stack et al. (2004) note that Internet pornography's coverage in the literature "has consisted of descriptive treatments of the subject. These analyses do not rigorously test major sociological theoretical perspectives of why some people use cyberporn and others do not" (p. 76). Using sociological theories of deviant behavior to formulate hypotheses, they found that male gender, weak ties to religion and marriage (low marital satisfaction), and past sexual deviant behavior were all significant predictors of cyberporn use. Forty percent of the total variance is explained by these variables. Furthermore, individuals engaging in extramarital affairs were 3.18 times more likely to use cyberporn, while those who had engaged in paid sex were 3.7 times more likely to use cyberporn. Stack et al. (2004) conclude by suggesting that strengthening social ties to religion and marriage may reduce an individual's propensity to using Internet pornography.

The Mesch (2009) findings with Israeli youth mirror the Stack et al. findings: Youth who sought out Internet pornography had weaker social ties to religion, family, and school. They also

had more antisocial attitudes and displayed more violent attitudes and behavior. Mesch suggests pornography is a risk factor for deviance. Strengthening the social bonds of school and family should be used as a preventative measure for deviance.

The Stack et al. (2004) study makes a significant contribution to the body of knowledge around pornography use in two major areas. First, the use of theoretical frameworks of social bonds and deviance is used to formulate hypotheses. Secondly, whereas previous work has sought to shed light on psychosocial correlates and the associated risks of pornography use, this study sought to elucidate the motivations underlying why people use. The inherent moral and political inclination to prove the harmful effects of pornography overlooks the possibility that pornography use may in fact be symptomatic of other social and or psychological processes. Furthermore, a greater understanding of why certain individuals use pornography and some do not, may shed more light on the effects of pornography.

Leisure. Shaw (1999), Shiner and Parry (2005), and Stebbins (1997) suggest that pornography consumption is a form of leisure. With 47% of American families citing pornography use as a problem in their home (Lighted Candle Society, 2008), categorizing pornography as leisure is reasonable. Cooper et al. (1999) report findings that are in harmony with this categorization. They found in their sample of 9,177 adults that the majority participated in online sexual activities at home. Pornography falls under the umbrella of online sexual activities, and thus it can be reasonably argued that since the majority of these behaviors occur in the home, that pornography use is indeed a behavior occurring during leisure time.

A second analysis of the data reported in Cooper et al. (1999) focused on cybersex compulsives. Cooper et al. (2000) found that 17% (n =1,527) of their normative sample of 9,177 reported being in the problematic range (moderately sexually compulsive, sexually compulsive,

cybersex compulsives). They also indicated that college students are more likely to be found in the cybersex compulsive group. Possible reasons for this were experimentation associated with this developmental stage and more private leisure time (Cooper et al., 2000).

Dew et al. (2006) investigated the online sexual activities (OSA) and extramarital affairs of 508 heterosexual married males. Seventy-eight percent of the subjects reported having at least one face-to-face sexual encounter with a person they met in a chat room. The majority of OSA occurred from a home computer. Wife or child(ren) home had little constraining effect on OSA. This supports the findings of Cooper et al. (2000, 1999) that OSA, including pornography use, occurs at home and during leisure time.

Shaw (1999) is perhaps one of the only leisure scholars to investigate pornography. Using grounded theory methodology she found that her sample of Canadian women had negative to fearful attitudes towards pornography. She also reports perceptions of pornography's negative impact on women's identities and relationships to men. Shaw concludes that pornography is not a leisure behavior for women and that "pornography can be seen as the quintessential leisure activity in which women are used as objects of men's leisure" (p. 209). As such, pornography adds to hegemonic femininity and masculinity and thus reinforces sexist attitudes towards women.

Shaw's (1999) study is noteworthy because it considers pornography to be leisure for men. Due to its qualitative nature, however, established leisure theory was not used to formulate hypotheses. In order to better ascertain the underlying motivations for pornography use, hypotheses need to be guided by established theory. Recent literature suggests that pornography occurs during one's leisure. Therefore, a leisure framework is needed to guide investigations into the pornography phenomenon.

Leisure Boredom

Leisure boredom is a theoretical construct that may help explain motivations behind pornography use. Iso-Ahola and Weissinger (1990) conceptualize leisure boredom as the psychological perception that available leisure opportunities fall short of an individual's need for optimal arousal. It is likely a product of both dispositional and situational factors (Iso-Ahola & Weissinger, 1990), is a state of dissatisfaction, and is "a disruption of the intrinsic motivation process in leisure time" (Weissinger, Caldwell, & Bandalos, 1992, p. 324). Leisure boredom is also negatively related to desirable developmental outcomes and positively related to undesirable outcomes (Gordon & Caltabiano, 1996; Iso-Ahola & Crowley, 1991; Wegner, Flisher, Chikobvu, Lombard, & King, 2008; Widmer, Ellis, & Trunnell, 1996; Weissinger, 1995).

In an attempt to establish a link between perceived physical and mental health and leisure boredom, Weissinger (1995) compared groups within a sample of undergraduate students ($N = 779$) who scored in the upper and lower quartiles on the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990). The data suggested that the group in the upper quartile differed significantly on measures of physical health satisfaction, rating and worry as well as mental health rating and satisfaction than the group in the lower quartile. These significant differences were in the hypothesized directions, namely satisfaction and rating were lower while worry was higher in the group who scored in the upper quartile on the Leisure Boredom Scale and are in harmony with Iso-Ahola and Weissinger (1990).

The Weissinger (1995) statistical analyses make these findings even more compelling. In order to control for study wide inflation due to six univariate analyses, a Bonferroni correction was used producing a more conservative p value of .008 for the critical regions (Weissinger, 1995). The groups in the upper and lower quartile "reported relatively low levels of boredom.

This actually makes the findings more conservative, in that the effect on health was found even with lower levels of boredom” (p. 27). The Bonferroni correction and the low levels of boredom between the high and low groups, taken together, strengthen the link between leisure boredom and poor health. Weissinger suggests that this link means one of two things. Either leisure boredom causes poor health behaviors such as substance abuse, or “boredom may be related to dispositional states that produce less ‘buffering’ of the effects of life stress” (p. 28). Leisure scholars’ investigation of the former of the two explanations has produced some compelling results.

An Australian study examines the role self-esteem, sensation seeking and leisure boredom plays in urban and rural adolescents’ leisure behavior (Gordon & Caltabiano, 1996). Urban adolescents who report high substance use also exhibit low self-esteem, high sensation seeking, and high leisure boredom. Urban adolescents who scored highest on sensation seeking and leisure boredom were the heaviest substance abusers. The rural adolescents’ substance use was affected most by self-esteem followed by sensation seeking, with leisure boredom having the least impact of the three. The heaviest substance users in the rural adolescent sample had low leisure boredom. Furthermore, the urban sample’s sensation seeking scores paralleled crime involvement, while leisure boredom scores paralleled crime involvement in the rural sample. Taken together, adolescents who engage in deviant leisure (crime and substance abuse) tend to have low self-esteem, high sensation seeking and leisure boredom. The importance placed on each variable with regards to participation in deviant leisure is somewhat affected by area of residence.

These findings paint a mixed picture of leisure boredom’s role in adolescent substance use. They are in harmony, however with Iso-Ahola and Weissinger’s (1990) finding linking

leisure boredom to low self-esteem. But, Weissinger (1995) concluded that leisure boredom affects health by causing individuals to make poor health decisions, such as substance use, is partially called into question. This is furthered by null findings between leisure boredom and alcohol use in Australian undergraduates (Patterson, Pegg, & Dobson-Patterson, 2000) and in South African eleventh graders (Wegner et al., 2006). Evidence supporting the Weissinger (1995) conclusion, however, does exist both theoretically and empirically.

Wegner et al. (2008) reported in their sample of South African eighth-grade students ($N = 308$) that leisure boredom was a significant predictor of dropping out of school. This held true for students 14 years and older, but not younger students. Studies by Flisher, Townsend, Chikobvu, Lombard, and King (2004, 2005) draw empirical connections between school drop-out, sexual risk behavior, and substance abuse. Given these connections, and the influence of leisure boredom on school-drop out, leisure boredom should have an effect on substance use.

Widmer et al. (1996) using known group samples found that substance abusers scored significantly lower on a measure of ethical leisure behavior (AEBLS) than nonsubstance users. The sample also completed a measure on substance abuse and the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990). Both were significantly and negatively correlated with AEBLS scores. A study using a shorter version of the AEBLS replicated these results (Widmer, Ellis, & Munson, 2003). These findings suggest that substance use and leisure boredom are somehow related, if only indirectly.

A known group study was, however, conducted which suggests a direct link between leisure boredom and substance abuse. Utilizing a sample of 39 adolescent substance users and 81 nonsubstance users, Iso-Ahola and Crowley (1991) found that the substance users had significantly higher leisure boredom scores than the nonsubstance users. They also found that the

substance users participated in more leisure activities and pursued more active types of leisure. It was concluded that these substance users “seek to achieve optimal arousal, and thereby decrease leisure boredom, through the use of illicit substances. From such a perspective, the use of substances becomes an activity choice and can be viewed as a leisure behavior” (p. 268).

The Iso-Ahola and Crowley (1991) conclusion explains the process behind the Weissinger (1995) claims regarding health, leisure boredom, and substance abuse. It can thus be argued that individuals who experience high levels of leisure boredom are likely to seek out leisure activities that will meet their need for optimal arousal. The use of pornography may in fact be one of these leisure activities.

Leisure Boredom and Pornography

Both pornography and leisure boredom are directly and indirectly linked to substance abuse (Carroll et al., 2008; Gordon & Caltabiano, 1996; Iso-Ahola & Weissinger, 1991; Wegner et al., 2008; Widmer et al., 1996; Widmer et al., 2003; Ybarra & Mitchell, 2005) and sensation seeking (Cooper et al., 2000; Gordon & Caltabiano, 1996). Furthermore, boredom and pornography use are related to clinical features of depression (Farmer & Sundberg, 1986; Sommers & Vodanovich, 2000; Ybarra & Mitchell, 2005). The data suggest pornography is often used at home and during leisure time (Cooper et al., 2000, 1999; Dew et al., 2006). Research examining the overlapping correlations between pornography and leisure boredom may provide greater insight into pornography use.

Regarding pornography research, Zillman (2000) suggested measuring social and psychological factors in order to better ascertain factors contributing to the development of certain sexuality dispositions, such as pornography. Carroll et al. (2008) intimated that pornography use be considered both a behavior and a sexual ethic, suggesting the presence of

individual differences in pornography motivations. Additionally, Stack et al. (2004) pointed out the overuse of descriptive studies on pornography use and emphasized the rigorous testing of sociological theories to help explain why individuals use pornography.

The Stack et al. call for the rigorous testing of theories, the Zillman call for measuring psychological factors in order to explain dispositions toward the use of pornography, and the Carroll et al. reference to pornography as a sex ethic, warrants the use of established theory in helping to explain why individuals use pornography. Treating pornography use as leisure behavior engaged by those who experience high levels of leisure boredom may answer the calls of both Stack et al. and Zillman in attempting to further the knowledge of why people use pornography. Therefore, the purpose of this study is to investigate the relationship between pornography use and leisure boredom and test leisure boredom's predictive power of individuals' pornography use.

Summary and Hypotheses

Many studies explore the associated risks that accompany pornography use. The results of this research provide a plethora of mixed findings and contradictions (Allen et al., 1995). It is the intent of this study to add to the body of knowledge regarding pornography through examining predicting factors for pornography use as opposed to associated risks and possible outcomes. Furthermore, this study seeks to strengthen the literature through the utilization of established theory that treats pornography as a leisure behavior.

Using a leisure lens makes it possible to investigate pornography in a different manner. Leisure theory posits that the absence of unhealthy leisure is not enough for high quality life. It is equally important that individuals make wise leisure decisions such that they may reap the

physical, social, and psychological benefits that a leisure lifestyle offers (Stumbo & Peterson, 2009). This becomes more apparent when investigating couples.

Johnson, Zabriskie, and Hill (2006) found that satisfaction with couple leisure, especially home-based and regularly occurring leisure, was the greatest predictor of marital satisfaction. This suggests that time and frequency in shared leisure is not nearly as important as the perception of a satisfying shared leisure experience. Lundberg, Zabriskie, Ward, and Nutter (2008) replicate these findings and report that the psychological needs for autonomy, competence and relatedness (Ryan & Deci, 2000) mediate this relationship. These studies highlight the importance of satisfying couple leisure involvement in maintaining strong marital ties.

Since pornography use is for the most part a homebased activity (Cooper et al., 2000, 1999; Dew et al., 2006), and men use far more porn than women (Carroll et al., 2008; Cooper et al., 1999; Hald, 2006) couples may miss out on the benefits of satisfying couple leisure. This discrepancy becomes even more problematic when investigating attitudes towards pornography.

The Carroll et al. (2008) sample of 818 emerging adults found that almost 90% of males used pornography, while almost 50% of females were not accepting of it. As these individuals begin to couple, such gender discrepancies between use and acceptance may be a source of marital conflict. Furthermore, it has been suggested that as perceived spousal support of leisure activities decreases, so does marital satisfaction (Baldwin, Ellis, & Baldwin, 1999). Thus, pornography use, if not supported by a spouse may act as a barrier to marital satisfaction and quality of life.

Looking through a leisure lens may also help to shed further light on pornography's effect on couples. Leisure's benefits, such as marital satisfaction through satisfying couple

leisure (Johnson et al., 2006) and spousal support of leisure (Baldwin et al., 1999), may never be obtained in relationships where pornography use is present. This leisure perspective may have implications for marriage and family therapists, family science educators, and therapeutic recreation specialists. In order to investigate pornography use through a leisure lens, the following hypotheses were tested:

Hypothesis 1 (H1). A statistically significant ($p < .05$) relationship will be found between pornography use and leisure boredom.

