

## Running Head: ONLINE SEXUAL PROBLEMS

Online Sexual Problems:

Assessment and Predictive Variables

**Al Cooper** [\[1\]](#)  
**Eric Griffin-Shelley**

San Jose Marital and Sexuality Centre

Private Practice

Pacific Graduate School of Psychology

David L. Delmonico    Robin M. Mathy

Duquesne University

University of Oxford

University of Minnesota, Twin Cities

This research was partially funded by a grant from the American Foundation of Addiction Research (A.F.A.R.). We are grateful to Coralie Scherer, Ron Burg, and Marc Schillace, for research assistance and help with design of the project.

## Introduction

### **Internet Growth**

Most people are unaware of how the Internet is affecting every facet of life. The Information Age will change lives more dramatically over the next 20 years than in any period in history (Cooper, Boies, Maheu, and Greenfield, 1999). Recent statistics highlight the speed and direction of these developments. The number of people in the United States who use the World Wide Web is estimated at 158.3 million, averaging six accesses per week, six sites per visit, and spending an average of three hours and 22 minutes per week online (Nielsen-Netratings, 2001). This translates into over half of all American households and reflects a trend that grew by 58% over a 20-month period (Department of Commerce, 2000). The amount of information and opportunities is overwhelming, with an estimated one billion unique web pages available in January, 2000 (Inktomi, 2000). It was estimated that the number of unique web pages increased by 35% (to over 1.3 billion) by March 2001 (Google, 2001).

### **The Internet and Sexuality**

Since its inception the Internet has been inexorably associated with sexuality in a synergistic dance, each fueling and ultimately contributing to the transformation of the other. It is clear that the fascination that people have with sexuality and sexual relationships is being prominently manifested on the Internet in a multitude of ways. Cooper, Delmonico, and Burg (2000) estimated that 20% of Internet users engage in some form of online sexual activity.

Sexuality has been one of the financial engines underwriting the development of new technologies to deliver sex via the Internet. Sexual websites are one of the few categories of commercial sites that continue to produce a profit. Sprenger (1999) estimated that online sexual activity may account for 70% of all dollars spent online. In addition, in order to make profits, these sites need large numbers of visitors because less than one percent of visitors to these sites actually spend money on them (Branwyn, 1999). The overall effect of the Internet on sexuality and society is yet to be determined.

Another trend is the availability and use of sexually explicit materials via the Internet. Carr (2000) reported that 18 million people in the United States accessed these types of sites in the year 2000. This number is nearly three times more than statistics from 1999. Law enforcement and legislative bodies are scrambling to protect children from being deluged by advertisements from adult sites, and from inappropriate sexual attention of adults, including pedophiles (Finkelhor, Mitchell, & Wolak, 2000).

The pivotal characteristics that give the Internet its power have been described as the "Triple A Engine" (Cooper, 1998). These characteristics are: Accessibility, Affordability, and Anonymity. These three characteristics distinguish the Internet from more conventional media featuring erotic and sexual material (e.g., magazines and videotapes). It is the combination of these three factors that make the Internet appealing to many individuals.

## **Defining Online Sexual Activity and Problems**

Online Sexual Activity (OSA) is defined as use of the Internet (via text, audio, and/or video/graphic files) for any activity that involves human sexuality. These activities include, but are not limited to, casual encounters for recreation, exploration, and entertainment purposes, seeking education and/or support around sexual concerns, purchasing sexual materials, trying to find sexual partners, and so forth.

Cybersex can be operationally defined as one form of OSA where individuals use the medium/Internet to engage in sexually arousing or gratifying activities. These include looking at erotic pictures or videos, reading sexual material, engaging in sexual chat, exchanging explicit sexual emails and pictures (or both), or sharing sexual fantasies while both people masturbate (sometimes also referred to as "cybersex" or as "cybering").

Developing an Online Sexual Problem (OSP) is a possible outcome of engaging in OSA. For the purposes of this study, OSP is defined as the use of computerized content (text, sounds, and/or images obtained from

computer software or the Internet) for sexual stimulation and gratification which seems to the user to a) cause the person difficulty and b) be perceived as beyond their control. This includes, but is not limited to, looking at pictures, reading sexual stories, engaging in sexual chat, exchanging explicit sexual emails, and other forms of OSA.

### **Research on OSA**

As with any complex phenomena, OSA is neither good nor bad. Instead, it is the ways that people use it that determines whether it will ultimately enhance people's lives or result in serious adverse consequences. This basic premise was supported by the first large-scale study about Internet sexuality (Cooper, Scherer, Boies, & Gordon, 1999). The findings of this study of 9,265 respondents indicated that 91.7 % of all respondents spent less than 11 hours per week involved in OSA and 46.6% less than one hour per week. In addition, most men and women were satisfied with their online activity, and reported they never felt guilty or ashamed about their OSA. Thus, for the vast majority of respondents, OSA seemed to have no negative consequences. However, the authors found that 17% of the respondents gave some "strong indication" of problems with their online sexual behavior and 8% met the criteria for online sexual compulsivity (cf. the Kalichman Sexual Compulsivity Scale; Kalichman & Rompa, 1995). Sexually compulsive respondents were found to be online more than 11 hours per week, with resulting distress and interference in their lives. Delmonico and Carnes (1999) also expressed concerns about "virtual sex addiction" based on the finding that 65% of subjects who scored high on the Sexual Addiction Screening Test (SAST; Carnes, 1991) also reported problems with their Internet sexual activity.

