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Social interaction anxiety and Internet addiction among university students in medical and health sciences: the mediating role of fear of missing out

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Keywords

FoMO
Problematic Internet use
Online social engagement
Higher education

Abstract

Internet addiction has garnered attention owing to its psychological, social, and intellectual repercussions on individuals. Individuals exhibiting problematic and excessive Internet usage often participate in online activities, potentially leading to the development of addictive behaviours over time. Online actions are believed to stem from social interaction anxiety related to the pursuit of connection and acceptance, as well as the fear of missing out on social advancements. Given the detrimental consequences of Internet addiction on individuals, it is crucial to comprehend the associated elements. This research investigated the regression-based mediation role of fear of missing out in the relationship between social interaction anxiety and Internet addiction among university students. A sample of 301 Turkish university students in medical and health sciences from a public university (62.8% females; $M = 21.61$ years, $SD = 2.01$, age range = 18-39) participated in an online survey via the Google Forms platform. This study utilised the Turkish adaptations of the original *Social Interaction Anxiety Scale*, Young Internet Addiction Test-Short Form, and *Fear of Missing Out Scale*. The model findings indicated that social interaction anxiety exerts both a direct and an indirect influence on Internet addiction. Furthermore, fear of missing out was identified as a partial mediator in the link between social interaction anxiety and Internet addiction. These findings emphasise the importance of focusing on social interaction anxiety and fear of missing out in interventions to reduce Internet addiction.

Ansiedad por interacción social y adicción a Internet entre estudiantes universitarios de ciencias médicas y de la salud: el papel mediador del miedo a perderse algo

Palabras clave

FoMO
Uso problemático de Internet
Participación social en línea
Educación superior

Resumen

La adicción a Internet ha suscitado la atención investigadora por sus repercusiones psicológicas, sociales e intelectuales en los individuos. Los individuos con un uso problemático y excesivo de Internet participan en actividades en línea, que conducen al desarrollo de conductas adictivas. Estas acciones en línea podrían deberse a la ansiedad por la interacción social asociada a la búsqueda de conexión y aceptación, el miedo a perderse algo. Dadas las consecuencias perjudiciales de la adicción a Internet resulta crucial comprender los elementos asociados. Este estudio investigó el papel mediador del miedo a perderse algo en la relación entre la ansiedad por la interacción social y la adicción a Internet entre estudiantes universitarios. Un total de 301 universitarios turcos de ciencias médicas y de la salud (62.8 % mujeres; $M = 21.61$ años, $DT = 2.01$, rango de edad = 18-39) participaron en una encuesta online a través de Google Forms. Se utilizaron las adaptaciones turcas de la *Escala de Ansiedad de Interacción Social*, la versión corta del Test de Adicción a Internet de Young y la *Escala de Miedo a Perderse Algo*. Los resultados indicaron que la ansiedad por la interacción social ejercía una influencia directa e indirecta sobre la adicción a Internet. El miedo a perderse algo medió parcialmente en dicha asociación. Estos hallazgos enfatizan la importancia de centrarse en la ansiedad por la interacción social y en el miedo a perderse algo en las intervenciones para reducir la adicción a Internet.

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With the rapid expansion of Internet access and social network sites (SNSs), the number of people experiencing digital addiction has also risen, particularly among vulnerable groups who may be more susceptible to developing problematic or addictive Internet use behaviours (Kuss & Griffiths, 2011). The increasing dependence on online platforms has drawn scholarly attention to behavioural addictions, which, similar to substance-related addictions, are characterized by compulsive engagement in rewarding non-substance-related activities (Grant et al., 2010). Within this framework, Internet addiction is regarded as one of the most prevalent forms of behavioural addiction, with consequences that resemble those of traditional addictions (Alavi et al., 2012).

