## ORIGINAL PAPER

# Perceived Consequences of Casual Online Sexual Activities on Heterosexual Relationships: A U.S. Online Survey

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Received: 13 July 2009 / Revised: 21 December 2009 / Accepted: 21 December 2009 / Published online: 20 February 2010 © Springer Science+Business Media, LLC 2010

**Abstract** Some researchers have illustrated how the Internet can provide users with an ideal atmosphere to explore sexuality; however, most have stressed the Internet's negative impact on intimate relationships. Notably, much of this research has focused on the small minority of men who compulsively engage in online sexual activities (OSA), overlooking the majority of men and women who use OSA recreationally (either individually or with a partner). Addressing these limitations, data on heterosexual adults in committed relationships were taken from the 2004 "ELLE/msnbc.com Cyber-sex and Romance Survey" (n = 8,376). In quantitative analyses, men were less likely than women to express concerns and more likely to hold favorable attitudes about their partner's OSA. With regard to the impact of OSA on intimate relationships, men and women did not differ in becoming "more open to new things," and finding it easier "to talk about what [they] want sexually." Negative impacts were also identified, with women more likely to indicate they had less sex as a result of a partner's OSA, and men more likely to indicate they were less aroused by real sex as a result of their own

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J. Lever Department of Sociology, California State University, Los Angeles, CA, USA OSA. Generally, qualitative results mirrored quantitative ones. Additionally, qualitative data suggested that moderate or light amounts of OSA yield relationship benefits for both female and male users, including increases in the quality and frequency of sex, and increased intimacy with real partners. In addition, men who used the Internet moderately, and men and women who reported being light users, stated that engaging in tandem OSA fostered better sexual communication with partners. Findings underscore the need to explore further the impact that online sexual activities can have on real-life committed relationships.

**Keywords** Internet · Sexuality · Cybersex · Pornography · Heterosexuals · Relationships

#### Introduction

The use of the Internet for online sexual activity (OSA) has increased across the United States over the last decade (Ropelato, 2007). As of 2006, there were 4.2 million active pornographic websites, representing about 12% of all websites on the Internet, and approximately 40 million U.S. adults were regularly visiting Internet pornography websites (Ropelato, 2007). These numbers imply that, at least in the United States, use of Internet-based adult erotica has become mainstream.

Researchers have suggested that the anonymous nature of the Internet, as well as the variety of sexual expression depicted online, provides an ideal atmosphere to explore sexuality (Albright, 2008; Barak & King, 2000; Bargh, McKenna, & Fitzsimons, 2002; Benotsch, Kalichman, & Cage, 2002; Cooper, 2002; Kalichman, Benotsch, Weinhardt, Austin, & Luke, 2002; Ross, 2005). New opportunities for online exploration are accompanied by growing concerns related to compulsive Internet sexuality, including interest in investigating the ways online adult erotica have impacted real social



relationships (Bostwick & Bucci, 2008; Griffiths, 2000; Grov et al., 2008; Meerkerk, Van Den Eijnden, & Garretsen, 2006).

Cooper, Delmonico, and Burg (2000) classified compulsive cybersex use as that exceeding 11 h per week, and several studies have focused on the consequences of compulsive online sexual activity from the users' point of view (Bostwick & Bucci, 2008; Cooper, Galbreath, & Becker, 2004; Cooper, Putnam, Planchon, & Boies, 1999; Cooper, Scherer, Boies, & Gordon, 1999; Southern, 2008). One study found that, although a small minority in their sample, compulsive users reported that their online sexual behavior had jeopardized at least one important dimension of their life offline, creating problems associated with their personal, social, occupational, and/or recreational lives (Cooper, Scherer et al., 1999). Other specific negative life outcomes included loss of employment (Young, 2004), friends' and partners' complaints about participants' Internet use (Cooper et al., 2004), and compulsive users' decreased desire for real-life sexual activity (Cooper et al., 2004; Young, 2004). While these studies have focused on compulsive rather than casual users, researchers have not reported adverse effects on those who use the Internet for OSA on a more occasional basis (Cooper, Putnam et al., 1999; Cooper, Scherer et al., 1999; Cooper et al., 2000).

A few studies have investigated female partners of compulsive users. These studies have found that some spouses and romantic partners in committed relationships feel distress over their partners' compulsive Internet use and believe that their partners' OSA has threatened the stability of their relationships (Bergner & Bridges, 2002; Bridges, Bergner, & Hesson-McInnis, 2003; Hertlein & Piercy, 2006; Manning, 2006; Schneider, 2000, 2003; Whitty, 2003, 2005). Female partners of male compulsive Internet pornography users reported feeling less desirable because they feel unable to compete with the "fantasy women" featured in pornography, both sexually (Bergner & Bridges, 2002; Bridges et al., 2003) and in terms of physical appearance (Manning, 2006; Schneider, 2000). They also reported feeling "objectified" by partners who did not really understand their sexual and/or emotional needs (Bergner & Bridges, 2002). In addition to feeling objectified, Schneider (2000, 2003) found that the female significant others reported feeling hurt, betrayed, and mistrustful of their pornographyusing partners.

Researchers in this area have also found that partners of those who compulsively engage in OSA experience decreased feelings of sexual desirability and sexual desire (Bergner & Bridges, 2002; Bridges et al., 2003; Manning, 2006; Schneider, 2003), decreased sexual satisfaction, and less frequent sexual intimacy (Manning, 2006). Compulsive users also experience decreased sexual desire for their real-life partners, suggesting that "virtual sex" can be experienced as more satisfying than actual sex, thus displacing real-life intimacies (Schneider, 2000, 2003). This

"threat" has been noted in the popular press as well (Amsden, 2003). Still unknown, however, is the extent to which these findings hold true for casual users of Internet erotica.