In order to better understand the differences between those who go online for sexual pursuits, Cooper, Putnam, Planchon, and Boies (1999) offered a model of three profiles of users. The first category, which they stated was the most common, was what they called the *Recreational User*. This category included those people who use the Internet in a "non-problematic" way for a host of reasons from simply satisfying their curiosity about available online sexual material, to searching for specific sexual and education information, to looking for sexual stimulation as a means of recreation and/or distraction. Such individuals appear to access online sexual material intermittently and do not find it to be especially engaging, nor are they compelled to pursue it in an ongoing manner.

The second type of user was labeled the *Sexually Compulsive user*. They have a previously established pattern of unconventional sexual practices such as a preoccupation with pornography, engaging in sex with several or anonymous partners, lying to others about their sexual practices, paying for sex, (e.g., prostitutes, phone sex,

commercial websites) or any of the paraphilias listed in the DSM-IV (1994). These activities have varying degrees of adverse consequences, both with respect to the individuals (e.g., financial, legal, occupational, safety), as well as to their relationships with others. They tend to also be generally associated with feelings of shame and loss of control. When these people discover the Internet, they often transfer the locus of their pre-existing problem to Internet based activities. In addition, it is not uncommon for what was a somewhat modulated activity to “explode” after being unleashed by the Triple A of the Internet.

The third type of Internet users have no prior history of sexual compulsivity. Cooper, Putnam, et al., assert that “in some ways this maybe the most interesting group as it appears that these are people who may never have had difficulty with sexual compulsivity if it were not for the Internet” (1999, p. 85). They speculate that these people may have a vulnerability to, or proclivity for, sexual compulsivity, but that they have sufficient internal resources and impulse control to have resisted acting on these behaviors until faced with the power of the Triple A Engine. The at-risk group consists of two subtypes. Subtype one, referred to as the *Depressive Type*, consists of at-risk users who are generally are depressed, dysthymic, or anxious (cf, Kafka, 2000). Sexual encounters may be one of the few experiences powerful enough to penetrate their dysphoria and malaise, as well as providing them with an opportunity to feel in control and express aggression. The second subtype, referred to as the *Stress Reactive Type*, is characterized by those individuals who engage in OSA primarily during times of high stress (c.f.,Leiblum, 1997). These individuals use sex and the Internet as a transient method of escaping, or distracting, themselves from feelings that may arise in stressful situations.

## Purpose

This article compares characteristics of individuals who self-identify as having problematic online sexual behavior (OSA) to a group of respondents who do not self-identify as having similar online sexual behavior problems (systematic sample group). In particular, the subjects were asked about their online activity, their reasons for OSA, the consequences of these behaviors, and their general Internet use, past problem behaviors, and past emotional problems.

## Methods

### Procedure

The study was conducted over a one-month period, from June 1 to June 30, 2000. The Institutional Review Board of the Pacific Graduate School of Psychology approved the study. Participants accessed the questionnaire via an interactive web page that was part of the MSNBC web site (the online portal

for a major U.S. news organization). All participants were required to check a box indicating that they had read, understood, and agreed to the informed consent. Because the study involved sexual behavior we decided to exclude minors. Participants were asked to answer all the items, and those who submitted incomplete surveys received a prompt reminding them of items that were incomplete. GUIDs (Global User Identification Numbers) were assigned and cookies (minute software programs that identify a personal computer to a server) were utilized to minimize chances of multiple submissions and to ensure that the samples were mutually exclusive. Completed data for the survey was stored in an appended database linked to the MSNBC server.Instrument

The questionnaire was composed of 76 items. It expanded and refined one used in earlier studies of online sexual activities (Cooper, Scherer, et al., 1999 and Cooper, Delmonico, and Burg, 2000). It included 15 items designed to gather information on a wide range of demographic variables and 41 items regarding respondents' attitudes and behaviors. Additionally, the 10-item Kalichman Sexual Compulsivity Scale was utilized as a widely used instrument designed to assess level of sexual compulsivity (Kalichman & Rompa, 1995).

**Since one of the primary purposes of this article was to compare the profile of a typical person who engages in OSA to the profile of a person who identifies as having online sexual problems (OSP), we operationalized the OSP sample as those participants who gave positive responses to two questions: (a) "My time online for sexual activities has been a problem in my life" and (b) "My time online for sexual activities seems out of control." A positive response was defined as "sometimes," "often," or "all of the time" answers to both of these questions. A negative response was defined as the "seldom" or "none of the time" answers to both of these questions. The OSP sample may include people with transient or isolated concerns related to their OSA, individuals with online sexual compulsivity (OSC), others with OSP who are in the process of developing OSC, and respondents "at risk" for developing OSC.**

## Sample

All participants were 18 years of age or older. Twenty percent of respondents reported being from countries other than the USA. A "pop-up" menu appeared on the screen of every 1,000<sup>th</sup> unique visitor to the MSNBC web site. This selected random sample yielded 7,037 respondents (5,925 males and 1,112 females). This represents a 25% response rate that parallels the typical response rate obtained for surveys utilizing random-digit dialing (Gonzales, 1999). However, a truly random sample is contingent upon a 100% response rate, which is very rarely obtained, and our response rate is well below the 50% generally considered adequate (Rubin & Babbie, 1999). We did not sample with replacement, as do most random-digit dialing methodologies; therefore, our sample limits inferences to June 2000 MSNBC users who respond to requests to participate in studies of this kind. Generalizations beyond this sample must be made with all due caution.

Of the total selected random sample, we obtained 384 males and 19 females when we applied the OSP criteria.

Methodologically, we were reluctant to speculate about a sample with only 19 females. We did note that we had

five times as many male as female cases overall, yet 20 times more males than females in the OSP group.

