

Research Article

Exploring the Relationship between Social Networking Addiction, Fear of Missing Out, Loneliness and TikTok Use among Adolescents

Zinaida Adelhardt* and Thomas Eberle

Friedrich-Alexander-Universität Erlangen-Nürnberg, Nürnberg, Germany

Abstract

With the increasing popularity of social media among adolescents, understanding social networking addiction and its psychological predictors has become extremely important. This study explores the relationships between social networking addiction, Fear of Missing Out (FOMO), loneliness and TikTok usage among adolescents. Data were collected from 143 teenagers ($M = 14.97$, $SD = 0.769$; 58.7% female) from 16 out of 18 federal states in Germany, using the Social Networking Addiction Scale (SNAS), the Fear of Missing Out (FOMO) scale and the Revised UCLA Loneliness Scale (UCLA-LS). Regression analyses, with the overall model fit of $R^2 = 0.259$, revealed that both FOMO ($\beta = 0.328$, $p < 0.001$, 95% CI: 0.384 to 1.049) and loneliness ($\beta = 0.223$, $p = 0.004$, 95% CI: 0.078 to 0.399) were significant predictors of social networking addiction. TikTok use was also positively related to social networking addiction ($\beta = 0.187$, $p = 0.014$, 95% CI: 0.232 to 2.044), though it showed a wider confidence interval. Gender was not a significant predictor ($\beta = 0.013$, $p = 0.859$). Further analysis of SNAS dimensions revealed significant correlations with loneliness and FOMO across all dimensions - salience, mood modification, tolerance, withdrawal, conflict and relapse. TikTok was positive correlated with overall SNAS ($r = 0.263$, $p < 0.01$) and its three dimensions: salience ($r = 0.270$, $p < 0.01$), mood modification ($r = 0.317$, $p < 0.01$), and conflict ($r = 0.224$, $p < 0.01$). Additionally, TikTok use had a weak but significant correlation with FOMO ($r = 0.179$, $p < 0.05$), but no significant correlation with loneliness. These findings suggest that FOMO and loneliness are

significant psychological predictors of social networking addiction, and TikTok use also contributes to addiction levels. Understanding these predictors is essential for addressing social networking addiction among adolescents and safeguarding their well-being.

Keywords: Adolescents; Loneliness; Networking addiction; Social media

Introduction

The rise of social media has significantly changed the way adolescents interact, communicate and spend their leisure time. Platforms like TikTok have become important in many teenagers' daily lives, offering an endless stream of engaging content, diverse entertainment, and extensive social interaction opportunities. These digital innovations have significantly influenced the way how young people interact with their peers and engage with the world around them. Despite the numerous benefits of social media - such as continuous connectivity, social networking opportunities, diverse entertainment options, and opportunities for self-presentation - they also pose significant challenges. One major concern is social media addiction. This phenomenon, characterized by excessive and compulsive use of social media, can negatively impact an individual's daily functioning and both psychological and physical well-being. Andreassen et al. [1] identified key symptoms of social media addiction, including mood modification, salience, tolerance, withdrawal, conflict and relapse. While the concept of social media addiction normally refers to the compulsive use across all types of social media platforms (e.g. video-sharing platforms like YouTube, photo-sharing services like Instagram, or microblogging applications like Twitter), social networking addiction is a subset of social media addiction that specifically refers to excessive use of Social Networking Sites (SNS) designed primarily for social interaction, such as Facebook or Twitter.

Research involving over 150,000 adolescents in 29 countries indicates that problematic social media use is associated with lower well-being. Specifically, symptoms of social media addiction are linked with lower mental, academic and social well-being [2]. Adolescents due to their developmental need for peer validation and social interaction are particularly vulnerable to social media and SNS addiction. However, findings on the impact of different social media use patterns on well- and ill-being are mixed, with variations based on the nature (active vs. passive) and duration of use [3]. Addictive behaviours on SNS often revolve around the social aspect of these platforms, such as frequently checking notifications and likes, posting and reading updates, commenting on others' posts, and engaging with friends or followers. This perceived need to be constantly connected can lead to compulsive behaviors, with severe cases exhibiting symptoms and consequences similar to substance-related addictions. This compulsive engagement in online social activities is often driven by the constant need for validation, social approval, and interaction with peers. Kuss and Griffiths [4] highlight that the Fear of Missing Out (FOMO) significantly contributes to the addictive nature of SNS, with potential overlaps with smartphone addiction.

*Corresponding author: Zinaida Adelhardt, Friedrich-Alexander-Universität Erlangen-Nürnberg, Regensburgerstraße 160, 90478 Nürnberg, Germany, E-mail: zinaida.adelhardt@fau.de

Citation: Adelhardt Z, Eberle T (2024) Exploring the Relationship between Social Networking Addiction, Fear of Missing Out, Loneliness and TikTok Use among Adolescents. J Addict Addictv Disord 11: 176.