Hypothesis 2 (H2). When controlling for the demographic variables of education, income, race, age, years married, number of children, ages of children, and religion, leisure boredom will be a statistically significant ($p < .05$) predictor of pornography use.

Hypothesis 3 (H3). The influence of leisure boredom on pornography will be greatest at higher levels of use (i.e. there will be a quadratic relationship between leisure boredom and pornography usage).

Hypothesis 4 (H4). The relationship between leisure boredom and pornography use will be significantly moderated ($p < .05$) by gender.

Methods

The purpose of the study was to investigate potential relationship(s) between leisure boredom and pornography use in a sample of married and cohabiting couples with children. The following organizational steps are addressed in this section: (a) participants; (b) procedure, (c) measurement tools; and (d) data analysis.

Participants

The participants for this study were taken from the *Flourishing Families Project (FFP)* Time 2 dataset. The FFP is an ongoing, longitudinal study of inner family life involving families

with a child. At Time 1 these children were aged between 10 and 14. This study focused on married couples that participated in the FFP (Time 2) and completed an in-home questionnaire (see Table 1).

The sample consisted of $N = 290$ married couples ($N = 580$ individuals) from a large Northwestern city in the United States. There were $n = 290$ females (50%) and $n = 289$ males (49.8%) and $n = 1$ case of missing data (0.2%). There were $n = 484$ Caucasians (83.4%), $n = 27$ African Americans (4.7%), $n = 19$ Asian Americans (3.3%), $n = 13$ Hispanics (2.2%), $n = 20$ who were Multi Ethnic (3.4%), $n = 13$ who fit under the category of Other Race (2.2%), and $n = 4$ cases of missing data (0.7%). Ages ranged from 28 to 63 ($M = 45.4$, $SD = 5.8$). There were $n = 2$ cases of missing data (0.3%) for age.

Ninety-nine percent of the sample were heterosexual ($n = 579$), $n = 2$ homosexual (0.3%), $n = 1$ bisexual (0.2%), There were $n = 3$ cases of missing data (0.5%). Average length of marriage was 18.6 years ($SD = 4.8$) and ranged from 0.5 to 34 years.

Individual annual income ranged from under \$10,000 to over \$200,000. Seventy-five cases had an income of under \$10,000 (12.9%) and $n = 24$ (4.1%) between \$10,000 and \$19,999. Ninety cases had an income between \$20,000 and \$39,999 (15.5%), $n = 95$ (16.4%) between \$40,000 and \$59,999, $n = 89$ (15.3%) between \$60,000 and \$79,999, and $n = 71$ (12.2%) between \$80,000 and \$99,999. Fifty-five cases (9.5%) had an annual income between \$100,000 and \$119,999, $n = 26$ (4.5%) between \$120,000 and \$139,999, $n = 9$ (1.6%) between \$140,000 and \$ 159,999, $n = 11$ (1.9%) between \$160,000 and \$179,999, $n = 4$ (0.7%) between \$180,000 and \$199,999, and $n = 16$ (2.8%) of at least \$200,000. There were $n = 15$ cases of missing data (2.6%).

The majority of the sample had earned a bachelor's degree ($n = 233$, 40.2%) followed by completing some college ($n = 118$, 20.3%) and having a master's degree ($n = 115$, 19.8%). Fifty seven (9.8%) cases had an advanced degree (JD, PsyD, PhD, MD, etc.), $n = 29$ a high school diploma (5.0%), $n = 19$ an associate's degree (3.3%), and $n = 5$ had not completed high school (0.9%). There were $n = 3$ cases of missing data (0.5%).

The majority of the sample was comprised of Protestants ($n = 250$, 43.1%), followed by Catholics ($n = 105$, 18.1%) and those with no religious affiliation ($n = 82$, 14.1%). There were $n = 51$ members of the Church of Jesus Christ of Latter-day Saints (LDS; 8.1%), $n = 26$ Agnostics or Atheists (4.5%), $n = 24$ who were Jewish (4.1%), $n = 18$ who categorized themselves in an Other category (3.1%), $n = 11$ who were affiliated with an Eastern Religion (1.9%) such as Buddhism, Hinduism, or Confucianism. There were $n = 13$ cases of missing data (2.2%).

Procedure

Participant families for the FFP were selected from a large northwestern city and were interviewed in the winter, spring, and summer of 2007. Families were primarily recruited using a purchased national telephone survey database (Polk Directories/InfoUSA). This database claims to contain 82 million households across the United States and has detailed information about each household, including presence and age of children. Families identified using the Polk Directory were selected from targeted census tracts that mirrored the socio-economic and racial stratification of reports of local school districts. All families with a child between the ages of 10 and 14 living within target census tracts were deemed eligible to participate. Eligible families were subsequently contacted directly using a multi-stage recruitment protocol. First, a letter of introduction was sent to potentially eligible families. Second, interviewers made home visits and phone calls to confirm eligibility and willingness to participate in the study. Once

eligibility and consent were established, interviewers made an appointment to come to the family's home to conduct an assessment interview.

In addition to the random selection protocol used with the survey database, families were recruited into the study through family referral. At the conclusion of their in-home interviews, families were invited to identify two additional families in the recruitment area that matched study eligibility. This type of limited-referral approach permitted us to identify eligible families in the targeted area that were not found in the Polk Directory. The Polk Directory national database was generated using telephone, magazine, and Internet subscription reports; therefore, families of color (especially those of lower socio-economic status) are under-represented in the database. By broadening our approach and allowing for some limited referrals, we were able to significantly increase the social-economic and ethnic diversity of the sample.

Through these recruitment protocols, a total of 692 potentially eligible families were identified within the survey database as living within the targeted census tracts. Of those, 372 were determined to have a child within the target age range. Of those, 64% agreed to participate ($n = 238$). Additionally, there were 372 families referred by participating families, 262 of whom agreed to participate (71%). The most frequent reasons cited by families for not wanting to participate in the study were lack of time and concerns about privacy. It is important to note that there were little missing data. As interviewers collected each segment of the in-home interview, questionnaires were screened for missing answers and double marking. These same procedures were used for Time 2 data collection.

Measurement Tools

The variables of interest in this study were leisure boredom and pornography use. A three-item questionnaire was developed by adapting two items from the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990) and constructing an item that directly inquires about boredom during recreation. A measure of pornography use patterns was constructed by the FFP primary investigators. Both of these measures were included in the Time 2 battery. Demographic questions were also included in the battery.

Leisure Boredom Scale. Two items from the Leisure Boredom Scale (LBS, Iso-Ahola & Weissinger, 1990) were included in the FFP Time 2 battery due to space constraints. Response choices for the LBS are on a five-point Likert scale (strongly disagree to strongly agree) and a higher score suggests higher levels of leisure boredom.

The LBS's initial construction included 28 items which were then refined by 35 faculty members and graduate students in leisure studies (Iso-Ahola & Weissinger, 1990). A pretest was given to a sample of 55 undergraduate students. Items which had at least a .30-item total correlation and were deemed to have content validity from at least 75% of the judges were included in the final measure (Iso-Ahola & Weissinger). Sixteen items met this criteria and make up the LBS.

Initial evidence of construct validity was established over the course of three studies. Cronbach's Alpha coefficients were estimated for internal consistency and acceptable estimates were reported (.85, .88, and .86, respectively). Taken together, the LBS reports the necessary psychometric properties to make valid and reliable inferences regarding leisure boredom.

FFP Leisure Boredom Measure (LBM). Two of the items from the LBS (Iso-Ahola & Weissinger, 1990) were adapted before being amended to the FFP battery for Time 2. Items three

and fourteen of the LBS were rewritten in the past tense to be in harmony with the other items in the questionnaire. Furthermore, an item asking specifically about boredom during recreation time was added. Following are the three items that are contained in the FFP Leisure Boredom Measure:

1. I felt bored during my free time.
2. The recreation activities I engage in did not excite me.
3. My recreation time was boring.

Participants were instructed to read the LBM items and indicate the number of times they had experienced the statements in the past week. Response choices fell on a 3-point Likert scale (Never, Some of the time, Most of the time). A higher score suggests greater levels of leisure boredom.

FFP Pornography Use Patterns Measure (PUPM). In order to measure pornography use patterns within the FFP sample, four items were added to the Time 2 battery. The first three questions measured the frequency of pornography use with various formats in the past year. Response choices fall on a scale from 0 to 5 ranging from “Never” to “Every day or almost everyday.” The fourth question asked for an estimated average of hours per week spent viewing pornographic materials regardless of format.

Demographics. Demographic data were collected in the following areas: gender, race, religion, sexual orientation, length of marriage, income, age, and education.

Data Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS) Version 16.0 computer software. Because the LBM and PUPM were modified/created for the FFP, factor and reliability analyses were conducted to test for internal-consistency and the assumption that

only one construct was being measured. Basic descriptive statistics of the demographic data were also calculated. H1 was tested by calculating a Pearson's correlation for leisure boredom scores and pornography use. In order to test H2 a multiple regression model explaining the variance within pornography use was created using the variables leisure boredom, gender, race, religion, sexual orientation, relationship status, length of relationship, income, age, and education. H3 was tested by creating the variable leisure boredom squared (leisure Boredom x leisure Boredom) and introducing it into the regression model, thus testing for a quadratic effect. Finally, H4 was tested by creating the interaction variable leisure boredom \times male and introducing it into the regression model.

Results

Measurement

The FFP Leisure Boredom Measure (LBM) and the FFP Pornography Use Pattern Measure (PUPM) were analyzed to gather evidence regarding the reliability and validity of inferences (see Tables 2-4). To accomplish this, each item in the LBM and PUPM underwent factor and reliability analyses.

LBM

The LBM is a three-item modified version of Iso-Ahola and Weissinger's (1990) 16-item Leisure Boredom Scale. It was assumed that the modifications would not affect internal consistency or create new factors. For the integrity of the study, however, this assumption underwent statistical analyses.

Using Principal Component Analysis, the three-item LBM loaded on to one factor. Factor loadings for the three items were .75, .86, and .89 for the entire sample. This single factor produced an Eigenvalue of 2.01 and accounted for 69.61% variance between these items. A

reliability analysis reported a Cronbach's Alpha of $\alpha = .78$. Taken together, the factor analyses and reliability analyses suggest that the LBM is both internally consistent and measures a single factor. Since the three items from the LBM are modified from items of the LBS, we make the assumption that the single factor being measured is indeed leisure boredom.

PUPM

Created by the principal investigators of the FFP, the PUPM is a self-report measure of pornography. The items measure frequency of pornography use from various mediums (magazines, video, and Internet) as well as total weekly pornography consumption measured in hours. Three factor analyses were conducted using (a) all cases, (b) males cases, and (c) female cases. This was done for two reasons. First, the literature suggests that male and female pornography use patterns differ in both frequency and mediums (see Carroll et al., 2008 and Hald, 2007). Running factor analyses according to gender was necessary to make sure the PUPM measured the same factor(s) for male and female cases. Second, it was hypothesized that a gender interaction effect would occur due to differences around male and female pornography use. To properly test for this, male and female cases need to hang on the same factor(s).

An underlying assumption for factor analysis is that each item being analyzed is normally distributed (Cohen, Cohen, West, & Aiken, 2003). This was not the case for the PUPM. The four items were heavily skewed in the total sample and when separated by gender. To correct for this a log transformation was conducted by adding one to each item and then multiplying this by the natural log. This decreased the skewness of each item in the entire sample and when separated by gender. Furthermore, since item four did not fall on the same scale as the other three items, all items were standardized by converting them to z-scores. Thus analyses were run using the z-scores of one plus the natural log of each item.

All cases. In a Principal Component Analysis (PCA) all items loaded on a single factor and produced factor loadings of .71, .73, .77, and .78, respectively. An Eigenvalue of 2.23 was produced that accounted for 55.86% of the variance within the PUPM. The four items of the PUPM report a Cronbach's Alpha of $\alpha = .74$.

Males. Items loaded on to two factors for males when running PCA. After rotating the two factors using Varimax Rotation with Kaiser Normalization, Eigenvalues were 1.65 and 1.53, respectively. These factors accounted for 79.55% of the total variance between items. Factor one accounted for 41.3% and factor two 38.26% of this variance. Items three and four converged onto factor one and inquire about Internet pornography use and total (all mediums including adult novels) average weekly pornography use in hours. Factor loadings for these items were .91 and .89 and yielded a Cronbach's Alpha of $\alpha = .80$. Items one and two loaded on factor two and inquire about the use of pornographic magazines and films. Factor loadings for these items were .87 and .85. A scale analysis examining reliability produced a Cronbach's Alpha of $\alpha = .67$ for these two items.

Splitting the PUPM into two measures for males was decided against. Although it could be argued that the two factors measure different types of pornography, modern (Internet) versus traditional (magazine and films) mediums, this was not relevant to the study's hypotheses. The PUPM was written to measure different types of pornography mediums in order to better capture overall pornography use. Furthermore, the discrepancy in Cronbach's Alpha levels after analyzing the items contained in the two factors was a matter of concern. A reliability analysis was run using all four items and produced a Cronbach's Alpha of $\alpha = .71$. Because factor two's alpha was so low, and total pornography use was the focus of the hypotheses, it was decided that using all four items together would be best for more precise measurement.

Females. For female subjects a PCA yielded one factor that accounted for 55.1% of the variance and produced an Eigenvalue of 2.2. Factor loadings for the four PUPM items were .77, .78, .73, and .68, respectively and yielded a Cronbach's alpha of $\alpha = .73$.

