



Original Research

Exploring How Far Fear of Missing Out and Self-Control Contribute to Social Media Addiction among TVET Students

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Abstract: Efforts are ongoing to ascertain the incidence of social media addiction among students in higher education. Social media plays a pivotal role in daily life as it permits users to communicate with each other in various ways. The study aimed to investigate the prevalence of social media addiction among Technical and Vocational Education and Training (TVET) students. The study was conducted at a TVET college in the Gauteng province of South Africa using a quantitative research approach. Using convenience sampling, 279 respondents were selected for analysis. According to the results of hypothesis testing, fear of missing out (FoMO) was associated with social media addiction, as was a lack of self-control. The mediation analysis and the fear of missing out partially mediated the relationship between social media addiction and a lack of self-control. A better understanding of the factors contributing to social media addiction among students is necessary if society, and higher education institutions in particular, are to prevent the mental health problems associated with it.

Keywords: Social Media Addiction, Fear of Missing Out, Self-Control, Technical and Vocational Education and Training Colleges, Students

Introduction

Social media plays a pivotal part in daily life as it permits users to communicate with each other in various ways such as video calls or by developing and sharing content (We are Social 2019). Bertot, Jaeger, and Hansen (2012) suggest that social media is a set of online tools that are designed for the purpose of exchanging social information. According to Nie et al. (2020), the social media platform serves as a resource for communities to converse, generate, disseminate, and communicate. Mackson, Brochu, and Schneider (2019) pointed out that social media allows users to share photos, videos, and video games in real time, which are available at any time (Cudo et al. 2020). It also allows for sharing information and checking on each other (Quaglieri et.al. 2021). Additionally, social media is commonly used for communication, learning, information searching, and choice making (Zhao 2021). Thus, it is a computer-mediated application that is utilized by users to create content and link them

to others (Obar and Wildman 2015). Social media comprises social networking sites and messenger platforms (Waterberg, Kriston, and Thomasius 2020). It is widely believed that social media has significant benefits, but only if those benefits are premised on improving people's lives. The benefits may either be hedonic or psychological (Roberts and David 2020; Radovic et al. 2017).

There are, however, instances in which social media can trigger a sense of inadequacy, which may lead to problematic behaviors. An unhealthy use of social media is also known as social media addiction (Fang et al. 2020). The use of social media is one of the most significant mental health factors affecting those who spend more time on social network sites. In the context of social media, the term addiction refers to the uncontrollable dependence on social media (Keles, McCrae, and Grealish 2020). According to Paakkari et al. (2021), this dependence on social media is characterized by preoccupation ("substantial time used to think about the activity"), withdrawal, tolerance, problems in reducing/stopping ("unsuccessful attempts to stop"), giving up other activities, continuance despite problems, deception or covering up, use to escape from or relieve negative moods, and indications of risk or loss regarding relationships or opportunities. Consequently, such dependence impacts vital aspects of life (Fang et al. 2020). A typical example is someone spending a lot of time on social networking sites and wishing to stay informed of everything happening (Radovic et al. 2017).

There is evidence to suggest that social media contributes to 28 percent of all media time spent among 15- to 19-year-olds, while 20- to 29-year-olds spend almost two hours per day on social media (Leong et al. 2019). It has been shown that spending too much time on social media can lead to psychological problems, such as problems with self-control and fear of missing out (FoMO). Individuals with low self-control have a propensity to develop behavioral addictions (De Ridder et al. 2012; Geng et al. 2018; Vainik, Garcia-Garcia, and Dagher 2019). These people are only able to resist their desires to a limited extent and can engage in destructive behavior (Carver, Scheier, and Segerstrom 2010). People who have difficulty regulating their social media use are more likely to continue using it, while not doing so increases the likelihood of missing out and thus threatens their self-control. In addition, studies indicate that excessive social media use impacts mental wellbeing and contributes to anxiety and depression, among other things. In contrast, people who have self-control are those who can effectively manage their emotions, thoughts, and behaviors when confronted with external stressors (DeLisi 2014).