Internet addiction (IA) exhibits traits commonly associated with substance-related addictions, such as mood modulation, salience, tolerance, withdrawal, conflict, and relapse (Griffiths, 2005). In the domains of Internet use and behavioural addiction, IA is frequently equated with terms such as "Problematic Internet use," "Online addiction," and "Excessive Internet use." This issue has emerged as a notable concern within the field of behavioural health (Arisoy, 2009). Research indicates that IA is notably prevalent among adolescents and university students, who allocate significant time online for academic and social activities (Gezgin & Akilli, 2016; Hammad et al., 2024; Tekinarslan & Gurer, 2011). Consistent with these findings, studies conducted in Türkiye have reported prevalence rates of problematic Internet use ranging from 1% and 25% (Alaca, 2020; Balci & Gulnar, 2009; Cam & Nur, 2015; Canan et al., 2014; Kurt & Avci, 2020; Seyrek et al., 2017). Moreover, variables including loneliness (Dong et al., 2024; Gu et al., 2023; Kim et al., 2009), low self-esteem (Fioravanti et al., 2012), sleep quality (Hammad et al., 2024), and anxiety (Akin & Iskender, 2011; Azher et al., 2014; Dong et al., 2024; Weinstein et al., 2015) are significantly correlated with IA. In addition, numerous studies have focused on social anxiety (Weinstein et al., 2015), indicating that concerns associated with social interaction anxiety have been identified as a predictor of problematic Internet use (Cuhadar, 2012; Lee & Stapinski, 2012; Onyekachi et al., 2022).

Social interaction anxiety (SIA) is defined by an individual's tendency to avoid communication in social settings, along with a fear of self-expression that results in heightened anxiety (Kashdan, 2004; Mattick & Clarke, 1998). Research indicates that individuals with elevated SIA often turn to the Internet as a coping mechanism to manage the stress and challenges associated with social interactions (Caplan, 2006; Dong et al., 2024; Prizant-Passal et al., 2016). Furthermore, it was discovered that heightened social anxiety correlated with Internet usage, attributed to the possibility of concealing one's appearance and behaviour, which might be subject to unfavourable appraisal in direct contacts (e.g., speech faults, pauses, visible signs of anxiety, physical appearance) (Erwin et al, 2004). The Social Compensation Theory (SCT) (Valkenburg & Peter, 2007) of Internet use has been widely referenced in explaining this behaviour. In support of this, a study found a relationship between high levels of social anxiety and increased use of SNSs (McCord et al., 2014). Moreover, intensive SNSs use has been shown to increase the risk of IA (Mubarak & Quinn, 2019; Muller et al., 2016). A growing body of research has also reported a significant association between SIA and IA (Baloglu et al., 2018; Gezgin & Efeoglu, 2025; Hidayat & Nurhayati, 2019; Nwufo et al., 2023). In this context, SIA-driven reliance on SNSs may pave the way for the emergence of fear of missing out (Przybylski et al., 2013), which has recently been identified as an important coping mechanism.

Fear of Missing Out (FoMO) is defined as a pervasive anxiety that others may be having rewarding experiences without one's participation (Przybylski et al., 2013). Empirical evidence shows that FoMO correlates with unmet psychological needs, lower mood and life satisfaction, and greater social media engagement (Milyavskaya et al., 2018; Przybylski et al., 2013; Stirnberg et al., 2024). Recent studies further reveal that FoMO is linked to problematic use of SNSs and smartphones (Beyens et al., 2016; Coskun & Karayagiz Muslu, 2019; Elhai et al., 2025; Gezgin, 2018; Oberst et al., 2017).

FoMO can be explained within the framework of Self-Determination Theory (SDT) (Deci & Ryan, 1985), which emphasizes the fundamental human need for relatedness and social approval. When these needs are not fulfilled offline, FoMO may drive individuals to spend more time on SNSs, thereby increasing their risk of IA. Prolonged engagement with SNSs, motivated by FoMO, heightens the likelihood of IA. Prior research demonstrates that individuals experiencing FoMO are particularly vulnerable to IA (Anastasya et al., 2022; Kargın et al., 2020; Vaidya et al., 2016), largely due to persistent online engagement and extended interaction with SNS-related technologies (Blackwell et al., 2017; Elhai et al., 2020; Gezgin, 2018; Li et al., 2022). Therefore, the present study proposes that FoMO may serve as a mediating factor in the relationship between SIA and IA (Gezgin & Efeoglu, 2025).