LBM Scores

The LBM are forced choice items measuring feelings of boredom during leisure or recreation time during the past week. Answer choices fall on a 3 point Likert-type scale with the following answer choices: 1 = *Never*, 2 = *Some of the Time*, and 3 = *Most of the Time*. The minimum score attainable is three and the maximum is nine. A higher score suggests higher levels of leisure boredom. The mean score for the sample was 3.63 ($SD = 1.07$). The median for males was 3.69 ($SD = 1.14$) and for females 3.57 ($SD = .99$). There were no missing cases. This gender difference was not significant ($t(577) = 1.84, p = .17$; see Table 5).

PUPM Scores

The PUPM is a four-item questionnaire measuring frequency of pornography use. Items one through three measure use of various pornographic mediums (magazines, films, and Internet) during the past 12 months. The forced answer choices fall on a 6-point Likert-type scale. Answers ranged from 0 "Never" to 5 "Almost Everyday." The fourth item is designed to measure average hours per week spent consuming pornography, regardless of medium. This was not a forced choice question.

Scores could range from zero upward due to the open choice for item four. Before the standardization of the scale, scores ranged from 0 to 36 ($M = .77, SD = 2.2$) for the entire sample. 0 to 36 ($M = 1.32, SD = 2.77$) for males, and 0 to 11 ($M = .20, SD = .87$) for females. PUPM data were missing for $n = 3$ cases. This gender difference in pornography use was significant ($t(399.8) = 8.44; p < .001$; see Table 5).

Hypothesis Testing

H1: Correlation between Leisure Boredom & Pornography

H1 predicted a significant positive relationship between leisure boredom and pornography use. A Pearson's zero order correlation analysis was conducted to test this hypothesis (see Tables 6-8). A significant positive correlation was found between leisure boredom and pornography use ($r = .14, p = .001$). When separated by gender, there was a weak significant positive correlation between leisure boredom and pornography use for males ($r = .17, p = .003$), but not for females ($r = .06, p = .33$).

H2: Leisure Boredom as a Predictor of Pornography Use

In order to test H2, a two-step regression analysis was run on pornography use (see Table 9). The main effect, leisure boredom was entered in Step 1. Demographic variables acted as controls and were entered in the second step. One dummy variable was created for male where female = 0 and male = 1, five dummy variables were entered to represent race: African American, Asian American, Hispanic, Multi Ethnic, other race. Caucasian cases served as the reference variable. Religion was represented by seven dummy variables; Catholic, Latter-day Saint, Jewish, Eastern Religion, other religion, none, Agnostic or Atheist, where Protestant cases represented the reference variable. Due to such a large overrepresentation of heterosexuals (99% of the sample), sexual orientation was not entered into the model. The variables education, income, length of marriage and age were also entered in Step 2. Both length of marriage and age were converted to z-scores.

The final model was significant, $F(18, 533) = 8.73, p < .001$ and accounted for 20.2% of the variance in pornography use (Table 9). There was a $\Delta R^2 = .18$ from Step 1 to Step 2. When controlling for gender, race, religion, education, income, length of marriage, and age, leisure

boredom was a significant predictor of pornography use ($\beta = .13$, $t(550) = 3.22$, $p = .001$, $R^2 = .022$).

H3: Quadratic Effect

In order to test for a quadratic effect the interaction variable leisure boredom squared was created by multiplying the variable leisure boredom independently and introduced into a three-step regression model. The main effect was entered in Step 1, the interaction effect in Step 2, and demographic controls in Step 3. This final model was significant (see Table 10), $F(19, 532) = 8.83$, $p < .001$, and accounted for 21.3% of the variance in pornography use. Step 1 to Step 2 produced a $\Delta R^2 = .006$ and Step 2 to Step 3 a $\Delta R^2 = .19$. When controlling for leisure boredom, gender, race, religion, education, income, length of marriage, and age, leisure boredom squared was a significant predictor of pornography use ($\beta = .70$, $t(550) = 2.91$, $p = .004$, $R^2 = .006$).

H4: Gender Interaction Effect

H4 predicted a gender interaction with leisure boredom on pornography use. Multiplying leisure boredom by the dummy variable for male created the interaction variable leisure boredom \times male. In a four-step regression analysis leisure boredom was entered in Step 1, male in Step 2, leisure boredom \times male in Step 3, and the demographic control variables in Step 4. The final model was significant (see Table 11), $F(19, 532) = 8.51$ $p < .001$ and accounted for 20.6% of the variance in pornography use. A $\Delta R^2 = .102$ was found from Step 1 to Step 2 and $\Delta R^2 = .006$ from Step 2 to Step 3, and $\Delta R^2 = .076$ from Step 3 to Step 4. When controlling for leisure boredom, gender, race, religion, education, income, length of marriage, and age, the interaction effect of leisure boredom \times male was not a significant predictor of pornography use ($\beta = .29$, $t(550) = 1.95$, $p = .05$, $R^2 = .006$).

Post hoc Analysis

Graphing H3. In order to graph the quadratic effect predicted in H3 a post hoc analysis was necessary. Since being a male was a strong predictor of pornography use and female a strong negative predictor of pornography use, the quadratic effect was graphed by gender. A regression model was run using leisure boredom, leisure boredom squared, leisure boredom \times male, leisure boredom squared \times male and the demographic controls. None of the main, quadratic, nor interaction effects were significant (see Table 12); likely a result of multicollinearity. This, however, produced the equation necessary to graph the quadratic effect by gender (see Figure 1).

Nesting effect. Regression analysis assumes individual data points to be independent of one another (Cohen et. al., 2003). This becomes problematic when utilizing a sample of married adults. For example, it is possible that one spouse's pornography use directly influences the other spouse's use (Hald, 2006), constituting a departure from the assumption of independence. We suspected that the data were nested by couples. Hierarchical Linear Modeling (HLM) was conducted to test for this. Nesting explained 1.15% of the total variance within pornography use and was nonsignificant.

Discussion

The purpose of the study was to investigate pornography use through a leisure lens. Leisure boredom was the guiding theoretical framework. Results indicated a significant positive correlation between leisure boredom and pornography use. It was also found that when controlling for various demographic variables leisure boredom was a predictor of pornography use. Findings are discussed around hypothesis testing, post hoc analyses, demographics, and practical applications.

Hypotheses

The findings for H1 indicate a weak positive correlation between pornography use and leisure boredom in males but not in females. This finding is not surprising. It is documented that females and males use pornography for different reasons. For example, young males in Sweden are more likely to use pornography to get aroused and masturbate, whereas females tend to view pornography out of curiosity (Wallmyr & Welin, 2006). Gender differences in using pornography for sexual arousal and masturbation have also been documented in American university students (Goodson et al., 2001), and Danish adults (Hald, 2006). Through a leisure lens this suggests that men may experience more leisure boredom than women. Independent *t* tests confirmed that this was not the case, thus other explanations should be considered.

Consistent with the existing literature, males used significantly more pornography than females. Pornography use may be more indicative of leisure boredom manifestations in males than females. This is consistent with the optimal arousal perspective of leisure boredom that suggests a sensation seeking element (Gordon & Caltabiano, 1996; Iso-Ahola & Crowley, 1991, Iso-Ahola & Weissinger, 1990). From this perspective individuals seek relief of leisure boredom through active or exhilarating sensation based activities. Since males use pornography more for masturbatory purposes than females, the nonsignificant finding between leisure boredom and pornography use in females is consistent with theoretical underpinnings and previous studies.

Such gender differences have received scant attention in the literature looking at links between alcohol abuse, substance use, and other forms of delinquent and criminal behavior (Patterson et al., 2000). Investigations into gender differences in manifestations of leisure boredom would be helpful to better understand when leisure boredom becomes a risk factor for delinquent behavior.

When controlling for gender, race, religion, sexual orientation, education, income, relationship time, and age, leisure boredom was a significant predictor of pornography use. This finding confirms H2 and adds strength to leisure boredom as a theoretical framework because it suggests leisure boredom to be a factor in pornography use, regardless of demographics. This is the first study to examine the phenomenon of pornography use within a leisure boredom framework. Furthermore, the use of established theory to formulate hypotheses makes a contribution to the pornography literature.

It should be noted that most of the leisure boredom literature around delinquent leisure uses adolescent and university student samples. This study used previous work to formulate hypotheses and attempted to generalize the optimal arousal perspective (Iso-Ahola & Crowley, 1991) within leisure boredom to adult couples. The optimal arousal perspective around leisure boredom and tolerable deviant leisure is perhaps stable over time and carries over to adulthood as a personality trait. Further investigations, in particular longitudinal, are needed to better understand leisure boredom as a disposition.

The quadratic effect found in H3 provides insight regarding the influence of leisure boredom on pornography use. The findings of this study suggest that the influence of leisure boredom on pornography is greater at high levels than lower levels. This study is among the first to test for a quadratic relationship between leisure boredom and tolerable deviant leisure (Stebbins, 1997), in this case pornography. Investigations with known samples would be helpful in identifying a threshold for leisure boredom as it relates to specific tolerable deviant leisure behaviors. Future research on leisure boredom and tolerable deviant leisure, should further examine curvilinear relationships to better ascertain the nature of leisure boredom's effect on such behavior.

H4 tested for an interaction effect between being male and leisure boredom on pornography use. The variable leisure boredom \times male was not a significant predictor of pornography use ($\beta = .29, p = .05$). Before the demographic variables were added in Step 3, leisure Boredom \times male was a significant predictor of pornography use ($\beta = .33, p = .03$). This suggests that, before controls were added, as leisure boredom increases in males, they become more likely to use pornography.

The models used to predict pornography use must be interpreted cautiously. These data are cross sectional, and thus directionality can only be implied as it relates to theoretical underpinnings. As already suggested, this adds strength to leisure boredom's explanative power as it relates to deviant leisure, specifically pornography use in adult couples. Leisure boredom, however, only explained around 2% of the total variance within pornography use. Although this study represents a beginning for using a leisure lens to investigate pornography use, it is clear that other constructs may explain more variance than leisure boredom. It is recommended that a leisure-constraints (Crawford & Godbey, 1987) framework be used in conjunction with the Cooper (1998) "Triple-A-Engine" to seek more clarity on Internet pornography use. A leisure stress coping perspective (Iwasaki & Mannell, 2000) may also be useful in explaining pornography use, especially chronic use. Finally, investigating pornography from an Aristotelian ethical leisure perspective (Widmer et al., 2003; Widmer et al., 1996) is also recommended. Specifically, individual ethical frameworks may influence leisure choices, and leisure boredom, or both. For example, certain religious backgrounds may promote a strong work ethic and at the same time involve moral restrictions regarding pornography use. In the context of the recent work in positive psychology (Peterson & Seligman, 2004), the relationships between ethical frameworks, deviant leisure behavior, and well-being should be of interest in future research. It

has been suggested that seeking pleasure, as in pornography use, does not seem to improve the quality of our lives (Seligman, 2002). As leisure scholars are particularly interested in quality of life and well-being, examining the relationships between QOL and WB and pornography would be a potentially promising area of research.

Post hoc Findings

H3 found a significant quadratic effect suggesting leisure boredom's effect on pornography use to be curvilinear. H4 found a nonsignificant gender interaction effect. This effect only approached significance ($p = .05$). Furthermore, H4 suggests male gender ($B = .49, p < .001$) as a positive predictor of pornography use, while being female ($B = -.57, p < .001$) was a negative predictor. The significant difference between male and female pornography use ($t(399.8) = 8.44; p < .001$) and significant correlation between leisure boredom and pornography in males but not in females suggests that an interaction effect indeed exists. For these reasons a model was produced wherein leisure boredom squared \times male was added to the model in H4. This produced an equation, that when graphed (see Figure 1) shows quite different trajectories for male and female pornography use in the context of leisure boredom.

Differences in male and female pornography use are well documented throughout the literature (see Carroll et al., 2008; Hald, 2006; Kernsmith & Kernsmith, 2009). These differences, however, are rarely explained in the context of theory. As earlier discussed, pornography use is most likely a manifestation of leisure boredom in males but not females. These post hoc analyses give further credence to this notion and support H3 that suggests this relationship to be quadratic.

Hald (2006) found gender discrepancies in interpersonal contexts of pornography use. Females, for example, use pornography with a sexual partner and incorporate this use into sexual activity more than males, suggesting that partners influence each other's pornography use. This

was, however, not the case in the sample. This nonsignificant finding suggests that pornography consumption is a solitary activity. It is somewhat surprising that a nesting effect was not found. It is plausible, however, that couple pornography use was so underrepresented that the phenomenon lacked statistical power. Furthermore, Hald's analysis utilized a subsample that had answered positive to ever using pornography. It is suggested that further research look into the phenomenon of pornography use in the context of marriages where both partners use pornography.

Demographics

The study's findings offer an underutilized perspective that treats pornography as a leisure behavior. The use of leisure boredom as a guiding framework answers the Stack et al. (2004) call for theoretically guided hypothesis formulation and testing as well as investigating pornography predictor variables. It is safe to say that leisure boredom does play a role in pornography use. This role however, varies by levels of leisure boredom. Furthermore, being male ($\beta = .35, p < .001$), having no religion ($\beta = .14, p = .001$), and being agnostic or atheist ($\beta = .17, p < .001$) had stronger beta weights than leisure boredom ($\beta = .13, p = .001$). Other significant demographic variables included, being Asian ($\beta = .12, p = .004$), belonging to an eastern religion ($\beta = .08, p < .05$) or the LDS church ($\beta = -.12, p = .004$), and age ($\beta = -.12, p = .009$).