Recent evidence has shown that social media addiction has been widespread, particularly among students. Sahin (2018) and Wegmann, Stodt, and Brand (2015) argue that social media addiction negatively impacts students' daily lives. Several theoretical frameworks can help explain the relationship between social media addiction, self-control, and FoMO among students, for example, the self-control theory. This theory suggests that individuals' ability to regulate their behaviors and impulses plays a significant role in any addiction (Rasheed et al. 2020). For example, it has been shown that students who struggle to manage their social

media usage may show signs of addiction (Bheo, Lerik, and Wijaya 2020; Nęcka et al. 2019; Ekşi, Turgut, and Sevim 2019). In contrast, those who show high levels of self-control can better control their behavior (Ma, Huang, and Ma 2020). Thus, investigating the association between self-control and social media addiction is crucial in understanding TVET (technical vocational education and training) students' addictive behaviors.

FoMO is another contributing factor that studies have identified as contributing to excessive social media usage. FoMO is defined as an extensive anxiety that an individual might experience, desiring to be continually linked with other people as a way of monitoring their moves, and being worried that others are enjoying themselves (Gioia et al. 2021). Alutaybi et al. (2020) observed that social networking platforms triggered students to be continuously occupied by checking on other people's status and actions, leading to extreme utilization and unpleasant behaviour, and causing dangerous mental health problems such as addiction (Gao et al. 2020).

Previous literature suggests that social media addiction has been extensively researched in Western countries and East Asia (Dhir et al. 2018). In comparison, there has been little research on the use of social media by students in TVET colleges in developing countries such as South Africa. Due to this limitation, the present study aims to explore the relationship between social media addiction, fear of missing out, and self-control among college students in South Africa. The next section of the manuscript focuses on the literature review, which includes the constructs of self-control and FoMO.

Literature Review

People might react differently to social media use. Consequently, the impact on a person's well-being might differ depending on the duration spent on social media. Previous studies investigated elements of social media addiction and its impact on individuals' well-being. Studies explored a range of issues related to social media addiction, including psychological outcomes related to depression, anxiety, and lack of self-control among others (Wartberg, Kriston, and Thomasius 2020). Based on previous studies, this study examined self-control and fear of missing out as factors contributing to social media addiction among TVET students.

Self-Control

Self-control is a process that enables sensitive self-consciousness of maladaptive instincts (Tangney, Baumeister, and Boone 2004). Self-control is pivotal and useful to the human mind as it is linked to a healthy and joyful life. An excessive level of self-control is positively linked to certain qualities, such as self-esteem and appropriate social skills (Tangney, Baumeister, and Boone 2004). Inzlicht, Schmeichel, and Macrae (2014) argue that self-control allows people to take control of their thoughts and emotions, thereby allowing the behavior to change in response to a situation. According to Gottfredson and Hirschi (1990), low self-

control is characterized by dimensions that are not conducive to achieving long-term goals and aspirations. Thus, people who lack self-control have difficulty restraining themselves from engaging in behaviors that produce instant gratification (Gottfredson and Hirschi 1990). Individuals with less self-control are more likely to be addicted to technology such as social media (Osatuyi and Turel 2018). Again, it can be concluded that people with low self-control refuse to avoid the temptation of excessive use of social media (Li et al. 2014). Self-control is measured using the scale developed by Tangney, Baumeister, and Boone (2004).

Berger, Wyss, and Knoch (2018) noticed that students who found it difficult to control their behavior when using technology were likely to check notifications and messages immediately after they had been sent. This may be attributed to certain feelings, such as sadness (Curci et al. 2013). Again, in the same vein, Atroszko et al. (2018) declared that a lack of self-control and social media addiction urged students to access and use various online platforms. Based on the study results of Bheo, Lerik, and Wijaya (2020), it can be concluded that the greater the social media addiction, the lower the self-control. In line with previous research, the current study hypothesizes the following:

H1: There is a significant relationship between self-control and social addiction

Fear of Missing Out (FoMO)

Przybylski et al. (2013,1848) define FoMO as “a pervasive apprehension that others might be having rewarding experiences from which one is absent.” This apprehension may lead to a need to interact with others. These connections are based on the need that people have to belong to a community (Franchina et al. 2018). The fear of missing out can be viewed as an expression of this desire to belong. Thus, the belongingness hypothesis contributes to a better understanding of the mechanisms and motives behind the phenomenon of FoMO.