Therefore, we focused our study on the males in the OSP and non-OSP comparison groups. There were 384 males who met the criteria for OSP, which represents 5.46% of the total sample and 6.48% of all males who completed the survey. The remaining 5,541 respondents comprised a (systematic) random sample (SRS) of June 2000 MSNBC users who respond to surveys about Internet sexuality and who did not meet criteria for OSP at the time they responded to the survey.

## Results

### Demographic Variables

An independent samples  $t$ -test was conducted to ascertain whether there was a statistically significant difference in ages between the OSP and non-OSP groups. There was no significant difference in mean ages between these groups,  $t(5923) = 1.40$ ,  $p = .161$ . A one-way Analysis of Variance (ANOVA) revealed there were no significant differences in proportions of OSP respondents who reported they resided in rural (.068), suburban (.066), or urban (.064) areas,  $F(2, 5922) = .117$ ,  $p = .889$ . A one-way ANOVA also revealed no significant differences in proportions of OSP respondents who identified as heterosexual (.064), gay (.061), bisexual (.077), or who declined a label (.065).

We assessed differences between OSP and non-OSP groups regarding reported relationship status. The six relationship statuses were (a) single and dating, (b) romantic/sexual, (c) committed with extra-relationship affairs, (d) committed, (e) married with extramarital affairs, (f) and married. The percentage of respondents with OSP ranged from 4.1 (committed) to 9.0 (single and dating). A one-way ANOVA was conducted to evaluate the association between relationship status and the proportion of respondents with OSP. The ANOVA was significant,  $F(5, 5919) = 6.40$ ,  $p < .001$ . Post-hoc analyses (Scheffe) were performed to assess pair-wise differences among means. A significantly greater proportion of married men were in the OSP group than were in the committed ( $p = .019$ ) and romantic/sexual ( $p = .031$ ) relationship statuses, and a significantly greater proportion of single and dating men were in the OSP group than in the committed ( $p = .002$ ) and romantic/sexual ( $p = .003$ ) groups.

### Time Online for Sexual Activities

Independent samples  $t$  tests were conducted to evaluate the hypotheses that prior months of Internet use (USENET), hours per week spent online (ONLINE), and total hours per week online for sex (TIMEON) were higher in the OSP group than in the non-OSP group. However, the results of these tests were mixed. Non-OSP respondents, on average, had been online a slightly but not significantly greater number of months than were the OSP respondents. Relative to the non-OSP respondents, OSP participants spent a slightly but not significantly greater number of hours per week online. However, a significant difference emerged regarding the total hours per week in which the two groups engage in online sexual activities. The OSP group engaged in OSA an average of more than twice as many hours per week. Table 1 summarizes these results.

## Reasons for Engaging in Online Sexual Activities

Pearson chi-square tests were conducted to determine whether there was independence between OSP status and reasons for engaging in online sexual activities. Reasons included education, distraction, coping with stress, meeting dates, meeting for sex, socialization, engaging in sexual activities not done in real time, getting support for sexual concerns, and purchasing sexual materials. Differences were found in four categories. First, non-OSP respondents were significantly more likely than their OSP peers to engage in online sex for education and to purchase sexual materials. In contrast, OSP respondents were significantly more likely than their non-OSP peers to engage in online sexual activities to cope with stress and to "engage in sexual activities I would not do in real time." Table 2 presents the percentage in each group who gave each reason, as well as the Pearson  $\chi^2$  test statistic for the independence between each group and each reason.

## OSA Behaviors

Cybersex was a Likert-scored item ranging from 0 (Never) to 4 (All the time). The test of between-group differences was statistically significant,  $t(5923) = 5.12$ ,  $p < .001$ , with the OSP participants scoring an average of .74 ( $SD = 1.02$ ), whereas the non-OSP respondents had a mean of .53 ( $SD = .78$ ). Using the same Likert-scale format, OSP participants also scored higher than their non-OSP peers on frequency of masturbation while online,  $t(5923) = 14.49$ ,  $p < .0001$ . On average, the OSP group scored a mean of 2.65 ( $SD = 1.16$ ), compared to an average of 1.71 ( $SD = 1.23$ ) for the non-OSP group.

## Negative Consequences of OSA

An independent samples  $t$ -test was performed to assess the hypothesis that, on average, OSP participants scored higher than non-OSP respondents on reduced sexual activity with a partner due to OSA. The test supported this hypothesis,  $t(5923) = 10.05$ ,  $p < .0001$ . As a Likert-scaled item ranging from 0 (Increased Significantly) to 4 (Decreased Significantly), OSP respondents scored a mean of 2.06 ( $SD = .98$ ), whereas their non-OSP peers scored an average of about a half point lower ( $M = 1.68$ ,  $SD = .69$ ). Respondents also were asked to endorse whether their online sexual activities had resulted in a positive effect on their relationship. A  $z$ -approximation test (difference of proportions) revealed the OSP respondents were significantly more likely than their non-OSP peers to answer, “No,”  $Z = 5.03$ ,  $p < .00001$ . About 78% of the OSP respondents and 65% of the non-OSP participants answered negatively. However, there were no significant differences between OSP and non-OSP respondents in regard to those who answered, “Yes, but not in general,” and those who responded, “Yes, in general.”

