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An Examination of Internet Pornography Usage Among Male Students at Evangelical Christian Colleges

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AN EXAMINATION OF INTERNET PORNOGRAPHY USAGE AMONG MALE STUDENTS AT EVANGELICAL CHRISTIAN COLLEGES

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BY
PAUL O. CHELSEN
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TABLE OF CONTENTS

ACKNOWLEDGEMENTS iii

LIST OF TABLES viii

ABSTRACT ix

CHAPTER ONE: INTRODUCTION 1
  Background 1
  Statement of the Problem 7
  Theoretical Framework 13
  Purpose of the Study and Research Questions 17
  Significance of the Study 18
  Conclusion 19

CHAPTER TWO: REVIEW OF LITERATURE 21
  College Student Attitudes toward Pornography 21
  Effects of Internet Pornography on College Students 28
  The Debate between Sexual Compulsion and Sexual Addiction 36
  Sexual Addiction and College Students 49
  Sexual Compulsion and College Students 57
  Conclusion 63

CHAPTER THREE: METHOD 65
  Overview of Chapter 65
  Rationale for the Methodology 65
  Research Design 66
  Instrument Development, Validity, and Reliability 67
  Study Population 75
  Data Collection Measures 78
    Criteria for Institutional Sample 78
    Criteria for Student Sample 79
    Use of Institutional Liaison 79
    Gaining Institutional Access 80
    Distribution and Receipt of Surveys 80
  Data Analysis 82

CHAPTER FOUR: RESULTS 84
  Overview of Chapter 84
  Survey Administration 84
  Background Questions 86
  Research Questions 92
  Data Preparation 93
    Validation 94
CHAPTER FIVE: CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Key Findings and Implications

- Extent of Internet Pornography Access
- Relationship between Extent of Internet Pornography Access and Select Predictors
- Is Viewing Internet Pornography Justified?

Recommendations

- Publish the Evangelical Biblical Sexual Ethic
- Teach the Evangelical Biblical Sexual Ethic
- Provide Peer-to-Peer Resources
- Encourage Online Boundaries
- Harness Consequences
- Develop Assessment Tools

Research Limitations

Suggestions for Future Research

Conclusion

APPENDIX A: APPROVAL TO USE INSTRUMENT

APPENDIX B: SAMPLE PARTICIPANT RECRUITMENT E-MAIL

APPENDIX C: SAMPLE COOPERATING INSTITUTION LETTER

APPENDIX D: INSTITUTIONAL RESEARCH INVITATION
<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Participant Informed Consent Form</td>
<td>155</td>
</tr>
<tr>
<td>F</td>
<td>Instrument</td>
<td>159</td>
</tr>
<tr>
<td>G</td>
<td>Email Reminder #1</td>
<td>185</td>
</tr>
<tr>
<td>H</td>
<td>Email Reminder #2</td>
<td>187</td>
</tr>
<tr>
<td></td>
<td>Reference List</td>
<td>189</td>
</tr>
<tr>
<td></td>
<td>Vita</td>
<td>196</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Response rate information</td>
<td>86</td>
</tr>
<tr>
<td>2. Class comparison between response rate and survey population</td>
<td>88</td>
</tr>
<tr>
<td>3. Frequency of Internet pornography viewing</td>
<td>96</td>
</tr>
<tr>
<td>4. Time, on average, viewing Internet pornography per week</td>
<td>96</td>
</tr>
<tr>
<td>5. Linear correlations regarding extent of Internet pornography access</td>
<td>99</td>
</tr>
<tr>
<td>6. Multiple regression analyses with five predictors of Internet pornography use</td>
<td>109</td>
</tr>
<tr>
<td>7. Multiple regression analyses with seven predictors of Internet pornography use</td>
<td>111</td>
</tr>
<tr>
<td>8. Multiple regression analyses with seven predictors of Internet pornography use</td>
<td>114</td>
</tr>
</tbody>
</table>
ABSTRACT

Internet pornography access among male students at Evangelical Christian colleges presents two dilemmas. First, Internet pornography access is institutionally prohibited based on a Biblical view of sexuality. The second dilemma is that individual students who choose to follow the teaching of Jesus Christ in the context of Evangelical Christian faith tradition can experience internal distress in response to Internet pornography access. No empirical study to date has examined Internet pornography access only among male undergraduates only at Evangelical Christian colleges. The first guiding research question is, “To what extent do male undergraduates at select Evangelical Christian colleges in the Midwest access Internet pornography?” The second guiding research question is, “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online use and online sexual behavior that is social in nature?” This correlational study collected data through an online survey with 46 questions and was sent to 2,245 male undergraduate students at three different Evangelical Christian colleges in the Midwest. The purpose of the study was to provide information to help staff members at Evangelical Christian colleges design strategies to support male students in distress regarding Internet pornography access. Support for this study was found in the empirical literature regarding college
student attitudes regarding Internet pornography including its effects on students. Further support came from both the general literature on sexual addiction and compulsion and specific empirical literature about college student sexual addiction and sexual compulsion. The descriptive statistical results helped to answer the first research question and demonstrated that 79.3 percent of male undergraduate students at Evangelical colleges reported accessing Internet pornography at some point in the previous year, with 61.1 percent reported accessing Internet pornography at least some amount of time each week. Linear relationships and multiple regression analyses generated data to answer the second research question. A statistically significant relationship exists between the extent of Internet pornography usage among male undergraduates at three Evangelical colleges and indicators of addictive patterns related to Internet pornography, guilt regarding online pornography use, and online sexual behavior that is social in nature. Furthermore, the multiple regression results overall suggest that students who do not self-identify as Evangelical, spend higher amounts of time online, demonstrate higher indicators of Internet pornography addiction and demonstrate online social behavior that is sexual in nature are more likely to access Internet pornography a higher number of hours each week. The addictive scale emerged as the strongest predictor for the amount of time, on average, spent viewing Internet pornography each week.
CHAPTER ONE

INTRODUCTION

Willard (2008) defines pornography as “writings, drawings, images and pictures for use in arousing sexual desire, and frequently in stimulating the body to achieve sexual discharge or release” (p. 2). This study examined Internet pornography usage among male undergraduates at Evangelical Christian liberal arts colleges in the Midwest. Background information related to Internet pornography will be introduced before the problem being investigated in this study is stated. After the problem is stated, the theoretical framework for the study will be identified. Next the purpose of the study will be introduced along with the research questions that were pursued. The final section will address the significance of this study.

Background

Eberstadt (2009), a research fellow at the Hoover Institution and consulting editor to Policy Review, penned a thought-provoking article about pornography. The author used the analogy of the “social consensus” about tobacco, prior to the surgeon general’s 1964 report regarding the health effects of smoking, as a parallel to the current “widespread tolerance” of pornography in the United States (p. 4). The article emphasized the tobacco industry’s historical argument to justify its existence, namely that empirical research could not prove smoking was harmful therefore smoking should be left up to individual choice. Furthermore, Eberstadt claims that smoking did not become
a negative stigma in the United States until there was a clear empirical link between smoking, second hand smoke and cancer. The author wondered if pornography would follow a similar pattern and pointed to research correlating pornography use with divorce rates and job loss rates due to pornography use at work as potential indicators of the harm pornography, particularly Internet pornography, could cause. Eberstadt’s article reflects that harm must be empirically demonstrated in America before there is human will to act against it.

Willard (2008), a Christian theologian, writer, and a philosophy professor at the University of California, Berkley presents a different, but equally thought provoking view of pornography as contrasted with Eberstadt (2009). Willard identifies pornography as a widespread problem and claims the use of pornography is closely related to the role of human desire. Willard goes on to explain that desire follows the human will and that the human will follows whatever it orients itself around. Willard argues that pornography represents a vision of human bodies as objects to be used to stimulate sexual desire with the intention of sexual gratification. Harm, from Willard’s perspective, occurs when the human will is not oriented around a vision of something good, such as the Bible, and there is no intention or means to follow the good vision, which leaves prevailing desires to control a person. While Eberstadt points to the external relationships between Internet pornography and divorce as well as job loss to demonstrate the potential harm of Internet pornography, Willard focuses on the internal spiritual harm of allowing sexual desire to control a person’s will to view Internet pornography.

Eberstadt (2009) points out that action was not taken against the smoking industry until the harmful problems were more clearly understood. Any claim regarding the
potential harm of Internet pornography prompts a closer examination of Internet pornography to find out what is known, and what is yet to be examined. Pornographic material is easily accessible on the Internet in part because of the number of American households who have access to the Internet. According to the 2007 U.S Census Bureau Internet-related statistics, 61.7 percent of households in the U.S. have Internet access at home. When asked if someone from the household has access to the Internet from a location other than the home the percentage of households that have Internet access rises to 71 percent.

Much access to the Internet is related to Internet pornography. Ropelato (2006) compiled statistical data from a variety of news sources and reported that 12 percent of Internet Websites were pornographic with 25 percent of total search engine requests relating to pornography. Ropelato also states that 42.7 percent of all Internet users view Internet pornography with 13.61 percent of these users being 18-24 years of age.

Empirically, concern over access to pornography among vulnerable groups such as pre-college aged students exists. One primary area of concern is the potential harmful effect of viewing Internet pornography. Empirical studies have established that a large percentage of students are exposed to pornography in some form prior to attending a college or university. Brown and L’Engle (2009) conducted a longitudinal study with 14 middle schools in Southeastern United States. About 3,000 7th and 8th graders completed a media use survey. From this group, 1,200 students were randomly selected based on gender and race (black or white) to complete a health survey in their homes, with 1,074 completing the surveys. Two years later, 1,017 of these students completed a second survey at home. By age 14, 66 percent of the males and 39 percent of the female students
had reported having accessed at least one sexually explicit medium in the previous year. The Internet was the most common place for boys to access sexually explicit material; and X-rated movies was a more common context for girls to access sexually explicit material. Higher sensation-seeking males and females were more likely to have viewed sexually explicit content, were more likely to have more permissive sexual norms, to exhibit more traditional gender role attitudes and to experiment with sexual behaviors at an earlier age. Especially for boys, early exposure to sexually explicit material between the ages of 12-14 positively correlated with more permissive sexual norms, more frequent sexual harassment, as well as experience with oral sex and intercourse before the ages 14-16 (Brown & L’Engle, 2009).

Wolak, Mitchell, and Finkelhor (2007) used data from the Second Youth Internet Safety Survey in an attempt to understand the extent of wanted and unwanted exposure to online pornography. The data were collected in a 2005 national telephone survey with a representative sample of 1,500 youth aged 10-17. The final number of participants completing the survey was 1,422. The authors found that 42 percent had been exposed to online pornography in the previous year with 66 percent reporting unwanted exposure only and 34 percent reporting as either wanted exposure only or both wanted and unwanted exposure. The percentage increase of desired exposure by age is noteworthy among the boys. At ages 10-11, only 1 percent of boys reported wanted exposure in the previous year. The percentages increase with older boys with 11 percent of boys 12-13 years of age wanting exposure, 26 percent of boys 14-15 years of age, and 38 percent of boys who were 16-17 years of age. Wolak, Mitchell, and Finkelhor (2007) did not investigate the potential harmful effects of pre-college age student exposure to
pornography. The study completed by Brown and L’Engle (2009) seems to suggest, however, that for higher sexual sensation seeking pre-college aged students, early exposure to pornography can lead to engaging in higher risk sexual behavior.

Peter and Valkenburg (2008) conducted an online survey of 2,343 Dutch adolescents aged 13-20 to determine if exposure to Internet pornography could be correlated with sexual uncertainty (the extent to which there is a lack of clarity regarding sexual beliefs and values) and attitudes toward sexual exploration. Essentially, the authors were attempting to document the potential influence of Internet pornography on the development of a person’s sexual identity. The authors found that males used pornography at a higher rate than females, 58.3 percent versus 21 percent. The authors also found that the more frequently pornography was consumed, the more sexually uncertain the users and the more positive the views toward uncommitted sexual exploration. Peter and Valkenburg cautioned the reader away from concluding that Internet pornography causes sexual uncertainty and uncommitted sexual exploration, but they did express concern over the potential harmful influence of pornography on the development of an adolescent’s sexual identity. Adolescents still forming their views on sexuality, and on themselves as a sexual person, according to Peter and Valkenburg, may not have had enough sexual experience to interpret the sexual images consumed when viewing pornography, thereby potentially causing confusion rather than clarity over what the images mean to their sexual choices and beliefs.

Peter and Valkenburg (2008) also conducted a study with Dutch youth to test for the influence of Internet pornography on sexual preoccupancy. Sexual preoccupancy is defined as cognitive engagement in sexual issues, such as thinking about sex and having
an interest in participating in sexual behavior, that result in distraction from focusing on something non-sexual in nature. This study surveyed 962 Dutch youth aged 13-20 at six-month intervals over the course of one year. The authors were working from a cognitive theoretical framework that assumes adolescents will access online material that matches with their identity. Therefore, if sexually explicit material is accessed, the material accessed will match with the users’ views of sexuality. The authors also entered the study with the desire to test if a preoccupation with sex preceded access to sexually explicit material or if access to sexually explicit material preceded a preoccupation with sex. According to the authors, the data suggested that adolescents’ exposure to sexually explicit material resulted in sexual preoccupancy and that sexual preoccupancy found in adolescents at the beginning of the study did not increase the level of exposure to sexually explicit material over time.

This introduction to the current study establishes that scholars are broadly questioning the potential harm of Internet pornography (Eberstadt, 2009). The background establishes that the Internet is widely available to most families in the United States and that much content and traffic on the Internet is related to pornography. Finally, the background establishes that empirical researchers have investigated the potential harmful effects of Internet pornography on a vulnerable group, pre-college age students, and have discovered considerable exposure to Internet pornography leading to openness to risky sexual behaviors (Brown & L’Engle, 2009; Peter & Valkenburg, 2008; Peter & Valkenburg, 2008; and Wolak, Mitchell, & Finkelhor, 2007). What happens to a pre-college aged student who is exposed to Internet pornography and then attends a college that believes Internet pornography is immoral and prohibits access? Attention
will next be directed to the focus of the current research, male students attending Evangelical Christian liberal arts colleges in the Midwest. More must be understood about the extent of the Internet pornography usage of this subpopulation of higher education.

**Statement of the Problem**

The empirical research on pornography reviewed thus far demonstrates that Internet pornography may have harmful effects on pre-college aged students. Internet pornography usage does not stop at the end of the pre-college age however. College students are consumers of Internet pornography as well (Boies, 2002; Caroll, Padilla-Walker, Barry, & Madsen, 2008; Goodson, McCormick, & Evans, 2001; Morrison, Ellis, Morrison, Bearden, & Harriman, 2006; O’Reilly, Knox, & Zusman, 2007). For many college students, viewing Internet pornography is acceptable. But for others viewing Internet pornography is unacceptable. Caroll, Padilla-Walker, Barry, and Madsen (2008) found that 67 percent of men and 49 percent of women agreed, in their study with 813 undergraduate and graduate students (500 women and 313 men), that viewing pornography is acceptable, while 87 percent of men and 31 percent of women reported actually viewing Internet pornography. This study was completed with students attending six different colleges and universities around the United States: a small private liberal arts college, a medium-sized religious university, three large public universities, and a large religious university. When comparing the percentages of students viewing Internet pornography with the percentages of university students in this study who reported viewing Internet pornography was acceptable, the comparison shows that 20 percent of the male college students in the study view pornography but did not agree it
was acceptable while 18 percent of female students believe viewing pornography was acceptable but did not view it. This discrepancy, particularly for the male students, seems to suggest that an investigation is worthwhile to understand the relationship between male college students viewing of pornography while also declaring it unacceptable. Could the 20 percent of male students who view Internet pornography while reporting it is unacceptable to do so indicate a violation of personal, family, and/or religious convictions? Or could this 20 percent of male college students be an indication of a lack of control over Internet pornography use?

There is a particular population of college students for whom viewing Internet pornography is considered unacceptable and immoral by the colleges they attend and by the religious faith tradition they follow. These students attend Evangelical Christian liberal arts colleges. Freitas (2008) examined the relationship between sexuality and spirituality at seven different college campuses in different parts of the country. The campuses included Evangelical Christian liberal arts colleges, Catholic colleges, private-nonreligious colleges and public universities. Freitas collected data from 2,500 on-line surveys and then followed up with 111 student semi-structured interviews. Freitas summarized students’ descriptions of the Evangelical colleges.

Students are encouraged in their faith by peers and supported in their “Christian walk” by friends as they struggle with family difficulties, academics, personal problems, or doubts about their faith. Faculty not only are open about their personal faith commitments but also integrate Christian teachings and values into their courses, encouraging and empowering students to integrate the material they are studying into their own understanding of their faith. Because students and faculty have, for the most part, the same religious commitments and values, faith is an integral part of the relationships they form at college. Though most students can identify a small group of hard partiers on campus, they typically enjoy non-alcohol-related socializing, and they express relief that their Christian culture largely shelters them from the hookup culture they see among friends attending
public, nonreligious private, and Catholic colleges and universities. Open discussions of faith, both one on one and in a variety of faith-based campus activities, allow students to explore their religious commitments in community. Contrary to popular stereotypes, the fact that evangelical colleges are faith-based does not necessarily restrict student learning and growth by forbidding certain topics of discussion. On the contrary, this core commitment provides students with a strong framework within which they can test their beliefs and values, discerning in the process where they fall in relation to what is presented to them as the Christian ideal. (pp. 64-65)

Foster (1998) defines the three predominant themes defining the Evangelical tradition. First is the faithful proclamation of the gospel of Jesus Christ as the Son of God – his birth, life, death, and resurrection – as the way to be reconciled to God. The second predominant theme of the Evangelical tradition is that the Bible is the written Word of God, just as Jesus is the living Word of God. The third predominant theme of the Evangelical tradition is the confessional witness of the early Christian community as a faithful interpretation of the gospel of Jesus Christ. An Evangelical Christian college’s purpose is rooted in these three themes. According to the Council for Christian Colleges and Universities’ Web site, 110 colleges and universities in the U.S. qualify as intentionally Christ-centered institutions (Council for Christian Colleges and Universities, 2010). An Evangelical college would conclude that pornography is immoral and unacceptable. For example, Wheaton College (IL) requires all students, faculty, and staff to sign and abide by a Community Covenant. In a section called “Living the Christian Life,” the Covenant states that sexual immorality, such as the use of pornography, is condemned by the Bible, and references Matthew 5:27-28, which says “You have heard that it was said ‘you shall not commit adultery.’ But I say to you, that everyone who looks on a woman to lust for her has committed adultery with her already in his heart” (Wheaton College, p. 8).
Students at Evangelical Christian colleges, however, do view Internet pornography (Huson, 2005; Logue, 2009), despite college and religious faith prohibitions to do so. Students attending Evangelical Christian colleges who view Internet pornography face a spiritual problem (Willard, 2008) and they face a potential disciplinary problem with the respective college they attend. Eberstadt’s (2009) article discusses the power of individual choice, even in the face of evidence that a particular choice may be harmful. Smoking is Eberstadt’s case in point. Viewing Internet pornography at an Evangelical Christian college could be considered harmful because of the fear of being discovered and the shame of viewing the Internet pornography in secret (Huson, 2005). Since viewing pornography on the Internet is considered unacceptable and immoral at Evangelical Christian colleges, could viewing it in these contexts be an indication of a lack of personal control? Why else might a student attending an Evangelical Christian college view Internet pornography in the face of contrary personal moral convictions in addition to institutional moral and policy prohibitions?

Kwee, Dominguez, and Ferrell (2007) wrote about their experiences counseling male students attending Evangelical Christian colleges. They reflected on a phenomenon of male students who came to counseling with a self diagnosed sexual addiction because of sexual desire that led to Internet pornography use and/or masturbation. Goodman (2001) defines sexual addiction “as a condition in which a behavior that can function both to produce pleasure and to reduce painful affects is employed in a pattern that is characterized by two key features: 1. recurrent failure to control the behavior, and 2. continuation of the behavior despite substantial harmful consequences” (p. 195). One of the conclusions Kwee, Dominguez, and Ferrell (2007) made was that male Christian
college students seemed to equate sexual desire with sexual addiction. There are two challenges with this claim. The first challenge is that the concept of a sexual addiction is not completely accepted in the field of psychology or psychiatry. The diagnostic manual used by psychologists and psychiatrists, called the Diagnostic and Statistical Manual of Mental Disorders, does not have a specific listing for “sexual addiction” (American Psychiatric Association, 2000). The second challenge is that there have been few empirical studies to identify the potential sexual addiction rates in the general population not to mention in the much smaller male Evangelical Christian college population. Marshall, Marshall, Moulden, and Serran (2008) compared the rates of sexual addiction among incarcerated adult male sexual offenders and socio-economically matched community samples of non-incarcerated adult males. The study found that 43.9 percent of sexual offenders were sexual addicts and 17.9 percent of the non-incarcerated men were addicted. Logue (2009) found that 18.3 percent of the 100 Christian college male and female students surveyed perceived themselves to be sexually addicted. Huson (2005), in his unpublished qualitative dissertation research with 18 male Christian college undergraduate students, included a section on the “addictive and progressive nature of pornography” (p. 61). In this section Huson identified that several students showed signs of addictive behavior and that all of the participants said they had a very hard time terminating their Internet pornography viewing. Huson’s study cannot be generalized to all male students attending Evangelical Christian colleges because of the small sample size; however, the reader is left with the impression that these students could be addicted to Internet pornography. Abell, Steenbergh, and Boinin (2006) found an inverse relationship between religiosity and sexual addiction with 125 college men, meaning the
higher the religiosity measures the lower the sexual addiction indicators. However, in the same study, Abell, Steenbergh, and Boinin found that the higher the religiosity measures the higher the measures for Internet pornography compulsion. The study by Abell, Steenbergh, and Boinin included male students from Christian and non-Christian college campuses. The three empirical investigations involving Christian college men do not seem to demonstrate much clarity about the indicators of Internet pornography addiction for male Christian college students. The Abell, Steenbergh, and Boinin (2006) study however introduces the idea of Internet pornography compulsion as another way of describing problematic Internet pornography viewing among male Christian college students. One may conclude from Abell, Steenbergh, and Boinin (2006), Huson (2005), and Logue (2009) that Internet pornography as a sexual addiction has not been empirically established as an issue for male Christian college students. Furthermore, one may conclude that male Christian college students may misperceive unwanted sexual behavior, such as viewing Internet pornography, as a sexual addiction or a sexual compulsion.

The problem clearly stated then is focused on the extent of Internet pornography use among male students at Evangelical Christian liberal arts colleges and what the Internet pornography use indicates. If 20 percent of male students participating in a study and attending colleges and universities that make little to no prohibition of Internet pornography use (Caroll, Padilla-Walker, Barry, & Madsen 2008) still view it even though they state it is unacceptable to do so, is it likely that a much higher percentage of males attending Evangelical Christian colleges would report such viewing unacceptable? The first problem investigated in this study was the extent to which male students access
Internet pornography while attending Evangelical Christian colleges strictly prohibiting its use. The second problem examined was the correlation between the extent of access to Internet pornography among male undergraduates at Evangelical Christian colleges and indicators of addiction patterns, guilt regarding online use and online sexual behavior that is social in nature.

**Theoretical Framework**

Patrick Carnes, a psychologist and director of a sexual disorder recovery program, is identified as the first person to write about and empirically research the idea of sexual addiction. In 1983 he wrote a book titled *The Sexual Addiction*. In 1986, Carnes initiated a quantitative and qualitative study with participants in sexual addiction recovery groups in an attempt to confirm his theories of sexual addiction. Surveys were distributed to 1,500 sexual addiction group participants with one to three years of recovery experience in addition to 500 surveys distributed to the partners of the sexual addiction group participants. The return rate was 20 percent with 289 addicts and 99 coaddicts participating. The second phase involved interviewing 89 recovering addicts and 37 coaddicts. Based on his research and clinical experience, Carnes identified ten signs of sexual addiction: a pattern of out-of-control sexual behavior; severe consequences due to sexual behavior; inability to stop despite adverse consequences; persistent pursuit of self-destructive or high-risk behavior; ongoing desire or effort to limit sexual behavior; sexual obsession and fantasy as a primary coping strategy; increasing amounts of sexual experiences; severe mood changes around sexual activity; inordinate amounts of time participating in or recovering from sexual behavior; and neglect of important activities because of sexual behavior.
In *Out of the Shadows: Understanding Sexual Addiction*, Carnes (1992) defines a sexual addiction as an unhealthy sexual relationship substitute for a healthy sexual relationship in response to a difficult family event or process. In the context of this present study, an example may be a Christian college male student who substitutes looking at Internet pornography for a healthy friendship with a roommate when academic responsibilities become stressful. Carnes writes about the belief system that makes a sexual addiction possible. A belief system, according to Carnes, is the set of facts, myths, assumptions and judgments that one holds to be true about oneself. The belief system forms the foundation for all of life’s choices. This view of the belief system seems to mirror Willard’s (2008) claim about the human will’s orientation as the foundation for human desire and human action. Sexual addicts, according to Carnes, perceive themselves to hold little value, do not believe that others care about them, and that sex is their most important need. The faulty beliefs form the foundation for a distorted view of reality, with denial about the presence of an unhealthy sexual relationship being the result.

An unhealthy sexual relationship substitute in response to a difficult family event or process, a faulty belief system and a denial of problems create an environment where a sexual addiction cycle can take hold of a person’s life, according to Carnes (1992). The cycle of sexual addiction starts with a preoccupation with sexual thoughts about sexual stimulation. The next step is ritualization, or the sexual addicts’ repetitious behaviors that lead up to the sexual behavior. A male college student may routinely look at Internet pornography when academic responsibilities become stressful and after his roommate leaves the room to attend class on particular days and at particular times. The third step
in the addiction cycle, according to Carnes, is the compulsive sexual behavior, which is the end goal of the preoccupation and the ritualization. A sexual addict is one who cannot control or stop this compulsive sexual behavior. The fourth step in the addiction cycle is a feeling of despair and/or hopelessness about the sexual behavior itself and about the inability to stop or control the behavior.

The writing of Patrick Carnes posits another theoretical construct may be an influence on a male college student viewing of Internet pornography. The third step in the addiction cycle according to Carnes (1992) is engaging in a compulsive sexual behavior. Dr. Eli Coleman, a medical doctor and a professor of human sexuality at the University of Minnesota Medical School, like Carnes, has an interest in helping clients with problematic sexual behavior. Coleman (1988), unlike Carnes (1992), believes the term sexual compulsion is a more helpful term to describe problematic sexual behavior. Coleman describes sexual compulsion as patterns of sexual behavior as a result of an obsessive preoccupation with them. Engaging in compulsive sexual behavior results in negative consequences; failure to control the behavior is also experienced. Coleman claims that any sexual behavior can become compulsive and that “the pattern of the behavior, the motivation and the result determine whether a behavior is a healthy use of the behavior, abusive, or compulsive” (p. 191). Coleman cautions describing problematic sexual behavior as an addiction, claiming that the sexual addiction label presupposes addiction to all sexual behavior. The use of terminology describing problematic sexual behavior is important to Coleman because the terminology represents a “theoretical orientation” (p. 194).
The theoretical orientation of sexual compulsion, according to Coleman’s clinical experience, begins with an intimacy problem or abuse related to a person’s family of origin. As a result, a person perceives that s/he is somehow responsible for the lack of intimacy or abuse and then experiences shame. Experiencing shame makes it difficult to form relationships with others, resulting in feeling loneliness and emotional distress. Sexual behavior can be viewed as a way to respond to feelings of loneliness and emotional distress. Sexual behavior, engaged over time, in response to feelings of loneliness and emotional distress can provide temporary relief but must be re-engaged to have the same effect, therefore becoming compulsive.