Of interest are the religion variables. Stack et al. (2004) and Mesch (2009) found church attendance (ties to religion) as a significant negative predictor of cyberporn use. These findings are in harmony with the Stack et al. and Mesch findings. Namely, agnostic or atheist or not having a religion were significant predictors of pornography use. Furthermore, being agnostic or atheist was the second strongest predictor of pornography use, thus strengthening the Stack et al.

adult social bonds and deviance hypothesis. Belonging to an Eastern religion, however, was also a significant predictor of pornography use. It is tempting to explain this finding in terms of religion. Many Asians belong to an Eastern religion, and being Asian was a significant predictor of pornography use. In this study, however, seven of the 12 subjects belonging to an Eastern religion were Caucasian, suggesting independence between Eastern religion and being Asian in this sample.

Another interesting finding regarding religion is that belonging to the Church of Jesus Christ of Latter-day Saints is a negative predictor of pornography use. A recent study found that the state of Utah, an area with a high concentration of Latter-day Saints (LDS), consumed the most Internet pornography in the country (Edelman, 2009). Data of zip codes of credit cards used to purchase online pornography were used for the study, a data collection method more reliable than the self-report method used in this study. This contradiction may in fact be a matter of geography and sampling. For example, the sample selected came from a state reporting relatively lower Internet pornography consumption rates. Also, the sample were married individuals, a factor that predicted less pornography use in the Edelman data.

Of the 51 LDS subjects, five (9.8%) reported using pornography. The medium of choice for all five was Internet pornography. This is in harmony with the Edelman (2009) findings. This also supports the Cooper (1998) notion of the “Triple-A-Engine,” in particular the anonymity aspect. It should be noted, however, that a post hoc analysis found a strong positive correlation between leisure boredom and pornography use in LDS subjects ($r = .46, p = .001$). This suggests that even if pornography use was underreported in these subjects, that it did not affect hypothesized theoretical directions.

Although Stack et al. (2004) and Mesch (2009) report religion as a negative predictor of pornography use, the Edelman (2009) data report more consumption of Internet pornography in states with conservative religious and sexual values. The Christian community recognizes pornography use and addiction as a major problem. For example, 57% of pastors report pornography addiction as the most damaging issue in their congregations (Lighted Candle Society, 2008). Since the mid 1990s, the LDS church has offered pornography addiction recovery programs based on Alcoholics Anonymous' 12-step program (The Church of Jesus Christ of Latter-day Saints, 2008). Carroll et al. (2008) suggested a sexual ethic around pornography use. For many Christians pornography consumption is immoral. An investigation into how one defines pornography (entertainment, recreation, education, taboo, etc.) would be helpful in understanding reasons behind this population's use (J. S. Carroll, personal communication, October, 2007). This kind of research would also help with the identification of factors that seemingly put this population at more risk for addiction. Pornography addiction research using specific Christian subgroups is also needed to better understand how to treat this population.

The overall sample was predominantly Protestant, married, heterosexual, middle to upper middle class Caucasians. This limits generalization to more diverse samples. The large sample size, $n = 580$, is a strength to the study, making it possible to generalize findings sample demographics in large urban areas in the Northwest United States.

Practical Applications

Pornography use is one of many challenges that threaten today's families (Lighted Candle Society, 2008; Manning, 2006; Oddone Paolucci et al., 2000). Research suggests recreation can act as a buffer to challenges faced by families. For example, participation in

outdoor recreation has been shown to increase levels of communication and collective efficacy in resolving conflict in families with an at-risk adolescent (Huff, Widmer, McCoy, & Hill, 2003; Wells, Widmer, & McCoy, 2004). Other studies suggest that couples and families who participate in recreation together experience greater levels of cohesion and adaptability than those who do not (Johnson et al., 2006; Zabriskie & McCormick, 2001). Leisure boredom in male family members may act as a barrier to family recreation as they seek more solitary activities such as pornography use. Finding ways to decrease leisure boredom within families may help these families to reap the benefits offered by family and couple leisure experiences.

An avenue for reducing leisure boredom in pornography users is a leisure education program rooted in positive psychology. Seligman (2002) suggests that pleasure seeking may promote good feelings, but not well-being. This state comes from virtuous living and discovery and use of one's character strengths. Leisure education could focus on the limitations of pleasure seeking activities. Furthermore, leisure activities cultivating character strengths could be introduced. The intended result is a leisure lifestyle void of boredom due to the feelings of well-being promoted from the use of character strengths.

Spouses play a large role in a healthy leisure lifestyle. For example, spousal support for independent recreational activities is related to marital satisfaction (Baldwin et al., 1999). Satisfaction with couple leisure, especially home-based shared leisure, is also a predictor of marital satisfaction (Johnson et al., 2006). Couples where one or both partners experience leisure boredom may manifest itself in less satisfying shared leisure experiences. This in turn may contribute to lower levels of marital satisfaction. Marital educators, counselors, and therapists would benefit their client greatly by using a leisure lens.

Sex addiction treatment is another area that could incorporate these findings into practice. For example, sex addicts score significantly higher on measures of sexual and nonsexual sensation seeking than nonsex addicts (Cooper et al., 2000). Combined with this study's findings, sex addicts would theoretically have high levels of leisure boredom. Wholesome but risky recreational activities such as rock climbing, kayaking, and sky diving could be used to displace pornography. Furthermore, administering the LBS (Iso-Ahola & Weissinger, 1990) to sex addicts could help establish predictive validity and be useful in treatment.

The use of recreational therapy is also suggested for sexual addiction treatment. Recreational therapists have expertise in addressing barriers to healthy leisure, such as leisure boredom, as a means to bring about a positive change. Leisure counseling and education, when combined with other therapies, may offer healthy alternatives to pornography use and decrease leisure boredom. Along with a leisure boredom framework, recreational therapists would be a valuable addition to treatment teams working with sexual addiction.

Conclusion

As external barriers to pornography rapidly disappear, (Cooper, 1998) investigations into internal motives are important to better understand the psychology of pornography. Scholarly endeavors investigating pornography have focused mainly on its effects. From sexual self-esteem (Morrison et al., 2004) and self-perceived positive effects (Hald & Malamuth, 2008) to global health issues (Perrin et al., 2008) and major threat to families, couples, and individuals (Manning, 2006), the spectrum varies considerably. Little work, however, has investigated underlying motivations (Stack et al., 2004).

Leisure boredom (Iso-Ahola & Weissinger, 1990) is a construct implicated in alcohol and substance abuse (Iso-Ahola & Crowley, 1991). Individuals who experience leisure boredom are

more likely to seek out sensation based leisure activities to alleviate this negative state. This study has confirmed hypotheses predicting leisure boredom as a factor influencing pornography use, thus opening the door for more pornography research using a leisure framework.

The use of a leisure lens offers a unique perspective into pornography use. Theoretical underpinnings in leisure sciences are rooted in Ancient Greek writings. Aristotle, for example, suggests the good life is characterized “by a curious, inquisitive approach to living that leads to learning beyond that needed for survival, meaningful relationships, and moral behavior” (Widmer et al., 1996, p. 399). This kind of life, an ethical leisure life, in turn brings happiness.

Leisure boredom is negatively related to an ethical leisure life (Widmer et al., 2003; Widmer et al., 1996) and thus acts as an internal barrier to a satisfying leisure life. Individuals are prone to seek relief from this negative state through sensation based, instantaneously gratifying leisure pursuits. This in turn tends to produce unhealthy leisure patterns in the form of delinquent leisure (Gordon & Caltabiano, 1996; Iso-Ahola & Crowley, 1991), specifically pornography use. A life consumed by leisure boredom and deviant leisure is the antithesis of Aristotle’s leisure life, namely “the good life.”

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Table 1

Sample Demographics (n = 580)

Variable	N	Percentile
Gender		
Male	289	49.8
Female	290	50.0
Missing	1	.2
Race		
Caucasian	484	83.4
African American	27	4.7
Asian American	19	3.3
Hispanic	13	2.2
Multi Ethnic	20	3.4
Other	13	2.2
Missing Data	4	0.7
Religion		
Protestant	250	43.1
Catholic	105	18.1
Latter-day Saint	51	8.8
Jewish	24	4.1
Eastern	11	1.9
Other	18	3.1
None	82	14.1
Agnostic or Atheist	26	4.5
Missing Data	13	2.2
Sexual Orientation		
Heterosexual	574	99.0
Homosexual	2	0.3
Bisexual	1	0.2
Missing Data	3	0.5
Individual Annual Income		
Under \$10,000	75	12.9
\$10,000 - \$19,999	24	4.1
\$20,000 - \$39,999	90	15.5
\$40,000 - \$59,999	95	16.4
\$60,000 - \$79,999	89	15.3
\$80,000 - \$99,999	71	12.2
\$100,000 - \$119,000	55	9.5

\$120,000 - \$139,999	26	4.5
\$140,000 - \$159,999	9	1.6
\$160,000 - \$179,999	11	0.7
\$180,000 - \$199,999	4	4.1
Over \$200,000	16	2.8
Missing Data	15	2.6

Education

Less than High School	5	0.9
High School Diploma	29	5.0
Some College	118	20.3
Associate's Degree	19	3.3
Bachelor's Degree	233	40.2
Master's Degree	115	19.8
Advanced Degree	57	9.8
Missing Data	3	0.8

Table 2

Factor Analysis: LBM

Item 1: Bored during free time	.746
Item 2: Recreation activities do not excite	.855
Item 3: Recreation time is boring	.894

Extraction method: Principal component analysis.

Table 3

Factor Analysis: PUPM

	Component Matrix	
	1	2
All Cases		
Item 1: Pornographic Magazines	.708	
Item 2: Pornographic Films	.730	
Item 3: Internet Pornography	.768	
Item 4: Hours Per Week	.781	
Males		
Item 1: Pornographic Magazines		.869
Item 2: Pornographic Films		.849
Item 3: Internet Pornography	.905	
Item 4: Hours Per Week	.885	
Females		
Item 1: Pornographic Magazines	.773	
Item 2: Pornographic Films	.779	
Item 3: Internet Pornography	.733	
Item 4: Hours Per Week	.680	

Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization.

Table 4

Cronbach's Alpha

Scale	Group	N	α
LBM	All Cases	580	.78
PUPM	All Cases	564	.74
	Males	283	.71
	Females	280	.73

Table 5

Descriptive Statistics

Scale	Group	N	M	SD
LBM	All Cases	580	3.63	1.07
	Males	289	3.69	1.14
	Females	290	3.57	0.99
PUPM	All Cases	577	0.77	2.15
	Males	288	1.33	2.81
	Females	288	0.20	0.87

Note. PUPM means and standard deviations were calculated before z-scores to the natural log plus one transformation.

Table 6

Correlation between Pornography Use (n = 577) and Leisure Boredom (n = 580): All Cases

	1	2
Pornography Use	—	.14**
Leisure Boredom	.14**	—

** $p < .01$

Table 7

Correlation between Pornography Use (n = 288) and Leisure Boredom (n = 289): Males

	1	2
Pornography Use	—	.17**
Leisure Boredom	.17**	—

** $p < .01$

Table 8

Correlation between Pornography Use (n = 288) and Leisure Boredom (n = 290): Females

	1	2
Pornography Use	—	.06
Leisure Boredom	.06	—

Table 9

Summary of Multiple Regression for Variables Predicting Pornography Use (n = 552)

Variables	B	SE B	β
Step 1			
Constant	-.37***	.11	--
Leisure Boredom	.32	.09	.15***
Step 2			
Constant	-.44**	.16	--
Leisure Boredom	.27	.08	.13**
Male	.53	.07	.35***
African American	.13	.14	.004
Asian American	.49	.17	.12**
Hispanic	-.22	.20	-.04
Multi Ethnic	.07	.16	.02
Other Race	.09	.20	.02
Catholic	.11	.08	.06
Latter-day Saint	-.31	.11	-.12**
Jewish	-.15	.15	-.04
Eastern	.43	.22	.08*
Other	.14	.17	.03
None	.29	.09	.14*
Agnostic or Atheist	.62	.14	.17***
Income	-.01	.01	-.03
Education	-.04	.02	-.07
Relationship Time	.06	.03	.08
Age	-.09	.03	-.12**

Note. $R^2 = .022$ for Step 1; Adjusted $R^2 = .202$ for Step 2; $\Delta R^2 = .18$ ($p < .001$) from Step 1 to Step 2. Constant in Step 2 is a reference variable and represents the variables: Female, Caucasian, and Protestant.

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

Table 10

Testing for a Quadratic Effect: Summary of Three-Step Regression Model for Variables Predicting Pornography Use (n = 552)

Variables	B	SE B	β
Step 1			
Constant	-.37**	.11	--
Leisure Boredom	.31	.09	.15***
Step 2			
Constant	.53	.40	--
Leisure Boredom	-.99	.56	-.47
Leisure Boredom Squared	.42	.18	.62*
Step 3			
Constant	.58	.38	--
Leisure Boredom	-1.20	.51	-.56*
Leisure Boredom Squared	.47	.16	.70**
Male	.53	.07	.35***
African American	.02	.14	.004
Asian American	.49	.17	.12**
Hispanic	-.23	.19	-.05
Multi Ethnic	.08	.16	.02
Other Race	.10	.19	.02
Catholic	.11	.08	.06
Latter-day Saint	-.33	.11	-.12**
Jewish	-.14	.15	-.04
Eastern	.46	.21	.08*
Other	.13	.17	.03
None	.30	.09	.14**
Agnostic or Atheist	.63	.14	.17***
Income	-.01	.01	-.03
Education	-.04	.02	-.08
Relationship Time	.07	.03	.09
Age	-.09	.03	-.13**

Note. $R^2 = .022$ for Step 1; Adjusted $R^2 = .028$ for Step 2; Adjusted $R^2 = .213$ for Step 3; $\Delta R^2 = .006$ ($p < .05$) from Step 1 to Step 2; $\Delta R^2 = .185$ ($p < .001$) from Step 2 to Step 3; Constant in Step 3 is a reference variable and represents the variables: Female, Caucasian, and Protestant.