The OSP participants were nearly 23 times more likely than the non-OSP group to report that discovering online sex has had a devastating impact on their life ( $OR = 22.57$ , 95%  $CI = 16.15, 31.53$ ). The OSP respondents also were significantly more likely than the non-OSP group to report that others complained about their involvement in online sexual activities,  $t(5923) = 21.63$ ,  $p < .0001$ . As a Likert-scaled item ranging from 0 (Never) to 4 (All the Time), the OSP group had a mean of .83 ( $SD = 1.09$ ), whereas the non-OSP group averaged .18 ( $SD = .51$ ). As a similar Likert-scale item, the OSP respondents, on average, scored slightly but significantly higher than their non-OSP peers on a measure of their willingness to experiment offline has increased as a consequence of their online sexual behaviors,  $t(5923) = 6.68$ ,  $p < .001$ . The OSP group scored  $M = 1.29$ ,  $SD = 1.02$ , whereas the non-OSP group had a mean of 0.95,  $SD = 0.96$ .

## Future Preferences for OSA

When asked about their future preference for online sexual activities, the OSP group’s mean endorsement for a desired decrease was significantly greater than that of the non-OSP group,  $t(5923) = 19.35$ ,  $p < .0001$ . On a Likert-scaled item ranging from 0 (Significant Increase) to 4 (Significant Decrease), the OSP group had a mean of 3.28 ( $SD = 1.04$ ), whereas the non-OSP group had a mean of 2.28 ( $SD = 0.97$ ).

## Internet Addiction

Independent samples  $t$  tests were conducted to test the hypothesis that the OSP group would, on average, score higher than their non-OSP peers in endorsing the assertion that “Generally Internet activities have been a

problem” and, “Generally, Internet activities feel out of control.” Both assertions were scored as Likert-scaled items, ranging from 0 (Never) to 4 (All the Time). Both tests were statistically significant. On both of these items, the OSP group scored significantly higher than their non-OSP peers. See Table 3 for a full summary of results. Table 3 also indicates that relative to their non-OSP peers, the OSP participants had significantly greater odds of reporting they were addicted to (a) the Internet, (b) sex, and (c) both the Internet and sex. Because the 95% confidence interval for the odds ratios excluded 1.0, we can rule out the hypothesis of equality between the OSP and non-OSP groups.

Hierarchical logit regression was performed to determine whether addiction to the Internet, addiction to sex, or addiction to both the Internet and sex were better predictors of OSP. Logit analysis is a special form of log linear model that tests the relation between a binary dependent variable (e.g., presence or absence of addiction) and one or more independent variables. Log linear models, unlike Chi-square analyses of categorical data, provide estimates of the effects of variables on each other, similar to multiple regression models. In each case, 0 represented absence and 1 indicated presence of the variable. The saturated main effects model (Constant + OSP by internet addiction + OSP by sexual addiction + OSP by both internet and sexual addiction) yielded a Pearson  $P^2(1, N = 5925) = 1.00, p = .000$ , indicating a perfect fit in predicting OSP. However, the more parsimonious model comprised of the combined main effects of Internet addiction and sexual addiction (Constant + OSP by internet addiction + OSP by sex addiction) also yielded a perfect fit, Pearson  $P^2(2, N = 5925) = 1.00, p = .000$ . The individual main effects of Internet addiction, sexual addiction, and addiction to both were statistically independent of OSP, indicating a poor fit. Likewise, the combined main effects of Internet addiction and addiction to both the Internet and sex was a poor fit, Pearson  $P^2(2, N = 5925) = 56.23, p = .5^{-13}$ , as was sex addiction and addition to both the Internet and sex,  $P^2(2, N = 5925) = 15.86, p = .0004$ . Since the addition of addiction to both Internet and sex in the saturated main effect model did not decrease the goodness of fit in predicting OSP, we can be relatively certain that the combined main effects of Internet addiction and sex addiction predict OSP. This is an important finding relative to designing an instrument to predict OSP.

## Dual Diagnosis Issues

Table 4 summarizes the odds ratios which were computed to determine whether, relative to the non-OSP comparison group, respondents in the OSP group had significantly greater odds of having past difficulties with

alcohol, drugs, gambling, food, sex, work, or spending. The confidence interval of the odds ratios for alcohol, drugs, gambling, and work contained 1.0, negating the ability to rule out the possibility that the OSP and non-OSP participants had an equal chance of having had past difficulties in these areas. However, the OSP respondents were 3.82 times more likely than their non-OSP peers to report that they had experienced past difficulties with sex. Relative to the non-OSP group, the OSP group also was at greater risk of identifying prior difficulties with food and spending

Odds ratios were calculated to assess whether the OSP group had significantly greater odds than the non-OSP group of reporting a psychiatric history. The data indicated the OSP group had significantly greater odds on five of six variables assessed here, including psychiatric medication by history, psychotherapy by history, current psychiatric medication, and current psychotherapy. Although the OSP group was at significantly increased risk of suicidal ideation relative to the non-OSP group, they were not at greater risk of having made a suicide attempt.

## Discussion

### **Objectives of the Study**

As stated earlier, for most Internet users OSA does not pose a problem, nor is it a significant risk (Cooper, Scherer, Boies, & Gordon, 1999). However, for a significant minority, there can be major life consequences. In this article, we examined the difference between individuals who have online sexual problems and those who do not. One goal of identifying these factors was to assist clinicians in being able to better identify the two groups. When evaluating individuals who engage in OSA for OSP, it is important to keep in mind that no one factor alone is sufficient for classification. Instead, being attentive to the general pattern of answers will be more likely to lead to a valid and reliable determination of OSP.

The respondents in this survey are not identified as online sexual compulsives. However, their answers to the criterion questions offer measurable evidence of objective, external difficulties (i.e., problems or what is called "unmanageability" in Twelve Step programs) and subjective, internal feelings of a loss of freedom of choice or control. Therefore, this OSP population likely includes individuals currently experiencing OSC, as well as those who may be at-risk for developing OSC by engaging in online sexual activities.

