This is an author produced version of a paper published in Sexual Health. This paper has been peer-reviewed but does not include the final publisher proof-corrections or journal pagination.

Citation for the published paper:

Daneback, Kristian; Sevcikova, Anna; Månsson, Sven-Axel; Ross, Michael W.. (2013). Outcomes of using the internet for sexual purposes : fulfilment of sexual desires. Sexual Health, vol. 10, issue 1, p. null

URL: <https://doi.org/10.1071/SH11023>

Publisher: CSIRO Publishing

This document has been downloaded from MUEP (<https://muep.mah.se>) / DIVA (<https://mau.diva-portal.org>).

Outcomes of using the internet for sexual purposes: fulfilment of sexual desires

Kristian Daneback^{A,E}, Anna Sevcikova^B, Sven-Axel Månsson^C and Michael W. Ross^D

^ADepartment of Social Work, University of Gothenburg, Gothenburg 405 30, Sweden.

^BFaculty of Social Studies, Masaryk University, Brno 602 00, Czech Republic.

^CFaculty of Health and Society, Malmö University, Malmö 205 06, Sweden.

^DSchool of Public Health, University of Texas, Houston, TX 77030, USA.

^ECorresponding author. Email: kristian.daneback@socwork.gu.se

Abstract. *Background:* The purpose of the current study was to examine the characteristics of those who report fulfilment of sexual desires as a result of internet use for sexual purposes and which sexually related online activities contribute to the fulfilment of sexual desires. *Methods:* Data were collected through a questionnaire posted on Swedish-language websites in 2009. The sample comprised 1614 respondents who reported using the internet for sexual purposes, 62% women and 38% men. *Results:* The results showed that the majority of the respondents had their sexual desires fulfilled as a result of their sexually related activities on the internet; 21% to a great extent and 59% to a small extent, but 20% did not have their sexual desires fulfilled. Using a multinomial logistic regression analysis, respondents who had their sexual desires fulfilled to a small or great extent were each compared with those who did not have their sexual desires fulfilled at all. At the level of individual characteristics and sexual behaviours, those with no fulfilment of their sexual desires did not differ from those who had their sexual desires fulfilled, with the exceptions of age and masturbation. In comparison to fulfilment to a small extent, fulfilment of sexual desires to a great extent was predicted by a larger number of sexually related online activities that were based on interaction. *Conclusion:* The findings suggest that the internet may contribute to fulfilment of sexual desires among a large internet population, irrespective of sex or sexual identity.

Additional keywords: online sexual activities, sexuality, Sweden.

Received 15 February 2011, accepted 21 May 2012, published online 14 December 2012

Introduction

The massive volume of sexual material and sexual merchandise available on the internet has made it possible for people to explore virtually anything imaginable related to sexuality.¹ Through its specific characteristics such as anonymity and virtual proximity, the internet has allowed users to overcome or break away from some of the prevailing sexual scripts guiding human sexual behaviour in a face-to-face setting.² By typing instead of talking, along with virtual proximity, the internet has enabled people to participate in detailed conversations about how to have sex or just anonymously watch these conversations unfold online.³ Moreover, individuals and couples have been able to approach strangers online and ask for sexual encounters offline,⁴ and others have engaged in detailed sexual talk while masturbating.⁵ In addition, men and women have been able to consume pornography and to purchase sexual merchandise online without the stigma attached to these behaviours in public settings offline.^{6,7} All these forms of behaviours are examples of sexually related online activities, which, according to Leiblum and Döring's definition, capture all sexually related content and activities observable on the internet.⁸

Prior research has focussed on sexual activities on the internet as well as on the characteristics of those who use the internet for sexual purposes. The outcomes of using the internet for these purposes have also been researched, although to a lesser extent. As sexuality researchers turned their eyes to the emergence of the internet in the mid-1990s, both the potential benefits and possible risks were discussed. From a professional perspective, it could be possible to use the new technology to obtain information about various sexual issues, and to use the internet in sexual education and for sexual therapy.^{9,10} From a user's perspective, the internet could help establish and maintain sexual and romantic relationships, connect with various subgroups not present in the local community, and allow for the exploration of one's own sexuality through adult websites and purchasing sexual merchandise from online sex shops.^{7,11} However, many of these benefits have not been studied and, to the present day, they remain as mere speculations, that have not yet been subjected to empirical studies.^{6,12} Overall, only little is known about the effects and influences of the internet on human sexuality.

