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Examining the Perceived Benefits for Engaging in Cybersex Behavior among College Students

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EXAMANING THE PERCEIVED BENEFITS FOR ENGAGEING IN CYBERSEX BEHAVIOR AMONG COLLEGE STUDENTS

by

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ABSTRACT

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by

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This study examined college students' cybersex use, perceived benefits of use, time spent online, and compulsive cybersex. Participants consisted of students attending Utah State University Spring semester 2007. Data were collected via an online survey, and 262 surveys were used in the correlation and regression analyses.

Results indicated that age, religion and gender are predictive of perceiving more benefits for cybersex participation. A strong positive correlation was found between perceived benefits and compulsive cybersex use. Students' lack of social skills was predictive of more time spent online. Time spent online for cybersex was predictive of sexually compulsive behavior. There was a positive correlation between sex by phone behaviors, compulsive cybersex, time spent online, and benefits perceived among college students, and cybersex activities were associated with offline relationships.

(133 pages)

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CHAPTER I

INTRODUCTION

In a world in which everything from banking and shopping to education and matchmaking is found online, it is little wonder that for 2003, the United States Department of Commerce found that 70 million (62%) of all U.S. households had two or more computers and 55% had access to the Internet, a number which is up from 50% in 2001 (United States Department of Commerce Bureau of Census, 2003). Increasing access to the Internet creates several concerns for mental health professionals. For example, increased access in individuals' homes adds a new dimension to health and psychological issues when combined with sexually-oriented behaviors (Cooper, Delmonico, Griffin-Shelly, & Mathy, 2004). The speed, availability, and convenience of sexually-oriented material on the Internet create the potential for the "next sexual revolution" (Cooper, Bioes, Maheu, & Greendield, 1999, p. 519).

In recent years, pornography viewing among Americans dramatically increased, largely due to this increased access to the Internet (Freeman-Longo, 2000). With the invention of the Internet, the pursuit of sexual stimuli has become more accessible, affordable, and anonymous (Cooper, 1998; Cooper et al., 2004; Cooper, Boies et al., 1999). As of the year 2000, it was estimated that 20 million people visited sexual websites monthly, and this number continues to increase with sex being the number one searched topic on the Internet (Cooper et al., 2004; Weiss, 2000). According to comScore Media Metrix, 71.9 million people visited adult sites in August 2005, reaching 42.7% of

the Internet population (Enough is Enough, 2005). It is therefore not surprising that cybersex compulsive use is on the rise. Further, college students appear to be at a particular risk for cybersex use and abuse (Cooper, Delmonico, & Burg, 2000; Freeman-Longo, 2000).

The amount of time spent online is positively correlated with online sexual activity that is problematic (i.e., interferes with other areas of the user's life) and potentially compulsive (Cooper et al., 2000). The Marital and Sexuality Center and MSNBC (2002) reported that 6.5% of the male Internet-using population in the USA reported spending nearly 6 hours per week in cybersex activities. Additionally, an MSNBC report indicated that 25 million Americans visit cybersex sites between 1-10 hr per week, and another 4.7 million in excess of 11 hours per week (MSNBC, 2000a). Cybersex can be defined as, "online sex-oriented conversations and exchanges, and sex-oriented material available on a computer (as on the Internet and on CD-ROM)" (Merriam-Webster Online, 2005). The need to better understand this growing pattern of behavior promotes the need for more research.

There is increasing research on online sexual access as the need to understand this behavior becomes more evident. For example, most studies show the impact of compulsive sexual behavior on adults (usually men) even though their compulsive behaviors often began in their teen or college-age adult years (Freeman-Longo, 2000; Schneider, 2000a).

Conceptual Overview

Cybersex research literature is relatively new in the research world; therefore, there are no universal theories used to describe the behavior. However, certain main concepts on sexual behavior are essential to understanding the cybersex literature. These concepts are described below.

Sexual Addiction

The existence of sexual addiction is still debated among health care professionals. Some believe that behaviors such as gambling, eating, or sex are not in themselves addictive but they are manifestations of other underlying issues (Roller, 2004). The term addiction has been used to describe any form of behavior that is self-destructive and is continued despite negative consequences (Roller). It is therefore important to distinguish between physiological and psychological addiction. Physiological addiction refers to developing physical withdrawal symptoms during abstinence from a "drug," which may include: shakiness, flu-like symptoms, chills, vomiting, or an over all feeling of malaise. If an addict is using drugs and suddenly stops, it is normal for that person to go through withdrawal. Physical dependence begins by developing tolerance to doses of the drug, and more is needed for the same affect. Over time the original reason for using the drug, (e.g., pain medication) is gone and now the drug is used because the individual is addicted to the substance (Advanced, 2008). Psychological addiction is a behavioral phenomenon, and addiction can be defined as compulsive use of a substance or behavior, which is characterized by loss of control. The addict focuses on the "drug," to the extent

that the addict's whole life revolves around it: obtaining it, using it, and when the next fix will be. This occurs even as the individual is harming himself or herself (Advanced).

Carnes defines addiction as a "pathological relationship with a mood-altering substance or behavior" (2001, p. 14). According to this definition, drugs, as well as any mood-altering behavior, would apply. Hence, when sexual behavior is used as a coping device, it is used to alter one's mood. Compulsive sexual behavior has been documented to alter brain function in a way similar to illicit drug exposure (Roller, 2004). Additionally, researchers have documented the existence of a "high" produced by sexual behavior similar to that produced by crack cocaine (Schneider, 2004). The use of the Internet for sex -- or cybersex -- to escape and alter one's mood fits into this category and is becoming more prevalent in cases of sexual addiction as it has, heretofore, been defined (Schneider).

Definition of Cybersex

Cybersex definitions have many variations. Some researchers differentiate online sexual activity (OSA) from cybersex. OSA is defined as the "use of the Internet for any activity (text, audio, graphics) that involves sexuality. This includes recreation, entertainment, exploration, support around sexual concerns, education, purchasing sexual materials, [and searching for] sexual partners" (Cooper et al., 2004, p. 131). Cybersex has been defined as a subcategory of OSA and occurs when individuals use the Internet to engage in sexual expression or sexually gratifying activities that may include: looking at pictures, engaging in sexual chat, exchange of sexual emails, and "cybering," where both parties masturbate while exchanging sexual chat online (Cooper et al.).

Other descriptions of cybersex include Schneider's definition: "any form of sexual expression that is accessed through a computer" (Schneider, 2000a, p. 208; Schneider, 2004). In 2004, Cooper and colleagues, defined cybersex as "using the…Internet to engage in sexually gratifying activities" (Cooper et al., p. 131). This latter definition narrows the former from any sexual expression on a computer, to sexually-oriented Internet use only. Another definition, given in 2004, described cybersex as "engaging in sexual self-stimulation while online with another person," (Ross, Rosser, & Stanton, 2004, p. 1002), which is similar to "cybering" (Cooper et al.). This interaction could be exchanging sexual e-mail, chatrooms, instant messaging, or web cameras. Finally, cybersex was defined in 2005 as "two or more people engaging in simulated sex talk while online for the purposes of sexual pleasure and may or may not include masturbation by one or more of the participants" (Ross, Mansson, Daneback, & Kikkanen, 2005, p. 132). Clearly there exists a lack of agreement in the literature regarding a universal definition of cybersex. This discrepancy may lead to confusion and creates challenges in planning and implementing cybersex abuse prevention programs. For example, one program may focus on the Internet while another may focus prevention efforts on pornographic CD-Rom purchases. For the purpose of this study, cybersex will be defined as sexual expressions or interactions accessed through a computer.

Definition of the Flow Experience

Cybersex abuse, as with other potentially addictive behaviors, initially begins with reinforcement. For cybersex abuse, this reinforcement is sexual gratification and release of tension (Schwartz & Southern, 2000). Sexual gratification is achieved through

the flow experience (Money, 1986; Philaretou, Mahfouz, & Allen, 2005). Flow theory posits that individuals become so absorbed in their online behavior that they lose track of time and of themselves, becoming oblivious to all around them (Csikszentmihalyi, 2000). An individual engaging in cybersex often has the goal of achieving this flow experience.

Flow is obtained through a ritualized experience of surfing for the "perfect pick." For example, Philaretou and colleagues interviewed six cybersex compulsive users and found that they reported searching until they found the image or movie that was just what they wanted and then masturbated to that specific image (Philaretou et al., 2005). The construct of a "lovemap" is defined as a cognitive and emotional schema that provides a map or outline for the individual's preferred sexual relations and actions (Money, 1986). This behavior may exist both offline (e.g., phone sex) and online (e.g., chatrooms). When online, the individual customizes his or her perfect pick instead of searching offline in clubs for someone who fits their ideal. Once the perfect pick is found, satisfaction is short-lived, and the user then searches for a variation on the theme. For the user, there is always something more to search for, and he or she is never satisfied (Philaretou et al.).

Cybersex and Relationships

Cyber relationships are two sided. On one side they offer the participants an opportunity to get to know a person without the fear of personal rejection, or being judged by their physical appearance. They also offer opportunities for disfranchised groups to find socialization. Additionally, disclosures often come more rapidly online than in real life relationships. People get to know one another, and then decide if they want to meet (Cooper, 1998).

The second side is that cyber relationships can leave the user unfulfilled (Schwartz & Southern, 2000). The cyber world is illusory, which may create a barrier to real intimacy. Participants can become caught up in their fantasies to the extent that the interactions barely resemble a real relationship (Schwartz & Southern). In an editorial, Delmonico explained that online communications fail to involve all of the senses, as in-person relationships do (Delmonico, 2003). Without stimulating all five senses, the relationship breaks down to a one-dimensional experience that lacks the depth developed in real-life relationships. The online relationship interaction is not able to meet the needs of human relationships, and prevents the development of the "sixth sense," the one that tells us if a relationship is "good" or "bad" (Delmonico). Schnarch explained that individuals in cybersex relationships can present themselves however they feel most comfortable, which may actually limit disclosure and can leave the relationship fake and misleading (Schnarch, 1997). College students are among those participating in cybersex in a world that often offers illusions in the place of real relationships.

Scope of the Problem

As stated above, the use of the Internet for sexual behaviors is prevalent among Americans. The Marital and Sexuality Center and MSNBC conducted an online survey and found that 6.5% of the male Internet-using population reported spending nearly 6 hours per week in cybersex activities (2002). Additionally, 32 million unique individuals visited a pornographic website in September of 2003. Most visitors were male, 22.8 million (71%), while 9.4 million adult site visitors were female (29%) (Nielsen/Net

Ratings, 2003). A MSNBC report in 2000 indicated that at least 200,000 Internet users are “compulsive users” of pornographic websites, X-rated chat rooms, or other online sexual behaviors (MSNBC, 2000b). An additional MSNBC report indicated that 25 million Americans visit cybersex sites between 1-10 hr per week, and another 4.7 million in excess of 11 hours per week (MSNBC, 2000a). More recent data reveals that 40 million U.S. adults regularly visit pornographic websites, and 10% of adults report some type of Internet sexual compulsion (Internet Filter Review, 2006).

Excessive time spent in cybersexual activities is not the only concern that arises from use; chatrooms are also a potential risk in cybersex activities. They can be a gateway for other more risky behaviors, such as offline meetings. Some consider chatrooms a “slippery slope” toward more compulsive sexual behaviors, especially for individuals who are prone to addictions (Cooper et al., 2000). Cybersex involvement often damages real-life relationships, at times leaving the family members of users feeling used, betrayed, or depressed (Cooper, 1998; Schneider, 2000a).

FBI Special Agent Jeff Ross reported that according to Google Trends, Salt Lake City, Utah is first in the nation when it comes to Internet searches for terms such as "nudity," "naked girls," "pornography," and "strip tease." Furthermore, Salt Lake is second in the country for Google searches including "hot sex" and "naughty." Salt Lake is fifth in the nation for searches regarding “incest,” seventh for searches on “child pornography,” eighth for searches on “sex,” and tenth for searches on "pedo," short for pedophile. Moreover, Utah also has more computers per capita than any other state in the country (Reavy, 2006).

Problem Statement

The increased availability of the Internet provides nearly unlimited access to pornographic images and other erotic activities. This behavior, known as cybersex, is affecting an increasing number of individuals. Despite the growing body of research in this area, little research has been done on college students and their cybersexual behavior. Researchers still know little about the perceived benefits and compulsions associated with engaging in cybersex. The present literature offers little information on the college students' perception of cybersex. A better understanding of students' perceived benefits, compulsive behavior, and time spent in pursuit of cybersex is needed to better intervene prior to the development of cybersex compulsive behaviors. The purpose of this study was to investigate the relationship that perceived benefits, compulsive cybersex, and time spent online has on Utah college students' cybersex behavior.

Research Questions

1. What is the relationship between: characteristics of cybersex users, perceived benefits, and compulsive behaviors of cybersex among college students?
2. To what degree are the perceived benefits for engaging in cybersex associated with compulsive sexual behavior among college students?
3. What is the relationship between perceived benefits and time spent online among college students?
4. To what degree is the amount of time spent online related to compulsive cybersex behavior among college students?

5. What is the relationship among types of perceived benefits for engaging in cybersex among college students?

6. To what degree are: sex by phone behaviors, time spent online for sexual purposes, compulsive behavior, and cybersex perceived benefits related among college students?

7. What are the relationships among: offline relationships, time spent online for cybersex, compulsive behavior, and cybersex perceived benefits among college students?

Significance of the Study

This study will investigate the relationships among perceived benefits, compulsive cybersex behaviors, time online, and Utah college students' cybersex behavior.

Previous research has focused on populations such as: Americans, individuals living in Portugal and Sweden, homosexual men, and women. Among this literature, there appears to be a higher level of cybersex involvement and potential cybersex compulsive behavior among the younger adult population (Carvalheira & Gomes, 2003; Cooper et al., 2004). This study proposed to study a unique population of students enrolled at a University in the United States and their cybersexual involvement. By examining only college students, this researcher planed to better understand the benefits of cybersex perceived by this younger population of adults. Additionally, the study took place in a conservative state (Utah) at a relatively conservative school. The conservatism and religious affiliation of most of the students make it an interesting study by addressing cybersex use among this population, and will add to the literature on cybersex.

Delimitations

The study was delimitated to a selection of college students attending Utah State University in Logan, Utah during spring semester 2007. All individuals were required to be over 18 years old to participate. Each instrument was chosen because it has been tested for psychometric validity and proved reliable and valid. Kalchiman's Sexually Compulsive Scale (SCS) was chosen because many other researchers have used this scale, facilitating the comparison with the results of this study to other studies. The Sexual Behavior Scale (SBS) was chosen because it assesses perceived benefits of cybersex behavior as well as phone sex and relationship impacts of cybersex involvement. The Quality of Relationship Inventory (QRI) was used because it gave researchers a way to assess the quality of the participants' relationship when evaluating if cybersex use and time online affected the quality of individuals' relationships.

Limitations

This study was limited to one university and the students attending in spring semester, 2007. It was also limited by the accuracy of self-report. Additionally, Utah State University is located in a conservative state; therefore, the participants may feel reluctant to disclose activities that are considered unacceptable by some in the area. The study will be limited to college students, but as that is the desired population to study, this limitation is acceptable.

Definition of Terms

Addiction

Addiction can be divided into psychological and physiological components, therefore, addiction can be defined as: “habitual psychological and physiological dependence on a substance or practice beyond one's voluntary control” (The American Heritage Stedman's Medical Dictionary, 2002). Likewise, addiction has been defined as: “the state of being enslaved to a habit or practice or to something that is psychologically or physically habit-forming, as narcotics, to such an extent that its cessation causes severe trauma (Random House Dictionary, 2006). Both definitions describe the inability to stop a behavior without negative consequences for the individual.

Compulsion

Compulsions have been described as the desire to stop or to reduce the frequency of a behavior with the inability to do so (Cooper, 1998). Cooper defines sexual compulsion as an “irresistible urge to perform an irrational sexual act, such as one that will result in negative consequences” (Cooper et al., 2004, p. 136) which often expresses itself in ritualized or routine fashions (Kalichman et al., 1995). This is the definition that will be used in this review.

Sexually Compulsive Behavior

The Mayo Clinic describes sexually compulsive behavior as an overwhelming need for sex, to the extent that the individual is so intensely preoccupied with this need that it interferes with job and relationships. Individuals who engage in compulsive sexual

behavior spend inordinate amounts of time in sexually related activities and neglect important aspects of their day-to-day life in social, occupational, and recreational areas. They often find themselves failing repeatedly at attempts to reduce or control their sexual activities or desires (Mayo Clinic, 2005).

There are other names for this potentially serious condition. Compulsive sexual behavior is sometimes called hypersexuality, nymphomania or erotomania. Others use the term "sexual addiction," comparing it with the uncontrolled use of a drug. Others argue that it is an issue of impulse control or obsessive-compulsive behavior (Mayo Clinic, 2005). Either way, researchers agree that online sexual compulsivity refers to a person who is involved with online sexual activity in a continuous way, to the degree that it interferes with aspects of work, social, and/or recreational dimensions of one's life (Cooper, 1998; Cooper et al., 2004; Schneider, 2000b).

Cyber

The term cyber is a prefix that is used to describe involvement, using, or relating to computers, especially via the Internet.

Cybersex

For the purposes of this study, cybersex will be defined as sexual expressions or interactions accessed through a computer.

Chatrooms

Chatrooms will be defined as "a site on a computer network where online conversations are held in real time by a number of users." This definition also includes:

"a site on the Internet where a number of users can communicate in real time (typically one dedicated to a particular topic)" (Dictionary.com, 2006).

Phone Sex

Phone sex will be defined as sexually explicit talk engaged in by telephone, especially to enhance autoerotic pleasure.

Instant Messaging

Instant messaging is a computer application that allows for communications in real time. It can be a one-on-one or group live chat, and acts as an email service.

Summary

In this chapter background information was presented to support the need for this study. Cybersex and sexual addiction were explained, as was the flow experience. The influence that cybersex has on relationships was outlined. The importance of better understanding cybersexual behavior among college students was presented as an important element this study has to offer. The limitations, delimitations, and definitions of important terms for the study were also provided in this chapter. The next chapter will provide empirical evidence from related literature to support the claims made in this chapter and provide further evidence for the need of this study.

CHAPTER II

LITERATURE REWIEW

The literature review will discuss recent research published regarding cybersex use. The literature review will be the basis for the rationale for the proposed study. More specifically, the literature review will examine: (a) cybersex users' characteristics; (b) the role of compulsive cybersex behaviors; (c) the perceived benefits of cybersex use among participants; (d) the role of sex by phone in cybersex behaviors; and (e) the impact cybersex has on real relationships.

Characteristics of Cybersex Users

Individuals involved in online sexual activities differ widely, but there are trends. For example, users must have access to the Internet, and most access it at home. However, in a study of online sexual behavior, Cooper and colleagues reported that 6 out of 100 employees reported accessing sexual material at work (Cooper et al., 2000). This included individuals meeting the criteria for sexually compulsive behavior as well as those with no sexual compulsions. Cybersex participants come from all areas of the globe and involve a variety of individuals. This review will examine marital status, gender, sexual orientation, and age as they relate to cybersex use.

Marital Status and Cybersex

Marital status is not a consistent predictor of use of online pornography; however, there are differing behaviors among these two groups. In an online survey of 9,265

participants done in conjunction with MSNBC, Cooper and colleagues examined cybersex behaviors. They compared their data to a study done in April 1998 that surveyed 3.8 million users to the MSNBC website. Researchers divided their sample into four groups using the Kalichman Sexual Compulsive Scale (SCS). These groups included: nonsexually compulsive (NC), moderate SCS score (MSCS), sexually compulsive (SC), and cybersexually compulsive (CC). Chi-square statistics found that unmarried individuals were overrepresented in the cybersex compulsive group (Cooper et al., 2000). Researchers concluded that unmarried individuals may be more likely to report cybersex compulsive behaviors because they may be searching for dating relationships. They are more likely to pursue intimate relationships online, therefore placing themselves at greater risk for cybersex compulsive behaviors.

