

Social anxiety and social media addiction among emerging adults: The mediating role of 'sofalising'

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ABSTRACT

Social media addiction (SMA) has been shown to associate with the compensation of real-life social interaction. Concerning this, the present study investigated the social and communication aspects of SMA. 'Sofalising' is a term that emerged from the combination of the words 'sofa' and 'socializing', and can be described as the preference of online social interaction rather than going out and physically meeting individuals. The present study tested the mediating role of sofalising on the well-established relationship between social anxiety and SMA. The participants comprised 604 university students (51% female; $M_{age} = 20.61$ years, $SD = 2.49$; range = 17 to 45 years) who completed an online survey. Path analyses indicated that sofalising partially mediated the relationship between social anxiety and SMA. The present study suggested new phenomena among emerging adults and warrants further examination of its impact on mental health and wellbeing.

Keywords: sofalising, social media addiction, social anxiety

Yetişkinler arasında sosyal kaygı ve sosyal medya bağımlılığı: 'Sofalising'in aracı rolü

ÖZET

Sosyal medya bağımlılığının (SMB), gerçek hayattaki sosyal etkileşimin telafisi ile ilişkili olduğu gösterilmiştir. Bununla bağlantılı olarak, bu çalışma SMB'nin sosyal ve iletişimsel yönlerini araştırmıştır. 'Sofalising', 'sofa' ve 'socializing' kelimelerinin birleşiminden ortaya çıkan bir terim olup, dışarı çıkıp bireylerle fiziksel olarak görüşmek yerine çevrimiçi sosyal etkileşim tercihi olarak tanımlanabilir. Bu çalışmada, sosyal kaygı ve SMB arasındaki bilinen ilişki üzerinde 'sofalising' in aracı rolü test edilmiştir. Katılımcılar, çevrimiçi bir anketi dolduran 604 üniversite öğrencisinden (%51 kadın; $M_{age} = 20.61$ yıl, $SD = 2.49$; aralık = 17 ila 45 yıl) oluşmaktadır. Yol analizleri, sofalize olmanın sosyal kaygı ile SMA arasında kısmi bir aracı olduğunu göstermiştir. Bu çalışma, gelişmekte olan yetişkinler arasında var olan yeni bir fenomen ileri sürmekte ve bunun ruh sağlığı üzerindeki etkisinin daha fazla incelenmesine dikkati çekmektedir.

Anahtar kelimeler: sosyalize olma, sosyal medya bağımlılığı, sosyal kaygı

Introduction

The use of social media platforms has become one of the most popular leisure activities that attracts millions of users across the world. Currently, more than two-thirds of everyone living in the world actively use social media (Wong, 2023). Despite the many benefits of social media use, research has consistently shown that a small minority of users appear to experience problems related to excessive social media use (Kuss & Griffiths, 2017). One of the most well-documented adverse consequences is social media addiction (SMA). SMA refers to being preoccupied with social media, having a strong motivation to use social media, and spending excessive time on social media, leading to impairments in social, personal and/or professional life, as well as poor psychological health and well-being (Andreassen & Pallesen, 2014). SMA can create significant emotional, relational, health-related, and performance problems (Andreassen, 2015). These detrimental effects of SMA on individuals have led researchers to investigate possible predictors of it in order to develop effective prevention and intervention strategies.

According to the Interaction of Person-Affect-Cognition-Execution (I-PACE) model of internet-use disorders (Brand et al., 2016), social anxiety is one of the core psychopathological characteristics that has consistently been shown to associate with different types of internet use disorders. In addition to theoretical models, a cross-sectional examination among a college student sample showed that social anxiety was positively related to problematic (i.e., addictive) Facebook use among those with moderate to high level of need for social assurance (Lee-Won et al., 2015). Psychopathological symptoms, including depression and social anxiety, have been directly and indirectly associated with SMA via self-regulation and internet use expectancies of avoidance and positive reinforcement (Wegmann et al., 2015). Consequently, it is now both theoretically and empirically established that socially anxious individuals are at higher risk for becoming addictive users of online platforms especially social networking sites (Kuss & Griffiths, 2011).

The social skills model asserts that individuals who perceive themselves as deficient in social skills invest excessive time in online use in attempts to use online social interaction as compensation for their lack of face-to-face interaction (Caplan, 2005). Socially anxious individuals prefer online social interaction to real-life face-to-face communication because it facilitates higher anonymity, increased ability to have control over self-presentation, and lower perceived social risk (Walther, 2007). Despite this widely addressed assumption, the mediating role of preference for online social interaction to face-to-face communication in the relationship between social anxiety and SMA has yet to be investigated.