In one of the world's first large-scale surveys, comprising an internet convenience sample, it was found that 92% of the

respondents considered their use of the internet for sexual purposes nonproblematic.¹³ This result was corroborated in subsequent studies in the USA as well as in Sweden where similar proportions of respondents reported their use to be nonproblematic.^{14,15} Specifically, in a Swedish study, it was found that the majority consider their use of the internet for sexual purposes as positive or even very positive.¹⁴ However, population-based figures are lacking.

More detailed studies of specific online sexual activities have shown that there are various outcomes of sexually related online activities. For example, having cybersex defined as a web-based mediated form of sexual encounter includes the potential of improving and intensifying partner relationships,^{12,16,17} of experiencing better sex¹⁸ and of approximating sexual encounters not possible in offline settings.^{4,7} In greater detail, prior research has recognised a group of men who do not consider themselves homosexuals but seek sex with other men on the internet.^{4,19} In relation to online pornography, the use of pornography by couples has been associated with a permissive erotic climate, (i.e. expressing personal sexual desires within the relationship),²⁰ and high pornography consumption in individuals has been linked to positive factors such as satisfaction of sexual needs or curiosity.^{21,22} It has also been found that active participation in a sexually related online discussion group may facilitate the expression of one's sexual self and contribute to coming out.²³ Likewise, seeking sexual advice and other sex-related information on the internet has been perceived as a useful source of experience-based opinions, suggestions, and emotional support.²⁴ Consequently, online sexual activities may have several positive impacts on sexuality such as improving sex-related knowledge, increasing satisfaction in partner relationships and fulfilment of sexual desires. According to a study on understanding sexual desire, it was found that genital arousal, daydreams or sexual fantasies are the best index of this term.²⁵ The fulfilment of sexual desires broadly refers to sexual gratification associated with sexual arousal, sexual fantasies or daydreams.

However, in spite of the fact that internet use for sexual purposes is regarded as unproblematic or even positive by many users, to the best of our knowledge, there are no studies available providing empirical evidence about those who report having their sexual desires fulfilled by their sexually related online activities. Thus, the purpose of the current study was to examine the characteristics of those who report fulfilment of their sexual desires, and whether the anonymous internet provides access to sexual content and connecting people with various sexual needs and empowers those people (e.g. women, gays and lesbians) who may have difficulty reaching fulfilment of their sexual needs in their traditional social milieu.^{4,18}

Furthermore, the internet provides a wide range of sexually related online activities for individuals to engage in.^{6,12} These might be qualitatively different in that they vary from less interactive (e.g. accessing sexual information, consuming online pornography) to highly interactive activities such as having cybersex. For instance, cybersex, sometimes followed by experimenting with partner selection as well as different sexual scripts,¹² may contribute greatly to the fulfilment of sexual desires.¹⁸ Nevertheless, the possible link between sexually related online activities and the fulfilment of sexual

desires is currently unknown. Therefore, an additional aim of the current study was to examine which sexually related online activities may predict fulfilment of sexual desires and to what extent.

Methods

Procedure

The web questionnaire was administered in the Swedish language via four sites: three websites and one Swedish university. Two websites were portal sites oriented towards adults, including a collection of hyperlinks to a variety of web resources (e.g. newspapers, weather forecasts) and various applications (e.g. email, chats), with one leaning more towards online dating. The third website was a youth community, one of the two largest in Sweden for 16- to 29-year-olds. None of the sites were sexual or sexually explicit in their nature. The sites were Passagen.se, Spray.se, and Playahead.se with ~500 000, 400 000 and 100 000 unique visitors per week respectively. The size of the university was nearly 21 000 students.

Between 27 February and 8 March in 2009, a banner was placed on the Passagen.se and Spray.se (part of the Eniro Corporation) web portal site and was visible at all times for all visitors to that site. The banner read 'Participate in a study on love and sex on the internet'. On 11 March, an email briefly describing the study, including a hyperlink to the web questionnaire, was sent to all active student email addresses registered at the university. Finally, on 18 March, a message with similar content to the university email was randomly sent by the administrators to 10 000 members of the Playahead.se community aged 18 years or older. Data collection ended on 20 March 2009.