Ross and colleagues surveyed 1,846 Swedish men and women in an online study concerning their online sexual behavior. Thirty percent of men and 34% of women reported engaging in cybersex, and 42.7% of participants in the study were in a committed relationship (i.e., married, or co-habiting) while 54.7% were not (Ross et al., 2005). Research indicates that both married and single individuals engage in cybersex.

Gender and Cybersex

Some studies indicate that women are more likely to be involved in Internet chatrooms than are men; additionally, researchers found that women are at risk, along with men, for developing compulsive cybersex behaviors (Ferree, 2003). In their MSNBC survey of cybersex users, Cooper and colleagues (2000) found there was a significant gender shift between the cybersex compulsive group and the other three

groups, with women more likely to be in the cybersex compulsive group in that study. They also found that 70% of female cybersex users preferred using chatrooms (Cooper et al., 2000). In another MSNBC online survey of 7000 participants, Cooper and others found that more men than women (68% & 50%, respectively) reported using the World Wide Web. However, twice the percentage of females (26%) as males (16%) report using chatrooms (Cooper et al., 2004). Conversely, Schneider (2000b) surveyed 55 self-reported sex addicts via email (45 men & 10 women) about their cybersexual activities. One 35-yer-old woman became hooked on the visual images of cybersex and reported, "the material…written for women is usually in the 'love addiction' realm and not straight sex addiction…I don't have sex to appease the man in my life, or get his love; I have sex for the rush of orgasm, to medicate my feelings" (Schneider, p. 262).

In the MSNBC study mentioned earlier, Cooper also found that even though men are online for sexual purposes more frequently than women, women appear to be more apt to develop cybersex compulsive behaviors (Cooper et al., 2004). However, the same study reported that twice as many men as women reported their online sexual behavior being problematic, and indicated that others complained about their cybersex activity. Yet, when asked if their online behavior felt out of control, men were more than three times as likely as women to respond affirmatively (Cooper et al.). It appears from the recent research that more men are involved in sexual activities online than women, and report higher levels of loss of control (Cooper et al.; Ferree, 2003).

According to a literature review by Ferree (2003) on women's cybersex use, women are more likely to desire romance and relationships in their sexual experiences,

which makes ‘love’ or ‘relationship’ addictions more prevalent among women (Ferree). This could explain why women are more likely to visit Internet chatrooms and initiate relationships through the Internet (Schneider, 2000a). For example, in her study of self-identified sex addicts mentioned previously, Schneider reported that women are more likely than men to eventually meet an online sex partner in person, and that 80% of women (compared to 33% of men) surveyed reported a real-life meeting with their online sex partner (2000b). This may make women who engage in cybersex more likely to be victims of sexual violence. Another explanation for women’s involvement in cybersex is that, historically, women are considered a sexually disenfranchised group. The Internet and chatrooms offer a venue where a woman may anonymously release sexual inhibitions (Cooper et al., 2000; Ferree).

Women’s draw to anonymous cybersex could also be a reflection of women conforming to the social norm of acceptable behavior. Women may experience more guilt after engaging in cybersex. This is illustrated by a comment from a participant in the email survey done by Schneider, who said, “It is not considered normal for a woman to escape her pain through sex” (Schneider, 2000b, p. 269).

In summary, men report a higher rate of participating in online sexual behaviors, and women report more time spent in chatrooms. Moreover, women seem to be drawn to the relationship component of cybersex, where as men tend to prefer viewing pornographic images. Both genders report participating in sexual behavior online that could be problematic for other areas of their life. Further research on gender and the differing behaviors between genders and cybersex use is needed.

Sexual Orientation and Cybersex

Both homosexual and heterosexual individuals report engaging in online sexual behavior. In Cooper's online MSNBC study on cybersex, researchers reported that gay males and bisexual individuals were overrepresented within the cybersex compulsive group, yet lesbians were underrepresented (Cooper et al., 2000). In the online survey mentioned above, Ross and colleagues specifically examined men's cybersex behaviors. They divided the sample of men (N = 244) into three groups: those who identified themselves as heterosexual and reported sexual contacts with women online (heterosexual men, n = 186); those who defined themselves as heterosexual and reported sexual contacts with only men or with both men and women online (men who have cybersex with men and do not identify as gay/bisexual: MSM-NI; n = 20); and finally, men who identified themselves as gay or bisexual (n =38). Researchers reported that heterosexual and gay men reported engaging in cybersex, and that the sexual orientation of their reported cybersex behavior did not necessarily reflect participants' self-reported sexual orientation (Ross et al., 2005). Sexual orientation does not appear to be a dividing line among cybersex participants; however, there are still questions about use among all sexual orientations. Limited research has been conducted in regards to sexual orientation and cybersex use. Further research is warranted to explore if there is a relationship between sexual orientation and types and amounts of cybersex behaviors.

Cybersex and Youth

Most studies explain the impact of compulsive sexual behavior on older adults even though these compulsive behaviors often begin in the teen or young adult years

(Freeman-Longo, 2000; Schneider, 2000b). One age group appears to be more at risk for compulsive cybersex activities. Cooper and researchers reported in their MSNBC online study of cybersex users that college students are more likely to appear in the cybersex compulsive group, and that professionals and those in the computer field are less likely to be in the cybersex compulsive group (Cooper et al., 2000).

It is impossible to determine how many youth and children are accessing online sexual material, because online behavior is anonymous. Adults and children alike can change their age and gender information in chatrooms, and many do (Cooper, 1998). Regardless, there has been a rise in the number of children and teens seeing counselors for problems associated with online sexual behaviors (Freeman-Longo, 2000).

Because it is illegal for those under 18 years to access online sexual material, they are reluctant to disclose any such behavior, what benefits they derive, or the extent of their online sexual behavior. Despite these barriers, however, there are studies reporting adolescents engaging in cybersex. Ross and colleagues (2004) studied 1,026 Latino men who engaged in cybersex with other men. Through this online survey, they found that teenage homosexual men, along with adult men, reported engaging in cybersex, with the mean age of 16.05 ± 4.85. A study done at the University of New Hampshire found that 1,501 Internet users ranging from 10 – 17 years of age reported the following. One in five received a sexual solicitation over the Internet in the past year, and one in 33 received an aggressive approach, defined as an individual requesting a meeting, calling on the telephone, or sending regular mail. One in four was exposed to unwanted online pictures, and one in 17 received threats or harassment online. These adolescents stated that they

reported less than 10% of the sexual solicitations they received to authorities, and reported only 3% of unwanted exposure occurrences to authorities (University of New Hampshire, 2000). Young people and cybersex is a highly under-researched area. Cybersex involvement is growing among young adults and youth. More research needs to be done on a student population in order to better understand this growing area of participation.

In summary, characteristics of cybersex users vary widely. Individuals of all ages, ethnic groups, genders, and relationship status participate in online sexual behaviors. Within this growing issue is a concern not only about the time spent online, but also about the potential for compulsive use among participants.

Compulsive Behaviors

The Risk of Addiction/Compulsion

Most cybersex users do not report compulsive behaviors, but there appears to be a significant minority at risk for developing a compulsion. Researchers cite a relationship between compulsive behavior and cybersex in order to explain this minority's excessive amount of time spent online in sexual activities (Cooper et al., 2000, 2004). Additionally, there are often other aspects of compulsion, such as loss of control or loss of the ability to regulate or stop the intensity and amount of the behavior (Cooper, 1998). In one study by Cooper mentioned previously, researchers found that 9.2% of the participants reported their cybersex behavior felt out of control (N = 7000) (Cooper et al., 2004). Furthermore, in another study mentioned above by Cooper and others, of 9,265 participants, 21%

reported their cybersex involvement jeopardized an area of their life (Cooper et al., 2000).

For some, cybersex can provide an avenue for extreme sexual behaviors that may lead to an addictive sexual disorder. Researchers point out that a small number of Internet users have preexisting sexual compulsions or addictions, (e.g., their pornography viewing and one-night stands which interfere with other areas of their life) and the Internet becomes a new outlet for the behavior (Cooper et al., 2004; Schneider, 2000b). Conversely, in some cases, the use of the Internet may trigger a compulsion for some who would not have a problem with pornography otherwise (Cooper et al.; Freeman-Longo, 2000).

The results of Schneider's survey of spouses of addicts via email indicated that abuse for some individuals starts out small and then leads to an increase in frequency and intensity of behaviors, which for one interviewee escalated to the point where she reported finding it necessary to enter the house before her children so that they did not see their father masturbating in front of the computer (Schneider, 2000a). For others increasing behavior interferes with their jobs and family relationships (Cooper et al., 2000). Moreover, in a study done by Philaretou and others, researchers found a pattern of becoming "increasingly addicted to online pornography" (Philaretou et al., 2005, p. 159). Philaretou participated in semi-structured interviews with six males, ages 25-40. These men were involved in cybersex and were willing to discuss their behaviors with the primary researcher. One interviewee reported that the time spent online started out small and then increased to a typical week of spending 8-12 hr surfing the Internet for sexual

material. He desired to stop but reportedly could not. He and others expressed concern and guilt for their behavior, especially if they were ever discovered by family members. Overall, there was a lack of control of behavior despite an expressed desire to stop. One participant stated that it was like getting "high"; there is the same euphoric feeling and drive for more, similar to euphoric drug use (Philaretou et al., 2005).

How Much Is Too Much?

Just as not all users of alcohol become alcoholics most cybersex users do not experience compulsive problems. Cybersex use becomes a social concern when individuals spend so much time online that they neglect their relationships, jobs, school, or other obligations (Schneider, 2000b). Cooper and colleagues reported a positive correlation between the amount of time spent online and problematic cybersex that is potentially compulsive. They found that of the four groups in their study, the nonsexually compulsive group, the moderate sexually compulsive group, and the sexually compulsive group all reported spending approximately 15 – 25 hr per week online. The cybersex compulsive group members reported spending an average of about 35 – 45 total hr per week online overall. Additionally, the cybersex compulsive group reported spending an average of about 15 – 25 hr per week pursuing online sexual material (Cooper et al., 2000). Moreover, in the 2004 study described above, Cooper and other researchers reported that those who engaged in 11 or more hours per week of Internet pornographic behavior experienced intrapersonal and interpersonal problems in financial, legal, occupational, and recreational areas of their lives (Cooper et al., 2004). In the same study, researchers reported a mean of 2.6 hr per week spent engaged in online sexual activity

within their study sample. Those who reported spending 11 or more hours per week in online sexual pursuits were nearly two standard deviations above the mean in time spent engaging in cybersex (Cooper et al.).

In additional studies, Carvalheira and Gomes (2003) found that there was a significant minority of cybersex participants whose time online is associated with compulsive behaviors. In their online study of cybersexual behavior done in Portuguese chatrooms (N = 400), 8.3% of their sample spent more than 2 hr online per day, and half of those participants (4.3%) completely agreed with the statement, "After discovering cybersex I have no longer time to do other things" (Carvalheira & Gomes, p. 351). There appears to be a trend worth further investigation, though not a perfect relationship, in the amount of time spent online and level of compulsive behavior in cybersex.

Perceived Benefits

The influx of cybersex behavior renders it important to address the perceived benefits of engaging in this behavior. What are the rewards that make cybersex so appealing? Understanding the benefits perceived by users' for participating in cybersex opens a door of understanding of this relatively new behavior. Researchers also will be better able to create interventions for compulsive cybersex behaviors. Griffiths suggested some benefits of online sexuality, including convenience, escape, and social acceptability (Griffith, 2000). The major benefits perceived by cybersex users in the research literature are addressed below.

Using Masks

Researchers have proposed several mechanisms for the appeal of cybersex to its users, one of which is termed the "Triple-A Engine," which suggests that the major benefits of using the Internet for pornography are primarily these three: anonymity, accessibility, and affordability (Cooper, 1998; Cooper et al., 2000; Cooper, Boies et al., 1999). Individuals are able to access online material from the privacy of their own homes without the potential embarrassment or criticism associated with being sighted at an adult bookstore. In the study by Philaretou and colleagues mentioned above, one interviewee reported that cybersex is better than paying for prostitutes, and that an individual can obtain free sexual material online (Philaretou et al., 2005). In on online survey through ABCNEWS.com on Internet addiction, 17,251 surveys were analyzed. Greenfield reported that 43% of participants surveyed reported a sense of "disinhibition" while online. This figure jumped to 80% for Internet compulsive users. Additionally, 39% of non-addicts reported feeling a loss of boundaries or sense of no boundaries to guard their behavior while online, with 83% of addicts reporting this experience (Greenfield, 1999).

The anonymity the Internet provides opens up a new avenue for cybersex participants as well as for more nontraditional behaviors. Being able to mask one's real identity and keep secret his or her online behavior are benefits perceived by cybersex participants. Online sexual experimentation may facilitate identity exploration and development. Creating a new persona online is a common occurrence, and a safe way to explore being a different gender, age, or race (Cooper, 1998). This is demonstrated in case studies of two women in bondage, discipline/domination, submission/sadism,

masochism (BDSM) chatrooms. Palandri and Green (2000) interviewed BDSM participants both in online chatrooms and in real life. When one participant was asked if her self-expression in her virtual life (VL) differed from that of her real life (RL), she reported, "Oh yes! I would never say the things I say in VL to another living soul in RL!" (Palandri & Green, p. 634).

Furthermore, Ross and colleagues (2004) conducted an online study wherein they surveyed Latino men who have Internet sex with other men (MISM) in Spanish chatrooms (N = 1,026). Using a chi squared analysis, researchers reported that men who scored high in the "liking cybersex: perceived anonymity/safety" scores were more likely to use chatrooms and web cameras as opposed to using neither in their online interactions. Participants preferred the safety net of anonymity the Internet provided when engaging in cybersexual behaviors. In the same study, researchers reported a perceived benefit of cybersex is users' ability to approximate or to experiment and change things online to what the user prefers (Ross et al., 2004).

The benefit of "masking" one's true identity occurs in a variety of ways in cybersex involvement. This was illustrated in a study by Cooper and colleagues in 1999. Researchers conducted an online study through MSNBC.com. A 59-item questionnaire was offered and participants were self-selected through pop-ups on the website. Sample size was N = 9,177; average age of participants was 34.96 years. Men were slightly older (*Mean* = 35.34, *SD* = 11.79) than women (*Mean* = 32.62, *SD* = 10.24) in the study. Researchers found that changing one's age, gender, or other personal characteristics online is not as popular as was previously thought. It was found to be fairly unusual

event, only 5% of the sample indicated pretending to be a different gender, and most of them (4%) said that they do so only occasionally. Less than half of the respondents (38%) said they present themselves as a race different than their own on occasion (27%) or more often (11%) (Cooper, Scherer et al., 1999).

In the 2005 study previously described, Ross had a similar finding when participants reported that being able to experiment with the Internet and to take on a new identity are benefits of cybersex. Researchers also found that 50% of men in the group entitled, men who have cybersex with men and do not identify as gay/bisexual (MSM-NI) reported agreeing with the statement "There are things I do online that I would not do offline," whereas 21% of the heterosexual men group agreed with the statement (Ross et al., 2005, p. 136).

The ability to be anonymous and to hide one's true identity online makes the Internet a popular venue for exploration of one's sexuality as well as non-traditional sexual behaviors.

Filter for a Later Date

There are hundreds of online matchmaking organizations dedicated to helping customers find their perfect mates. Previous research has shown that among the benefits perceived by cybersex users, the ability to screen potential partners for a later date is popular. As part of their study described earlier, Ross and colleagues (2004) looked at the participants' frequency of using in real life (IRL) meetings created through chatrooms. Men who scored high in IRL interactions were more likely to view explicit pictures, use e-mail, chatrooms and bulletin-boards, view websites for relationships and sex and

explicit pictures, and use personal advertisements. In the same study, researchers found that these online options were used as tools for meeting other men in real life (Ross et al.).

Additional studies found participants reporting similar preferences for the Internet as a potential date filter. Ross and colleagues in their 2005 study found that 70% of the men in the MSM-NI group reported using the cybersex to make contacts with others for sex, while 52.7% of the heterosexual men group reported engaging in this behavior. The chi square analysis of the differences between these groups was significant at the .01 level (Ross et al., 2005). Carvalheira and Gomes additionally found respondents stating that one of their purposes for using the Internet is to set up later dates with people met there. For example, 8.5% of sample participants completely agree with the statement, "I use these chatrooms exclusively to set up dates with sexual aims," and 12.5% completely agree with the statement "It's a good way to make a first selection of a partner for a real date" (Carvalheira & Gomes, 2003, p. 356). In the 2004 MSNBC study, Cooper and colleagues reported that over 26.5% of the respondents stated that they had met someone online with whom they later had a real-life sexual relationship. In this same study, nearly a tenth (9.8%) of the sample stated that they engage in cybersex to meet people to date, and the same percent reported that they use it to meet sexual partners (Cooper et al., 2004). In her survey of partners of cybersex addicts via email, Schneider indicateed that 16 respondents (17.6%) reported that their partner's cybersex activities had progressed to live encounters with other people (Schneider, 2000b). One participant in Palandri and

Green's study previously described stated that she "used the web to find like-minded people" for her erotic expressions (Palandri & Green, 2000, p. 634).

The Internet and chatrooms are a place where people appear to enjoy meeting other people and filter relationships for further exploration. College students and young adults, in general, are likely to be dating and are at an age when romantic relationships are central. The Internet is becoming evermore popular for dating behavior among college students. Ross and researchers found that study participants' most frequently reported occupation was college students (17%) (Ross et al., 2005). Carvalheira and Gomes (2003) likewise found that the greatest number of participants (59.3%) were between the ages of 15 – 24 years, with 47% of the sample being students. There is a need for more research about building romantic relationships among this younger age group.

Social Skills

The ability to meet individuals online without having to disclose too much information or to continue a relationship if it becomes uncomfortable are benefits for many who engage in cybersex relationships. Cavalheira and Gomes (2003) reported that cybersex users prefer to use the Internet to meet people in order to compensate for a lack of social skills. They report that 23% and 19.5% of the sample, respectively, totally agreed with each of the following statements: "I can be more open and straightforward than in a face-to-face relationship" and "In a real relationship I get nervous during first dates" (p. 351).

In their study mentioned above, Ross and colleagues found using the Internet to compensate for a lack of social skills was important to their sample. Seventy-two percent of their respondents agreed that "cybersex is easier and less hassle than meeting men in real life," and 67% agreed that "people who engage in cybersex are scared of real intimacy" (Ross et al., 2004, p. 1007). Being able to stay "safe" in one's own home and meet new people seems ideal and a way to make connections even when an individual's social skills may be low, and is a perceived benefit of cybersex.

Preference for Cybersex

In the study by Philaretou and colleagues mentioned above, interviewees reported that some of the advantages of online sexual behavior include being able to engage in sexual activity when their girlfriend is not interested or if the user does not have a girlfriend (Philaretou et al., 2005). Cybersex being available 24 hr a day 7 days a week make it a preferred activity for many individuals, sometimes even leading to preferring it over anything else in their lives (Carvalheira & Gomes, 2003).

In an in-depth study examining a specific type of cybersex behavior, Palandri and Green (2000) did case study reports on two women to better understand the BDSM culture and behavior in online chatrooms. Both participants reported that their introduction to chatrooms initially began with either curiosity or seeking companionship (Palandri & Green). There, participants were introduced to differing graphic and erotic behaviors that on their own they might not consider participating in. Although exposure alone may not have been enough to lead to more extreme behaviors, this pattern is worth exploring. Among these behaviors are the abusive relationships explored in the BDSM

world. With the support and encouragement of others in the chatroom, participants began to find the new behaviors appealing and even preferable to traditional sexual behaviors. One participant reported, "I really want to be a RL slave to someone…I am scared that that will never happen and I want it more than anything in the world. I want to be dominated" (Palandri & Green, p. 635). Additionally, in Greenfield's study mentioned earlier, when participants were asked about their cybersex chatroom behavior, results were significant at the .001 level between the addicted and non-addicted groups. The addicted group members were more likely to seek out certain individuals in chatrooms as they were more involved in and preferred the culture of cybersex (Greenfield, 1999).