Coleman (1988) observed that people from conservative backgrounds who prohibit sexual behaviors are more likely to develop sexually compulsive behaviors. Rather than abuse or intimacy problems, it is the inability to abstain from prohibited sexual behavior that causes the feelings of shame for people from conservative backgrounds if/when these behaviors are engaged. Coleman used masturbation as an example. Feeling shame causes secretive engagement in sexual behavior to avoid real or perceived punishment. Engaging in prohibited sexual behavior creates emotional distress, which is alleviated through sexual behavior over time, therefore becoming compulsive. Male students attending Evangelical Christian Colleges seem to fit Coleman’s observation. Using Wheaton College (IL) as an example, the Community Covenant prohibits sexual activity outside the marriage between a woman and a man as well as Internet pornography use (Wheaton College, 2003). Students attending Evangelical Christian colleges that prohibit sexual behavior and also come from families
with similar restrictive perspectives would seem to fit the high risk category in Coleman’s (1988) sexual compulsive theoretical framework.

The major similarity between Carnes (1992) and Coleman (1988) is the focus on problematic sexual behavior finding its beginnings within the family of origin. Seidman (2003) also makes this conclusion in his pornography study of 310 undergraduate college students (208 female; 102 male) at the University of Massachusetts. Both scholars also acknowledge compulsivity within their theoretical framework, either as a part (Carnes, 1992) or as the whole (Coleman, 1988). Both theories acknowledge the role of repetitious sexual behaviors and the inability to control those behaviors, as well as the role those behaviors play in addressing an emotional distress of some kind. Both theorists acknowledge the persistence of problematic sexual behavior despite harmful consequences. Both theoretical frameworks therefore seem to support this current study’s goals of investigating the problem of whether the extent of Internet pornography access among male students at Evangelical Christian colleges may be correlated to indicators of addiction patterns.

**Purpose of the Study and Research Questions**

After reading Abell, Steenbergh, and Boinin (2006), Huson (2005), Kwee, Dominguez, and Ferrell (2007), and Logue (2009), one of the questions that empirically remain relates to the extent of Internet pornography access among male students at Evangelical Christian liberal arts colleges. The study by Abell, Steenbergh, and Boinin (2006) used a sample of male students from four participating colleges, with only two being Evangelical Christian colleges. So it is difficult to determine the extent of Internet pornography access as well as correlations between the extent access and indicators of
sexual addiction patterns among the participants who attended only the Evangelical Christian colleges. Huson (2005) conducted a qualitative study with a small sample size from Evangelical Christian colleges. Kwee, Dominguez, and Ferrell (2007) wrote from their counseling experience with male students attending Evangelical Christian colleges. Logue (2009) used a sample of male and female students from an Evangelical Christian college and did not analyze the data separately for each gender. Therefore, the purpose of the current study was to contribute to this small research base by investigating the extent of Internet pornography access among a male only student population attending Evangelical Christian colleges in addition to the investigating the potential correlations between the extent of Internet pornography access and indicators of addiction patterns. Pornography research suggests that boys and men access pornography in greater percentages than women (Albright, 2008; Carol, Padilla-Walker, Nelson, Olson, Barry & Madsen, 2008; Mitchell, Finkelhor & Wolak, 2003; Wolak, Mitchell, & Finkelhor, 2007). Therefore this study only surveyed male students.

The first research question for this study was, “To what extent do male undergraduates at select Evangelical Christian colleges in the Midwest access Internet pornography?” The second research question for this study was, “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online use and online sexual behavior that is social?”

Significance of the Study

This study was significant for several reasons. The first reason was to study a population within higher education that has received very little empirical attention. Only
three research studies could be found that focused on Internet pornography access among male students attending Evangelical Christian colleges. The second reason this study was significant was to establish empirical data that could serve as a foundation for helpful support. Evangelical Christian colleges believe Internet pornography use is Biblically immoral and prohibit access to it through policies and through Internet blocking systems. The three studies completed with students attending Evangelical Christian colleges demonstrate that Internet pornography is accessed. More empirical guidance was needed to help leaders within Evangelical Christian colleges who want to understand the extant of the problem as a foundation for developing strategies to help students having difficulty controlling their Internet pornography behavior and experiencing guilty feelings in response. For example, if male students attending Evangelical Christian colleges demonstrate significant access to Internet pornography, then a campus may strongly consider starting a 12 step addictive behavior group as recommended by Carnes (1992), and/or consider ways to address the guilt feelings over viewing it secretly.

Conclusion

Eberstadt (2009) attempted to reflect on the decline of smoking acceptance in order to forecast the potential future of Internet pornography. Unlike the empirical research on smoking, empirical research on pornography has not definitively established that viewing it results in harmful consequences. The empirical research does suggest harmful consequences are present for pre-college aged students who view it. Male college students are one population that views Internet pornography in larger percentages. Male students attending Evangelical Christian colleges are a subpopulation of all college students whose Internet pornography usage has been empirically studied very little. The
potential harm caused to male students attending Evangelical Christian colleges from viewing Internet pornography may be unique because Internet pornography is identified as immoral and prohibited (Logue, 2009). This study examined the extent of Internet pornography access among male students at three Evangelical Christian colleges. No study to date has empirically examined the extent of Internet pornography access among a male-only population within a strictly Evangelical Christian college population. This study was supported by the theoretical framework of sexual addiction (Carnes, 1992) and the theoretical framework of sexual compulsion (Coleman, 1988), which both recognize the potential for any sexual behavior to become repetitious and problematic under conditions of emotional distress. The significance of the study was in its ability to provide empirical data that can help staff members at Evangelical Christian colleges to design effective resources for male students who are accessing Internet pornography and experiencing guilty feelings as a result.
CHAPTER TWO

REVIEW OF LITERATURE

This study investigated the extent of Internet pornography access among male undergraduates at select Evangelical Christian liberal arts colleges in the Midwest. The study also investigated potential correlations between the extent of Internet pornography access and addictive patterns, guilt regarding online use and online sexual behavior that is social in nature. Very little empirical research is available with this population (Abell, Steenbergh, & Boivin, 2006; Huson, 2005; Logue, 2009) and no quantitative research could be found with a male-only population attending only Evangelical Christian colleges. A literature review was conducted prior to the collection of data. General empirical studies about pornography use among college students were examined. The general empirical pornography research with college students can be organized into two categories: attitudes toward pornography, and effects of use. Next, the debate regarding addiction and compulsion terminology in the literature was reviewed. Studies related to sexual addiction and sexual compulsivity among college students were then examined. The literature review sought to present the results as a foundation for the current study.

College Student Attitudes toward Pornography

Several studies measure college student attitudes toward Internet pornography. Measuring attitudes toward the viewing of Internet pornography can be one representation of openness to and acceptance of the behavior. Some of the research reviewed in the section below also measured Internet pornography viewing behavior,
which strongly suggests that college students’ attitude toward Internet pornography and behavior are closely related. Measuring attitudes toward Internet pornography among college students also communicates something about their values, or what they believe to be important or true.

Goodson, McCormick, and Evans (2000) developed an instrument for assessing college student behavior and attitudes related to obtaining sexuality-related information; establishing personal connections; and sexual entertainment/arousal. The questionnaire was then used in a separate study with 506 undergraduate students (38.1 percent male and 61.9 percent female) at a public university in Texas. This study appears to be one of the first to empirically assess college student behaviors and attitudes related to Internet pornography (Goodson, McCormick, & Evans, 2001). The authors found that 28.4 percent of the male college student participants viewed Internet pornography either sometimes or frequently compared to 10 percent of female students. With 5.9 percent of male students reporting frequent use of Internet pornography, the authors concluded that this statistic did not signal a concern for addictive behavior among the entire population of male participants. There may in fact be a need for concern regarding addiction among the 5.9 percent of frequent male Internet pornography users, but the authors did not address this potential. There was no statistically significant difference in men’s and women’s attitudes toward Internet pornography; both genders, on average, did not seem to place importance or value on having access to Internet pornography. The authors of this study expressed surprise over the absence of significance between male and female student attitudes regarding access to Internet pornography. The authors concluded that the Internet may still be considered a relatively new technology among students and
therefore potentially creating a dampening affect on the attitudes toward the importance of access to sexual content.

In a convenience sample of 305 college students, with 41.3 percent male and 58.7 percent female, O’Reilly, Knox, and Zusman (2007) found that 99.2 percent of the men had viewed pornography, with 31.7 percent viewing it three to five times each week, compared to 88 percent of the women who reported they had viewed pornography. Only 3.8 percent of women, however, reported they viewed pornography three to five times a week. The overall percentage of male students viewing Internet pornography found by O’Reilly, Knox and Zusman (2007) was much higher than the 28.4 percent of male students reported by Goodson, McCormick, and Evans (2001). The male students reported that 64 percent of their pornography use was via the Internet, according to O’Reilly, Knox and Zusman (2007). When asked if they approved of pornography use, 93.5 percent of male students reported approval, a statistic that is much higher than the Carrol et. al (2008) study reported below. The high approval rating is contrasted by the fact that 41.3 percent of the male students felt threatened by female students viewing pornography. The authors suggested that female students were perceived as less sexually interested in male students after viewing pornography, thus creating the reported threat and perhaps a double standard for female students. The other significant finding was that 72.8 percent of the male students approved viewing pornography while in a dating relationship, a much lower percentage of approval compared to the 93.5 percent of male students reporting general approval for viewing Internet pornography. Dating relationships then seemed to have had a diminishing influence on the overall percentage of male students who felt viewing pornography was acceptable.
Shim, Lee, and Paul (2006) examined the role of sexual and antisocial dispositions in predicting Internet pornography use among college students. Sexual disposition is the measure of erotophobia and erotophilia on a negative to positive continuum of response to external sexual cues such as Internet pornography. Erotophobia marks the negative end of the continuum and represents a closed attitude toward sexuality and sexual experiences. Erotophilia marks the positive end of the continuum and represents an open attitude toward sexuality and sexual experiences. In this study, antisocial disposition measured degrees of psychopathology, which is marked by a lack of empathy for and relationship with others and the inability to delay gratification. Antisocial disposition in this study also measured psychotic behavior, which attempts to satisfy sexual needs with more deviant media stimuli. Deviant pornography included unusual images such as transvestites, overweight people, sexual coercion and people older than 40. Data were collected from 337 (158 male; 179 female) undergraduate college students at a large Midwestern university. The results suggest that sexual disposition significantly contributed to predicting standard-fare Internet pornography use. The higher the sexual disposition measure, the more open to sexual experiences and the more likely the participant viewed standard-fare Internet pornography. Standard-fare pornography is the most common forms the participants identified using, including nine different types of Caucasian images of one or more people. The second noteworthy finding was that the higher the antisocial disposition, the more likely the participant viewed both standard-fare and deviant Internet pornography (Shim, Lee, & Paul, 2006).
Nosko, Wood, and Desmarais (2007) examined the factors that affected college students’ attitude toward unsolicited online sexual material. The participants included 482 undergraduate psychology students (246 female; 236 male) in a Canadian university. General computer and Internet skills and experience were assessed as well as questions to assess attitudes about Internet sexual material. The results show that male students were very open to receiving unsolicited sexual material on the Internet, especially the more skilled and experienced computer users. Curiosity significantly predicted students’ openness to unsolicited online sexual material. Gender, curiosity and the amount of time spent on the computer were found to be the most significant motivators to search for Internet pornography. The findings by Lam and Chan (2007) with 229 Chinese undergraduate and graduate students in Hong Kong were nearly identical to Nosko, Wood, and Desmarais (2007). Byers, Menzies, and O’Grady (2004) also found in their study with 443 undergraduate students (35.2 percent male and 64.8 percent female) representing 24 different courses at a Canadian university that the amount of time spent on-line each week significantly predicted the viewing and sending of sexually explicit material.

In one of the most recently published studies, Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) discovered, in a sample of 813 university undergraduate and graduate students (313 male; 500 female) from six colleges across the United States, that 67 percent of male students believed viewing pornography is acceptable, while 87 percent reported accessing it. The acceptance of pornography use was more highly correlated with sexual attitudes and family formation values than was pornography use. Family formation values were defined by non-marital cohabitation and
childbearing patterns, marriage ideals, and views of parenting. Sexual attitudes were assessed with questions about premarital and extramarital sexual relations as well as with questions about participants’ personal sexual behavior. The authors also found a correlation between male students’ use and acceptance of pornography with religiosity and impulsivity. Articulated another way, the higher the religiosity score, the lower the reported use and acceptance of pornography; and the higher the impulsivity score, the higher the pornography acceptance score but the lower the use. Additionally, a small but significant correlation was found between pornography use and the number of lifetime sexual partners and acceptance of extramarital sexual behavior. The more sexual partners participants reported, the more likely to view pornography and accept extramarital sexual behavior.

The most distinctive sexual values were found among the male students who never used pornography and reported significantly more conservative sexual values. Conservative sexual values were illustrated by the finding that most non-pornography users reporting not having had sexual intercourse. The authors of this study suggest pornography should be regarded as a value as well as a behavior because acceptance of pornography was strongly correlated with sexual attitudes and behaviors as was pornography use. One could argue that values reflect beliefs. Equating the viewing of Internet pornography as a value, as suggested by Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008), seems to reflect Carnes’ (1992) concept of sexual addiction’s foundation on a certain belief system. The Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen study seems to open an important question regarding why 20 percent of the male college students use pornography without considering such use acceptable. Perhaps
this 20 percent represents the potential population for which there is self-denial regarding compulsive and/or addictive Internet pornography behavior.

The research on college student attitudes toward Internet pornography has demonstrated strong acceptance among college students, especially among male students. Male students in dating relationships, however, rated Internet pornography acceptance lower, which has relevance to the current study with male students attending Evangelical Christian colleges. The research has demonstrated the amount of time that college students spent on-line was a significant predictor of Internet pornography use, a point that also has relevance to the current study. The research also demonstrates that the higher the sexual disposition measure (level of openness to sexuality and sexual experiences), the higher the percentage of Internet pornography viewing. The correlation between Internet pornography use and sexual attitudes and other sexual behavior was so strong that Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) suggest pornography should be regarded as a value and not just a behavior. This is interesting insight in light of Willard’s (2008) claim that human will left without an orientation around something good is vulnerable to desires, such as sexual desires for Internet pornography that may begin directing the human will toward actions.

There are two relevant points from Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) for the current study with male students attending Evangelical Christian liberal arts colleges. First is the relationship between religiosity and Internet pornography. The higher the religiosity measures the lower the rate of Internet pornography viewing. One could hypothesize that if male students declare and follow the teachings of the Evangelical Christian faith, they will be less likely to view Internet
pornography. The second relevant point is the correlation between sexual partners and Internet pornography use. The more sexual partners reported in the Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) study, the more likely Internet pornography will be viewed. Likewise, most of the non-pornography users reported not having had sexual intercourse. Since male students attending Evangelical Christian colleges do view Internet pornography (Huson, 2005 and Logue, 2009), could one hypothesize that their usage may also be a reflection of being sexually active?

Effects of Internet Pornography on College Students

A number of studies have examined the effects of Internet pornography on college students. Researchers have been particularly concerned with how exposure to Internet pornography among male students affects their attitudes and actions toward female students. In other words, will male students be more interested in sexual activity and therefore be more aggressive toward female students as a result of viewing Internet pornography? Some researchers are concerned with the effect of Internet pornography on how college students perceive themselves as well as their level of satisfaction in dating relationships. Other researchers are concerned with how Chief Information Officers perceive the effect of Internet pornography on college students.

In a sample of 24 undergraduate male university students, Barak, Fisher, Belfry, and Lashambe (1999) established an experiment that organized the male students into four experimental conditions with a total of six students (organized into groups of two to four) in each condition. The four experimental conditions ranged from exposure to only non-Internet pornography sites to increasing exposure to Internet pornography sites and less exposure to non-Internet pornography sites. The students were allowed to browse a
predetermined number of bookmarked Web sites as a starting point to browse any sites on the Web. The sites accessed, as well as the amount of time on each site, were measured unobtrusively for each participant. The first study measured differential exposure to Internet pornography and did not find an effect on the participant’s attitudes toward women, acceptance of women managers, rape myth acceptance, or the likelihood of sexual harassment.

In a second study, 31 male undergraduate students completed five individual difference measures several weeks before completing a similar experiment in a computer lab where more substantial levels of pornography and less substantial numbers of non-pornographic Web sites were bookmarked (Barak, Fisher, Belfry, & Lashambe, 1999). Bookmarked sites were the starting place for unrestricted Web browsing with the types of sites and the time on each site measured through a computer monitoring program. The results of the second study revealed three individual difference variables (hyper masculinity, sensation seeking, and sex media exposure) were significant contributors to the prediction of rape myth acceptance. The amount of exposure to pornography, however, was not found to significantly affect any of the scales on attitudes toward women. The amount of past exposure to Internet pornography was associated with likelihood of sexual harassment and with the amount of time spent on Internet pornography.

In a national representative sample of 1,713 college men, Malamuth, Addison and Koss (2000) found that pornography use by itself was not correlated with a high risk for sexual aggression of men toward women. However, in the same study, the authors found that men who tested higher for hyper masculinity and sexual promiscuity and were also
frequent users of pornography were a risk for sexual aggression. A study with a convenience sample of 102 college men by Vega and Malamuth (2007) had similar results.

Isaacs and Fisher (2008) assessed the impact of a computer-based education intervention with 150 male undergraduate students from the University of Western Ontario. The students arrived to a computer lab in groups of three to 12 and were randomly assigned to view violent and degrading pornography, with or without an educational intervention, or to a control condition that included no viewing of Internet pornography and no educational intervention. The students who viewed the same violent and degrading pornography with or without an educational intervention completed dependent measures assessing rape myth acceptance, attraction to sexual aggression, and an evaluation of sexually explicit materials. The control group completed the dependent measures as soon as they arrived to the computer lab and did not view any pornography. No negative effects of exposure to pornography were observed on any of the measures.

Taguchi (2009) conducted a survey of 476 college students (192 male and 284 female) at six different universities in Tokyo, Japan. Taguchi examined college students’ use of Internet pornography and associations with sexually permissive attitudes as well as perceptions of women. The findings indicated that Japanese college students accessed pornography more commonly in print media rather than on the Internet. The author concluded that the popularity of comics and magazines among Japanese college students may account for this finding as may the large amount of time Japanese college students spend on public transportation. It is common for Japanese college students to access the Internet while riding public transportation, which may be a deterrent to accessing Internet
pornography. Taguchi’s findings suggest that exposure to Internet pornography was positively associated with sexually permissive attitudes. He also found that exposure to Internet pornography was not a stronger predictor of Japanese college students’ perception of women than exposure to pornography in the traditional media (print, TV, movies, DVS). However, Taguchi found that sexual interest mediated the relationship between the exposure to Internet pornography and the perceptions of women. According to Taguchi, this means that the more Japanese college students exposed themselves to Internet pornography, the greater their interest in sex and the more likely to perceive women as sex objects. This finding seems opposite of Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008), who found that the more sexual partners participants reported, the more likely they were to view Internet pornography. Taguchi (2009) and Carrol et.al. (2008) both seem to reflect the complexity in attempting to understand Internet pornography’s effect on college students. One of the limitations to the Taguchi study is the ability to see an analysis of the data for male Japanese college students only. The analysis was based on the data of male and female students together.

Goodson, McCormick, and Evans (2000) examined the role of gender and ethnic differences on the emotional effect of Internet pornography among 506 public university students in Texas (39 percent male; 61 percent female). Significant findings for male students included feeling entertained and sexually aroused. Ethnicity was significantly related to feeling anxious about being caught while viewing Internet pornography. Hispanic students overall reported feeling significantly more anxious about being caught. Huson (2005) reported a similar fear of being caught among students attending Evangelical colleges.
Morrison, Ellis, Morrison, Bearden, and Harriman (2006) conducted a study to examine the effect of exposure to various forms of sexually explicit material, on and off the Internet, on male college students’ body esteem, genital attitudes and sexual esteem. The study was conducted with 188 male community college students in Canada, with 77 percent of the sample reporting accessing Internet pornography in the previous six months. The study found that greater exposure to Internet pornography resulted in lower reported levels of genital esteem (a measure of perception of various aspects of one’s genitals) and sexual self esteem (the value placed on oneself as a sexual person). The authors claimed their study demonstrated the effect of viewing Internet pornography, where images of ideal bodies are presented, influenced a negative view of one’s own body and one’s perceived value as a sexual person.

Deloy (2006) examined the effect of Internet pornography use on sexual behavior and relationship satisfaction among 245 college men at the University of North Dakota. Sixty percent of the participants reported pornography use in the previous month. The Internet was the most common context where pornography was accessed. Three hours a week was the average amount of time viewing Internet pornography. The average age of first exposure to pornography was 12.3 years for pornography viewers, which was lower when compared to non-pornography viewers, 13.5 years. Those participants who viewed Internet pornography alone were highly correlated with lower overall relationship satisfaction. Relationship satisfaction is determined by frequency of sexual activity, satisfaction with partner’s appearance, and satisfaction with the type of sexual behavior with partner. Deloy conjectures the level of relational dissatisfaction among Internet pornography users may be related to the finding that 27 percent reported feeling guilt, 20
percent reported feeling anxiety, and 9 percent reported feeling depressed following pornography viewing. Deloy’s (2006) findings may parallel those by Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008), who found that 87 percent of the male college students reported Internet pornography use while 67 percent reported Internet pornography use acceptable. Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) did not measure guilt, but if they did the 20 percent of the male students who reported Internet pornography use while reporting such use unacceptable may have reported feeling guilty.

Brandenburg (2003) surveyed 267 Chief Information Officers at public universities in the United States with business colleges, accredited by the Association to Advance Collegiate Schools of Business, to examine perspectives on appropriate computer use. Seventy surveys were returned. The survey revealed 44.3 percent of university-CIOs believed that viewing pornography had no effect on students while 47.1 percent believed that viewing pornography was somewhat harmful, and 8.6 percent believing that viewing pornography was very harmful. No CIO believed viewing pornography was helpful to students. The criteria upon which the CIOs based their perception of Internet pornography’s effect were not clear in this study. The belief about the effect of viewing Internet pornography may be based on the number of complaints the CIOs reported receiving regarding public viewing of Internet pornography. The majority of CIOs (57.4 percent) reported receiving no complaints about public Internet pornography use, with 26.5 percent reporting one complaint a month, and 11.8 percent reporting receiving 1-5 complaints per month. When asked about the university’s acceptable use policy, 98.6 percent of CIOs said that their respective university had such
a policy. However, when asked about the university’s guidelines about viewing pornography, 33.3 percent said the policy was not written down or did not exist and 30.4 percent stated the policy was written down but was not well known.

Brandenburg discovered three significant relationships. The first significant relationship was that CIOs who believed viewing pornography had no effect on students were more likely to respond that their respective universities’ policies about viewing Internet pornography did not exist or were not written down. The second significant relationship was that CIOs who believed the university did not have a legal right to regulate the viewing of Internet pornography were more likely to believe viewing pornography had no effect on students. Conversely, CIOs who believed the university did have a legal right to regulate Internet pornography viewing were more likely to believe that viewing it was harmful. The third significant relationship Brandenburg found was that CIOs who believed that the university did not have a legal right to regulate Internet computer use on campus computers were more likely to report that the universities’ policies related to viewing pornography were not written down or nonexistent. Conversely, CIOs who believed that the university did have a legal right to regulate viewing Internet pornography were more likely to report that the university had a policy on viewing pornography on campus computers that was written down and well known. This study suggests that the leaders in charge of a university’s computer network can exercise a large influence on how Internet pornography is or is not regulated.

The result of research focusing on the effects of Internet pornography on college students is mixed. The bulk of the research has focused on how exposure to Internet pornography among male students affects their attitudes and actions toward female
students. There does appear to be some cause for concern regarding male aggression against female students for specific at risk populations of college students who view Internet pornography (Malamuth, Addison & Koss, 2000; Vega & Malamuth, 2007). More clarity seems to be found in the negative effect of Internet pornography on how male college students perceive their own bodies after viewing Internet pornography (Morrison, Ellis, Morrison, Bearden, & Harriman, 2006) as well as their lower level of satisfaction in dating relationships after viewing Internet pornography (Deloy, 2006). It is also clear that many college and university Chief Information Officers do not perceive Internet pornography to create harmful effects on college students.

The literature review related to Internet pornography and college students raised several important points relevant to the current study with male students attending select Evangelical Christian liberal arts colleges in the Midwest. First, the amount of past exposure to Internet pornography was associated with the amount of time spent looking at Internet pornography. Second, the percentage of male college students viewing Internet pornography and who believe the viewing of Internet pornography is acceptable is greater than for female college students. Third, there seems to be a correlation between religiosity and Internet pornography such that the higher the religiosity measure the lower the Internet pornography usage. Fourth, there seems to be a correlation between male students who are sexually active and Internet pornography usage. Fifth, the sheer amount of time spent online can be a predictor of Internet pornography use for male college students.
The Debate between Sexual Compulsion and Sexual Addiction

The literature reviewed thus far has not established if or when viewing Internet pornography becomes problematic or out-of-control for male college students. Researchers outside of higher education have most commonly applied the term addictive or compulsive to problematic or out-of-control sexual behavior such as viewing Internet pornography (Bancroft & Vukadinovic, 2004). Therefore, before the empirical research regarding sexual addiction, sexual compulsion and college students is examined, it is important to acknowledge the lack of consensus among scholars and various health care related practitioners, outside of higher education, regarding how to understand and define problematic or out-of-control sexual behavior. Brief attention will be given to some of the most prominent voices in this debate in a chronological format to better understand how some of the debate has progressed over time. Due to the focus of this current study, to contribute to the small empirical research base regarding the extent of Internet pornography access among male undergraduates at Evangelical Christian colleges and potential correlations between the extent of access to Internet pornography and indicators of addictive patterns, guilt regarding online use and online behavior that is sexual in nature, attention will not be given to the research and theories addressing why people may experience addictive and/or compulsive behavior.

Carnes (1976), a clinical psychologist, wrote an unpublished paper, The Sex Offender: His Addiction, His Family, His Beliefs, based on two years of clinical work with outpatient sex offender groups (Carnes, 1992). Later that same year, Carnes began an experimental program for chemically dependent families in a suburban hospital. According to Carnes, working with chemically dependent families revealed the presence
of other addictive behaviors, including sexual behaviors. In response, the hospital developed sexual addiction programming based on the Twelve Step model of Alcoholics Anonymous. In 1983, Carnes wrote *The Addiction*, as his first published work about sexual addiction. In this book, Carnes defined sexual addiction as a parallel to alcoholism and drug dependency. Sexual addiction is defined as a substitution of a healthy sexual relationship with an unhealthy sexual relationship in response to a distressing event or process, most likely occurring in the context of one’s family. Carnes claimed that compulsive sexual behavior was the preoccupation of a sexual addict and something that the addict could not control. He described the addictive cycle, the levels of addiction, the family system of an addict, and the common beliefs of a sexual addict. Carnes also pointed to help through the adapted 12 step recovery model.

Schwartz and Brasted (1985) discussed sexual addiction from a medical perspective. They described sexual addiction as an intimacy disorder, meaning a person who has difficulty with sexual expression and closeness with another person. Schwartz and Brasted described sexual addictions as preoccupations with sexual thoughts and/or behaviors in addition to participating in sexual behavior that is undesirable and/or illegal. Sexual behavior becomes a way of regaining control over life circumstances that feel out of control.

In 1986, Carnes initiated a quantitative and qualitative study with participants in sexual addiction recovery groups in an attempt to confirm his theories of sexual addiction. Based on his research and clinical experience, Carnes identified ten signs of sexual addiction. The results of his research are reported in Chapter One.
Quadland (1985), a clinical psychologist, was the first to publish quantitative and qualitative research that used the term sexual compulsivity to describe problematic or out-of-control sexual behavior. His research was conducted over a two year period in New York City with a group of 30 bisexual and gay men. These men lived in fear of contracting the HIV virus, and were asking for help to reduce sexual partner numbers. AIDS was gaining much public attention at the time. The men coming in for help were self-identifying as sexually compulsive, which Quadland defined as “a lack of control over one’s sexual behavior” (p.122). Quadland’s results suggested that the gay and bisexual men were successful in reducing the number of partners from 13.7 different partners per month during the five years and 11.5 per month during the six months prior to the study, to 3.3 partners on average per month the six months following the study. The control group of men seeing the same counselor, who conducted the research group, for non-sexual issues reported an average of 3.5 partners per month five years before the study, 2.1 partners per month six months before the study, and 1.9 partners per month six months following the study. Quadland hypothesized that the number of partners decreased in the control group in response to the public fear over the AIDS epidemic.