Participation was totally anonymous and there was no way of connecting completed questionnaires to respondents. Potential personal identifiers such as name and email addresses were not asked for. As such, the study was exempt from an ethical review.

Instrument

The instrument was based on an earlier instrument that was used in a similar study in 2002,²⁶ but revised and expanded. The web questionnaire comprised 85 questions divided into six subsections. However, by using skip patterns, we were able to personalise the question to some extent. This could reduce the number of questions to 51 for some respondents.

Sample

A total of 1913 respondents completed the questionnaire. The majority of the respondents were recruited from the university (955 respondents) and from the Playahead.se web community (580 respondents). The numbers recruited from Spray.se and Passagen.se were 273 and 105 respondents respectively. The sample comprised 66% women and 34% men. The mean age for women was 28 years and 29 years for men. Fourteen respondents were over 65 years and were excluded from this study. Approximately 1% reported that they were from a country outside Sweden. For this analysis, only those who reported using the internet for sexual purposes were included

($n=1614$), of whom 62% were women and 38% men. Participants were selected if they replied yes to one or more of the following items: reading erotic novels, viewing pornography, chatting about sex, seeking information about sex, shopping for sex products, flirting, seeking romantic partners or seeking sex partners.

Dependent variable

The questionnaire included one item on sexual desire and the internet. Participants who reported using the internet for love and sexual purposes were asked to respond to the following statement: 'I have been able to fulfil my sexual desires because of my online activities.' The response alternatives were 'not at all', 'to a small extent', 'to a moderate extent', 'to a great extent' and 'to a very great extent'. To facilitate the analysis, these response alternatives were recoded into a three-category dependent variable: sexual desire not fulfilled, sexual desire fulfilled to a small extent and sexual desire fulfilled to a great extent.

Independent variables

The independent variables revolved around three areas: sociodemographic, sexual behaviour offline, and sexual behaviour online. Sociodemographic variables comprised sex (male or female), age (age groups: 18–24 years, 25–34 years and 35–65 years), relationship status (in a relationship or not in a relationship). Sexual orientation was measured by the respondents' reported sexual experience on a five point version of the Kinsey Heterosexual–Homosexual scale (sexual experience with women only, mostly women but sometimes men, both men and women, mostly men and sometimes women, or with men only).²⁷ Those respondents who reported opposite sexual experience only were coded as heterosexual, those who reported same-sex only experience were coded as gay or lesbian ($n=31$), and those who reported sexual experiences with both sexes were coded as bisexual ($n=208$). Due to the low number of gay men and lesbians, the original variable of sexual orientation was collapsed into a two-category variable (heterosexual or nonheterosexual). Sexual behaviour offline included frequency of having sex (not in last 12 months, rarely, monthly, weekly, daily) and frequency of masturbation (never, rarely, monthly, weekly, daily). Sexual behaviour online was measured by a yes–no scale for several sexually related activities engaged in on the internet. These items were: reading erotic novels, viewing pornography, chatting about sex, seeking information about sex, shopping for sex products, flirting, seeking romantic partners, seeking sex partners, having had sex with a partner met online and having had cybersex.

Analysis

Data were analysed by SPSS ver. 17 (SPSS Inc., Chicago, IL, USA). Demographic characteristics were examined by using descriptive statistics. A multinomial logistic regression analysis was used to generate separate profiles for the groups 'sexual desire fulfilled' and 'sexual desire somewhat fulfilled' compared with the reference category 'sexual desire not fulfilled'. Effects are expressed in odds ratios (OR) where values above 1 indicate increased effects and values below 1 indicate decreased effects. Consequently, a value of 1 indicates no effect.

Results

The results showed the majority of the 1082 respondents who responded to the question reported to have had their sexual desires fulfilled as a result of their sexually related activities on the internet, 21% to a great extent and 59% to a small extent, while 20% did not have their sexual desires fulfilled. Age and sex differences are displayed in Table 1. The results show that the highest proportions of sexual desires fulfilled were found among men and women aged 25–34 (89% men v. 85% women). The lowest proportion was found among men and women aged 18–24 (81% men v. 73% women).

The respondents engaged in a range of sex-related activities on the internet, with seeking information about sex being the most endorsed activity (56%) followed by viewing pornography (55%), flirting (51%), reading erotic novels (41%), chatting about sex (32%), shopping for sex products (30%), seeking romantic partners (28%) and seeking sex partners (18%). Forty-five percent of the respondents reported having had sex with a partner they had met online and 25% claimed to have had cybersex.