These new and encouraged behaviors often play out in both online and offline intimate relationships. In Schneider's email survey of family members of cybersex addicts, one wife reported that her husband accused her of being the weird one for not wanting to participate in risky sexual behaviors, "because there are all those women on the web who are just crazy about it" (Schneider, 2000a, p. 46). Moreover, cybersex does not place participants at risk for sexually-transmitted diseases, and participants reported that cybersex is easy to hide from a spouse because there is no physical evidence of the sexual experience (Schneider, 2000a, 2004). In the 1999 Cooper study mentioned previously, users reported engaging in cybersex when they were distressed as a way to escape from life and depression (Cooper, Scherer et al., 1999). Philaretou and colleagues also reported escape as a reason and a benefit perceived for participating in cybersex. One participant stated that "I don't think there is anything wrong with it as long as you don't get carried away…it's just masturbation" (Philaretou et al., 2005, p. 160). Cybersex

can become the preferred method of sexual expression for some users and is perceived as a benefit to users in that regard.

Fantasies

The Internet is an avenue for individuals to explore and act out their fantasies, doing things online that they would never do in real life. Research has found that participants put on a façade and act out who they wish they could be. In their study mentioned above, Palandri and Green (2000) found that women in the BDSM chatrooms put off a certain persona in order to act out their fantasies. There is girlishness about the façade the women put up to attract the men. This persona consists of "giggling, blushing, soft silken kisses blown from honey melon gloss lips, baskets of hugs and strawberry kisses, shiny ribbons of care" (p. 637) and other girlish behaviors. In real life, these women are very different than their virtual persona. They are level-headed and articulate women. They live out a fantasy in the chatroom with others who share their fantasy goals. One woman with the primary net name of maribel is a 39-year-old teacher who has been chatting for 3 years in a BDSM chatroom. She stated, "I would love to have the guts to be maribel in real life. I really want to be a slave to someone.…I think more of our fantasies should be acted out" (Palandri & Green, p. 635).

Cooper and colleagues in their 2004 MSNBC study reported that 21% of individuals from the sample indicated that they used cybersex for exploring their fantasies. Ten percent of the overall sample (N = 5,925) reported that their primary reason for using the Internet for sex is a desire to engage in sexual activities they would not perform in real life (Cooper et al., 2004). In their study of Portuguese chatrooms,

Carvalheira and Gomes (2003) found that over half of the participants (55.5%) totally agreed with the statement "fantasy is what rules an online relationship," and 35% totally agreed that "it is exciting to share fantasies online" (Carvalheira & Gomes, p. 351). Schneider reported that one of the spouses of a cybersex addict stated that her husband was able to explore his fantasy of anal sex online. Finding that behavior approved of in cyberspace, he came to view his wife as the "weird one" for not wanting to engage in the behavior (Schneider, 2000b). The ability to act out deviant or risky sexual behaviors is a benefit perceived by cybersex participants. Anonymously exploring traditionally unacceptable behavior appears safer than doing so in real life.

Sex by Phone

Other sexual behaviors tend to accompany cybersexual activities. In their previously mentioned study of Latino MISM, Ross and colleagues (2004) reported that participants preferred to participate in phone sex prior to meeting their partners in person. The results indicated two groups of MISM. The first preferred the anonymity and safety of cybersex, while the other preferred to use cybersex as a way to meet men in real life. Phone sex appeared to be a desired step between cybersex and a real-life meeting for men in the latter group. Greenfield's study on Internet addiction also reported that 18% of the non-addicted group members engaged in phone contact with their online partner, whereas 50% of the addicted group did the same (Greenfield, 1999).

In an email survey to partners of cybersex addicts, 30.9% of the surveys reported that cybersex activities were a continuation of other compulsive sexual behaviors that

existed prior to Internet involvement. Other behaviors included phone sex, voyeurism, frequenting prostitutes, going to massage parlors, and involvement in traditional pornography (e.g., magazines, videos, and movies), often since teen years (Schneider, 2000b). Carvalheira and Gomes likewise reported that phone sex sometimes accompanies cybersexual behavior. They found that 17% of participants totally agreed with the following two statements: "I prefer sex over the phone to cybersex," and "Sex by phone arouses me" (Carvalheira & Gomes, 2003). In an online survey of university students, researchers indicated that 87% of students polled reported having virtual sex mainly using Instant Messenger, webcam, and the telephone (CampusKiss & Tell, 2006). Participating in sex over the phone is a behavior that at times accompanies cybersex use and is perceived as a step towards meeting a real life partner.

Impact on Real Relationships

It is important to consider what impact cybersex use has on the users' real life relationships. Individuals can go online to find relationships, improve their relationships, or to undermine their relationships. Some individuals may even find the optimal real life partner online (Cooper, 1998). Cooper and others in the 2004 MSNBC study found that 31% of participants reported increased offline sexual activity after they began engaging in online sexual activity. This may or may not be a positive result as the increase of sexual behavior is not always helpful, depending on the previous level of sexual behavior (Cooper et al., 2004). Internet usage can enrich real life relationships in several ways. Individuals can use email to send affirming or erotic messages, which may stoke sexual

interest early in the day. People in long term relationships can search the Internet for suggestions on sexual enrichment, or get ideas in chatrooms (Cooper, 1998).

Conversely, other studies indicate the potential consequences of engaging in online sex include a negative affect on family members and the individual's ability to seek and maintain offline intimate relationships. Cooper reported that individuals can spend so much time in an online relationship that offline relationships atrophy without the time and attention needed to develop or maintain them. The offline relationship then suffers and often terminates (Cooper, 1998). Moreover, in Greenfield's study on Internet addiction, 14% of those in the non-addicted group reported participating in an online affair whereas 42% of addicted group members reported the same behavior (Greenfield, 1999).

In the email interview study of cybersex addicts, Schneider reported that one participant stated he had "turned off [his] emotions" and "was unavailable to [his] family" (Schneider, 2000b, p. 260). Another participant lamented, "If I had spent the time and energy on my marriage instead of online, we would have grown together rather than apart" (Schneider, 2000b, p. 262). These problems were noted when the participant was a compulsive, not a casual cybersex user. There is little evidence that problems with offline relationships occur with casual use. A pattern of obsession with cybersex often leads to problems with intimacy and other psychological problems (Cooper et al., 2004; Freeman-Longo, 2000). Family members, in particular, tend to suffer when one they love is a compulsive cybersex user. Schneider reported on individuals in committed relationships with a cybersex addict. In an email interview of 94 individuals (91 women) with a mean

age was 38.0, ± 7.9 years, participants were asked standard questions. Participants reported feeling devastation, betrayal, loss of self-esteem, mistrust, fear, and lack of intimacy with their real-life partner. Others reported feeling sexually inadequate, unattractive, and ugly. The behaviors led to separation or divorce among 22.3% of the sample; two participants became physically abusive to their husbands, and two reported hospitalization for suicidality (Schndeider, 2000a). There appears to be a relationship between online sexual behavior and real life relationships; however, the direction of the relationship is not clear, nor is the level of impact with varying degrees of cybersex involvement.

Conclusion

The Internet is becoming an increasingly popular way of accessing erotic sexual material and a venue for participating in online sexual fantasies. Cybersex users' characteristics spread across genders, ages, marital status, and sexual orientation. Based on current research, women, homosexual, and bisexual individuals are found to be overrepresented in compulsive cybersex groups, and married participants are less likely to report becoming engaged in cybersex activity (Cooper et al., 2004). More men are involved in sexual activities online than women (Cooper et al.; Ferree, 2003).

There are many perceived benefits the research has identified. These include being able to wear masks to hide one's true self online, the "Triple-A Engine" is a major contributor to this phenomenon; using the Internet as a filter for a later real-life date; compensating for a lack of social skills or opportunity for real life romance; cybersex being preferred over other types of sexual expression, not being exposed to STIs is an

important contributor; and having a safe place to act out one's fantasies (Cooper et al., 2000, 2004; Schneider, 2000a). Even though most individuals' cybersex behavior is not pathological, some become compulsive users which can place them on a downward slope to addiction. Those who have become compulsive users of cybersex wish to decrease the frequency of the behavior, but reportedly cannot (Philaretou et al., 2005). Moreover, research reports that cybersex has both a positive and negative influence on off-line real relationships. Some users reported no negative affect, and a significant minority reported severe damage to their relationships with family and friends (Schneider, 2000b, 2004).

College students are more likely than other occupations to report compulsive cybersex involvement (Cooper et al., 2000). Increasingly, youth are participating in cybersex and many underage teens have been exposed to unwanted online sexual solicitations via e-mail or in chatrooms (Freeman-Longo, 2000; University of New Hampshire, 2000). Further research is needed on the perceived benefits of college students' cybersex behavior. A better understanding of that age group will assist in educating youth and in implementing better education in schools and communities.

Summary

In summary, studying the perceived benefits, compulsive behavior, and impact on relationships are important to understanding college students' cybersexual behavior. It was hypothesized that researchers would find: (a) more use occurring in younger students, more men using cybersex than women, more cybersex use among those not in committed relationships, both heterosexual and homosexual individuals using cybersex,

and fewer Latter-day Saint (LDS) participants using cybersex; these demographics will also find interesting things when analyzed with compulsive behavior and perceived benefits; (b) perceived benefits are positively correlated with compulsive behavior; (c) a predictive relationship between perceived benefits and time spent online among college students; (d) a predictive relationship between the amount of time spent online and compulsive cybersex behavior; (e) a positively correlated relationship among types of perceived benefits for engaging in cybersex among college students; (f) sex by phone behaviors, time spent online for sexual purposes, compulsive behavior, and cybersex perceived benefits are correlated positively among college students; and (g) a predictive relationship between the impact that cybersex has on: relationships, time spent online for cybersex, compulsive behavior, and cybersex perceived benefits.

CHAPTER III

METHODOLOGY

The purpose of this study was to investigate the relationship that perceived benefits, compulsive cybersex behaviors, and time online have to college students' cybersex behavior. This chapter will discuss the research (a) design, (b) sample, (c) instrument for data collection, (d) data collection procedures, and (e) how the data were analyzed to understand these relationships.

Design

This study used a cross-sectional, volunteer, single group design that included correlation, regression, and descriptive statistical analysis to measure and compare the relationships among: perceived benefits, time spent online, and compulsive use of cybersex among college students. Data collected are quantitative as obtained from an online survey. Previous research on cybersex followed a similar design; therefore, results are comparable to prior studies.

Sample

The sample consisted of graduate and undergraduate students attending Utah State University (USU) in Logan, Utah, during the spring semester of 2007. The rationale behind this sample selection comes from previous research that identifies college students as potentially "high risk" for participating in compulsive cybersex behaviors (Cooper et al., 2004). Students at Utah State consist primarily of Caucasian men and women, the

majority of which are members of The Church of Jesus Christ of Latter-day Saints (Mormons). Of the 2,550,000 residents in Utah, 1,790,000 (70.18%) of them are Mormon (LDS Newsroom, 2008; Utah Census data, 2006). Utah is a conservative state and cybersex is not culturally accepted; due in part to the teachings of the LDS church that pornography is to be avoided (LDS Church, 2008). This being said, rates of cybersex-related queries in Utah are among the highest in the nation, with Salt Lake City being first in the nation for Google searches on pornography (Reavy, 2006). This study aims to extend the research in this area to better understand the use and perceived benefits of cybersex in this region, especially among college students. Understanding student cybersex use in a conservative region may benefit the research literature.

For the correlational analysis a power set at .80, alpha set at .05, and an effect size of .3 indicated that a sample size of 36 participates was sufficient to determine the presence of a difference in the data. However, for the multiple regression analysis, a sample of 100 was needed to obtain a power of .80, when alpha is set at .05, and the effect size is .1. To ensure that there were enough participants for statistical power, 200 participants was the minimum sample size required for this study.

A total of 270 surveys were submitted from participants; of which, 262 surveys were complete and used in the analysis. Three surveys were identified as duplicates and were therefore deleted. Duplication occurred because participants submitted the survey multiple times, a fact identified by comparing timestamps and similarities in the responses. Five surveys were omitted because they contained no data. Twenty surveys had data missing for one or two questions (e.g., gender, or religion was left blank) and

were retained for the analysis. Despite some limitations inherent to online surveys, such as inaccurate or dishonest reporting, presenting the survey online provided anonymity and reduced social desirability bias reporting.

Of the 262 participants, 123 were female; 134 male and 5 did not answer. Table 1 presents the demographic information for this study's participants. Age distribution was positively skewed with most participants in the 21 to 24-year-old category. Participants were required to be at least 18 years old to participate. Ages of participants were typical for a college population. There were 71 students (27.0%) ages 18-20 years, 114 students (43.5%) ages 21-24 years, 49 students (18.7%) ages 25-29 years, and 25 students (9.4%) 30 years and over. Three students did not respond to this question.

The majority of participants were LDS (*n*=207, 79%), followed by "Other", a free-response field that included responses of Jainism, Agnostic, and Atheist (*n*=36, 13.7%), next was Catholic (*n*=8, 3.1%), then Protestant (*n*=3, 1.1%) and Muslim (*n*=1, 0.38%), seven participants (2.6%) did not answer. This sample is predominantly LDS, and the views of most of the participants were likely influenced by this religion as well as the surrounding culture. Although this demographic is not homogeneous, it is important to note that the LDS faith plays a large role in the reporting of this study.

Participant committed relationship status is also presented in Table 1. The committed relationship status of participants was as follows: 90 students (34.3%) were married, three students (1.1%) reported cohabitating, 77 students (29.4%) were single and not dating anyone, 78 students (29.8%) were single and dating someone, four students (1.5%) were separated or divorced and not dating anyone, six participants (2.3%)

identified their relationship status as "other," and four participants (1.5%) did not answer this question. Sexual orientation distribution was as expected with the overwhelming majority (*n*=236, 90%) of participants identified themselves as heterosexual, 11 participants (4.2%) identified as homosexual, five students (1.9%) as bisexual, three (1.1%) as other, and seven (2.6%) did not answer.

Participants' majors in school included a wide sample from Utah State's colleges. Computer science and engineering majors were the most frequently reported with 61 students (23.3%), next was Health, Physical Education and Recreation (HPER) with 50 students (19.1%), then Education with 33 students (12.6%), Psychology with 31 students (11.8%), Science and Mathematics had 25 students (9.5%), International Studies, Political Science, and Sociology had 15 students (5.7%), Business majors had 14 students (5.3%), and 14 students (5.3%) reported other majors. Nineteen participants (7.3%) did not answer this question. Some majors, including Computer Science, Psychology, HPER, and Engineering, were more heavily recruited through class announcements and mass emails than were other majors, such as International Studies, Science, and Business.

This sample of college students spent large amounts of time online on a regular basis. Table 2 reports the frequency of time spent online overall, as well as time spent online for cybersexual activities. In this variable: 36 students (13.7%) spent less than 2 hr a week online for any purpose, 54 students (20.6%) spent 2 – 4 hr per week, 39 students (14.9%) spent 5 – 6 hr a week online, 73 students (27.9%) spent 1 – 2 hr a day online, 56 students (21.4%) spent more than 2 hr a day online, and 4 students (1.5%) did not answer this question.

Table 1

Frequency of Participants' Demographic Characteristics (N=262)

Demographics	Group	No.	%	Demographics	Group	No.	%
Age	18-20	71	27.0	Religion	LDS	207	79.0
	21-24	114	43.5		Other	36	13.7
	25-29	49	18.7		Catholic	8	3.1
	30 +	25	9.4		Protestant	3	1.1
	Not answered	3	.1		Muslim	1	.4
					Not Answered	7	2.6
Relationship Status	Married	90	34.4	Major	Computer Science and Engineering	61	23.3
	Cohabitating	3	1.1		Health, Physical Education, and Recreation	50	19.1
	Single – not dating	77	29.4		Education	33	12.6
	Single – dating	78	29.8		Psychology	31	11.8
	Separated – not dating	4	1.5		Science and Mathematics	25	9.5
	Other	6	2.3		International Studies, Political Science, and Sociology	15	5.7
	Not answered	4	1.5		Business	14	5.3
Sexual Orientation	Heterosexual	236	90		Other	14	5.3
	Homosexual	11	4.2		Not Answered	19	7.3
	Bisexual	5	1.9				
	Other	3	1.1				
	Not answered	7	2.6				

Note. Percents not equal to 100 due to rounding

Fewer students spent time online for cybersex than they did overall. The vast majority of students reported spending no time at all in cybersex (*n* = 201, 76.7%), 37 students (14.1%) reported participating in cybersex between one and 2 hr a month, three students (1.1%) reported spending 3 – 6 hr a month in cybersex, six students (2.3%) reported 1 – 2 hr a week, four students (1.5%) reported participating 3 – 5 hr a week, three students (1.1%) reported participating in cybersex 6 – 8 hr a week, another three students (1.1%) participated 1 – 2 hr a day, and two students (.8%) spent more than 2 hr a day in cybersex. Three students (1.1%) did not answer this question. The majority of cybersex users in this sample would be considered "casual" users as most reported participating 1 – 2 hr a month. Only five participants reported a frequency of cybersex use that would be considered compulsive or problematic; that is, participating 11 or more hr a week (Cooper et al., 2004). Whereas 10 participants (3.8%) scored high enough in their SCS scores (24 or over) to be considered sexually compulsive (Comp Care, 1987).

The participants of this study reported participating in a variety of online sexual activities. Table 3 reports the types and frequency of these activities, which are not mutually exclusive. A total of 8 students (3.1%) reported participating in sexual chatrooms, 6 of them (2.3%) spent 1 – 2 hr a month in sexual chatrooms, 1 (.4%) spent 1 – 2 hr a week, and 1 (.4%) spent more than 2 hr a day in sexual chatrooms and three did not answer. Overall, 8 students (3.1%) reported using a web camera for sexual purposes, of these 5 (1.9%) spent 1 – 2 hr a month using a web camera, 2 (.8%) spent 3 – 6 hr a month, 1 (.4%) spent 1 – 2 hr a week, and 3 did not answer.

Table 2

Frequency of Time Spent Online Overall and for Cybersex (N=262)

Time Online	Group	No.	%
Overall Time Online	< 2 hr/week	36	13.7
	2-4 hr/week	54	20.6
	5-6 hr/week	39	14.9
	1-2 hr/day	73	27.9
	> 2 hr/day	56	21.4
	Not answered	4	1.5
Time in Cybersex	None	201	76.7
	1-2 hr/month	37	14.1
	3-6 hr/month	3	1.1
	1-2 hr/week	6	2.3
	3-5 hr/week	4	1.5
	6-8 hr/week	3	1.1
	1-2 hr/day	3	1.1
	> 2 hr/day	2	.8
	Not answered	3	1.1

A total of 53 students (20.3%) reported viewing or purchasing sexual images online; of these 34 (13.0%) participated 1 – 2 hr a month, 6 (2.3%) participated 3 – 6 hr a month, 4 (1.5%) spent 1 – 2 hr a week in viewing sexual images, 2 (.8%) spent 3 – 5 hr a week, two (.8%) spent 6 – 8 hr a week, 3 (1.1%) spent 1 – 2 hr a day, 2 (.8%) spent more than 2 hr a day purchasing or viewing sexual images, and 3 students (1.1%) did not answer. A total of 43 students (16.4%) reported using an online bulletin board for sexual purposes, of these 26 (9.9%) participated 1 – 2 hr a month, 4 (1.5%) used it for 3 – 6 hr a month, 6 (2.3%) participated 1 – 2 hr a week, 4 students (1.5%) participated 3 – 5 hr a week, 1 (.4%) student participated 6 – 8 hr a week, 2 (.8%) students participated 1 – 2 hr a day, and 4 students (1.5%) did not answer.