Received: August 16, 2024; **Accepted:** August 30, 2024; **Published:** September 05, 2024

Copyright: © 2024 Adelhardt Z, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited

Fear of missing out and social networking addiction

The Fear of Missing Out (FOMO) is a key factor in understanding social networking addiction. It refers to the anxiety or apprehension that one might be missing out on rewarding experiences that others have [5] and reflects a broader social construct concerned with the perceived exclusion from desirable social interactions and activities. Research consistently shows that higher levels of FOMO are associated with more intensive and compulsive social media use [5-9]. Individuals with high FOMO are more likely to engage heavily with SNSs, which often correlates with negative emotional states and lower life satisfaction. For example, Tandon et al. [10] conducted a systematic review of existing research on FOMO and its effects on social media users, synthesizing insights from 58 empirical studies. The review found that FOMO is associated with negative psychological outcomes, such as increased anxiety and depression, with social media use magnifying these issues. Fioravanti et al. [9] further confirmed a robust association between FOMO and problematic social networking site use, including positive correlations with depression, anxiety, and neuroticism. Additionally, higher levels of FOMO are associated with increased social media use at night, leading to disrupted and unhealthy sleep patterns (systematic review of [11]. Scott and Woods [12] also identified connections between adolescents' social media habits, FOMO and sleep disturbances. Given that social networking sites are often accessed via smartphones, understanding FOMO in the context of smartphone use and overuse is also important. Studies of Elhai et al. [13], Wang et al. [8], and Wolniewicz et al. [14] demonstrate that FOMO significantly mediates the relationship between problematic smartphone use and mental health issues such as anxiety and depression. Oberst et al. [6] also highlighted FOMO's role in linking psychopathological symptoms with the negative consequences of social networking site use via mobile devices.

Additionally, ongoing research aims to differentiate between trait FOMO and state FOMO and to adapt measuring instruments [15]. Trait FOMO is a stable disposition reflecting a general tendency to feel anxious about missing out on experiences, often linked to anxiety and depression. In contrast, state FOMO is context and situation-specific and triggered by online activities, associated with impulsive behaviors and problematic social media use. Li et al. suggest that interventions for trait FOMO should focus on long-term psychological and social support, while strategies for state FOMO should address immediate triggers of compulsive use. Mao's [16,17] research indicates that active social media use is significantly related to state FOMO, but not to trait FOMO. Positive, active social media interactions and reducing passive browsing may alleviate trait FOMO.

Loneliness and social networking addiction

Loneliness is another crucial factor in understanding social media and SNS overuse. It is defined as a subjective negative emotional experience arising from a discrepancy between desired and actual social relationships [18]. The impact of SNS use on loneliness is still not entirely clear, with research showing mixed results depending on usage patterns. Zhang et al. [19] conducted a meta-analysis of 82 studies involving over 48,000 participants to explore the relationship between SNS use and loneliness. Their findings revealed a weak but statistically significant positive correlation ($r = 0.052$) between SNS use and loneliness. While passive and abnormal use of SNSs was associated with increased loneliness, no significant link was found between general or active SNS use and loneliness. Gender, age, and

cultural factors did not appear to moderate this relationship, though other studies suggest that younger users, in particular, report higher levels of loneliness and depression related to prolonged SNS use [20].

SNS activities can be roughly categorized into interactive, passive and active types. Research indicates that interactive SNS use, involving meaningful engagement with others, is generally associated with better psychological well-being and reduced loneliness [17,21-24]. Conversely, passive use, such as browsing without interacting, can have mixed effects. Yang [23] found that passive browsing on Instagram was associated with lower loneliness, while other studies suggest that passive use may increase feelings of loneliness [21,25]. Additionally, Yang [23] found that active but non-interactive activities, like broadcasting, were linked to higher loneliness.

Wang et al. [26] observed curvilinear relationships between active Facebook use and adolescents' social and emotional loneliness, with moderate use reducing loneliness and heavy use increasing it. Hunt et al. [27] found that limiting social media use led to significant decreases in loneliness and depression, suggesting that the addictive nature of social media can exacerbate feelings of loneliness.

Research objectives

This study aims to analyze the interplay between FOMO, loneliness, and adolescents' use of TikTok, one of the most popular social media platforms today. Since its launch in 2016, TikTok has rapidly gained global popularity, having over 830 million active users worldwide as of 2023 [28]. The platform is particularly popular among younger users, with 14.4% of its users aged 13 to 17 years and 34.9% aged 18 to 24 years [29]. TikTok has elements of both social media and social networking sites, giving users an opportunity to create, share, and consume short video content while providing features for following, commenting, liking, and direct messaging. It fosters community engagement and social interaction, similar to traditional social networking sites. Consequently, some TikTok users may potentially experience symptoms of social media addiction, with others showing signs of social networking addiction.

While research has extensively explored the relationship between FOMO, loneliness, and users' engagement with platforms like Facebook and Instagram [9,30,31], studies focusing on TikTok are still limited. Montag et al. reviewed empirical studies on TikTok, and highlighted that there is limited understanding of the psychological mechanisms related to TikTok use. This gap in knowledge raises questions about whether findings from other social media platforms are directly applicable to TikTok. Investigating how TikTok use correlates with social networking addiction and understanding the roles of FOMO and loneliness in compulsive social media use are crucial. Insights into these dynamics may be essential for safeguarding well-being of adolescent users. Recent research by Chao et al. [32] compared non-users, moderate users, and addictive users of TikTok. They found that addictive users experienced the most severe mental health issues, including higher levels of depression, anxiety, stress, loneliness, social anxiety, attention problems and reduced life satisfaction and sleep quality. In contrast, non-users and moderate users showed no significant differences in school performance or mental health conditions. Additionally, studies have examined the impact of TikTok's active and passive use on self-esteem and subjective well-being, revealing positive correlations [33].