Coleman (1986), writing from a clinical medical perspective, recommended the phrase compulsive sexual behavior as more descriptive than the term sexual addiction. Coleman, much like Carnes (1983) and Quadland (1985), was responding to patients who were self-identifying problems with controlling sexual behavior. Based on his clinical experience, Coleman claimed that childhood abuse and/or neglect disrupted healthy interpersonal functioning leaving a person feeling lonely. A lonely person then looks for something to alleviate the psychological pain of loneliness, which often results in
engaging in compulsive sexual behavior. Coleman also claimed that compulsive sex behavior is more common in people who grew up in conservative contexts with restrictive views about sexuality.

Levine and Troiden (1988) examined sexual addiction and sexual compulsivity from a sociological perspective and are heavily referenced by other scholars and professionals. They claim that the diagnosis of sexual addiction or sexual compulsivity must be understood within the cultural context of sexual impulse control. Each culture, according to Levine and Troiden, has its own sexual scripts, which determine acceptable sexual behavior and deviant sexual behavior. The authors identify three competing sexual scripts in the United States: the procreative, the relational, and the recreational. The procreative script promotes the belief that sexual activity belongs in the context of marriage between one man and one woman and is for the purpose of having children. The relational script promotes the belief that sexual activity is reserved for a committed relationship as an expression of intimacy. The recreational script promotes the belief that consensual people can participate in whatever consensual sexual behavior they so desire regardless of their commitment to each other. Levine and Troiden describe the change in the sexual script in the United States from being procreative in the 1950s to relational and recreational in the 1960s and 1970s and then to a relational script beginning in the 1980s. Also examined were the definitions of deviant sexual behavior over this time period by mental health professionals influenced by the changes in sexual scripts. According to Levine and Troiden, the concepts of sexual addiction and sexual compulsion were not mentioned in the literature until the 1980s because during this time, there was a cultural rejection of the recreational sexual script due to the rise of sexually transmitted diseases,
a stronger commitment ethic, and the rise in power of the conservative religious right wing.

Levine and Troiden describe the concepts of sexual addiction and sexual compulsion as value judgments that are socially constructed to reflect the dominant relational sexual script. They go on to argue that addiction occurs in response to a physiological dependence on a substance and that sex is an experience not a substance. Also argued is that sexual addiction and compulsion are deemed unacceptable when it occurs outside the culturally constructed relational sexual script. The relational sexual script, according to Levine and Troiden, was subjectively constructed and suggests that repetitive sexual behavior is actually considered acceptable when it occurs in the context of a committed relationship but is considered unacceptable sexual addiction and compulsion when practiced outside a committed relationship. Another criticism of sexual addiction and sexual compulsion by Levine and Troiden is that empirical research does not demonstrate sexual addiction as a clinical condition.

In 1989, empirical research activities begin to increase and add to the debate between scholars and professionals regarding sexual addiction and sexual compulsion. Carnes (1989) introduced the Sexual Addiction Screening Test (SAST), which has become commonly used and referenced in the literature. The current 25-item SAST was developed by Carnes as a tool for therapists to use when working with clients who may be engaging in problematic sexual behavior, and to encourage future research to address the lack of empirical evidence. The original 50-item questionnaire was tested with 73 sexual addicts in Minneapolis, MN, revised to 25 items and then retested with 191 male addicts and 67 nonaddicts to show internal consistency. According to Carnes, a male
who answers “yes” to at least 13 of the 25 items is someone who may exhibit sexual addiction tendencies and should follow up with a clinical interview.

Marks (1990) applied chemical addiction knowledge to what he called behavioral addictions. Marks claims that repetitive routines are not usually labeled chemical addictions until other life routines are negatively affected. Less frequent, according to Marks, is the term addiction applied to behaviors. Both chemical and behavioral addictions have in common a lack of impulse control and a lack of self-regulation. Hypersexuality is one of the behaviors identified as a candidate for a behavioral addiction. Excessively viewing Internet pornography was not listed specifically as a subcategory of hypersexuality. What is particularly noteworthy is Marks’ description of the two different urges that motivate an addiction. One urge is appetite and the second urge relieves discomfort. Marks describes an appetite as a behavior that pushes someone toward it. Relieving discomfort is described as a behavior that pulls someone toward it. Furthermore, addictions, according to Marks, are often called compulsions, to communicate the desire to relieve discomfort. Addictions, on the other hand, communicate attraction in response to an appetite. What Marks is suggesting is that this push toward addictive behavior and the pull to relieve discomfort can occur at the same time. To apply Marks, a male Christian college student could be attracted to viewing Internet pornography in response to his sexual appetite, may experience discomfort if he does not view it, but then views it to relieve the discomfort caused by not viewing it after experiencing an appetite for it. Marks seems to shed light on Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008), who discovered in a sample of 313 male university students from six colleges across the United States that 67 percent of male
students believed viewing pornography is acceptable, while 87 percent reported viewing it. The differences between pornography acceptance and use in the Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) study may well be an illustration of the push (addiction) and pull (compulsion) described by Marks (1990).

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) does not currently list sexual addiction or sexual compulsion as a mental disorder (American Psychiatric Association, 1994). The DSM is utilized by trained professionals to diagnose mental health disorders, which then serve as the basis for designing treatment options. The DSM-IV defines mental disorders as “a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom” (American Psychiatric Association, 1994, p. xxi). Irons and Schneider (1996) review how problematic sexual behavior is categorized in the DSM-IV. One of the 16 diagnostic categories in the DSM-IV is Sexual and Gender Identity Disorders, which is further organized into the sub-categories, Sexual Dysfunctions, Paraphilias (unusual sexual urges, behaviors or fantasies), Gender Identity Disorders, and Sexual Disorder Not Otherwise Specified. According to Irons and Schneider, problematic sexual behavior is usually classified as a Sexual Disorder Not Otherwise Specified. Impulse-Control Disorder is located in a different DSM category that also may include problematic sexual behaviors, according to Irons and Schneider. The most recent Diagnostic and Statistical Manual of Mental Disorders, DSM-IV-TR,
categorizes problematic sexual behavior similarly to the DSM-IV. (American Psychiatric Association, 2000).

Kalichman and Rompa (1995) tested the reliability and validity of instruments they designed to predict HIV risk behavior: a Non-Sexual Sensation Seeking Scale (NSSS); a Sexual Sensation Seeking Scale (SSSS); and a Sexual Compulsivity Scale (SCS). The study was completed with 296 gay men in Milwaukee, WI and also with 158 low income men and women from Milwaukee, WI. The results showed a relationship between sensation seeking and a variety of sexual behaviors as well as a relationship between sexual compulsivity relating to self esteem (the higher the compulsive sexual behavior the lower the self-esteem) and resistance to changing HIV risk behavior. Additionally, sexual and non-sexual sensation seeking was found to predict substance use among gay men before sexual behavior, while the Sexual Compulsivity scale predicted a variety of sexual behaviors among the men and women. All three instruments, it was concluded, demonstrated reliability and validity, an important finding which created research instruments that have been utilized and referenced consistently ever since.

Carnes (1996) reflected on the literature in five different professional fields including sexual medicine, addiction medicine, trauma medicine, psychiatry, and criminal justice in an attempt to clarify the conflict over the use of the terms sexual addiction and sexual compulsion as well as to build consensus. Carnes claimed that the conflict over definitions was rooted in political conflict rather than in a desire to help people who were ill. One of the conclusions that Carnes makes at the end of the article is that a new term may be necessary if there will ever be an acceptable way of clinically
diagnosing and treating a person with sexually addictive or sexually compulsive behavior.

The empirical research continued to contribute to the ongoing debate. In a study with 53 men participating in a Sexual Addicts Anonymous (SAA) group, Wines (1997) developed a questionnaire based on Carnes (1991) research. The author sought to compare the experiences of people with sexual addiction to the substance dependence criteria in the DSM-IV. The results demonstrated that the criteria for substance dependence applied to sexual addicts as reported by 74 to 98 percent of the respondents on each of the seven criteria. The substance dependence criteria include tolerance of addictive behavior; withdrawal from addictive behavior; addictive behavior engaged longer over time or for more time than desired; lack of success in eliminating or controlling addictive behavior; significant time spent getting ready for and/or recovering from the addictive behavior; reduction or elimination of significant activities as a result of the addictive behavior; and continual engagement in addictive behavior despite negative consequences. The study completed by Wines suggests that sexual addiction can be diagnosed in similar ways to substance dependence, which seems to address, in part, the concern raised by Levine and Troiden (1988) regarding the lack of scientific research.

Goodman (1997), a psychiatrist, provides a thorough treatment of various perspectives in the ongoing debate about how best to describe problematic sexual behavior in a comprehensive textbook on substance abuse. He also describes the various theories behind addiction and compulsion. In a later article, Goodman (2001) assumes agreement between clinicians and researchers on the existence of “driven sexual
behavior” that leads to either “subjective distress or functional impairment” (p. 191).

Goodman then argues his case for the most effective definition of driven sexual behavior. The definition of obsessive-compulsive disorder (OCD) in the DSM-IV, according to Goodman, focuses on behavior that reduces anxiety but is not considered pleasurable. Driven sexual behavior, Goodman argues, can help to reduce anxiety, but he claims that the pleasurable aspect of the behavior is also a motivation to engage in the sexual behavior. Goodman argues that the research of others demonstrates that patients with driven sexual behavior, who were also diagnosed with Obsessive-Compulsive Disorder, were able to be effectively treated with antidepressant medications to positively improve the OCD while leaving the driven sexual behavioral issues unaffected. Goodman concludes that driven sexual behavior cannot, therefore, be defined alone as a compulsive behavior.

Goodman then briefly examined the Impulse-Control Disorder model from the DSM-IV as a potential definition for driven sexual behavior. Impulse-Control Disorder, according to the DSM-IV, is the inability to resist an urge to engage in a harmful behavior. The focus of an impulse disorder is the failure to control engaging in a harmful behavior to experience pleasure whereas the focus of a compulsive disorder is the failure to control engaging in a behavior to avoid distress. Goodman concludes that there is a dimension to driven sexual behavior that is captured by the definition of Impulse-Control Disorder. Guigliano (2008) points out that there has been no research promoting the impulse-control disorder model to describe driven sexual behavior since Barth and Kinder (1987).
Goodman (2001) also examined the term addiction as an appropriate definition to apply to driven sexual behavior. He reviewed what was known about drug addiction, which, according to Goodman, is the most accepted syndrome to be labeled an addiction. Goodman states that the mark of true drug addiction is the repeated inability to control the behavior and the continued engagement in the behavior despite harmful consequences that may occur as a result. The conclusion Goodman makes is that driven sexual behavior fits the two most salient characteristics of chemical addiction while helping a person avoid psychological distress and experience physical pleasure. Goodman uses the same pull (addiction)/push (compulsion) language as Marks (1990) but Marks concluded that compulsive sexual behavior and addictive sexual behavior exist at the same time. Carnes (1992), on the other hand, concluded that uncontrolled compulsive sexual behavior is a necessary part of the addiction cycle. Goodman concludes that the inability to control a driven sexual behavior, which helps a person avoid psychological distress while at the same time experience pleasure, is what makes sexual addiction a unique definition by itself.

In an article analyzing addiction research, Peele (2000) focuses on the role of subjective beliefs to show their impact on addictions. Peele does not address the debate between sexual addiction and sexual compulsivity, but his ideas may be instructive in the debate. Peele highlights research by the Alcohol Research Group between the late 1960s and the early 1980s that demonstrates a significant increase in the number of people reporting a dependence on alcohol while the actual reported drinking problems remained constant. Peele’s interpretation was that people reported higher levels of alcohol dependence in response to greater public marketing and awareness of alcoholism. The
author’s point was that one’s belief about one’s behavior influences the addictive experience. If Peele were to enter the debate regarding how best to describe problematic sexual behavior, he may be likely to point to the increased public attention given to AIDS and other sexually transmitted infections (STIs) as sparking interest in sexual addiction and sexual compulsion research, recovery groups, and self-help books. Peele may conclude that there may be higher reported rates of sexual addiction and sexual compulsion in response to greater public awareness of these issues, even though the reported rates of actual problematic sexual behavior may not have increased. Whether or not problematic sexual behavior has increased over time cannot be demonstrated since there has not been sustained empirical research.

Guigliano (2008) conducted qualitative, semi-structured interviews with 14 men, between the ages of 29-64. The median age was 36. Participants were recruited from the Los Angeles area through announcements at locations where sexual addiction recovery groups were meeting, through announcements to professionals attending sex addiction and compulsivity conferences, and through snowballing (asking volunteer participants to recruit others who may also be interested in participating). The purpose of the study was to explore and describe the sexual behavior of men, who self-identify as having out-of-control sexual behavior, as compulsive, impulsive, addictive, or as something not yet identified. Guigliano identified the common features between compulsive, impulsive, and addictive behavior, as described by the DSM-IV-TR manual (APA, 2000): repetitive sexual behavior; inability to resist sexual behavior, even with the knowledge that the behavior may result in negative consequences; and internal or external cues that can trigger sexual behavior.
Guigliano (2008) found that most of the participants described their sexual behavior as pleasurable early on, but less pleasurable over time, suggesting that sexual addiction/dependence may begin as an impulse control disorder but then lead to addiction/dependence. One of the marks of impulse control disorder is the inability to control urges that are pleasurable. Guigliano did not find support in the study for the sexual behavior of the participants to be identified as compulsive since only one person described his sexual behavior as a response to anxiety. A person with a compulsive disorder uses behavior to decrease distress or anxiety. According to Guigliano, the study does support the use of addiction or dependence to describe out-of-control sexual behavior. All 14 participants of the study identified at least three of the seven symptoms of dependence, as required by the DSM-IV; 13 participants identified at least five of the symptoms of dependence applied to them. Even with the limitations of the small sample size, this study is important because it supports similar findings by Wines (1997).

The research demonstrates the current lack of consensus about how best to describe problematic sexual behavior. Most of the research related to problematic sexual behavior has been conducted with high-risk populations such as sexual offenders (Carnes, 1992), people in sexual recovery groups (Carnes, 1986), as well as bisexual and gay men at risk of HIV (Quadland, 1985). Researchers have been attempting to understand and empirically describe what defines problematic sexual behavior, when sexual behavior becomes problematic and why it becomes problematic. How does this research apply to college students? There is a small, but growing, body of research related to sexual addiction and sexual compulsion with college students. Researchers have become interested in examining the merits of sexual addiction and sexual compulsivity measures...
to describe problematic sexual behavior among non-clinical populations such as college students.

In light of the research reviewed regarding the debate between problematic sexual behavior being described as compulsive or addictive, and for the purposes of this study, both perspectives were considered. Rather than choosing one perspective to the exclusion of the other, and given the lack of consensus among professionals in a variety of fields, it seemed best to leave open the possibility of both descriptors existing independently of one another or concurrently (Bancroft & Vukadinovic, 2004).

**Sexual Addiction and College Students**

Thus far, the sexual addiction and sexual compulsion research that has been reviewed provides a foundational understanding for the broader debate regarding how best to understand and describe problematic sexual behavior. The sexual behavior under examination in this current study was accessing Internet pornography by male undergraduates at Evangelical Christian liberal arts colleges. Is viewing Internet pornography by this population a compulsion, an addiction or something else not yet examined? The focus of the literature review will now turn to examining the empirical research related to sexual addiction and college students. Then the review will examine empirical research related to sexual compulsion and college students.

Seegers (2003) surveyed 240 students (69 male and 171 female) at a private university in the southeast. Male students took the Sexual Addiction Screening Test (Carnes, 1989) and female students took the Women’s Sexual Addiction Screening Test (Carnes & O’Hara, 2000). The results for male students demonstrated that 17.4 percent were high risk and needed further evaluation and potential treatment, while 8.7 percent
were considered at-risk, and 73.9 percent were not at risk. The results for female students demonstrated that 32.2 percent were high risk and needed further evaluation and potential treatment, while 13.5 percent were considered at-risk, and 54.4 percent were not considered to be at risk. One of the problems with this study, as noted by Seegers, is the use of two different sexual addiction screening tests, making it difficult to compare the results of male and female students. The instruments used by Seegers do not specifically identify or examine the viewing of Internet pornography. The study does suggest, however, that college students are able to identify a variety of sexual behaviors, defined by the participant, as potentially addictive, which would include the viewing of Internet pornography.

Breaux (2004) used the Sexual Addiction Screening Test (Carnes, 1989) to survey undergraduate students at Arizona State University from 12 different liberal arts courses. Breaux was seeking to examine, to what extent, participants perceived the Sexual Addiction Screening Test as an effective assessment of someone they knew who may exhibit a potentially addictive sexual behavior. The students were surveyed after the professors gave their permission to do so. There were 151 completed surveys (43 men and 108 women). The survey contained 50 items. At least half of the participants responded that each of Carnes (1989) original 50 items was a “possible” or “definite” indicator of a sexual addiction. Approximately 80 percent of the participants believed that 40 of the 50 statements together were indicators of sexual addiction. Male students were more likely than female students to believe that one particular item was a sign of sexual addiction. The item related to losing a partner, significant other or spouse as a result of sexual behavior. Female students on the other hand identified five different
items as signs of a sexual addiction: near death experience related to sexual behavior; using sexual behavior to achieve emotional balance; using sexual behavior in response to emotional distress; losing custody rights to children because of sexual behavior; and an all encompassing desire for sexual behavior above all other desires. Much like Seegers’ (2003) study, Breaux (2004) does not isolate viewing Internet pornography as the only potential sexually addictive behavior being examined.

What is helpful about Breaux’s study however is that it gives the overall statistical breakdown for each of the 50 items. Three of the 50 items relate directly to Internet pornography. The first identifies spending five or more hours a week viewing Internet pornography or engaging in cybersex. The second lists 11 or more hours of viewing Internet pornography or engaging in cybersex as the boundary. The third item discusses having less human-to-human partner sex because of a preference for cybersex. A gender statistical breakdown is not provided, unfortunately, for each of the 50 items. It is interesting to note, however, that spending five or more hours each week engaging in Internet pornography of some form was perceived by 6.6 percent of the participants as not being an indication of a sexual addiction, while 57.6 percent perceived that it could possibly be considered an addiction and 35.8 percent perceiving that it was definitely a sign of addiction. Spending 11 or more hours each week engaging in Internet pornography of some form resulted in 4 percent not perceiving this to be a sign of addiction, 32.5 percent possibly perceiving this as a sign of addiction, and 63.6 percent definitely perceiving this as a sign of a sexual addiction. Preferring cybersex over partnered sex was perceived by 17.2 percent as no sign of addiction, 47 percent perceiving this as a possible sign of addiction, and 35.8 percent perceiving this as a
definite sign of sexual addiction. Reflecting on the results of the three items related to
Internet pornography seems to suggest that there is not as much participant concern for
someone who prefers cybersex to partnered sex as being sexually addicted, as long as the
person does not spend five hours or more each week viewing/engaging in Internet
pornography related material. Correlations between these three items were not
determined however, so the relationship between them is strictly hypothetical.

Leahy (2009) conducted research with 26,399 college students from 2006-2008,
as a part of his speaking tour to college students regarding his personal experience with
pornography. Leahy utilized the 25-item Sexual Addiction Screening Test (SAST)
developed by Carnes (1989). Data were collected on a number of demographic questions
and on topics such as the age of first exposure to pornography, amount of time spent on-
line, and amount of time spent engaging in on-line sexual behavior. The colleges or
universities, where Leahy was to speak, hung posters advertising the lecture and inviting
students to complete an online sex survey. The advertisements were, according to Leahy,
pornography neutral so as not to skew the survey responses. Completing the SAST was
not required for attending Leahy’s lecture. Students who elected to participate in the
survey saw, in a drop down box in the demographics section, all the colleges and
universities close to the host campus. The drop down box allowed students from
neighboring campuses to participate in the survey. One hundred and ten colleges and
universities were listed over the three year period. Students from 1,000 other campuses,
not listed in the drop down box, found out about the survey and completed it as well.

The survey was completed by 59 percent of male students and 41 percent of
female students. By the age of 14, 81 percent of male participants had been exposed to
pornography compared to 52 percent of female participants. The amount of time spent on-line was similar for both genders. The amount of time spent on-line engaging in Internet sex was very different between the genders: 36 percent of male students compared to 82 percent of female students spent zero hours each week; 51 percent of male students compared to 16 percent of female students spent less than five hours; 11 percent of male students compared to 1 percent of female students spent five – 20 hours a week; and 2 percent of male students compared to 1 percent of female students spent over 20 hours a week. Male students reported that 5 percent in their ranks had been sexually abused as children compared to 12 percent of female students. When the SAST asked if they regularly visited sexually explicit web sites, 42 percent of the male students answered yes compared to 18 percent of female students. When evaluating the total scores for the SAST, 4 percent of the male students answered yes to at least 14 of the 25 statements compared to 2 percent of female students. Carnes (1989) claimed that answering yes to at least 13 of the 25 items was an indication of sexual addiction and should prompt a follow up verbal assessment with a trained professional.

Huson (2005) conducted a qualitative study with 18 male undergraduate students attending Evangelical Christian colleges. They were recruited to participate from one of five Evangelical Christian colleges on the West Coast. Participants were recruited through resident assistant e-mail invitations to the men on their respective floors, a personal invitation from the campus pastor, a personal invitation through a local church youth pastor, and participants inviting other participants to join the study. The interviews lasted from one to two hours. Following the interviews the content was transcribed and analyzed for common themes. The researcher then met with resident assistants and
residence directors from two of the schools to test if the findings were consistent with their experience of working with male Christian college undergraduates in the context of the residence halls. Huson found that the age of first exposure to pornography for the participants was between 11-13 years of age.

The most common reason stated for the attraction to pornography was that students knew it would provide some release from their fears, stresses, and anxieties. Students believed that they could escape from the problems and pressures of life through their use of pornography. Feeling good was part of that escape from reality. (Huson, p.59)

Huson’s finding seems to reflect Goodman’s (2001) determination that the term sexual addiction uniquely identifies sexual behavior both to reduce psychological distress and experience pleasure.

All the participants in Huson’s study identified that they had a very difficult time terminating Internet pornography use, even though they could be caught by the college they were attending and be held responsible for violating college policy. All of the participants also stated that over time, viewing Internet pornography images no longer made them feel as good so they eventually started also to view pornography videos. Most participants described a gradual process of withdrawing from people the more pornography was consumed. Being discovered was described as the most pressing fear, but ironically, identifying pornography use to other caring people who were willing to help was deemed important to reduce or stop pornography use. All but one participant stated that pornography consumption had a negative impact on college academic performance due to the distracting images making it difficult to concentrate, the amount of time spent consuming pornography in addition to the need to hide habitual pornography use. All of the students recommended more communication from Christian
college administrators about the dangers of pornography. All participants spoke critically about the lack of discussion among Christians in general about sexuality and pornography related topics. All participants identified feelings of guilt and shame for consuming pornography as well as a negative impact on their spiritual growth. Spiritual growth was described by Huson as “the capacity to know and be known (by Christ and other Christians)” (p. 93). All the participants in the study acknowledged that viewing pornography was unacceptable. The conflict of engaging in a behavior that was viewed as unacceptable to God and those who followed God seem to cause the students to isolate themselves.

Logue (2009) conducted a study with students attending Evangelical Christian colleges, predominately Assemblies of God universities from a variety of locations in the United States. The purpose of the study was to investigate the potential impact of the fathers’ parenting style on the students’ online sexual behavior during college. Faculty members in Pastoral Counseling, Sociology, Psychology, and Counseling Psychology at the participating universities were asked to forward a URL link to students in their respective departments and encourage students to participate in the study. There were 300 students who received an electronic invitation to participate in the research, and 100 students completed the survey. Logue does not identify the breakdown of female and male participants, possibly because gender was a not a specific factor being examined. In addition to demographic questions, students were asked to complete the Internet Sex Screening Test (Delmonico, 1999) and the Parental Authority Questionnaire (Buri, 1991). The Internet Sex Screening Test, adapted from Carnes (1989) Sexual Addiction Screening Test, assesses self-reported online and offline sexual behaviors and the
Parental Authority Questionnaire assesses the self-reported perception of three different parenting styles: authoritarian, authoritative, and permissive. Logue found that 10.1 percent of the participants have bookmarked Internet pornography sites, 43.1 percent reported searching the Internet for pornography, 45 percent promised to stop viewing sexual material on the Internet but failed, and a total of 18.3 percent of the participants perceived themselves to be sexually addicted.

Logue (2009) also discovered no significance between the authoritarian and the authoritative parenting styles as a predictor for perceived Internet sexual addiction during college. The prediction was that students who perceived their fathers to be authoritarian would be more likely to report a perception of Internet sexual addiction. Instead, there was a significant difference between the permissive parenting style and both the authoritarian and authoritative parenting styles respectively. Students who perceived the parenting style of their fathers to be permissive were less likely to perceive themselves to be addicted to Internet sex.

The influence of Carnes (1989) is seen in much of the sexual addiction quantitative research conducted with college students. The assessment tool developed by Carnes (1989), however, so broadly measures potentially problematic sexual behavior that the meaning of the results for the current study related specifically to Internet pornography access and male students attending Evangelical Christian colleges is a bit unclear. The qualitative study by Huson (2005) contains the strongest data to support further quantitative study of Internet pornography use among male students attending Evangelical Christian colleges and the relationship of such use to potential indicators of addiction. The other studies also serve as an important support for further quantitative
research because they demonstrate the pervasive issue of problematic sexual behavior, including the viewing of Internet pornography, which may in fact best be understood as addictive. The focus of the literature review will next turn to studies related to sexual compulsion and colleges students.

**Sexual Compulsion and College Students**

Until 2004, sexual compulsivity had not been empirically investigated with college students. Sexual compulsivity is commonly studied with the use of the Sexual Compulsivity Scale (SCS) developed by Kalichman and Rompa (1995). The 10 question SCS instrument was initially developed and tested to be reliable and valid with populations who exhibit high risk sexual behaviors related to HIV. Dodge, Reece, Cole, and Sandfort (2004) used the SCS with college students to test the reliability and construct validity with this population. A sample of 876 college students (325 men and 551 women) completed several demographic questions, the 10-item SCS and questions that measured the frequencies of several different types of sexual behaviors as well as the number of sexual partners from the previous three months. The sample came from introductory health science courses at a large, public university in the Midwest.

The results showed a significant relationship between sexual compulsivity and partner sex activities, a significant relationship between solo sex activities and sexual compulsivity and a significant relationship between public sex activities and sexual compulsivity. The most significant of these relationships was between solo sex activities and sexual compulsion. Solo sex was defined as masturbation alone or with the aid of five other behaviors, one of which was pornography. There was also a significant relationship between sexual compulsivity and sexual relationship status. Students
reporting that they had participated in nonexclusive sexual situations in the previous three months were more likely to have a higher sexual compulsivity score than students reporting involvement in an exclusive sexual relationship or reporting not being sexually active. The mean sexual compulsivity scores were higher for men than for women. Finally, the higher the sexual compulsivity score, the more likely was the report of higher rates of unprotected sexual behavior.