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

Table 11

Gender Interaction Effect: Summary of Four-Step Regression Analysis for Variables Predicting Pornography Use (n = 552)

Variable	B	SE B	β
Step 1			
Constant	-.37**	.11	--
Leisure Boredom	.31	.09	.15***
Step 2			
Constant	-.57***	.11	--
Leisure Boredom	.28	.08	.13**
Male	.49	.06	.33***
Step 3			
Constant	-.32*	.16	--
Leisure Boredom	.07	.13	.03
Male	.05	.21	.03
Leisure Boredom × Male	.37	.17	.33*
Step 4			
Constant	-.24	.19	--
Leisure Boredom	.08	.12	.04
Male	.14	.21	.10
Leisure Boredom × Male	.32	.17	.29
African American	.01	.14	.003
Asian American	.49	.17	.12**
Hispanic	-.22	.19	.04
Multi Ethnic	.08	.16	.02
Other Race	.10	.19	.02
Catholic	.10	.08	.05
Latter-day Saint	-.30	.11	-.12**
Jewish	-.13	.15	-.03
Eastern	.43	.21	.08*
Other	.14	.17	.03
None	.29	.09	.14**
Agnostic or Atheist	.62	.14	.17***
Education	-.03	.02	-.07
Income	-.01	.01	-.03
Relationship Time	.06	.03	.08
Age	-.09	.03	-.12**

Note. $R^2 = .022$ for Step 1; Adjusted $R^2 = .124$ for Step 2; Adjusted $R^2 = .13$ for Step 3; Adjusted $R^2 = .206$ for Step 4; $\Delta R^2 = .102$ from Step 1 to Step 2 ($p < .001$); $\Delta R^2 = .006$ from Step 2 to Step 3 ($p = .03$); $\Delta R^2 = .076$ from Step 3 to Step 4. Constant in Step 3 is a reference variable and represents the variables: Female, Caucasian, and Protestant.

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

Table 12

Graphing H3 (Post hoc Analysis): Summary of Regression Analysis for Variables Predicting Pornography Use (n = 552)

Variable	B	SE B	β
Constant	-.02	.72	--
Leisure Boredom	-.23	1.03	-.11
Leisure Boredom Squared	.11	.35	.16
Leisure Boredom \times Male	-1.00	1.19	-.90
Leisure Boredom Squared \times Male	.41	.40	.65
Male	1.09	.83	.73
African American	.01	.14	.004
Asian American	.49	.16	.13**
Hispanic	-.22	.19	.04
Multi Ethnic	.09	.16	.02
Other Race	.12	.19	.02
Catholic	.10	.08	.05
Latter-day Saint	-.32	.11	-.12**
Jewish	-.13	.15	-.04
Eastern	.44	.21	.08*
Other	.13	.17	.03
None	.29	.09	.14**
Agnostic or Atheist	.62	.14	.17***
Education	-.04	.02	-.07
Income	-.01	.01	-.03
Relationship Time	.06	.03	.08
Age	-.09	.03	-.12**

Note. Adjusted $R^2 = .214$. Constant is a reference variable and represents the variables: Female, Caucasian, and Protestant.

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

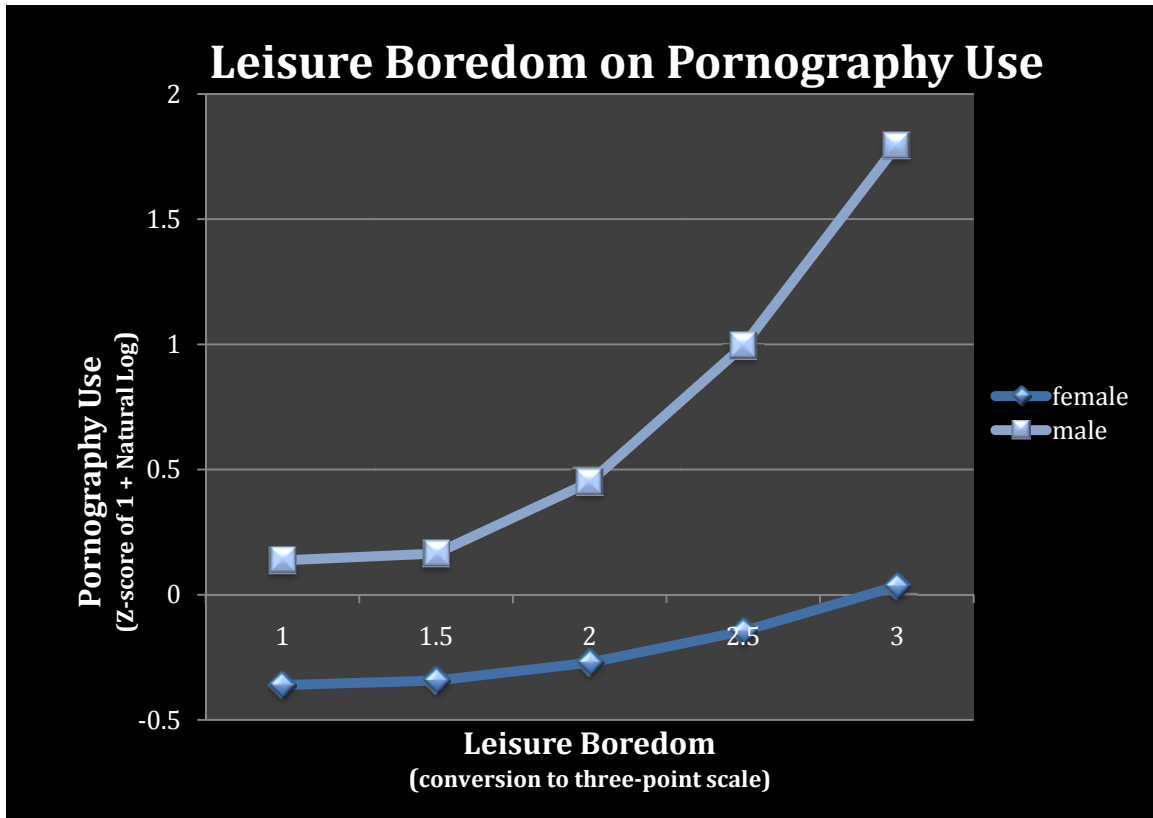


Figure 1.

Appendix A

Prospectus

Chapter 1

Introduction

The phenomenon of pornography is a controversial topic. Wilson (1973) suggests pornography first became a social issue in 1957 when the U.S. Supreme Court ruled that pornography was not protected under the First Amendment (*Roth v. United States*, 354 U.S. 476 (FindLaw, 2008)). As pornography access and revenues have increased exponentially in the past 15 years, so too has concern about pornography's moral implications and potential harmful effects. Although there is a "general consensus that pornography endangers the well-being of others" (Perrin, Madanat, Barnes, Carolan, Clark, Ivins, et al., 2008, p. 11), questions of free speech continue to arise.

It is also argued that pornography is a global public health issue. As such, pornography affects the health of individuals so dramatically that it is beyond their capacity to correct. In terms of policy, it has been proposed that pornography should be handled in away that protects society instead of focusing on individual rights (Perrin et al., 2008).

The advent of the Internet, cable, and satellite TV virtually eliminates physical and social barriers to pornography consumption. People have access at their fingertips (Cooper, 1998). They do not have to go to a store to purchase a magazine or rent a video, or worry about neighbors seeing a magazine wrapped in black plastic delivered to their home. Furthermore, the Internet has made pornography consumption in the workplace an area of concern (Lighted Candle Society, 2008). This is because pornography falls in the realm of leisure behavior (Shaw, 1999) and is considered tolerable deviant leisure (Stebbins, 1997).

Leisure theory and literature provide an excellent framework to understand and more carefully examine the phenomenon of pornography. The literature suggests that pornography use,

for the most part, is a homebased leisure time activity (Cooper, Delmonico, & Burg, 2000; Cooper, Scherer, Boise, & Gordon, 1999; Dew, Brubaker, & Hays, 2006). It has also been suggested that 47% of families cite pornography use as a problem in their home (Lighted Candle Society, 2008).

Tolerable deviant leisure is defined by Stebbins (1997) as activities which mildly threaten the moral norms held by members of a society and therefore fail to produce active governmental control. This type of leisure roots in sensory stimulation, and in particular, the creature pleasures it produces (Stebbins, 1997). Such activities include gambling, the use of cannabis, heavy drinking, and the illicit use of prescription medications for pleasure. Sexually deviant activities that are considered tolerable include cross-dressing, group sex, swinging, patronizing strip clubs, and using pornography (Stebbins, 1997).

Although socially tolerable, participation in these forms of deviant leisure costs both individuals and society (Shinew & Parry, 2005). For example, pornography use is also associated with substance abuse, deviant behavior, and clinical features of depression (Carroll, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008; Ybarra & Mitchell, 2005). Investigating pornography use from a leisure perspective may shed light on reasons for participation in tolerable deviant activities, specifically sexual deviance. Furthermore, Rojek (1999) suggested the study of deviant leisure as an important focal point for leisure scholars.

Leisure boredom is a theoretical construct that has been useful in investigating deviant leisure (Gordon & Caltabiano, 1996; Iso-Ahola & Crowley, 1991). Iso-Ahola and Weissinger (1990) define leisure boredom as the perception that available leisure activities fall short of desired psychosocial outcomes. For example an individual may enjoy flow experiences offered through rock climbing. As the individual further develops rock climbing skills, it is important

that it is matched by appropriate challenge levels. If an individual's rock climbing skill becomes greater than the challenge levels of climbing routes offered, boredom results (Csikszentmihalyi, 1990). Iso-Ahola and Crowley (1991) suggest that leisure boredom may be a "personality predisposition toward sensation seeking and low tolerance for constant experiences" (p. 260). Taken together, these perspectives suggest that both situational and dispositional factors influence leisure boredom.

Research suggest that individuals with high levels of leisure boredom are at risk for substance abuse and deviant behavior (Gordon & Caltabiano, 1996; Iso-Ahola & Crowley, 1991), poorer perceptions of mental and physical health (Sommers & Vodanovich, 2000; Weissinger, 1995), more clinical features of depression (Farmer & Sundberg, 1986; Sommers & Vodanovich, 2000) and are at greater risk of dropping out of high-school (Wegner, Flisher, Chikobvu, Lombard, & King, 2008). Individuals dispositionally prone to leisure boredom will seek relief through types of leisure that include physical activity and risk-taking. If the need for arousal is not met, sensory stimulating activities such as substance abuse may be the result (Iso-Ahola & Crowley). It is plausible that pornography is one of these sensory stimulating activities that are used to relieve leisure boredom through arousal.

Pornography generally occurs during free time (Cooper et al., 1999; Copper et al., 2000; Dew et al., 2006) and is a leisure behavior (Shaw, 1999; Shinew & Parry, 2005; Stebbins, 1997). It clusters with similar deviant behaviors and risk factors as leisure boredom. Furthermore, Stack, Wasserman, and Kern (2004) have criticized the literature and its primary focus on descriptive studies. They have also called for utilizing theory to explain why individuals use pornography. Leisure boredom offers an appropriate theoretical foundation for hypothesizing about why individuals use pornography.

Statement of the Problem

The first problem of this study is to investigate the relationship between leisure boredom and pornography use. The second problem of the study is to investigate leisure boredom's contribution to pornography use.

Purpose of the Study

The purpose of the study is to explore underlying motivations for pornography use in couples, specifically in the context of leisure boredom. Findings may provide insight that will help individuals, families, mental-health professionals and policy makers in understanding pornography use and abuse.

Significance of the Study

Many studies explore the associated risks that accompany pornography use. The results of this research provide a plethora of mixed findings and contradictions (Allen, D'Allesion, & Brezgel, 1995). It is the intent of this study to add to the body of knowledge regarding pornography through examining predicting factors for pornography use as opposed to associated risks and possible outcomes. Furthermore, this study seeks to strengthen the literature through the utilization of established theory that treats pornography as a leisure behavior.

Using a leisure lens makes it possible to investigate pornography in a different manner. Leisure theory posits that the absence of unhealthy leisure is not enough for high quality life. It is equally important that individuals make wise leisure decisions such that they may reap the physical, social, and psychological benefits that a leisure lifestyle offers (Stumbo & Peterson, 2009). This becomes more apparent when investigating couples.

Johnson, Zabriskie, & Hill (2006) found that satisfaction with couple leisure, especially home-based and regularly occurring leisure, was the greatest predictor of marital satisfaction.

This suggests that time and frequency in shared leisure is not nearly as important as the perception of a satisfying shared leisure experience. Lundberg, Zabriskie, Ward, and Nutter (2008) replicate these findings and report that the psychological needs for autonomy, competence and relatedness (Ryan & Deci, 2000) mediate this relationship. These studies highlight the importance of satisfying couple leisure involvement in maintaining strong marital ties.

Since pornography use is for the most part a homebased activity (Cooper et al., 2000; Cooper et al., 1999; Dew et al., 2006), and men use far more porn than women (Carroll et al., 2008; Cooper et al., 1999; Hald, 2006) couples may miss out on the benefits of satisfying couple leisure. This discrepancy becomes even more problematic when investigating attitudes towards pornography.

Carroll et al.'s (2008) sample of 818 emerging adults found that almost 90% of males used pornography, while almost 50% of females were not accepting of it. As these individuals begin to couple, such gender discrepancies between use and acceptance may be a source of marital conflict. Furthermore, it has been suggested that as perceived spousal support of leisure activities decreases, so does marital satisfaction (Baldwin, Ellis, & Baldwin, 1999). Thus, pornography use, if not supported by a spouse may act as a barrier to marital satisfaction and quality of life.