Table 2 displays the results of the multinomial logistic regression analysis. The likelihood ratio test of the overall model was significant, indicating a well-fitting model ($P<0.001$). Age was found to be a significant predictor of having had sexual desire fulfilled through online sexual activities. Respondents aged 25–34 years were twice as likely as 18- to 24-year-olds to have had their sexual desire fulfilled compared with those who had not had their sexual desire fulfilled through online sexual activities. Other than age, none of the social demographic variables could predict group membership.

The results indicated that those who masturbated daily compared with rarely were more likely to have had their sexual desires fulfilled compared with those who had not had their sexual desires fulfilled. No other significant results were found among the sexual behaviour factors.

Sexually related online activities were the strongest predictors in the model. Those respondents who had had their

Table 1. Fulfilment of sexual desires as a result of sex-related activities on the internet by sex and age in percent ($n=1082$)

	18 to 24 years old		25 to 34 years old		35 to 65 years old		Total	
	Men ($n=240$)	Women ($n=336$)	Men ($n=128$)	Women ($n=174$)	Men ($n=92$)	Women ($n=112$)	Men ($n=469$)	Women ($n=624$)
To a great or very great extent	27	17	25	21	24	19	16	22
To a moderate or small extent	54	56	64	64	60	63	58	59
Not at all	20	27	11	15	16	19	25	18

Table 2. Comparison between categories of sexual fulfilment. Multinomial logistic regression odds ratio (OR) estimates ($n=1082$)Desires not fulfilled is the reference category. CI, confidence interval for OR. * $P<0.05$, ** $P<0.01$, *** $P<0.001$

Independent variables	Desires fulfilled to small extent OR (95% CI)	Desires fulfilled to great extent OR (95% CI)
Sex		
Woman (ref.)	1	1
Man	1.28 (0.79–2.07)	1.78 (0.99–3.21)
Age group		
18–24 (ref.)	1	1
25–34	1.92 (1.23–3.01)**	2.15 (1.23–3.77)**
35–65	1.39 (0.84–2.29)	1.51 (0.80–2.83)
In a relationship	1.34 (0.81–2.20)	1.25 (0.68–2.30)
Gay/lesbian/bisexual	1.49 (0.82–2.71)	1.57 (0.79–3.13)
Frequency of having sex		
Daily (ref.)	1	1
Weekly	0.56 (0.23–1.32)	0.73 (0.26–2.05)
Monthly	0.99 (0.36–2.13)	0.92 (0.32–2.63)
Rarely	0.64 (0.26–1.60)	0.41 (0.13–1.24)
Not in last 12 months	0.47 (0.17–1.29)	0.44 (0.12–1.60)
Frequency of masturbation		
Daily (ref.)	1	1
Weekly	1.36 (0.72–2.54)	0.88 (0.44–1.77)
Monthly	1.25 (0.63–2.50)	0.51 (0.23–1.15)
Rarely	1.24 (0.60–2.56)	0.37 (0.15–0.92)*
Never masturbate	0.52 (0.20–1.39)	0.52 (0.15–1.78)
Online sexual activities		
Read erotic novels	2.11 (1.45–3.07)***	2.67 (1.67–4.28)***
View pornography	2.93 (1.88–4.56)***	6.99 (3.82–12.79)***
Chat about sex	1.36 (0.87–2.15)	1.84 (1.04–3.27)*
Seek information about sex	1.38 (0.96–1.98)	1.22 (0.77–1.94)
Shop for sex products	1.66 (1.07–2.58)*	1.98 (1.16–3.37)*
Flirt	1.12 (0.68–1.84)	1.18 (0.62–2.24)
Seek romantic partners	0.97 (0.60–1.58)	0.66 (0.36–1.20)
Seek sex partners	1.13 (0.65–1.99)	2.39 (1.25–4.57)**
Had sex with someone met online	1.44 (0.96–2.14)	2.01 (1.60–4.57)***
Had cybersex (online sex)	2.18 (1.33–3.57)**	3.26 (1.85–5.76)***

sexual desires fulfilled to a small extent through their sexually related online activities were more likely than those who had not had their sexual desires fulfilled to read erotic novels (OR=2.11), view pornography (OR=2.93), shop for sex products (OR=1.66) and to have had cybersex (OR=2.18). The results showed increased ORs as well as additional significant factors among those who had had their sexual desires fulfilled to a great extent. They were more likely than the reference group to read erotic novels (OR=2.67), view pornography (OR=6.99), chat about sex (OR=1.84), shop for sex products (OR=1.98), seek sex partners (OR=2.39), to have had sex with someone met online (OR=2.01) and to have had cybersex (OR=3.26) compared with those who reported not having had their sexual desires fulfilled through their use of the internet for sexual purposes.