Given TikTok's popularity, the combination of social media and social networking features, and its design that encourages frequent use, it serves as an ideal platform for exploring the relationships between platform use, social networking addiction, FOMO, and loneliness. This study includes both psychological factors (loneliness and FOMO) and usage frequency (TikTok use) to provide a comprehensive understanding of predictors of social networking addiction. Loneliness and FOMO represent psychological constructs that may drive social networking addiction, reflecting internal states or feelings that influence behavior. In contrast, TikTok use measures the frequency of engagement, reflecting the intensity of behavior. By integrating both types of predictors, we aim to capture a holistic view of the factors contributing to social networking addiction.

Methodology

Participants

The study employed a quantitative design with 143 adolescents ($M = 14.97$, $SD = 0.769$; 58.7% female) from German grammar schools. Participants volunteered for an adventure education program and were then asked to complete our questionnaires. Participants came from 16 out of 18 federal states in Germany, providing a diverse geographic representation across the country.

Instruments

Social networking addiction

Social networking addiction was assessed using the Social Networking Addiction Scale (SNAS), developed by Shahnawaz and Rehman [34]. The SNAS consists of 21 items designed to measure key dimensions of addiction, including salience, mood modification, tolerance, withdrawal, conflict, and relapse, with each dimension represented by three or four statements. Participants rated their agreement with statements such as "I go to social networking sites whenever I am upset" on a 5-point Likert scale ranging from strongly disagree to strongly agree. In the original 7-point scale version, a total score above 84 indicates addiction. When using the 5-point scale, this threshold translates to a score exceeding 63, which can similarly be interpreted as indicative of addiction. Both the SNAS and the Fear of Missing Out (FOMO) scale were translated from English to German by two bilingual translation specialists to ensure the accuracy of the translated versions. The internal consistency of the SNAS was assessed using Cronbach's alpha, yielding a point estimate of 0.914, indicating excellent reliability. The 95% confidence interval for Cronbach's alpha ranged from 0.892 to 0.933, demonstrating a high degree of internal consistency for the scale.

Fear of Missing Out (FOMO)

Fear of Missing Out (FOMO) was assessed using the scale developed by Przybylski et al. [5]. This brief self-report scale includes 10 items rated on a 5-point scale, ranging from not at all true to me to extremely true to me, with items such as "I get anxious when I find my friends having fun without me." The analysis revealed a Cronbach's alpha of 0.715, indicating acceptable reliability for the scale. The 95% confidence interval for Cronbach's alpha ranged from 0.639 to 0.779, providing a range within which the true reliability of the scale is likely to fall.

Loneliness

Loneliness was assessed using the validated German version of the Revised UCLA Loneliness Scale, adapted by Döring and Bortz [35] from the original scale by Russell et al. [36]. It consists of 20 items, with 10 positive and 10 negative statements. Participants rated their agreement on a 5-point Likert scale ranging from strongly disagree to strongly agree, with items such as "I feel isolated from others." Cronbach's alpha was computed to evaluate the internal consistency of the scale, yielding a coefficient of 0.919. The 95% confidence interval for Cronbach's alpha ranged from 0.898 to 0.937, indicating a high level of internal consistency and suggesting that the scale reliably measures the intended construct.

TikTok use

We also collected data on TikTok usage frequency. Participants indicated their frequency of use from ten options: "never used," "once per month," "several times a month," "once a week," "several times a week," "once per day," "several times per day," "once per hour," "several times per hour," and "all the time."

Procedure

Data collection took place in March 2024 using the online survey platform SoSci Survey. Participants were given a period of ten days to complete and submit their responses, providing them with sufficient time and flexibility to participate at their convenience. The online format allowed for efficient data collection and ensured confidentiality and ease of access for all participants.

Data analysis

The data collected from the participants were analyzed using several statistical methods to investigate the relationships between social networking addiction, FOMO, loneliness, and TikTok usage patterns. Analyses were conducted using SPSS (Version 29) and JASP (Version 0.19). The dataset had no missing values; therefore, imputation was not required.

Descriptive statistics

Initially, descriptive statistics were computed to summarize the characteristics of the sample. Means, standard deviations, and frequencies were reported to provide an overview of the data. T-tests for independent groups were performed to examine potential gender differences in the main variables.

Correlation analysis

Pearson correlation coefficients were calculated to assess the strength and direction of linear relationships between continuous variables, including social networking addiction, FOMO, loneliness and TikTok usage. This analysis aimed to identify significant associations among these variables. Prior to conducting correlation and regression analyses, assumptions of normality, linearity, and homoscedasticity were tested to ensure the validity of the results. To check normality we used Shapiro-Wilk Test, as a more sensitive test for small to moderate sample sizes.

Reliability analysis

Internal consistency of the measurement scales was evaluated using Cronbach's alpha to assess the reliability of each scale.