At present, only one study has tried to gauge the impact of casual users' OSA on their committed relationships. Bridges et al. (2003) studied women whose male partners viewed noninteractive pornographic material. Recruited from message boards on which women discussed their relationships, the 100 female participants answered 50 items on the Pornography Distress Scale, 27 of which were positive statements. Overall, Bridges et al. concluded that the women did not endorse strongly negative attitudes towards their partners' Internet use; rather, the majority expressed neutral to mildly positive attitudes. Although Bridges et al. did not elaborate on the few positive sentiments that participants endorsed, we draw attention to two items embedded in their Table 1: roughly half the women said that their partner's use led to variety in their sexual relationship, and just over half of the women reported that they themselves also viewed pornography. In other words, although their study was based on a small convenience sample, Bridges et al.'s research supports the need to explore consequences of casual (not compulsive) use of OSA, positive consequences as well as negative ones, and women's use as well as men's. Although they do not explore the female participants' own use as a predictor of her attitudes towards partners' use, their findings suggest there is a need to study couples where both partners indulge in OSA for recreational or sexual enhancement purposes. Finally, with few exceptions (e.g., Cooper et al., 2000, 2004; Cooper, Scherer et al., 1999), virtually all research in this area has been characterized by small sample sizes with limited statistical power.

## Current Study

To date, research on the impact of OSA on real-life intimate partners has been focused on female partners of male OSA users, thus yielding no knowledge of how men perceive their female partners' OSA. Furthermore, previous analyses have concentrated on negative effects, and, as stated, have been overshadowed by a narrow focus on the minority of users who engage in compulsive OSA. To our knowledge, no research has empirically examined individuals who engage in OSA in conjunction with their partner.

To address these limitations, this analysis drew from an online sub-sample of 8,376 adults who were currently in committed relationships, and who reported either having used the Internet to access adult materials themselves and/or having knowledge that their partner had done so. Using a multi-method approach incorporating quantitative and qualitative analyses, this study sought to investigate gender differences in concerns about romantic partners' OSA, feelings of personal growth in sexual exploration, and impact on real-life sexuality.



Table 1 Sample characteristics

	Men (n = 6516) n (%)	Women $(n = 1233)$ n (%)	$\chi^2$	df	Cramer's V	p
Education						
High school or less	314 (4.8)	109 (8.8)	84.9	3	.11	<.001
Some college or AA	2056 (31.6)	485 (39.3)				
Bachelors	2629 (40.3)	453 (36.7)				
Post graduate degree	1517 (23.3)	186 (15.1)				
Marital status						
Never married <sup>a</sup>	956 (14.7)	349 (28.3)	233.0	2	.17	<.001
Formerly married <sup>a</sup>	452 (6.9)	170 (13.8)				
Married	5108 (78.4)	714 (57.9)				
Length of time with par	tner					
Under 6 months	235 (3.6)	85 (6.9)	231.0	4	.17	<.001
6 months to 2 years	955 (14.7)	304 (24.7)				
3 years to 6 years	1422 (21.8)	375 (30.4)				
7–10 years	966 (14.8)	168 (13.6)				
10 years+	2938 (45.1)	301 (24.4)				
Has your partner used to	he Internet to access	sex-related materials of	or experienc	es?		
Yes	1648 (25.7)	937 (76.7)	1193.8	1	.40	<.001
No	4774 (74.3)	285 (23.3)				
Time participant spends	s online, in sex-relat	ed activities, in a typica	al week			
None	671 (10.3)	436 (35.4)	678.1	6	.30	<.001
<15 min	1729 (26.5)	424 (34.4)				
16-30 min	1223 (18.8)	136 (11.0)				
31–60 min	1100 (16.9)	98 (7.9)				
61 min to <5 h	1388 (21.3)	105 (8.5)				
5-10 h	313 (4.8)	24 (1.9)				
11 h+	92 (1.4)	10 (.8)				

Note: Some variables have missing data

a Participants indicated currently being in a "commi

" Participants indicated currently being in a "committed relationship" in a subsequent survey question

#### Method

## Participants and Procedure

Data from this project were procured from *ELLE* magazine based on its 2004 "ELLE/msnbc.com Cyber-Sex and Romance Survey," a U.S.-based national survey about the use of Internet personals and adult (i.e., sex-related) websites. During a twoweek period in mid-February 2004, both *ELLE*.com and msnbc. com hosted this survey on their websites, although 98% of participants came from msnbc.com web traffic. Visitors to each site were presented with a banner that linked them to the survey. Survey items were designed by the ELLE/mnsbc.com under consultation from this study's last author. All participants were provided with an opportunity to view the privacy agreement, and asked for their birth year; those under age 18 were dismissed as under-age to participate. About twice the number of participants clicked the banner as chose to finish the actual 31-item survey, which took between 10 and 15 min to complete, and for which participants were provided no incentive.

In total, 15,246 individuals completed the survey (25.3% female). To prevent individuals from responding to the survey

multiple times, a computer program prevented multiple responses from any given computer. Preliminary findings from the survey were reported in *ELLE* magazine (2004, June), on elle. com and msbnc.com, and have been described in detail elsewhere (Albright, 2008; Lever, Grov, Royce, & Gillespie, 2008). All findings reported in this study were based on secondary analyses of the anonymous data from this survey.

The survey was built with skip patterns and follow-up questions; thus, the valid *N* changed based on the specific question being analyzed (e.g., those in a relationship were asked follow up questions about the length of their relationship). Insofar as our analyses were specifically focused on understanding how Internet sexuality impacted committed relationships, most analyses were drawn from self-identified heterosexuals who were (1) married or in a committed relationship, and (2) who had used the Internet for sexual purposes (i.e., done at least one of the following seven activities: read/posted messages on a sex newsgroup or bulletin board; live chatted about sex; intentionally viewed/downloaded erotic images/videos online; emailed sexual images; watched/engaged with someone sexually via webcam; went to a sexual matchmaking site to find someone with compatible sexual interests; or approached someone in a chat



room for an offline sexual encounter), and/or (3) were aware that their partner had used the Internet to access sex-related experiences.