Discussion

Most respondents reported that their sexual desires had been fulfilled through sexually related online activities. At the level of demographic characteristics, with the exception of age, respondents who had their sexual desires fulfilled to a small

extent and a large extent did not differ from those who did not have their sexual desires fulfilled at all. Similarly, no differences were found at the level of sexual behaviour, with the exception of masturbation. Those respondents whose sexual desires had been fulfilled to a great extent had a slightly higher masturbation frequency. In terms of sexually related online activities and their link to fulfilment of sexual desires, a larger number of activities mostly based on interaction were found to be significant for fulfilment of sexual desires to a great extent.

The finding that neither sex nor sexual identity predicted fulfilment of sexual desires through sexually related online activities indicates that the outcomes of internet use for sexual purposes are no longer privileged to only those who have a limited access to sex in their traditional social milieu.⁷ This may reflect some change in internet use in that the internet, through its persistent entanglement in daily life, has become a widely acceptable venue for sexual behaviour,²⁸ which, in turn, may have an empowering effect on women and their internet use for sexual purposes.

However, age was the only sociodemographic characteristic that was associated with an increased extent of fulfilment of

sexual desires. Those who had their sexual desires fulfilled through their online sexual activities were twice as likely to be 25–34 years old than to be 18–24 years old. Older age groups might live in a longer-term relationship than younger age groups, which could be followed by a decline in sexual satisfaction.²⁹ Although this problem may be relevant for respondents in the older age group (35–65 years), individuals aged between 25–34 years might be more familiar with internet use in its breadth and potentially more open to treat sexually related online activities as a full-blown form of sexual behaviour than the older age group. This, in turn, might result in a greater fulfilment of their sexual desires.

Furthermore, the fulfilment of sexual desires to a great extent through sexually related online activities was linked to a slightly higher masturbation frequency. When interpreting this finding, an increased variability of sexually related online activities should be considered. For instance, it is widely known that masturbation follows online pornography²¹ and its consumption was found to be tripled when predicting fulfilment of sexual desires to a great extent. Similarly, masturbation is often considered a part of cybersex,¹² the effect of which on predicting fulfilment of sexual desires was also increased. Furthermore, chatting about sex was found to predict fulfilment of sexual desires to a great extent. Those who could be unfamiliar with the term 'cybersex' might be more likely to report chatting about sex instead of cybersex. Therefore, we assume that a slightly higher masturbation frequency might be a manifestation of involvement in interactive sexually related online activities.

The study showed that fulfilment of sexual desires to a small extent was predicted by fewer and rather less interactive sexually related online activities, whereas fulfilment of sexual desires to a great extent was predicted by a larger number of sexually related online activities. These were more interactive, as they included chatting about sex, seeking sex partners, having sex with someone they met online or cybersex. This indicates that the more interactive sexually related online activities internet users engage in, the greater fulfilment of sexual desires they may experience. The current study may support prior studies documenting possible positive effects of internet use for sexual purposes.^{13–15} However, this finding was obtained with no relation to the broader context in which individuals lived. For instance, it remains unclear how fulfilment of sexual desires through sexually related online activities affects relationships and their quality; whether this contributes to satisfaction with a partner relationship or, on the contrary, and whether it has a detrimental effect on it. Therefore, further research seems to be needed before concluding that fulfilment of sexual desires through sexually related online activities, especially through those emphasising interactivity, generally has a positive effect.