Perera (2005) surveyed 539 undergraduate students (69.2 percent female and 30.8 percent male) in a large Midwestern university to examine the etiological, personal and socio-ecological correlates of dispositions toward out-of-control sexual behavior and also to examine the cognitive and behavioral impact of sexual behavior. A convenience sample was completed among health, bioscience and computer science courses. A 180 item instrument was designed by joining together several different existing instruments: The Sexual Compulsivity Scale (Kalichman & Rompa, 1995) used to investigate high risk sexual behaviors; the Sensational Seeking Scale (Kalichman, Johnson, Adair, Rompa, Multhauf, & Kelly, 1994), used to measure traits that could predict high risk sexual behavior; the Family Environment Scale (Moos & Moos, 1981), designed to measure family social and environmental characteristics; the Eysenck Impulsivity Scale (Eysenk & Eysenck, 1978), designed to measure impulsivity (the inability to delay gratification) and the traits most commonly expressed by impulsive people; the Center for Epidemiological Studies-Depression Scale (Radloff, 1977), designed to measure symptoms of depression; and four items measuring sexual abuse.

Perera (2005) reported that men scored significantly higher on sexual compulsivity and sexual sensation seeking. Perera also found significance between
sexual compulsivity and nonexclusive sexual relationships as well as between sexual sensation seeking and nonexclusive sexual relationships, which is similar to the findings by Dodge, Reece, Cole, and Sandfort (2004). Religious affiliation was found to be significant with sexual compulsivity and with sexual sensation seeking. Protestants were less likely to self-report sexual compulsive and sexual sensation seeking behaviors when compared to Catholics/other Christians, Jewish, and “other.” Religious affiliation may be a bit more difficult to interpret than Perera discussed because listing Catholics/other Christians together is very broad and could be confusing to some of the participants. Compulsive sexual and sexual sensation seeking behaviors are positively associated with the number of sexual partners and the frequency of sexual behaviors, similar to Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) who found the number of sexual partners correlated with higher rates of Internet pornography use. Childhood sexual abuse and poor family environments were more likely to foster sexually compulsive and sexual sensation seeking behaviors, which mirror similar conclusions made by Carnes (1992) and Coleman (1988). Sexual compulsivity was found to be a strong indicator of negative cognitive and behavioral impact of college student sexual behavior.

Gullette and Lyons (2005) conducted research with a randomly selected group of female and male undergraduate students at a southern university in the United States. An e-mail invitation was sent to an equal number of female and male students, with 256 (154 female or 60.9 percent and 99 male or 39.1 percent) students completing the on-line survey. The survey consisted of demographic questions as well as three different instruments to understand the role of sexual compulsivity, sensation seeking and alcohol
use as they relate to HIV risk behaviors. The instruments were the Sexual Compulsivity Scale (SCS), the Sexual Sensation Seeking Scale (SSSS), and the College Alcohol Problem Scale (CAPS), which measures personal and social problems related to drinking alcohol. Gullette and Lyons discovered significant relationships between the scores on each of the three scales and HIV risk behaviors. Male students scored significantly higher on the SSSS and SCS when compared to female students. The four variables that predicted HIV risk behaviors were age, high scores among SSSS and CAPS and low scores on SCS.

Abell, Steenbergh, and Boivin (2006) completed a study with 125 undergraduate college males at two Evangelical Christian colleges, one private non-Christian college and one public university in the Midwest. The participants completed the 20-item Spiritual Well-Being Scale (Ellison, 1983), which measures perception of spirituality and relationship to God as well as the perception of purpose and satisfaction in life; the 15-item Systems of Belief Inventory (Holland et al., 1998), which measures religiosity and quality of life; the 25-item Male Sexual Addiction Screening Test (Carnes & Weiss, 2000), which measures sexual addiction indicators; and a 4-item Cyberporn Compulsivity Scale (adapted from Kalichman & Rompa, 1995), which measures sexual behaviors relating to Internet pornography. The results indicated 31 percent reported struggling with the desire to view Internet pornography. This result leaves a question as to whether or not desire can be interpreted as actual Internet pornography use. Also found was a significant positive correlation between the Cyberporn Compulsivity Scale and religiosity, indicating that the higher the religiosity measures the greater the compulsive Internet pornography struggle. This finding is noteworthy because it appears to be
opposite the finding regarding religiosity and addiction indicators in this same study. An inverse relationship was discovered between sexual addiction and religiosity, meaning that the higher the measures on sexual addiction, the lower the measures of religiosity. The finding regarding the inverse relationship between religiosity and sexual addiction seems consistent with the inverse relationships found between sexual behavior and religiosity in other studies (Lefkowitz, Gillen, Shearer, & Boone, 2004). This study may suggest that compulsive Internet pornography use is a greater issue than sexual addiction or perhaps a more effective way to understand the issue of problematic Internet pornography usage.

Perry, Accordino, and Hewes (2007) examined the variables that significantly predicted sexual compulsivity and risk-taking behaviors related to using the Internet for sexual purposes among a convenience sample of 307 college students (113 male and 194 female) recruited from one private and several different public universities in Western Massachusetts. Three different scales were used: the 11-item Sexual Sensation Seeking Scale (SSSS) measuring risk taking behavior in a sexual context, the 11-item Nonsexual Sensation Seeking Scale (NSSS) measuring risk taking behavior in a non-sexual context, and the 10-item Sexual Compulsivity Scale (SCS) measuring preoccupations with sexual behaviors. All the scales were developed by Kalichman and Rompa (1995). A demographic questionnaire was also used to assess age, gender, amount of time on-line each week, age of first exposure to pornography, year in college, and the general activities pursued on the Internet.

The age of first exposure to pornography was a significant predictor of the sexual sensation seeking score. Seidman’s (2003) findings were similar in his study with 310
undergraduate college students (208 female; 102 male) at the University of Massachusetts. He found that the younger the age of first exposure to pornography, the higher the frequency of later pornography use. Those participants who identified using the Internet for adult entertainment demonstrated higher sexual sensation seeking and sexual compulsivity scores (Perry, Accordino, & Hewes, 2007). Male participants scored higher than female participants on sexual compulsivity and on nonsexual sensation seeking. The mean sexual sensation score for upperclass students was significantly higher than the mean score for underclass students. This may reflect Huson’s (2005) findings that identified the need for more pornography exposure over time among male students to gain the desired response.

A number of findings from the review of research regarding sexual compulsivity and college students were relevant for the current study with male students attending Evangelical Christian colleges. First was the significant relationship between sexual compulsion and solo sex with the aid of one of five different behaviors, including Internet pornography (Dodge, Reece, Cole, & Sandfort, 2004). Kwee, Dominguez, and Ferrell (2007) discussed the sexual addiction self diagnoses of many male students attending Evangelical Christian colleges who are seeking help from a counselor; masturbation and Internet pornography were two of the most commonly discussed sexual behaviors. The second finding that was relevant to this study from the sexual compulsivity research was that male college students measured higher for sexual compulsivity than female students. The third relevant finding was that Protestants reported less sexually compulsive behavior (Perera, 2005), which seems to conflict with Abell, Steenbergh, and Boivin (2006), who found male students reporting higher scores of Internet pornography
compulsivity also reported higher religiosity scores. This conflict needs further investigation. The fourth relevant finding is that the age of first exposure to Internet pornography seemed to be a predictor of Internet pornography use during the college years. Seidman (2003) may shed important insight into one of the factors that may be influencing Internet pornography use by male students attending Evangelical Christian colleges.

Conclusion

The broader literature related to sexual addiction and sexual compulsion seemed to reflect a concern for the inability to control sexual behavior despite harmful consequences. These concerns have been researched with high risk populations in order to understand the behavior so as to be able to design effective treatment. The broader literature does not agree on how to label this behavior however. As a result, the scientific authority on understanding disordered behavior, the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000), does not specifically identify problematic sexual behavior as a disorder much like substance dependence. In the absence of guidance from the APA, researchers have been largely pursuing both the exploration of sexual compulsion and sexual addiction models to explain problematic sexual behavior.

In this current decade, researchers have turned their attention to higher education and college students for further investigation of problematic sexual behavior, given the high level of sexual activity exhibited by this population. The high Internet pornography usage rates among male college students in combination with the high acceptance of Internet pornography and the number of sexual partners suggest that college men are
another high risk category for problematic sexual behavior. A small sub-group of college men, studying at Evangelical Christian liberal arts colleges, could easily be overlooked given that higher religiosity measures generally show lower Internet pornography usage rates. However, several known researchers have investigated this sub-population of higher education and have found Internet pornography access to indeed be occurring and worthy of future study related to addiction and compulsion (Abel, Steenbergh, & Boivin, 2006; Huson, 2005; Logue, 2009). Therefore, the literature broadly and specifically seemed to support this current study examining the extent of Internet pornography access among male undergraduates at Evangelical Christian colleges as well as the potential correlation between the extent of Internet pornography access and indicators of addictive patterns, guilt regarding online use and online sexual behavior that is social in nature.
CHAPTER THREE
METHOD

Overview of Chapter

The method’s chapter will describe the methodology and the research design for the current study. Next the development of the instrument will be described. Then the study population will be described along with data collection measures and the types of data analyses.

Rationale for the Methodology

The literature review uncovered three empirical studies investigating varying degrees of Internet pornography addiction and/or sexual compulsion indicators among students attending Evangelical Christian liberal arts colleges (Abell, Steenbergh, & Boinin, 2006; Huson, 2005; and Logue, 2009). No study has been found to date, however, that seeks to quantitatively measure the extent of Internet pornography access only among male students attending only Evangelical Christian liberal arts colleges.

The current study seeks to quantitatively measure the extent of Internet pornography access among male students attending Evangelical Christian liberal arts colleges as well as seeking to quantitatively measure the potential correlations between the extent of Internet pornography access and indicators of addictive patterns, guilt regarding online use and online sexual behavior that is social in nature. Data were collected through the use of an online survey. The reason for utilizing a quantitative
research design method was due to the sensitive nature of the topic. The assumption was that male students would feel more comfortable answering questions related to their sexual behavior as well as answer more honestly if the survey was received and could be completed through the privacy of an online survey.

A correlation study investigates the degree of relationship between variables (Howell, 2007). Therefore, a correlation model seemed to be the most effective research method to utilize for the current study. Once the data were collected, they were analyzed in search of meaningful relationships.

**Research Design**

The current study utilized a quantitative research method through the use of an online questionnaire that included 15 background questions in addition to 31 survey questions (see Appendix F). The total number of questions was 46 and took less than 15 minutes to complete.

The survey was given to a small pilot group at an Evangelical college to determine how long the survey took to complete, as well as to receive feedback regarding the clarity, flow, and order of the questions. Feedback was also sought as to the level of comfort answering questions related to sexual behavior. Changes were made, based on pilot group feedback, after the survey was submitted to the Institutional Review Board of Loyola University Chicago for initial approval. All survey changes were documented and submitted to Loyola’s Institutional Review Board for final approval before data were collected.

Due to the research requirements of Loyola University Chicago, a demographic question was asked relative to age. Students must legally be considered an adult to
participate in research. Therefore, students who recorded they were under 18 were not eligible to complete the questionnaire.

*Instrument Development, Validity, and Reliability*

Background data asked if the participants considered themselves Evangelical Christians. A question about identification with the Evangelical Christian faith was asked in the current study because of support for such a question from the literature review regarding the effect of religiosity on Internet pornography usage (Abell, Steenbergh, & Boivin, 2006; Carrol, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008). Students who do and do not personally identify as Evangelical Christians were included in the data to help determine how religious affiliation relates to the extent of Internet pornography usage. Additionally, however, a question regarding religious identification was asked because attendance in an Evangelical Christian college does not guarantee all students consider themselves to be Evangelical Christians and not all Evangelical Christian colleges require students to profess a commitment to following Jesus Christ in order to enroll. Year in college was asked in the background data section because Perry, Accordino, and Hewes (2007) found upperclass students measured higher for sexual sensation seeking which can occur through Internet pornography usage.

Information about dating relationship status was requested because such a status was found to decrease acceptance for Internet pornography (O’Reilly, Knox, & Zusman, 2007). The justification of Internet pornography use was asked as well given the reportedly high level of acceptance from college men (Carrol, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008; O’Reilly, Knox, & Zusman, 2007).
Participants were asked to identify the total number of sexual partners because this number has been correlated with Internet pornography usage (Carrol, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008). Sexual partners was defined on the survey as anyone with whom there has been any shared orgasmic experience (intercourse, anal sex, oral sex, or mutual masturbation).

The amount of time spent online was found to be a predictor of Internet pornography usage (Byers, Menzies, & O’Grady, 2004; Lam & Chan, 2007; Nosko, Wood, & Desmarais, 2007) and was therefore pursued as a background question. The age of first exposure to pornography was a question due to its significance as a predictor of Internet pornography use, meaning the younger the age of first exposure the increased likelihood of Internet pornography use during college (Seidman, 2003).

There was no support in the literature review for examining factors such as part-time versus full-time student status. There was also no support for examining place of residence as a factor to examine.

There are four other background questions that were not grounded in the literature review, but rather grounded in the purpose for the study. The results of this study were intended to help staff members at Evangelical colleges understand undergraduate male Internet pornography usage patterns. Such understanding was intended to assist staff members in designing supportive resources and strategies for male students expressing a need for help related to Internet pornography usage. Therefore, a question was asked about how often a student speaks to someone about Internet pornography use. A second question asked the student to mark the types of people/roles on campus he feels most comfortable speaking with about Internet pornography use. A third question asked how
interested the student was in attending programs sponsored by the college to discuss questions/issues regarding Internet pornography. A fourth background question, located at the very end of the survey, asked the student to identify the reference point from which the survey questions were answered (i.e. college, high school, junior high or elementary school). An understanding of the students’ frame of reference when taking the survey was intended to clarify students’ pornography usage patterns specifically related to the college context.

Grubbs, Sessoms, Wheeler, and Volk (2010) recognized the challenges of measuring Internet pornography usage among religious populations for whom such usage has strong moral implications. Therefore, they developed the Cyber-Pornography Use Inventory (CPUI) to measure such usage. The CPUI is based on an instrument developed by Delmonico and Miller (2003), the Internet Sex Screening Test (ISST). The ISST was based on the work of Carnes (1989) and his Sexual Addiction Screening Test (SAST). The original design of the CPUI included a 40-item self-report inventory consisting of six subscales: compulsivity (lack of control regarding Internet pornography use), social (interactive online sexual behavior), isolated (non-interactive online sexual behavior), interest (level of attraction to Internet pornography), efforts (energy expended to obtain Internet pornography), and guilt (internal dissonance and self-judgment after looking at Internet pornography). Much of the importance of the CPUI, according to Grubbs, Sessoms, Wheeler, and Volk (2010), was placed on the Online Sexual Compulsivity subscale and on the Guilt subscale. High scores on the compulsivity subscale were intended to demonstrate compulsive and addictive Internet pornography tendencies and
high scores on the guilt subscales were intended to demonstrate the amount of guilt participants felt in response to viewing Internet pornography.

The CPUI was tested as an online instrument with 145 students over 18 years of age (94 male and 51 female) from a mid-sized Christian university in the Southeast. Also included in the online assessment were 13 questions related to attitudes toward pornography and 10 questions related to the frequency of Internet pornography use.

To explore the genuine factor structure of the inventory and assess the psychometric properties of the test, the items of the CPUI were entered into a principle components factor analysis with varimax rotation. The exploratory analysis initially revealed 11 factors with eigenvalues greater than one. However, the scree plot indicated only two or three distinct factors. As such, the analysis was conducted again for both a two-factor and a three-factor solution, with the three factor solution yielding much more interpretable results. Only items with factor loadings greater than .3 were viewed as belonging to a particular factor. (Grubbs, Sessoms, Wheeler, & Volk, 2010, p. 113)

The first factor was determined to be Addictive Patterns, which included 18 items: four from the original efforts subscale, two from the original guilt subscale, four from the original isolated subscale, and eight from the original compulsivity subscale. The Addictive Patterns factor is attempting to measure the extent to which the person completing the survey is unable to control his or her Internet pornography use resulting in addiction indicators. Out of the 18 items, eight items use a seven point scale on a continuum from “strongly disagree” to “strongly agree” in response to statements such as “Pornography has sometimes interfered with certain aspects of my life.” Four items utilize a two point true/false scale with statements such as “I have put off studying or other important priorities to view pornography.”

In response to feedback from the pilot study, the four statements associated with a true/false scale were converted to a five point continuum from “never” to “always.” An
option was also added that states, “I do not view Internet pornography.” The pilot study feedback revealed that it was difficult for male students to answer questions such as, “At times, I try to arrange my schedule so that I will be able to be alone in my room to view pornography” as true or false; A range of options was identified as more helpful for the student completing the survey to be able to answer the question more precisely. The four true/false questions are also written with the assumption that the student completing the survey is viewing Internet pornography. The male students in the pilot study felt that an option ought to be provided for the students who do not view Internet pornography.

Six items utilize a five point scale on a continuum of “never” to “always” in response to statements such as “I fear that someone might someday discover my secret of viewing online pornography.” The pilot study feedback suggested that the option, “I do not view Internet pornography” needed to be added to these six items for those students taking the survey who do not view Internet pornography. All six of the items are statements written from the assumption that the person taking the survey views Internet pornography. Without such an option, students who do not view Internet pornography marking “never” in response to a statement such as “I fear that someone might someday discover my secret of viewing online pornography” may intend the answer to mean that they do not view Internet pornography. This intention cannot be distinguished from students who do view Internet pornography and mark that they “never” fear that someone might someday discover their secret viewing of online pornography.

The Addictive Patterns scale included five items written with a past tense verb. For example, “I have stayed up late at night to access pornography online.” Feedback from the pilot study revealed the past tense verb in these five items created confusion.
Male students in the pilot were unsure if they were supposed to answer the five items with high school or college as the reference point. In response, the verb tense in those five items was changed to read in the present tense. For example, “I stay up late at night to access pornography online.”

The internal reliability of the Addictive Patterns factor was .89 and according to Grubbs, Sessoms, Wheeler, and Volk, the Addictive Patterns factor “did seem to find some level of theoretical support and potential construct validity when compared with the diagnostic criteria for both substance Dependence and Pathological Gambling, an Impulse Control Disorder” (p. 114). Given the modifications noted above to the four statements with a true/false scale, and to the six statements with the scale of “never” to “always,” the internal reliability of the Addictive Patterns factor was unknown.

The second factor determined through the factor analysis was identified as Guilt Regarding Online Pornography Use and consisted of eight items: six from the original guilt subscale and two from the original compulsivity subscale. The Guilt scale seeks to measure the strength of the internal dissonance and self-judgment experienced in response to viewing Internet pornography in the face of personal and institutional moral prohibitions to the contrary. Six items utilize the five point scale on the continuum of “never” to “always” in response to statements such as “I feel ashamed after viewing pornography online.” All six of these items are statements written from the assumption that the person taking the survey is viewing Internet pornography. The feedback from the pilot study suggested the addition of the option “I do not view Internet pornography” for students who do not view pornography. Without such an option, students who do not view Internet pornography marking “never” in response to a statement such as “I feel
ashed after viewing pornography online” may intend the answer to mean that they do not view Internet pornography. This intention cannot be distinguished from students who do view Internet pornography and mark that they “never” feels ashamed after viewing it.

One additional modification was made to two of the first six items in the Guilt scale. Two items were statements written with a negative preposition. “Viewing pornography online does not bother me” and “I feel no negative emotions after viewing pornography online.” In the pilot study, students were confused by the double negative created if “never” was selected as the answer for these statements. The suggestion was to clear up the confusion of the double negative language by writing the statements in the affirmative. The new questions read as follows: “My viewing pornography online bothers me” and “I feel negative emotions after viewing pornography online.”

The Guilt scale included one item written with a past tense verb, “I have punished myself when I use the Internet for pornography.” Feedback from the pilot study revealed the past tense verb in this item created confusion. Male students in the pilot were unsure if they were supposed to answer the item with high school or college as the reference point. In response, the verb tense in the item was changed to read in the present tense, “I punish myself when I use the Internet for pornography.”

The last two items utilize a seven point scale on the continuum of “strongly disagree” to “strongly agree” in response to statements such as “I have punished myself when I use the Internet for pornography (e.g., time-out from computer, cancel Internet subscription, etc.).” The internal reliability coefficient was .83 and the Guilt scale revealed by the factor analysis, according to Grubbs, Sessoms, Wheeler, and Volk (2010), demonstrated “psychometric soundness” (p. 116). Given the modifications noted
above to the six statements with the scale of “never” to “always,” as well as to the two items to avoid the double negative and the one item to avoid confusion regarding the students’ reference points, the internal reliability of the Guilt scale was unknown.

The third factor was determined to be Online Sexual Behavior – Social and consisted of five items from the original social. The Online Sexual Behavior – Social scale seeks to measure responses to statements that relate to sexual behavior on the Internet involving interaction with other people such as “I have participated in sexually related chats.” The statements utilize a five point scale on a continuum from “never” to “always.” The internal reliability coefficient was .84. The Online Sexual Behavior – Social scale is the only factor of the three generated by the factor analysis conducted on the CPUI that matches one of the five factors in the ISST.

Even though the CPUI was modeled after the ISST, the differences in the final factors, according to Grubbs, Sessoms, Wheeler, and Volk (2010), may be related to the survey participants. The ISST was tested with a large pool of people who came to a particular Web site in search of help for sexual problems whereas the CPUI was tested with students attending an Evangelical college who had viewed Internet pornography in the previous six months. The three final CPUI constructs seem to have taken shape around the particular group of Evangelical college students on whom it was tested, which included the Online Sexual Behavior – Social factor as the only factor that matched a factor in the ISST. Leaving the Online Sexual Spending scale (originally in the ISST) out of the CPUI and adding the Guilt and Efforts scales (not in the ISST), according to Grubbs, Sessoms, Wheeler, and Volk, likely affected the formation of the final three factors in the CPUI as compared to the original five factors in the ISST. The total
number of items for the CPUI was recommended to be 31 after the factor analysis was completed. No other studies were found utilizing the CPUI to date.

Overall, the instrument utilized for this current study was designed to measure potential correlations between male undergraduate students attending Evangelical Christian colleges and their personal faith identification as an Evangelical Christian, year in college, age, average time on-line, acceptance of Internet pornography, frequency of Internet pornography access, average time accessing Internet pornography each week, age of first exposure to Internet pornography, dating status, total number of sexual partners, frequency of self-disclosure regarding Internet pornography use, identification of to whom self-disclosure would be most comfortable, level of interest in college sponsored programs related to Internet pornography, indicators of Internet pornography addictive patterns, level of socially interactive on-line sexual behavior, and personal feelings of guilt as a result of accessing Internet pornography. The CPUI is not copyrighted. Authorization to use the CPUI was secured via e-mail from one of the published authors (see Appendix A).

**Study Population**

College students are consumers of Internet pornography (Boies, 2002; Caroll, Padilla-Walker, Barry, & Madsen, 2008; Goodson, McCormick, & Evans, 2001; Morrison, Ellis, Morrison, Bearden, & Harriman, 2006; O’Reilly, Knox, & Zusman, 2007). Students attending Evangelical Christian colleges also view Internet pornography (Huson, 2005; Logue, 2009), despite college and religious faith prohibitions to do so. There are 110 colleges and universities listed as members of the Council for Christian Colleges and Universities (CCCU). Institutions belonging to the Council for Christian
Colleges and Universities (CCCU) are considered intentionally Christian, which differentiates them from private liberal arts colleges that are church-affiliated. Being an intentionally Christian college means having an institutional mission statement that is Christ-centered and founded on the historic Christian faith. An intentional Christian college or university also hires full-time faculty and administrators who profess personal faith in Jesus Christ in addition to sponsoring curricular and co-curricular programs that integrate academic scholarship, biblical faith and service to Jesus Christ. There are 29 different Protestant denominations represented in the CCCU. The total student population is 325,000 with institutional enrollment ranging from 374 – 32,123. All CCCU institutions offer a four-year comprehensive undergraduate curriculum in the arts and sciences. All CCCU institutions are located in North America and must be regionally accredited (Council for Christian Colleges and Universities, 2010).

The data for this study was obtained from male undergraduate students attending one of three small (fewer than 3,000 students) Evangelical liberal arts colleges in the Midwest. Smaller undergraduate student populations are typical in the CCCU, therefore smaller colleges are targeted for this current study. Three campuses were targeted to increase the size of the sample in an effort to strengthen the findings. One college is located in Illinois, one in Indiana, and one in Minnesota. A multi-state perspective was important so the results reflected as heterogeneous a population as possible. One is located in a rural context and two are located in suburban contexts. Two colleges are rooted in the Baptist Church tradition and one is interdenominational, meaning it is not rooted in any one Protestant church denomination. There are 29 different denominations represented in the CCCU. The three Evangelical Christian colleges represent a
convenience sample of denomination types within the CCCU and in the Midwest. All three colleges are listed as members of the Council for Christian Colleges and Universities (Council for Christian Colleges and Universities, 2010). The three colleges targeted for this current study have been accredited by the Higher Learning Commission and are members of the North Central Association. The target male undergraduate student population for the three campuses combined was 2,245.

The online survey was sent to all male undergraduate students attending the targeted Evangelical Christian colleges. After reading Abell, Steenbergh, and Boinin (2006), Huson (2005), Kwee, Dominguez, and Ferrell (2007), and Logue (2009), one of the questions that empirically remained related to the extent of Internet pornography access among male students attending Evangelical Christian liberal arts colleges. The study by Abell, Steenbergh, and Boinin (2006) used a sample of male students from four participating colleges, with only two being Evangelical Christian colleges. So it is difficult to determine a relationship between sexual addiction and sexual compulsivity among the participants who attended only the Evangelical Christian colleges. Huson (2005) conducted a qualitative study with a small sample size from Evangelical Christian colleges. Kwee, Dominguez, and Ferrell (2007) wrote from their counseling experience with male students attending Evangelical Christian colleges. Logue (2009) used a sample of male and female students from an Evangelical Christian college and did not analyze the data separately for each gender. It seemed important for the current study to contribute to this small research base by investigating the extent of Internet pornography access among a male only undergraduate student population attending Evangelical Christian colleges as well as potential correlations of Internet pornography access.
Pornography research suggests that boys and men access pornography in greater percentages than women (Albright, 2008; Carol, Padilla-Walker, Nelson, Olson, Barry & Madsen, 2008; Mitchell, Finkelhor & Wolak, 2003; Wolak, Mitchell, & Finkelhor, 2007). Therefore this study only surveyed male students.

Undergraduate students were the target population because the vast majority of the students attending CCCU institutions are undergraduates.

Data Collection Measures

Criteria for Institutional Sample

Several criteria were used to select the institutional sample for the current study. First, institutions needed to be members of the CCCU. This ensured that all of the institutions were intentionally Christian. One of the purposes of this study was for the results to be of use to staff members seeking to help male students attending Evangelical Christian liberal arts colleges who are accessing Internet pornography. In order for the results of this study to be of use to Evangelical Christian colleges, the data collection for this current study must mirror the institutional context for which the results were targeted.

The second criterion used to select the institutional sample was a clearly articulated prohibition of Internet pornography use as well as institutional use of an Internet pornography blocking system. One of the relationships under investigation in this study was the level of moral guilt created when a male student attending an Evangelical Christian college accesses Internet pornography even though the institution prohibits and blocks such access.

The third criterion used to select the institutional sample was that the geographic location of the Evangelical Christian colleges needed to be in the Midwest. The primary
reason was the anticipated need to meet with faculty and/or staff Institutional Research members/committees in person. The researcher in this study lived and worked in the Midwest and could drive to each of the campuses if necessary to gain the approval necessary to collect data. Three campuses were selected in order to begin with a high enough sample size to generate a return rate resulting in meaningful data analysis.

Criteria for Student Sample

Male undergraduate college students were the focus of the current study because they have demonstrated higher Internet pornography access rates when compared to female students (Carrol, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008; Goodson, McCormick, & Evans, 2000; O’Reilly, Knox, & Zusman, 2007). Male students attending Evangelical Christian liberal arts colleges, specifically, have also been found to access Internet pornography (Huson, 2005; Logue, 2009), but no researcher to date has quantitatively measured the extent of Internet pornography access by only male students attending only Evangelical Christian colleges, which supports the current study’s goal to examine this subpopulation within higher education. The vast majority of the students attending CCCU institutions are undergraduate students. Therefore, undergraduates were the focus of the current study.