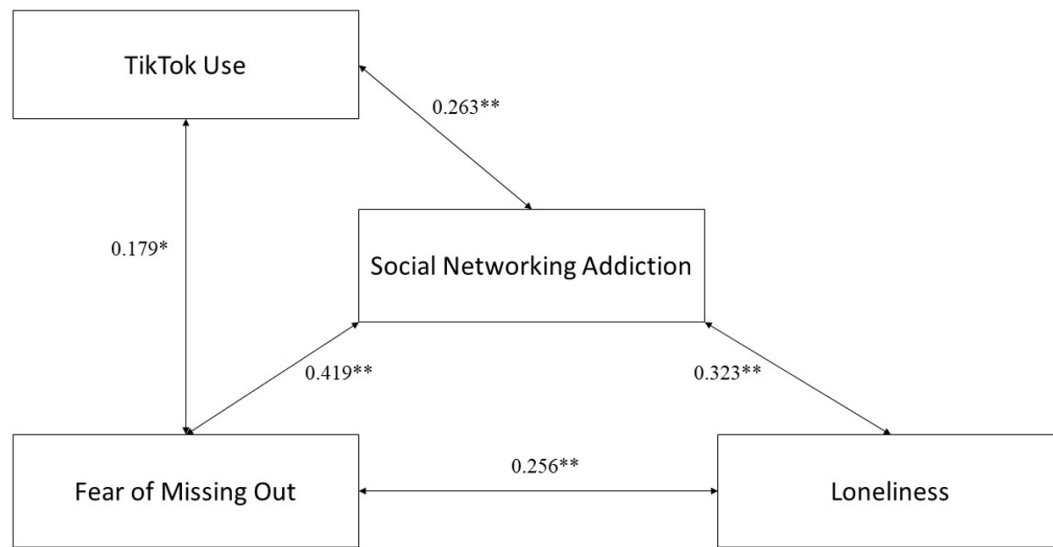


Figure 1: Relationships between social networking addiction, fear of missing out, loneliness and TikTok use (**** p<0.01, * p<0.05).

Regression analysis

Multiple regression analysis was conducted to examine the predictive power of FOMO, loneliness, and TikTok use on social networking addiction, while controlling for gender. The primary aim was to determine the extent to which these predictors - both psychological factors and usage frequency - contribute to social networking addiction. In our regression model, social networking addiction served as the dependent variable, while FOMO, loneliness, and TikTok use were included as independent variables. This approach enabled us to evaluate the impact of both internal psychological factors and the frequency of TikTok use on social networking addiction. By incorporating these predictors, we sought to differentiate between the effects of psychological motivations and the intensity of social media engagement on addiction levels. This methodology provides a comprehensive analysis of how psychological constructs and usage behaviors collectively influence social networking addiction, offering insights into both the motivational and behavioral aspects of engagement.

Results

In our sample, social networking addiction had a mean score of $M=39.15$ ($SD=12.094$). According to the scale threshold, 6% of teenagers were identified as having social networking addiction, while approximately 40% exhibited a tendency towards social networking overuse. The Fear of Missing Out (FOMO) among teenagers had a mean score of $M=24.43$ ($SD=5.553$). Sixteen percent of participants had scores above 30, indicating frequent FOMO-related feelings, as they selected answers of 4 or 5 on the 5-point Likert scale (“true to me” or “extremely true to me”).

Loneliness scores averaged $M=1.97$ ($SD=1.982$). This is slightly higher than that reported by Döring et al. ($M=1.69$, $SD=0.95$). Notably, the comparison group in Döring et al. was older, with a mean age of 47. In our sample, 10.5% of teenagers scored 3 or above, indicating occasional feelings of loneliness. Regarding TikTok use, 12%

Correlations between constructs	Coefficient (r)
Correlation Between Social Networking Addiction and Psychological Factors	
SNAS and FOMO	0.419**
Salience and FOMO	0.364**
Mood Modification and FOMO	0.363**
Tolerance and FOMO	0.271**
Withdrawal and FOMO	0.328**
Conflict and FOMO	0.213*
Relapse and FOMO	0.320**
SNAS and Loneliness	0.323**
Salience and Loneliness	0.266**
Mood Modification and Loneliness	0.284**
Tolerance and Loneliness	0.190*
Withdrawal and Loneliness	0.285**
Conflict and Loneliness	0.323**
Relapse and Loneliness	0.167*
Correlation Between Social Networking Addiction and TikTok use	
SNAS and TikTok use	0.263**
Salience and TikTok use	0.270**
Mood Modification and TikTok use	0.317**
Tolerance and TikTok use	-
Withdrawal and TikTok use	-
Conflict and TikTok use	0.224**
Relapse and TikTok use	-

Table 1: Correlation coefficients among social networking addiction, fear of missing out, loneliness and TikTok Use.

** p<0.01, * p<0.05

reported using it at least once a day, another 12% used it less frequently, and 76% did not use TikTok. No significant gender differences were found in social networking addiction, loneliness, fear of missing out, or TikTok use.

The Shapiro-Wilk test revealed some deviations from normality in the residuals for all variables. We conducted visual inspections of residual plots to assess the impact of these deviations on the robustness of our analyses. The skewness and kurtosis for all variables were within mild ranges, suggesting that deviations from normality were not severe. Given the robustness of Pearson correlations to mild deviations and the resilience of regression analysis to moderate non-normality, we proceeded with our analyses. With a sample size of 143, mild deviations are unlikely to significantly affect the validity of our results.

Pearson correlation coefficients were calculated to examine the relationships between the main variables (Figure 1). The results indicate that social networking addiction was positively correlated with both FOMO ($r=0.419$, $p<0.01$) and loneliness ($r=0.323$, $p<0.01$), with a positive correlation also found between FOMO and loneliness ($r=0.256$, $p<0.01$). TikTok use was positively correlated with social networking addiction ($r=0.263$, $p<0.01$) and weakly correlated with FOMO ($r=0.179$, $p<0.05$). No significant correlation was found between TikTok use and loneliness.

Table 1 presents correlations between different dimensions of the social networking addiction with FOMO, loneliness and TikTok use. All dimensions of social networking addiction scale (SNAS) - salience, mood modification, tolerance, withdrawal, conflict, and relapse - were significantly correlated with both loneliness and FOMO. TikTok use was significantly correlated with three out SNAS dimensions: salience ($r=0.270$, $p<0.01$), mood modification ($r=0.317$, $p<0.01$) and conflict ($r=0.224$, $p<0.01$). No significant correlations were found with tolerance, withdrawal, or relapse.