A similar cautious approach should be taken when interpreting a strong link between consumption of online pornography and fulfilment of sexual desires. Those who had fulfilled their sexual desires to a great extent were six times more likely to have viewed pornography than those who had not had their sexual desires fulfilled. This finding may support recent research that suggests that pornography can have a positive impact on sexuality for both individuals and couples.^{20,22}

However, a broader approach is required to evaluate its positive effect, as the positive influence of online pornography may vary depending on how it is consumed by a couple.²⁰

We found a portion of internet users whose online sexual activities did not fulfil their sexual desires. Based on comparisons between groups who had and who had not fulfilled their sexual desires, a relationship was found between less use of the internet for sexual purposes and not fulfilling one's sexual desires. However, we do not know what the causal link looks like – whether one is less likely to fulfil one's desires because of lower internet use for sexual purposes or whether one engages in sexually related activities online less frequently because it does not fulfil one's sexual desires. This should be subjected to further research.

Limitations

This study had several limitations. First, it was a convenience sample biased by age due to the recruitment sites. Second, it was conducted in Sweden and the results may differ from those from other countries on several parameters. Third, this was a self-reported questionnaire using a single-item measure on fulfilment of sexual desires, which means that participants may have over- or under-, estimated the effects of sexually related activities on the fulfilment of sexual desires. Fourth, the sample consisted of self-selected volunteers, who were predominantly female, and university students. Fifth, the high drop-out rate may have influenced the results, retaining respondents who were more positively inclined towards internet sexuality.

Conclusion

The current study distinguished users who had fulfilled their sexual desires through online sexual activities to a great extent, to a small extent and not at all. Although fulfilment of sexual desires may be *a priori* considered as a positive outcome of internet use for sexual purposes, the increased role of interaction-based sexually related activities on the internet and heightened consumption of online pornography call for further research to examine the fulfilment of sexual desires with respect to an individual's social context. Despite this, the findings indicate that the internet may contribute to the fulfilment of sexual desires irrespective of sexual identity or sex, which adds to the currently limited knowledge on the positive aspects of internet sexuality.

References

- 1 Fisher WA, Barak A. Online sex shops: phenomenological, psychological, and ideological perspectives on internet sexuality. *Cyberpsychol Behav* 2000; 3: 575–89. doi:10.1089/109493100420188
- 2 Gagnon J, Simon W. Sexual conduct: the social sources of human sexuality, 2nd ed. Chicago: Aldine Transaction; 2005.
- 3 Daneback K, Löfberg C. Youth, sexuality and the internet: young people's use of the internet to learn about sexuality. In Dunkels E, Frånberg GM, Hällgren C, editors. Youth culture and net culture: online social practices. Hershey: IGI Global; 2011. pp. 190–206.
- 4 Tikkanen R, Ross MW. Technological tearoom trade: characteristics of Swedish men visiting gay internet chat rooms. *AIDS Educ Prev* 2003; 15: 122–32. doi:10.1521/aeap.15.3.122.23833