Use of Institutional Liaison

A Student Affairs professional at each of the targeted colleges was recruited to serve as an institutional advocate and liaison prior to and following the research approval process as well as prior to and following the data collection phase.
Gaining Institutional Access

Approval for this study was sought from the Institutional Review Board through Loyola University Chicago in order to collect data. Next, approval to collect data was sought from the Institutional Review Boards at each of the three Midwestern Evangelical Christian campuses targeted for this study (see Appendix D). A letter was requested from each campus Institutional Review Board and from a senior administrator at each college (Dean, Vice President, or President) as confirmation of institutional approval to participate in the study (see Appendix C).

Distribution and Receipt of Surveys

Approval was sought from each of the participating colleges to e-mail all of the male undergraduate electronic addresses to the principal researcher’s dissertation chair in order to preserve student’s anonymity. The students were sent a recruitment e-mail from the online program Opinio through Loyola’s computer server by the principal researcher under the supervision of the dissertation chair (see Appendix B). Sending the recruitment e-mail from the Loyola University computer server ensured the participating colleges could not observe who was responding to the survey. Students interested in participating in the research were instructed to click on the Opinio online survey link embedded in the recruitment e-mail. Clicking on the link brought up the informed consent form. The informed consent included basic information about the study itself as well as an explanation about how the identity of the student and the identity of the college he is attending were being protected (see Appendix E). Neither the identity of the student nor the identity of college was asked, making it impossible to track the answers of any given survey to the identity of any particular student or college. The informed consent letter
included information explaining exactly what the students were agreeing to by participating as well as stressing the voluntary nature of the survey. The consent form was also combined with the survey. Students were then asked if they wanted to continue to the survey and had to click “yes” then “continue” in order to continue. Continuing to the survey communicated their consent to participate in the research. Students who reported they were female and/or less than 18 were prohibited from completing the survey by Opinio. Opinio was also programmed so each person who received a recruitment e-mail was only able to complete the survey one time. Opinio was one of the instruments recommended by the Loyola University Chicago Institutional Review Board.

The date the recruitment e-mail was sent to all the male undergraduates was Thursday, January 27, 2011. The survey remained open until midnight on Thursday, February 17. Participants completed the online survey from the privacy of their computers.

All survey results were collected and aggregated by Opinio on the server of Loyola University Chicago so no individual responses could be connected to any individual e-mail addresses. Opinio was programmed at partial anonymity so that two reminders could be sent out as an encouragement to participate as well as to list the link to the informed consent and the survey (see Appendices G & H). The first reminder was sent on Monday, February 7 and the second on Monday, February 14 to the students who had not completed the survey. Recent studies regarding the expected return rate of Web-based survey research suggest that approximately 40 to 50 percent of electronic surveys are completed (Converse, Wolfe, Huang, & Oswald, 2008; Greenlaw & Brown-Welty, 2009). Both of these studies were completed with full-time working professionals. A
similar study completed with undergraduate college students who were solicited via e-mail to complete a Web-based health survey discovered a 58.8 percent return rate (Balajti, Darago, Adany & Kosa, 2010). However, an incentive was offered for completed surveys, which may have affected the response rate. Taken together, these studies created an expectation of a response rate of at least 40 percent in the current study with a total population sample of 2,245 male students, which equaled 898 as the expected number of returned surveys.

Data Analysis

The data analyses helped to answer the two research questions for the current study. The first research question was “To what extent do male undergraduates at select Evangelical Christian colleges in the Midwest access Internet pornography?” The second research question was “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online pornography use and online sexual behavior that is social in nature?” After the data were collected, descriptive statistics enumerated various frequencies among the 15 background questions. For example, the frequency of time spent online, how often Internet pornography is viewed, and how much time, on average, Internet pornography is viewed was reported. Linear correlation tests were then computed between the extent of pornography use each week and five variables from the background data (Evangelical status, year in college, amount of time online, number of sexual partners, and age of first exposure to pornography) as well as the three scales (addictive patterns, guilt over Internet pornography usage, and social interaction that is sexual in nature). The correlation tests were investigating the
potential relationships among the eight variables and the extent of reported Internet pornography use each week. Next, two different multiple regression analyses were computed. The first analysis investigated the predictive value of the five background variables found in the literature (Evangelical status, year in college, amount of time online, number of sexual partners, and age of first exposure to pornography) on the reported Internet pornography use. The second and third multiple regression analyses investigated the predictive value of a combination of the five background variables and the three scales (addictive patterns, guilt over Internet pornography usage, and social interaction that is sexual in nature). The significance of the correlations was established at the level of .05 during data analysis to ensure a confidence rate of 95 percent.
CHAPTER FOUR

RESULTS

Overview of Chapter

This chapter presents key findings from the online survey examining Internet pornography use among male undergraduate students at Evangelical Christian liberal arts colleges. Descriptive statistics will be shared as contextual information about the background of the students who responded to the survey. The research questions that guided this study will be reviewed along with the steps followed to prepare and then analyze the data. The results of the data analyses will also be presented.

Survey Administration

On Thursday, January 27, 2011, 2245 registered undergraduate male students were sent an e-mail invitation from the online survey program Opinio. Opinio is licensed by Loyola University Chicago. The survey was sent from the Loyola University Chicago computer server to protect the anonymity of the participants and the participating colleges. The students’ names and e-mail addresses were sent to the supervisor of this dissertation study by the participating colleges. The e-mail addresses were inputted into Opinio from the dissertation supervisor’s computer at Loyola University Chicago. The e-mail invitation was rejected by five student e-mail addresses, which presumes the addresses were connected to students who had cancelled their enrollment, were received as incorrect e-mail addresses by the participating college, or were accidently altered when
cutting and pasting the addresses into Opinio. The total number of students who received the invitation was 2240.

The male students were attending one of three Evangelical Christian liberal arts colleges in the Midwest who agreed to participate in the study. The survey consisted of 15 background questions developed with support from the literature review and the purpose of the study as well as 31 survey questions organized into three scales (addictive patterns; guilt over online pornography use; and online sexual behavior that is social in nature) by Grubbs, Sessoms, Wheeler, and Volk (2010) and used by permission.

Two reminders (Monday, February 7 and Monday, February 14) were e-mailed from Opinio to students who had not yet responded to the invitation to participate in the survey. The survey closed on Thursday, February 17 after being available for three weeks. A total of 635 students opened the survey invitation e-mail for an open rate of 28.3 percent. Beyond the first two questions to confirm the participants were male undergraduates and over the age of 18, no other questions required a response in order for the respondent to continue. Students were asked at the end of every Opinio online screen if they wanted to continue with the survey or if they wanted to exit. Each Opinio screen contained two questions. The data analysis demonstrates the slow decline of participants throughout the survey. There were missing data as a result. No surveys were eliminated for missing data. The number of students completing the entire survey was 485 (21.7% of 2240). The range of individual responses to the individual questions was between 485 (question #46) on the low end to 609 (question #1) on the high end. Opinio reported a median number of individual responses to individual questions were 501 (22.4% of 2240). Table 1 illustrates the data related to response rates.
Table 1. Response rate information.

<table>
<thead>
<tr>
<th># of e-mail invitations received</th>
<th># of invitations opened</th>
<th>Median # of individual responses to individual survey questions</th>
<th># of completed surveys</th>
<th>Range of individual responses to individual questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2240</td>
<td>635 (28.3% of 2240)</td>
<td>501 (22.4% of 2240)</td>
<td>485 (21.7% of 2240)</td>
<td>485 (question #46) to 609 (question #1)</td>
</tr>
</tbody>
</table>

Fourteen different students sent a direct e-mail to the primary researcher after receiving the invitation to participate in the study or after completing the survey. Most e-mail responses offered affirmation for the study and expressed an interest in seeing the results. Two students wanted clarification as to how the primary researcher received their respective e-mail addresses. One student offered suggestions for how to improve the wording of three questions that were confusing to him. No reported responses were received from students regarding technical difficulty accessing the online survey. One student questioned his particular institution’s approval for the study since he received the invitation from Loyola University Chicago’s address instead of from his own college’s electronic address. The principal researcher responded to each of the individual student e-mail inquiries to acknowledge the feedback and provide information if it was requested.

**Background Questions**

All registered undergraduate male students at three participating colleges were invited to participate in the online survey. If invited students answered “no” to the question, “Are you a male undergraduate student?” or if they answered “Under 18,” they were automatically transported to the end of the survey so they could not complete it. Four students were prohibited from taking the survey because they were either a female student and/or a graduate student. Three students were under the age of 18 and were also
prohibited from completing the survey. The vast majority (75.3 percent) of male undergraduate students who completed the survey was between the ages of 18-21; 21.3 percent were 22 years of age or older; and 2 percent were over 25.

The next background question asked students, “Do you consider yourself to be an Evangelical Christian?” This question was asked because of an assumption that attendance at an Evangelical Christian college was not the same as claiming personal identification as an Evangelical Christian. This question was also asked because of the significant relationship between religiosity and Internet pornography usage in prior studies (Abell, Steenbergh, & Boivin, 2006; Carrol, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008). The majority of respondents to the online survey (92 percent) answered that they considered themselves to be Evangelical Christians while 8 percent said they did not self-identify as an Evangelical Christian.

Undergraduate year in college was asked in the background question section in order to understand the distribution of the population responding to the survey but also because of the significance to Internet pornography usage in previous research (Perry, Accordino, & Hewes, 2007). A fairly even distribution of students occurred from each class, except 5th year seniors. First year students were represented by 19.8 percent of the responses; 25.3 percent of the responses were from second year students; 26.1 percent of the responses were from third year students; 23.5 percent of the responses were from fourth year students; and 5.3 percent of the responses were from fifth year students. Data for the number of male students in each class were provided to the researcher by each participating institution so a comparison could be made to the response rate from each of the aggregated classes. The data from the participating colleges demonstrate that surveys
were sent to 20 percent of first year students, 22.3 percent of second year students, 25.3 percent of third year students, and 32.4 percent of fourth year students. All three of the participating colleges combined fifth year and fourth year students together as fourth year students. Table 2 illustrates the class comparison between the response rate and the population receiving the survey. For the sake of comparison, respondent data from the fourth and fifth years were combined. The comparison demonstrates that the students responding to the survey from each class closely resemble the class distribution from the sample population.

Table 2. Class comparison between response rate and survey population.

<table>
<thead>
<tr>
<th>Class year</th>
<th>Population surveyed</th>
<th>Survey response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>20%</td>
<td>19.8%</td>
</tr>
<tr>
<td>2nd year</td>
<td>22.3%</td>
<td>25.3%</td>
</tr>
<tr>
<td>3rd year</td>
<td>25.3%</td>
<td>26.1%</td>
</tr>
<tr>
<td>4th year</td>
<td>32.4%</td>
<td>28.8%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Information regarding how much time (in hours) spent online, on average, each week was sought since these data were a predictor of Internet pornography usage in previous research (Byers, Menzies, & O’Grady, 2004; Lam & Chan, 2007; Nosko, Wood, & Desmarais, 2007). A bell curve seems to represent the results with a plurality of the online users (30.8 percent) self-reporting an average of 9-12 hours per week. To the left of the bell curve, 23.2 percent reported spending 5-8 hours per week online while 9 percent reported less than five hours per week. To the right of the bell curve, 20.8
percent reported spending 13-16 hours per week online while 16.1 percent reported 17 or more hours per week online.

Frequency of Internet pornography viewing was the next background question and was important in answering the first research question, “To what extent do undergraduate male students at Evangelical Christian colleges access Internet pornography?” Of the responses to this question, 79.3 percent acknowledged accessing Internet pornography at some time during the previous year with a slight plurality (29.3 percent) accessing it at least once a month. The responses to this question, overall, were evenly distributed with 20.7 percent reporting never accessing Internet pornography, 21.7 percent reporting accessing it at least once a year, and 25 percent reporting accessing it at least once a week. The outlier is the 3.3 percent of students who reported accessing Internet pornography at least once a day.

The data results for a background question asking about the frequency of the number of hours, on average, per week viewing Internet pornography were also important in addressing the first research question. A plurality of students, 46.2 percent, reported less than one hour of Internet pornography use each week and 38.9 percent reported zero hours on average of Internet pornography usage each week. However, 12.8 percent of students reported accessing Internet pornography between one and five hours each week and 1.4 percent reported accessing pornography between five and 10 hours each week while .7 percent reported more than 10 hours a week of access.

A background statement asking a student to rate his level of belief in the justification of viewing Internet pornography was purposely placed after the two questions where students were asked to disclose the frequency of Internet pornography
usage in an attempt to reduce negative internal feelings in response to reporting Internet pornography usage. The justification question was relevant because of the high level of acceptance of Internet pornography usage in previous research with college men (Carrol, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008; O’Reilly, Knox, & Zusman, 2007). The statement focused on the word “justification” instead of “acceptance” as a result of focus group feedback in a pilot study. The rationale for the recommended change relates to the assumption, among the male students attending the Evangelical college where the pilot study was conducted, that most male students attending Evangelical colleges are not likely to declare acceptance of Internet pornography usage, but may be more likely to rationalize a justification for viewing Internet pornography. A majority, 77.1 percent, reported that viewing Internet pornography is never justifiable. Additionally, 10.5 percent reported that viewing Internet pornography is rarely justifiable, and 8.5 percent reported such viewing is sometimes justifiable. Another 1.8 percent and 2.1 percent respectively reported that Internet pornography is frequently and always justifiable.

The age a student was first exposed to Internet pornography was included as a background question because it was a predictor of Internet pornography usage in previous research (Seidman, 2003). The majority of the survey participants completing this question, a combined 80.5 percent, had been exposed in junior high (52.8 percent at ages 11-13) or high school (27.7 percent at ages 14-18). Another combined 12.5 percent had been exposed in elementary school (11.9 percent at ages 6-10) or when five years old or younger (.6 percent). A low 3 percent reported first exposure to pornography during
college (19-22 years of age) and 3.3 percent reported never having been exposed to Internet pornography.

Exclusive dating status was asked in the background question section because of its relationship to male college students’ level of acceptance of Internet pornography usage in previous research (O’Reilly, Knox, & Zusman, 2007). A majority, 61 percent, reported that they were not currently in an exclusive dating relationship while 39 percent answered yes.

Students were asked to report how many sexual partners with whom they had at least one sexual experience leading to orgasm. A sexual experience was defined as intercourse, anal sex, oral sex, or mutual masturbation. Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) found a correlation between the number of sexual partners and Internet pornography use among college men. A majority, 51.2 percent, reported zero sexual partners from the past with 38.7 percent reporting 1-4 partners and 6.7 percent reporting five to eight sexual partners. A much smaller percentage, 1.5 and 1.9 respectively, reported nine to 12 sexual partners and 13 or more partners respectively.

Three background questions were included to address the purpose of this study. The purpose of this study was to provide empirical research that could inform the design of Internet pornography resources for male students attending Evangelical Christian liberal arts colleges who desire help. The three background questions that may be helpful to staff working at Evangelical colleges include: “How often do you speak to someone about your Internet pornography use? Who do you feel most comfortable speaking with about your Internet pornography use? And, how interested are you in attending programs sponsored by your college to discuss questions and issues regarding the viewing of
Internet pornography?" Approximately 47 percent answered “never” to “rarely” in response to the question about the frequency of their self-disclosure to someone about Internet pornography use while approximately 34.1 percent responded somewhere between “sometimes,” “frequently” and “always.”

When asked to whom they felt most comfortable speaking about Internet pornography, 55.4 percent said to a peer friend who is male; 32.3 percent to a roommate; and 12.9 percent said that they did not feel comfortable speaking to anybody. Other responses to this question include: peer friend who is female (9.9 percent); counselor (8.8 percent), local church resource person, (8.2 percent), chaplain (4.1 percent), other college staff member (3.8 percent), faculty member (2.8 percent), and coach (2 percent). The students also reported at a rate of 17.8 percent that they did not view Internet pornography.

In response to the question regarding the level of interest in attending campus sponsored programs about Internet pornography use, 37.7 percent were “interested” to “extremely interested,” 38.2 percent were “disinterested” to “extremely disinterested,” and 24.2 percent expressed no opinion.

Research Questions

This study pursued two research questions. The first question was, “To what extent do male undergraduates at select Evangelical Christian colleges in the Midwest access Internet pornography?” The second research question was, “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns,
guilt regarding online pornography use, and online sexual behavior that is social in nature?” Before the data were analyzed, they went through a preparation process.

**Data Preparation**

All data from the students who completed some or all of the online Opinio survey questions were aggregated together in Opinio as a protection of the participating students’ and colleges’ anonymity. Opinio prevented the researcher from connecting individual survey responses with individual e-mail addresses, student names, and/or the identity of the participating college. The Information Technology Office at Loyola University Chicago provided instructions to the researcher regarding the process for extracting the raw data from Opinio into a format that could be exported into the SPSS data analysis program, PASW Statistics 18. Next, numerical values on the survey data had to be assigned to the string text variables before the data could be validated and analyzed. This process was completed first on a paper copy of the survey before completing this transformation process in SPSS. The string variables were preserved with new columns added to show the numerical values replacing the string variables. A frequency distribution in SPSS was checked to ensure that any numerical variable that fell outside of those identified with respective string variables would be considered “missing.” Examples of the most common string variable conversions to numerical values include the following: “yes” = 1, “no” = 0, “never” = 0, “rarely” = 1, “sometimes” = 2, “frequently” = 3, “always” = 4, “I do not view Internet pornography” = 0, “strongly disagree” = 0, “disagree” = 1, “somewhat disagree” = 2, “neither disagree nor agree” = 3, “somewhat agree” = 4, “agree” = 5, “strongly agree” = 6. An example of each of the string variables in all of the background questions was manually examined to ensure the
transformation process identified the corresponding numerical variable accurately. An example of each of the most common string variables within the survey was then manually followed to the corresponding numerical variable to ensure the transformation process had been conducted accurately. A visual inspection was also made of each column of numerical variables for any numerical values that fell outside the normal range for that particular question. No problems were detected in any of these steps to check the validity of the numerical variables when compared to corresponding string variables.

Validation

The final question in the survey was added as a way to validate the context students were considering when answering the questions. The question read, “When I completed the survey, I was thinking about my Internet pornography use in:” The response options included: college, high school, junior high, elementary school, or I do not view Internet pornography. Students were asked to mark all the responses that applied. The greatest number of responses were marked “college” (371), with “high school” ranking second (289), “junior high” third (136), “I do not view Internet pornography fourth (67), and elementary school fifth (18). The total number of students responding to this question is unknown since multiple responses could be marked by one student. Since 485 students completed the entire survey, it could be suggested that 76.5 percent of the students completing the survey contextually considered experience with Internet pornography in college when completing the survey while 59.6 percent considered Internet pornography experience in high school, 28 percent considered experience in junior high, 3.6 percent considered elementary school and 13.8 percent stated they did not view Internet pornography. These responses seem to suggest that a
majority considered experience with Internet pornography only in college or additionally in other contexts (high school, junior high, and/or elementary school) when taking the survey. College, as the strongest reference point for students taking the survey, seems to add credibility to the data generated by the study in response to the two research questions, which focus on Internet pornography use in college.

Data Results

Results of Descriptive Statistics

The first step of data analysis that addressed the first research question was to compile descriptive statistics. The frequencies of answers to two of the survey questions begin to form a picture of how extensive Internet pornography was accessed among undergraduates at the three participating Evangelical colleges. The first question was “How frequently do you view Internet pornography?” The response options included: never, at least once a year, at least once a month, at least once a week, at least once a day. If the responses “at least once a day” and “at least once a week” are combined, 28.3 percent of the male students reported accessing Internet pornography each week. If the responses to “at least once a month” are added, the claim could be made that 57.6 percent of male students accessed Internet pornography each month. If the responses to “at least once a year” are added, the claim could be made that 79.3 percent of male students accessed Internet pornography at some point in the previous year; 20.7 percent answered that they “never” accessed Internet pornography. See Table 3 below for a summary of the responses.

The frequency of responses to a second question also helps to answer the research question about the extent of Internet pornography access among undergraduates at the
Table 3. Frequency of Internet pornography viewing.

<table>
<thead>
<tr>
<th>Frequency</th>
<th># of responses</th>
<th>%</th>
<th>Cumulative % for viewing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>119/576</td>
<td>20.7</td>
<td></td>
</tr>
<tr>
<td>At least once a year</td>
<td>125/576</td>
<td>21.7</td>
<td>21.7</td>
</tr>
<tr>
<td>At least once a month</td>
<td>169/576</td>
<td>29.3</td>
<td>51</td>
</tr>
<tr>
<td>At least once a week</td>
<td>144/576</td>
<td>25</td>
<td>76</td>
</tr>
<tr>
<td>At least once a day</td>
<td>19/576</td>
<td>3.3</td>
<td>79.3</td>
</tr>
</tbody>
</table>

three participating Evangelical colleges. The second research question asks, “How much time, on average, do you spend viewing Internet pornography each week?” The possible responses included: zero, less than 1 hour, between 1 and 5 hours, between 5 and 10 hours, or more than 10 hours. When asked how much time, on average, Internet pornography was accessed each week, 12.8 percent responded between 1 and 5 hours; 1.4 percent responded between 5 and 10 hours; and .7 percent responded more than 10 hours. Another 46.2 percent responded less than 1 hour. The combined total of students self-reporting access to Internet pornography for some amount of time each week was 61.1 percent; 38.9 percent responded “zero.” See Table 4 for a summary of the responses.

Table 4. Time, on average, viewing Internet pornography per week.

<table>
<thead>
<tr>
<th>Time</th>
<th># of responses</th>
<th>Percentage</th>
<th>Cumulative % for viewing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero hours</td>
<td>219/563</td>
<td>38.9</td>
<td></td>
</tr>
<tr>
<td>Less than 1 hour</td>
<td>260/563</td>
<td>46.2</td>
<td>46.2</td>
</tr>
<tr>
<td>1 – 5 hours</td>
<td>72/563</td>
<td>12.8</td>
<td>59</td>
</tr>
<tr>
<td>5 – 10 hours</td>
<td>8/563</td>
<td>1.4</td>
<td>60.4</td>
</tr>
<tr>
<td>More than 10 hours</td>
<td>4/563</td>
<td>.7</td>
<td>61.1</td>
</tr>
</tbody>
</table>
The result of the descriptive statistics demonstrated that 79.3 percent of male undergraduate students at Evangelical colleges reported accessing Internet pornography at some point in the previous year and that 61.1 percent reported accessing Internet pornography at least some amount of time each week on average.

*Description of Linear Correlations*

The next step of data analysis to help answer the first research question (extent of Internet pornography access among male undergraduates at Evangelical colleges) was to examine a possible correlation between the amount of self-reported access to Internet pornography in light of five background questions where the literature review demonstrated correlations in previous research related to Internet pornography use among college men. This analysis included running linear correlation statistics between each of the five background questions and the one question with comparable metrics (average number of hours accessing Internet pornography each week). The background questions include: “Do you consider yourself to be an Evangelical Christian? What is your undergraduate year in college? How much time (in hours) do you spend online, on average, each week? How old were you the first time you were exposed to Internet pornography? And with how many sexual partners total have you had at least one sexual experience (intercourse, anal sex, oral sex, or mutual masturbation) leading to orgasm?” The results of these linear correlations will go beyond the descriptive statistics to respond to the first research question.

In addition to the background questions, three scales were utilized for this study: addictive patterns (18 items), guilt regarding online pornography use (eight items), and online social behavior that is sexual in nature (five items). Before the scales were tested
for reliability, two questions in the addictive scale and one question in the guilt scale that were stated positively were reverse coded in SPSS to match the metrics of the other questions, which were stated negatively. The SPSS was also programmed not to calculate missing values in the scales as zero and thereby misrepresent average and total values. The following scores resulted from Cronbach’s Alpha: social scale=.70; addictive patterns scale=.91; and the guilt scale=.85. These scores suggest the three scales are reliable (Dane, 2011, p. 140).

Additional linear correlations were examined between the background question, “How much time, on average, do you spend viewing Internet pornography each week?” and the three scales, addictive patterns (18 items), guilt regarding online pornography use (eight items), and online social behavior that is sexual in nature (five items) to begin answering the second research question, “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online pornography use, and online sexual behavior that is social in nature?”

Results of Linear Correlations

A total of eight different linear correlations were executed with a p value of less than .05 required for significance. According to Green and Salkind (2008), “for the behavioral sciences, correlation coefficients of .10, .30, and .50, irrespective of sign, are by convention, interpreted as small, medium, and large coefficients, respectively” (p. 259). Table 5 below illustrates the results.
Table 5. Linear correlations regarding extent of Internet pornography access.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Porn time</th>
<th>Christian status</th>
<th>Year in college</th>
<th>Time online</th>
<th>First exposure</th>
<th>Sexual partners</th>
<th>Addictive scale</th>
<th>Guilt scale</th>
<th>Social scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porn time</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian status</td>
<td>-.124**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year in college</td>
<td>.097*</td>
<td>-.092*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time online</td>
<td>.241**</td>
<td>-.072</td>
<td>.066</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First exposure</td>
<td>-.239**</td>
<td>.017</td>
<td>.044</td>
<td>-.083</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual partners</td>
<td>.181**</td>
<td>-.177**</td>
<td>.174**</td>
<td>.031</td>
<td>-.223**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addictive scale</td>
<td>.620**</td>
<td>.006</td>
<td>.043</td>
<td>.177**</td>
<td>-.220**</td>
<td>.076</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guilt scale</td>
<td>.202**</td>
<td>.172**</td>
<td>.036</td>
<td>.028</td>
<td>-.167**</td>
<td>-.073</td>
<td>.611**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Social scale</td>
<td>.307**</td>
<td>-.188**</td>
<td>-.002</td>
<td>.183**</td>
<td>-.236**</td>
<td>.387**</td>
<td>.186**</td>
<td>-.176**</td>
<td>1</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
N=530 (N range=524 to 589)

Evangelical Status

The first correlation examined the potential relationship between how much time, on average, students spend viewing Internet pornography each week and whether students consider themselves to be an Evangelical Christian. An inverse relationship exists between the two variables, meaning that a student who self-identified as an Evangelical Christian reported fewer hours per week, on average, accessing Internet pornography. The relationship is small (r =-.124, p<.01). The magnitude of the relationship appears small because of the difference in metrics. The question, “Do you
consider yourself to be an Evangelical Christian?” is dichotomous, meaning there are only two answers, “yes” or “no,” and the second question, “How much time, on average, do you spend viewing Internet pornography each week?” is a categorical question, meaning there were five different categories containing potential responses to the question, “Zero, less than 1 hour, between 1-5 hours, between 5-10 hours, more than 10 hours.”

Related correlations, evident through the data analysis regarding the self-reported Evangelical status variable, are worth noting. One correlation exists between the questions, “What is your undergraduate year in College” and “Do you consider yourself to be an Evangelical Christian?” A very small inverse relationship exists \( r = -0.092, p<0.05 \), meaning the lower the year in college, the more likely a student was to self-identify as an Evangelical Christian. Another correlation exists between “How many sexual partners?” and “Do you consider yourself to be an Evangelical Christian?” A small inverse relationship exists between these two variables \( r = -0.177, p<0.01 \), meaning students who did not self-identify as an Evangelical Christian were more likely to have reported a higher number of sexual partners. The third small correlation exists between “Do you consider yourself to be an Evangelical Christian and the guilt scale \( r = 0.172, p<0.01 \) suggesting that a student who self-identifies as an Evangelical Christian is more likely to report feeling guilty regarding online pornography use. A fourth small correlation exists between Evangelical Christian status and the social scale \( r=-0.188, p<0.01 \) suggesting that students who did not self-report as an Evangelical Christian were more likely to use the Internet for social interaction that was sexual in nature. Taken together, the correlations highlighted above suggest the lower the year in college, the
more likely a student was to self-identify as an Evangelical Christian. Additionally, the more likely a student responded that he considered himself to be an Evangelical Christian, the fewer hours per week he was likely to spend, on average, accessing Internet pornography, the lower the number of sexual partners reported, the less likely he would use the Internet for social activity that is sexual in nature, and the more likely he was to report feeling guilty regarding online pornography use.