In total, 8,376 heterosexual participants in committed relationships met criteria for sample inclusion for either having used the Internet for OSA themselves, or by indicating that their partners had. In contrast, 7,749 indicated having used the Internet for OSA themselves (independent of their partner's use), and 3,212 reported that both they and their partners had used the Internet for OSA. Comparing these numbers with that of the full dataset (N=15,246), a majority of those not included in the present sets of analyses were either not in some form of a committed relationship (n=3,973), had never used the Internet for sexual purposes themselves (n=3,980), and/or indicated that their partners had not used the Internet for OSA (n=9,411).

We elected to exclude data from gay, lesbian, and bisexual (GLB) participants for two reasons. First, although GLB participants comprised 1,154 of the total sample, the number having used the Internet for OSA, or whose partners had used the Internet for OSA was much smaller (n = 671), thus limiting statistical power. Second, we did not know the gender of participants' partners (salient for bisexuals), thus making it difficult to interpret some findings.

#### Measures

## Demographic Characteristics

Participants provided information on demographic characteristics, including their gender, age, education (high school or less, some college or associate degree, college graduate, graduate degree), marital status (never married, formerly married, married), and length of time with current partner (under 6 months, 6 months to 2 years, 3–6 years, 7–10 years, over 10 years). Data on race and ethnicity were not collected.

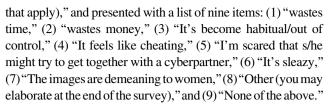
As indicated, only participants in a committed relationship were selected for these analyses. In order to qualify as "committed," participants had to indicate either (1) being married or (2) indicate that they were currently "in a committed relationship" (if unmarried or divorced).

# Time Spent on Online Sexual Activity

Participants indicated how much time in a typical week they spent on sex-related activities online (response categories reported in Table 1).

Concerns and Feelings About Partner's Cybersex Materials and Activities

Participants were asked "Do you have any of these concerns about your partner's interest in cybersex materials? (check all



Participants were also asked, "If you've seen any of your partner's online adult materials, how did they make you feel? (check all that apply)." For this question, participants were presented with seven categories: (1) "I was interested to learn more about what excites my partner," (2) "I was turned on by what I saw," (3) "I felt hurt or betrayed," (4) "I thought what I saw was disgusting," (5) "I worried that I might not be satisfying my partner's sexual needs," (6) "None of the above," and (7) "I never tried to see anything like this."

# Positive Impact on Sexual Relationship

Participants were asked, "If you and/or your partner view adult websites (either alone or together), has it affected your sexual relationship in any of the following positive ways? (check all that apply):"(1)"We have sex more often,"(2)"We've become more open to doing new things," (3) "It's easier to talk about what we want sexually," (4) "We view it together to enhance arousal," (5) "One of us views/both of us view it alone to enhance arousal," (6) "None of the above."

# Negative Impact on Sexual Relationship

Participants were asked, "If you and/or your partner view adult Web sites (either alone or together), has it affected your sexual relationship in any of the following negative ways? (check all that apply): "(1) "We have sex less often," (2) "One of us is/both of us are bored with our sex routines," (3) "I'm more critical of my partner's body," (4) "My partner seems more critical of my body," (5) "I'm less aroused by our real sex than by cybersex," (6) "I feel pressure to perform sexual acts that my partner sees online," (7) "None of the above."

# Qualitative Response

Finally, participants were given an open-ended opportunity to provide additional narrative data at the end of the survey. In total, 2,215 participants (13.9% of 15,246) provided qualitative responses, elaborating on their previous "closed ended" answers by providing details about their positive and negative experiences with online personals and Internet sexuality. A similar proportion (13.2%) of the 8,376 participants selected for the present analyses provided qualitative responses, yielding a qualitative dataset consisting of 1,104 (n = 406 women's, n = 698 men's) short narratives.



#### Analytic Plan

Where appropriate, non-parametric chi-square tests and unadjusted odds ratios were used to assess for bivariate gender differences in (1) concerns about partner's use, (2) feelings toward partner's online adult materials, and (3) positive and (4) negative impact on sexual relationship. In addition, we conducted a series of logistic regressions to predict the aforementioned impacts of OSA (dependent variables) and report adjusted odds ratios comparing women to men (referent group). Models adjusted for the effects of age, education, and length of time in current relationship with partner. We also report Cramer's V, which adjusts chi-square for sample size and allows for better interpretation for the magnitude of the association. Values on Cramer's V range from 0 to 1, with values from .0 to .09 indicating weak, .10 to .30 moderate, and >.30 strong magnitudes (Healey, 2009).

Finally, in an effort to better understand and interpret quantitative findings, the 1,104 qualitative responses were systematically analyzed for coherent themes using the principals of grounded theory and the "constant comparative method" (Glaser & Strauss, 1967). Responses were first organized by gender, then by length of time engaged in OSA per week: no OSA use (16.7% of total), 30 or fewer minutes spent on OSA per week were operationalized as "light" users (34.2% of total), 31 min to 5 h as "medium/moderate" (28.1% of total), and greater than 5 h as "high" (6.4% of total). The remaining 14.6% of the participants providing qualitative narratives were missing data on amount of OSA. We used ATLAS.ti qualitative analysis software to review responses for coherent themes within each group. Group themes were then compared across gender clusters.

### Results

# Quantitative Findings

Gender Differences in Accessing Online Sexual Activities

Table 1 reports sample characteristics for participants who had used the Internet for online sexual activities (valid n=7749). For the sample selected in these analyses, 15.9% were female, lower than the overall sample (n=15,246,25.3% female) and a preliminary indicator that women were less likely to report engaging in online sexual activities. Mean age for men was 39.4 (SD=10.5, range, 19–94) and for women was 35.0 (SD=10.0, range, 19–94). In addition, the sample was overall well-educated, with a majority having completed college. A majority of participants were married, with men (78.4%) being significantly more likely than women (57.9%) to be married. Relationship length was fairly stable, with a majority of participants having been with their current partner for three years or greater, though

men (45.1%) were significantly more likely than women (24.4%) to report being a relationship in excess of 10 years. Finally, only 23.1% of participants reported spending in excess of 1 h per week online engaged in sex-related activities, with men spending significantly more time online than women. Only 1.2% of participants (n = 102) reported spending in excess of 11 h per week on OSA, the threshold for compulsive use (Cooper et al., 2000).