A multiple regression analysis was conducted to explore the predictive power of loneliness, Fear of Missing Out (FOMO), and TikTok use on social networking addiction, while controlling for gender. Despite no significant gender differences found in t-tests, gender was included as a control variable to account for potential interactions, as gender might interact with FOMO, loneliness and TikTok use in ways that are not captured by simple group comparisons. The regression analysis revealed the following results:

- FOMO showed a significant positive association with social networking addiction, with a standardized beta coefficient of $\beta=0.328$ ($p<0.001$). The 95% confidence interval ranged from 0.384 to 1.049, suggesting a strong and statistically significant impact.
- Loneliness was positively associated with social networking addiction, with a standardized beta coefficient of $\beta=0.223$ ($p=0.004$). The 95% confidence interval ranged from 0.078 to 0.399, indicating a statistically significant effect.
- TikTok use was positively related to social networking addiction, with a standardized beta coefficient of $\beta=0.187$ ($p=0.014$). The 95% confidence interval ranged from 0.232 to 2.044, suggesting a significant but weaker association compared to loneliness and FOMO. The wide confidence interval indicates some uncertainty about the precise effect size due to a relatively small sample size.

- Gender was included as a control variable in the model and was not a significant predictor of social networking addiction ($\beta=0.013$, $p=0.859$).

Model Fit: The R^2 value for the model was 0.259, suggesting that approximately 25.9% of the variance in social networking addiction is explained by the predictors included in the model. To check for multicollinearity, tolerance and Variance Inflation Factor (VIF) values were examined. The results indicated that multicollinearity was not a concern in the regression model (FOMO: Tolerance = 0.909, VIF = 1.100; Loneliness: Tolerance = 0.931, VIF = 1.074; TikTok Use: Tolerance = 0.953, VIF = 1.050; Gender: Tolerance = 0.984, VIF = 1.016). All tolerance values were above the critical threshold of 0.1, and VIF values were below 10, suggesting that the independent variables were not highly collinear. These results support the reliability of the regression analysis and the individual contributions of the predictors.

Discussion

The regression analysis demonstrated that both psychological factors (loneliness and FOMO) and usage frequency (TikTok use) are significant predictors of social networking addiction. This comprehensive model provides deeper insights into how internal psychological states and behavioral patterns interact to contribute to addictive behaviors. The significant associations identified between the variables enhance our understanding of the multifaceted nature of social networking addiction and its predictors. Interestingly, gender did not have a significant effect on social networking addiction within our model, nor there were significant gender differences in loneliness, FOMO, or TikTok use frequencies. This suggests that the predictors of social networking addiction may operate similarly across genders and interventions may address these factors universally rather than targeting specific gender groups.

Fear of Missing Out (FOMO) as a predictor of social networking addiction

Consistent with existing literature, our results indicate that FOMO is a strong predictor of social networking addiction. With a standardized beta coefficient of $\beta=0.328$ ($p<0.001$), our analysis confirms that higher levels of FOMO are strongly associated with increasing social networking addiction. This finding aligns with prior research that highlights FOMO as a crucial factor in the compulsive use of social networking sites [5,6,37]. Adolescents experiencing high levels of FOMO are more likely to engage excessively with social networking platforms, triggered by a perceived need to stay connected with peers and avoid missing out on potential rewarding experiences.

Loneliness as a predictor of social networking addiction

Our study also found that loneliness is a significant predictor of social networking addiction ($\beta=0.223$, $p=0.004$). This result is consistent with other research linking loneliness with problematic social media use [19,26]. Adolescents who feel lonely may utilize social networking sites as a coping mechanism to relieve their social isolation. However, it can sometimes intensify feelings of loneliness, particularly if their social media use is passive or non-interactive, or if interactions do not meet their emotional needs. Our results emphasize the importance of addressing loneliness as a factor in social networking addiction and highlight the need for interventions that not only focus on online behavior of teenagers but also address underlying emotional states.

TikTok use and social networking addiction

TikTok use was positively associated with social networking addiction ($\beta=0.187$, $p=0.014$), although this association was weaker compared to FOMO and loneliness. The correlation between TikTok use and social networking addiction supports the idea that platforms like TikTok, which encourage frequent engagement and social interaction, can contribute to addictive behaviors. While our study focuses on TikTok, it aligns with broader findings that social networking addiction is an eclectic phenomenon and is not limited to Facebook addiction [4]. However, the wide confidence interval for TikTok use suggests some uncertainty about the precise effect size, which may be attributed to the relatively small sample size and high variability in TikTok usage patterns among participants in our study.

Dimensions of social networking addiction

Our analysis examined the six dimensions of social networking addiction: salience, mood modification, tolerance, withdrawal, conflict and relapse. The results revealed that each of these dimensions was significantly correlated with both loneliness and FOMO. This indicates that these dimensions are intricately linked to the psychological factors triggering social networking addiction. At the same time, TikTok use was significantly correlated with three dimensions of social networking addiction: salience, mood modification and conflict. This suggests that TikTok use is particularly associated with the immediate psychological impacts of social networking addiction, such as the dominated significance of online presence (salience), changes in mood related to social media engagement (mood modification), and interpersonal disputes in real life relations caused by social media interactions (conflict).