Undergraduate Year

The second linear correlation examined the questions, “What is your undergraduate year in college?” and “How much time, on average, do you spend viewing Internet pornography each week?” A significant positive relationship between the two variables was found meaning the higher the year in college, the more time on average the student is likely to view Internet pornography. The relationship is very small ($r = .097$, $p < .05$). A related linear correlation also surfaces between “How many sexual partners?” and “What is your undergraduate year in College?” A small relationship exists ($r = .174$, $p < .01$), which suggests that the higher the year in college, the higher the number of sexual partners students are likely to have reported. Taken together, these findings suggest that the higher the year in college, the more time a student is likely to report viewing Internet pornography and the higher the reported number of sexual partners.

Internet Usage

The third linear correlation examined the questions, “How much time on average do you spend online (in hours) each week?” and “How much time, on average, do you spend viewing Internet pornography each week?” There was a positive significant but small relationship between these two variable ($r = .241$, $p < .01$). The relationship suggests
that the more time a student spends online, the more likely he is to view Internet pornography. A small related relationship exists between “How much time do you spend online each week?” and the addictive scale (r = .177, p<.01), suggesting that the more time a student reported spending online, the higher the reported indication scores for the Internet pornography addiction scale. Finally, a relationship was found to exist between the amount of time online and the social scale, (r = .183, p<.01). The small relationship suggests that the more time a student spends online, the more likely he is to exhibit online sexual behavior that is social in nature. Taken together, the more time a student spent online, the more time he was also likely to spend viewing Internet pornography, the higher the Internet pornography addictive patterns score, and the more likely the student was to report accessing the Internet for social interaction that is sexual in nature.

Age of First Exposure

The fourth linear correlation examined the questions, “How old were you the first time you were exposed to Internet pornography?” and “How much time, on average, do you view Internet pornography each week?” A significant small inverse relationship was found between these two variables (r = -.239, p<.01). The younger a student was exposed to Internet pornography, the more time he is likely to spend viewing Internet pornography in college. Other correlations related to the age of first exposure variable also exist. A relationship exists between “How many sexual partners?” and “How old were you the first time you were exposed to Internet pornography?” A small inverse relationship (r = -.223, p<.01) exists, which suggests that the younger a student was exposed to Internet pornography, the higher the number of sexual partners he is likely to have reported. Another relationship exists between “How old were you when you were
exposed to Internet pornography?” and the addictive scale (r = -.220, p<.01). The small inverse relationship suggests that the younger the student when exposed to Internet pornography the higher the indicator of addiction to Internet pornography. An inverse relationship exists between “How old were you when you were exposed to Internet pornography?” and the guilt scale, (r = -.167, p<.01). The small inverse relationship suggests that the younger a student was exposed to Internet pornography, the more likely the reported feelings of guilt regarding access to it. Finally, an inverse relationship exists between the age of first exposure and the social scale, (r = -.236, p<.01), suggesting that the younger the age a student was first exposed to pornography, the more likely he was to report using the Internet for social interaction that was sexual in nature when in college. Taken together, the age of first exposure to Internet pornography suggests that the younger a student was exposed to Internet pornography, the more time he is likely to spend viewing Internet pornography in college, the higher the number of sexual partners reported, the higher the indicator of addiction to Internet pornography, the more likely the reported feelings of guilt regarding access to it in college, and the more likely he is to report using the Internet for social activity that is sexual in nature.

Number of Sexual Partners

The fifth linear correlation examined the questions, “With how many sexual partners total have you had at least one sexual experience (intercourse, anal sex, oral sex, or mutual masturbation) leading to orgasm?” and “How much time, on average, do you spend viewing Internet pornography each week?” A significantly positive but small relationship exists between the two variables (r = .181, p<.01). The relationship suggests that the more sexual partners a student reported, the more time reported viewing Internet
pornography. Another linear correlation related to the number of sexual partners variable also surfaced. A medium relationship exists between the number of sexual partners and the social scale ($r = .387, p<.01$), which suggests that the higher the number of sexual partners reported, the more likely a student reported using the Internet for social interaction that was sexual in nature. Taken together, the more sexual partners a student reported, the more time he will likely report viewing Internet pornography, and the more likely he will report using the Internet for social interaction that is sexual in nature.

**Relationship with Addictive Patterns**

The sixth linear correlation examined the question, “How much time, on average, do you spend viewing Internet pornography each week?” and the addictive patterns scale. A large relationship exists between the two variables ($r = .620, p<.01$). The relationship suggests that the more time a student spends viewing Internet pornography the higher the indicator score for addictive patterns related to Internet pornography use. A large relationship also exists between the addictive patterns scale and the guilt scale ($r = .611, p<.01$), suggesting that the higher the indicator of addiction to Internet pornography, the higher the reported feelings of guilt. Finally, a small relationship exists between the addictive patterns scale and the social scale ($r = .186, p<.01$), which suggests that the higher the indication of Internet pornography addiction, the more likely a student reported accessing the Internet for social interaction that is sexual in nature. Together, these relationships suggest that the more time a student spends viewing Internet pornography the higher the indicator for addictive patterns related to Internet pornography use, the higher the reported feelings of guilt, and the more likely the Internet will be used for social interaction that is sexual in nature.
Relationship with Guilt

The seventh linear correlation examined the question, “How much time, on average, do you spend viewing Internet pornography each week?” and the guilt scale. A small relationship of statistical significance exists (r = .202, p<.01) suggesting that the more time a student spends accessing Internet pornography, the more likely he is to report feeling guilty about accessing it. An additional inverse relationship exists between the guilt scale and the social scale that is of small significance (r = -.176, p<.01) suggesting that the more guilt that was reported regarding Internet pornography use, the less likely a student reported using the Internet for social interaction that was sexual in nature.

Relationship with Online Social Behavior

The eighth linear correlation examined the question, “How much time, on average, do you spend viewing Internet pornography each week?” and the scale associated with online sexual behavior that is social in nature. A medium statistically significant relationship exists (r = .307, p<.01) suggesting that the more time a student spends viewing Internet pornography, the more likely he is also expressing online social behavior that is sexual in nature.

Linear Correlations Results Summary

The correlations highlighted above suggest the lower the year in college, the more likely a student was to self-identify as an Evangelical Christian. Additionally, the more likely a student responded that he considered himself to be an Evangelical Christian, the fewer the hours per week he was likely to report, on average, accessing Internet pornography, the lower the number of sexual partners reported, the less likely he reported
using the Internet for social activity that is sexual in nature, and the more likely he was to report feeling guilty regarding online pornography use. The higher the year in college, the more time a student is likely to report viewing Internet pornography and the higher the reported number of sexual partners. The more time a student spent online, the more time he was also likely to report viewing Internet pornography, the higher the Internet pornography addictive patterns score, and the more likely the student was to report accessing the Internet for social interaction that is sexual in nature. The age of first exposure to Internet pornography suggests that the younger a student was exposed to Internet pornography, the more time he is likely to spend viewing Internet pornography in college, the higher the number of sexual partners reported, the higher the indicator of addiction to Internet pornography, the more likely the reported feelings of guilt regarding access to it in college, and the more likely he is to report using the Internet for social activity that is sexual in nature. The more sexual partners a student reported, the more time he will likely report viewing Internet pornography, and the more likely he will report using the Internet for social interaction that is sexual in nature. The more time a student reports viewing Internet pornography the higher the indicator for addictive patterns related to Internet pornography use, the higher the reported feelings of guilt, and the more likely the Internet will be used for social interaction that is sexual in nature. The more guilt that was reported regarding Internet pornography use, the less likely a student reported using the Internet for social interaction that was sexual in nature.

*Independent t-test Results*

One correlation suggested an inverse relationship between Evangelical Christian status and reported average pornography usage each week such that male students who
did not self-identify as Evangelical Christians were more likely to report a higher weekly average Internet pornography usage rate. But is the rate of usage between students who do and who do not claim to be Evangelical Christians significant? An independent t-test was calculated to compare the difference between the mean scores of the average weekly time reported accessing Internet pornography for the students who self-reported they did not consider themselves to be Evangelical Christians (n=46; mean=1.1087) and those who self-reported that they did consider themselves to be Evangelical Christians (n=516; mean=.7597). The options for reporting weekly Internet pornography usage were zero hours per week (coded as 0), less than one hour per week (coded as 1), between one and five hours per week (coded as 2), between five and ten hours per week (coded as 3), and more than 10 hours per week (coded as 4). The mean scores suggest that students who did not consider themselves to be Evangelical Christians reported, on average, just over one hour a week of Internet pornography usage and that students who did consider themselves to be Evangelical Christians reported, on average, just under one hour a week of Internet pornography access. The difference between the two means was significant at p<.01 with t(52.67) = 2.861, p = .006, which suggests that those who reported they were Evangelical Christians were likely to report less weekly average Internet pornography usage. It is important to note that the unbalanced group sizes likely impacted the results of the t-test. It is also important to note that the results of the t-test do not demonstrate that self-identifying as an Evangelical Christian caused the respondents to view less Internet pornography each week.
Multiple Regression Results for Five Predictors

After the correlations were completed and analyzed, three different multiple regression analyses were conducted to help answer the second research question, “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online pornography use, and online sexual behavior that is social in nature?” After relationships were discovered between the extent of Internet pornography use and five of eight different variables (including among the three scales), three regression analyses were examined for an indication of which variables were the strongest predictors of Internet pornography use (Green & Salkind, 2008). The first regression analysis was conducted to evaluate the criterion of the number of hours Internet pornography was viewed each week from the following predictors: a) Evangelical Christian status, b) time spent online, c) age of first exposure, d) year in college, and e) and number of sexual partners.

The regression equation for predicting the number of hours Internet pornography is viewed each week is:

\[ \hat{Y} = B_1 X_1 \text{(Evangelical status)} + B_2 X_2 \text{(undergrad year)} + B_3 X_3 \text{(time online)} + B_4 X_4 \text{(age of first exposure)} + B_5 X_5 \text{(# of sexual partners)} + B_0 \text{(constant)} \]

where \( \hat{Y} \) is the predicted criterion and \( B_1 \) through \( B_5 \) represent the slope weights (unstandardized coefficients) for the five predictors \( X_1 \) through \( X_5 \) and \( B_0 \) is an additive constant (Green & Salkind, p. 285, 2008).
Applying the regression equation,

the predicted Hours of Viewing Internet Pornography = \(-.313\) Evangelical Status

\[.038\) (undergrad year) + \(.141\) (time online) + \(-.172\) (age of first exposure) +

\(.094\) (# of sexual partners) + 1.027 (constant).

Table 6 below illustrates the results.

#### Table 6. Multiple regression analysis with five predictors of Internet pornography use.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.027</td>
<td>.183</td>
<td>5.614</td>
<td>.000**</td>
<td></td>
</tr>
<tr>
<td>Evangelical status</td>
<td>-.313</td>
<td>.122</td>
<td>-.107</td>
<td>-2.573</td>
<td>.010**</td>
</tr>
<tr>
<td>Undergrad year</td>
<td>.038</td>
<td>.028</td>
<td>.057</td>
<td>1.368</td>
<td>.172</td>
</tr>
<tr>
<td>Time online</td>
<td>.141</td>
<td>.027</td>
<td>.216</td>
<td>5.255</td>
<td>.000**</td>
</tr>
<tr>
<td>Age of first exposure</td>
<td>-1.172</td>
<td>.037</td>
<td>-.197</td>
<td>-4.674</td>
<td>.000**</td>
</tr>
<tr>
<td># of sexual partners</td>
<td>.094</td>
<td>.041</td>
<td>.101</td>
<td>2.328</td>
<td>.020*</td>
</tr>
</tbody>
</table>

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

N=523

The regression equation with the five predictors (Evangelical status, undergrad year, time online, age of first exposure, and # of sexual partners) was significant, \(R^2 = .138\), adjusted \(R^2 = .130\), \(F(5, 518) = 16.64, p < .01\). The \(R^2\) of .138 indicates that 14 percent of the criterion variance can be accounted for by its linear relationship with the predictor variables. Four of the five independent variables are linearly related such that Evangelical Christian status (\(B=-.313, t(-2.573), p<.01, \beta=-.107\)), time spent online (\(B=.141, t(5.255), p<.01, \beta=.216\)), age of first exposure (\(B=-.172, t(-4.674), p<.01, \beta=-.197\)), and number of sexual partners (\(B=.094, t(2.328), p<.05, \beta=.101\)) predict the number of hours Internet pornography was viewed each week 14 percent of the time.
The amount of time (in hours) spent online, on average, each week emerged as the strongest individual predictor for the amount of time, on average, spent viewing Internet pornography each week ($B=.141, t(5.255), p<.01, \beta=.216$). The results of the first regression analysis overall suggest that students who do not self-identify as Evangelical, spend higher amounts of time online, were exposed to Internet pornography at a younger age, and have had a higher number of sexual partners are more likely to access Internet pornography a higher number of hours each week.

*Multiple Regression Results for Seven Predictors*

The second regression analysis was conducted to evaluate the criterion of the number of hours Internet pornography was viewed each week from the following predictors: a) Evangelical Christian status, b) time spent online, c) age of first exposure, d) year in college, e) number of sexual partners, f) scale related to Internet pornography addictive patterns, and the g) scaled related to the online social behavior that is sexual in nature. The guilt scale was originally in the second regression analysis but was eventually dropped because the high correlation with the addictive patterns scale was causing the Beta score of the guilt scale to result in a false negative number.

The regression equation for predicting the number of hours Internet pornography is viewed each week is:

$$ \hat{Y} = B_1 X_1 \text{ (Evangelical status) } + B_2 X_2 \text{ (undergrad year) } + B_3 X_3 \text{ (time online) } + B_4 X_4 \text{ (age of first exposure) } + B_5 X_5 \text{ (# of sexual partners) } + B_6 X_6 \text{ (addictive scale) } + B_7 X_7 \text{ (social scale) } + B_0 \text{ (constant)} $$
where $\hat{Y}$ is the predicted criterion and $B_1$ through $B_7$ represent the slope weights (unstandardized coefficients) for the seven predictors $X_1$ through $X_7$ and $B_0$ is an additive constant.

Applying the regression equation,

the predicted Hours of Viewing Internet Pornography = -.325 Evangelical Status + .035 (undergrad year) + .057 (time online) + -.047 (age of first exposure) + .050 (# of sexual partners) + .027 (addictive scale) + .040 (social scale) + .314 (constant).

Table 7 below illustrates the results.

Table 7. Multiple regression analysis with seven predictors of Internet pornography use.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SE B</th>
<th>$\beta$</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.314</td>
<td>.155</td>
<td>.613</td>
<td>.540</td>
<td></td>
</tr>
<tr>
<td>Evangelical status</td>
<td>-.325</td>
<td>.097</td>
<td>-.111</td>
<td>-3.349</td>
<td>.001**</td>
</tr>
<tr>
<td>Undergrad year</td>
<td>.035</td>
<td>.022</td>
<td>.052</td>
<td>1.579</td>
<td>.115</td>
</tr>
<tr>
<td>Time online</td>
<td>.057</td>
<td>.022</td>
<td>.086</td>
<td>2.581</td>
<td>.010**</td>
</tr>
<tr>
<td>Age of first exposure</td>
<td>-.047</td>
<td>.030</td>
<td>-.053</td>
<td>-1.553</td>
<td>.121</td>
</tr>
<tr>
<td># of sexual partners</td>
<td>.050</td>
<td>.035</td>
<td>.052</td>
<td>1.434</td>
<td>.152</td>
</tr>
<tr>
<td>Addictive scale</td>
<td>.027</td>
<td>.002</td>
<td>.600</td>
<td>17.762</td>
<td>.000**</td>
</tr>
<tr>
<td>Social scale</td>
<td>.040</td>
<td>.012</td>
<td>.127</td>
<td>3.483</td>
<td>.001**</td>
</tr>
</tbody>
</table>

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

N=491

The regression equation with the seven predictors (Evangelical status, undergrad year, time online, age of first exposure, # of sexual partners, addictive scale, and social scale) was significant, $R^2 = .500$, adjusted $R^2 = .493$, $F(7, 484) = 69.11$, $p < .01$. The $R^2$
of .500 indicates that 50 percent of the criterion variance can be accounted for by its linear relationship with the predictor variables. This is much stronger than the 14 percent of the criterion variance accounted for by its linear relationship with the predictor variables in the previous regression analysis (Evangelical status, undergrad year, time online, age of first exposure, # of sexual partners). Four of the seven independent variables are linearly related such that Evangelical Christian status ($B = -0.325$, $t(-3.349)$, $p<.01$, $\beta = -.111$), time spent online ($B = 0.057$, $t(2.581)$, $p<.01$, $\beta = .086$), the addictive scale ($B = 0.027$, $t(17.762)$, $p<.01$, $\beta = .600$) and the social scale ($B = 0.040$, $t(3.483)$, $p<.01$, $\beta = .127$) predict the number of hours Internet pornography was viewed each week 50 percent of the time. The addictive scale emerged as the strongest predictor for the amount of time, on average, spent viewing Internet pornography each week ($B = 0.027$, $t(17.762)$, $p<.01$, $\beta = .600$). The results from the second regression analysis overall suggest that students who do not self-identify as Evangelical and spend higher amounts of time online, demonstrate higher indicators of Internet pornography addiction and are more likely to use the Internet for social behavior that is sexual in nature as well as being more likely to access Internet pornography a higher number of hours each week.

*Multiple Regression Results for Seven Predictors*

The third regression analysis was conducted to evaluate the criterion of the number of hours Internet pornography was viewed each week from the following predictors: a) Evangelical Christian status, b) time spent online, c) age of first exposure, d) year in college, e) number of sexual partners, f) scale related to guilt over Internet pornography use, and the g) scale related to Internet sexual behavior that is social in nature. The scale related to addictive patterns was not included because the high
correlation with the guilt scale was causing the Beta score of the guilt scale to result in a false negative number.

The regression equation for predicting the number of hours Internet pornography is viewed each week is:

\[
\hat{Y} = B_1 X_1 (\text{Evangelical status}) + B_2 X_2 (\text{undergrad year}) + B_3 X_3 (\text{time online}) + B_4 X_4 (\text{age of first exposure}) + B_5 X_5 (\# \text{ of sexual partners}) + B_6 X_6 (\text{social scale}) + B_7 X_7 (\text{guilt scale}) + B_0 (\text{constant})
\]

where \( \hat{Y} \) is the predicted criterion and \( B_1 \) through \( B_7 \) represent the slope weights (unstandardized coefficients) for the seven predictors \( X_1 \) through \( X_7 \) and \( B_0 \) is an additive constant.

Applying the regression equation,

the predicted Hours of Viewing Internet Pornography = -.355 Evangelical Status + .056 (undergrad year) + .107 (time online) + -.098 (age of first exposure) + .043 (\# of sexual partners) + .081 (social scale) + .021 (guilt scale) + .427 (constant).

Table 8 below illustrates the results.

The regression equation with the seven predictors (Evangelical status, undergrad year, time online, age of first exposure, \# of sexual partners, social scale, and guilt scale) was significant, \( R^2 = .226 \), adjusted \( R^2 = .215 \), F(7, 482) = 20.13, p < .01. The \( R^2 \) of .226 indicates that 26 percent of the criterion variance can be accounted for by its linear relationship with the predictor variables. This is stronger than the 14 percent of the
Table 8. Multiple regression analyses with seven predictors of Internet pornography use.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.427</td>
<td>.200</td>
<td>2.130</td>
<td>.034</td>
<td></td>
</tr>
<tr>
<td>Evangelical status</td>
<td>-.355</td>
<td>.124</td>
<td>-.119</td>
<td>-2.855</td>
<td>.004*</td>
</tr>
<tr>
<td>Undergrad year</td>
<td>.056</td>
<td>.028</td>
<td>.082</td>
<td>2.001</td>
<td>.046</td>
</tr>
<tr>
<td>Time online</td>
<td>.107</td>
<td>.027</td>
<td>.162</td>
<td>3.958</td>
<td>.000**</td>
</tr>
<tr>
<td>Age of first exposure</td>
<td>-.098</td>
<td>.038</td>
<td>-.112</td>
<td>-2.605</td>
<td>.009**</td>
</tr>
<tr>
<td># of sexual partners</td>
<td>.043</td>
<td>.044</td>
<td>.045</td>
<td>.996</td>
<td>.320</td>
</tr>
<tr>
<td>Social scale</td>
<td>.081</td>
<td>.015</td>
<td>.254</td>
<td>5.521</td>
<td>.000**</td>
</tr>
<tr>
<td>Guilt scale</td>
<td>.021</td>
<td>.004</td>
<td>.242</td>
<td>5.711</td>
<td>.000**</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
N=489

criterion variance accounted for by its linear relationship with the predictor variables in the first regression analysis (Evangelical status, time online, age of first exposure, and # of sexual partners) but not as strong as the 50 percent of the criterion variance accounted for by its linear relationship with the predictor variables in the second regression analysis (Evangelical status, time online, addictive patterns scale and social scale). Five of the seven independent variables are linearly related in the third regression analysis such that Evangelical Christian status (B=-.355, t(-2.855), p<.01, β=-.119), time spent online (B=.107, t(3.958), p<.01, β=.162), the age of first exposure (B=-.098, t(-2.605), p<.01, β=-.112), the social scale (B=.081, t(5.521), p<.01, β=.254) and the guilt scale (B=.021, t(5.711), p<.01, β=.242) predict the number of hours Internet pornography was viewed each week 26 percent of the time. The social scale emerged as the strongest predictor for the amount of time, on average, spent viewing Internet pornography each
week (B=0.081, t(5.521), p<.01, β=.254) but the guilt scale was also a predictor worth noting (B=0.021, t(5.711), p<.01, β=.242). The results from the third regression analysis overall suggest that students who do not self-identify as Evangelical, spend higher amounts of time online, were exposed to pornography images at a younger age, reported higher levels of online social behavior that is sexual in nature, and reported higher levels of guilt over accessing Internet pornography were more likely to also report higher levels of access to Internet pornography, on average, each week.

Conclusion

This study pursued two research questions. The first question was, “To what extent do male undergraduates at select Evangelical Christian colleges in the Midwest access Internet pornography?” The second research question was, “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online pornography use, and online sexual behavior that is social in nature?” Surveys were sent to 2,245 male undergraduate students attending one of three Evangelical colleges with 635 opening the survey, 485 completing the entire survey, and a median number of 501 individual students completing individual questions.

Descriptive statistics and linear correlations generated data to answer the first research question. The answer to the first research question is that 79.3 percent of male undergraduate respondents at three Evangelical colleges accessed Internet pornography at some point in the previous year with 61.1 percent reporting some level of average weekly access. The extent of Internet pornography access was related in part to a lack of self-identification as an Evangelical Christian, being an upper division student, higher
amounts of reported time online, exposure to Internet pornography at a younger age, as well as a higher number of reported sexual partners.

Linear correlations and multiple regression analyses generated data to answer the second research question. A relationship exists between the extent of Internet pornography usage among male undergraduate respondents at three Evangelical colleges and indicators of addictive patterns related to Internet pornography (large significance meaning the more time accessing pornography the higher the indicator of addiction to pornography), guilt regarding online pornography use (small significance meaning the greater the extent of access to pornography the higher reported feelings of guilt), and online sexual behavior that is social in nature (medium significance meaning the more time accessing pornography the more online sexual behavior that is social in nature).

Furthermore, the multiple regression results overall suggest that students who do not self-identify as Evangelical, spend higher amounts of time online, reported higher levels of online social behavior that is sexual in nature, and demonstrate higher indicators of Internet pornography addiction are more likely to access Internet pornography a higher number of hours each week. The addictive patterns scale emerged as the strongest predictor for the amount of time, on average, spent viewing Internet pornography each week.

In addition to answering two research questions, this study sought programmatic information that could be helpful to higher education practitioners seeking to provide services to students viewing Internet pornography. When asked to whom they felt most comfortable speaking about Internet pornography, 55.4 percent said to a peer friend who is male and 32.3 percent to a roommate, which illustrate a much greater comfort in
speaking to a peer about the topic of pornography. In response to the question regarding the level of interest in attending campus sponsored programs about Internet pornography use, 37.7 percent were “interested” to “extremely interested,” 38.2 percent were “disinterested” to “extremely disinterested,” and 24.2 percent expressed no opinion.

Chapter Five will discuss the results of the data analyses presented in Chapter Four in light of the literature review findings in Chapter Two. Recommendations for future research at Evangelical colleges will then be offered and the limitations of this study identified.
CHAPTER FIVE

CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

This chapter discusses key findings from the online survey examining the extent of Internet pornography use among male undergraduate students at three Evangelical Christian liberal arts colleges as well as the implications of the key findings. Recommendations will then be presented for consideration by leaders of Evangelical Christian colleges. The purpose of this study was to provide empirical information related to a subpopulation of higher education that has received little research attention. Finally, the limitations of this study will be identified and suggestions for future research will be offered.

Key Findings and Implications

Extent of Internet Pornography Access

The first research question for this study asks, “To what extent do male undergraduates at select Evangelical Christian colleges in the Midwest access Internet pornography?” Two different background questions were asked to help address this first question. The first background question asked participants to record the frequency of Internet pornography use per day, week, month, or year and the second question asked participants to estimate the average time (in hours) of Internet pornography access per week. The descriptive statistical results demonstrated that 79.3 percent of male undergraduate students at the participating Evangelical colleges reported accessing
Internet pornography at some point in the previous year and that 61.1 percent reported accessing Internet pornography at least some average amount of time each week.

These two statistics seem most critical when considering the implications of the key findings. First, nearly 79.3 percent of male undergraduate respondents reported accessing Internet pornography at least one time during the past year, either while enrolled and/or when off campus during breaks when college was not in session. The options for leaders in higher education in response to this finding are, a) to ignore it under the belief that access to Internet pornography once a year is within an acceptable range or because there is a belief that campus leaders cannot influence Internet pornography usage patterns, b) to engage students in a dialogue and/or with resources about the role of Internet pornography in their lives in hopes that students’ access to Internet pornography does not increase over time but rather decreases or ceases, or c) attempt to increase control over as much access to Internet pornography as possible through filter programs and/or through educational interventions. Huson’s (2005) qualitative study with 18 male students attending Evangelical colleges may be instructive as Evangelical college leaders consider the options. Huson reported that all students interviewed for the study spoke critically about the lack of discussion among Christians about sexuality and pornography related topics. Huson also reported that all students recommended more communication from Christian college administrators about the dangers of pornography.

The second statistic that seems critical when considering the implications of the key findings is that 61.1 percent of the male students reported accessing Internet pornography at least some average amount of time each week. What kind of implication will such a weekly diet of Internet pornography have on academic work, relationships
with others, feelings about oneself, as well as feeling about one’s sexual identity and one’s relationship with God? Huson’s qualitative work revealed that students accessing Internet pornography reported feeling isolated from God and others, as well as feeling shame and experiencing a negative impact on academic performance. Morrison, Ellis, Morrison, Bearden, and Harriman (2006) found that greater exposure to Internet pornography where ideal bodies were presented, influenced a negative view among 188 male community college students of one’s own body and one’s perceived value as a sexual person. It seems as if accessing Internet pornography then could be a counter force working against the educational missions of Evangelical colleges among those male students viewing Internet pornography. Most leaders would probably admit that becoming aware of an issue that negatively affected the educational experience of 61.1 percent of their male undergraduate student population would be a call to action.