### **Sample Comparison**

Survey participants with online sexual problems (OSPs) were well matched with the overall systematic random sample on demographic variables such as age, residence, sexual orientation and relationship status. The

OSP group appears to be somewhat more likely to be single and dating than the systematic random sample. One plausible hypothesis for this is that individuals with sexual acting out tendencies are more committed to these behaviors (especially the fantasies) than they are to real relationships (Earle & Crow, 1989; Leedes, 1999). Their participation in OSA may take time and/or motivation away from pursuing offline romantic relationships. It may also be that respondents in the OSP group may either have more difficulty maintaining a relationship or their relations may end as a result of their OSP.

It was also striking that when asked about a range of prior problematic sexual activities, most respondents (typically between 80-90%) reported they had never engaged in activities such as viewing sexual magazines or videos, paying for phone sex, frequenting strip clubs, paying for sex at massage parlors or with prostitutes, or engaging in anonymous, casual, or illegal sex. There were only small differences between the systematic sample and the OSP group regarding these particular behaviors. Thus, there is evidence that most people who engage in OSA may not have had prior problems with certain other types of potentially problematic sexual activities.

As was true for the demographics mentioned above, our OSP group was similar to the systematic sample with regard to prior Internet use and hours online per week. There was a significant difference in the amount of time each group spent engaged in OSA each week, with the OSP group spending twice as much time online as the general sample. Spending inordinate amounts of time engaged in any single activity has the inevitable consequence of taking time away from other dimensions of life. This may negatively impact work, social, or recreational pursuits. In addition, needing to engage in any activity on a daily basis may demonstrate an over reliance on that activity and the start of a dependency or addiction (Griffin-Shelley, 1991). Although it may be overly simplistic to equate sexual time online with problematic use of the Internet, it is clearly a variable worth examining. Cooper et al. (1999) reported that respondents who had engaged in OSA less than one hour a week were unlikely to have a problem and those who were involved 11 or more hours a week were more likely to report consequences from their OSA. This study found similar results and suggests that the number of hours engaged in OSA is a critical factor for assessment of online problems.

## **Reasons for, and Profiles of those, engaging OSA**

There are as many reasons to engage in OSA as there are participants. At the same time, finding a way to better understand general categories of reasons that people engage in an activity might be an important way to

differentiate problematic and non-problematic behaviors (Carnes, 1991), particularly around process addictions.. Kafka agrees and asserts that understanding the “psychodynamic or behavioral contexts for the meaning and perpetuation of sexual symptom formation” is an important a way to assess whether a particular person is having difficulties with an activity (2000, p. 489).

The data from this study was examined in an attempt to better understand who engages in OSA and what their motivation might be and to ascertain if it supported the heuristic schema on profiles of users of OSA proposed by Cooper, Putnam, et al. (1999) that was outlined earlier.

When our participants were asked about the reasons they engaged in OSA, the vast majority of respondents in both groups (80.5% of the systematic sample and 78% of OSP sample) said that OSA was used as a distraction or a "break" from other life activities. This appears to fit the category of Recreational User and supports the data from this and previous research that finds that OSA is not a problem for the vast majority of those who engage in it. This is to be expected as perusing sexually explicit materials or websites or even more frank sexual activities such as masturbation are generally not a problem for most people.

At the same time, this and prior research also find a significant minority of participants do manifest numerous signs of serious difficulties with their OSA. One important question is whether these people fit the aforementioned category of Sexual Compulsive user or At Risk user, or both. The data show that some participants clearly did have a history of past sexual problems and thus may fit the former category. It is also noteworthy that the OSP respondents were more than three times more likely than the non-OSP participants to report past sexual problems and that this represented a significant difference between groups. Again, this may not be surprising as it corroborates Cooper, Putnam et al.'s (1999) contention that one category of people with current OSP are simply “sexual compulsives” who have found the Internet to be the “perfect” venue to pursue their interests. Thus, it is increasingly important that clinicians who treat people with sexual compulsivity are aware of the risks of Internet use, particularly around strategies for relapse prevention.

Also interesting was that critical between-sample differences were found concerning the use of OSA to cope with stress. Almost twice as many respondents in the OSP group as in the non-OSP group reported using OSA as a way to cope with stress. Attempting to deal with stress by engaging in sexual activity via a virtual world is no better than using sex to deal with stress in the real world. It appears that using sexual activities as a way of coping with stress is likely to lead to excessive or problematic behaviors (Carnes, 1991; Griffin-Shelley, 1991).

This may also be support for the At Risk-Stress Reactive category. of user

To “engage in sexual activities I would not do in real time” was the other major difference in reasons that the OSP sample gave for engaging in OSA. Cooper and Scherer et al. (1999) commented that any type of sexual activity one might imagine can be found on the Internet, and many people are experimenting with options they might never have heard of prior to first going online. This can have both positive and negative effects on users and their relationships. For many , experimentation and trying new things can be tremendously freeing and lead to more satisfying sexual relations. On the other hand, , the ability to easily engage in fantasies at any time, as well as to instantly fulfill sexual requests that a partner is not able, or willing, to gratify, may have a particularly powerful appeal for certain people. For these people, OSA may quickly lead to repeated and escalating behaviors through simple positive reinforcement (Putnam, 2000). . Similarly, the ability to split off certain aspects of one's sexuality and have it exist only "in cyberspace” creates the potential for leading a "double life." This would understandably reduce social opportunities for more fully integrating and understanding these dissociated aspects of one's sexuality. These findings argue for an expansion of the aforementioned model to include a third subtype under the At Risk category. We suggest this might be known as the *Fantasy type*.