The data for time spent in email and instant messenger for sexual purposes drastically disagree with the overall amount of time spent in cybersex reported earlier. They are reported here, but with caution, as it is likely that some students misread the questions, and instead of reporting the amount of time they spend in email and instant messenger for sexual purposes, they reported the total time they spend in these activities for any reason. A total of 147 students (56.2%) reported participating in e-mail for sexual purposes. Note that only 58 students (22%) reported spending any time online in cybersexual activities. Of these 147 students, 38 (14.5%) reported spending 1 – 2 hr a month in sexual emails, 27 students (10.3%) participated 3 – 6 hr a month, 34 students (13.0%) spent 1 – 2 hr a week, 18 students (6.9%) spent 3 – 5 hr a week, 16 (6.1%) students participated 6 – 8 hr a week, 12 students (4.6%) reported spending 1 – 2 hr a day in sexual email, 2 students (.8%) reported spending more than 2 hr a day, and 3 students

(1.1%) did not answer. A total of 88 students (33.6%) reported using instant messenger for sexual purposes. Of these, 43 students (16.4%) reported participating 1 – 2 hr a month, 6 students (2.3%) spent 3 – 6 hr a month, 17 students (6.5%) spent 1 – 2 hr a week, 11 students (4.2%) reported spending 6 – 8 hr a week, 5 students (1.9%) reported spending 1 – 2 hr a day in instant messenger for sexual purposes, 2 students (.8%) spent more than 2 hr a day, and 3 students (1.1%) did not answer.

Instrumentation

The instrument consisted of four survey modules, and nine demographic items. Permission to use all instruments was obtained from the authors (see Appendix A). The first was a scale developed by Carvalheira and Gomes (2003) to measure the behaviors and attitudes of individuals participating in chatrooms, and this scale will be referred to as the Sexual Behavior Scale (SBS) (see Appendix B). In developing the scale, the authors considered (a) clinical cases of Internet-addictive behavior, (b) literature on cybersex, and (c) non-structured interviews by the authors of participants in predominantly sexual chatrooms. Based on their initial information, the authors found seven themes within the data: (a) using masks, one of the main characteristics of online interactions is the use of "masks" or of being someone online that they are not offline; (b) filter for a later date, the use of chatrooms to set up later dates with people met online is a common element of cybersex; (c) social skills, participants can stay in their comfort zone meeting people online, the online relationships compensate for those who have a lack of

Table 3

Time Spent Engaging in Cybersex Activities (N=262)

Cybersex Activity	Group	No.	%	Cybersex Activity	Group	No.	%
Sexual Chatrooms	None	251	95.8	Web Camera	None	251	95.8
	1-2 hr/month	6	2.3		1-2 hr/month	5	1.9
	1-2 hr/week	1	.4		3-6 hr/month	2	.8
	> 2 hr/day	1	.4		1-2 hr/week	1	.4
	Not answered	3	1.1		Not answered	3	1.1
Purchasing or Viewing sexual images	None	206	78.6	Bulletin Board	None	215	82.1
	1-2 hr/month	34	13.0		1-2 hr/month	26	9.9
	3-6 hr/month	6	2.3		3-6 hr/month	4	1.5
	1-2 hr/week	4	1.5		1-2 hr/week	6	2.3
	3-5 hr/week	2	.8		3-5 hr/week	4	1.5
	6-8 hr/week	2	.8		6-8 hr/week	1	.4
	1-2 hr/day	3	1.1		1-2 hr/day	2	.8
	> 2 hr/day	2	.8		> 2 hr/day	0	0
	Not answered	3	1.1		Not answered	4	1.5
E-mail	None	112	42.7	Instant Messenger	None	171	65.3
	1-2 hr/month	38	14.5		1-2 hr/month	43	16.4
	3-6 hr/month	27	10.3		3-6 hr/month	6	2.3
	1-2 hr/week	34	13.0		1-2 hr/week	17	6.5
	3-5 hr/week	18	6.9		3-5 hr/week	4	1.5
	6-8 hr/week	16	6.1		6-8 hr/week	11	4.2
	1-2 hr/day	12	4.6		1-2 hr/day	5	1.9
	> 2 hr/day	2	.8		> 2 hr/day	2	.8
	Not answered	3	1.1		Not answered	3	1.1

social skills; (d) preference for cybersex (cybersex addiction), individuals spend so much time online they no longer have time for other things, and individuals prefer cybersex to any other type of sexual expression; (e) fantasies, fantasies – an imaginary world -- frequently play a central role in cybersex; (f) sex by phone, phone sex plays an significant role in the development of cyber and real relationships; and (g) impact on real relationships, cybersex involvement has positive and negative effects on offline relationships.

Using these identified areas, the authors created a 58 item-questionnaire. In order to establish content validity, a panel of experts first reviewed the scale. The scale was then shown to Portuguese chatroom cybersex participants, after which 10 items were dropped. After assessing internal consistency, five more items were dropped which increased overall homogeneity and reliability of the now 43-item questionnaire. The SBS is a Likert-type scale wherein participants rank how much they agree with a statement: (1) Totally Disagree" to (5) "Totally Agree." The higher the score, the more the participants agree with the benefits of cybersex in their life. This means that those with a lower score do not approve of cybersex participation and do not view it as a positive contribution in their life. Items on each of the seven subscales are summed to obtain that subscale's score. The SBS obtained a Cronbach's alpha of .94. See Table 4 for subscales ratings and their levels of internal consistency (Carvalheira & Gomes, 2003). For the purpose of this study, two questions were added back into the SBS. First, "I enjoy viewing online porn" was returned in order to measure participants' use of the World Wide Web for cyberseuxal experiences, and was number 44 on the survey. Second, "My

online sexual relationships are harmful to my real relationship" was returned to clarify the "impact on real relationships" section, and was number 45 on the survey (Carvalheira & Gomes, p.359).

For the current study, a Cronbach's alpha was conducted the SBS obtained an alpha of .95 overall. Table 5 reports the individual subscale ratings and their level of internal consistency for the current study. Note that the impact on real relationships subscale was not used in this study, so the low alpha does not affect the current data.

The second scale is the Sexual Compulsivity Scale (SCS) developed by Seth Kalichman (see Appendix C). This eight-item questionnaire assesses an individual's level of sexual compulsive behavior. The current scale was developed by examining the self-help guide for persons with sexual addictions (Comp Care, 1987).

Table 4

SBS Internal Consistency

Domain	Cronbach's alpha
Masks	.74
Filter for a later date	.79
Social skills	.90
Preference for cybersex	.90
Fantasies	.68
Sex by phone	.74
Impact on real relationships	.75
All items	.94

Carvalheira & Gomes, 2003, p. 356

Researchers then conducted interviews with a group of five culturally diverse gay men to refine item terminology and develop sexually related items. Finally, a pilot test was administered to eight gay men, three heterosexual men, and five women for feedback on clarity of the questionnaire. This questionnaire is measured on a four-item scale from "Not At All Like Me" (1) to "Very Much Like Me" (4). Item scores are summed to obtain a scale score with a possible high of 40, meaning a very high level of sexual compulsivity. The lower the overall score, the lower the sexual compulsion. Internal consistency was determined by a Cronbach's alpha of .89. To measure the temporal stability of the scale, a test-retest measure was conducted that measured at .95 for the SCS (Kalichman et al., 1994). For the present study internal consistency was determined by a Cronbach's alpha of .92.

Table 5

SBS Internal Consistency for Current Study

Domain	Cronbach's alpha
Masks	.78
Filter for a later date	.87
Social skills	.90
Preference for cybersex	.80
Fantasies	.82
Sex by phone	.77
Impact on real relationships	.60
All items	.95

The third scale used was the Quality of Relationships Inventory (QRI). Its purpose was used to determine the quality of participant's relationships (see Appendix D). This scale was developed to assess three dimensions of relationships. The first was the perceived availability of social support from specific relationships (i.e., "To what extent can you turn to this person for advice." Second, the extent to which the relationship is perceived as being positive, important and secure (depth); and third, the extent to which the relationship is a source of conflict and ambivalence. Thirty-nine questions were generated. After reviewing the questions from initial testing, ten questions were removed. Twenty-five items for each of the three scales were finally kept that loaded strongly on one factor with minimal overlap. Alpha coefficients for the Support, Depth and Conflict, scales for best friend were (.85, .84, .91, respectively), and for significant other were (.85, .88, .86, respectively) (Pierce et al., 1991). The QRI has questionnaires for father and mother as well as the two listed above. As this study only asked participants about their relationships with their best friend and their significant other, only the psychometric validity of those two are reported here. Questions are measured on a four point scale indicating the level of agreement from "Not At All" to "Very Much." For the purposes of this study, the conflict section is reverse scored so that a lower score indicates a stronger and more supportive relationship, thus clasping the three categories mentioned above into one. This method of scoring allowed for one number to represent the relationship quality for each participant, instead of the three scores indicated above. In the present study internal consistency was determined by a

Cronbach's alpha of .99 for the significant other scale, and an alpha of .92 for the best friend scale.

This was essential in order to access whether time spent in cybersexual behavior either positively or negatively influenced the quality of an individual's relationships. If an individual spent large amounts of time perusing online sexual gratification and scored low on relationship quality, it could support the hypothesis that time online is negatively associated with close relationships. However, it would also bring up questions of whether participants' relationships were already poor which led the individual to spend more time online. If both the relationship quality score and cybersexual use are high, then it brings into question the impact of time spent in cybersex use on relationships.

Additionally, demographics including age, gender, committed relationship status, total time spent online, time spent online for sexual purposes, religious affiliation, major, and sexual orientation were gathered (see Appendix E).

Procedures

After receiving approval of USU's Institutional Review Board (IRB), data collection commenced on USU campus on February 26, 2007 and continued until March 24, 2007. Participants were recruited from large classes and several majors at USU. Upon obtaining permission from the instructors, announcements inviting students to participate in the study were made by the teacher in large undergraduate classes, including: Psychology 1010, Biology 4210, Sociology 1010, HEP 2000, and HEP 2500 (see Appendix F). Some instructors sent the announcement about the study in the form of

an email to their students. Additionally, signs were posted on campus describing the survey. The departments of Health, Physical Education and Recreation (HPER); Irrigation Engineering; Electrical and Computer Engineering; Mathematics; Computer Science; Physics; Business; and Psychology provided emails to their students with the survey announcement inviting students to participate.

Participation was voluntary, and study participants were given the option of being entered into a drawing for 10 compensatory prizes, which included: $100.00 cash; an MP3 player; two 1GB USB thumb drives; and $20.00 gift cards to Old Navy, Borders, and the USU Bookstore. These incentives were offered in order to encourage student participation. After completion of data collection, 10 names were drawn randomly. Participants were contacted via email with a code, and given the option to pick up their prize in the HPER main office, or have it mailed to them. To ensure anonymity, students presented their code to the secretaries in the HPER main office; where the prize with the matching code was awarded. All of the students picked up their prizes in the HPER main office.

Informed consent was obtained by having participants read a Letter of Information prior to beginning the survey. In the Letter of Information, it was made clear that participation was voluntary and that participants may withdraw at any time (see Appendix G). Risks to participants were deemed minimal because the survey was self-report and anonymous, and IRB approval was obtained (see Appendix H). Because the questionnaires ask about sexual behavior, there was the risk that participants may have felt uncomfortable or experienced psychological distress. In order to protect participants:

(a) the survey guaranteed that no information would link the survey to the participant, (b) researchers did not collect any personal identifying information, (c) the anonymous surveys are stored in a secure file on the researcher's computer, (d) surveys will stay in the secure file for 3 years after the study is completed for reference purposes, and (e) after 3 years survey results will be destroyed.

The survey was conducted online and was available to be taken at the students' leisure. The survey took approximately 20 min for participants to complete. Upon completion, or early termination of the survey, students were given the option of entering into the prize drawing. If they chose to do so, they were prompted to enter their USU email address then thanked for their participation. There was no association between the survey results and the email addresses.

Data Analysis

The research questions introduced in Chapter I were answered through data analysis procedures. Most of the data collected in this study are continuous. Demographic data are ordinal and categorical. Regression and correlation analyses were calculated for the questions below, as indicated in Table 6.

Question Number One

What is the relationship between: characteristics of cybersex users, perceived benefits, and compulsive behaviors of cybersex among college students? To measure this, two separate multiple linear regression analyses were calculated. First, the demographic information (age, gender, religious affiliation, committed relationship status, sexual

orientation) were regressed on the each of the five perceived benefits subscale (SBS), and the second analysis regressed the same demographic information on Kilchman's SCS.

Question Number Two

Question number two is: to what degree are the perceived benefits for engaging in cybersex associated with compulsive sexual behavior among college students? To measure this, a correlation analysis was conducted. The overall SBS score as well as each of the five perceived benefit SBS subscales: masks, filter for a later date, social skills, preference for cybersex, and fantasies were correlated with the SCS.

Question Number Three

What is the relationship between perceived benefits and time spent online among college students? To measure this, one linear multiple regression analysis was conducted. The total amount of time spent was regressed on the five perceived benefits SBS subscales: masks, filter for a later date, social skills, preference for cybersex, and fantasies.

Question Number Four

To what degree is the amount of time spent online related to compulsive cybersex behavior among college students? To measure this, one linear regression analysis was conducted. Sexually Compulsive Scale scores were regressed on total time spent online, and time spent in cybersex.

Question Number Five

What is the relationship among types of perceived benefits for engaging in cybersex among college students? To measure this, a correlation analysis was conducted. The five perceived benefit SBS subscales: masks, filter for a later date, social skills, preference for cybersex, and fantasies; were correlated with each of the other.

Question Number Six

To what degree are sex by phone behaviors, time spent online for sexual purposes, compulsive behavior, and cybersex perceived benefits related among college students? To measure this, a correlation matrix analysis was conducted. The sex by phone subscale, the amount of time spent online both for cybersex and overall, SCS scores, and five of the SBS subscales: the results highlighted by masks, filter for a later date, social skills, preference for cybersex, and fantasies; were all correlated with one another.

Question Number Seven

What are the relationships among: offline relationships, time spent online for cybersex, compulsive behavior, and cybersex perceived benefits among college students? To measure this, two multiple regression analyses were conducted. Two QRI subscales were regressed on: time spent online for cybersex, SCS scores, and five of the SBS subscales.

Table 6

Data Analysis by Research Question, Survey Subscales, and Statistical Analysis

Research Questions	Subscales	Statistical Analysis
1. What is the relationship between: characteristics of cybersex users, perceived benefits, and compulsive behaviors of cybersex among college students?	Marital status, gender, sexual orientation, and age regressed on 1) 5 SBS subscales (masks, filter for a later date, social skills, preference for cybersex, and fantasies) and 2) regressed on SCS.	Seven separate multiple regression analyses
2. To what degree are the perceived benefits for engaging in cybersex associated with compulsive sexual behavior among college students?	5 SBS subscales (masks, filter for a later date, social skills, preference for cybersex, and fantasies) correlated with SCS	Correlation analysis
3. What is the relationship between perceived benefits and time spent online among college students?	5 SBS subscales (masks, filter for a later date, social skills, preference for cybersex, and fantasies) used to predict time spent online items	One linear multiple regression analysis
4. To what degree is the amount of time spent online related to compulsive cybersex behavior among college students?	Time spent online items related to SCS	One linear regression analysis

5. What is the relationship among types of perceived benefits for engaging in cybersex among college students?	5 SBS subscales (masks, filter for a later date, social skills, preference for cybersex, and fantasies) correlated with each other.	Correlation analysis
6. To what degree are: sex by phone behaviors, time spent online for sexual purposes, compulsive behavior, and cybersex perceived benefits related among college students?	Sex by phone subscale, related to time spent online for cybersex item, SCS, and 5 SBS subscales (masks, filter for a later date, social skills, preference for cybersex, and fantasies).	Correlation analysis for 4 variables
7. What are the relationships among: offline relationships, time spent online for cybersex, compulsive behavior, and cybersex perceived benefits among college students?	Two QRI subscales regressed on time spent online items, SCS, and the 5 SBS subscales (masks, filter for a later date, social skills, preference for cybersex, and fantasies).	Two multiple linear regression analyses

Summary

This study examined the relationships between perceived benefits for participating in cybersex among college students and compulsive behavior, time spent online and impact on relationships. The chapter provided the overview for the proposed study's methodology and analysis. Chapter IV presents the results found in the analyses for this study.

CHAPTER IV

RESULTS

An online study was administered in order to determine the prevalence of and attitudes about cybersex use among undergraduate and graduate students attending Utah State University Spring Semester 2007. This chapter discusses the results of the seven research questions posed in Chapter III. The student researcher used SPSS 14.0 software in all of the analyses. The results are presented below.

Question Number One

What is the relationship between characteristics of cybersex users and the perceived benefits and compulsive behaviors of cybersex among college students? To answer this question, I conducted seven multilinear regression formulas. The first regressed the level of prediction of the five demographic characteristics (age, gender, religious affiliation, committed relationship status, and sexual orientation) on the overall score of the five perceived benefits Sexual Behavior Scale (SBS) scales. The second through sixth formulas regressed the level of prediction of the five demographic characteristics on each of the individual five perceived benefits SBS subscales. The demographic characteristics were the independent variable and SBS subscales the dependent variables.

For the purpose of this analysis religion categories were divided into LDS and non-LDS. Committed relationship status was categorized as committed and non-committed relationships. Participants who identified themselves as: married,

cohabitating, and single – dating someone were placed in the committed relationships category. Those who reported being separated/divorced – not dating anyone, and single – not dating anyone were placed in the non-committed relationship category. Sexual orientation was also categorized into two groups: (a) heterosexual and (b) homosexual, bisexual, and other.

Table 7 displays the results of the first analyses. Statistical analysis using multiple regression indicated that religion, gender, age, and committed relationship status were predictive of perceiving more overall benefits for engaging in cybersexual behavior, $F(3,258) = 25.79$, $p < .001$, $f^2 = .32$, adjusted $R^2 = .24$.

Men perceived significantly more benefits than did women for cybersex participation, $B = -10.46$, $SE = 2.79$, $t = -3.75$, $p < .001$. Figure 1 graphically reports the gender difference in the perceived benefits; men had higher scores for benefits perceived than did women. The non-LDS religious group perceived a statistically significant higher level of benefits than did the LDS group, $B = 18.44$, $SE = 3.45$, $t = 5.35$, $p < .001$. Older participants perceived significantly more benefits than did younger participants, $B = 5.95$, $SE = 1.58$, $t = 3.76$, $p < .001$. Figure 2 illustrates graphically the distribution of perceived benefits by age. Note that perceived benefits scores are higher among older participants. Those not in committed relationships perceived a statistically significant higher level of benefits than those in committed relationships, $B = 4.95$, $SE = 2.51$, $t = .1.97$, $p = .05$. Thus, non-LDS, college men in their thirties who are not in a committed relationship perceive more benefits than LDS college women in their twenties who are in a committed relationship. The effect size was large ($f^2 = .32$), so the practical difference is notable and

Table 7

Coefficients with SBS as Dependent Variable

Variables	*B*	*SE*	Beta	*t*	*p* value
Religion	18.44	3.45	.3	5.35	.001~
Gender	-10.46	2.79	-.22	-3.75	.001~
Age	5.95	1.58	.23	3.76	.001~
Committed Relationship	4.95	2.51	.11	1.97	.05*

$F(3,258) = 25.79$, $p < .001$, adjusted $R^2 = .24$; $f^2 = .32$; *p value ≤ .05, ~p value ≤ .001

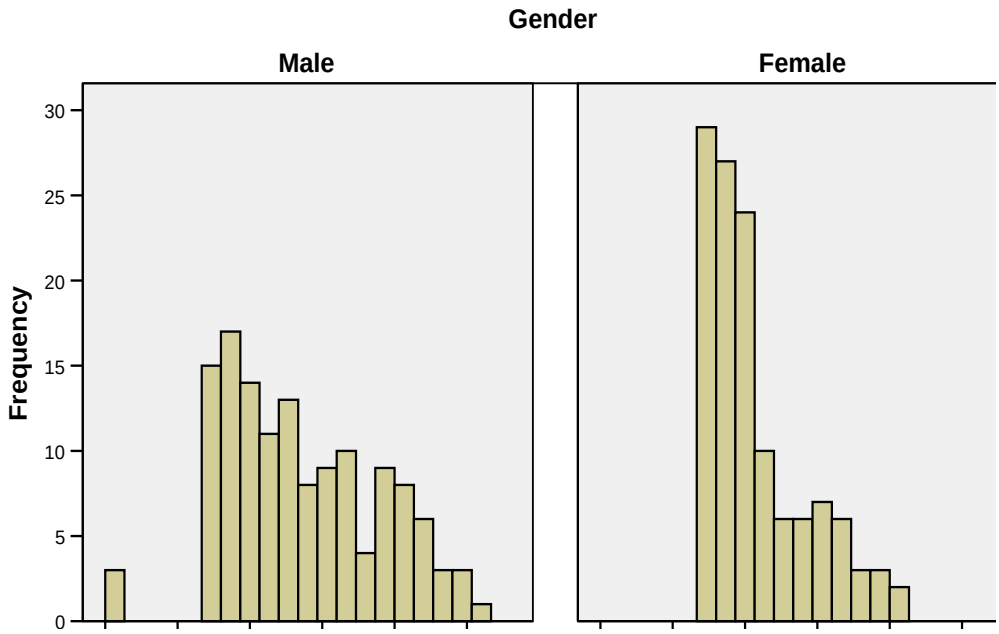

Figure 1. Perceived benefit scores by gender $N = 262$; 123 female; 134 male. Mean of perceived benefit = 60.56 ± 23.85.

worth further exploration. Using a Forward method of statistical analysis in SPSS for multiple regression, nonsignificant variables were excluded from the model and are not reported in the table below. This is why sexual orientation is not reported.