Other studies over this past decade have found varying degrees of access to Internet pornography. Goodson, McCormick, and Evans (2001) found that that 28.4 percent of male students reported accessing Internet pornography either sometimes or frequently. Deloy (2006) discovered 60 percent of college men participating in his study reported accessing Internet pornography in the previous month. Morrison, Ellis, Morrison, Bearden, and Harriman (2006) found that 77 percent of participating male community college students reported accessing Internet pornography in the previous six months. Abell, Steenbergh, and Boivin (2006), in their study with male students from Christian and non-Christian colleges, found that 31 percent reported struggling with a desire to access Internet pornography. O’Reilly, Knox, and Zusman (2007) found that 31.7 percent of the male students in their study reported accessing Internet pornography
three to five times each week. Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008) discovered 87 percent of male students reported viewing Internet pornography. In a very large sample size of 26,399 college students, Leahy (2009) found that 51 percent of the male students reported accessing Internet pornography five hours or less each week. Logue (2009) in a sample of male and female Evangelical college students aggregated together discovered that 43.1 percent of students reported searching for Internet pornography.

Comparing the rate of Internet pornography usage in the current study with three Evangelical colleges to the studies noted above is difficult at best given the variety of populations surveyed and different metrics used to measure the extent of access. There is a sense, however, that the rate of Internet pornography usage at the three Evangelical colleges surveyed is not altogether different from previous research among college men. The extent of Internet pornography access found in this current study is an important reference point for future research because it is the first known quantitative study to document the extent of Internet pornography access among a male-only population attending only Evangelical Christian colleges.

The amount of self-reported access to Internet pornography in this study was examined in light of five background questions and three scales (consisting of multiple questions) structured around variables related to Internet pornography use and college men in previous research. Examining the relationships between variables established in previous research and the extent of Internet pornography access among male undergraduates at Evangelical colleges clarifies how previously established variables relate to the extent of pornography use in this current study. The background questions
included: “Do you consider yourself to be an Evangelical Christian? What is your undergraduate year in college? How much time (in hours) do you spend online, on average, each week? How old were you the first time you were exposed to Internet pornography? And with how many sexual partners total have you had at least one sexual experience (intercourse, anal sex, oral sex, or mutual masturbation) leading to orgasm?”

The variables identified in the five background questions noted above relate to the extent of Internet pornography access among male undergraduates at three Evangelical colleges and demonstrated a statistically small inverse relationship between self-reported Evangelical status and age of first exposure to Internet pornography. This means that the students who self-identified as Evangelicals were likely to spend less time accessing Internet pornography (a finding similar to Abell, Steenbergh, & Boivin, 2006, and Carrol, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008) and that the younger the reported age of first exposure to Internet pornography, the more time the student will likely spend accessing Internet pornography (a finding similar to Seidman, 2003). The results also seem to suggest that the extent of Internet pornography access among male undergraduates at Evangelical colleges has a small statistically positive relationship to the amount of time online and the total number of sexual partners. This means that the more time a student spends online for any purpose, the more time he is likely to spend accessing Internet pornography, which is similar to the findings of other studies (Byers, Menzies, & O’Grady, 2004; Lam & Chan, 2007; Nosko, Wood, & Desmarais, 2007), and the more sexual partners a student reported, the more time he is likely to spend accessing Internet pornography, a finding which is also consistent with other studies (Carrol, Padilla-Walker, Nelson, Olson, Barry, & Madsen, 2008; Perera, 2005). Finally the
results seem to suggest that a very small positive statistical relationship exists between the extent of Internet pornography access and year in college, meaning the higher the year in college the more time a student is likely to spend accessing Internet pornography. This finding is similar to the higher sexual sensation seeking scores found by Perry, Accordino, and Hewes (2007) with upper class students.

The extent of Internet pornography use among male students at Evangelical colleges also relates to the three scales utilized in this study and is related to previous research. A large statistically significant relationship exists between the addictive patterns scale and the extent of Internet pornography use, which is similar to Dodge, Reece, Cole, and Sandfort (2004), Gullette and Lyons (2005), Huson (2005), Leahy (2009), Logue (2009), Perera (2005), and Seegers (2003). A small statistically significant relationship exists between the guilt scale and the extent of Internet pornography use, similar to Huson (2005). A medium statistically significant relationship exists between the social scale and the extent of Internet pornography access, but no research connection was found with other studies examining online social behavior that is sexual in nature among college men.

This study confirms that relationships between seven of eight variables and Internet pornography use among college men are consistent with findings in previous studies. Five of the statistical relationships identified above are small and one relationship is very small while one is medium and one is large. The implications must be cautiously considered as a result. None of the relationships by themselves should necessarily form the basis of Internet pornography interventions by leaders within Evangelical colleges. However, the individual relationships were statistically significant,
which means they ought not to be ignored when considering the appropriateness of providing Internet pornography resources for male undergraduate students. The next section discusses the key findings when the variables were considered individually and together as predictors for the amount of time male undergraduate students spend accessing Internet pornography.

**Relationship between Extent of Internet Pornography Access and Select Predictors**

The second research question examined in this study asks, “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online pornography use, and online sexual behavior that is social in nature?” A relationship was found between the extent of Internet pornography usage among male undergraduates at three Evangelical colleges and indicators of addictive patterns related to Internet pornography (large significance meaning the more time accessing pornography the higher the indicator of addiction), guilt regarding online pornography use (small significance meaning the greater the extent of access to pornography the higher reported feelings of guilt), and online sexual behavior that is social in nature (medium significance meaning the more time accessing pornography the more online social behavior that is sexual in nature).

The relationship between the amount of time a student accesses Internet pornography and an indication of Internet pornography addiction patterns is not a surprise. One would expect such a relationship. Also not surprising is the relationship between the higher reported feelings of guilt regarding Internet pornography use when a higher number of hours of access per week are reported. One may expect stronger
feelings of guilt reported with higher levels of Internet pornography access among a population that believes Internet pornography use violates an Evangelical Biblical sexual ethic and attends colleges prohibiting access to Internet pornography through written policies as well as through filter programs that block pornography images. The male population participating in this study reported at a rate of 92 percent that they consider themselves to be Evangelical Christians, which means they follow a religious faith whose moral teachings include avoiding Internet pornography. How will leaders of Evangelical colleges design resources for male undergraduate students who exhibit strong indicators of addictive patterns to Internet pornography, higher levels of guilt the more time they spend accessing Internet pornography as well as higher rates of using the Internet to socially relate to others in sexual ways?

Three different multiple regression analyses were conducted to help answer the second research question. The first multiple regression analysis investigated the predictive value of five variables (a) Evangelical Christian status, b) time spent online, c) age of first exposure to pornography, d) year in college, and e) total number of sexual partners upon a criterion (i.e., the number of hours male undergraduates view Internet pornography each week). The second multiple regression analysis investigated the predictive value of seven variables (a) Evangelical Christian status, b) time spent online, c) age of first exposure to pornography, d) year in college, e) total number of sexual partners f) scale related to Internet pornography addiction patterns and a, g) scale related to online social behavior that is sexual in nature, upon a criterion (i.e., the number of hours male undergraduates view Internet pornography each week). The third multiple regression analysis investigated the predictive value of seven variables (a) Evangelical
Christian status, b) time spent online, c) age of first exposure to pornography, d) year in college, e) total number of sexual partners f) scale related to Internet pornography addiction patterns and a, g) scale related to guilt regarding Internet pornography use, upon a criterion (i.e., the number of hours male undergraduates view Internet pornography each week).

In the first regression analysis, a lack of self-identification as Evangelical, the higher amounts of time online, earlier exposure to Internet pornography and a higher number of sexual partners are related and together are able to predict 14 percent of the access to Internet pornography among the participants for this study. The amount of time (in hours) spent online, on average, each week emerged as the strongest individual predictor for the amount of time, on average, spent viewing Internet pornography each week in the first regression analysis.

The results from the second regression analysis overall suggest that a lack of self-identification as Evangelical, the higher amounts of time online, the higher the indicators of Internet pornography addiction patterns and the higher the levels of online social behavior that is sexual, together, predict 50 percent of the access to Internet pornography among the male undergraduates participating in this study. Adding two scales to the second regression analysis increased the predictive value significantly. The addictive scale emerged as the strongest predictor for the amount of time, on average, spent viewing Internet pornography each week in the second regression analysis. The implication of the second regression analysis is that taken together, the four variables (students’ lack of identification as an Evangelical Christian in combination with spending higher amounts of time online, exhibiting higher indicators for Internet pornography
addiction patterns and exhibiting higher levels of online social behavior that is sexual) may be starting places for leaders in Evangelical colleges to consider when designing Internet pornography resources.

The results from the third regression analysis overall suggest that a lack of self-identification as Evangelical, the higher amounts of time online, earlier exposure to pornography, the higher the levels of online social behavior that is sexual and the higher the levels of guilt regarding Internet pornography use, together, are able to predict 26 percent of the access to Internet pornography among the male students participating in this study. The social scale emerged as the strongest predictor for the amount of time, on average, spent viewing Internet pornography each week in the third regression analysis. The third regression analysis was not as strong a predictor of the reported weekly average access to Internet pornography when compared to the second regression analysis.

Three variables above from the second regression analysis represent opportunities for leaders of Evangelical colleges to discern how best to influence male students: 1) identification as an Evangelical Christian, 2) the amount of time spent online, and 3) the amount of time viewing Internet pornography.

*Is Viewing Internet Pornography Justified?*

This study found that a majority of participants, 77.1 percent, reported that viewing Internet pornography is never justifiable. This is similar to results reported by Huson’s (2005) qualitative study. These results are also worth discussing in light of the fact that 79.3 percent of the male undergraduate student respondents from three Evangelical colleges reported accessing Internet pornography at some point in the previous year. The lack of reported justification for accessing Internet pornography in
this current study is more pronounced than the finding by Carrol, Padilla-Walker, Nelson, Olson, Barry, and Madsen (2008), whose study found 67 percent of male students believed viewing pornography was acceptable while 87 percent reported accessing it. Internet pornography is being accessed by male students on three Evangelical college campuses that utilize blocking systems and publish user policies to prohibit such access. These same students attend Evangelical institutions that follow what they believe to be divine moral teaching related to sexuality, which prohibits Internet pornography use. The majority of the students themselves acknowledged Internet pornography use is never justifiable. One can begin to surmise why the reported guilt score increases as the amount of Internet pornography viewing increases for students self-identifying as Evangelical Christians. Internet pornography use violates an internal belief system in addition to an institutional belief system. Students’ reported access to Internet pornography while also reporting it is never justifiable may be an illustration of Goodman’s (2001) sexual addiction twin concepts of avoiding psychological distress while at the same time experiencing pleasure. Internet pornography viewing offers the possibility of pleasure to avoid the guilty feelings over viewing it, which may feed a cycle leading to higher indicators of addiction.

The other perspective worth considering is Willard (2008) who claimed that in the absence of a good anchor, the human will is controlled by human desire such as sexual desire. Willard’s perspective should cause leaders at Evangelical colleges to ask, “Are we providing an anchor for male students regarding Christian faith and sexual desire?” If the answer to this question is “no”, could the lack of an anchor to Christian faith amidst sexual desire be why Kwee, Dominguez, and Ferrell (2007) reported seeing male students
from Evangelical colleges in counseling centers with confusion over the difference between sexual addiction and sexual desire?

The second predominant theme of the Evangelical tradition is that the Bible is the written Word of God, just as Jesus is the living Word of God (Foster, 1988). In order for the recommendations offered here to have credibility for leaders of Evangelical colleges, they must be related to the Truth found in the Bible as well as reflecting the findings of this study. The next section will focus on recommendations for consideration by leaders in Evangelical colleges.

**Recommendations**

In response to the question regarding the level of interest in attending campus sponsored programs about Internet pornography use, 37.7 percent were “interested” to “extremely interested,” 38.2 percent were “disinterested” to “extremely disinterested,” and 24.2 percent expressed no opinion. While these statistics should not discourage leaders at Evangelical colleges from organizing campus programs related to Internet pornography, the results seem to suggest that the audiences and therefore the impact, may be limited. Limited audiences for Internet pornography related programming should be a concern when 61.1 percent of participants reported some amount of access to Internet pornography each week on average. The recommendations below focus on how to foster change among institutional structures to address Internet pornography issues for the benefit of all students.

**Publish an Evangelical Biblical Sexual Ethic**

This study found that 92 percent of the participants self-identified as Evangelical Christian. Furthermore, this study found that 77.1 percent of the participants reported
Internet pornography use is never justified while 79.3 percent reported accessing Internet pornography at least once in the previous year. Such a conflict between these findings could mean that students lack some measure of control over their Internet behavior and/or that they are not clear why Internet pornography use is never justified. The apostle Paul, in his letter to the Romans states, “And do not be conformed to this world, but be transformed by the renewing of your mind, that you may prove what the will of God is, that which is good and acceptable and perfect” (New American Standard Bible, 1977, p. 915). The first recommendation is to help students develop an awareness and an understanding as to how the teachings of the Bible relate to those areas of their lives where they need a good anchor to transform their minds. Sexuality is certainly one of those areas. Just because students are attending an Evangelical college, leaders cannot assume that students know what the Bible teaches about sexuality and how its teachings can be applied to transform their minds. A clear and robust statement describing an Evangelical Biblical sexual ethic ought to be articulated with text that is understandable and accessible in multiple mediums such as brochures and the Web to facilitate wide distribution. Such a statement could become an anchor for all students attending Evangelical colleges, not just students who exhibit addictive tendencies to Internet pornography.

*Teach an Evangelical Biblical Sexual Ethic*

Beyond a clear statement of an Evangelical Biblical sexual ethic, students need to hear leaders and teachers talk and teach publically about what the Bible teaches about sexuality as well as to serve as living examples of human beings learning to apply Evangelical Biblical truth to a very personal area of life. Most Evangelical colleges still
require all undergraduate to attend weekly chapel worship events throughout the year or at least offer regular chapel events. Chapel is a good place for all students to hear Biblical teaching on sexuality related topics. Chapel is also a great context to invite outside speakers to expose students to other ways of integrating Evangelical Biblical truth and sexuality.

If chapel attendance is no longer required, addressing sexuality topics from an Evangelical Biblical perspective in required courses across the curriculum is another option to consider. Most Evangelical colleges require a certain number of academic courses to be completed in the liberal arts. Students in a variety of academic majors could study sexuality from the perspective of their discipline and through the lens of the Bible.

A third option to consider is inviting off campus resources from around the country to facilitate a conference on campus or request permission to adapt established off campus resources to individual campus cultures so that optional training can be offered to students who are interested in learning in-depth ways to understand and apply Biblical teaching to key areas of their lives as well as to receive relational support.

*Provide Peer-to-Peer Resources*

One of the background questions in the current study asked students how often they spoke to someone about their Internet pornography use. The results indicated that 19.1 percent never spoke to anyone and another 27.9 percent rarely spoke to anyone.

This means that 47 percent of the male students who participated in this study are lacking a human connection to the issue of Internet pornography that Huson (2005) reported causes students to feel isolated. Huson also reported that being discovered is a pressing
fear for the students he interviewed, but ironically he reported that identifying
pornography use to caring people who were willing to help was deemed important to
reduce or stop pornography use. In the current study, a combined 47.3 percent reported
that they sometimes (26.9 percent), frequently (13.9 percent), or always (6.5 percent)
were fearful that someone might someday discover their secret of viewing pornography.
When asked to whom they felt most comfortable speaking about Internet pornography,
55.4 percent said to a peer friend who is male and 32.3 percent to a roommate, which
illustrates a much greater comfort in speaking to a peer about the topic of pornography.

Another recommendation for leaders of Evangelical colleges is to provide
structures and opportunities for male students to build trusting relationships with each
other so that sensitive topics such as Internet pornography can be discussed. In the Bible,
the apostle James states, “Therefore, confess your sins to one another, and pray for one
another, so that you may be healed. The effective prayer of a righteous man can
accomplish much” (New American Standard Bible, 1977, p. 980). The higher percentage
of male students reporting that they felt more comfortable talking to a male peer friend
than a roommate communicates that students may not necessarily consider their
roommates as friends or that talking to someone with whom you live about a sensitive
topic such as Internet pornography does not feel as comfortable. Male students are likely
to develop friendships in the contexts of involvement (i.e., living on campus, athletics,
music, student organizations, employment, etc.). But encouraging male students to
discuss Internet pornography in the contexts where they are involved across campus may
prove to be a challenge because a sensitive topic like Internet pornography may not seem
to fit the context within which relationships were formed.
Leaders of Evangelical colleges should consider utilizing the chapel format to organize groups of male and female students to meet regularly together in small groups instead of always altogether in a large auditorium. If chapel is held three times each week, one chapel time each week could be designated as the small group chapel in order to focus on the application of chapel teaching. A small group chapel format communicates that the college values small groups for students to build supportive relationships where the integration of Biblical teaching is encouraged as well as communicating the college does not expect students to attempt to schedule another time to participate in such a group in the midst of rigorous academic, co-curricular and work schedules. Small groups could be organized by campus residence, athletic team, music ensemble, student organization, etc. so that students are able to have contact with their small group outside of the chapel context and thereby foster greater familiarity and trust with one another. Familiarity and trust may create a more open climate to discussing sensitive topics such as Internet pornography use if guidance is given regarding how to facilitate such a conversation.

In addition to institutional facilitation of small groups, leaders at Evangelical colleges could consider developing a resource to help male students understand the importance of peer support related to resisting Internet pornography. Such a brochure could also provide helpful instruction regarding how to initiate and sustain peer-to-peer conversations about Internet pornography that foster the type of confession, prayer, and healing articulated by the apostle James. Worthy of consideration is the creation of an Evangelical adaptation of the 12 recovery steps from addictive behaviors that was made popular by Patrick Carnes. Given that the addictive patterns scale was the strongest
predictor of Internet pornography use among the male participants in this study, designing a resource to specifically address how to respond to addictive behaviors seems appropriate. Periodic campus training sessions could be hosted by key campus resource staff to teach students how to activate the steps in the brochure with each other in the context of their own peer helping groups. The content of such a brochure could also be posted online to make it as accessible as possible.

*Encourage Online Boundaries*

The results of this study suggest that the amount of time a student spends online is statistically related to the amount of time he spends accessing Internet pornography and is a predictor for the extent of access to Internet pornography. The statistical relationship is small but it does have value when considering recommendations. Online access via computer and cell phone is a way of life for most college students. To suggest establishing boundaries on the amount of time spent online will likely receive a chilly reception at best among male students. However, the results of this study suggest there is some vulnerability to Internet pornography for a male student the more time he spends online.

Faculty members review important information at the beginning of each course. Additionally, students on most campuses are required to meet with a faculty adviser once or twice each year, generally before registering for the next semester of courses. It could communicate a priority to students if their faculty members, at the beginning of each course, reviewed a clause written in the syllabus that encouraged students to carefully consider the amount of time spent online (especially accessing entertainment sites) because such use can compete with time to focus on academic work and personal
relationships as well as because of the increased likelihood of Internet pornography access. The other option for faculty to consider is to incorporate a time management exercise in academic advising appointments in order to help students understand how to prioritize and coordinate their time between academic work, co-curricular commitments, work, friendships and entertainment (including online entertainment). If students only hear Student Development/Student Affairs leaders addressing the dangers of too much time spent online, then the issue may not sustain students’ attention over time.

*Harness Consequences*

The next recommendation for leaders of Evangelical colleges to consider relates to consequences. The results of this study suggest that as the amount of access to Internet pornography goes up for students who self-identify as Evangelical, the feelings of guilt also go up. Most college students likely have a negative view of consequences experienced in response to their actions. Consequences, however, can be reframed by leaders in Evangelical colleges as tools to encourage students to grow in maturity and be released from guilt. In the letter to the Hebrews, an unknown author writes, “All discipline for the moment seems not to be joyful, but sorrowful; yet to those who have been trained by it, afterwards it yields the peaceful fruit of righteousness” (New American Standard Bible, 1977, p. 975).

The three campuses that participated in this study all employ a blocking system to prohibit access to Internet pornography in addition to established written policies prohibiting such access. Students who reported accessing Internet pornography in the previous year were not asked if the pornography was accessed on the campus network, or on an off campus network or on a cell phone. Policies to prohibit access to Internet
pornography on campus networks have little educational value if the policies go unenforced. With some coordination between the computing services department and Student Development/Student Affairs staff, regular filter reports can be generated to communicate to the staff which students are accessing Internet pornography on the campus network. Staff members in a position to best encourage students could initiate a conversation about the content of the report. These staff members may likely be in residence life if it is a residential campus. If this reporting structure is established, the college would have an obligation to explain the Internet pornography reporting structure to new students in some format (e.g., pre-new student orientation online video). The content of these types of conversations regarding consequences could be effective if they are done with great care and respect for the students. If students continued to access Internet pornography on the college’s network, the college staff could make it clear that the natural consequence is to eliminate the personal computer account, except in public access campus computer labs, for a specific period of time. This recommendation requires an investment of time and intentionality by staff. It also helps the college communicate the value and importance of consequences as a corrective form of encouragement and as a practical measure to help students relieve the pressure of guilty feelings.

Develop Assessment Tools

Carnes (1989) developed the Sexual Addiction Screening Test (SAST) to provide objective feedback as an encouragement for people who take the screening test to seek professional help if they answered yes to at least 13 of the 25 questions. Delmonico and Miller (2003) developed the Internet Sex Screening Test (ISST) based, in part, on the
work of Carnes (1989). The Cyber-Pornography Use Inventory (CPUI) was developed by Grubbs, Sessoms, Wheeler, and Volk (2010) based, in part, on the work of Delmonico and Miller (2003) for use by Evangelicals. The final recommendation relates to the development of an assessment tool for the counseling center staff. The three scales developed by Grubbs, Sessoms, Wheeler, and Volk (2010) were slightly adapted for this research study based on feedback from a pilot study, and showed good validity. All three scales were statistically related to the amount of time students in this study reported accessing Internet pornography. One of the scales (addiction) was the strongest predictors of Internet pornography usage. Further development of the three scales could prove useful for college counselors working with male students who mistakenly confuse sexual desire for sexual addiction (Kwee, Dominguez, & Ferrell, 2007) and for male students who may be in denial about the extent of their access to Internet pornography or whose guilt feelings may have driven them into isolation.

Research Limitations

A number of limitations occurred with the research completed for this study. The most significant limitation is the volunteer bias of the participants in sexuality research (Wiederman, 1999). All registered male undergraduate students (2240) attending three different Evangelical colleges received an e-mail invitation to participate in this study. Any number of factors likely influenced the 635 students who responded to the invitation and the 485 students who actually completed it. A question asking participants to identify why they completed the survey was not asked at the end. Had such a question been asked, the volunteer bias may be better understood. If students who view Internet pornography and/or those were more sexually experienced were attracted to completing
the survey, this may mean the survey results are not representative of the extent of
Internet pornography use at the three participating Evangelical colleges.

A second limitation of this study is the limited experience of the primary
researcher with survey and research design. The content of the background questions
was closely related to the literature review, the need for feedback related to the type of
Internet pornography educational resources male students need, and three published
scales used by permission from the authors. A pilot study was also conducted to receive
feedback on the design and content of the survey. However, many subjective decisions
were made related to the wording of questions and responses, the order of the questions
and responses, as well as related to the metrics of the responses and the anticipated ways
they could relate to each other in the correlation and regression analyses.

A third limitation of the research is the online format. The rationale for using the
online format was to help the participants feel more comfortable answering sensitive
questions and therefore to answer more honestly. Some male students receiving the e-
mail invitations may have had more experience with completing online surveys however,
and therefore been more likely to participate as a result. Other male students may have
been irritated at the online survey invitation and/or the reminders, depending on how
many such invitations/reminders they received in the recent past. Students irritated by
the invitation and/or reminders may have been less likely to complete the online survey.
Several students sent the primary researcher e-mail messages revealing irritation in direct
response to the first or second reminder. The students who took the time to express their
frustration may very well represent many other students who did not take the time to
write.
A fourth limitation of the research relates to research design. A question was added at the bottom of each online screen to ask the participant if he wanted to continue, to exit, or to go directly to the list of resources. The data analysis demonstrated the slow decline in the number of participants after nearly every one of the screen changes. One may argue that many of the 115 participants that dropped out of the survey before it concluded may have grown weary of answering a question at the end of every screen in order to continue. Students completing the entire survey answered the question related to continuing a total of 21 times.

A fifth limitation of the research is that one of the three participating campuses sent out an e-mail from the Counseling Center introducing and supporting the study as well as encouraging students to complete the online survey when the e-mail invitation arrived. All three campuses were encouraged by the researcher to send such an announcement before the e-mail invitation to participate was sent. Whether or not more students participated in the study as a result of campus encouragement is unknown. All student responses were aggregated together to protect student and institutional anonymity.

A sixth limitation of the research is the absence of a question asking students to identify where they accessed Internet pornography: on the campus network, on a cell phone network, at their family’s home, in locations where free wireless Internet is offered, or on a personal network in an off campus location. This information may have helped leaders of Evangelical colleges develop resources that are more targeted to the context(s) where Internet pornography was accessed.
A seventh limitation of the research is the inability to generalize the results to all Evangelical colleges. “Unfortunately, single studies rarely have the large and heterogeneous samples of persons, settings, times, treatments, and outcome measures that are useful for confident generalization; and single studies rarely use diverse methodologies” (Shadish, Cook, & Campbell, 2002, p. 418). This study did not have a high enough response rate, did not employ enough participating campuses, or utilize a diverse enough methodology to be able to generalize the results. Five campuses were initially recruited to participate but only three agreed, which was part of the limiting factor for generalization.

**Suggestions for Future Research**

More research needs to be completed with male students attending Evangelical colleges and the extent of their access to Internet pornography. The variables that were uncovered in the literature review and examined in this study demonstrated some large and medium statistical relationships, but most of the relationships and the predictive values were small. The variables that predicted 50 percent of the Internet pornography use means there may be variables that can demonstrate stronger relationships with Internet pornography use and predict a higher percentage of variance but are still largely unknown and yet to be discovered. Where students access Internet pornography (i.e., campus network, cell phone, etc.) should be studied in future research so leaders at Evangelical colleges can better understand students’ Internet pornography usage patterns and design more effective resources. Do students access Internet pornography more frequently now due to Web access on cell phones for example? Goodman’s (2001) ideas related to the avoidance of psychological distress and the experience of pleasure seem to
offer potential avenues for future research. How do these two concepts relate to each other and to Evangelical college students’ patterns of access to Internet pornography, particularly when such a high percentage of students reported such access is never justified, yet an almost equal percent reported accessing it in the previous year? Do Evangelical college students experience greater levels of psychological distress and is Internet pornography use viewed as a pleasurable way to cope with this distress? The three scales developed by Grubbs, Sessoms, Wheeler, and Volk (2010) seem to offer good potential for future research resulting in an assessment tool that can be utilized by counseling center staff members attempting to encourage and guide students accessing Internet pornography. More research is needed around the idea of Internet pornography addiction and sexual desire. This study demonstrated that 61.1 percent of the Evangelical students together accessed Internet pornography, on average, one hour or less a week. This study also found that among the same population, the addiction scale was the strongest predictor for reported Internet pornography use. While less than one hour a week of Internet pornography use is viewed as morally unacceptable to Evangelicals, does this average amount of use qualify as an addiction? What is the relationship between morally unacceptable behavior for Evangelicals, such as Internet pornography use, and addictive behavior? A qualitative study may be a good research methodology to investigate this question more fully. Finally, this same or a similar study should be pursued with female students attending Evangelical colleges. Even less information is known about the extent of Internet pornography use among this subpopulation of higher education.
Conclusion

This study pursued two research questions. The first question asked, “To what extent do male undergraduates at select Evangelical Christian colleges in the Midwest access Internet pornography?” The second research question asked, “Is there a correlation between the extent of access to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online pornography use, and online sexual behavior that is social in nature?” The descriptive statistical results demonstrated that 79.3 percent of male undergraduate students at Evangelical colleges reported accessing Internet pornography at some point in the previous year and that 61.1 percent reported accessing Internet pornography at least some amount of time each week. The rate of Internet pornography usage at the three Evangelical colleges surveyed is not altogether different from previous research among college men. The extent of Internet pornography access found in this current study is an important reference point for future research because it is the first known quantitative study to document the extent of Internet pornography access among a male-only population attending only Evangelical Christian colleges.

