Sexual function and problematic use of smartphones and social networking sites

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Abstract

Introduction. The use of social networking sites (SNS) sometimes acquires an addictive-like quality, often referred to as problematic use of SNS. This condition overlaps with problematic (addictive-like) use of smartphones, as the latter are commonly used for online social networking in addition to other activities that may gain addictive-like qualities. There is ample evidence that problematic use of smartphones and SNS is associated with poorer mental health, but research on associations with sexual function is scarce. Thus, we examined if sexual difficulties are related to problematic use of SNS and smartphones.

Methods: Data from four studies conducted in Portugal were collapsed, resulting in 946 women and 235 men providing data on sexual function and problematic use of smartphones, and in 536 women and 194 men providing data on sexual function and problematic use of SNS. Female sexual function was assessed with the Female Sexual Function Index (FSFI) and the Female Sexual Distress Scale – Revised (FSDS–R). Male sexual function was assessed by the International Index of Erectile Function (IIEF). Problematic smartphone use was measured by the Smartphone Addiction Scale – Short Version (SAS–SV). Problematic use of SNS was measured by the Internet Addiction Scale (IAT) specifically adapted to online social networking.

Results: In women, problematic use of smartphones and SNS correlated with lower sexual arousal, difficulties lubricating, difficulties having orgasms, coital pain, and greater sexual distress. Women's problematic use of SNS correlated additionally with sexual dissatisfaction. In men, problematic use of smartphones and SNS correlated with lower erectile function. Men's problematic use of SNS correlated additionally with

lower desire, intercourse dissatisfaction, overall sexual dissatisfaction, and more difficulties having orgasms. In a subsample of 311 women and 94 men with data on use of smartphones and SNS, multiple regressions predicting sexual function domains from age, problematic smartphone use, and problematic use of SNS, were performed. In women, problematic use of SNS independently predicted lower arousal, dissatisfaction, pain, and more sexual distress. Problematic use of smartphones independently predicted more difficulties lubricating. In men, problematic use of SNS independently predicted lower erectile function, intercourse dissatisfaction, and overall dissatisfaction.

Discussion: Addictive-like use of SNS might be a risk factor for sexual difficulties. Our findings corroborate previous research.

Introduction

Research on relations between new technologies and sexuality has been largely focused on correlates of cybersex, pornography, and other online sexual activities.¹⁻⁶ Few studies have addressed how face-to-face sexual function relates to use of new technologies other than online sexual activities.

Problematic use of online social networking sites (SNS) refers to an addictive-like use of such online sites, characterized by a compulsion to communicate through them and to be attentive to what appears there: this compulsive behavior leads to interference in daily activities, responsibilities, and sleep. It can also lead to a deterioration of mental health.^{7,8} A study with Iranian women showed that greater severity of symptoms of problematic use of social media predicted poorer sexual function and greater sexual distress six months later, independently of initial levels of sexual function,⁹ but research on the association between sexual difficulties and problematic use of SNS remains surprisingly scarce.

Problematic smartphone use refers to an addictive-like use of smartphones, which are commonly used for online social networking, but allow many more activities. Research on sexual function and problematic smartphone use is lacking.

The present study aims at testing the hypothesis that, for both sexes, sexual difficulties are related to more problematic use of SNS and problematic use of smartphones.

Method

Participants and procedure

The sample was obtained by collapsing data from four studies carried in Portugal. These studies collected information on sexual function and problematic use of

smartphones and/or online social networks. In three studies, data were collected by means of online surveys and in one study, as part of a protocol of a laboratory study on psychological and psychophysiological factors in sexual desire and behavior. All studies received ethical approval from the local Ethics Committee. The total number of participants was 1,486. There were 1,181 participants for which there was information on smartphone use, and 710 for which there was information on use of SNS. All participants were sexually active with opposite-sex partners in the preceding month.

The subsample with data on problematic smartphone use (946 women, 235 men) had a mean age of 25.60 years ($SD = 7.85$; age range: 18 – 64). In this subsample, 90% had a regular sexual partner, 38% were cohabiting with their partner, and 92% were Portuguese. The subsample with data on problematic use of SNS (536 women, 174 men) had a mean age of 24.08 years ($SD = 6.12$; age range: 18 – 70). In this subsample, 93% had a regular sexual partner, 34% were cohabiting with their partner, and 99% were Portuguese.

Measures

Problematic smartphone use was assessed by the Smartphone Addiction Scale – Short Version (SAS-SV).¹⁰ The problematic use of SNS was measured by the Internet Addiction Test (IAT),¹¹ adapted specifically to use of online social networks. Female sexual function was assessed by Portuguese versions the Female Sexual Function Index (FSFI)^{12,13} and the Female Sexual Distress Scale – Revised (FSDS-R).^{14,15} A Portuguese version of the International Index of Erectile Function (IIEF) was used to evaluate male sexual function.^{16,17}

Results

Scores suggestive of female sexual dysfunction on the FSFI (< 26.56) were reported by 19.6% of women, and scores suggestive of clinically significant sexual distress on the FSDS-R (≥ 15) were reported by 18.4%. Scores suggestive of erectile dysfunction on the IIEF (< 26) were reported by 12.8% of men (10.2% mild, 1.9% mild to moderate, .6% moderate).