The second analysis regressed the five demographic characteristics listed above on the fantasies SBS subscale. Table 8 displays the results of this second analysis. Age, gender, and religion were statistically significant predictors for perceiving fantasies as a benefit of cybersex; non-LDS men who are in their late twenties and thirties see being able to act out fantasies as a benefit of cybersex $F(5,242) = 17.83$, $p < .001$, $f^2 = .33$, adjusted $R^2 = .25$. Age was predictive of older (late twenties and into thirties) participants seeing fantasies as a benefit, $B = .56$, $SE = .21$, $t = 2.70$, $p = .007$. Men perceived more benefit in fantasies than did women, $B = -1.25$, $SE = .36$, $t = -3.46$, $p = .001$. Finally, non-LDS participants perceived fantasies as a benefit more than did LDS participants, $B = 3.22$, $SE = .45$, $t = 7.11$, $p < .001$. The effect size was large ($f^2 = .33$), so the results are meaningful and worth considering.

Table 8

Coefficients with Fantasy as Dependent Variable

Variables	*B*	*SE*	Beta	*t*	*p* value
Age	.56	.21	.16	2.70	.007*
Gender	-1.25	.36	-.19	-3.45	.001~
Religion	3.22	.45	.40	7.11	.001~

$F(5,242) = 17.83$, $p < .001$, $f^2 = .33$, adjusted $R^2 = .25$, *p value $\leq .05$, ~p value $\leq .001$

The third analysis regressed the five demographic characteristics listed above on the preference for cybersex SBS subscale. Table 9 displays the results of this third analysis. Age, gender, and religion were statistically significant predictors for perceiving preference for cybersex as a benefit of cybersex participation; non-LDS men who are in their late twenties and thirties perceive cybersex as the preferable activity of sexual expression and a benefit for participating in cybersex $F(3,244) = 19.77$, $p < .001$, $f^2 = .23$, adjusted $R^2 = .19$. Age was predictive of older (late twenties and into thirties) participants having a preference for cybersex as a sexual expression and seeing it as a benefit, $B = .76$, $SE = .29$, $t = 2.55$, $p = .011$. Men perceived more benefit in preferring cybersex than did women, $B = -2.23$, $SE = .54$, $t = -4.12$, $p < .001$. Finally, non-LDS participants had a greater preference for cybersex and saw it as a benefit more than did LDS participants, $B = 3.09$, $SE = .67$, $t = 4.60$, $p < .001$. The effect size was large ($f^2 = .23$) and indicate that the results are meaningful.

Table 9

Coefficients with Preference for Cybersex as Dependent Variable

Variables	*B*	*SE*	Beta	*t*	*p* value
Age	.76	.29	.15	2.55	.01*
Gender	-2.23	.54	-.25	-4.12	.001~
Religion	3.09	.67	.27	4.60	.001~

$F(3,244) = 19.77$, $p < .001$, $f^2 = .23$, adjusted $R^2 = .19$, *p value $\leq .05$, ~ p value $\leq .001$

The fourth analysis regressed the five demographic characteristics listed above on the masks SBS subscale. Table 10 displays the results of this fourth analysis. Age and religion were statistically significant predictors for perceiving masks as a benefit of cybersex participation; non-LDS participants who are in their late twenties and thirties perceive the ability to wear masks as a benefit for participating in cybersex $F(2,245) = 17.35$, $p < .001$, $f^2 = .14$, adjusted $R^2 = .12$. Age was predictive of participants in their late twenties and into thirties perceiving masks as a benefit to cyberesx, $B = .61$, $SE = .18$, $t = 3.29$, $p = .001$. Non-LDS participants perceived masks as a benefit more than did LDS participants, $B = 1.95$, $SE = .44$, $t = 4.49$, $p < .001$. The effect size was medium ($f^2 = .14$), indicating that results are meaningful and worth more exploration.

The fifth analysis regressed the five demographic characteristics listed above on the compensation for social skills SBS subscale. Table 11 displays the results of this fifth analysis. Religion, age, gender, and committed relationship status were statistically significant predictors for perceiving the ability of compensate for a lack of social skills as a benefit for cybersex participation.

Table 10

Coefficients with Masks as Dependent Variable

Variables	*B*	*SE*	Beta	*t*	*p* value
Age	.61	.18	.19	3.29	.001~
Religion	1.95	.44	.27	4.49	.001~

$F(2,245) = 17.35$, $p < .001$, $f^2 = .14$, adjusted $R^2 = .12$, ~ p value $\leq .001$

Non-LDS men in their late twenties and thirties who are not in committed relationships perceive the ability to wear masks as a benefit for participating in cybersex $F(4,243) = 13.30$, $p < .001$, $f^2 = .20$, adjusted $R^2 = .17$.

Religion was predictive of non-LDS participants perceiving the ability to compensate for a lack of social skills as a benefit for cybersex participation, $B = 6.22$, $SE = 1.62$, $t = 3.84$, $p < .001$. Age was predictive of participants in their late twenties and into thirties perceiving compensation for lack of social skills as a benefit to cyberesx, $B = 2.62$, $SE = .74$, $t = 3.53$, $p = .001$. Gender was predictive of men perceiving cybersex as a way to compensate for lack of social skills as a benefit, $B = -3.59$, $SE = 1.29$, $t = -2.76$, $p = .006$. Finally, committed relationship status was predictive of those not in committed relationships perceiving the ability to compensate for a lack of social skills as a benefit to cybersex, $B = 3.14$, $SE = .1.19$, $t = 2.63$, $p = .009$. The effect size was medium ($f^2 = .20$), and suggest a meaningful difference.

Table 11

Coefficients with Social Skills as Dependent Variable

Variables	*B*	*SE*	Beta	*t*	*p* value
Religion	6.22	1.62	.23	3.84	.001~
Age	2.62	.74	.23	3.53	.001~
Gender	-3.59	1.29	-.17	-2.77	.006*
Relationship Status	3.14	1.19	.16	2.63	.009*

$F(4,243) = 13.30$, $p < .001$, $f^2 = .20$, adjusted $R^2 = .17$, *p value $\leq .05$, ~p value $\leq .001$

The sixth analysis regressed the five demographic characteristics listed above on the filter for a later date SBS subscale. Table 12 displays the results of this sixth analysis. Gender, religion, and age were statistically significant predictors for perceiving the ability of compensate for a lack of social skills as a benefit for cybersex participation; non-LDS men in their late twenties and thirties perceive filtering for a later date as a benefit for cybersex participation $F(3,244) = 22.20$, $p < .001$, $f^2 = .27$, adjusted $R^2 = .21$. Gender was predictive of men perceiving the ability to filter for a later date a benefit for cybersex use, $B = -3.41$, $SE = .76$, $t = -4.51$, $p < .001$. Religion was predictive of non-LDS participants perceiving the ability to filter for a later date as a benefit for cybersex participation, $B = 4.35$, $SE = .94$, $t = 4.65$, $p < .001$. Age was predictive of participants in their late twenties and into their thirties perceiving the ability to filter for a later date as a benefit to cybersex use, $B = 1.15$, $SE = .41$, $t = 2.78$, $p = .006$. The effect size was large ($f^2 = .27$), and indicate a meaningful difference in the data. Figure 2 illustrates the overall breakdown of perceived benefits by age.

Table 12

Coefficients with Filter for a Later Date as Dependent Variable

Variables	*B*	*SE*	Beta	*t*	*p* value
Gender	-3.41	.76	-.27	-4.51	.001~
Religion	4.35	.94	.27	4.65	.001~
Age	1.15	.41	.17	2.78	.006*

$F(3,244) = 22.20$, $p < .001$, $f^2 = .27$, adjusted $R^2 = .21$, *p value $\leq .05$, ~ p value $\leq .001$

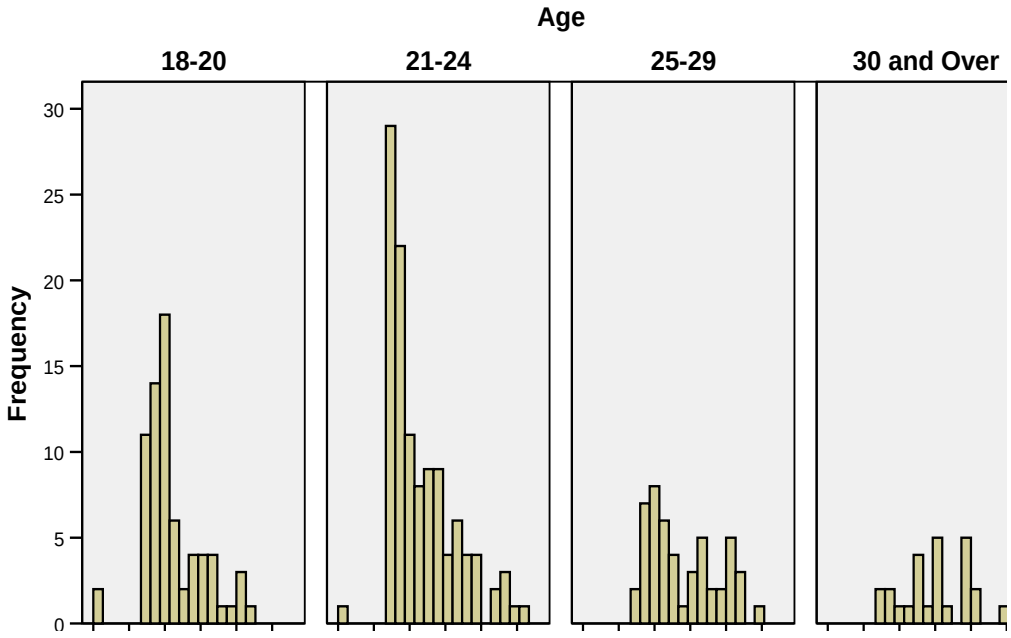

Figure 2. Frequency of perceived benefits by age $N = 262$.

The seventh multiple regressing analysis for question one, regressed the five demographic characteristics listed above on the Sexual Compulsivity Scale (SCS). Table 13 describes that gender and age were both statistically significant predictors with a medium effect size of sexual compulsive behavior, $F(1,260) = 31.86$, $p < .001$, $f^2 = .18$, adjusted $R^2 = .15$. The other three variables: committed relationship status, sexual orientation, and religion were not statistically significant and were therefore not included in the multiple regression model, or the table below. Men participated in compulsive cybersexual behavior at a statistically significantly higher rate than did women, $B = -3.83$, $SE = .67$, $t = -5.71$, $p = .000$, and the effect size was medium, so the practical difference is important, though not large. With sexually compulsive participants few in number

(n = 10), and compulsive cybersex participants even fewer (n = 5) this difference is of value and merits further exploration.

Participants in their late twenties and thirties participated in compulsive cybersexual behavior at a statistically significantly higher rate than did teenage participants and those in their early twenties, B = .73, SE = .37, t = 1.99, p = .05. Here it is important to note that most participants were between the ages of 21-24 and only 25 participants reported their ages as 30 years or over. Older participants in this study are still relatively young individuals, with only 5 reporting their age over 40 years. With the medium effect size noted above, this age difference is important, even though there were few participants in the "oldest" age group. Figure 3 graphically illustrates the distributions SCS by gender, showing the higher scores among the male participants. Figure 4 graphically reports the distribution of SCS by age, showing the higher scores in the older age groups. Ten participants (3.8%) reported SCS scores of sexually compulsive behavior.

The results of question one indicate that non-LDS men in their late twenties and thirties who were not in a committed relationship perceive significantly more benefits than LDS women in their late teens and early twenties who were in a committed relationship. Additionally, older men participated in compulsive cybersexual behavior at a statistically significantly higher rate than did younger women.

Table 13

Coefficients with SCS as Dependent Variable

Variables	*B*	*SE*	Beta	*t*	*p* value
Gender	-3.83	.67	-.35	-5.71	.001~
Age	.73	.37	.12	1.99	.05*

$F(1,260) = 31.86$, $p < .001$, $f^2 = .18$, adjusted $R^2 = .15$,*p value ≤ .05, ~ p value ≤.001

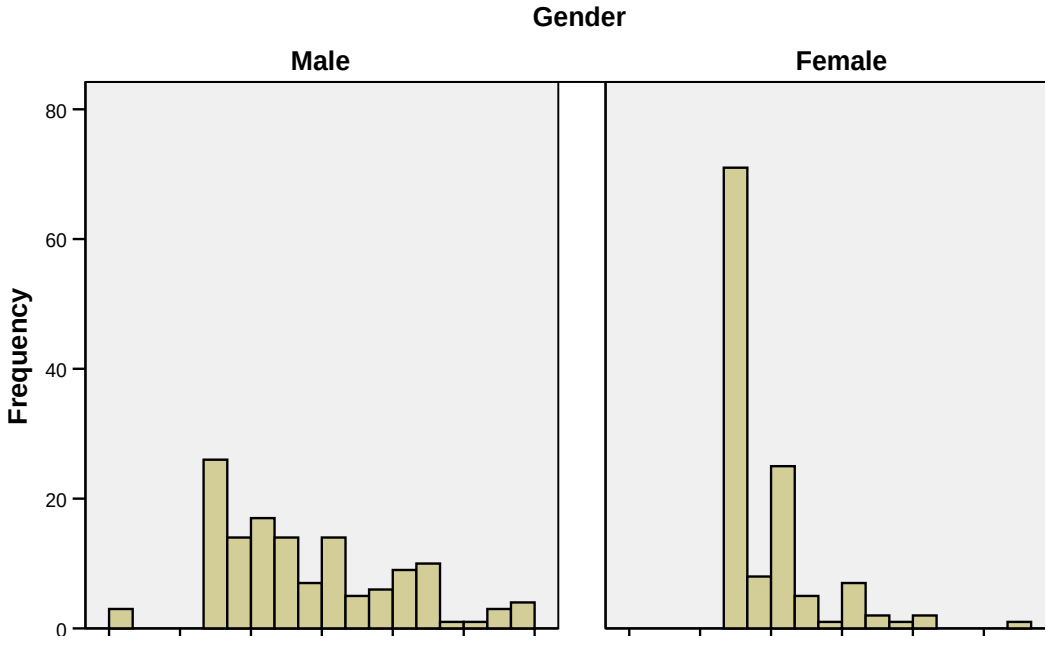

Figure 3. Sexually compulsivity score by gender $N = 262$. Mean of sexually compulsivity scale = 11.87 ± 5.41.

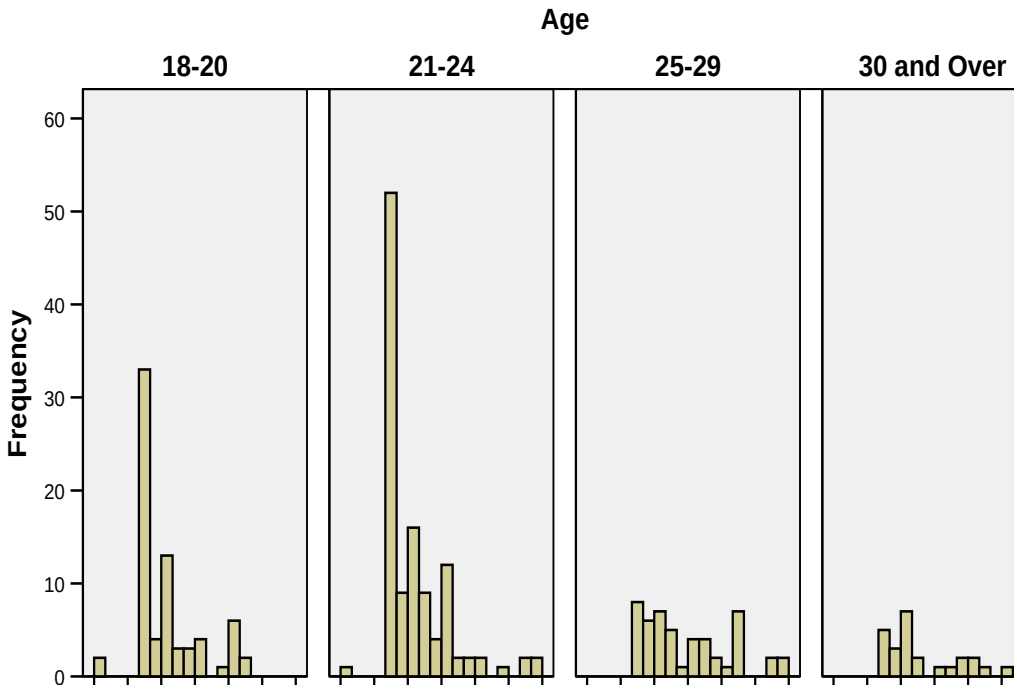

Figure 4. Sexually compulsivity score by age $N = 262$.

Question Number Two

Research question two asked: to what degree are the perceived benefits for engaging in cybersex associated with compulsive sexual behavior among college students? To answer this question I conducted a Spearman's non-parametric correlation analysis to account for the non-normal data. The SCS scores were correlated with each of the five individual perceived benefit SBS subscales, as well as the overall SBS score. The results indicated in Table 14 show that for the overall SBS score there was a strong positive significant correlation, (r = .67, p = .01), with a large effect size. There were also strong positive significant correlations with large effect sizes for the individual subscales: masks, filter for later date, fantasies, social skills, and preference for cybersex correlation coefficients were (r = .53, .56, .51, .63, & .63, p < .001) respectively. However, these results are correlational; therefore, no direction of the relationship can be determined with this analysis.

Table 14

Bivariate Correlation of SBS Subscales and SCS (N = 262)

Variables	Sexual Compulsivity
Masks	.53~
Filter for Later Date	.56~
Fantasies	.51~
Compensate for Social Skills	.63~
Preference for Cybersex	.63~
Overall SBS	.67~

~p value < .001

Question Number Three

Research question three asked: what is the relationship between perceived benefits and time spent online among college students? A multiple regression analysis was conducted to predict if time spent online is influenced by perceived benefits of cybersex participation. The predictors were the 5 SBS subscales (masks, filter for a later date, compensate for lack of social skills, preference for cybersex, and fantasies), while the criterion or dependent variable was total time spent online. The results, shown in Table 15, indicate a significant relationship $F(1,260) = 24.17$, $p < .001$, $f^2 = .08$, adjusted $R^2 = .08$. The data suggest that individuals who see the Internet as a way to compensate for a lack of social skills spend a statistically significant larger amount of time online than those who do not, $B = .04$, $SE = .008$, $t = 4.92$, $p < .001$. However, the effect size was small, ($f^2 = .08$), so the actual difference in these data are small and should be interpreted with caution. The Forward method of regression analysis in SPSS was used for this model. All of the non-significant variables were not included in the model and are therefore not shown in the table below. None of the other perceived benefit scales were statistically significant and were excluded on those parameters.