The extent of Internet pornography access was related in part to a lack of identification as an Evangelical Christian, being an upper division student, spending higher amounts of time online, being exposed to Internet pornography at a younger age, as well as reporting a higher number of total sexual partners.

Linear relationships and multiple regression analyses generated data to answer the second research question. A significant statistical relationship exists between the extent of Internet pornography usage among male undergraduates at three Evangelical colleges
and indicators of addictive patterns related to Internet pornography, guilt regarding online pornography use, and online sexual behavior that is social in nature.

Furthermore, the strongest multiple regression results overall suggest that students who do not self identify as Evangelical, spend higher amounts of time online, demonstrate higher patterns of Internet pornography addiction, and demonstrate higher levels of online social behavior that is sexual in nature are more likely to access Internet pornography a higher number of hours each week. The addictive scale emerged as the strongest predictor for the amount of time, on average, spent viewing Internet pornography each week.

Based on this study, a number of recommendations were identified for leaders in Evangelical colleges for consideration. The recommendations included publishing the Evangelical Biblical sexual ethic, teaching the Evangelical Biblical sexual ethic, providing peer-to-peer resources, encouraging online boundaries, harnessing consequences, and developing assessment tools. Several limitations of this research study were identified and future topics of researched were explored.

Eberstadt (2009) pointed to the external relationships between Internet pornography and divorce as well as job loss to demonstrate the potential harm of Internet pornography. Willard (2008) focused on the internal spiritual harm of allowing sexual desire to control a person’s will to view Internet pornography. Both scholars may be correct regarding the impact of Internet pornography on college students in general unless further research and further action are undertaken by leaders within higher education.
APPENDIX A
APPROVAL TO USE INSTRUMENT
From: Joshua Grubbs [jbg49@case.edu]
Sent: Wednesday, July 21, 2010 1:24 PM
To: Paul Chelsen; FVolk@liberty.edu; jhgrubbs@liberty.edu
Subject: Re: Permission to use instrument

Paul,

Thank you for your inquiry regarding the CPUI. We are very interested in your research and welcome the opportunity for the CPUI to be used/tested in various populations. As such, you are welcome to use the CPUI in your research, provided of course that it is properly cited. We do ask that you keep us very informed about your findings, as we are very interested in discovering more about the psychometric effectiveness of the inventory across populations.

In regards to your inquiry about the guilt subscale, there seems to have been a typo in the article. The original guilt subscale consisted of 12 items and the final version consisted of 9.

Please inform us if you need any further information. Thank you again for your inquiry and we look forward to corresponding with you further in the future.

Joshua Grubbs
Case Western Reserve University
Department of Psychology

From: Paul Chelsen [mailto:paul.chelsen@wheaton.edu]
Sent: Tuesday, July 20, 2010 4:28 PM
To: Volk, Frederick
Subject: Permission to use instrument

Dr. Volk,

My name is Paul Chelsen. I am completing my PhD from Loyola University in Chicago. My dissertation topic is related to Internet pornography use and male Evangelical college students. I was very interested when I read the recent article in Sexual Addiction & Compulsivity regarding your development of the Cyber-Pornography Use Inventory. I am writing to request permission to use the instrument in the data collection for my dissertation.

If you approve my request, I have a follow up question. In the results section of the article, you identify that three items from the original scale were removed leaving eight. However when I go to table 2 in appendix A, I count nine questions not eight. I am sure I am missing a detail somewhere. Could you help clarify this discrepancy?

Thanks for considering my request and for your input on my follow up question.

Sincerely,

Paul Chelsen
Student Development
Wheaton College
APPENDIX B

SAMPLE PARTICIPANT RECRUITMENT E-MAIL
Recruitment E-mail

Happy New Year!

I write you to invite and encourage your participation in an important research study. Internet pornography is a common issue at Evangelical Christian colleges, but little understanding surrounds this issue. This research study examines Internet Pornography access and use among male undergraduates at Evangelical colleges.

My name is Paul Chelsen and I am a doctoral student at Loyola University Chicago. I am also a graduate of an Evangelical Christian college and have worked in Student Development at an Evangelical college for 12 years. I have spoken with many male undergraduate students regarding their access to Internet pornography.

Very little empirical research exists to help guide college staff members to know how to assist male students who wish to address their access to Internet pornography. This study holds much potential.

I ask that you consider completing a voluntary and anonymous online survey with 46 closed-ended questions. It will take approximately 15 minutes or less to complete.

The Institutional Research Review Board, the Office of Student Development and a senior level administrator at the college you attend has approved this study.

If you are interested, please click on the link below to learn more.

Thank you!

Paul Chelsen
Loyola University Chicago PhD student
APPENDIX C

SAMPLE COOPERATING INSTITUTIONAL LETTER
December, 2010

Name  
Address  
City, State, Zip Code

To Whom It May Concern:

My name is INSERT NAME and I am INSERT TITLE. I serve on or as the Institutional Review Board at INSERT NAME OF COLLEGE. I am writing to confirm that INSERT NAME OF COLLEGE understands the research protocols proposed by Paul Chelsen, a PhD student at Loyola University Chicago in the Higher Education program, and agrees to participate in this voluntary study.

I understand that the study will utilize an anonymous online questionnaire that includes 15 background questions in addition to 31 survey questions. The total number of questions is 46. I understand Mr. Chelsen will encourage students, both in the informed consent and at the end of the survey, to follow up with their respective college’s Counseling Center and Chaplain’s Office as resources if they want to speak to someone after completing the survey. I also understand that Mr. Chelsen will provide Web links to students who wish to locate off campus counseling resources.

I understand that the survey will use the on-line survey program called Opinio, which is licensed and made available through Loyola University Chicago. Furthermore, I understand that students will not be asked their name nor the name of the college they attend in order to protect the privacy of both. I have read and understand the participant consent form as well as the survey. I understand that the survey will terminate for students who answer they are under the age of 18 and/or female.

I understand that NAME OF PARTICIPATING COLLEGE will e-mail a database with all the male undergraduate e-mail addresses to Dr. Terry Williams, the dissertation chair for Mr. Chelsen. I understand that a recruitment e-mail will be sent by Mr. Chelsen from the Loyola University Chicago computer server under the supervision of Dr. Williams in order to preserve the anonymity of the students. I have read and approve the recruitment e-mail. I understand that the Opinio link to the informed consent form and survey will be embedded in the recruitment e-mail, which will be sent on Monday, January 3, and will remain active until midnight on Friday, January 28. I understand that participants complete the online survey from the privacy of their
computers or their computer accounts if in a computer lab. I have read and approve of
the two reminders to be sent out on Monday, January 10 and Monday, January 24
respectively, in order to encourage a high return rate.

I understand that students communicate their consent if/when they continue to the
survey after reading the consent form. I understand that students who receive the
recruitment e-mail are allowed to complete one survey.

I understand from reading the consent form that Mr. Chelsen will program Opinio
at partial anonymity so he will be able to send two reminders to the students who have
not completed the survey. I understand Opinio does not allow Mr. Chelsen to connect
individual survey responses to individual e-mail addresses.

I understand that all presentations of the data that are collected will protect the
identity of the participating colleges.

I understand that I will receive a copy of the approval letter issued by the
Institutional Review Board at Loyola University Chicago as soon as Mr. Chelsen has
received it. I understand this institutional letter of cooperation needs to be sent to the
Institutional Review Board by Mr. Chelsen as a confirmation of our college’s willingness
to participate and to communicate that our college understands all the conditions of
participation.

Should you have follow up questions regarding the content of this letter, you may
contact me at my office, INSERT OFFICE PHONE or INSERT WORK E-MAIL.

Sincerely,

INSERT FULL NAME, SIGN ABOVE TYPED NAME AND INSERT TITLE BELOW
APPENDIX D

INSTITUTIONAL RESEARCH INVITATION
Dear:

My name is Paul Chelsen. I am working toward the completion of a PhD at Loyola University Chicago in Higher Education. I also serve as the Vice President for Student Development at Wheaton College (IL).

As you know, college students are consumers of Internet pornography (Boies, 2002; Caroll, Padilla-Walker, Barry, & Madsen, 2008; Goodson, McCormick, & Evans, 2001; Morrison, Ellis, Morrison, Bearden, & Harriman, 2006; O’Reilly, Knox, & Zusman, 2007). Students attending Evangelical Christian colleges also view Internet pornography (Huson, 2005; Logue, 2009), despite institutional and faith prohibitions. No research project to date has completed survey research on Internet pornography use among a male only undergraduate population attending only accredited Evangelical Christian liberal arts colleges who are members of the Council for Christian Colleges and Universities (CCCU). I am undertaking such a study and am writing to invite your college to participate. I am inviting a total of five Evangelical Christian colleges to participate. My hope is to secure data from a high number of participants in order to strengthen the empirical findings.

This study is important for several reasons. First, the male, Evangelical college student population has received very little empirical attention. Only one qualitative research study could be found that examined Internet pornography use among male students attending Evangelical Christian colleges. The second reason this study is important is to establish empirical data that can be generalized to male students attending Evangelical Christian colleges and serve as a foundation for supportive responses. Evangelical Christian colleges believe Internet pornography use is immoral and prohibit access to it through policies and commonly through Internet blocking systems. Two quantitative studies completed with students attending Evangelical Christian colleges demonstrate that Internet pornography is accessed. There ought to be more empirical guidance to help leaders within Evangelical Christian colleges who want to understand patterns of Internet pornography access as a foundation for developing strategies to help students who are having difficulty controlling their Internet pornography behavior.

The first guiding research question is, “To what extent do male undergraduates at select Evangelical Christian colleges in the Midwest access Internet pornography?” The second guiding research question asks “Is there a correlation between the extent of access
to Internet pornography among male undergraduates at select Evangelical Christian colleges in the Midwest and indicators of addiction patterns, guilt regarding online pornography use, and online sexual behavior that is social in nature?

The current study is voluntary and proposes to utilize a quantitative research method through the use of a confidential online questionnaire that includes 15 background questions in addition to 31 survey questions. The total number of questions is 46 and should take less than 15 minutes to complete. The reason for utilizing a survey research design is due to the sensitive nature of the topic. The assumption is that male students will feel more comfortable answering questions related to their sexual behavior as well as answer more honestly if the survey is received and can be completed through the privacy of an e-mail link. I will encourage students, both in the informed consent and at the end of the survey, to follow up with their respective college’s Counseling Center and Chaplain’s Office as resources if they want to speak to someone after completing the survey. I also will provide Web links to students who wish to locate off campus counseling resources as well as Web links to other helpful resources.

The survey will use the on-line survey program called Opinio, which is licensed and made available through Loyola University Chicago. Students will not be asked their name nor the name of the college they attend in order to protect the privacy of both. A copy of the consent form is attached as well as a copy of the survey for your review. The survey will terminate for students who answer they are under the age of 18 and/or female.

If you are interested in participating, the ideal time to launch the survey, in my opinion, is Monday, January 3. Most college Christmas break periods last approximately three weeks. Releasing the survey shortly after Christmas and New Years allows time for students to check their e-mail from home, see the link to the survey, and if interested, complete the survey from the privacy of their home. The survey will remain available until midnight on Friday, January 28 to leave open the possibility for students to complete the survey after classes begin or after they check e-mail upon returning to campus. Participants complete the online survey from the privacy of their computers. I have constructed two reminders to be sent out on Monday, January 10 and Monday, January 24 in order to encourage a high return rate. The reminders are also attached.

The consent form, which is combined with the survey, is designed to be sent to all registered male undergraduate students through a link embedded in a recruitment e-mail, which is attached. Students who read the consent form and continue to the survey communicate, by doing so, their consent to participate in the research.

The recruitment e-mail must go out from the Loyola University computer server to ensure that each participating college cannot observe which students have accessed the online link to the informed consent/survey. In order to protect student anonymity, I am asking that each participating college e-mail a database with all male undergraduate e-mail addresses to my dissertation chair, Dr. Terry Williams. Dr. Williams has agreed to keep the e-mail addresses confidential and in his possession. The recruitment e-mail will be sent out under the strict supervision of Dr. Williams. Opinio will be programmed at partial anonymity so the two reminder e-mails can be sent to those students who have not
completed the survey. The reminder e-mails will be sent under the strict supervision of Dr. Williams. Opinio will prohibit e-mail contact once the survey has been completed. Opinio also does not allow individual survey responses to be traced to individual e-mail addresses. After the survey has closed on Friday, January 28, all the male e-mail addresses will be destroyed.

All presentations of the data that are collected will protect the identity of the participating colleges. I am willing to provide upon request a bound copy of my dissertation upon its completion in the spring or summer of 2011.

I have applied for Institutional Review Board approval to collect data with human subjects through Loyola University Chicago and will provide a copy of the approval letter as soon as it is available for distribution. The Institutional Review Board at Loyola University Chicago also requires a letter of cooperation on institutional letterhead verifying consent to participate. This letter must be completed by participating college’s Institutional Review Board and also by the President, a Vice President, or a Dean. A sample letter of cooperation is also attached.

Should you have follow up questions or concerns as you consider my request, you may contact me at 630.752.5026 or pchelse@luc.edu. You may also contact my dissertation advisor, Dr. Terry Williams at 312.915.7002 or twillia@luc.edu. I look forward to the potential of collaborating with your institution on this research project.

Thank you in advance for considering my request.

Sincerely,

Paul O. Chelsen

Cc: Vice President for Student Development

Encl: Informed Consent Form
     Recruitment e-mail
     Sample Institutional Review Board Letter of Cooperation
     Survey
     Sample reminder e-mails
APPENDIX E

PARTICIPANT INFORMED CONSENT FORM
CONSENT TO PARTICIPATE IN RESEARCH

**Project Title:** "An Examination of Internet Pornography Access among Male Undergraduates at Evangelical Colleges"

**Researcher:** Paul O. Chelsen

**Faculty Sponsor:** Dr. Terry Williams

**Introduction:**
You are being asked to take part in a research study being conducted by Paul Chelsen for a dissertation under the supervision of Dr. Terry Williams in the Higher Education Program at Loyola University Chicago.

You are being asked to participate because you are a male undergraduate student attending an Evangelical Christian college that is a member of the Council for Christian Colleges and Universities (CCCU). Approximately 2,600 male undergraduate students have received an invitation to participate in this research. Female students and students under the age of 18 are ineligible from participating.

Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

**Purpose:**
The purpose of this study is to better understand the extent to which male undergraduate students attending Evangelical Christian colleges access and view Internet pornography.

**Procedures:**
If you agree to be in the study, you will be asked to complete an anonymous online survey with 46 questions, which will take approximately 15 minutes or less to complete. Many of the questions are personal because they are asking about feelings, attitudes and actions related to Internet pornography. Some questions ask for basic background information. Most of the questions ask you to rate your level of agreement with various
statements. Other questions ask you to rate the frequency of feelings, attitudes and/or actions. There are no open-ended questions.

**Risks/Benefits:**
The foreseeable risks involved in participating in this research may include some uncomfortable feelings because the questions are related to Internet pornography. Internet pornography usage may be a difficult topic about which to think and answer questions. You are encouraged to follow up with your respective college’s Counseling Center and/or Chaplain’s Office should you want to talk to someone after completing the survey.

There are no direct benefits to you for participating.

**Anonymity:**
There are no questions asking you to identify either your name or the name of the college you attend. All survey related information is sent to you through the Loyola University e-mail system. Your college agreed to provide all male undergraduate e-mail addresses for your college to Dr. Terry Williams at Loyola University Chicago so that an e-mail invitation could be sent. The e-mail addresses will be in the possession of Dr. Terry Williams, who is the research director for this dissertation. Your college will not be able to record, trace or review your responses. The researcher will at no time possess your e-mail address. All participant responses will remain anonymous and will be collected together by the online survey program called Opinio for research purposes only. Opinio does not allow individual survey responses to be traced to individual e-mail addresses. Opinio will be programmed at full anonymity so the principal researcher will be able to send two reminder e-mails to students who have not completed the survey. Opinio prohibits further e-mail contact with students who have completed the survey.

**Confidentiality:**
Confidentiality will be maintained to the degree permitted by the technology used. Your participation in this online survey involves risks similar to a person’s everyday use of the Internet. Dr. Terry Williams will keep all male e-mail addresses confidential until the survey is closed at midnight on Wednesday, February 16 after which time all e-mail addresses will be deleted. Names of participating colleges will be masked in all presentations of data results.

**Voluntary Participation:**
Participation in this study is voluntary. If you do not want to be in
this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty. If you decide to complete a survey and then submit it your data cannot be extracted from the database should you later wish it to be withdrawn. You are authorized to complete one survey. Only students who receive an e-mail invitation to participate directly from the principal researcher will have access to the survey link.

**Contacts and Questions:**
If you have questions about this research study, please contact Paul Chelsen at pchelse@luc.edu or the faculty sponsor, Dr. Terry Williams, at twillia@luc.edu. If you have questions about your rights as a research participant, you may contact the Loyola University Office of Research Services at (773) 508-2689. If you want to access private counseling resources off campus in your geographic area to speak to a counselor about Internet pornography, please refer to http://www.caps.net or www.aacc.net. Additional resource information is listed at the end of the survey.

**Statement of Consent:**
The survey involves answering 46 questions and will take approximately 15 minutes or less to complete.

By proceeding to the survey questions, you are indicating that you have read the information provided above, and have had an opportunity to ask questions. By completing the survey you are agreeing to participate in the research.

Do you wish to continue with the survey?

- Yes
- No

---

Continue

---
APPENDIX F

INSTRUMENT
Internet pornography usage survey of male undergraduates at Evangelical colleges

Are you a male undergraduate student?
- Yes
- No

2%

What is your age?
- Under 18
- 18-21
- 22-25
- Over 25

4%
Internet pornography usage survey of male undergraduates at Evangelical colleges

Do you consider yourself to be an Evangelical Christian?
○ Yes
○ No

What is your undergraduate year in college?
○ 1st
○ 2nd
○ 3rd
○ 4th
○ 5th

Do you want to proceed with the survey?
○ Yes
○ No, I wish to exit the survey
   No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

How much time (in hours) do you spend online, on average, each week?
- Less than 5
- 5-8
- 9-12
- 13-16
- 17 or more

How frequently do you view Internet pornography?
- Never
- At least once a year
- At least once a month
- At least once a week
- At least once a day

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  - No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.

12%
Internet pornography usage survey of male undergraduates at Evangelical colleges

How much time, on average, do you spend viewing Internet pornography each week?
○ Zero
○ Less than 1 hour
○ Between 1 and 5 hours
○ Between 5 and 10 hours
○ More than 10 hours

I believe viewing Internet pornography is justifiable.
○ Never
○ Rarely
○ Sometimes
○ Frequently
○ Always

Do you want to proceed with the survey?
○ Yes
○ No, I wish to exit the survey

No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

How often do you speak to someone about your Internet pornography use?

- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

With whom do you feel most comfortable speaking about your Internet pornography use? (mark all that apply)

- I do not view Internet pornography
- Chaplain
- Coach
- Counselor
- Faculty member
- Peer friend who is female
- Peer friend who is male
- Local church resource person off campus
- Nobody
- Other college staff member
- Roommate

Do you want to proceed with the survey?

- Yes
- No, I wish to exit the survey

No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
How interested are you in attending programs sponsored by your college to discuss questions and issues regarding the viewing of Internet pornography?

- Extremely disinterested
- Disinterested
- No opinion
- Interested
- Extremely interested

How old were you the first time you were exposed to Internet pornography?

- I have never been exposed to Internet pornography
- 5 years or younger
- 6-10 (Elementary School)
- 11-13 (Junior High)
- 14-18 (High School)
- 19-22 (College)

Do you want to proceed with the survey?

- Yes
- No, I wish to exit the survey

No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Are you currently in an exclusive dating relationship?

○ Yes
○ No

With how many sexual partners total have you had at least one sexual experience (intercourse, anal sex, oral sex, or mutual masturbation) leading to orgasm?

○ Zero
○ 1-4
○ 5-8
○ 9-12
○ 13 or more

Do you want to proceed with the survey?

○ Yes
○ No, I wish to exit the survey

No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

Pornography sometimes interferes with certain aspects of my life
- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

I sometimes use pornography as a reward for accomplishing something (e.g., finishing a project, stressful day, etc.)
- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey

No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.

34%
Internet pornography usage survey of male undergraduates at Evangelical colleges

When I am unable to access pornography online, I feel anxious, angry, or disappointed.

○ Strongly disagree
○ Disagree
○ Somewhat disagree
○ Neither agree nor disagree
○ Somewhat agree
○ Agree
○ Strongly agree

It is easy for me to reject the chance to view online pornography.

○ Strongly disagree
○ Disagree
○ Somewhat disagree
○ Neither agree nor disagree
○ Somewhat agree
○ Agree
○ Strongly agree

Do you want to proceed with the survey?

○ Yes
○ No, I wish to exit the survey

No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

Even when I do not want to view pornography online, I find myself drawn to it.
- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

I feel unable to stop my use of online pornography.
- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  - No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

I have no problem controlling my use of online pornography.
- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

I believe I am addicted to Internet pornography.
- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  - No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

I search for pornography through an Internet search tool.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

I try to hide sexual images on my computer or monitor so others cannot see it.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  - No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

I stay up late at night to access pornography online.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

I masturbate while looking at pornography on the Internet.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  - No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

I try to arrange my schedule so that I will be able to be alone in my room to view pornography.

- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

I get up earlier or go to bed later than my roommates to view pornography.

- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?

- Yes
- No, I wish to exit the survey
- No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.

60%
Internet pornography usage survey of male undergraduates at Evangelical colleges

I refuse to go out with friends or attend certain social functions to have the opportunity to view pornography online.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

I put off studying or other important priorities to view pornography.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
- No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

I avoid situations in which my pornography usage could be exposed or confronted.

- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

I fear that someone might someday discover my secret of viewing online pornography.

- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?

- Yes
- No, I wish to exit the survey
- No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.

68%
I use sexual humor and innuendo with others while online.
- Never
- Rarely
- Sometimes
- Frequently
- Always

I have participated in sexually related chats.
- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  - No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

I have a sexual username or nickname that I use on the Internet.

- Never
- Rarely
- Sometimes
- Frequently
- Always

I have increased the risks I take online (give out name and phone number, meet people offline, etc.).

- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?

- Yes
- No, I wish to exit the survey

  No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.

77%
Internet pornography usage survey of male undergraduates at Evangelical colleges

I have met face to face for romantic purposes with someone I met online.
- Never
- Rarely
- Sometimes
- Frequently
- Always

My viewing of pornography online bothers me.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  - No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.

81%
I feel negative emotions after viewing pornography online.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

I feel ashamed after viewing pornography online.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.

85%
Internet pornography usage survey of male undergraduates at Evangelical colleges

I feel depressed after viewing pornography online.
○ I do not view Internet pornography
○ Never
○ Rarely
○ Sometimes
○ Frequently
○ Always

I feel sick after viewing pornography online.
○ I do not view Internet pornography
○ Never
○ Rarely
○ Sometimes
○ Frequently
○ Always

Do you want to proceed with the survey?
○ Yes
○ No, I wish to exit the survey
   No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
Internet pornography usage survey of male undergraduates at Evangelical colleges

I feel good after viewing pornography online.
- I do not view Internet pornography
- Never
- Rarely
- Sometimes
- Frequently
- Always

I punish myself when I use the Internet for pornography (e.g., timeout from computer, cancel Internet subscription, etc.).
- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Do you want to proceed with the survey?
- Yes
- No, I wish to exit the survey
  - No, I wish to exit the survey and go directly to a resource list for students who have questions, want more information, or wish to talk with someone about the topic of pornography.
I have made promises to myself to stop using the Internet for pornography.

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

When I completed this survey, I was thinking about my Internet pornography use in (mark all that apply):

- I do not view Internet pornography
- Elementary School
- Junior High
- High School
- College

Do you want to proceed to the resource list?

- Yes
- No, I wish to exit the survey

98%
RESOURCE LIST

Counseling Resources

www.caps.net (Christian Association for Psychological studies)

· Once you have logged on to this website there is the option for “online directory”

· The online directory will provide a list of counselors off campus for your particular area

www.aacc.net (American Association of Christian Counselors)

· Once you have logged on, click on “resources”

· Then click “find a counselor”

· Then “find a counselor near you”

Web Resources

www.sexaa.org (Sex Addicts Anonymous)

www.sa.org (Sexaholics Anonymous)

www.sexual recovery.com (The Sexual Recovery Institute)

www.ncac.org (National Council on Sexual Addiction and Compulsivity)

www.victims.of pornography.org (Victims of Pornography)

www.faithfulandtrueministries.com (Faithful and True Ministries)

www.freedomeveryday.org (L.I.F.E. Ministries)

www.lustfreeliving.org (Lust Free Living)
www.pureintimacy.org (Focus on the Family resource related to online pornography)

www.purelifeministries.org (Pure Life Ministries)

www.settingcaptivesfree.com (Setting Captives Free)

www.sexualintegrity.org (Christian Sexual Integrity)

ccvillage.buffalo.edu/ccv.html (Connects you to resources from college and university counseling centers)

Internet pornography usage survey of male undergraduates at Evangelical colleges

Thank you for taking the time to complete this survey!
APPENDIX G

E-MAIL REMINDER #1
Recently, you received an invitation to participate in a dissertation research project. The research project is an examination of Internet pornography usage among male undergraduates at Evangelical colleges.

Information is power. Your participation will provide valuable input that could be beneficial to the staff at Evangelical Christian colleges who want to understand Internet pornography usage patterns so they can be helpful resources for students.

Click on the following link to read the informed consent form. The anonymous online survey is located at the bottom of the informed consent form.

The survey will take 15 minutes or less to complete.

Thanks in advance for your participation!

Sincerely,
Paul O. Chelsen
Graduate Student
Loyola University Chicago
APPENDIX H

E-MAIL REMINDER #2
The anonymous online survey examining Internet pornography usage among male undergraduates at Evangelical colleges will close at midnight on Thursday, February 17.

If you are interested in participating and have not already done so, please click on the following link to go to the informed consent form. The survey is located at the bottom of the informed consent form.

It will take 15 minutes or less to complete the confidential online survey.

Thank you!

Sincerely,
Paul O. Chelsen
Graduate Student
Loyola University Chicago
REFERENCE LIST


VITA

Paul O. Chelsen was born and raised in Newark, Illinois. He completed a Bachelor of Arts degree in Communications from Wheaton College in 1991 and served in Residence Life for two years. Paul went on to complete a Master of Arts in College Student Personnel Administration from Ball State University in Muncie, Indiana in 1992 while serving as a graduate assistant in the Office of Multicultural Affairs. He moved to Coe College in Cedar Rapids, Iowa where he served as a Residence Hall Director and a Career Counselor from 1992-1994, while also chairing the College’s committee on diversity. While at Coe College, Paul participated in a presentation to the NASPA national convention on sexual assault advocacy. From 1994-1996, Paul worked for North Central College in Naperville, Illinois, as a Residence Hall Director and as the Assistant Director for Dispute Resolution. Paul was recorded in a training video for conflict mediation while at North Central College and in 1996, received the Student Government Distinguished Service Award. From 1996-1998, Paul worked for the University of Illinois at Chicago as the Assistant Director for Student Development Services in charge of student leadership programming and advising student government. In 1998, Paul returned to Wheaton College in Wheaton, Illinois, to serve as the Director of Residence Life and Housing until 2008, when he became the Vice President for Student Development, a position in which he currently serves.