## Concerns About Partner's Use

Table 2 reports unadjusted and adjusted odds ratios for gender differences in participants' concern about their partners' interest in cybersex materials and activities. Only participants who indicated their partner used the Internet for OSA were asked these questions (valid n = 3,212, of whom 2585 had also used the Internet for OSA themselves). Bivariately, the gender differences were consistent across the board, with women significantly more likely to express all concerns, and men the most likely to indicate "none of the above." Furthermore, the magnitude of the difference between men and women was quite large. For example, only 2.9% of men (n = 50) indicated that they thought online images were demeaning to women, compared with 27.9% of women (n = 216), V = .36.

Adjusting for the effects of age, education, and length of time in relationship with current partner did little to impact the magnitude of odds ratios for gender differences in concerns about partner's interest in cybersex materials. While gender differences were significant across the board, the largest gender differences (adjusted) were found for response choices corresponding to "the images are demeaning to women" (adjusted OR = 13.2), "it's sleazy" (adjusted OR = 11.3), and "it feels like cheating" (adjusted OR = 8.0).

# Feelings Toward Partner's Use

Table 3 reports gender differences in feelings toward partner's online adult materials (valid n = 3,212). Men were significantly more likely to endorse positive feelings around their partner's online adult materials, including being "interested to learn more about what excites my partner" (50.8% vs. 34.9%, V = .16) and being "turned on by what I saw" (37.7% vs. 19.6%, V = .20). In addition, men were significantly more likely than women to indicate that they had never tried to view their partner's online adult materials (12.5% vs. 9.2%, V = .05). In contrast, women were significantly more likely than men to express negative feelings about their partner's use of online adult materials, including feeling "hurt or betrayed" (35.0% vs. 5.3%, V = .38), thinking what they saw was "disgusting" (21.1% vs. 1.5%, V =.32), and worrying that "I might not be satisfying my partner's sexual needs" (42.1% vs. 10.0%, V = .37). Adjusting for the effects of age, education, and length of time in relationship with current partner did little to impact the magnitude of odds ratios



Table 2 Gender differences in concerns about partner's interest in cybersex materials and activities

	Men $(n = 1741)$ n (%)	Women $(n = 1471)$ n (%)	$\chi^2$ (1)	Cramer's V	Unadjusted odds ratio (95% CI)	Adjusted <sup>a</sup> odds ratio (95% CI)
Wastes time	98 (5.6)	331 (22.5)	196.1***	.25	4.9 (3.8–6.2)	5.0 (3.9-6.4)
Wastes money	56 (3.2)	134 (9.1)	49.8***	.12	3.0 (2.2-4.2)	3.2 (2.3-4.44)
It's become habitual/out of control	86 (4.9)	363 (24.7)	258.3***	.28	6.3 (4.9-8.1)	6.6 (5.2–8.5)
It feels like cheating	115 (6.6)	528 (35.9)	427.2***	.37	7.9 (6.4–9.8)	8.0 (6.4–10.0)
I'm scared that s/he might try to get together with a cyberpartner	154 (8.8)	347 (23.6)	131.7***	.20	3.2 (2.6–3.9)	3.1 (2.5–3.8)
It's sleazy	56 (3.2)	406 (27.6)	385.0***	.35	11.5 (8.6–15.3)	11.3 (8.4–15.1)
The images are demeaning to women	50 (2.9)	216 (27.9)	406.1***	.36	13.1 (9.6–17.7)	13.2 (9.7–17.9)
Other (You may elaborate at the end of this survey.)	23 (1.3)	101 (6.9)	66.1***	.14	5.5 (3.5–8.7)	5.9 (3.7–9.4)
None of the above	1385 (79.6)	565 (38.4)	565.8***	.42	.16 (.14–.19)	.16 (.14–1.9)

n = 3212 heterosexual men and women in committed relationships, who indicated their partners used the Internet to access sex-related materials \*\*\* p < .001

Table 3 Gender differences in feelings toward partner's online adult materials

	Men $(n = 1741)$ n (%)	Women (n = 1471) n (%)	$\chi^2(1)$	Cramer's V	Unadjusted odds ratio (95% CI)	Adjusted <sup>a</sup> odds ratio (95% CI)
Was interested to learn more about what excites my partner	885 (50.8)	514 (34.9)	81.9***	.16	.52 (.45–.60)	.52 (.45–.60)
Was turned on by what I saw	657 (37.7)	288 (19.6)	126.6***	.20	.40 (.3447)	.40 (.3447)
Felt hurt or betrayed	93 (5.3)	515 (35.0)	457.3***	.38	9.55 (7.55–12.1)	9.86 (7.77–12.5)
Thought what I saw was disgusting	26 (1.5)	311 (21.1)	327.8***	.32	17.7 (11.8–26.6)	18.3 (12.2–27.6)
Was worried that I might not be satisfying my partner's sexual needs	174 (10.0)	620 (42.1)	443.0***	.37	6.56 (5.44–7.92)	6.17 (5.10–7.46)
None of the above	386 (22.2)	174 (11.8)	59.2***	.14	.47 (.39–.57)	.48 (.39–.58)
I never tried to see anything like this	218 (12.5)	135 (9.2)	9.1**	.05	.71 (.56–.89)	.68 (.54–.86)

n = 3212 heterosexual men and women in committed relationships, who indicated their partners used the Internet to access sex-related materials \*\*p < .01; \*\*\* p < .001

for gender differences in feelings toward partner's online adult materials. Confidence intervals and adjusted and unadjusted odds ratios are reported in Table 3.