Table 15

Coefficients with Total Time Online as Dependent Variable

Variable	*B*	*SE*	Beta	*t*	*p* value
Compensation for lack of Social Skills	.04	.008	.29	4.92	.001~

$F(1,260) = 24.17$, $p < .001$, $f^2 = .08$, adjusted $R^2 = .08$; ~p value $\leq .001$

Question Number Four

Research question four asked: to what degree is the amount of time spent online related to compulsive cybersex behavior among college students? A multiple regression analysis was conducted to evaluate whether time spent online in general and in cybersex impact sexually compulsivity. Sexually compulsive behavior was the criterion variable and was regressed on the independent variables: total time online and time spent online for cybersex. The results shown in Table 16 indicate a statistically significant relationship, $F(2,259) = 36.42$, $p < .001$, $f^2 = .27$, adjusted $R^2 = .21$. Time online for cybersex was a statistically significant predictor for sexually compulsive behavior, $B = 1.96$, $SE = .26$, $t = 7.59$, $p < .001$. The sample size for students who reported compulsive behavior according to the SCS was small ($n = 10$), yet the effect size large ($f^2 = .27$). These results have a large practical difference, and indicate that students who spent more time online for sexual purposes were statistically and practically significantly more likely to develop sexually compulsive behavior. Students who spent large amounts of time online for other reasons had no link to become compulsive cybersex users.

Table 16

Coefficients with Sexual Compulsivity as the Dependent Variable

Variables	*B*	*SE*	Beta	*t*	*p* value
Total time online	.21	.23	.05	.92	.36
Time online for sexual purposes	1.96	.26	.45	7.59	.001~

$F(2,259) = 36.42$, $p < .001$, $f^2 = .27$, adjusted $R^2 = .21$; ~*p* value $\leq .001$

Question Number Five

Research question five asked: what is the relationship among types of perceived benefits for engaging in cybersex among college students? Correlation coefficients were computed among the five perceived benefits scales: masks, filter for a later date, fantasies, social skills, and preference for cybersex. Spearmans's correlation analysis was used to account for the non-normal distribution. Using Bonferroni approach to control for Type I error across the 10 correlations, a p value of less than .005 (.05/10 = .005) was required for significance. The results of the correlational analysis presented in Table 17 show that all 10 correlations were statistically significant and were greater than or equal to .60, which indicates a large effect size for all the relationships.

Table 17

The Bivariate Correlations among the Five Perceived Benefit SBS Subscales (N = 262)

Variables	Preference for Cybersex	Masks	Filter for Later Date	Fantasies
Masks	.60**			
Filter for Later Date	.69**	.69**		
Fantasies	.71**	.63**	.61**	
Compensate for Social Skills	.71**	.69**	.68**	.71**

**p value < .005

Preference for cybersex is positively correlated with the subscales: masks, filter for a later date, fantasies, and social skills (r = .60, .69, .71, & .71, respectively, p < .005). As participants perceive benefits in one of these variables they also perceive the other as a benefit. The masks subscale is positively correlated with the subscales: filter for a later date, fantasies, and social skills (r = .69, .63, & .69, respectively, p < .005). The filter for a later date subscale is positively correlated with the subscales: fantasies and social skills (r = .61 & .68, respectively, p < .005). And the fantasies subscale is positively correlated with the social skills subscale (r = .71, p < .005). At about the same relationship, as a participant perceives one benefit for cybersex participation, they also perceive the other four, though the direction of the relationship cannot be determined from this analysis. There appears to be a strong, positive relationship among perceived benefits for cybersex.

Question Number Six

Research question six asked: to what degree are sex by phone behaviors, time spent online for sexual purposes, compulsive behavior, and cybersex perceived benefits related among college students? Spearman's analysis was again used to account for the non-normal distribution of the data. Using Bonferroni approach to control for Type I error across the 6 correlations, a p value of less than .008 (.05/6 = .008) was required for significance. Time online for cybersex was positively correlated with sexually compulsivity, perceived benefits, and phone sex scales at a medium level (r = .29, .32, & .22, respectively, p < .008). Sexual compulsivity was positively correlated with perceived benefits and phone sex at a high level (r = .67 and .48 respectively, p < .008). Perceived

benefits was positively correlated with phone sex at a high level ($r = .72$, $p < .008$). Phone sex and time online for cybersex had the smallest correlation ($r = .22$). The results of the correlational analysis presented in Table 18 indicate that all 6 correlations were statistically significant and greater than or equal to .22. However, the direction of these relationships can not be determined with this analysis.

Question Number Seven

Question seven asked: what are the relationships among, offline relationships, time spent online for cybersex, compulsive behavior, and cybersex perceived benefits among college students? Two multiple regression analyses were conducted to predict the overall association between cybersex activities and offline relationships. This first analysis had three predictors: time spent online for cybersex, SCS total, and perceived benefits total. These were regressed on the significant other subscale of the QRI as dependent variable.

Table 18

The Bivariate Correlations among Four Variables (N = 262)

Variables	Time Online for Cybersex	Sexual Compulsivity	Perceived Benefits
Sexual Compulsivity	.29†		
Perceived Benefits	.32†	.67†	
Phone Sex	.22†	.48†	.72†

†*p* value < .008

The results indicate a statistically significant relationship $F(1,196) = 8.99$, $p = .003$, $f^2 = .04$, adjusted $R^2 = .04$. The data shown in Table 19 indicate that perceiving more benefits for participation in cybersex, had a statistically significant negative association with offline relationships with a boy friend, girl friend, or spouse ($B = -.10$, $SE = .03$, $t = -2.99$, $p = .003$). However the effect size was small ($f^2 = .04$), so the practical difference of these results are small and should be interpreted with caution. The Forward method of regression analysis in SPSS was used for this model. All of the non-significant variables were not included in the model and are therefore not shown in the table below. There was no statistically significant prediction that sexually compulsivity or time spent online for cybersex had negative relationships with the above relationships, and are not included in the model for this reason.

A second analysis was conducted to evaluate the association with best friend relationships. This analysis had the same predictors: time spent online for cybersex, SCS total and perceived benefits total. These were regressed on the dependent variable of the best friend subscale of the QRI. Results indicate a statistically significant relationship, $F(1,260) = 3.87$, $p = .05$, $f^2 = .01$, adjusted $R^2 = .01$.

Table 19

Coefficients with Significant Other as the Dependent Variable

Variable	*B*	*SE*	Beta	*t*	*p* value
Perceived Benefits	-.10	.03	-.21	-2.99	.003*

$F(1,196) = 8.99$, $p = .003$, $f^2 = .04$, adjusted $R^2 = .04$, *p value $\leq .05$

The data shown in Table 20 indicate that higher levels of sexual compulsivity have a statistically significant negative association with best friend relationships, B = -.30, SE = .15, t = -1.96, p = .05. However, here again the effect size was small (f^2 = .01), so the actual difference was small and should be interpreted with caution. The Forward method of analysis in SPSS was used in this analysis as well. The other two independent variables were not statistically significant, and were therefore not included in the model. Results indicate that higher sexual compulsivity had a negative relationship on best friend relationships, and higher scores of perceived benefits had a negative association with significant other relationships.

Summary

Chapter IV presented the results of the statistical analyses that were conducted to provide evidence that allowed the current study to support or reject its research hypotheses. Chapter V will present a discussion regarding the results found in the current study and relevant results from previous research regarding the perceived benefits of cybersex, cybersexual compulsive behaviors, time spent online, and the impacts of cybersex on real life relationships.

Table 20

Coefficients with Best Friend as the Dependent Variable

Variable	*B*	*SE*	Beta	*t*	*p* value
Sexual Compulsivity	-.30	.15	-.12	-1.96	.05*

$F(1,260) = 3.87$, $p = .05$, $f^2 = .01$, adjusted $R^2 = .01$,*p value $\leq .05$

CHAPTER V

DISCUSSION

This study of cybersex use among college students was designed to expand upon earlier knowledge about cybersex use as well as better understand the associations cybersex use has on individuals. Little is known about college student's use of cybersex. Data results were compared to related previous research and analyzed for a better understanding of college students' cybersex involvement in a conservative university environment. Table 21 presents the research questions for the current study, the results of this study, and prior research that supports the findings of this study.

Conclusions

Question Number One

The present study found that non-LDS college men in their late twenties and thirties who were not in committed relationships perceived more benefits overall in cybersex participation than did LDS college women in their early twenties who were in committed relationships. The individual subscales analyses agreed with the overall SBS analysis. The fantasy, preference for cybersex, and filter for a later date subscales found that non-LDS men who are in their late twenties and thirties perceived these benefits more than did LDS women in their early twenties and late teens. These factors were also predictive of compensation for lack of social skills subscale. Additionally, the masks subscale indicated that non-LDS participants in their late twenties and thirties found masks a benefit more than LDS younger students.

Table 21

Research Questions, Study Results, and Supporting Research

Research Question	Study Results	Supporting Research
1. What is the relationship between characteristics of cybersex users and the perceived benefits and compulsive behaviors of cybersex among college students?	Non-LDS, older men who were not in a committed relationship perceived significantly more benefits than LDS, younger women in a committed relationship. Older men participated in significantly more compulsive cybersexual behavior than younger women.	Agreeing: Carvalheira & Gomes (2003); Cooper (2000); Cooper (2004); Ferree (2003); Philaretou et al. (2005); Ross et al. (2005); Schneider (2000a); Schneider (2000b) Dissenting: Cooper et al. (2000); Cooper et al. (2004)
2. To what degree are the perceived benefits for engaging in cybersex associated with compulsive sexual behavior among college students?	There was a significant positive correlation among all five variables.	Agreeing: Cooper et al. (2000); Cooper et al. (2004)
3. What is the relationship between perceived benefits and time spent online among college students?	Individuals who see the Internet as a way to compensate for a lack of social skills spend significantly more time online. No significant relationship for other benefits.	Agreeing: Cooper et al. (2000); Carvalheira & Gomez (2003); Cooper (2004); Palandri & Green (2000); Ross et al. (2005)

4. To what degree is the amount of time spent online related to compulsive cybersex behavior among college students?	Time online for cybersex was a statistically significant predictor for sexually compulsive behavior.	Agreeing: Cooper et al. (2000); Cooper et al. (2004); Greenfield (1999)
5. What is the relationship among types of perceived benefits for engaging in cybersex among college students?	All 10 correlations were positively statistically significant.	Agreeing: Calveria & Gomes (2003)
6. To what degree are: sex by phone behaviors, time spent online for sexual purposes, compulsive behavior, and cybersex perceived benefits related among college students?	All 6 correlations were positively statistically significant. These data indicate that as participants increase in one area of these variables, other variables increase as well.	Agreeing: Cooper et al. (2000); Carbalheria & Gomes (2003); Palandri & Green (2000); Ross et al. (2004); Ross et al. (2005) Dissenting: Carbalheria & Gomes (2003)
7. What are the relationships among: offline relationships, time spent online for cybersex, compulsive behavior, and cybersex perceived benefits among college students?	Perceiving more benefits for participation in cybersex is negatively associated with relationships with a boy friend, girl friend, or spouse. Higher levels of sexual compulsivity is negatively associated with best friend relationships	Agreeing: Cooper (1998); Cooper (1999); Cooper et al. (2000); Cooper et al. (2004); Schneider (2000a); Schneider (2000b) Dissenting: Cooper et al. (2000); Cooper et al. (2004); Schneider (2000a); Schneider (2000b)

Previous research did not study this specific gender question; however, previous research reported that men use the Internet more for cybersex than women (Carvalheira & Gomes, 2003; Cooper et al., 2000, 2004). Perceiving more benefits may lead to increased use, as those who see more benefits are more likely to participate than those who see few or none. Previous research indicated that men are also more likely to use the Internet for viewing pornographic images than are women, which may be explained by the finding of this study that men tend to see more benefits of cybersex. Women are reported in previous research to be more involved in chatrooms because of the relational element (Cooper et al., 2004; Ferree, 2003). The results of the present study differ. Perhaps this may be explained by the possibility that college women have more opportunities to meet their social needs offline, and do not see as many benefits for cybersex participation. The masks subscale was not inflected by gender. Both men and women appear to see the ability to wear masks as a benefit. This is supported by previous research which indicates that both genders participate in changing their identity while online (Cooper et al, 2000, 2004).

Another explanation for the low level of perceived benefits among women in this study could be the traditional sexual gender roles emphasized within the LDS culture which predominates at Utah State University. This culture likely has great influence on study participants' perceptions of sexuality, and on the use of the Internet for the expression of sexuality. Perhaps female participants hold to the traditional expression of sexuality from the culture in which most were raised. Previous research suggested that females actually have a larger presence on the Internet than they report (Carvalheira &

Gomes, 2003). Yet another explanation could be a social desirability bias to women participating in cybersex. Thus, the level of perceived benefits and the use of cybersex among women may actually be greater than what is reported in this study.

Previous research did not explore the link between cybersex use and religious affiliation. The present study found that non-LDS students perceived significantly more benefits than did the LDS group. LDS church doctrine teaches that any type of premarital or extramarital sexual activity is inappropriate, and that all types of pornography, including cybersex, are to be avoided, which may explain this trend. However, it is possible that students who identified themselves as LDS may have underreported their perception of cybersex benefits for social desirability reasons. Most of the students who reported a high perception of benefits identified themselves as atheist or agnostic. Perhaps identifying with an organized religion in general influences the amount of benefit that individuals see in cybersex participation. Churches may offer an offline social outlet that helps students meet their needs for sexuality and romance in real life instead of online. This may be especially true for the younger college students.

The age difference brought into question other research which indicated that younger people, as young as 16 years old, were the most involved in cybersex and possibly saw more benefits (Ross et al., 2005). The current study found that older participants perceived more benefits than did the younger ones. The age range of students was not large, of a younger population, and the older students were in their late twenties and thirties. It may be that younger participants hold to the value system of the homes in which they were raised; which may include traditional sexual roles as well as

oppositional views on cybersex. Older participants have lived independently of their parents for a longer period of time, and had time to explore other perspectives in all areas of life, including sexuality. Perhaps older individuals may be more likely to work part time to full time and have less time to socialize offline. Also, older students with established income may be more likely to have their own computer, whereas younger ones may require a public computer lab. This could influence the level of benefits they perceive, as anonymity and accessibility may be limited for younger students. Moreover, older students may be more Internet savvy, and know how to find less expensive or free cybersex interactions. Older students may have more experience with cybersex and find it helpful in reaching their relationship or sexual goals; whereas, younger students may not perceive a need, may meet their needs offline, or simply not yet experimented with cybersex.

The present study found that those in committed relationships perceived fewer benefits overall than those not in a committed relationship. This finding is consistent with previous research which reported that married participants are less likely to report becoming engaged in cybersex activity (Cooper et al., 2004). Additional individual subscale analyses revealed that the only subscale where committed relationship status was a significant factor was in compensation for lack of social skills. Those not in committed relationships perceived more benefit in cybersex as a means to compensate for their lack of social skills. There could be an association between students' lack of social skills and their ability to create or maintain committed relationships. Those who do not feel comfortable meeting others in person seem to find cybersex as an appealing

alternative to create relationships. Moreover, single students in their thirties may perceive the benefit of a private sexual outlet where they feel comfortable. Single students with poor social skills may also feel unfulfilled in dating relationships or other areas of their life, and find that cybersexual activities fill that void.

The present study found no significant relationship between perceived benefits and sexual orientation. It appears that all sexual orientations find benefit in cybersex participation which is consistent with previous research that found all sexual orientations participate in cybersex with no large differences (Cooper et al., 2000; Ross et al., 2005).

The final analysis for question one reported that both age and gender were statistically significant predictors of high levels of sexual compulsive behavior. In the present study men in their late twenties and thirties reported participating in compulsive cybersexual behavior at a statistically significant higher rate than did women in their early twenties. The effect size was large, and the practical difference notable. This finding is consistent with previous research which indicated that men are more likely to report their online sexual behavior to be problematic (Cooper et al., 2004). Yet, previous research reported that women were overrepresented in compulsive cybersex groups, which is contrary to the findings of this study (Cooper et al.).

In the LDS culture, where the present study took place, it is common for young adults to marry in their early twenties. Individuals who are still single in their late twenties and thirties are in the minority, and there tends to be a less desirable social condition for this older, single group. Activities for LDS college students are for those ages 18 to 30; however, those who attend are usually students in their late teens and early

twenties, as fewer individuals are single as their cohort ages. Men are especially given a hard time if they are single and thirty. These older men, which are significantly more likely to be compulsive users, could experience more loneliness than their younger peers from decreasing social opportunities with others they may feel that they relate with. They may therefore have more of a desire for companionship found online which then leads them into the flow experience described by Philaretou and others, and from there into compulsive behaviors (2005). The Triple-A Engine likely influences the present study for older college men, especially those living alone or with roommates. Older, married men that feel unfulfilled in their marital relationships may find cybersex meets that need, which is consistent with precious research which suggests that men meet their sexual needs online even when married (Schneider, 2000b). These men may also have unrealistic expectations of their sex partners, which expectations they are able to meet online. This is also consistent with previous research (Schneider, 2000a, 2000b). Younger men, those in their early twenties, and all women may be more likely meet their romance and sexual needs through offline interactions. The cultural environment seems to favor the younger age cohort, as well as be kinder to ageing women. Additionally, the casual user may be able to stay a casual user if they have other interests to other ways to meet their emotional and sexual needs. Younger individuals may be more willing to reach out socially to make new friends, and may meet social needs offline.

The present study found no significant differences in compulsive behavior among the types of: religion, committed relationship status, or sexual orientation. This is inconsistent with previous research that indicated that married participants are less likely

to report becoming engaged in cybersex activity (Cooper et al., 2004). Married individuals may feel fulfilled sexually by their spouse, and do not see a need to participate in cybersex. It is possible that married individuals do not feel comfortable reporting that they do participate in cybersex because they feel it is being unfaithful to their spouse, as suggested by Cooper and others (2000).

Question Number Two

The results indicate that perceiving benefits for cybersex participation was highly correlated with compulsive sexual behavior, on an overall and individual subscale basis. It is tempting to place a predictive direction on the relationship; however, direction cannot be determined on a correlational analysis. Perceiving more benefits may lead to compulsive use, or compulsive use could increase the users' perception of benefits. It is possible that one variable is causal, or that there is a third variable, such as time spent online, influencing them both. Previous research has not explored this precise relationship. Yet, previous research indicated that excessive amounts of time spent online for cybersex (over 11 hr per week) was indicative of compulsive use (Cooper et al., 2000, 2004). Those who perceive no benefits in the present study are not likely to use cybersex. Moreover, as individuals participate in cybersex use they will most likely do one of two things: a) either not see benefits and discontinue use, or b) increase the perception of benefits and increase their cybersex participation. Either way, the relationship indicated in this study would be consistent.

Question Number Three

In exploring the relationship between perceived benefits and time spent online, only the social skills factor was a significant predictor of time online. Students who see the Internet as a way to compensate for a lack of social skills spend more time online. It is important to note that the effect size for this analysis was small. Further research should explore this question to extrapolate a more accurate relationship. The finding of this study is consistent with previous research which found that compensating for a lack of social skills was a benefit found for meeting individuals online (Carvalheira & Gomez, 2003; Ross et al., 2005). Those who are shy, or do not feel comfortable expressing themselves in person can meet individuals online in a safer environment. They may feel that they are risking less in the relationship and may feel freer to be themselves online (Carvalheira & Gomes; Cooper et al., 2000, 2004; Palandri & Green, 2000).

Additionally, those who do not feel comfortable in social situations may be more inclined to pursue interests that do not involve socialization either on or offline such as: online or offline video games, blogging, online surfing, online shopping, or reading. As human beings, we crave human interaction, so for shy individuals who may prefer individual interests, the Internet provides an avenue to meet people while maintaining a safe distance. Individuals who feel isolated or disfranchised, which may in turn affect their level of social skills, have an ideal place to meet others with similar interests.

Question Number Four

Time online for cybersex was a statistically significant predictor for sexually compulsive behavior. Students who spent more time online for sexual purposes were

more likely to report sexually compulsive behavior. This is consistent with previous research which reported that time spent online for cybersex was a direct predictor of compulsive use (Cooper et al., 2000, 4004). The amount of time spent online was one of the metrics researchers used to determine compulsive cybersex use, so this finding is not surprising.