Finally it is clear that having a better understanding of both reasons and profiles of those that engage in OSA will both, allow clinicians to better predict who might develop OSP, as well as provide improved treatment.

## **Problematic Consequences of OSA**

We also found effects of OSA on a person's offline relationships. The OSP group indicated that OSA decreased their real-time sex with their partner. This finding suggests respondents in the OSP group have a tendency to 'escape' to OSA due to stress, relational problems, or dissatisfactions via the Internet. Thus, people with OSP may not be learning to resolve conflicts or developing adaptive coping strategies offline. The ability to easily engage in cyberspace fantasies might decrease motivation to resolve issues with a partner, leading to a retreat to, and eventual preference for, their “virtual world”. Decreased sex with an offline partner maybe due to partners’ dissatisfaction related to being involved with a person with OSP. Schneider (2000) reported that 34% of the partners in her sample had a decreased interest in sexual activity with their partner. Our data also found that fewer OSP than non-OSP respondents reported a positive impact of OSA on an offline romantic relationship. This may be due to a negative association to OSA, as well as the fact that the educational use of OSA is also lower for

this group. Not surprisingly, relative to the non-OSP participants, it was almost four times more common for the OSP respondents to report that other people had complained about their OSA. This suggests that others' complaints about OSA are an important discriminating variable in screening and comprehensive assessment. This is not surprising since brief screening instruments for alcohol problems include a question about complains by other people about alcohol related behaviors, e.g., Cooney, Zweben, and Fleming (1999) noted questions related to others' complaints are included in the CAGE and TWEAK. These instruments are both identified by their acronyms. The A in the CAGE acronym represents, "Have you ever felt Annoyed by someone criticizing your drinking?" The W in the TWEAK acronym represents, "Have close friends or relatives Worried or complained about your drinking the past year?"

Asking individuals how they feel about discovering OSA is another possible discriminating factor. Relative to their non-OSP peers, OSP group respondents were nearly 23 times more likely to endorse the assertion that "finding out about online sexuality is the worst thing that has ever happened in my life." This statement is a powerful one and speaks to the potential destructive force that OSA can have on a person's life.

The idea that OSA "increases my tendency to experiment with new behaviors offline" is another way people may find that OSA leads to OSP. Sexual experimentation is not inherently negative. It is often encouraged by therapists to reduce unhealthy inhibitions. However, for people who are already struggling with self-control issues, experimentation may lead to an increased risk of OSP. Clearly, developing OSP when experimenting is a negative consequence of OSA. Other factors that may lead to increased experimentation and disinhibition are the Internet's tendency to be seen as giving permission for almost any sexual activity and the sense that "everyone else is doing it" (Cooper, Putnam, et. al, 1999).

Leiblum (1997) argues "the repetitiveness of the images and the unreality of the activity are doomed to eventually disappoint" those "individuals who are not true sexual obsessives" (p. 25). Some vulnerable people are more likely to spend increasing amounts of time online, experimenting with new fantasies and behaviors. Negative consequences such as progression and escalation are common for individuals struggling with sexual issues (Carnes, 1991). Indications of increasing activity may be an indicator of habituation. The OSP respondents seemed to have some awareness that their OSA was having adverse effects on their lives. They expressed a preference to have their OSA decrease somewhat or significantly in the future.

## Dual Diagnosis Concerns

An increasing number of leaders in the field of sexually compulsive behaviors are discussing the prevalence of numerous problem areas in the lives of with OSP. They are calling for clinicians and researchers to continue the assessment beyond the most salient diagnosis (Cooper, Putnam, et. al, 1999; Kafka, 2000, Ragan & Martin, 2000). We found that a disproportionately higher number of OSP than non-OSP respondents reported prior and current contact with mental health professionals for both past and current psychiatric medication and psychotherapy. It is unclear whether seeking mental health services is an antecedent or consequence of OSP. The answer to this question has important implications. It suggests this is an important area for future research.

Relative to the systematic sample, a significantly greater proportion of OSP respondents indicated that, in general, use of the Internet had been a problem and felt out of control. Similarly, a significantly greater proportion of OSP than non-OSP respondents identified themselves as being addicted to the Internet, to sex, and to both the Internet and sex.

Questions about sexual addiction and Internet addiction demonstrated promise in the prediction of individuals who are experiencing OSP. This has a number of clinical implications. First, there may be a number of reasons a client is reluctant to admit having OSP (e.g, an accusatory partner or employer). However if there is a history of sexual problems and the client is willing to acknowledge difficulties with Internet addiction, it is more likely that the person has OSP. Similarly, screening instruments could include these two areas as an alternate means of assessing OSP.

The OSP group was similar to the comparison group in most other typically assessed dual diagnostic issues except for past sexual problems. Earlier, it was noted that this group may include sexual compulsives who act out on the Internet. More research is needed to better understand this finding. Smaller between-group differences also were found for past problems with food and shopping/spending money. The reasons the OSP vs. non-OSP respondents were at greater odds of risk in these areas remains unclear. However, assessing all issues related to impulse control is an essential part of a thorough evaluation. It is important to note which past behaviors are associated with OSP and which are not.

### Limitations and Future Research

This study was limited to males who engage in OSA. Only incidental information is available regarding

women's online sexual problems. Only 19 (1.7%) of 1,112 women met our criteria for OSP. This may be due to the fact that a much smaller proportion of women have problems with OSA, as is the case with offline problems of a similar nature (Kafka, 2000). However, it is possible that OSP is manifested differently in women (e.g., more relationally) than in men. Thus, the ways in which OSP would be identified and assessed in women may need to be different than in men.