Studies have used a shortened version of the Przybylski et al. (2013) scale to measure the fear of missing out. The instrument consists of several items that assess the fear of missing out in different social contexts. Example items include: “I fear others have more rewarding experiences than me,” and “When I miss out on a planned get-together it bothers me.” Przybylski et al. (2013) report that a deficit in the psychological need for relatedness is likely to increase one’s sense of FoMO. Studies have examined the association between FoMO and social media addiction and found that these constructs are linked to the fact that digital tools can be used to stay connected (Alt 2015; Fuster, Chamarro, and Oberst 2017; Al-Furaih and Al-Awidi 2021), while at the same time negatively affecting health (Przybylski et al. 2013; Marino et al. 2018). For example, Franchina et al. (2018) argued that FoMO has a significant role in social media addiction and experiencing stress due to the overuse of technology tools. Fuster, Chamarro, and Oberst (2017) indicated FoMO has a powerful influence on social media engagement that leads to addiction to various social media platforms (Dempsey et al. 2019), which assists in fulfilling social effective functions (Elhai, Yang, and Montag 2020; Rozgonjuk

et al. 2019). As a result of FoMO, humans may remain in a long-lasting excessive engagement with mobile applications (Zhou 2019). Yet again, Chai et al. (2019) established that FoMO controls individuals' overuse of social media and negatively impacts on their welfare.

Furthermore, a recent study by Gioia et al. (2021) has also indicated a positive relationship between FoMO and social media addiction. Students are afraid of being invisible in the social media world, and those who are physically isolated will try to access social media to connect with others (Schimmenti, Billieux, and Starcevic 2020). FOMO also leads to other problematic behaviors like anxiety and depression (Elhai, Yang, and Montag 2020). Thus, it is hypothesised that:

H2: There is a relationship between FoMO and social media addiction.

H3: FoMO mediates the relationship between self-control and social media addiction.

Methods

Design

A cross-sectional research was employed to investigate the relationships between variables in this study. This study utilized a convenience sampling approach to investigate the relationships between variables. Given the limited timeframe and resources available for this study, convenience sampling provided the most practical and feasible means of data collection, as TVET students often have busy schedules and limited availability for research participation. Participants in this study included male and female undergraduate students enrolled in a Gauteng area of South Africa in their first third-year studies. The age range of the participants was between 18 and 24 years.

Participants and Data Collection

A total of 279 students from the TVET college participated in this study and completed the questionnaire. The participants were recruited from different academic levels, including first-year, second-year, and final-year students. By involving students from various stages of their TVET education, the study aimed to capture a broader perspective on the variables under investigation and ensure a diverse representation of the sample. Of the 279 respondents, 110 were male and 169 were female.

Ethical Considerations

The study was approved by the Research Ethics Committee (REC) of the institution and all the procedures were performed according to the ethics standards. Participants were provided with consent forms to sign before completing the questionnaire. It was explained to the

participants that they had a right not to participate in the research as their participation was voluntary. The participants' anonymity and confidentiality were ensured (Arifin 2018).

The Measurement Instruments

The study measured constructs using a 5-point Likert scale ranging from 1 = Very Often, 2 = Often, 3 = Sometimes, 4 = Rarely, 5 = Never and 1 = Strongly Disagree, 2 = Agree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. The questionnaire items in this study were created by modifying scales that were used in previous research. The social media scale was adapted from Davey, Davey, and Singh (2016) scale and consisted of nine items. The self-control scale was constructed from a scale developed by Tangney, Baumeister, and Boone (2004) and included four items. The four items of the FoMO scale were adapted from Przybylski et. al. (2013) scale. The scales included in this study have undergone rigorous validation in previous research and were deliberately selected as they have shown reliability in effectively assessing the variables of this study. These scales also proved to be reliable in this study. The Cronbach alpha values and the results of the composite reliability are shown in Table 1. These values show that the scales have a high internal consistency, with Cronbach's alpha values between 0.817 and 0.890. The results of the composite reliability also show high values, ranging between 0.872 and 0.924. Therefore, the scales used in this study can be considered reliable measures of self-control, social media addiction and FoMO.