# Positive and Negative Impact

Participants quantitatively reported on online sexual activities' positive and negative impact on their sexual relationships (see Table 4). The valid n for these data included participants who accessed online materials themselves and/or reported that their partners did so (n = 8271). Regarding positive impact, men were significantly more likely than women to indicate they had sex more often (15.3% vs. 12.8%, V = .03) and to indicate that either one or both partners view online sexual materials alone for the purposes of enhancing arousal (17.1% vs. 14.8%, V = .03), and both these associations remained significant in multivariate modeling. Also of interest was the lack of gender differences on

some variables, whereby sizeable proportions of men (22.9%) and women (23.8%) indicated adult websites helped them become more open to "doing new things," and more than 1 in 5 men and women reported "It's easier to talk about what we want sexually." In addition, sizeable proportions of women (17.1%) and men (14.9%) reported viewing adult websites with their partner in order to enhance sexual arousal.

There were, however, several gender differences when reporting negative impact. Women were significantly more likely than men to report having sex less often (15.0% vs. 9.4%, V=.07), to feel their partners were more critical of their bodies (9.2% vs. 1.2%, V=.20), and to feel pressured to perform sexual acts that their partner saw online (17.1% vs. 1.3%, V=.30). In contrast, although only a minority of males expressed these sentiments, men were significantly more likely than women to report they were more critical of their partner's body (8.9% vs. 2.6%, V=.10), and that they were less aroused by "real" sex



<sup>&</sup>lt;sup>a</sup> Adjusted, using logistic regression, for participant's age, education, and length of time in relationship with current partner. All ps < .001

<sup>&</sup>lt;sup>a</sup> Adjusted, using logistic regression, for participant's age, education, and length of time in relationship with current partner. All ps < .001

Table 4 Positive and negative impact of viewing adult websites on sexual relationships

	Men (n = 6515) n (%)	Women (n = 1756) n (%)	$\chi^2(1)$	Cramer's V	Unadjusted odds ratio (95% CI)	Adjusted <sup>a</sup> odds ratio (95% CI)	Adjusted sig.
Positive impact							
We have sex more often	997 (15.3)	224 (12.8)	7.1**	.03	1.2 (1.1–1.4)	1.3 (1.1–1.5)	***
We've become more open to doing new things	1489 (22.9)	418 (23.8)	0.7	<.01	_	-	
It's easier to talk about what we want sexually	1373 (21.1)	397 (22.6)	1.9	<.01	-	-	
We view it together to enhance arousal	973 (14.9)	310 (17.7)	7.8**	.03	.82 (.71–.94)	-	
One of us views/both of us view it alone to enhance arousal	1114 (171)	260 (14.8)	5.2*	.03	1.2 (1.02–1.4)	1.2 (1.01–1.3)	*
None of the above	3669 (56.3)	983 (56.0)	0.1	<.01	_	_	
Negative impact							
We have sex less often	613 (9.4)	263 (15.0)	45.3***	.07	.6 (.50–.69)	.6 (.48–.67)	***
One of us is/both of us are bored with our sex routines	764 (11.7)	211 (12.0)	0.1	<.01	-	-	
I'm more critical of my partner's body	577 (8.9)	45 (2.6)	78.8***	.10	3.7 (.27-5.0)	4.2 (3.1–5.7)	***
My partner seems more critical of my body	77 (1.2)	161 (9.2)	315.7***	.20	.12 (.09–.16) .12 (.09–.16		***
I'm less aroused by our real sex than by cybersex	597 (9.2)	64 (3.6)	57.3***	.08	2.7 (2.0–3.5)	2.7 (2.1–3.6)	***
I feel pressure to perform sexual acts that my partner sees online	87 (1 3)	300 (17.1)	769.2***	.30	.07 (.05–.08)	.07 (.05–.09)	***
None of the above	4871 (74.8)	1182 (67.3)	39.2***	.07	1.4 (1.3–1.6)	1.4 (1.3–1.6)	***

Note: n = 105 participants were not asked this these questions due to incorrect skip pattern embeded in the electronic survey. n = 8721 heterosexual men and women in committed relationships who either they and/or their partners have accessed online sex-related materials. –, not significant \*p < .05, \*\*p < .01, \*\*\*p < .001

(9.2% vs. 3.6%, V = .08). However, a majority of participants (significantly more so among men, 74.8% vs. 67.3%, V = .07) indicated that they had experienced "none of the above" for the question regarding negative impact. Finally, the magnitude of odds ratios and levels of significance remained similar when using multivariate modeling.

## Viewing Adult Materials in Tandem with Partner

Unsurprisingly, viewing adult websites with a partner in order to enhance sexual arousal was positively associated with positive consequences and inversely associated with negative consequences. Those who had viewed adult websites with a partner in order to enhance sexual arousal were more likely to report an increase in the frequency of sex (OR = 8.37, V = .37), an increase in openness to doing new things (OR = 11.59, V = .45), finding it easier to talk about what they wanted sexually (OR = 10.95, V = .44), and being more likely to view it alone in order to enhance arousal (OR = 3.15, V = .19). They were also less likely to have a reduction in the frequency of sex (OR = .27, V = .10), less likely to report boredom with sex routines (OR = .27).

.52, V = .06), less likely to report being critical of their partner's body (OR = .70, V = .03), and less likely to experience decreased arousal by real sex (versus cybersex) (OR = .45, V = .06). All confidence intervals for odds ratios are significant at p < .05. There were no significant differences between those who had used adult websites with a partner in order to enhance sexual arousal and those who did not in whether they felt pressure to perform sexual acts that their partner saw online.

#### **Qualitative Findings**

Patterns that emerged from the qualitative data generally mirrored our quantitative findings. Both men's and women's narratives suggest that for some people in committed relationships, OSA yielded tangible relational benefits. Both men and women who identified as light or moderate users of OSA credited their online sexual activities with subsequent increases in the quality and frequency of sex with their real life partners. Further, participants, particularly those who used OSA moderately and especially light users, stated that their individual use of OSA improved their relationships because it enhanced their sense of



<sup>&</sup>lt;sup>a</sup> Adjusted using logistic regression, for participant's age, education, and length of time in relationship with current partner

intimacy with their partners. As this 29-year-old woman who used OSA moderately stated, "What I have found on the net brings me and my partner closer together. And we have more sex than we have had in years."