Recently, a new term, 'sofalsing', has been used to refer to the preference of online social interaction. Sofalsing derives from a combination of the words 'sofa' and 'socializing', and refers to the use of the internet or other electronic devices (e.g., texting, e-mail, social media messaging, status updates, tweets) for socializing with individuals from home rather than in-person (Collins Dictionary, 2019). Increasing numbers of individuals choose to engage in sofalsing rather than go out to meet others even when there is time to see individuals face-to-face (Realwire, 2010). Different motivations lead individuals to sofalsise rather than socialize in-person, including convenience, laziness, multitasking, time pressure, the expense of going out and/or to avoid lengthy conversations (Macmillan Dictionary, 2019).

However, individuals' sofalsing may also be related to their elevated social anxiety, given that socially anxious individuals may find it easier to communicate via an online medium (Caplan, 2007). The compensatory internet use model (Kardefelt-Winther, 2014) suggests that individuals tend to use the internet to compensate for their lack of offline needs. Successful and repeated attempts to compensate for these needs may lead to addictive online use. Based on this assumption, those with higher social anxiety may prefer online communication and become sofalsisers to compensate for their problems in offline social interaction and self-expression deficit.

Furthermore, given that (i) using social media platforms greatly facilitates sofalsing (e.g., instant messaging), and (ii) using social media with the motivation to obtain social gratification is positively associated with greater SMA (Kircaburun et al., 2020), it is expected that sofalsing would mediate in the relationship between social anxiety and SMA. To date, there has been only one empirical investigation of the relationships between social anxiety, SMA, and sofalsing (i.e., Tosuntaş et al., 2020). The study reported that social media addiction fully mediated the relationship between social anxiety and sofalsing, and that SMA should predict sofalsing.

However, based on the aforementioned theoretical rationale, it is hypothesized here that sofalising should mediate the relationship between social anxiety and SMA. Extant literature suggests that underlying motivations are predictive of addictive use of online activities. For instance, meeting new people and socializing was one of the motivational factors of SMA in a cross-sectional study (Kircaburun et al., 2020). Based on the existing evidence, it is logical to assume that motivations (e.g., preference for online social interaction) should be examined as a predictor and/or mediator variable when considering SMA. From this perspective, the present study is an update on the rationale of the aforementioned study (Tosuntaş et al., 2020).

Consequently, the present study examined the mediating role of sofalising in the relationship between social anxiety and SMA. Furthermore, the aforementioned pathways were examined among a total sample, and among men and women separately. Existing studies suggest that there may be differences in study variables according to participants' gender. For instance, females report more addictive use of technological applications involving higher social interaction and more online self-disclosure than males (Andreassen et al., 2016; Schouten et al., 2007).

More specifically, based on the aforementioned theoretical and empirical rationale, the following four hypotheses (H_s) were investigated: (i) social anxiety would be directly positively related to SMA (H_1); (ii) social anxiety would be directly positively related to sofalising (H_2); (iii) social anxiety would be indirectly positively related to SMA via sofalising; and (iv) sofalising would be directly positively related to SMA. Daily time spent using social media was also included as a control variable. Frequency of daily use of a specific application (e.g., social media) has been shown to be the most consistent indicator of addictive use of that particular application (Griffiths et al. 2014). Therefore, frequency of daily social media use was included into the analysis as a predictor of SMA.

Method

Participants and procedure

A total of 604 university students (51% female; $M_{age} = 20.61$ years, $SD = 2.49$; range = 17 to 45 years) who had active social media accounts participated in the study by completing an online survey. The study was promoted in different online courses of a Turkish university's distance learning center. Students gave their informed consent acknowledging that participation in the study would be voluntary and anonymous, and that they would not be rewarded for participation. Ethical approval for the study was received from the first author's university ethical board before the recruitment of the participants, and complied with the Declaration of Helsinki.

Measures

Sofalising Scale (SS): The SS (Tosuntaş et al., 2020) comprises 11 items that assess sofalizing. Items are rated on a five-point Likert scale ranging from "never" to "always". The SS has two sub-dimensions which are online displacement (e.g., "I prefer meeting with my friends online rather than outside") and social compensation (e.g., "I feel like I am socializing while communicating in online contexts"). Higher scores indicate higher sofalising. Internal consistency was excellent in the present study ($\alpha=.91$).

Bergen Social Media Addiction Scale (BSMAS): The BSMAS (Andreassen et al., 2016), which is an adaptation of the Bergen Facebook Addiction Scale (Andreassen et al., 2012), was used to assess SMA. The BSMAS comprises six items (e.g., "How often during the last year have you felt an urge to use social media more and more?") rated on a five-point Likert scale from "never" to "always". Higher scores indicate higher social media addiction. Internal consistency was very good in the present study ($\alpha=.87$).