- 5 Daneback K, Cooper A, Månsson S-A. An internet study of cybersex participants. *Arch Sex Behav* 2005; 34: 321–8. doi:[10.1007/s10508-005-3120-z](https://doi.org/10.1007/s10508-005-3120-z)
- 6 Daneback K. Love and sexuality on the internet. PhD thesis, University of Gothenburg; 2006.
- 7 Ross MW. Typing, doing and being: sexuality and the internet. *J Sex Res* 2005; 42: 342–52. doi:[10.1080/00224490509552290](https://doi.org/10.1080/00224490509552290)
- 8 Leiblum S, Döring N. Internet sexuality: known risks and fresh chances for women. In Cooper A, editor. Sex and the internet: a guide for clinicians. New York: Brunner-Routledge; 2002. pp. 19–45.
- 9 Barak A, Fisher WA. Toward an internet-driven, theoretically-based, innovative approach to sex education. *J Sex Res* 2001; 38: 324–32. doi:[10.1080/00224490109552103](https://doi.org/10.1080/00224490109552103)
- 10 Cooper A, McLoughlin IP, Campbell KM. Sexuality in cyberspace: update for the 21st century. *Cyberpsychol Behav* 2000; 3: 521–36. doi:[10.1089/109493100420142](https://doi.org/10.1089/109493100420142)
- 11 Cooper A. Sexuality and the internet: surfing its way into the new millennium. *Cyberpsychol Behav* 1998; 1: 187–193. doi:[10.1089/cpb.1998.1.187](https://doi.org/10.1089/cpb.1998.1.187)
- 12 Döring NM. The internet's impact on sexuality: a critical review of 15 years of research. *Comput Human Behav* 2009; 25: 1089–101. doi:[10.1016/j.chb.2009.04.003](https://doi.org/10.1016/j.chb.2009.04.003)
- 13 Cooper A, Scherer CR, Boies SC, Gordon BL. Sexuality on the internet: from sexual exploration to pathological expression. *Prof Psychol Res Pr* 1999; 30: 154–64. doi:[10.1037/0735-7028.30.2.154](https://doi.org/10.1037/0735-7028.30.2.154)
- 14 Månsson S-A, Daneback K, Tikkanen R, Löfgren-Mårtenson L. Love and sex on the internet. Göteborg: University of Gothenburg; 2003 [in Swedish].
- 15 Cooper A, Morahan-Martin J, Mathy R, Maheu M. Toward an increased understanding of user demographics in online sexual activities. *J Sex Marital Ther* 2002; 28: 105–29. doi:[10.1080/00926230252851861](https://doi.org/10.1080/00926230252851861)
- 16 Carvalheira A, Gomes FA. Cybersex in Portuguese chatrooms: a study of sexual behaviors related to online sex. *J Sex Marital Ther* 2003; 29: 345–60. doi:[10.1080/00926230390224729](https://doi.org/10.1080/00926230390224729)
- 17 Leiblum SR. Women, sex and the internet. *Sex Relationship Ther* 2001; 16: 389–405.
- 18 Döring N. Feminist views of cybersex: victimization, liberation, and empowerment. *Cyberpsychol Behav* 2000; 3: 863–84. doi:[10.1089/10949310050191845](https://doi.org/10.1089/10949310050191845)
- 19 Daneback K, Månsson S-A, Ross MW. Using the internet to find offline sex partners. *Cyberpsychol Behav* 2007; 10: 100–7. doi:[10.1089/cpb.2006.9986](https://doi.org/10.1089/cpb.2006.9986)
- 20 Daneback K, Træen B, Månsson S-A. Use of pornography in a random sample of Norwegian heterosexual couples. *Arch Sex Behav* 2009; 38: 746–53. doi:[10.1007/s10508-008-9314-4](https://doi.org/10.1007/s10508-008-9314-4)
- 21 Boies SC. University students' uses of and reactions to online sexual information and entertainment: Links to online and offline sexual behaviour. *Can J Hum Sex* 2002; 11: 77–89.
- 22 Hald GM, Malamuth NM. Self-perceived effects of pornography consumption. *Arch Sex Behav* 2008; 37: 614–25. doi:[10.1007/s10508-007-9212-1](https://doi.org/10.1007/s10508-007-9212-1)
- 23 McKenna KYA, Bargh JA. Coming out in the age of the internet: identity de-marginalization from virtual group participation. *J Pers Soc Psychol* 1998; 75: 681–94. doi:[10.1037/0022-3514.75.3.681](https://doi.org/10.1037/0022-3514.75.3.681)
- 24 Suzuki LK, Calzo JP. The search for peer advice in cyberspace: an examination of online teen bulletin boards about health and sexuality. *J Appl Dev Psychol* 2004; 25: 685–98. doi:[10.1016/j.appdev.2004.09.002](https://doi.org/10.1016/j.appdev.2004.09.002)
- 25 Beck JG, Bozman AW, Qualtrough T. The experience of sexual desire: psychological correlates in a college sample. *J Sex Res* 1991; 28: 443–56. doi:[10.1080/00224499109551618](https://doi.org/10.1080/00224499109551618)
- 26 Cooper A, Månsson S-A, Daneback K, Tikkanen R, Ross MW. Predicting the future of internet sex: online sexual activities in Sweden. *Sex Relationship Ther* 2003; 18: 277–91. doi:[10.1080/1468199031000153919](https://doi.org/10.1080/1468199031000153919)
- 27 Månsson S-A. Sexual relations between people of the same sex. In Lewin B, editor. Sex in Sweden. On the Swedish sexual life. Stockholm: Institute of Public Health; 2000. pp. 167–182.
- 28 King SA. Internet gambling and pornography: illustrative examples of the psychological consequences of communication anarchy. *Cyberpsychol Behav* 1999; 2: 175–93.
- 29 Christopher SF, Sprecher S. Sexuality in marriage, dating, and other relationships: a decade overview. *J Marriage Fam* 2000; 62: 999–1017. doi:[10.1111/j.1741-3737.2000.00999.x](https://doi.org/10.1111/j.1741-3737.2000.00999.x)