In contrast, TikTok use did not show significant correlations with tolerance, withdrawal, or relapse. These dimensions represent more longer-term aspects of addiction, such as the need for increased engagement to achieve the same level of satisfaction (tolerance), the discomfort experienced when unable to access social media platform (withdrawal), and the repeating return to problematic use despite negative consequences (relapse). The lack of significant correlation with these dimensions might suggest that TikTok use, as measured in our study, is more closely related to the immediate and situational impacts of social networking addiction rather than the more deep-rooted and long-lasting symptoms. This distinction highlights the need for further research to explore how different platforms influence various dimensions of social networking addiction over time and how these relationships might vary across different types of social media usage patterns.

Limitations and Further Research

While our study provides valuable insights into the predictors of social networking addiction, several limitations must be mentioned.

First, the cross-sectional design of our study restricts the ability to draw conclusions on causality between FOMO, loneliness, TikTok use and social networking addiction. Longitudinal studies are needed to determine the directionality of these relationships and to assess how changes in these variables over time may influence social networking addiction.

Second, the reliance on self-reported measures introduces potential biases, such as social desirability and recall inaccuracies. Participants may have provided responses they believed to be more socially

acceptable or may have inaccurately reported their TikTok usage. Future research could benefit from incorporating more objective measures of social media use and addiction, such as for instance digital activity logs, that provide more accurate data.

Third, although our sample size of 143 participants is sufficient, it may limit the generalizability of our findings. Our sample was drawn from adolescents attending German grammar schools, which may not fully represent the broader adolescent population. Consequently, the findings may not be representative for other age groups or those from different educational or cultural backgrounds. The wide confidence intervals observed for certain predictors, such as TikTok use, further underscore the need for studies with larger and more diverse samples to gain a more comprehensive understanding of the factors contributing to social networking addiction.

Additionally, the broad definition of social networking addiction used in our study may not fully capture the experiences of individuals with specific patterns of social networking use. Future research could explore the effects of different social media platforms and usage behaviours to better understand their contributions to addictive tendencies.

Finally, our study did not account for other variables that may influence social networking addiction, such as personality traits, socioeconomic status or family environment. Including these factors in future research could offer a more holistic understanding of the predictors of social networking addiction.

These limitations highlight the need for further research to address these gaps and to explore these relationships in depth.

Conclusion

In summary, our study demonstrated that both psychological factors, such as loneliness and FOMO, and usage frequency, specifically TikTok use, are significant predictors of social networking addiction among adolescents. The findings suggest that higher levels of FOMO, increased loneliness, and more frequent TikTok use are associated with a greater likelihood of developing social networking addiction. This research highlights the necessity to address both psychological aspects and specific platform usage in understanding and managing social networking addiction. Interventions that focus on reducing FOMO and loneliness could be crucial in preventing and mitigating social networking addiction in adolescents. Although TikTok use contributes to social networking addiction, the nature of this relationship needs further investigation, particularly concerning different usage patterns and their long-term effects.

Our study adds to the growing body of literature on adolescent social media use, offering valuable insights into the predictors of social networking addiction. Understanding these relationships is crucial for developing effective interventions and policies aimed at minimizing the harmful impacts of social media. Future research could prioritize longitudinal studies to better understand the relationships between these variables and to explore how various social media platforms contribute to addiction. Additionally, examining factors such as usage patterns, the impact of content type, and the quality of online interactions on addictive behaviors could provide deeper insights into the dynamics of social networking addiction and support the development of more effective strategies to protect adolescent well-being in the digital environment.