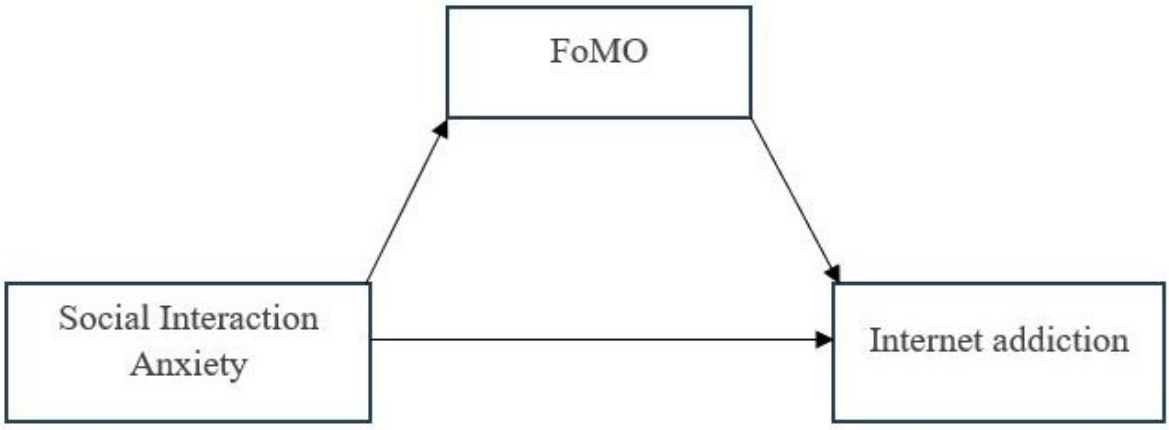
The present study

The present study focused on students enrolled in medical and health sciences programs. Health-related academic programs are widely acknowledged for their elevated academic standards, performance pressures, and competitive learning environments, which exacerbate stress and anxiety (Dyrbye et al., 2006). Yusoff et al. (2013) indicated that students in medical and health sciences exhibit higher levels of anxiety, depression, and problematic technology usage compared to their peers in other disciplines. In addition, the rigorous academic workload may limit opportunities for in-person social engagement, prompting students to rely more heavily on online platforms. The absence of offline contentment may enhance their utilization of the Internet and FoMO as coping mechanisms. Consequently, comprehending the connections between SIA, FoMO, and IA within this demographic may facilitate preventative measures and their implementation.

Accordingly, this study was conducted to examine the relationships between SIA, IA, and FoMO among university students in medicine and health sciences, and to investigate the potential mediating role of FoMO in these associations. Specifi-

Figure 1

The proposed mediation model



cally, it was hypothesized that: (a) SIA would be associated with IA; (b) FoMO would be associated with IA; and (c) FoMO would mediate the relationship between SIA and IA (see Figure 1).

Method

Participants

The study included 301 (62.8% female) university students enrolled in medical and health sciences, with a mean age of 21.61 years (*SD* = 2.01) and an age range of 18 to 39 years. The 12.3% (*n* = 37) of participants studied the career of Physiotherapy and Rehabilitation, the 58.3% (*n* = 176) the career of Medicine, the 6% (*n* = 18) the career of Nursing, the 3.3% (*n* = 10) the career of Nutrition and Dietetics, the 6.3% (*n* = 19) the career of Audiometry, and the 13.6% (*n* = 41) the career of Health Management.

Measures

Young's Internet Addiction Test-Short Form (YIAT-SF). Initially created by Young in 1998 and subsequently abbreviated by Pawlikowski et al. in 2013, is a 12-item instrument utilizing a 5-point Likert scale (from 1 = *Never* to 5 = *Always*). An example item is "How often do you try to reduce the time you spend online and fail?" The Turkish version of the YIAT-SF was validated (Kutlu et al., 2016) among teenagers and university students. The Cronbach's alpha reliability coefficient of the scale was .91 for university students and .86 for teenagers. The test-retest reliability coefficient of the scale was .93 for university students and .86 for teenagers. The measure has no reverse-scored items, and elevated scores signify a heightened risk of IA. The Cronbach alpha reliability coefficient for university students in this research was .88.

Social Interaction Anxiety Scale (SIAS; Leary & Kowalski, 1993). This scale was translated to Turkish (Coskun, 2009). The SIAS assesses social interaction anxiety using a unidimensional scale with 15 items with five-point Likert scale (from 1 = *Strongly disagree* to 5 = *Strongly agree*). An example item is "Parties or social gatherings often make me feel anxious and uncomfortable". Five items on the scale are assessed negatively and thus reverse scored. Elevated scores on the SIAS signify heightened anxiety around social interactions. All items in the scale have factor loadings over .45. The overall Cronbach's alpha coefficient of the scale is .91, signifying adequate reliability (Coskun, 2009). In this study, the Cronbach's alpha was .77.