Looking through a leisure lens may also help to shed further light on pornography's effect on couples. Leisure's benefits, such as marital satisfaction through satisfying couple leisure (Johnson, et al., 2006) and spousal support of leisure (Baldwin et al., 1999), may never be obtained in relationships where pornography use is present. This leisure perspective may have implications for marriage and family therapists, family science educators, and therapeutic

recreation specialists. Furthermore this study's findings whether in harmony with theoretical directions or not, will shed light on one of the many constructs that may or may not influence pornography use.

Delimitations

The scope of the study will be delimited to:

1. Married or cohabiting couples with at least one child from a large northwestern city in the United States
2. Data collected for the Flourishing Families Project (FFP) in the spring of 2008. This collection was Time 2 of an ongoing longitudinal study exploring a broad range of family life.
3. Questions regarding leisure boredom and pornography use included in a battery of questionnaires administered participants in their homes under the supervision of trained undergraduate students. Students rigorously double checked each questionnaire packet for missing data before leaving each participant's home.
4. Pornography use patterns measured by five items. These items inquire into frequency of use of specific pornographic mediums (e.g. Internet, magazines, movies, etc.), average use in hours per week, and percentile of porn use with romantic partner.
5. Leisure boredom measured using two items from the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990) modified to be in harmony with the overall battery of questions. An additional question specifically asking about boredom during recreation time was also used to measure leisure boredom.

Limitations

The scope of the study will be limited to the following factors:

1. The sample was recruited using a purchased telephone survey database (Polk Directories/InfoUSA).
2. Participants were recruited from a large northwestern city in the United States mirroring census tract data of socioeconomic and racial stratification.
3. Although all answers are confidential, pornography use may be underreported.
4. Issues of validity and reliability may be encountered due to the modification of items from the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990).

Assumptions

The study will be conducted on the basis of the following assumptions:

1. Participants will answer all questions truthfully and will not be influenced by social desirability or fear of a breach in confidentiality due to the sensitive nature of some of the questions.
2. The revised items of the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990) will produce data wherein valid and reliable inferences may appropriately be made about the sample.
3. Undergraduates administering the questionnaires have followed standardized administration procedures.
4. The research participants represent a diverse sample of adult parents. Many of the theoretical connections between leisure boredom and pornography use reflect studies utilizing samples of youth and university students. It is assumed that many of the leisure

patterns developed during these time periods carry over into adulthood (Gordon & Caltabiano, 1996).

Hypotheses

The study will test the following research hypotheses:

1. H₁: A statistically significant ($p < .05$) relationship will be found between pornography use and leisure boredom.
2. H₂: When controlling for the demographic variables of education, income, race, age, years married, number of children, ages of children, and religion, leisure boredom will be a statistically significant ($p < .05$) predictor of pornography use.
3. H₃: The influence of leisure boredom on pornography will be greatest at higher levels of use.
4. H₄: The relationship between leisure boredom and pornography use will be significantly moderated ($p < .05$) by gender.

Definition of Terms

The following definition of terms is provided in order to give clarity to their use in the study:

Pornography. Media portrayals of sexual behaviors and pictorial nudity (Carroll et al., 2008).

Leisure boredom. The psychological perception that available leisure opportunities fall short of an individual's need for optimal arousal and is likely a result of both situational and dispositional factors (Iso-Ahola & Weissinger, 1990).

Leisure behavior. Behaviors occurring during non-constrained free-time.

Chapter 2

Review of Literature

Introduction

In 1968 the Commission on Obscenity and Pornography invited behavioral scientists to their first meeting. The purpose of the invite was to have experts in behavior present the extant data on the influence of pornography on individuals. The available data fell short of any meaningful indicators (Wilson, 1973). Therefore, under the direction of the Commission, researchers undertook studies to shed light on the impact of pornography. According to Wilson, who was subsequently appointed as Executive Director and Director of Research over the Commission, these events mark the beginning of pornography as psychological study.

Two years and dozens of studies later the following recommendation was made to the Commission:

If a case is to be made against “pornography” in 1970, it will have to be made on grounds other than demonstrated effects of a damaging personal or social nature. Empirical research designed to clarify the question has found no reliable evidence to date that exposure to explicit sexual materials plays a significant role in the causation of delinquent or criminal sexual behavior among youth or adults (Presidential Commission on Obscenity and Pornography, 1970, p. 139)

Following this recommendation, an influx of scientific inquiry into pornography use, criminal sexual behavior and aggression took place. It should be noted that the Commission was established as a result of public concern over the effects of pornography (Wilson, 1973). In other words, the general public assumed that exposure to pornography had detrimental ramifications. It

is upon these assumptions and the findings of the Commission that contradicted these assumptions that scientific inquiry into pornography would rest for the next 25 years.

Allen et al. (1995) perhaps best summarize scholarship around the use of porn from 1970-1995: “The controversy over the impact of pornography revolves around one central issue: whether exposure to pornography increases the subsequent probability of a person engaging in aggressive or violent sexual assaults” (p. 258). They go on to claim that after 25 years of research revolving around this central issue, that essentially, the findings are consistent with the Commission’s; namely inconclusive. This central focus, however, seemed to dissipate with the arrival of the internet.

Pornography Findings in the Internet Era

The advent of the Internet not only brought major shifts in daily life, but also in the use and study of pornography. For example, one of the most frequently searched topics on the Internet is “sex.” Approximately 4.2 million pornographic Web sites (12% of all Web sites) on the Internet produced revenues reaching 4.9 billion dollars in 2006. Total revenues of all pornographic mediums (video, magazines, pay-per-view, Internet) reached nearly 100 billion dollars in 2006. Furthermore, 90% of 8-16 year-olds have been exposed to Internet pornography (Ropelato, 2007).

Cooper (1998) attributes the exponential increase in porn use and revenues to the “Triple-A-Engine.” The Internet offers unprecedented *accessibility* (twenty-four hours a day, seven days a week) to pornography. *Affordability*, the second “A” removes financial barriers to pornography through cheap and even free Web sites. Being able to view Internet porn from the comfort of one’s home encapsulates the third “A,” *anonymity* (Cooper et al., 2000). The Triple-A-Engine suggests that many barriers to porn use are virtually removed through the Internet.

Removal of barriers to pornography has also opened up new lines of research. Research on pornography's link to violence spans over 25 years. Today, researchers are asking different questions about the effects of pornography. This shift in focus from pornography and violence to possible links between sexual experience, social behaviors, and attitudes, brings greater scientific clarity about the effects of pornography. These recent studies represent more diverse subject selection, including women, adolescents, and children. International samples, particularly in Scandinavia, underscore the importance of culture with regards to pornography use. This provides a broader perspective of pornography use and corresponding effects.

Sexual behavior. Johansson & Hammarén (2007) for example, investigated attitudes about pornography and sexual experience in a sample of Swedish 15-18 year-olds. Results showed significant differences between male and female pornography use and levels of arousal when viewing pornography, with males viewing far more pornography and reporting higher levels of arousals compared to females. Both males and females who had viewed pornography reported significantly more sexual activity than those who had not viewed pornography. These findings suggest that a link exists between sexual activity and pornography use in this adolescent sample.

Other studies also establish links between pornography use and increased levels of sexual promiscuity. Carroll et al. (2008), in their sample of 817 American university students found that pornography acceptance and use of pornography were predictors of sexual promiscuity and permissiveness. Porn use and acceptance was related to females' number of lifetime partners and number of partners in the previous year. This did not hold true for males. In terms of sexual promiscuity in a general sense, Carroll et al.'s findings are in harmony with Canadian (Morrison, Harriman, Morrison, Bearden, & Ellis, 2004), and Chinese (Lam & Chan, 2007) university

student samples. Porn use in males and porn acceptance in females were related to acceptance of extramarital activity. Based on these findings, Carroll et al. (2008) suggest looking at porn as not only a behavior, but also as a personal sexual ethic.

Youth and family. Ybarra and Mitchell (2005) used a nationally representative sample to investigate Internet use, caregiver-child relationships, psychosocial characteristics, and pornography seeking behavior of 1,501 youth ages 10 to 17. Those who frequented the Internet the most displayed the most pornography seeking behaviors. Online pornography seeking behavior was related to poor caregiver-child relations, low caregiver monitoring, and higher forms of coercive discipline. It was also significantly related to physical and sexual victimization, delinquent behavior, increased substance abuse, and clinical features of depression compared to nonseekers. These findings are in harmony with Carroll et al.'s (2008) findings regarding university students' substance abuse and porn use patterns. Furthermore, the clustering of porn use with other risk behaviors suggests that porn use is a risk factor for youth. Ybarra and Mitchell's (2005) findings regarding porn use and parent-child relations and parenting styles also supports the notion of porn use being a risk behavior. This research, linking porn use and clinical features of depression suggest that porn use may, concomitant to substance abuse and other deviant behaviors, be an outward manifestation of maladaptive internal processes.

For many individuals, the discovery of a romantic partner's compulsive pornography use can be quite traumatic. In one study of women who posted letters on an online support page, researchers found this to be the case (Bergner & Bridges, 2002). Upon discovery, these women's self perceptions changed. They felt worthless, sexually undesirable, weak, and stupid. Furthermore, their perceptions of their romantic partners included words such as liar, selfish, and sick. Where children were involved, the mothers reported seeing the users as failures as fathers.

These mothers perceived that their children may have been exposed to pornography, that the father was a poor example, and that pornography use resulted in decreased father availability.

Such rich description gives insight into pornography's potential disruptive influence in romantic relationships. These data, however, are based on reactions of women who perceived their partners as being heavy pornography users (Bergner & Bridges, 2002). Therefore, clinical diagnoses of sexual addiction, or lack thereof, cannot appropriately be inferred in these cases. A self-selection bias is quite likely considering that the sample was so distressed that they felt a need to post letters on the Internet. Subsequently, Bergner & Bridges conducted a follow-up study with a normative sample of women.

In this follow up study, Bridges, Bergner, and Hesson-McInnis (2003) investigated romantically involved women's perceptions of their partner's pornography use. Results indicated that two-thirds of the sample had fair to semipositive attitudes towards their partners' pornography use. But, one-third did show signs of distress over their partners' pornography use. Taken together, these two studies paint a mixed picture of pornography's effects on users' romantic partners.

In discussing the implications of their findings, Carroll et al. (2008) paint a clearer picture about pornography's indirect family effects. "[P]ornography use was linked to permissive sexuality and nonmarital cohabitation, two variables that have been found to be associated with less marital stability in future marriages (Dush, Cohan & Amato, 2003; Heaton, 2002; Stanley, Markman, Olmos-Gallo, Peters, Whitton, et al., 2004)" (p. 21). Whether pornography use causes these behaviors, or those who engage in such behaviors are more inclined to view pornography is an interesting question. These correlations, however, have significant implications to the families these individuals may go on to form.

In terms of parenting, both Lam and Chan (2007) and Ybarra and Mitchell (2005) included measures of parenting practices. Chinese university students' pornography use was correlated with low parental involvement. The American study correlated adolescent pornography use with increased coercive parenting and poorer caregiver-child emotional bonds. These findings help in understanding one more dimension of pornography's place in the family, by suggesting that pornography use may be symptomatic of other issues, such as unhealthy parent-child relations.

Culture. The importance of the cultural environment with regards to pornography use is seen in Scandinavian samples. Scandinavia comprises the countries of Denmark, Sweden, and Norway. Hald (2006), for example, attributes the high prevalence of pornography consumption in a nationally representative sample ($n = 688$) of 18-30 year-old heterosexual men and women in Denmark to “a permissive cultural environment, a relaxed and accepting public attitude towards pornography, and an increase in social acceptability to pornography consumption” (p. 582). Since 1975 Sweden has offered free abortions to women in their first trimester (Wallmyr & Welin, 2006). During this same time period youth centers were developed throughout the country to provide teens with sex education, contraception, and gynecological examinations (Häggström-Nordin, Sandberg, Hanson, & Tydén, 2006). Furthermore, adolescent sexuality in Sweden (Häggström-Nordin, Hanson, & Tydén, 2005), Denmark, and Norway is quite acceptable.

Hald and Malmuth (2008) suggest that “in the context of a highly liberal and sex educated society, pornography's impact is relatively positive” (p. 622). Using the same Danish sample reported by Hald (2006), they found a significant relationship between hardcore pornography use (media depicting sexual practices) and perceived positive effects, but not

negative effects. This relationship was linear and held true for both men and women. These findings make a significant contribution to the literature by underscoring the importance of culture and calling into question the generalizability of studies performed in the United States.

With this in mind, pornography's influence on individuals in sexually liberal societies should be measured using samples from similar societies. Although Hald and Malmuth's (2008) findings suggest that pornography may contribute to sexual and life satisfaction among sexually liberal individuals, this is inconsistent with other Scandinavian studies. For example, 18 to 19 year-old Norwegian males who self-reported a likelihood of having sex with 13-14 year-old females also reported more alcohol use and alcohol-related problems, higher levels of pornography consumption, and had friends who were interested in child and violent pornography. Furthermore, these males participated in coercive sex, bought sex, were lonely, had poorer relational skills, and greater depressive symptoms (Hegna, Mossige, & Wichstrøm, 2004). These findings, with regard to alcohol use, depressive symptoms, and pornography are in harmony with Ybarra and Mitchell's (2005) nationally representative sample of American youth. This suggests that when it comes to adolescents, the effects of porn are somewhat ubiquitous in sexually liberal and more sexually conservative societies.

Using a random sample of adult Swedes ($n = 2,450$), Långström and Seto (2006) investigated the prevalence and psychosocial correlates of exhibitionistic and voyeuristic behaviors. This is the first study to utilize a normative sample to investigate these paraphilia-like behaviors. Both voyeurism and exhibitionism were associated with being male, more substance abuse, greater frequencies of masturbation and pornography use, lower life satisfaction, and having more sexual partners. The authors suggest that belonging to a sociocultural subgroup has no bearing on the exhibitionism and voyeurism because the survey was conducted in a sexually

liberal country and immigrant status was not significantly related to these paraphilia-like behaviors. In this study, pornography clusters with sexual deviance. This is in harmony with Stack, Wasserman, and Kern's (2004) American adult sample.