References

1. Andreassen CS, Pallesen S, Griffiths MD (2017) The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addict Behav* 64: 287-293.
2. Boer M, van den Eijnden RJJM, Boniel-Nissim M, Wong SL, Inchley JC, et al. (2020) Adolescents' Intense and Problematic Social Media Use and Their Well-Being in 29 Countries. *J Adolesc Health* 66: 89-99.
3. Valkenburg PM, Meier A, Beyens I (2022) Social media use and its impact on adolescent mental health: An umbrella review of the evidence. *Curr Opin Psychol* 44: 58-68.
4. Kuss D, Griffiths M (2017) Social Networking Sites and Addiction: Ten Lessons Learned. *International Journal of Environmental Research and Public Health* 3: 311.
5. Przybylski AK, Murayama K, DeHaan C, Gladwell V (2013) Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior* 29: 1841-1848.
6. Oberst U, Wegmann E, Stodt B, Brand M, Chamarro A (2017) Negative consequences from heavy social networking in adolescents: The mediating role of fear of missing out. *J Adolesc* 55: 51-60.
7. Dhir Y, Yossatorn Y, Kaur P, Chen S (2018) Online social media fatigue and psychological wellbeing—A study of compulsive use, fear of missing out, fatigue, anxiety and depression. *International Journal of Information Management* 40: 141-152.
8. Wang J, Wang P, Yang X, Zhang G, Wang X, et al. (2019) Fear of Missing Out and Procrastination as Mediators Between Sensation Seeking and Adolescent Smartphone Addiction. *International Journal of Mental Health and Addiction* 17: 1049-1062.
9. Fioravanti G, Casale S, Benucci SB, Probst A, Falone A, et al. (2021) Fear of missing out and social networking sites use and abuse: A meta-analysis. *Computers in Human Behavior* 122: 106839.
10. Tandon A, Dhir A, Almugren I, AlNemer GN, Mäntymäki M (2021) Fear of missing out (FoMO) among social media users: a systematic literature review, synthesis and framework for future research. *Internet Research* 31: 782-821.
11. Kaur P, Dhir A, Alkhalifa AK, Tandon A (2021) Social media platforms and sleep problems: a systematic literature review, synthesis and framework for future research. *Internet Research* 31: 1121-1152.
12. Scott H, Woods HC (2018) Fear of missing out and sleep: Cognitive behavioural factors in adolescents' nighttime social media use. *J Adolesc* 68: 61-65.
13. Elhai JD, Yang H, Fang J, Bai X, Hall BJ (2020) Depression and anxiety symptoms are related to problematic smartphone use severity in Chinese young adults: Fear of missing out as a mediator. *Addict Behav* 101: 105962.
14. Wolniewicz CA, Rozgonjuk D, Elhai JD (2019) Boredom proneness and fear of missing out mediate relations between depression and anxiety with problematic smartphone use. *Human Behav and Emerg Tech* 2: 61-70.
15. Li L, Griffiths MD, Niu Z, Mei S (2020) The trait-state fear of missing out scale: Validity, reliability, and measurement invariance in a Chinese sample of university students. *J Affect Disord* 274: 711-718.
16. Mao J, Zhang B (2023) Differential Effects of Active Social Media Use on General Trait and Online-Specific State-FoMO: Moderating Effects of Passive Social Media Use. *Psychol Res Behav Manag* 16: 1391-1402.
17. Mao J, Fu GX, Huang JJ (2023) The double-edged sword effects of active social media use on loneliness: The roles of interpersonal satisfaction and fear of missing out. *Front Psychol* 14: 1108467.
18. Peplau LA, Perlman D (1982) Perspectives on loneliness," in *Loneliness: A sourcebook of current theory, research and therapy*. John Wiley & Sons, New Jersey, USA.
19. Zhang L, Li C, Zhou T, Li Q, Gu C (2022) Social Networking Site Use and Loneliness: A Meta-Analysis. *J Psychol* 56: 492-511.
20. Pop LM, Iorga M, Iurcov R (2022) Body-Esteem, Self-Esteem and Loneliness among Social Media Young Users. *Int J Environ Res Public Health* 19: 5064.
21. Burke M, Marlow C, Lento T (2010) Social network activity and social well-being. In: Mynatt E, Fitzpatrick G, Hudson S, Edwards K, Rodden T (eds.). *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. Atlanta, Georgia, USA.
22. Ryan T, Xenos S (2011) Who uses Facebook? An investigation into the relationship between the Big Five, shyness, narcissism, loneliness, and Facebook usage. *Computers in Human Behavior* 27: 1658-1664.
23. Yang CC (2016) Instagram Use, Loneliness, and Social Comparison Orientation: Interact and Browse on Social Media, But Don't Compare. *Cyberpsychol Behav Soc Netw* 19: 703-708.
24. Lin S, Liu D, Niu G, Longobardi C (2022) Active Social Network Sites Use and Loneliness: the Mediating Role of Social Support and Self-Esteem. *Curr Psychol* 41: 1279-1286.
25. Verduyn P, Lee DS, Park J, Shablack H, Orvell A, et al. (2015) Passive Facebook usage undermines affective well-being: Experimental and longitudinal evidence. *J Exp Psychol Gen* 144: 480-488.
26. Wang K, Frison E, Eggermont S, Vandenbosch L (2018) Active public Facebook use and adolescents' feelings of loneliness: Evidence for a curvilinear relationship. *J Adolesc* 67: 35-44.
27. Hunt MG, Marx R, Lipson C, Young J (2018) No More FOMO: Limiting Social Media Decreases Loneliness and Depression. *Journal of Social and Clinical Psychology* 37: 751-768.
28. Statista (2024) Number of TikTok users worldwide from 2020 to 2025. Statista, Hamburg, Germany.
29. Business of Apps (2024) TikTok Revenue and Usage Statistics (2024). Business of Apps.
30. Beyens I, Frison E, Eggermont S (2016) "I don't want to miss a thing": Adolescents' fear of missing out and its relationship to adolescents' social needs, Facebook use, and Facebook related stress. *Computers in Human Behavior* 64: 1-8.
31. Brown RM, Roberts SGB, Pollet TV (2021) Loneliness is negatively related to Facebook network size, but not related to Facebook network structure. *Cyberpsychology* 15.
32. Chao M, Lei J, He R, Jiang Y, Yang H (2023) TikTok use and psychosocial factors among adolescents: Comparisons of non-users, moderate users, and addictive users. *Psychiatry Res* 325: 115247.
33. Zhang Y (2022) The Impact of College Students' Using TikTok on Their Mental Health from the Perspective of Media Society. *BCP Social Sciences & Humanities* 18: 170-181.
34. Shahnawaz MG, Rehman U (2020) Social Networking Addiction Scale. *Cogent Psychology* 7.
35. Döring N, Bortz J (1993) Psychometric loneliness research: A new German version of the UCLA loneliness scale. *Diagnostica* 39: 224-239.
36. Russell D, Peplau LA, Cutrona CE (1980) The revised UCLA Loneliness Scale: concurrent and discriminant validity evidence. *J Pers Soc Psychol* 39: 472-480.
37. Classen B, Wood JK, Davies P (2020) Social network sites, fear of missing out, and psychosocial correlates. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 14.