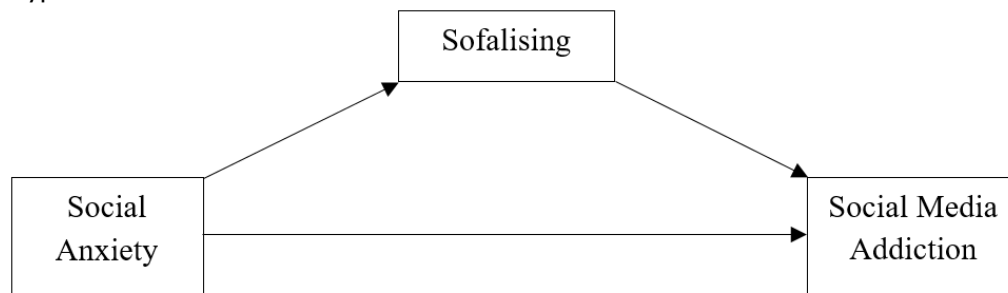
Social Anxiety Scale Short Form (SAS-A): The SAS-A (Nelemans et al., 2017) comprises 12 items and assesses social anxiety. Items are rated on a five-point Likert scale from "never" to "always". The SAS-A has three factors which are social avoidance and distress-new (e.g., "I get nervous when I meet new people"), fear of negative evaluation (e.g., "I worry about what others think of me") and social avoidance and distress-general (e.g., "I'm afraid to invite others to do things with me because they might say no"). Higher scores indicate higher social anxiety. Internal consistency was excellent in the present study ($\alpha=.95$).

Daily time spent using social media: The daily time spent using social media was assessed using an item ("How much daily time do you spend using social media on average?") on a six-point scale from "never" to "more than four hours". Higher scores indicate higher daily time spent using social media.

Statistical analysis

In the data analysis, frequencies, descriptive tests, *t*-tests, and Pearson correlations were conducted using SPSS 23.0. Path analysis was conducted using AMOS 23.0 software. Path analysis was carried out using the bootstrapping method with 5000 bootstrapped samples and 95% bias-corrected confidence intervals. In order to determine goodness of fit of the model, root mean square residuals (RMSEA), standardized root mean square residuals (SRMR), comparative fit index (CFI), and goodness of fit index (GFI) were utilized. According to Hu and Bentler 1999, RMSEA and SRMR lower than 0.05 is good and RMSEA and SRMR lower than 0.08 is adequate; CFI and GFI higher than 0.95 is good and CFI and GFI higher than 0.90 is acceptable.

Figure 1. Hypothesized model.



Results

Mean scores, standard deviations, and Pearson correlation coefficients are shown in Table 1. All study variables were positively (moderately to strongly) correlated. Furthermore, *t*-tests were used to assess gender differences on study variables. Females had higher scores on the BSMAS ($t[602]=1.72, p > .05$) and the SAS-A ($t[602]=.43, p > .05$) compared to males, and males had higher scores on the SS ($t[602]=-1.17, p > .05$), although none of these differences were statistically significant. Furthermore, in the correlation analysis, social media addiction was positively correlated with social anxiety, sofalising, and daily time spent using social media (Table 1).

Table 1. Mean scores, standard deviations, and Pearson correlation coefficients of the study variables

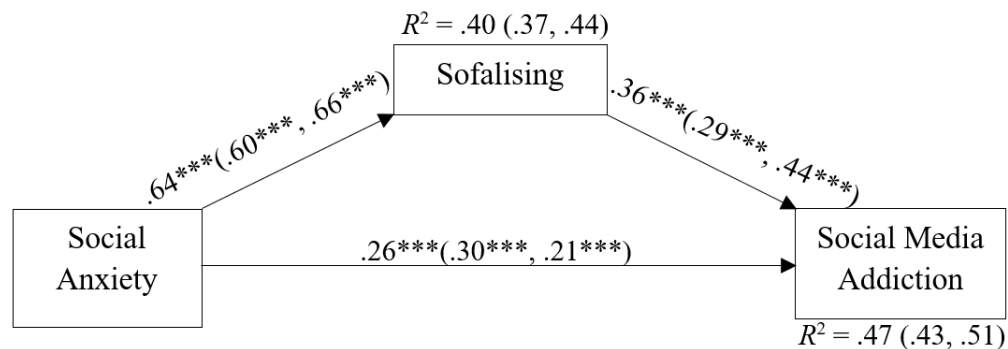
	1	2	3	4
1. Social media addiction	-			
2. Sofalising	.58***	-		
3. Social anxiety	.51***	.63***	-	
4. Daily social media use time	.40***	.19***	.09*	-
Mean	2.33	2.09	2.08	
SD	.94	.83	.92	

* $p < .05$, *** $p < .001$.