Additionally, some participants articulated the benefits of engaging in online sexuality with their partners. In particular, men who used the Internet moderately and men and women who identified as light users stated that tandem use of online sexual activities fostered increased honesty, openness, and sexual communication with their partners, resulting in both heightened sexual satisfaction and closer relationships. Collectively, these could be referred to as sexual and relational intimacy. As one 27-year-old man who engaged in OSA for less than 1 h a week stated, "It has helped me to discover new ways to satisfy my partner and be more open to things my partner wants to try on me." Although men who identified as light or moderate OSA users, as well as women who engaged in light OSA, recounted engaging in online sexual activities with their partners to enhance arousal, men in particular characterized such use as a form of mutual exploration. Further, some men who identified as light or moderate OSA users framed adult websites as fulfilling an educational function which subsequently expanded their sexual options. As this 47-year-old man who used OSA lightly stated, "It has been a learning experience. It sure has made sex easier to discuss, and yes, we have tried to emulate some of what we saw."

Additionally, women who identified as moderate or light users indicated that online sexual exploration, alone or with their partners, had normalized their desires and ultimately improved their relationships. Female users who were lightly engaged with OSA also reported an increased sense of self-esteem or improved body image since venturing online. This was especially true of women who enjoyed amateur pornography, like this 46-year-old woman: "I enjoyed doing that with him [perusing amateur pornography sites] because the women on there had regular bodies with flaws. I didn't feel self-conscious about my body anymore. I thought it was very exciting and we shared a lot of sexual experiences."

Although both women and especially men reported that individual or tandem engagement with OSA benefited their committed relationships, women in particular lodged numerous complaints about the negative impact of their partners' online sexual activities. Some women, particularly those who did not use OSA themselves, stated that they had less frequent or poorer quality sex as a result of their male partners' electronic activities. For example, this 28-year-old married woman who did not use OSA stated, "When my husband first began working second shift he was constantly looking at porn while I was sleeping. Our sex life became nonexistent; he was unable to become aroused by me."

Some female participants, even those who actively engaged in online sexual activities, indicated that when their male partners attempted to emulate the images they viewed on adult websites, new problems were introduced into their relationships. Women claimed that their male partners acquired sexual tastes and

proclivities online (often described by women as "weird," "disgusting," or "deviant") that women did not wish to accommodate in their real sexual relationships. As a 28-year-old married woman who used OSA moderately stated, "He also gets crazy ideas about what women like or don't like from pornography. I try to tell him that every girl is different and what they say I might like turns me OFF, but I don't know if he truly hears it."

As the aforementioned woman's response suggests, after engaging with OSA, some men appear to become focused on actualizing their virtual fantasies with diminished regard for their female partners' real sexual and emotional needs. Further, some men in each usage category conceded that their sexual energy, formerly reserved for their partners, had now been siphoned off either partially or completely by online sexual activities. In some cases, this was attributed to sexual exhaustion, such as for this 53-year-old married man who used OSA moderately: "Sometimes my wife approaches me for sex after I've recently masturbated to online porn, and I don't feel 'up' to it, which disappoints her. This makes me feel bad and guilty." But a few men, particularly moderate users, were candid about finding their real life partners less appealing than the idealized images they encountered online, such as another 53-year-old moderate OSA user: "E-sex is a trap. It lures you in and then delivers images that make you compare your real live woman to those on the screen, and that's not good." Others voiced that online sexuality was sometimes preferable to sex with their real life partners because when online, their own desires weren't compromised by the necessity of responding to, or respecting their actual partner's sexual preferences and needs. For example, this 35-year-old man who uses OSA moderately stated, "With my spouse, my desires are filtered by what works for her. Online I can fantasize/be stimulated by what I want, when and how I want it." Nonetheless, this sentiment was expressed by only a minority of male participants.

Some women, particularly light users and non-users, feared that their male partners' online activities held the potential for real-life infidelity or had already fostered such cheating, but many more women with various levels of personal engagement with OSA experienced their male partners' use as a form of betrayal or cheating in and of itself, regardless of whether real life sex actually transpired outside of the relationship. Further, many women, particularly light users and non-users, stated that their male partners' reliance on Internet pornography and other sexual activities (such as sexual chat) eroded their self esteem, body image, and confidence in the integrity of their relationships. This 29-year-old married woman who did not use OSA stated:

I think that "chatting" with a person on the Internet about sex and sexual topics is demeaning to the person you are with. My husband makes me feel like I am not good enough for him and that I am fat and ugly when he goes online and "chats" with other women about sex. I constantly worry that he will try to meet someone he 'chats'



with and actually have an affair... Every time he logs onto "chat" I feel like he is telling me, "I don't love you, I don't feel turned on by you, I want someone else, you are not what I want."

While some female participants, such as the one above, understood their male partners' OSA as hurtful and harmful to their relationships, it should be noted that those women who merely endured their husbands' or boyfriends' online "dalliances" were considerably less positive about the effects of OSA than the many women who reported their own personal engagement with online sexuality. Female participants whose narratives were the most positive about the effects of OSA on their relationships were those who actively engaged with OSA themselves, either on their own or in tandem with their partners.

For the most part, where men acknowledged the negative impact of OSA on their relationships, it was their own online engagements to which they referred. Men across usage categories reported that their own engagement with OSA made their partners feel "hurt," "threatened," and/or "upset," and some men, particularly those who used OSA moderately, admitted that their OSA had triggered the dissolution of their relationships. Some men, particularly those who identified their OSA use as moderate or heavy, characterized their relationship to OSA as "out of control" or as "an addiction" and expressed a desire to reduce or cease their activities in order to mend their relationships. However, as the following narrative illustrates, other men persisted in using OSA, either overtly or covertly, despite the distress it caused their female partners. Another 53year-old moderate OSA user continued to engage in OSA despite his wife's disapproval: "My wife would not approve, and she has said she does think it is cheating, so I don't let her know I sometimes do it."