College students in the current study appear to be involved in compulsive use of cybersex, although the number of compulsive users scores from the SCS was small (n = 10; 3.8%), the effect size was large (f^2 = .27). Five participants reported participating in problematic amounts of time spent in cybersex (11 or more hours a week). Compulsive use may be of larger concern among college students than these small numbers suggest, and inaccurate reporting may be of issue here as well. College students are exploring the world of cyberspace in general, and cybersex is one such area to explore. Most of the users of cybersex in this study (n = 37; 14.1%) reported participating in cybersex 1 – 2 hr a month. This causal level of involvement has not been reported to be problematic. Typically at this level, the user becomes disenchanted and stops participation (Cooper et al., 2000, 2004). Casual use may develop into compulsive use, but at this point there is no known method to predetermine who will become a compulsive user and who will not. College students are involved in many activities, and are exposed to many new ideas. College is often a time students explore their world, and the Internet and cybersex are currently convenient ways to do that exploring. It is worth noting also, that cybersex use was likely underreported in this study, as is common in self-report survey data. Both the numbers of users and the amount of time spent in cybersex may be higher than indicated.

Question Number Five

The results indicate that as individuals perceive benefits in one area of cybersex they also perceive other benefits for participating in online sexual behavior. This is consistent with research on perceived benefits that individuals perceive more than one benefit (Carvalheira & Gomez, 2003). It appears that college students who enjoy spending time in online sexual behavior see many benefits for their participation.

The manifestation of several perceived benefits appears to overlap. Consider, for example, masks: the ability to adopt a different persona online than in person, and fantasies: the ability to act out personal fantasies that the user cannot offline, are different benefits, but in many ways overlap. Both are a component of the anonymity offered by the Internet, and both provide avenues to explore one's self in an environment of little risk. Additionally, lack of social skills, and filter for a later date also overlap. Individuals with lower levels of social skills may find the initial meeting of a potentially romantic partner frightening. The Internet offers a place of accessibility for shy individuals to meet others with whom they have something in common, and the anonymity aspect allows them to do so with little risk. When they feel more comfortable with a person, they may move to phone conversations and then to a date. As the results from this study suggest, one benefit does not work in isolation, but they are tied together. Therefore, when a user perceives one, they more than likely will perceive several.

Two groups of people emerged in this analysis; those who see many benefits and those who do not. Because of the high correlation among the types of perceived benefits, as well as the apparent overlap between the benefits, it appears that if someone does not

see a benefit in cybersex; they are likely to see no benefits at all. This may be influenced by age and gender as discussed in question number one, as well as the surrounding religious culture, as previously discussed.

Question Number Six

Results indicate that all four variables were significantly positively correlated for research question six. Those who spent more time in sex by phone also spent more in cybersex, perceived more benefits, and participated more in compulsive behavior. The direction of the relationships in the current study cannot be determined because of the correlational nature of the analysis; however, this finding is consistent with previous research on the sex by phone variable. The research indicated that those who participate in sex by phone also participate in cybersex and are more likely to participate in compulsive behavior, and perceive many benefits (Carvalheira & Gomez, 2003; Ross et al., 2005).

It appears that college students who are involved in one area of the variables listed above are involved in the others as well. Similar to any taboo behavior, (e.g. drugs, tattoos, types of dress) when individuals cross a line into non-traditional behaviors, it may be easier to continue to cross into new territory. Previous research indicates that when individuals engage in non-traditional sexual behaviors, there is an increase in other non-traditional sexual activities (Palandri & Green, 2000).

Previous research reported that many individuals participated in chatrooms as a means to an end. They began in chatrooms to meet a person, then spoke to the person on the phone and then proceeded to set up a real-life meeting (Carvalheira & Gomez, 2003;

Ross et al, 2004, 2005). Cybersex was not the primary goal, and the phone was an important part of the relationship. In the present study, the correlation between time spent online for cybersex and phone sex was the lowest correlation for this question ($r = .22$, $p < .008$). This could be a direct relationship: participating more in cybersex introduces the individual to other behaviors of which phone sex is one, or vice versa. It could also indicate that those who are willing to experiment with non-traditional sexual activities do so mainly online, and phone sex is not a major contributor. There could also be a third variable: wanting a sexual connection with individuals. This may drive cybersex as well as phone sex interactions.

Sexual behaviors described by this question could lead to one another, or they could all be influenced by other variable(s). For example the correlation between phone sex and perceived benefits is high ($r = .72$, $p < .008$). The anonymity factor that exist for both cybersex and phone sex may play a role, or the filter for a later date variable could have a stronger influence this relationship. The correlation between time spent in cybersex and perceived benefits could be influenced by the direct relationship, those who perceive more benefits spend more time in cybersex, or vice versa, those spending more time in cybersex perceive more benefits. The correlation may also be impacted by a third variable: overall time spent online affecting both variables. The correlation between sexual compulsivity and phone sex may be influenced by the user's need for further sexual expression if cybersex becomes not enough to meet the compulsive user's drive for more. Additionally, other avenues of sexual expression are likely to be explored by a compulsive user, e.g.: movies, magazines, real-life sexual encounters, and phone sex.

Question Number Seven

The results from the first multiple regression analysis indicate that perceiving more benefits for participation in cybersex is negatively associated with relationships with a boy friend, girl friend, or spouse. Of importance is the small effect size for these data. This difference was not large, and caution should be used in interpretation. Previous research does not directly address this question. Other research did find that time online had a negative association with offline relationships, and perceiving more benefits has a positive association with the amount of time spent online (Cooper, 1999). It could also be that college students who have a poorer quality of relationships offline are more likely to spend time online, thus seeing more benefits, which in turn causes more harm to their relationship with a significant other. Only those who had a significant other answered questions pertaining to that relationship (n = 199), and students without one could have overall poorer relationships.

This study found no significant relationship between compulsive cybersex behavior and the quality of romantic relationships. This is not consistent with previous research which fond that cybersex involvement to a compulsive degree hurt the partners of participants (Cooper et al., 2004; Schneider, 2000a, 2000b). This could be that the number or participants in this study who used cybersex was small (n = 58; 22%) and compulsive users even smaller (n = 10; 3.8%). It may also be attributed to the fact that the partner was not asked to respond to the questions, causing the results to be biased from the perspective of the participant. It could also be that, in general, fewer college students are married or cohabitating (n = 93; 35.5%, for this study) and that individuals'

other relationships are not as affected by compulsive cybersex use as a marriage or equivalent relationship would be.

Additionally, this study did not find a significant relationship between time spent online for cybersex and significant other offline relationships. This is also inconsistent with previous research, which indicated that time spent online has a negative association with all of the users' offline relationships. All relationships take time to maintain, and time spent online can cause those relationships to atrophy and die without proper attention (Cooper, 1998; Cooper et al., 2000; Cooper, Scherer et al., 1999). One reason for this disparity may be that cybersex helps students find other like-minded peers with whom they can relate sexually. If the relationship is created in this fashion, continued cybersex interaction may not negatively affect it. Another reason could be that students participate in cybersex only occasionally, having a minimal influence on offline relationships. As mentioned previously, casual use is not currently linked to negative effects on offline relationships.

In the second analysis for question seven, which looked at the relationship between best friend relationships, time spent online for cybersex, compulsive behavior, and cybersex perceived benefits, higher levels of sexual compulsivity were negatively associated with best friend relationships. Here also the effect size was small, so caution should be used in interpretation of these data. The finding in the current study is consistent with research which indicated that sexual compulsivity negatively influenced offline relationships (Cooper et al., 2004; Schneider 2000b). However, past research did not examine specific sources of relationships. The best friend relationship is important for

this younger sample, as most of the participants are not married. Sexual compulsivity is negatively associated with best friend relationships and not significant other relationships, perhaps because the significant other could be involved in the sexual expression of the compulsion. The best friend may be left out of previously enjoyed mutual activities, which time is now being spent in cybersexual behaviors. It could also be that compulsive users may not have a significant other to be distanced from, but do have best friends. Moreover, the cybersex user may not be able to share their new-found interest in cybersex with their friend, which could explain time away from each other, and the negative association with that relationship.

There was no significant relationship between time spent in cybersex and the best friend relationship. This disagrees with previous research which reported that increasing amounts of time spent online can impact all areas of the participant's life (Cooper et al. 2004; Schneider, 2000b), but it is consistent with other research which did not find a significant difference in non-excessive time spent online and associations with offline relationships (Cooper et al., 2000). It appears that smaller amounts of time spent online for cybersex have little or no influence on participants' relationships of best friend and significant other.

Perceiving benefits was not associated with the best friend relationships. This question was not addressed in previous literature. This finding could indicate that the benefits perceived had little to do with a best friend relationship, and more to do with sexual partners. It may also be because best friends share the perception of the same benefits, and it could give the friends something to do together. The quality of offline

relationships is associated somewhat with cybersex involvement. The present study shows that not all offline relationships are linked in the same way to cybersex. Type of interaction and types of relationships are important factors when looking at the associations between cybersex and relationships.

Implications for Health Education

Many consider cybersex to be a public health hazard, and report that very few people are recognizing it as such or taking it seriously (MSNBC, 2000b). Considering that addiction is one of the most costly public health problems in the United States, cybersex potential for compulsive behavior becomes an important public health issue (Answers, 2008). The present study brings up several issues that are relevant for health educators to both be aware of and to work to better understand. First is the gender and age difference in cybersex involvement. Older men (men in their late twenties and thirties) could perceive cybersex as a way to find partners, especially those who are lacking social skills; whereas younger students in general may have more offline opportunities to find partners. Health education is typically done in a classroom setting, but this does not reach those who do not come to classes. Educators could use the Internet as a medium to reach those who do not feel as comfortable in social situations. As men both perceive more benefits and participate more in cybersex, the Internet is an ideal way to reach out to that population in terms of education, resources, and relationship building.

Another issue is the committed relationship factor. Men not in a committed relationship saw more benefits than women in one. It could be that men in committed

relationships do not have the need for cybersex participation as much as men not in such a relationship. Health educators need to educate and stress the importance of healthy relationships in general, and for better communication in all aspects of life.

Next, though there is a positive relationship between perceiving more benefits and sexual compulsion, the direction is not clear at this point. However, educators need to be aware of the benefits that cybersex affords its users. If these benefits can be offered to the users in offline experiences, perhaps the risk of compulsion can be diminished.

Fourth, those who are not in committed relationships perceive the ability to compensate for lack of social skills as a benefit in cybersex participation. Here the health educator needs to be sensitive to the user's needs. As noted above, educators can use the Internet to reach those who may be shy or less confident. Also, when in class, roll-plays and other social skills training programs should be implemented to help students learn skills and confidence for initiating and maintaining relationships of all types. Having higher levels of social skills, among them communication skills, may help students find other interests offline. It can give them confidence to try newer things, and the classroom can be a safe place to practice these skills. This alone may help to reduce the risk of compulsive behaviors, as increased time spent in cybersex is associated with compulsive behaviors.

Fifth, sex by phone behaviors are positively correlated with compulsive cybersex, time spent online, and perceived benefits. Health educators need to be aware of this relationship so to see the entire picture of the behaviors. One may lead to another, or they may simply be in the same family of behaviors. It is evident that the factors are not

isolated, and when educating about potentiality compulsive behaviors, all factors involved need to be addressed.

Finally is the association with the quality of offline relationships. This study outlined two areas where cybersex was negatively linked to offline relationships: compulsive use with the best friend relationship, and perceived benefits with the significant other. In educating the public, health educators need to be sensitive to in the area of relationships. Best friend and significant other relationships are important to the user, and understanding how cybersex is associated with those relationships is important to discuss. As the effect sizes were small in these analyses, the actual level of negative association with relationships in this study was small. It is important for educators to indicate that cybersex involvement has an association with relationships, as shown by previous research and in this study, but how far that association goes is unclear in this study. Educators also need to outline that there are many factors involved in any type of relationship. Each person is unique and cybersex involvement may be linked to their offline relationships in different ways.

Future Research

The current study was conducted at a University in northern Utah. Limitations of this study include the small geographic region it covered. All participants were students at Utah State University during spring semester 2007. Therefore they either lived in Logan, Utah and the surrounding area, or they were a distance education student in another area of Utah. It was not open to all college students in Utah or other states.

Another limitation to the study is that it was a self-report survey. Even though it was anonymous, individuals often underreport behavior in survey data. Moreover, in recruiting participants, not every department sent out emails to their students inviting them to participate. This created a bias in the ease of participation for some students over others. The population was very homogenous and a more heterogeneous population may have resulted in more diverse data sample. The research model was cross sectional, which allowed the researcher to obtain the data in a shorter period of time from a variety of students. However, this model is limited to students who were attending school spring semester 2007. A longitudinal approach would have given a better sample of student activities and behaviors throughout their college experience. Furthermore, the data were not collected randomly. There was bias in who received class announcements and email announcements for study participation. A variety of majors were included, but not all students had the same opportunity to find out about the study. That being said, future research can build on what the present study added to the literature.

There are many directions that future research can go from this study. Future research could explore the age-related questions to cybersex use: why do older students use cybersex more than younger ones? Further research could also explore the gender relationship of perceived benefits, as well as investigate religion and cybersex involvement, all of these in different populations, perhaps in an area of greater religious and ethnic diversity.

Although the direction of the relationship is not clear, there is a positive relationship between perceived benefits and compulsive use. More research needs to be

done to explore the direction of this relationship, and if there are any other contributing variables, especially among college students. Further research could explore how the relationship between time online and perceived benefits is played out in dating relationships or the GPA of college students. Research could also look at perceived benefits of a different population, a more diverse university, or an older population, to see if others benefits, besides social skills, are predictive of time online among students. Beneficial research could also look at compulsive use on GPA scores and social skills among college students.

Factors that contribute to why some people perceive benefits and others do not is an area of needed research. Religion could play a role, as could culture, age and possibly education. All are worth exploring. How the sex by phone variable compares with other variables needs to be further explored in order to help explain the direction of the relationships among college students, and other populations. In relationships, research needs to look at the impact that cybersex has on parental relationships, or on significant other and best friend relationships among a different population of college students; perhaps in a population where cybersex participation is more prevalent. Moreover, because of the small effect size in this study, additional research on this same population would help to clarify the impact that cybersex has on relationships in general.

REFERENCES

Advanced Pain Treatment (2008). Retrieved February 19, 2008, from http://www.advancedpaintreatment.com/types.asp

American Heritage Stedman's Medical Dictionary. (2002). Retrieved March 19, 2007, from http://www.kmle.com/

CampusKiss and Tell. (2006). *University and College Sex Survey*. Retrieved March 13, 2007, from http://www.campuskiss.com/defa...rvey=show&homepage=true

Carnes, P. (2001). *Out of the shadows* (3rd ed). Center City, MN: Hazelden.

Carvalheira, A. & Gomes, F. A. (2003). Cybersex in Portuguese Chatrooms: A study of sexual behaviors related to online sex. *Journal of Sex & Marital Therapy, 29,* 345-360.

Comp Care. (1987). *Hope and recovery: A twelve step guide for healing from compulsive sexual behavior.* Minneapolis: Author.

Cooper, A. (1998). Sexuality and the internet: Surfing into the new millennium. *CyberPsychology and Behavior, 1*(2), 181-187.

Cooper, A., Boies, S., Maheu, M., & Greendield, D. (1999). Sexuality and the Internet: The next sexual revolution. In F. Muscarella, & L. Sxuchman (Eds.), *The psychological science of sexuality: A research based approach* (pp. 519-545). New York: Wiley.

Cooper, A., Delmonico, D. L., & Burg, R. (2000). Cybersex users, abusers, and compulsives: New findings and implications. *Sexual Addiction and Compulsion, 7,* 5-29.

Cooper, A., Delmonico, D. L., Griffin-Shelly, E., & Mathy, R. M. (2004). Online sexual activity: An examination of potentially problematic behaviors. *Sexual Addiction and Compulsion, 11*, 129-143.

Cooper, A., Scherer, C. R., Boies, S. C., & Gordon, B. L. (1999). Sexuality on the internet: From sexual exploration to pathological expression. *Professional Psychology: Research and Practice, 30*(2), 154-164.

Csikszentmihalyi, M. (2000). Beyond boredom and anxiety: Experiencing flow in work and play. San Francisco: Jossey-Bass.

Delmonico, D. L. (2003). Cybersex: Changing the way we relate. *Sex and Relationship Therapy, 18*(3), 259-260.

Dictionary.com (2006). Definition of chatroom, retrieved November 4, 2006, from http://dictionary.reference.com

Enough is Enough. (2005). Enough is Enough, retrieved November 9, 2006, from http://enough.org/inside.php?tag=statistics

Ferree, M. C. (2003). Women and the web: Cybersex activities and implications. *Sexual Relations and Therapy, 18*(3), 385-393.

Freeman-Longo, R. E. (2000). Children, teens, and sex on the internet. *Sexual Addiction and Compulsion, 7*, 75-90.

Greenfield, D. N. (1999). Psychological characteristics of compulsive internet use: A preliminary analysis. *CyberPsychology & Behavior, 2*(5), 403-412.

Internet Filter Review. (2006). Website statistics, retrieved July 14, 2008, from http://www.enough.org/inside.php?tag=statistics

Kalichman, S. K., Johnson, J. R., Adair, V., Rompa, D., Multhauf, K., & Kelly, J. A. (1994). Sexual sensation seeking: Scale development and predicting AIDS-risk behavior among homosexually active men. *Journal of Personality Assessment, 62*(3), 385-397.

LDS Church. (2008). Teachings on pornography. Retrieved March 10, 2008, from http://www.lds.org/ldsorg/v/index

LDS Newsroom. (2008). Church statistics. Retrieved March 10, 2008, from http://www.newsroom.lds.org

Marital and Sexuality Center and MSNBC Survey (2002). EuropeMedia. Retrieved March 22, 2007 from http://www.familyschoice.com

Mayo Clinic. (2005). Compulsive sexual behavior. Retrieved February 9, 2007, from http://www.mayoclinic.com/health/compulsive-sexual-behavior/DS00144

Merriam-Webster Online Dictionary. Retrieved October 3, 2005, from http://www.m-w.com

Money, J. (1986). *Lovemaps*. New York: Irvington.

MSNBC/Stanford/Duquesne Study. (2000a). *Washington Times*. Retrieved March 21, 2007, from http://www.familyschoice.com/main/extent-stats.htm

MSNBC/Stanford/Duquesne Study. (2000b). Associated Press Online. Retrieved March 19, 2007, from http://www.familyschoice.com/main/extent-stats.htm

Nielsen/Net Ratings. (2003). Internet use statistics, retrieved October 15, 2007, from http://www.nielsen-netratings.com/

Palandri, M., & Green, L. (2000). Image management in a bondage, discipline, sadomasochist subculture: A cyber-ethnographic study. *Cyberpsychology & Behavior, 3*, 631-641.

Philaretou, A. G., Mahfouz, A. Y., & Allen, K. R. (2005). Use of internet pornography and men's well-being. *International Journal of Men's Health*, *4*(2), 149-169.

Pierce, G. R., Sarason, I. G., & Sarason, B. R. (1991). General and relationship-based perceptions of social support: Are two constructs better than one? *Journal of Personality and Social Psychology, 61*(6), 1028-1039.

Random House Dictionary. (2006). Retrieved March 5, 2007, from www.dictionary.com

Reavy, R. (2006). Unsavory web hits vex utah. *Deseret Morning News.* Retrieved, November 18, 2006, from http://deseretnews.com/dn/view/.html

Roller, C. G. (2004). Sex addiction and women: A nursing issue. *Journal of Addictions Nursing*, *15*, 53-61.

Ross, M. W., Mansson, S., Daneback, K. K., & Tikkanen, R. (2005). Characteristics of men who have sex with men on the internet but identify as heterosexual, compared with heterosexually identified men who have sex with women. *CyberPsychology and Behavior*, *8*, 131-139.

Ross, M. W., Rosser, B. R. S., & Stanton, J. (2004). Beliefs about cybersex and internet-mediated sex of Latino men who have internet sex with men: Relationships with sexual practices in cybersex and in real life. *AIDS CARE, 16*(8), 1002-1011.