In addition, our sample was gathered from the MSNBC website. Users who visit major news portals may or may not be different than other Internet users (e.g., those who only use email or chatrooms). Our findings are limited to individuals who responded to an unsolicited invitation to participate in an online study hosted on the MSNBC web site in June, 2000. There are undoubtedly marked differences between the general population, all Internet users, and even all visitors to the MSNBC website during the time of the study.

Finally, although it is clear that respondents with OSP engage in online sexual activities that they would not do in real life, this leads to a critical clinical question. Does OSA increase or decrease the chances of actually engaging in these types of activities? This remains an empirical question and an important area of research for clinicians, educators, law enforcement personnel, and legislators.

### Conclusions

This study compared characteristics of individuals in two groups. The first group consisted of respondents who self-reported online sexual problems. The second was a control group of other systematically sampled respondents who denied online sexual problems. Our findings corroborated previous literature in this area. We also identified important variables for assessing problematic online sexual activity as well as confirming and expanding our knowledge of those who engage in OSA. Some of these variables included predisposing factors and effects on real life relationships, among others. Results of this study show promising implications for researchers and clinicians attempting to assess and treat individuals who present with issues related to online sexual activities.

In addition to contributing to the development of an assessment protocol, these data have important implications for the general public and for counseling professionals. Our results support the suggestion (Cooper et al., 2000) that the public needs to be educated about the potential risks of OSA. Further, clinicians need additional information and training about sexuality and the Internet, with particular attention given to problematic sexual activity. It cannot be emphasized too strongly that our findings enabled us to predict with 100% accuracy

respondents with OSP based upon comorbidity between Internet addiction and sex addiction.

Finally, our data suggest that more research is needed in all aspects of computer and Internet use, abuse, and addiction. Special attention must be given to the impact of these technologies on both healthy and unhealthy aspects of human sexuality. Our research adds new information to the small body of empirical findings on the widely discussed and debated subject of OSA. However, our study also creates more questions. Only by continuing to devote resources and attention to empirical research in this field can we answer the host of important issues on the ways in which the Internet is impacting human sexuality nationally and internationally, both today and in the highly technological future of tomorrow.

Table 1

Time online devoted to sexual activity (OSA)

-

-

Online Sexual Problems      Random Sample

M SD      M      SD      t(5923)

Prior Months Online<sup>a</sup>      52.08    24.33      50.11    23.75      1.54

Hours per Week Online<sup>b</sup>      24.43    25.34      25.15    25.08      -0.54

-

Hours per week of OSA<sup>c</sup>      5.70    10.03      2.63      5.04      -10.59\*

Note. <sup>a</sup>USENET, <sup>b</sup>ONLINE, <sup>c</sup>TIMEON

\*  $p < .001$

-

-

Table 2

Reasons for OSA by Percent of Respondents in Each Group

-

	<u>Online Sexual Problems (%)</u>	<u>Random Sample (%)</u>	$\chi^2$
Distraction 81.6	0.28	80.5	
Education 31.7	6.95**	25.3	
Cope with stress 29.9	117.36***	56.5	
Explore sexual fantasies 114.04***	43.0	19.9	

<b>Socialize/similar interests</b>		<b>16.1</b>		<b>17.5</b>
<b>0.48</b>				
Buy sex materials		6.3		
12.0	11.62***			
Meet dates		9.1		
10.0	0.31			
Meet sex partners		11.7		
10.8	0.35			
Support for sexual concerns	8.1		6.0	2.71

\*\*p < .01, \*\*\*p < .001

---

Table 3

Negative Consequences of OSA

-

-

Online Sexual Problems      Random Sample

M SD      M      SD      t(5923)

Internet a problem	1.58	0.89	0.40	0.68	32.35*
--------------------	------	------	------	------	--------

Net feels out of control	1.47	0.94	0.31	0.64	33.32*
--------------------------	------	------	------	------	--------

%

%	OR (95% CI)
---	-------------

Addicted to the net	13.3%	8.8%	1.59 (1.17, 2.17)**
---------------------	-------	------	---------------------

Addicted to sex	21.1%	9.8%	2.46 (1.75, 2.66)**
-----------------	-------	------	---------------------

Addicted to both net and sex	33.3%	8.6%	5.34 (4.24, 6.74)*****
------------------------------	-------	------	------------------------

\*p < .0001

\*\*OSP vs. non-OSP odds > 1 and < 2

\*\*\*\*\*OSP vs. non-OSP odds > 5

Table 4

Dual Diagnosis Issues

	<u>Online Sexual Problems</u>		<u>Random Sample</u>
<u>%</u>	<u>OR (95% CI)</u>	<u>%</u>	
Alcohol		20.6	
18.0	1.18 (0.91, 1.53)		
Drugs		14.3	11.6
1.28 (0.95, 1.72)			
Gambling		4.4	3.4
1.32 (0.79, 2.19)			
Food		19.8	13.6
1.56 (1.20, 2.03)*			
Sex		35.9	
12.8	3.82 (3.06, 4.77)***		
Work		18.8	15.2
1.29 (0.99, 1.68)			
Spending		24.7	16.5
1.66 (1.31, 2.12)*			

Medication by History	14.1	8.4	1.79 (1.32, 2.42)*
Therapy by History	19.0	12.9	1.58
(1.21, 2.07)*			
Current Medication	6.5	3.8	1.77
(1.16, 2.73)*			
Current Therapy	6.0	2.3	
2.72 (1.72, 4.29)**			
Suicide ideation	18.5	12.6	
1.57 (1.20, 2.06)*			
Suicide attempts	5.5	4.5	
1.24 (0.78, 1.95)			

\*OSP vs. non-OSP odds > 1 and < 2; \*\*OSP vs. non-OSP odds >2 and < 3; \*\*\*OSP vs. non-OSP odds > 3.