When men expressed negative concerns about wives' or girlfriends' online sexual behavior, they overwhelmingly cited their female partners' use of the Internet as a catalyst for real life infidelity. This sentiment, from a 45-year-old man who eschewed OSA was typical: "Due to Internet smut, IM [Instant Message], and chat rooms, my partner had an affair that almost ended our marriage." Feelings of betrayal unrelated to real life sexual affairs, unwanted sexual pressure from partners, and narratives suggesting that female partners had become more critical of their husbands' or boyfriends' bodies were virtually nonexistent in men's responses.

# Discussion

The increase in Internet use across the United States has been accompanied by a corresponding increase in engagement with online sexuality. Although a wide variety of adult websites have been developed and are utilized every day by millions across the globe (Ropelato, 2007), there has been little empirical research

evaluating the ways in which online adult websites and cybersex have impacted people in committed relationships. Addressing this limitation, qualitative and quantitative data from a national online survey in the U.S. were utilized to evaluate gender differences in self-perceived problems, feelings of personal growth in sexual exploration, and feelings and concerns about romantic partners' use of online adult materials.

Some limitations should be noted. First, our sample was not probability based, and the survey did not gather information on race and ethnicity. People with higher socioeconomic status tend to be somewhat overrepresented in Internet research, although recent data suggest this gap is closing (Gosling, Vazire, Srivastava, & John, 2004; Rainie & Horrigan, 2005). Our sample was well-educated, and also predominantly male, possibly reflecting men's greater interest in the topic (annual *ELLE/* msnbc.com surveys in prior and subsequent years yielded samples where women comprised one-third to one-half of participants). Given that, the broad-based appeal of msnbc.com, where most participants were recruited, provided a large enough sample with adequate incidence on key variables to compare men and women, while also adjusting for the effects of education, age, and length of time in current relationship.

Second, to increase participation rates, the mass media survey was necessarily short and relied on single-item measures of key variables. Because our project was based on secondary analyses of the resulting data set, several of the items had less than ideal wording and this limits the interpretations of the results. Although participants were given an opportunity to provide more information in a qualitative format at the end of the survey, the quantitative-focused format of the survey may have censored the complete range of possible responses. Further, because only a portion of participants volunteered to respond to the open-ended question at the end of the survey, their narratives may not be fully representative of the experiences of the larger sample. Finally, although participants were asked to report on their own online sexual activities, as well as their partners' OSA, such data were collected without any ability to crosscheck between members of a given couple. Given that men endorsed the relational benefits of OSA more strongly than women, the question of perception arises: are some of the same men who think OSA is beneficial married to women who blame OSA for ruining their marriages? Future research in which both members of a couple contribute data would facilitate greater understanding of how discrepancies in perception of Internet sexuality may affect relationships.

In light of these limitations, our approach had multiple strengths and noteworthy findings. The large sample size increased statistical power in our ability to analyze relatively rare occurrences (e.g., while only 1.2% of men indicated their partner was critical of their body, we still had adequate incidence to perform statistical analyses). Internet surveys can provide considerable protection for participants' anonymity, and it has been shown that participants are more willing to reveal

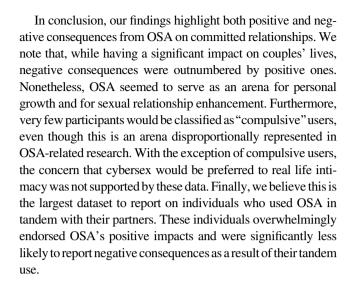


sensitive information on a computer than in face-to-face interviews, or even traditional pen-and-paper surveys (Cooper, Scherer et al., 1999; Ross, 2005). In addition, this analysis took a multiple-method approach whereby quantitative findings were mirrored and supported with qualitative insight, and vice versa. Such an approach provides an ideal opportunity for well-informed empirical analyses.

With regard to feelings about partners' online adult activities, men were most likely to report enhanced interest, including feeling aroused and being interested to learn more about what excited their female partners. In contrast, women were more likely to report negative feelings about their partners' online adult materials, including feeling hurt/betrayed, thinking what they saw was disgusting, and worrying about satisfying partners' needs. Clearly, these divergent findings warrant further investigation. Of particular interest, and unfortunately not available to these analysis, would be comprehensive information on the content of adult materials participants were viewing online. Certainly, most adult online websites are geared toward heterosexual men; a large proportion of these websites may include material that most women may find objectifying and demeaning; hence this was a probable driving force in the gender differences observed in these analyses.

The qualitative data suggest that online sexual activities were perceived as benefiting romantic relationships most when OSA were experienced relationally, as a means of enhancing and expanding a couple's sexual repertoire or as a means of fostering sexual communication. By engaging with adult websites and other online venues, partners may defuse some of the discomfort that even couples who have been together for a long time occasionally experience when trying to articulate their sexual desires. The sexual variety depicted online provided couples with a reference and a means of normalizing their fantasies. It may be that sexual use of the Internet enhances intimacy for couples who are already relatively well-synchronized in their sexual tastes and willingness to experiment. Further, women's responses suggested that individual online sexual exploration can also enhance relationships when it results in one partner's increased self-esteem, confidence, and sexual curiosity.

In other cases, there appear to be gendered differences in how some men and some women understood the meaning of OSA, whereby men downplayed the relational significance of their own OSA and women interpreted their male partners' Internet use as a form of rejection and betrayal. For men who persist in using OSA over their female partners' objections, engaging in OSA may signify an expression of male privilege or their greater power within their relationships, or simply their insensitivity to their partners' expressed needs. Overall, the high accessibility of online sexual venues challenged committed couples to redefine the acceptable limits of fantasy and the meaning of monogamy. Like other arenas in which couples must negotiate trust and boundaries, OSA holds the potential for disagreements that may ultimately endanger the relationship.