- Advances In Industrial Biotechnology | ISSN: 2639-5665
- Advances In Microbiology Research | ISSN: 2689-694X
- Archives Of Surgery And Surgical Education | ISSN: 2689-3126
- Archives Of Urology
- Archives Of Zoological Studies | ISSN: 2640-7779
- Current Trends Medical And Biological Engineering
- International Journal Of Case Reports And Therapeutic Studies | ISSN: 2689-310X
- Journal Of Addiction & Addictive Disorders | ISSN: 2578-7276
- Journal Of Agronomy & Agricultural Science | ISSN: 2689-8292
- Journal Of AIDS Clinical Research & STDs | ISSN: 2572-7370
- Journal Of Alcoholism Drug Abuse & Substance Dependence | ISSN: 2572-9594
- Journal Of Allergy Disorders & Therapy | ISSN: 2470-749X
- Journal Of Alternative Complementary & Integrative Medicine | ISSN: 2470-7562
- Journal Of Alzheimers & Neurodegenerative Diseases | ISSN: 2572-9608
- Journal Of Anesthesia & Clinical Care | ISSN: 2378-8879
- Journal Of Angiology & Vascular Surgery | ISSN: 2572-7397
- Journal Of Animal Research & Veterinary Science | ISSN: 2639-3751
- Journal Of Aquaculture & Fisheries | ISSN: 2576-5523
- Journal Of Atmospheric & Earth Sciences | ISSN: 2689-8780
- Journal Of Biotech Research & Biochemistry
- Journal Of Brain & Neuroscience Research
- Journal Of Cancer Biology & Treatment | ISSN: 2470-7546
- Journal Of Cardiology Study & Research | ISSN: 2640-768X
- Journal Of Cell Biology & Cell Metabolism | ISSN: 2381-1943
- Journal Of Clinical Dermatology & Therapy | ISSN: 2378-8771
- Journal Of Clinical Immunology & Immunotherapy | ISSN: 2378-8844
- Journal Of Clinical Studies & Medical Case Reports | ISSN: 2378-8801
- Journal Of Community Medicine & Public Health Care | ISSN: 2381-1978
- Journal Of Cytology & Tissue Biology | ISSN: 2378-9107
- Journal Of Dairy Research & Technology | ISSN: 2688-9315
- Journal Of Dentistry Oral Health & Cosmesis | ISSN: 2473-6783
- Journal Of Diabetes & Metabolic Disorders | ISSN: 2381-201X
- Journal Of Emergency Medicine Trauma & Surgical Care | ISSN: 2378-8798
- Journal Of Environmental Science Current Research | ISSN: 2643-5020
- Journal Of Food Science & Nutrition | ISSN: 2470-1076
- Journal Of Forensic Legal & Investigative Sciences | ISSN: 2473-733X
- Journal Of Gastroenterology & Hepatology Research | ISSN: 2574-2566
- Journal Of Genetics & Genomic Sciences | ISSN: 2574-2485
- Journal Of Gerontology & Geriatric Medicine | ISSN: 2381-8662
- Journal Of Hematology Blood Transfusion & Disorders | ISSN: 2572-2999
- Journal Of Hospice & Palliative Medical Care
- Journal Of Human Endocrinology | ISSN: 2572-9640
- Journal Of Infectious & Non Infectious Diseases | ISSN: 2381-8654
- Journal Of Internal Medicine & Primary Healthcare | ISSN: 2574-2493
- Journal Of Light & Laser Current Trends
- Journal Of Medicine Study & Research | ISSN: 2639-5657
- Journal Of Modern Chemical Sciences
- Journal Of Nanotechnology Nanomedicine & Nanobiotechnology | ISSN: 2381-2044
- Journal Of Neonatology & Clinical Pediatrics | ISSN: 2378-878X
- Journal Of Nephrology & Renal Therapy | ISSN: 2473-7313
- Journal Of Non Invasive Vascular Investigation | ISSN: 2572-7400
- Journal Of Nuclear Medicine Radiology & Radiation Therapy | ISSN: 2572-7419
- Journal Of Obesity & Weight Loss | ISSN: 2473-7372
- Journal Of Ophthalmology & Clinical Research | ISSN: 2378-8887
- Journal Of Orthopedic Research & Physiotherapy | ISSN: 2381-2052
- Journal Of Otolaryngology Head & Neck Surgery | ISSN: 2573-010X
- Journal Of Pathology Clinical & Medical Research
- Journal Of Pharmacology Pharmaceutics & Pharmacovigilance | ISSN: 2639-5649
- Journal Of Physical Medicine Rehabilitation & Disabilities | ISSN: 2381-8670
- Journal Of Plant Science Current Research | ISSN: 2639-3743
- Journal Of Practical & Professional Nursing | ISSN: 2639-5681
- Journal Of Protein Research & Bioinformatics
- Journal Of Psychiatry Depression & Anxiety | ISSN: 2573-0150
- Journal Of Pulmonary Medicine & Respiratory Research | ISSN: 2573-0177
- Journal Of Reproductive Medicine Gynaecology & Obstetrics | ISSN: 2574-2574
- Journal Of Stem Cells Research Development & Therapy | ISSN: 2381-2060
- Journal Of Surgery Current Trends & Innovations | ISSN: 2578-7284
- Journal Of Toxicology Current Research | ISSN: 2639-3735
- Journal Of Translational Science And Research
- Journal Of Vaccines Research & Vaccination | ISSN: 2573-0193
- Journal Of Virology & Antivirals
- Sports Medicine And Injury Care Journal | ISSN: 2689-8829
- Trends In Anatomy & Physiology | ISSN: 2640-7752

Submit Your Manuscript: <https://www.heraldopenaccess.us/submit-manuscript>