Data Analysis

The collected data were subjected to rigorous statistical analysis using established software programs. To examine the characteristics and have an overview of the collected data, this study used SPSS Statistics version 28. Descriptive statistics, such as means and standard deviations, were computed to evaluate the characteristics of the data. In addition, the hypotheses of the study were evaluated using SmartPLS 4, a widely accepted software for performing Partial Least Squares Structural Equation Modelling (PLS-SEM) analyses (Hair et al. 2017). SmartPLS 4 assisted in assessing the measurement model and structural model.

The measurement model was used to confirm the validity and reliability of the survey instrument, while the structural model was used to assess the relationships between the latent constructs. This means that the relationships between self-control, FoMO and social media addiction were analysed using structural equation modelling. The interpretations of the results derived from the statistical analysis were based on recognized criteria found in the existing literature and used in previous studies. In the section dealing with the evaluation of the structural model, the criteria used in PLS-SEM are presented.

Results

Descriptive Data

Table 1 summarizes the SPSS descriptive analyses. It shows the means and standard deviations of each item.

Table 1: Descriptive Statistics

	<i>N</i>	<i>Mean</i>	<i>Std. Dev</i>
<i>Social Media Addiction</i>			
I check over my social media (e.g. Twitter, TikTok, WhatsApp, Instagram and Facebook) accounts even if I have something else to do	279	3.17	1.756
It does not bother me to use various social media platforms in the presence of others.	279	2.98	1.275
I share what I did, what is going on with life and momentary events in social media	279	2.75	1.337
I follow activities, momentary events, popular videos and trend topics in social media	279	3.11	1.329
I check over my social media accounts whenever possible	279	3.33	1.222
I check over the accounts of the people I know in social media	279	3.07	1.224
I communicate with my friends through social media rather than talk to them face to face	279	3.20	1.319
I follow the daily events and current affairs using social networks	279	3.13	1.344
I prefer to use social media rather than watch television	279	3.13	1.376
<i>Self-Control</i>			
I cannot cope without my phone next to me	279	2.67	1.394
I am unable to control myself with the way I am using internet and social media platforms all the time.	279	2.78	1.335
I always find myself opening other applications all the time; isolating myself from others	279	2.86	1.387
I am so addicted to my phone, first thing in the morning I check my phone before doing anything	279	2.98	1.357
<i>Fear of Missing Out</i>			
I always check my phone for any updates so that I don't lag behind	279	2.96	1.342
I check over the accounts of the people I know in social media	279	2.94	1.330
I follow activities, momentary events, popular videos and trend topics in social media	279	3.01	1.365
I desire to be connected to social media continuously, to find out what others are doing	279	2.91	1.336

As indicated in Table 1, in terms of addiction to social media, respondents on average ($M = 3.33$), checked their social media accounts whenever possible. Self-control had the highest mean ($M = 2.98$), indicating that respondents were addicted to mobile devices as they checked them in the morning before any other activities. Finally, respondents in this study reported following particular activities, events, videos, and trending topics on social media to avoid missing out on those events, with a mean score of 3.01 for fear of missing out.

Reliability Testing

The first step in this study was to examine the reflective measurement model for reliability and validity. The reliability of the measurement model was assessed to ensure the consistency of the measured constructs. To evaluate the reliability of the model, two methods were utilized: Cronbach’s Alpha and Composite Reliability. Cronbach’s Alpha assesses the internal consistency of the measurement scales and the recommended values of 0.70 and above are acceptable (Taber 2018). Composite Reliability measures the level of internal consistency between the indicators used to measure a given aspect (Chen and Shen 2015) and further measures the accuracy of a scale. A value exceeding 0.7 is considered acceptable (Fornell and Larcker 1981).