Fear of Missing Out Scale (FoMOs; Przybylski et al., 2013). It is a unidimensional scale with 10 items assessing anxiety around the omission of social activities, with response possibilities ranging from 1 = *Not at all true of me* to 5 = *Extremely true of me*. "I fear that others have more fulfilling experiences than I do" is a prime example of the FoMO scale. Elevated scores indicate that individuals are more prone to the FoMO. The previously validated Turkish version was employed in the study (Gokler et al., 2016). The reliability coefficient of the original scale, determined using Cronbach's alpha, was .95. The internal consistency of this study entire sample was .85.

Procedure

Participants were recruited using a convenience sampling method from students enrolled in medical and health sciences at a public university in Türkiye, specifically those attending the elective course "Addiction and Prevention to Addiction" To increase the response rate, two more reminder message were sent during the data collection period. This approach reflects a convenience sampling method, chosen due to accessibility and time considerations. While practical, this sampling method may limit the representativeness of the sample and the generalizability of the findings. Furthermore, this method has facilitated researchers in terms of labour shortage and time constraints.

The data collection process lasted from January 2024 to April 2024. The survey was distributed via online communication platforms (e.g., Microsoft Teams, WhatsApp), and participation was primarily ensured by sending direct invitation messages to the first researcher's academic network. In the data collection form, the participants were first informed about the purpose of the study and ethical responsibilities, and their informed consent was obtained. Before data collection, permission was obtained from Trakya University Social and Human Sciences Research Ethics Committee (Decision No: 2024.01.2024, Ses-

sion No: 2024/01). It was emphasised that participation was voluntary and that they could withdraw from the study at any time. To ensure anonymity and confidentiality, no identifying personal information was collected. On average, participants took approximately 10 minutes to complete all questions.

Data analysis

Descriptive statistics (mean, standard deviation), normality assumptions, and internal consistency coefficients were first calculated. Pearson product-moment correlation analysis was then conducted to examine the relationships among SIA, IA, and FoMO. Skewness and kurtosis values were also calculated to test the normality assumption (Kline, 2015; Tabachnick & Fidell, 2013). To test the mediating role of FoMO, the Model 4 on the PROCESS macro for SPSS version 3.4 (Hayes, 2018) was applied. The results of the mediation model were interpreted using both unstandardized and standardized path coefficients (β). The significance of direct and indirect effects was further examined with bootstrap analyses (10,000 resamples, 95% confidence interval). In bootstrap analysis, effects are considered significant when the confidence interval does not include zero (Hayes, 2018; Preacher & Hayes, 2008). Finally, to test the significance of the indirect effect, a power analysis was performed in RStudio using the *pwr* package, which provides power calculations in the social sciences based on Cohen's effect sizes (Champely, 2020). Assumption checks were performed in line with common guidelines: independence of errors was assessed with the Durbin–Watson statistic (acceptable range ≈ 1.5–2.5), multicollinearity was evaluated via Variance Inflation Factor ($VIF < 5$) and condition indices (< 30), and scale reliability was evaluated with Cronbach's $\alpha \geq .70$ as the minimum acceptable threshold (Tabachnick & Fidell, 2013).

Results

Preliminary analysis

Descriptive analyses showed that participants most frequently checked their smartphones between 21 and 40 times per day, with nearly one-fifth indicating more than 50 daily checks. Regarding duration of use, the majority spent between 3 and 5 hours on their smartphones daily, while approximately 6% reported usage exceeding 7 hours per day.

Moreover, reliability and correlation values for the variables of the study were presented in Table 2. SIA ($M = 2.88$, $SD = 0.6$) had a skewness of -0.04 and kurtosis of 0.86. FoMO ($M = 2.69$, $SD = 0.77$) had a skewness of -0.01 and kurtosis of -0.1, suggesting. Lastly, IA ($M = 2.57$, $SD = 0.73$) showed a slight positive skewness of 0.08 and kurtosis of -0.52. All values were within acceptable ranges, indicating no deviation from normality. Correlations showed that SIA was moderate positively related to FoMO ($r = .48$, $p < .01$) and IA ($r = .42$, $p < .01$), while FoMO was strongly related to IA ($r = .5$, $p < .01$). The results are presented in Table 1.