In order to examine the total, direct, and indirect effects of independent and mediator variables on outcome variable, path analyses were conducted (Figure 1). A saturated model was used for path analysis. Therefore, all fit indices were perfect. This was expected given the present study used path analysis but not structural equation modeling. All hypotheses (H_1 - H_4) were supported. Social anxiety was both directly ($\beta = .26, p < .001$; 95% CI [.14, .38]) and indirectly ($\beta = .23, p < .001$; 95% CI [.15, .31]) associated with SMA via sofalising among total sample (Figure 2). Among females, social anxiety was directly ($\beta = .30, p < .001$; 95% CI [.17, .43]) and indirectly associated with SMA via sofalising ($\beta = .18, p < .001$; 95% CI [.10, .26]), while among males, social anxiety was directly ($\beta = .21, p < .001$; 95% CI [.08, .35]) and indirectly associated with SMA via sofalising ($\beta = .29, p < .001$; 95% CI [.21, .39]). Daily time spent using social media was also included as a control variable for SMA and it was positively related to SMA ($\beta = .27, p <$

.001). The tested model partially explained the relationship between social anxiety and SMA (Table 2). There were no significant gender differences among associations in the model.

Figure 2. Final model of the significant path coefficients among variables.



Note. The values out of the brackets represent the standardized path coefficients among the total sample. The values on the left side in brackets represent the standardized path coefficients among females, whereas values on the right side describe path coefficients among males. *** $p < .001$

Table 2. Standardized estimates of total, direct, and indirect effects on social media addiction

	Effect (S.E.)		
	All (n = 604)	Females (n = 306)	Males (n = 298)
Social anxiety → SMA (total effect)	.49***(.04)	.48***(.06)	.50***(.05)
Social anxiety → SMA (direct effect)	.26***(.05)	.30***(.08)	.21***(.08)
Social anxiety → Sofalising → SMA (indirect effect)	.23***(.04)	.18***(.05)	.29***(.04)

Note: SMA = Social media addiction; *** $p < .001$

Discussion

The present study examined the mediating role of sofalising in the relationship between social anxiety and SMA. This is the first study to investigate socially anxious individuals' elevated engagement in SMA considering sofalising. Social anxiety was directly related to SMA among the total sample, males, and females, and indirectly via sofalising among total sample, females, and males. The results supported all four hypotheses.

Social anxiety was directly associated with SMA. This finding is in line with the previous empirical studies (Lee-Won et al., 2015; Tosuntaş et al., 2020; Wegmann et al., 2015) and theoretical propositions (Brand et al., 2016; Kardefelt-Winther, 2014) which have asserted that psychopathological dispositions and compensatory use of social media lead to SMA. Socially anxious individuals tend to be less confident presenting themselves and creating a positive impression on others in face-to-face communication. These perceived shortcomings can facilitate the preference for online virtual and/or mediated communication over offline real-life interactions (Weinstein et al., 2015). Higher SMA among socially anxious participants might also be related to their passive use and their social interaction compensation (Tosuntaş et al., 2020).

Sofalising was a positive mediator between social anxiety and SMA. This is consistent with a previous study that found that preference for online social interaction was moderately associated with addictive internet use (Casale et al., 2015). Socially anxious participants engaged in higher sofalising, and in turn, more sofalisers had elevated SMA. Online applications facilitate the managing and handling of different tasks. Individuals can choose to communicate from home rather than face-to-face because online interaction is often more convenient, demanding less physical effort, facilitating multitasking, and providing higher control over the communication process. These positive aspects can exacerbate the increasing use of socializing via mediated communication rather than meeting individuals face-to-face. This compensation of social gratification could lead to preoccupation with social media and SMA (Kircaburun et al., 2020). Furthermore,

socially anxious individuals could easily become persistent sofalisers because online interaction promotes higher control over the communication process, enabling individuals to hide negative aspects of their behavior and alleviate their anxiety for social interaction (Huan, Ang, & Chye, 2014).

Limitations and conclusion

The present study is not without limitations. First, the data were collected via self-report online surveys which are susceptible to various response biases. Future studies could utilize qualitative designs for more in-depth findings. Second, the study's cross-sectional nature makes it impossible to draw causal links between variables. Cohort studies that use longitudinal design could be used to clarify the directions of the relationships explored in the present study. Third, the study used a convenience sample of Turkish emerging adults from a single university, which prevents the generalizability of the findings. Future studies should test and replicate the present findings, including participants from different age groups, different target groups (i.e., non-student samples), and cultures.

Despite its limitations, the present study is the first to investigate sofalising empirically and test its mediating role between social anxiety and SMA. The findings of the present study suggest that socially anxious individuals are more likely to be sofalisers who engage in SMA more than those with lower social anxiety levels. The present study posits new concepts that may help understand the risky use of social mediums among individuals who suffer from social skill problems in their real (offline) lives

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