Hald and Malamuth (2008) argue that the effects of pornography are culturally dependent. Their findings on the positive benefits of pornography in a Danish sample seem to give credence to their argument. Given this claim it would be expected that similar findings could be found in other reports on pornography conducted in Scandinavia. This, however, is not the case. Literature from the past five years suggests that Hald and Malamuth's findings are not in harmony with other findings throughout Scandinavia, thus calling into question their claim that pornography is beneficial in a sexually liberal society.

Porn-violence connection. The shift of focus in pornography scholarship has also brought greater clarity to the pornography-violence question. For example, Allen et al. (1995) found in their meta-analysis of 30 works focused on pornography and aggression under laboratory conditions that "pictorial nudity reduces subsequent aggressive behavior, that consumption of materials depicting nonviolent sexual activity increases aggressive behavior, and that media depictions of violent sexual activity generates more aggression than those of nonviolent sexual activity" (p. 258). This suggests that pornography depicting sexual activity under laboratory conditions may cause aggression. The pictorial nudity findings and aggression reduction suggests that a linear explanation for the relationship between pornography and aggression may be too simplistic.

Oddone-Paolucci, Genius, & Violato (2000), however, claim that the results from their meta-analysis of 46 studies (total $n = 12,323$) from 1962 to 1995 "provide clear evidence confirming the link between increased risk for negative development when exposed to

pornography” (p. 48). Their findings suggest a strong link between pornography use, sexual deviancy, sexual perpetration, acceptance of the rape myth, and negative attitudes toward intimate relationships. They further suggest that their findings are stable and generalizable, and that the question of pornography’s influence on violence and families is resolved.

It has also been suggested that the pornography-violence link is mediated by predispositions to aggression. Vega and Malamuth (2007) found that only in the presence of general hostility, hostile masculinity, and impersonal sex were high levels of pornography use predictive of sexual aggression. When these factors were absent, so too was pornography’s predictive power for sexual aggression. These findings highlight the role of individual dispositions and differences in the pornography-violence link.

From this second wave of pornography research, the scientific community is better able to understand pornography’s influence on individuals. Greater emphasis in research now focuses on pornography’s possible connection to sexual behavior, substance abuse, mental health, and even parenting styles rather than the link to sexual aggression and crime. Studies are also showing porn’s influence on the family and romantic partners of consumers. Additionally, an influx in pornography research is being conducted on an international level to determine cultural similarities and differences. Although these studies offer more insight into pornography use than the porn and violence connection, they, for the most part are descriptive in nature. Theoretical elements are interwoven and used to explain findings. Hypothesis formulation, however, is absent of theoretical guidance.

Pornography and Theory

With a few exceptions, theory in the pornography literature has primarily been used to clarify its link to sexual aggression and violence. Social learning theory (Bandura, 1986) and

excitation theory (Zillman, 1971) are two theories that dominate this focal area (see Allen et al., 1995; Bauserman, 1996). Studies that utilize theory to explain why individuals use porn, however, are quite scant. Furthermore, the use of theory to formulate hypotheses about porn users' primary motivations is almost nonexistent (Stack et al., 2004).

Social learning/cognitive theory. Social learning theory posits that media learning is a vicarious experience and “serves as a vehicle for learning appropriate and inappropriate forms of behavior” (Allen et al., 1995, p. 262). Pornography objectifies women through its portrayal of positive rewards (pleasure, sexual gratification) resulting from impersonal and sometimes violent sexual behavior. It is contended that violent pornography legitimizes sexual coercion and aggression by depicting such actions as appropriate and rewarding (Allen et al., 1995; Bauserman, 1996).

Allen et al. (1995), using social learning theory, hypothesized that exposure to violent pornography would increase aggressive behavior under laboratory conditions. They also hypothesized that subjects exposed to nonviolent pornography would not experience such increases. Their meta-analysis of 30 studies confirmed the first hypothesis but contradicted the second. In other words, individuals exposed to nonviolent forms of pornography also had increased levels of aggression. Allen et al. suggest that this contradictory finding “demonstrates some potentially fundamental problems with that approach [social learning theory] as a complete explanation for the effects reported” (p. 271).

Social learning theory is also used to explain higher levels of sexual activity in subjects who consume more pornography. Morrison et al. (2004) found that nonvirgin Canadian university students used far more pornography than their virgin counterparts. Furthermore, nonvirgin females who reported higher levels of pornography use also reported more frequent

sexual activity than nonvirgins who reported lower levels of pornography use. Whereas other studies report similar findings (see Carroll et al., 2008; Johansson & Hammarén, 2007; Lam & Chan, 2007), this study sets itself apart by using established theory to formulate hypotheses about this phenomenon. Their findings suggest pornography is indeed a teacher of appropriate and inappropriate behavior.

Social cognitive theory (Bandura, 1986) posits a reciprocal relationship between humans and their environment. Although media does in fact help to shape human cognition and behavior, this influence is mediated by existing values and beliefs. When looking specifically at pornography use, social cognitive theory is interested in outcome expectations (anticipated outcome of behavior) and expectancies (value placed on behavior and outcome). In other words, measuring outcome expectations and expectancies for pornography use may help to predict use and identify motivations behind use.

Goodson, McCormick, and Evans (2001) measured Internet pornography use as well as outcome expectations and expectancies in a sample of 506 undergraduate students. They found significant correlations between both outcome expectations ($r = .41, p < .01$) and expectancies ($r = .43, p < .01$) and Internet pornography use. This suggests that the higher the anticipated outcome and value placed on a behavior, the more likely one will engage in that behavior. A strong relationship between outcome expectations and expectancies ($r = .62, p < .01$) does however, suggest multicollinearity and thus suggests that these variables are measuring the same construct. Reported findings imply that social cognitive theory can be used to predict internet pornography use. It should also be noted that Goodson et al.'s work represents one of the few studies not investigating the pornography-violence link that utilizes theory to formulate hypotheses.

Excitation transfer theory. Bauserman (1996) contends that excitation transfer theory is probably the most relevant framework for explaining sexual aggression during and shortly after pornography use. According to Zillman (1971), excitation transfer happens after an individual is physiologically aroused. Residual arousal persists a few minutes after stimulation ceases. This increases the likelihood of intensified reactions to subsequent stimuli. This framework has been used to guide numerous experimental studies wherein researchers intentionally agitate subjects exposed to different forms of pornography in order to measure levels of aggression.

Conceptually, excitation transfer theory does not differentiate between sources of arousal (Bauserman, 1996). For example, an individual who just finished working out may become quite aggressive to minor agitating stimuli, whereas before working out this may not have occurred. Furthermore, empirical evidence suggests other weaknesses. Allen et al.'s (1995) meta-analysis of experimental studies looking into aggression post pornography viewing contradicts the basic inferences of excitation transfer theory. Comparing three different types of pornography, (1) pictorial nudity, (2) nonviolent pornography, and (3) violent pornography, they found that both forms of pornography increased aggression levels. Pictorial nudity, however, decreased levels of aggression. This finding suggests that excitation transfer theory may not be appropriate to explain sexual aggression during and post pornography viewing.

Underlying motivations. Stack et al. (2004) note that Internet porn's coverage in the literature "has consisted of descriptive treatments of the subject. These analyses do not rigorously test major sociological theoretical perspectives of why some people use cyberporn and others do not" (p. 76). Using sociological theories of deviant behavior to formulate hypotheses, they found that male gender, weak ties to religion and marriage (low marital satisfaction), and past sexual deviant behavior were all significant predictors of cyberporn use. Forty percent of the

total variance is explained by these variables. Furthermore, individuals engaging in extramarital affairs were 3.18 times more likely to use cyberporn, while those who had engaged in paid sex were 3.7 times more likely to use cyberporn. Stack et al. (2004) conclude by suggesting that strengthening social ties to religion and marriage may reduce an individual's propensity to using Internet porn.

Stack et al.'s (2004) study makes a significant contribution to the body of knowledge around porn use in two major areas. First, the use of theoretical frameworks of social bonds and deviance, is used to formulate hypotheses. Secondly, whereas previous work has sought to shed light on psychosocial correlates and the associated risks of porn use, this study sought to elucidate the motivations underlying why people use. The inherent moral and political inclination to prove the harmful effects of porn overlooks the possibility that porn use may in fact be symptomatic of other social and or psychological processes. Furthermore, a greater understanding of why certain individuals use pornography and some do not, may shed more light on the effects of pornography.

Leisure. Shaw (1999), Shiner and Parry (2005), and Stebbins (1997) suggest that pornography consumption is a form of leisure. With 47% of American families citing pornography use as a problem in their home (Lighted Candle Society, 2008), categorizing pornography as leisure is reasonable. Cooper et al. (1999) report findings that are in harmony with this categorization. They found in their sample of 9,177 adults that the majority participated in online sexual activities at home. Pornography falls under the umbrella of online sexual activities, and thus it can be reasonably argued that since the majority of these behaviors occur in the home, that pornography use is indeed a behavior occurring during leisure time.

A second analysis of the data reported in Cooper et al. (1999) focused on cybersex compulsives. Cooper et al. (2000) found that 17% (n =1,527) of their normative sample of 9,177 reported being in the problematic range (moderately sexually compulsive, sexually compulsive, cybersex compulsives). They also indicated that college students are more likely to be found in the cybersex compulsive group. Possible reasons for this were experimentation associated with this developmental stage and more private leisure time (Cooper et al., 2000).

Dew et al. (2006) investigated the online sexual activities (OSA) and extramarital affairs of 508 heterosexual married males. Seventy-eight percent of the subjects reported having at least one face-to-face sexual encounter with a person they met in a chat room. The majority of OSA occurred from a home computer. Wife or child(ren) home had little constraining effect on OSA. This supports the findings of Cooper et al. (1999) and Cooper et al. (2000) that OSA, including pornography use, occurs at home and during leisure time.

Shaw (1999) is perhaps one of the only leisure scholars to investigate pornography. Using grounded theory methodology she found that her sample of Canadian women had negative to fearful attitudes towards pornography. She also reports perceptions of pornography's negative impact on women's identities and relationships to men. Shaw concludes that pornography is not a leisure behavior for women and that "pornography can be seen as the quintessential leisure activity in which women are used as objects of men's leisure" (p. 209). As such, pornography adds to hegemonic femininity and masculinity and thus reinforces sexist attitudes towards women.

Shaw's (1999) study is noteworthy because it considers pornography to be leisure for men. Due to its qualitative nature, however, established leisure theory was not used to formulate hypotheses. In order to better ascertain the underlying motivations for porn use, hypotheses need

to be guided by established theory. Recent literature suggests that pornography occurs during one's leisure. Therefore, a leisure framework is needed to guide investigations into the pornography phenomenon.

Leisure Boredom

Leisure boredom is a theoretical construct that may help explain motivations behind porn use. Iso-Ahola and Weissinger (1990) conceptualize leisure boredom as the psychological perception that available leisure opportunities fall short of an individual's need for optimal arousal. It is likely a product of both dispositional and situational factors (Iso-Ahola & Weissinger, 1990), is a state of dissatisfaction, and is "a disruption of the intrinsic motivation process in leisure time" (Weissinger, Caldwell, & Bandalos, 1992, p. 324). Leisure boredom is also negatively related to desirable developmental outcomes and positively related to undesirable outcomes. (Gordon & Caltabiano, 1996; Iso-Ahola & Crowley, 1991; Wegner et al., 2008; Widmer, Ellis, & Trunnell, 1996; Weissinger, 1995).

In an attempt to establish a link between perceived physical and mental health and leisure boredom, Weissinger (1995) compared groups within a sample of undergraduate students ($n = 779$) who scored in the upper and lower quartiles on the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990). The data suggested that the group in the upper quartile differed significantly on measures of physical health satisfaction, rating and worry as well as mental health rating and satisfaction than the group in the lower quartile. These significant differences were in the hypothesized directions, namely satisfaction and rating were lower while worry was higher in the group who scored in the upper quartile on the Leisure Boredom Scale and are in harmony with Iso-Ahola and Weissinger (1990).

Weissinger's statistical analyses make these findings even more compelling. In order to control for study wide inflation due to six univariate analyses, a Bonferroni correction was used producing a more conservative p value of .008 for the critical regions (Weissinger, 1995). The groups in the upper and lower quartile "reported relatively low levels of boredom. This actually makes the findings more conservative, in that the effect on health was found even with lower levels of boredom" (p. 27). The Bonferroni correction and the low levels of boredom between the high and low groups, taken together, strengthen the link between leisure boredom and poor health. Weissinger suggests that this link means one of two things. Either leisure boredom causes poor health behaviors such as substance abuse, or "boredom may be related to dispositional states that produce less 'buffering' of the effects of life stress" (p. 28). Leisure scholars' investigation of the former of the two explanations has produced some compelling results.

An Australian study examines the role self-esteem, sensation seeking (Zuckerman, Kolin, Price, & Zoob, 1964) and leisure boredom plays in urban and rural adolescents' leisure behavior (Gordon & Caltabiano, 1996). Urban adolescents who report high substance use also exhibit low self-esteem, high sensation seeking, and high leisure boredom. Urban adolescents who scored highest on sensation seeking and leisure boredom were the heaviest substance abusers. The rural adolescents' substance use was affected most by self-esteem followed by sensation seeking, with leisure boredom having the least impact of the three. The heaviest substance users in the rural adolescent sample had low leisure boredom. Furthermore, the urban sample's sensation seeking scores paralleled crime involvement, while leisure boredom scores paralleled crime involvement in the rural sample. Taken together, adolescents who engage in deviant leisure (crime and substance abuse) tend to have low self-esteem, high sensation seeking and leisure boredom. The importance placed on each variable with regards to participation in deviant leisure is somewhat

affected by area of residence.