Acknowledgements We thank *ELLE* magazine for access to the data from the *ELLE*/msnbc.com Cyber-Sex and Romance Survey. Christian Grov acknowledges the research team at the Center for HIV/AIDS Educational Studies and Training (CHEST) for their intellectual contributions on earlier drafts of this manuscript. Janet Lever, the senior research consultant to *ELLE* on this project, acknowledges Cynthia Cobaugh and Alex Postman for their assistance in survey construction, and also thanks Carol Edwards, who helped create the database. Brian Gillespie and Tracy Royce are grateful for support from the Departments of Sociology at UCI and UCSB, respectively. An earlier version of this paper was presented at the 2009 Eastern and Midcontinent Regional Meeting of the Society for the Scientific Study of Sexuality.

## References

Albright, J. M. (2008). Sex in America online: An exploration of sex, marital status, and sexual identity in Internet sex seeking and its impacts. *Journal of Sex Research*, 45, 175–186.

Amsden, D. (2003). Not tonight, honey. I'm logging on. Internet porn Is everywhere; even "nice" guys are hooked. So where does that leave their girlfriends? *New York Magazine*. Available at http://nymag.com/nymetro/news/trends/n\_9349/.

Barak, A., & King, S. A. (2000). The two faces of the internet: Introduction to the special issue on the internet and sexuality. *CyberPsychology and Behavior*, *3*, 517–520.

Bargh, J. A., McKenna, K. Y. A., & Fitzsimons, G. M. (2002). Can you see the real me? Activation and expression of the "true self" on the Internet. *Journal of Social Issues*, 58, 33–48.

Benotsch, E. G., Kalichman, S. C., & Cage, M. (2002). Men who have met sex partners via the Internet: Prevalence, predictors, and implications for HIV prevention. *Archives of Sexual Behavior*, *31*, 177–183.

Bergner, R. M., & Bridges, A. J. (2002). The significance of heavy pornography involvement for romantic partners: Research and clinical implications. *Journal of Sex and Marital Therapy*, 28, 193–206.

Bostwick, J. M., & Bucci, J. A. (2008). Internet sex addiction treated with naltrexone. *Mayo Clinic Proceedings*, 83, 226–230.

Bridges, A. J., Bergner, R. M., & Hesson-McInnis, M. (2003). Romantic partners' use of pornography: Its significance for women. *Journal of Sex and Marital Therapy*, 29, 1–14.

Cooper, A. (Ed.). (2002). Sex and the Internet: A guidebook for clinicians. New York: Brunner-Routledge.



- Cooper, A., Delmonico, D. L., & Burg, R. (2000). Cybersex users, abusers, and compulsives: New findings and implications. Sexual Addiction & Compulsivity. 7, 5–29.
- Cooper, A., Galbreath, N., & Becker, M. A. (2004). Sex on the Internet: Furthering our understanding of men with online sexual problems. *Psychology of Addictive Behaviors*, *18*, 223–230.
- Cooper, A., Putnam, D. E., Planchon, L. A., & Boies, S. C. (1999). Online sexual compulsivity: Getting tangled in the net. Sexual Addiction & Compulsivity, 6, 79–104.
- 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*, 26, 154–164.
- Elle Staff. (2004, June). Girls gone wired. Elle, pp. 98-100.
- Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine Transaction.
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist*, 59, 93–104.
- Griffiths, M. (2000). Excessive internet use: Implications for sexual behavior. *CyberPsychology and Behavior*, *3*, 537–552.
- Grov, C., Bamonte, A. B., Fuentes, A., Parsons, J. T., Bimbi, D. S., & Morgenstern, J. (2008). Exploring the Internet's role in sexual compulsivity and out of control sexual thoughts/behaviour: A qualitative study of gay and bisexual men in New York City. Culture, Health, and Sexuality. 10, 107–124.
- Healey, J. F. (2009). Statistics: A tool for social research (8th ed.). Florence, KY: Wadsworth.
- Hertlein, K. M., & Piercy, F. P. (2006). Internet infidelity: A critical review of the literature. *Family Journal*, *14*, 366–371.
- Kalichman, S. C., Benotsch, E. G., Weinhardt, L. S., Austin, J., & Luke, W. (2002). Internet use among people living with HIV/AIDS: Association of health information, health behaviors, and health status. AIDS Education and Prevention, 14, 51–61.

- Lever, J., Grov, C., Royce, T., & Gillespie, B. (2008). Searching for love in all the "write" places: Exploring Internet personals use by sexual orientation, gender, and age. *International Journal of Sexual Health*, 20, 233–246.
- Manning, J. C. (2006). The impact of Internet pornography on marriage and the family: A review of the research. *Sexual Addiction and Compulsivity*, 13, 131–165.
- Meerkerk, G. J., Van Den Eijnden, R. J., & Garretsen, H. F. (2006). Predicting compulsive Internet use: It's all about sex! *CyberPsychology and Behavior*, *9*, 95–103.
- Rainie, L., & Horrigan, J. (2005). A decade of adoption: How the Internet has woven itself into American life. Available at http://www.pewinter net.org/PPF/r/148/report\_display.asp.
- Ropelato, J. (2007). Internet pornography statistics. Available at http:// internet-filter-review.toptenreviews.com/internet-pornographystatistics.html.
- Ross, M. W. (2005). Typing, doing, and being: Sexuality and the Internet. *Journal of Sex Research*, 42, 342–352.
- Schneider, J. P. (2000). Effects of cybersex addiction on the family: Results of a survey. Sexual Addiction and Compulsivity, 7, 31–58.
- Schneider, J. P. (2003). The impact of compulsive cybersex behaviors on the family. *Sexual and Relationship Therapy*, 18, 329–354.
- Southern, S. (2008). Treatment of compulsive cybersex behavior. Psychiatric Clinics of North America, 31, 697–712.
- Whitty, M. T. (2003). Pushing the wrong buttons: Men's and women's attitudes toward online and offline infidelity. CyberPsychology and Behavior, 6, 569–579.
- Whitty, M. T. (2005). The realness of cybercheating: Men's and women's representations of unfaithful Internet relationships. *Social Science Computer Review*, 23, 57–67.
- Young, K. S. (2004). Internet addiction: A new clinical phenomenon and its consequences. *American Behavioral Scientist*, 48, 402–415.