### References

- Branwyn, G. 1999. How the porn sites do it: 'Adult e-commerce' is still one of the few profitable online enterprises. Can others learn anything from its tricks of the trade? <http://www.thestandard.com/article/display/0,1151,3779,00.html>.
- Carnes, P. 1991. Don't call it love: Recovery from sexual addiction. N.Y.: Bantam.
- Carr, Laura. 2000. Sizing up virtual vice: Porn and gambling are making more money than ever. <http://www.thestandard.com/article/display/0,1151,17549,00.html>.

Cooney, N. L., Zweben, A., & Fleming, M. F. (1995). Screening for alcohol problems and at-risk drinking in health-care settings. In R. K. Hester & W. R. Miller (Eds.), Handbook of alcoholism and treatment approaches: Effective alternatives, 2<sup>nd</sup> ed. Boston: Allyn & Bacon.

Cooper, A. 1998. Sexuality and the Internet: Surfing into the New Millenium.

CyberPsychology and Behavior, 1 (2): 187-194.

Cooper, A., Boies, S.C., Maheau, M., & Greenfield, D. 1999. Sexuality and the

Internet: The next sexual revolution. In F. Muscarella & L. Szuchman (Eds.)

The psychological science of sexuality: A research based approach (pp. 519-

545). N.Y.: Wiley.

Cooper, A. Putnam, D. E., Planchon, L.A., & Boies, S. C. 1999. Online sexual

compulsivity: Getting tangled in the net. Sexual Addiction and Compulsivity:

Journal of Treatment and Prevention, 6 (2): 79-104.

Cooper, A., Scherer, C., Boies, S.C., & Gordon, B. 1999. Sexuality on the Internet:

From sexual exploration to pathological expression. Professional Psychology: Research and Practice, 30

(2): 154-164.

Cooper, A., Delmonico, D. & Burg, R. 2000. Cybersex users, abusers, and

compulsives: New findings and implications. Sexual Addiction and Compulsivity: Journal of Treatment

and Prevention, 7 (1-2): 5-30.

Cooper, A., Scherer, C., Mathy, and Burg, R. 2001. Manuscript in preparation.

Delmonico, D. L. & Carnes, P. J. 1999. Virtual sex addiction: Why cybersex becomes

the drug of choice. CyberPsychology & Behavior, 2 (5): 457-464.

Department of Commerce. United States government. 10/17/2000.

<http://www.ntia.doc.gov/ntiahome/digitaldivide/execsumftn00.htm>

Earle, R. & Crow, Gregory. 1989. Lonely all the time: recognizing, understanding, and overcoming sexual addiction, for addicts and co-dependents. N.Y.:

Simon & Schuster.

Finkelhor, D., Mitchell, K.J. & Wolak, J. 2000. Online victimization: A report on the nation's youth. National Center for Missing and Exploited Children.

<http://www.missingkids.com/>

Griffin-Shelley, e. 1991. Sex and love: Addiction treatment and recovery. N.Y.:

Praeger.

Google. 2001. <http://www.google.com/>

Gonzales, M. E. 1999. Statistical policy working paper: The role of telephone data collection on statistical methodology by the members of the Federal Committee on Statistical Methodology (November, 1984).

<http://www.bts.gov/ntl/DOCS/wp12.htm>.

Inktomi. 2000. Web surpasses one billion documents.

<http://www.inktomi.com/new/press/2000/billion.html>.

Kafka. M.P. 2000. The paraphilia-related disorders: Nonparaphilic hypersexuality and sexual compulsivity/addiction. In Leiblum, S. R. & Rosen, R. C.

Principles and Practice of Sex Therapy (3<sup>rd</sup> Ed.). N.Y.: The Guilford Press.

- Kalichman, S. C., & Rompa, D. (1995). Sexual sensation seeking and sexual compulsivity scales: Reliability, validity and predicting HIV risk behavior. Journal of Personality Assessment, *65*, 586-601.
- Leedes, R. 1999. Theory and praxis: A heuristic for describing, evaluating, and intervening on sexual desire disorders when sexual expression interferes with humanistic expression. Sexual Addiction & Compulsivity: The Journal of Treatment and Prevention, *6* (4): 289-310.
- Leiblum, S. R. 1997. Sex and the net: Clinical implications. Journal of Sex Education and Therapy, *22*: 21-28.
- Nielsen-netratings. 2001. <http://www.nielsen-netratings.com/>.
- Putnam, D. E. 2000. Initiation and maintenance of online sexual compulsivity: Implications for assessment and treatment. CyberPsychology and Behavior, *3* (4): 5553-564.
- Schneider, J. P. & Schneider, B. 1991. Sex, Lies, and Forgiveness: Couples Speaking Out on Healing From Sex Addiction. New York, NY: HarperCollins Publishers.
- Schneider, J. 2000. Effects of cybersex addiction on the family: Results of a survey. Sexual Addiction & Compulsivity: The Journal of Treatment and Prevention, *7* (1-2): 31-58.
- Sprenger, P. 1999. The porn pioneers. The Guardian (Online), p.2-3.
- Young, K. S. 1997. Internet addiction: What makes computer-mediated communication habit forming? Paper Presented at the 105<sup>th</sup> annual convention of the American Psychological Association, Chicago, IL.

---

[\[1\]](#) Requests for reprints should be sent to Al Cooper. Phd, San Jose Marital & Sexuality Centre, 100 N. Winchester Blvd., Suite 275, Santa Clara, CA 95050, [alcooper@myinternetcity.com](mailto:alcooper@myinternetcity.com)