Mediational analysis

Assumption check results showed that the Durbin-Watson statistic was 2.06, suggesting no autocorrelation. The VIF values for predictors were 1.3, and the highest condition index was 12.14, showing no multicollinearity. The condition index showed no values indicating multicollinearity issues, with the highest being 12.14. Cronbach's α coefficients ranged between .77 and .88, indicating acceptable to good reliability (Tabachnick & Fidell, 2013). Figure 2 and Table 2 reported the findings from the mediation analysis. SIA has a positive and significant effect on the mediator FoMO. The standardized coefficient is 0.48, indicating that about 23.34% of the variance in FoMO can be explained by SIA. After accounting for the mediator FoMO, SIA still has a positive and significant direct effect on IA. The standardized coefficient of 0.22 shows that the direct effect is weaker compared to the total effect but still significant. The mediator FoMO has a positive and significant effect on IA. The standardized coefficient is 0.39, indicating that FoMO explains about 29.1% of the variance in IA. The total effect of SIA on IA is positive and significant. The standardized coefficient of 0.41 shows that SIA explains about 17.2% of the variance in IA. The indirect effect of SIA on IA through the mediator FoMO is significant because the confidence interval does not include zero. This suggests that part of the effect of SIA on IA is mediated by FoMO. The standardized indirect effect is 0.19, indicating that about 19.1% of the variance in IA is explained by the indirect path through FoMO. The total effect of SIA on IA is significant and positive (β = 0.41). The direct effect of SIA on IA (after controlling for the mediator FoMO) remains significant, but weaker (β = 0.22). The indirect effect of SIA on IA through FoMO is also significant (β = 0.19). The unstandardized coefficient for the indirect effect was calculated as 0.23 in the study. Based on this effect size, a minimum of 232 participants would be required to achieve 95% statistical power (1 - β = 0.95). Since the current sample size is 301, the study has sufficient power to detect the indirect effect with high confidence. This calculation was performed for the indirect effect, not for direct or total effects.

Table 1

Descriptive statistics, reliabilities and correlations among study variables (N = 301)

Variables	*Mean*	*SD*	*Skewness*	*Kurtosis*	1	2
1. SIA	2.88	0.6	-0.04	0.86	1	
2. IA	2.57	0.73	0.08	-0.52	.42	1
3. FoMO	2.69	0.08	-0.01	-0.1	.48	.5

Note. IA = Internet Addiction, SIA = Social Interaction Anxiety, FoMO = Fear of Missing Out.
All correlations were significant at $p < .001$.

Table 2

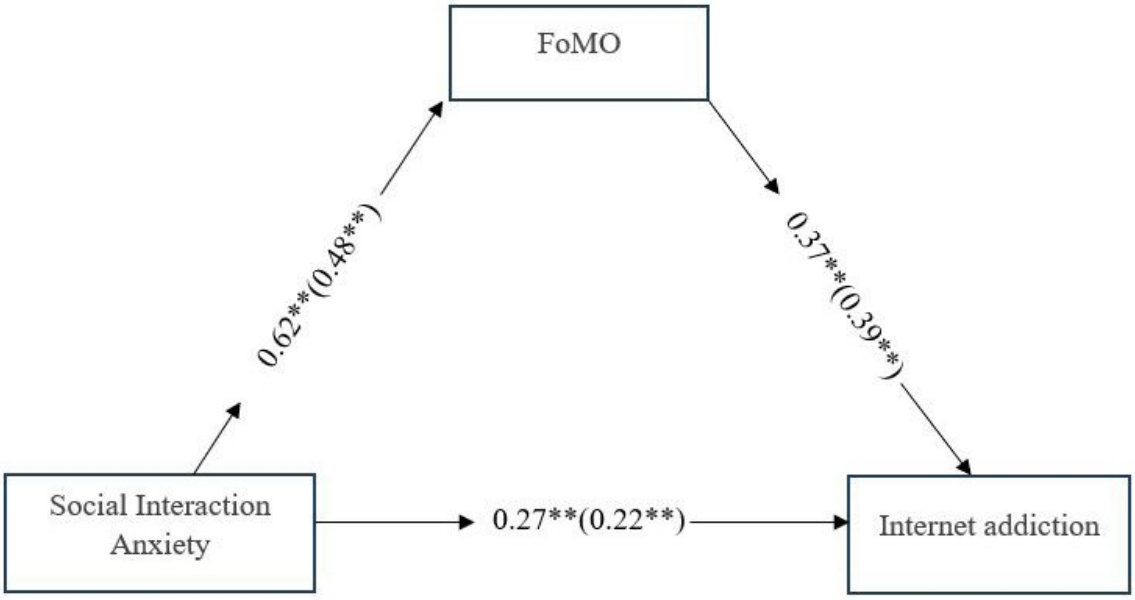
Coefficients for the mediation model; total, direct and indirect effects of FoMO on IA, and 95% Bootstrap confidence intervals