Schnarch, D. (1997). Sex, intimacy, and the internet. *Journal of Sex Education Therapy*, *22*(1), 15-20.

Schneider, J. P. (2000a). Effects of Cybersex addiction on the family: Results of a survey. *Sexual Addiction and Compulsion, 7,* 31-58.

Schneider, J. P. (2000b). A qualitative study of cybersex participants: Gender differences, recovery issues, and implications for therapists. *Sexual Addiction and Compulsion, 7*, 249-278.

Schneider, J. P. (2004). Understanding and diagnosing sex addiction. In R. Coombs (Ed.), *Handbook of addictive disorders: A practical guide to diagnosis and treatment* (pp. 197-232). Hoboken, NJ: Wiley.

Schwartz, M. F., Southern, S. (2000). Compulsive cybersex: The new tea room. *Sexual Addiction and Compulsion, 7*, 124-144.

United States Department of Commerce Bureau of Census. (2003). Computer and internet use in the United States: 2003 [computer file]. Washington, DC: United States Department of Commerce. Retrieved March 19, 2007, from http://usasearch.gov

University of New Hampshire (2000). *Online victimization: A report on the nations' youth.* Crimes against Children Research Center. Retrieved July 9, 2006, form http://www.unh.edu/ccrc/

Utah Census Data. (2006). Retrieved March 10, 2008, from www.quickfacts.census.gov

Weiss, R. (2000). Sexual Recovery Institute, Washington Times. Retrieved January 15, 2006, form www.enough.org

APPENDICES

Appendix A

Permission E-mails

Dear Delores Rimington

You have my permission to use the Scale on Sexual Behaviors in Chatrooms (Carvalheira & Gomes, 2003). I've submitted another article on the same subject, sexual behaviors through the Internet, I will send it to you.

Good luck to your thesis,

Ana Carvalheira

Hi

You actually do not need my permission. The scale is in the public domain...you may use

it in any fashion that you wish...just citing the paper from which you have taken it.

Best of luck...

Seth Kalichman

Appendix B

Sexual Behavior Scale (SBS)

Thank you for participating.

For this survey, cybersex is defined as sexual expressions or interactions accessed through a computer, including: sexual chatrooms, emails, instant messaging, and viewing sexually explicit images.

Please circle the number that indicates your agreement level with each statement regarding cybersex.

1	2	3	4	5
Totally Disagree	Partially Disagree	Neither Agree nor Disagree	Partially Agree	Totally Agree

1. Cybersex is a way of exchanging erotic fantasies with someone and enriching my erotic experiences.	(1)	(2)	(3)	(4)	(5)
2. My online sexual activity is important in my life.	(1)	(2)	(3)	(4)	(5)
3. My online sexual activity is important for my personal fulfillment.	(1)	(2)	(3)	(4)	(5)
4. It gives me the opportunity to explore some sexual fantasies I don't explore in a real relationship.	(1)	(2)	(3)	(4)	(5)
5. It is very exciting to share fantasies online.	(1)	(2)	(3)	(4)	(5)
6. In online relationships I quite often used "masks" and take on different identities.	(1)	(2)	(3)	(4)	(5)
7. I can pretend whatever I want online and I've already done it sometimes.	(1)	(2)	(3)	(4)	(5)
8. I feel more secure in expressing desires and fantasies that I wouldn't otherwise express.	(1)	(2)	(3)	(4)	(5)
9. I can be more open and straightforward that in a face-to-face relationship.	(1)	(2)	(3)	(4)	(5)

10. Online I can honestly say to the other person what I feel and think.	(1)	(2)	(3)	(4)	(5)
11. I am more daring in my sexual fantasies online.	(1)	(2)	(3)	(4)	(5)
12. I am less ashamed of expressing some of my erotic and sexual desires.	(1)	(2)	(3)	(4)	(5)
13. It's a matter of playing a role that has nothing to do with my real personality.	(1)	(2)	(3)	(4)	(5)
14. Cybersex can "spice up" my real relationship.	(1)	(2)	(3)	(4)	(5)
15. It can intensity and improve my real relationship with my partner.	(1)	(2)	(3)	(4)	(5)
16. Cybersex can be a good complement to the real relationship.	(1)	(2)	(3)	(4)	(5)
17. I feel more pleasure in an online relationship that in a real one.	(1)	(2)	(3)	(4)	(5)
18. Online sexual activity is more satisfactory that real relationships.	(1)	(2)	(3)	(4)	(5)
19. Online sexual activity can be as satisfactory as real relationships.	(1)	(2)	(3)	(4)	(5)
20. Cybersex allows me to do things that are not possible in a real relationship.	(1)	(2)	(3)	(4)	(5)
21. I am shy and this way I find partners more easily.	(1)	(2)	(3)	(4)	(5)
22. I have difficulties in establishing contacts with people of the opposite sex in real situations.	(1)	(2)	(3)	(4)	(5)
23. In real situations I feel a certain anxiety on social occasions.	(1)	(2)	(3)	(4)	(5)
24. In a real relationship I get nervous during the first dates.	(1)	(2)	(3)	(4)	(5)
25. If I am rejected online I don't suffer that much.	(1)	(2)	(3)	(4)	(5)
26. I feel less anxious when I begin a relationship online.	(1)	(2)	(3)	(4)	(5)

27. I use these chatrooms exclusively to se up dates with sexual aims.	(1)	(2)	(3)	(4)	(5)
28. It's an effective way of meeting people in a later, real-life situation.	(1)	(2)	(3)	(4)	(5)
29. It's a good way to make a first selection of a partner for a real date.	(1)	(2)	(3)	(4)	(5)
30. It's a good way to obtain someone's cell phone number for a later date.	(1)	(2)	(3)	(4)	(5)
31. It is easier to meet people with the same views and sexual preferences online.	(1)	(2)	(3)	(4)	(5)
32. It is easier to find people with the same sexual interests online.	(1)	(2)	(3)	(4)	(5)
33. Online relationships allow for a quicker conquest of the other person.	(1)	(2)	(3)	(4)	(5)
34. An online relationship allows me to get sex quickly.	(1)	(2)	(3)	(4)	(5)
35. Cybersex is one of the most important activities in my life at the moment.	(1)	(2)	(3)	(4)	(5)
36. Cybersex occupies most of my day.	(1)	(2)	(3)	(4)	(5)
37. After discovering cybersex I no longer had time to do other things.	(1)	(2)	(3)	(4)	(5)
38. I usually ask for a cell phone number.	(1)	(2)	(3)	(4)	(5)
39. I like to hear the voice of somebody I met online.	(1)	(2)	(3)	(4)	(5)
40. I've already spoken on the phone about sex with people I met online.	(1)	(2)	(3)	(4)	(5)
41. Sex by phone arouses me.	(1)	(2)	(3)	(4)	(5)
42. Before setting up a date with someone in the real world, I like to speak with that person on the phone.	(1)	(2)	(3)	(4)	(5)

43. I prefer sex over the phone to cybersex.	(1)	(2)	(3)	(4)	(5)
44. I enjoy viewing online porn	(1)	(2)	(3)	(4)	(5)
45. My online sexual relationships are harmful to my real relationship.	(1)	(2)	(3)	(4)	(5)

Appendix C

Sexual Compulsivity Scale (SCS)

Please circle the number that best describes you for each item.

1	2	3	4
Not At All Like Me	Not Like Me	Like Me	Very Much Like Me

46. My sexual appetite has gotten in the way of my relationships	(1)	(2)	(3)	(4)
47. My sexual thoughts and behaviors are causing problems in my life.	(1)	(2)	(3)	(4)
48. My desires to have sex have disrupted my daily life.	(1)	(2)	(3)	(4)
49. I sometimes fail to meet my commitments and responsibilities because of my sexual behaviors.	(1)	(2)	(3)	(4)
50. I sometimes get so horny I could lose control.	(1)	(2)	(3)	(4)
51. I find myself thinking about sex while at work.	(1)	(2)	(3)	(4)
52. I feel that my sexual thoughts and feelings are stronger than I am.	(1)	(2)	(3)	(4)
53. I have to struggle to control my sexual thoughts and behavior.	(1)	(2)	(3)	(4)

Appendix D

Quality of Relationships Inventory

Please use the scale below to answer the following questions regarding your relationship with your BOYFRIEND/GIRLFRIEND/SPOUSE.

1	2	3	4
Not at all	A Little	Quite a Bit	Very Much

54. To what extent could you turn to this person for advice about problems?	(1)	(2)	(3)	(4)
55. How often do you need to work hard to avoid conflict with this person?	(1)	(2)	(3)	(4)
56. To what extent could you count on this person for help with a problem?	(1)	(2)	(3)	(4)
57. How upset does this person sometimes make you feel?	(1)	(2)	(3)	(4)
58. To what extent can you count on this person to give you honest feedback, even if you might not want to hear it?	(1)	(2)	(3)	(4)
59. How much does this person make you feel guilty?	(1)	(2)	(3)	(4)
60. How much do you have to “give in” in this relationship?	(1)	(2)	(3)	(4)
61. To what extent can you count on this person to help you if a family member very close to you died?	(1)	(2)	(3)	(4)
62. How much does this person want you to change?	(1)	(2)	(3)	(4)
63. How positive a role does this person play in your life?	(1)	(2)	(3)	(4)
64. How significant is this relationship in your life?	(1)	(2)	(3)	(4)
65. How close will your relationship be with this person in 10 years?	(1)	(2)	(3)	(4)

66. How much would you miss this person if the two of you could not see or talk with each other for a month?	(1)	(2)	(3)	(4)
67. How critical of you is this person?	(1)	(2)	(3)	(4)
68. If you wanted to go out and do something this evening, how confident are you that this person would be willing to do something with you?	(1)	(2)	(3)	(4)
69. How responsible do you feel for this person's well-being?	(1)	(2)	(3)	(4)
70. How much do you depend on this person?	(1)	(2)	(3)	(4)
71. To what extent can you count on this person to listen to you when you are very angry at someone else?	(1)	(2)	(3)	(4)
72. How much would you like this person to change?	(1)	(2)	(3)	(4)
73. How angry does this person make you feel?	(1)	(2)	(3)	(4)
74. How much do you argue with this person?	(1)	(2)	(3)	(4)
75. To what extent can you really count on this person to distract you from your worries when you feel under stress?	(1)	(2)	(3)	(4)
76. How often does this person make you feel angry?	(1)	(2)	(3)	(4)
77. How often does this person try to control or influence your life?	(1)	(2)	(3)	(4)
78. How much more do you give than you get from this relationship?	(1)	(2)	(3)	(4)

Please use the scale below to answer the following questions regarding your relationship with your BEST FRIEND.

1	2	3	4
Not at all	A Little	Quite a Bit	Very Much

79. To what extent could you turn to this person for advice about problems?	(1)	(2)	(3)	(4)
80. How often do you need to work hard to avoid conflict with this person?	(1)	(2)	(3)	(4)
81. To what extent could you count on this person for help with a problem?	(1)	(2)	(3)	(4)
82. How upset does this person sometimes make you feel?	(1)	(2)	(3)	(4)
83. To what extent can you count on this person to give you honest feedback, even if you might not want to hear it?	(1)	(2)	(3)	(4)
84. How much does this person make you feel guilty?	(1)	(2)	(3)	(4)
85. How much do you have to “give in” in this relationship?	(1)	(2)	(3)	(4)
86. To what extent can you count on this person to help you if a family member very close to you died?	(1)	(2)	(3)	(4)
87. How much does this person want you to change?	(1)	(2)	(3)	(4)
88. How positive a role does this person play in your life?	(1)	(2)	(3)	(4)
89. How significant is this relationship in your life?	(1)	(2)	(3)	(4)
90. How close will your relationship be with this person in 10 years?	(1)	(2)	(3)	(4)
91. How much would you miss this person if the two of you could not see or talk with each other for a month?	(1)	(2)	(3)	(4)
92. How critical of you is this person?	(1)	(2)	(3)	(4)

93. If you wanted to go out and do something this evening, how confident are you that this person would be willing to do something with you?	(1)	(2)	(3)	(4)
94. How responsible do you feel for this person's well-being?	(1)	(2)	(3)	(4)
95. How much do you depend on this person?	(1)	(2)	(3)	(4)
96. To what extent can you count on this person to listen to you when you are very angry at someone else?	(1)	(2)	(3)	(4)
97. How much would you like this person to change?	(1)	(2)	(3)	(4)
98. How angry does this person make you feel?	(1)	(2)	(3)	(4)
99. How much do you argue with this person?	(1)	(2)	(3)	(4)
100. To what extent can you really count on this person to distract you from your worries when you feel under stress?	(1)	(2)	(3)	(4)
101. How often does this person make you feel angry?	(1)	(2)	(3)	(4)
102. How often does this person try to control or influence your life?	(1)	(2)	(3)	(4)
103. How much more do you give than you get from this relationship?	(1)	(2)	(3)	(4)

Appendix E

Demographics

Please check the box next to the item that best describes you

104. Age

O 18-20
O 21-24
O 25-29
O 30-34
O 35-39
O 40-44
O 45-49
O 50-55
O over 55

105. Gender

O Male
O Female

106. Religious Affiliation

O LDS
O Catholic
O Protestant
O Jewish
O Muslim
O Other _____

107. Committed relationship

O Married
O Cohabitating
O Single - not dating anyone
O Single - dating someone
O Separated/Divorced – not dating anyone
O Separated/Divorced – dating someone
O Other _____

108. Sexual Orientation

O Homosexual
O Heterosexual
O Bisexual
O Other _____

109. Total time spent online:

O Less than 2 hours per week
O 2-4 hours per week
O 5-6 hours per week
O 1-2 hours per day
O Over 2 hours per day

110. Total time spent online for sexual purposes:

O None
O 1-2 hours per month
O 3-6 hours per month
O 1-2 hours per week
O 3-5 hours per week
O 6-8 hours per week
O 1-2 hours per day
O Over 2 hours per day

111. Major:

112. Total time spent online in each activity for sexual purposes:

A. Chatrooms: O None O 1-2 hours per month O 3-6 hours per month O 1-2 hours per week O 3-5 hours per week O 6-8 hours per week O 1-2 hours per day O Over 2 hours per day	B. Viewing or purchasing sexually explicit mages: O None O 1-2 hours per month O 3-6 hours per month O 1-2 hours per week O 3-5 hours per week O 6-8 hours per week O 1-2 hours per day O Over 2 hours per day
C. Instant Messaging: O None O 1-2 hours per month O 3-6 hours per month O 1-2 hours per week O 3-5 hours per week O 6-8 hours per week O 1-2 hours per day O Over 2 hours per day	D. Email O None O 1-2 hours per month O 3-6 hours per month O 1-2 hours per week O 3-5 hours per week O 6-8 hours per week O 1-2 hours per day O Over 2 hours per day
E. Using a webcam: O None O 1-2 hours per month O 3-6 hours per month O 1-2 hours per week O 3-5 hours per week O 6-8 hours per week O 1-2 hours per day O Over 2 hours per day	F. Bulletin Boards: O None O 1-2 hours per month O 3-6 hours per month O 1-2 hours per week O 3-5 hours per week O 6-8 hours per week O 1-2 hours per day O Over 2 hours per day

Appendix F

Study Announcement

Study participants needed!

Students attending Utah State University are needed to fill out a survey on Internet use and sexuality. We are interested in your opinions! For your participation in this anonymous survey, you will be entered into a prize drawing that will have ***ten*** winners. Prizes include: $100.00 cash, an MP3 player; two 1GB thumb drives; and gift certificates to Old Navy, Borders, and the USU Bookstore.

For questions or more information please contact:
Delores Rimington: ddorton@cc.usu.edu or
Dr. Julie Gast: julieg@cc.usu.edu

To participate simply go to the following secure website and follow the instructions:

www.kbrimington.net/internetsurvey

www.kbrimington.net/internetsurvey Qs? ddorton@cc.usu.edu	**www.kbrimington.net/internetsurvey Qs? ddorton@cc.usu.edu**	**www.kbrimington.net/internetsurvey Qs? ddorton@cc.usu.edu**	**www.kbrimington.net/internetsurvey Qs? ddorton@cc.usu.edu**	**www.kbrimington.net/internetsurvey Qs? ddorton@cc.usu.edu**	**www.kbrimington.net/internetsurvey Qs? ddorton@cc.usu.edu**	**www.kbrimington.net/internetsurvey Qs? ddorton@cc.usu.edu**

Appendix G

Letter of Information

Internet Use and Sexuality Survey

Who are the researchers and what are they doing?

Professor Julie Gast in the Department of Health, Physical Education, and Recreation at Utah State University, and Delores Rimington are doing a research study to find out more about your opinions and attitudes about Internet pornography or Cybersex. Approximately 200 students will be participating in this study.

What will I be asked to do?

You will fill out an online survey which asks you about your attitudes and opinions regarding computer sex (or cybersex), sex in general, and about the quality of some of your relationships. Completing the survey will take about 30 minutes. Participants' names will be entered into a drawing for ten prizes, which include $100.00 cash, gift certificates, 1GB USB drives, or an MP3 player. After data are collected from all surveys, we will randomly select ten participants and contact you via email with a code and instructions on how to get your prize. **The prize drawing is not connected to your survey in anyway**. The survey and the prize information will be sent to different files with no linking information.

Will my answers be kept a secret?

Your answers will be anonymous. This survey is completely anonymous. We will not be able to link your survey answers to you in anyway. Your answers will not be reported to any college instructors and will have no affect on your status as a student at Utah State University.

Am I taking any risks?

There is minimal risk in participating in this survey. You may feel uncomfortable. If you wish to speak to someone after completion of the survey, please feel free to contact the USU counseling center at 797-1012 or visit the Taggart Student Center, rm. 306. You can also visit the University Counseling Center's website at: http://www.usu.edu/counsel/index.htm. Services are free for students.

Will the research help me?

The research study may or may not help you personally. There may not be a direct benefit to you at this time; however, researchers hope to learn more about college

student's perceptions of sexuality, the Internet, and relationships. Even if this research has no immediate benefit to you, it will be used to help others in the future.

Do I have to do the research study?

You do not have to participate in the survey if you do not desire. Withdrawal will not affect your eligibility to enter into the drawing.

Has this research study been approved?

The university (USU) has an Institutional Review Board (IRB). This group checks research studies to make sure they are safe. The IRB at the Utah State has approved this study. If you have more questions for them, they may be contacted at (435)797-1821.

Can I ask more questions?

If you have more questions about the study, you may contact Delores Rimington via email ddorton@cc.usu.edu or Dr. Julie Gast by phone (435) 797-7491, or by email at julieg@cc.usu.edu. Either one of them would be happy to talk to you about the study.

Click here to download this page for your records (.doc).

Appendix H

IRB Approval Letter

Utah State University

INSTITUTIONAL REVIEW BOARD OFFICE
9530 Old Main Hill
Military Science Room 216
Logan UT 84322-9530
Telephone: (435) 797-1821
FAX: (435) 797-3769

USU Assurance: FWA#00003308
Protocol # 1717

2/21/2007

SPO #:
AES #: UTA00

MEMORANDUM

TO: Julie Gast
Delores Rimington

FROM: True M. Rubal-Fox, IRB Administrator

SUBJECT: Examining the Perceived Benefits for Engaging in Cybersex Behavior among College Students

Your proposal has been reviewed by the Institutional Review Board and is approved under expedite procedure #7.

X There is no more than minimal risk to the subjects.
There is greater than minimal risk to the subjects.

This approval applies only to the proposal currently on file for the period of one year. If your study extends beyond this approval period, you must contact this office to request an annual review of this research. Any change affecting human subjects must be approved by the Board prior to implementation. Injuries or any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Institutional Review Board.

Prior to involving human subjects, properly executed informed consent must be obtained from each subject or from an authorized representative, and documentation of informed consent must be kept on file for at least three years after the project ends. Each subject must be furnished with a copy of the informed consent document for their personal records.

The research activities listed below are expedited from IRB review based on the Department of Health and Human Services (DHHS) regulations for the protection of human research subjects, 45 CFR Part 46, as amended to include provisions of the Federal Policy for the Protection of Human Subjects, November 9, 1998.

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.