As depicted in Table 1, for women, more problematic use of SNS correlated with greater sexual distress and poorer sexual functioning in all domains. Women's problematic smartphone use correlated with greater sexual distress and poorer sexual function in the domains of arousal, lubrication, orgasm, and pain. In men, more problematic use of SNS correlated with poorer sexual function across all domains. Problematic smartphone use correlated with lower erectile function (see Table 1). All significant correlations remained so after adjustment for multiple comparisons using the false discovery rate method.

Table 1. Pearson's correlations between sexual function and problematic use of smartphones and SNS.

	Problematic use of smartphones	Problematic use of online social networks
Women		
Desire	-.06	-.10*
Arousal	-.14***	-.22***
Lubrication	-.15***	-.13**
Orgasm	-.17***	-.20***
Satisfaction	-.06	-.23***
Pain ¹	-.17***	-.19***

Global sexual functioning ^a	-.18***	-.25***
Sexual dysfunction ^{a,b}	-.12*	-.15***
Sexual distress ^a	.22***	.33***
Clinically significant sexual distress ^{a,c}	.16***	.23***

Men

Erectile Function	-.20***	-.26***
Orgasm	-.06	-.20**
Desire	-.08	-.17*
Intercourse satisfaction	-.08	-.20**
Overall satisfaction	-.08	-.30***
Erectile dysfunction ^d	-.22***	-.29***

^a N = 493 due to lack of data on pain and distress in one study that collected data on female sexual function and problematic smartphone use.

^b 0 = FSFI scores < 26.56 (suggestive of sexual dysfunction), 1 = FSFI scores $\geq$ 26.56

^c 0 = FSFD-R scores < 15, 1 = FSDR-R scores $\geq$ 15 (suggestive of clinically significant distress).

^d 0 = IIEF erectile function scores < 26 (suggestive of erectile dysfunction), 1 = IIEF erectile function scores $\geq$ 26

*** $p \leq .001$; ** $p \leq .01$; * $p < .05$

For a subsample of 311 women and 94 men, there were data on problematic use of smartphones and SNS, which correlated with each other strongly (women: $r = .76$, $p < .001$; men: $r = .70$, $p < .001$). Table 2 shows multiple regressions predicting domains of sexual function from age, problematic smartphone use, and problematic use of SNS

in both sexes. Overall, poorer sexual function was solely predicted by more problematic engagement in online social networking. Exceptions in the female subsample were lubrication being solely predicted by more problematic smartphone use, and orgasm being only predicted by older age.

Table 2. Multiple regressions predicting sexual functioning from age, problematic smartphone use, and problematic use of SNS.

	Problematic use of smartphones β	Problematic use of SNS β	Age β
Women (N = 311)			
Sexual distress	-.030	.42***	.08
Desire	-.13	-.02	-.08
Arousal	-.07	-.32***	-.11
Lubrication	-.18*	-.06	.07
Orgasm	-.03	-.16 $\uparrow$	.16**
Satisfaction	.15	-.38***	-.08
Pain	-.07	-.18*	.11
Global sexual functioning	-.02	-.28***	.04
Men (N = 94)			
Erectile function	.18	-.63***	-.02
Intercourse satisfaction	.11	-.42**	.02
Orgasm	.05	-.27 $\uparrow\uparrow$	.004
Desire	.02	-.19	.08
Overall satisfaction	.11	-.37**	-.09

*** $p < .001$; ** $p < .01$; * $p < .05$; $\uparrow p = .066$; $\uparrow\uparrow p = .058$

Discussion

For both sexes, we confirmed associations between poorer sexual functioning and more problematic use of smartphones and SNS with the associations with the latter being stronger and more consistent. Further, multiple regression analyses revealed that, in most cases, poorer sexual function was predicted by problematic engagement in online social networking, but not by problematic use of smartphones. The only exception was lubrication being predicted by problematic smartphone use and not by problematic use of SNS. Thus, it seems to be the addictive-like use of SNS that is associated with most sexual difficulties, not the addictive-like use of smartphones *per se*.

Notably, the associations of problematic use of online social networks correlated more strongly with male erectile difficulties, female subjective sexual arousal, and both sexes' dissatisfaction. The correlations of problematic use of SNS with lower desire were weak and inconsistent, suggesting that addictive-like engagement in these new technologies is less likely to interfere in desire.

It is possible that excessive use of SNS affects sexual function by means of its adverse effects on mood. However, Alimoradi and colleagues⁹ found that problematic use of social media predicted poorer female sexual function and greater female sexual distress six months later, and that these associations were explained by perceived loneliness and lack of relationship closeness at baseline, independently of depression and anxiety at baseline.⁹ It is plausible that very frequent and compulsive use of social media diminishes attention to partners and disturbs sexual functioning by decreasing the sense of relationship closeness. Additionally, an accumulating body of research suggests that addictive-like use of SNS may increase perceived loneliness, even among those with partners, frequent face-to-face social contacts, and positive family

relationships, which argues to something intrinsic to addictive use of social media increasing perceived loneliness,^{7,18-20} in a way that may disturb sexual function. Of course, the correlational design of the present study cannot exclude that sometimes sexual difficulties increase vulnerability to addictive-like use of new technologies.

In conclusion, we confirmed previous findings⁹ that problematic (addictive-like) use of SNS is associated with sexual difficulties in women and men.

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