	B	*SE*	*t*	*p-value*	*LLCI*	*ULCI*	β
Mediation path (X → M)							
Constant (M: FoMO)	0.89	0.19	4.64	< .001	0.51	1.27	-
SIA → FoMO	0.62	0.07	9.54	< .001	0.49	0.75	0.48
Outcome model (X, M → Y)							
Constant (Y: IA)	0.77	0.18	4.25	< .001	0.41	1.13	-
SIA → IA (Direct)	0.27	0.07	4.02	< .001	0.14	0.41	0.22
FoMO → IA (Mediator)	0.37	0.05	7.09	< .001	0.27	0.48	0.39
Total effect (X → Y)							
SIA → IA (Total)	0.51	0.06	7.88	< .001	0.38	0.63	0.41
Indirect effect (X → M → Y)							
SIA → FoMO → IA	0.23	0.04	-	-	0.15	0.33	0.19

Note. Coeff = Unstandardized Coefficient, SE = Standard Error, 95% CI LL (Lower Limit), 95% CI UL (Upper Limit), β = Standardized Coefficient, X = Independent variable, M = Mediator variables, Y = Dependent variable, IA = Internet Addiction, SIA = Social Interaction Anxiety, FoMO = Fear of Missing Out..

Figure 2

Results of standardized coefficients for the hypothesized model



*Note***.** Coefficients outside the parentheses are unstandardized, and coefficients in parentheses are standardized estimates.
*p <.05, **p < .01, ***p < .001.

Discussion

This study aims to examine the mediating role of FoMO in the relationship between SIA and IA among university students in medical and health sciences. Furthermore, in line with this primary objective, the relationships between SIA and IA were investigated to reveal how SIA contributes to IA both directly and indirectly through FoMO.

The findings of the study reveal that hypothesis a, which predicted that SIA would be positively associated with IA, was supported. This result is consistent with prior research identifying SIA as a predictor of IA (Cam & Isbulan, 2012; Gezgin & Efeoglu, 2025; Tosuntas et al., 2024; Wang & Wang, 2013) and can be theoretically explained by Social Compensation Theory (SCT; Valkenburg & Peter, 2007). According to SCT, individuals with elevated levels of social anxiety tend to compensate for their difficulties in offline social interactions by turning to online environments, where they perceive greater control and reduced risks of negative evaluation. In the context of medical and health sciences students, this mechanism may be particularly salient: these students often face intense academic demands, time constraints, and high expectations in

professional training, which can further limit opportunities for supportive offline interactions. Consequently, socially anxious students in these fields may rely even more heavily on online platforms to fulfill unmet social and emotional needs, thereby increasing their vulnerability to problematic Internet use. Furthermore, the heightened propensity for unfavourable self-comparison may predispose persons with social anxiety to engage more passively online, thereby exacerbating feelings of social isolation and loneliness (O'Day & Heimberg, 2021).

FoMO was positively associated with IA, consistent with prior evidence (Anastasya et al., 2022; Avci & Kula, 2023; Setyaningsih et al., 2023; Stead & Bibby, 2017), and more recent studies corroborate this relationship (Manap et al., 2024; Wang et al., 2025; Xu et al., 2024). Thus, hypothesis b was supported. Although FoMO may heighten IA risk by amplifying fears of exclusion and driving constant connectivity (Beyens et al., 2016; Casale & Fioravanti, 2015), contradictory evidence indicates that some individuals with high SIA use SNSs for alternative purposes such as information seeking, research, or gaming (Azher et al., 2014). Others, particularly those with body image concerns, may prefer more private communication channels like messaging or dating apps rather than open SNSs (Erwin et al., 2004). These findings suggest that the relationship between FoMO and IA is complex and context-dependent rather than uniform across all individuals. From a theoretical perspective, this finding is consistent with Self-Determination Theory (SDT; Deci & Ryan, 1985), which emphasises that unmet psychological needs for connection and validation can intensify FoMO, thereby reinforcing excessive online engagement. Consistent with earlier research linking FoMO to broader well-being outcomes (Bernard, 2020; Hutchins et al., 2021; Przybylski et al., 2013), these findings also highlight the need to examine whether FoMO's impact on IA is robust across different cultural and demographic groups.