These findings paint a mixed picture of leisure boredom's role in adolescent substance use. They are in harmony, however with Iso-Ahola and Weissinger's (1990) finding linking leisure boredom to low self-esteem. But, Weissinger's (1995) conclusion that leisure boredom affects health by causing individuals to make poor health decisions, such as substance use, is partially called into question. This is furthered by null findings between leisure boredom and alcohol use in Australian undergraduates (Patterson, Pegg, & Dobson-Patterson, 2000) and in South African eleventh graders (Wegner, Flisher, Muller, & Lombard, 2006). Evidence supporting Weissinger's (1995) conclusion, however, does exist both theoretically and empirically.

Wegner et al. (2008) reported in their sample of South African eighth-grade students ($n = 308$) that leisure boredom was a significant predictor of dropping out of school. This held true for students 14 years and older, but not younger students. Studies by Flisher, Townsend, Chikobvu, Lombard, and King (2004, 2005) draw empirical connections between school drop-out, sexual risk behavior, and substance abuse. Given these connections, and the influence of leisure boredom on school-drop out, leisure boredom should have an effect on substance use.

Widmer et al. (1996) using known group samples found that substance abusers scored significantly lower on a measure of ethical leisure behavior (AEBLS) than nonsubstance users. The sample also completed a measure on substance abuse and the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990). Both were significantly and negatively correlated with AEBLS scores. A study using a shorter version of the AEBLS replicated these results (Widmer, Ellis, & Munson, 2003). These findings suggest that substance use and leisure boredom are somehow related, if only indirectly.

A known group study was, however, conducted which suggests a direct link between leisure boredom and substance abuse. Utilizing a sample of 39 adolescent substance users and 81 nonsubstance users, Iso-Ahola and Crowley (1991) found that the substance users had significantly higher leisure boredom scores than the nonsubstance users. They also found that the substance users participated in more leisure activities and pursued more active types of leisure. It was concluded that these substance users “seek to achieve optimal arousal, and thereby decrease leisure boredom, through the use of illicit substances. From such a perspective, the use of substances becomes an activity choice and can be viewed as a leisure behavior” (p. 268).

Iso-Ahola and Crowley’s (1991) conclusion explains the process behind Weissinger’s (1995) claims regarding health, leisure boredom, and substance abuse. It can thus be argued that individuals who experience high levels of leisure boredom are likely seek out leisure activities that will meet their need for optimal arousal. The use of pornography may in fact be one of these leisure activities.

Leisure Boredom and Pornography

Both pornography and leisure boredom are directly and indirectly linked to substance abuse (Carroll et al., 2008; Gordon & Caltabiano, 1996; Iso-Ahola & Weissinger, 1991; Wegner et al., 2008; Widmer et al., 1996; Widmer et al., 2003; Ybarra & Mitchell, 2005) and sensation seeking (Cooper et al., 2000; Gordon & Caltabiano, 1996). Furthermore, boredom and pornography use are related to clinical features of depression (Farmer & Sundberg, 1986; Sommers & Vodanovich, 2000; Ybarra & Mitchell, 2005). The data suggest pornography is often used at home and during leisure time (Cooper et al., 1999; Cooper et al., 2000; Dew et al., 2006). Research examining the overlapping correlations between pornography and leisure

boredom may provide greater insight into porn use.

Regarding pornography research, Zillman (2000) suggested measuring social and psychological factors in order to better ascertain factors contributing to the development of certain sexuality dispositions, such as pornography. Carroll et al. (2008) suggested that pornography use be considered both a behavior and a sexual ethic, suggesting the presence of individual differences in pornography motivations. Additionally, Stack et al. (2004) pointed out the overuse of descriptive studies on pornography use and emphasized the rigorous testing of sociological theories to help explain why individuals use pornography.

Stack et al.'s call for the rigorous testing of theories, Zillman's call for measuring psychological factors in order to explain dispositions toward the use of pornography, and Carroll et al.'s reference to pornography as a sex ethic, warrants the use of established theory in helping to explain why individuals use pornography. Treating pornography use as leisure behavior engaged by those who experience high levels of leisure boredom may answer the calls of both Stack et al. and Zillman in attempting to further the knowledge of why people use porn. Therefore, the purpose of this study is to investigate the relationship between pornography use and leisure boredom and test leisure boredom's predictive power of individuals' porn use.

Chapter 3

Methods

The purpose of the study is to investigate potential relationship(s) between leisure boredom and pornography use in a sample of married and cohabiting couples with children. The following organizational steps are addressed in this section: (a) participants; (b) procedure, (c) measurement tools; and (d) data analysis.

Participants

The participants for this study will be taken from the *Flourishing Families Project (FFP)* Time 2 dataset. The FFP is an ongoing, longitudinal study of inner family life involving families with a child between the ages of 10 and 14. This study will focus on married and cohabiting couples who participated in the FFP completed an in-home questionnaire.

Procedure

Participant families for the FFP were selected from a large northwestern city and were interviewed in the winter, spring, and summer of 2007. Families were primarily recruited using a purchased national telephone survey database (Polk Directories/ InfoUSA). This database claims to contain 82 million households across the United States and has detailed information about each household, including presence and age of children. Families identified using the Polk Directory were selected from targeted census tracts that mirrored the socio-economic and racial stratification of reports of local school districts. All families with a child between the ages of 10 and 14 living within target census tracts were deemed eligible to participate. Eligible families were subsequently contacted directly using a multi-stage recruitment protocol. First, a letter of introduction was sent to potentially eligible families. Second, interviewers made home visits and phone calls to confirm eligibility and willingness to participate in the study. Once

eligibility and consent were established, interviewers made an appointment to come to the family's home to conduct an assessment interview.

In addition to the random selection protocol used with the survey database, families were recruited into the study through family referral. At the conclusion of their in-home interviews, families were invited to identify two additional families in the recruitment area that matched study eligibility. This type of limited-referral approach permitted us to identify eligible families in the targeted area that were not found in the Polk Directory. The Polk Directory national database was generated using telephone, magazine, and Internet subscription reports; therefore, families of color (especially those of lower socio-economic status) are under-represented in the database. By broadening our approach and allowing for some limited referrals, we were able to significantly increase the social-economic and ethnic diversity of the sample.

Through these recruitment protocols, a total of 692 potentially eligible families were identified within the survey database as living within the targeted census tracts. Of those, 372 were determined to have a child within the target age range. Of those, 64% agreed to participate ($n = 238$). Additionally, there were 372 families referred by participating families, 262 of whom agreed to participate (71%). The most frequent reasons cited by families for not wanting to participate in the study were lack of time and concerns about privacy. It is important to note that there were very little missing data. As interviewers collected each segment of the in-home interview, questionnaires were screened for missing answers and double marking. These same procedures were used for Time 2 data collection and were restricted to married and cohabiting couples.

Measurement Tools

The variables of interest in this study are leisure boredom and pornography use. A three-item questionnaire was developed by adapting two items from the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990) and constructing an item that directly inquires about boredom during recreation. A measure of pornography use patterns was constructed by the FFP primary investigators. Both of these measures were included in the Time 2 battery. Demographic questions were also included in the battery.

Leisure Boredom Scale. Two items from the Leisure Boredom Scale (LBS, Iso-Ahola & Weissinger, 1990) were included in the FFP Time 2 battery due to space constraints. Response choices for the LBS are on a five-point Likert-scale (strongly disagree to strongly agree) and a higher score suggests higher levels of leisure boredom.

The LBS's initial construction included 28 items which were then refined by 35 faculty members and graduate students in leisure studies (Iso-Ahola & Weissinger, 1990). A pretest was given to a sample of 55 undergraduate students. Items which had at least a .30-item total correlation and were deemed to have content validity from at least 75% of the judges were included in the final measure (Iso-Ahola & Weissinger). Sixteen items met this criteria and make up the LBS (see Appendix A-1a).

Initial evidence of construct validity was established over the course of three studies. Cronbach's Alpha coefficients were estimated for internal consistency and acceptable estimates were reported (.85, .88, and .86 respectively). Taken together, the LBS reports the necessary psychometric properties to make valid and reliable inferences regarding leisure boredom.

FFP Leisure Boredom Measure. Two of the items from the LBS (Iso-Ahola & Weissinger, 1990) were adapted before being amended to the FFP battery for Time 2. Items three

and fourteen of the LBS were rewritten in the past tense to be in harmony with the other items in the questionnaire. Furthermore, an item asking specifically about boredom during recreation time was added. Following are the three items that are contained in the FFP Leisure Boredom Measure (see Appendix A-1b):

1. I felt bored during my free time.
2. The recreation activities I engage in did not excite me.
3. My recreation time was boring.

Participants are instructed to read the FFP Leisure Boredom items and indicate the number of times they have experienced the statements in the past week. Response choices fall on a 3-point Likert-scale (Never, Some of the time, Most of the time). A higher score suggests greater levels of leisure boredom. To test for internal-consistency a Cronbach's Alpha coefficient will be estimated upon data analysis.

FFP Pornography Use Patterns Measure. In order to measure pornography use patterns within the FFP sample, five items were added to the Time 2 battery. The first three questions measure the frequency of pornography use with various formats in the past year. Response choices fall on a scale from 0 to 5 ranging from "Never" to "Every day or almost everyday." The fourth question asks for an estimated average of hours per week spent viewing pornographic materials regardless of format. The final item asks for percentile of porn consumption that is a romantic partner versus solo (see Appendix A-1b for pornography use patterns items).

Demographics. Demographic data will be collected in the following areas: income, race, age, marital status, number of children, ages of children, sexual orientation, and religion.

Data Analysis

Data will be analyzed using the Statistical Package for Social Sciences (SPSS) Version 16.0 computer software. Basic descriptive statistics of the demographic data will be calculated. Due to reported differences in male and female pornography use, the data will be analyzed according to gender. H₁ will be tested by calculating a Pearson's correlation for leisure boredom scores and pornography use. In order to test H₂, a multiple regression model explaining the variance within pornography use will be created using the variables leisure boredom, education, income, race, age, marital status, number of children, ages of children, sexual orientation, and religion. H₃ will be tested by creating the variable *Leisure Boredom x Leisure Boredom* and putting it into the regression model, thus testing for a quadratic effect. Finally, H₄ will be tested by creating the interaction variable *Gender x Leisure Boredom* and putting it into the regression model.

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Appendix A-1a

Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990)

TABLE ONE
Leisure Boredom Scale

INSTRUCTIONS: The statements listed below are intended to find out how you feel about your leisure time. Just respond to each item as it applies to *your* leisure time. By "leisure time" we mean the *non-work* hours in your day.

Please respond to each of the 16 statements. You do this by circling the number that shows how much you agree or disagree with the statement. For example, by circling a 5, you are showing that you *Strongly Agree* with the statement as it applies to your leisure time. Please use the scale below to respond to each statement.

THANK YOU!

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. For me, leisure time just drags on and on.	1	2	3	4	5
*2. During my leisure time, I become highly involved in what I do.	1	2	3	4	5
3. Leisure time is boring.	1	2	3	4	5
*4. If I could retire now with a comfortable income, I would have plenty of exciting things to do for the rest of my life.	1	2	3	4	5
5. During my leisure time, I feel like I'm just "spinning my wheels."	1	2	3	4	5
6. In my leisure time, I usually don't like what I'm doing, but I don't know what else to do.	1	2	3	4	5
*7. Leisure time gets me aroused and going.	1	2	3	4	5
*8. Leisure experiences are an important part of my quality of life.	1	2	3	4	5
*9. I am excited about leisure time.	1	2	3	4	5
10. In my leisure time, I want to do something, but I don't know what I want to do.	1	2	3	4	5
11. I waste too much of my leisure time sleeping.	1	2	3	4	5
*12. I like to try new leisure activities that I have never tried before.	1	2	3	4	5
*13. I am very active during my leisure time.	1	2	3	4	5
14. Leisure time activities do not excite me.	1	2	3	4	5
15. I do not have many leisure skills.	1	2	3	4	5
*16. During my leisure time, I almost always have something to do.	1	2	3	4	5

*Reverse coding.

Appendix A-1b

FFP Leisure Boredom Measure & FFP Pornography Use Patterns Measure

► **Instructions:** We would like to know how you have been this **past week**. Read each statement and decide how often you have felt this way in the past week.

How often did this happen in the PAST WEEK?	Never	Some of the time	Most of the time
12. I felt bored during my free time.	1	2	3
13. The recreation activities I engage in did not excite me.	1	2	3
14. My recreation time was boring.	1	2	3

During the past 12 months, on how many days did you:

	Never	Once a month or less	2 or 3 days a month	1 or 2 days a week	3 to 5 days a week	Every day or almost everyday
1. View pornographic magazines?	0	1	2	3	4	5
2. View pornographic videos or movies?	0	1	2	3	4	5
3. View pornographic Internet sites?	0	1	2	3	4	5
4. On average, how many hours a week do you spend viewing pornographic materials (magazines, movies, Internet sites, adult-novels, etc.)? _____						

5. When you view pornography, what percent of the time do you view it with your spouse or partner versus viewing it alone?
- | | |
|---------------------------------------|---|
| a. I never view pornography. | e. About 50% alone, 50% with partner. |
| b. 100% alone, 0% with partner. | f. About 25% alone, 75% with partner. |
| c. About 90% alone, 10% with partner. | g. About 10% alone, about 90% with partner. |
| d. About 75% alone, 25% with partner. | h. About 0% alone, 100% with partner. |