The main finding of this study was related to hypothesis c, which proposed that FoMO mediates the relationship between SIA and IA. This hypothesis was partially supported, indicating that FoMO constitutes a significant but not exclusive mechanism in this association. Despite the inability to draw causal inferences from the findings of a cross-sectional design, prior studies provide a reasonable explanation for this pathway. Individuals with high SIA tend to avoid face-to-face environments due to fears of negative evaluation or embarrassment, a pattern consistently documented in social anxiety research (Alden & Taylor, 2004; Hoffman, 2007). Consequently, they may increasingly turn to online platforms as an alternative (Hutchins et al., 2021; Weidman et al., 2012). However, prolonged exposure to others' activities on SNSs has been found to be associated with higher levels of FoMO, thereby creating a persistent urge to remain connected and avoid exclusion (Przybylski et al., 2013; Wegmann et al., 2017). As such, SIA may encourage initial online engagement, while FoMO reinforces it, which is in turn related to a heightened risk of IA. Nevertheless, the precise stage at which FoMO exerts its influence remains unclear, as does the question of whether it emerges early or develops over time with prolonged SNS use (Maxwell et al., 2022). From a theoretical perspective, these findings suggest that SCT explains the initial reliance on online environments among socially anxious students, while SDT clarifies how unmet psychological needs foster FoMO, thereby reinforcing excessive online engagement. Also, a recent study distinguishes between trait- and state-FoMO (Wegman et al., 2017). Trait FoMO reflects a stable tendency, whereas state FoMO is situational and may be heightened during academic stress, social isolation, or romantic loneliness. This distinction may help explain why FoMO only partially mediates the link between SIA and IA, as medical students may experience both stable and situational FoMO. Our study therefore contributes to the field by showing that FoMO is one factor in the pathway from SIA to IA, but not the only factor.

Limitations and practical implications

This study has certain limitations. Its cross-sectional design precludes causal inference, reliance on self-reports may introduce bias, and the sample limits generalizability as most participants were female and active Internet users. These factors should be considered when interpreting and generalizing the findings. Longitudinal and experimental designs could clarify the temporal ordering of these variables, while ecological assessments and objective usage data may capture situational fluctuations. Additional mediators (e.g., loneliness, self-esteem) and moderators such as gender should be explored, and person-centred approaches (e.g., latent profile analysis) could help identify subgroups (e.g., high SIA-high FoMO-high IA vs. high SIA-low FoMO-high IA), providing insight into heterogeneous pathways. Moreover, future research should examine both trait- and state-FoMO (Maxwell et al., 2022).

The findings of this study revealed that FoMO partially mediated the relationship between SIA and IA among university students in medical and health sciences. In this relationship, FoMO is activated when individuals with high SIA levels use SNSs to cope with offline social challenges, thereby increasing the risk of IA through greater online engagement. Identifying this mechanism in a critical group such as medical and health sciences students, who play a vital role in public health and future healthcare delivery, underscores the importance of addressing FoMO and SIA in the prevention of technology-related addictions. Educational institutions training healthcare professionals may benefit from implementing supportive programs that promote balanced technology use, while mental health professionals could integrate modules on SIA and FoMO into IA prevention interventions to target these often-overlooked risk factors.

Conclusion

In conclusion, this study contributes to the literature by integrating SCT and SDT explain how SIA influences IA directly and indirectly through FoMO. By demonstrating that FoMO constitutes an important but partial mechanism, the study highlights both the complexity of psychosocial pathways underly-

ing Internet addiction and the need for multifaceted prevention strategies. Overall, by bridging theoretical frameworks with practical implications, this study not only advances the scientific understanding of how SIA and FoMO contribute to IA but also provides a foundation for targeted prevention and intervention strategies in vulnerable university student populations.

Author contributions

Conceptualization: D.M.G., T.T-K.
Methodology: D.M.G.
Data collection: D.M.G.
Formal analysis: T.T-K.
Supervision: D.M.G.
Writing – Original draft: D.M.G.
Writing – Review & editing: D.M.G., T.T-K.

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Declaration of interests

The authors declare that there is no conflict of interest.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author.

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