Secondly, the structural model, which explores the relationships between constructs, was then evaluated. To determine the significance of path coefficients and loadings in the outer model, bootstrapping was employed. The bootstrapping technique involved generating 5,000 subsamples to establish statistical significance (Hair et al. 2017; Hair et al. 2014). Table 2 presents the results of reliability and validity testing.

Table 2: Reliability and Validity

	<i>Cronbach Alpha</i>	<i>Composite Reliability</i>
<i>Self-Control</i>	0.818	0.880
<i>Fear of Missing Out</i>	0.890	0.924
<i>Social Media Addiction</i>	0.817	0.872

**Correlation is Significant at the 0.01 Level

Based on the analysis of Cronbach Alpha, social media addiction was scored at 0.840; self-control was scored at 0.888; and fear of missing out was scored at 0.818, thus indicating that the measurement items were internally consistent. As indicated in Table 2, these values exceeded 0.7.

Discriminant Validity

Several methods can be used to test the discriminant validity of a model, including the Fornell-Larcker test and the Heterotrait-Monotrait Ratio (HTMT) test. In this study, both methods were used. The Fornell-Larcker test involved calculating the AVE for each construct and then comparing the square root of the AVE to the inter-construct correlations. According to Henseler, Ringle, and Sarstedt (2015), to satisfy this requirement, the average variance extracted (AVE) of each construct must be compared with their squared correlations with other constructs. Thus, if the square root of the AVE is greater than the inter-construct correlations, it indicates discriminant validity, meaning that the constructs are distinct from one another.

Further testing of discriminant validity entails assessing “the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct” (Henseler, Ringle, and Sarstedt 2015, 9). According to Henseler, Ringle, and Sarstedt (2015) HTMT values greater than 0.90 indicates the absence of discriminant validity. The following table presents the results of the discriminant validity analysis.

Table 3: Fornell and Larcker Test of Discriminant Validity

	<i>FoMO</i>	<i>Self-Control</i>	<i>Social Media Addiction</i>
<i>Fear of Missing Out</i>	0.868		
<i>Self-Control</i>	0.626	0.804	
<i>Social Media Addiction</i>	0.487	0.412	0.76

Table 3 presents the Fornell and Larcker test of discriminant validity for the constructs: Fear of missing out, self-control, and social media addiction. Each cell represents the correlation between the respective constructs. The results indicate that the square root of AVE for Fear of missing out is 0.868, which is higher than the correlations of the respective constructs. The pattern is consistent across all constructs, supporting the presence of discriminant validity. For example, the AVEs for self-control and social media addiction are 0.804 and 0.76 respectively. This suggests the presence of discriminant validity.

To further assess the discriminant validity, the HTMT ratio was examined. The threshold value for validating discriminant validity using the HTMT ratio is typically below 0.90 (Henseler, Ringle, and Sinkovics 2009). Table 4 presents the results of the HTMT test.

Table 4: HTMT Matrix

	<i>FoMO</i>	<i>Self-control</i>
<i>Fear of Missing Out</i>		
<i>Self-Control</i>	0.724	
<i>Social Media Addiction</i>	0.569	0.497

The HTMT ratio results in Table 4 support the presence of discriminant validity, as all values are below the threshold of 0.90. This indicates that the constructs are sufficiently distinct from each other, supporting the validity of the measurement model.

Convergent Validity

Generally, the threshold value for AVE is 0.50 and above (Hu and Bentler 1999). Table 5 presents the values of AVEs.

Table 5: Average Variance Extracted (AVE)

	<i>AVE</i>
<i>Self-Control</i>	0.647
<i>Fear of Missing Out</i>	0.754
<i>Social Media Addiction</i>	0.578

Based on the AVE values in Table 5, the measurement instruments in this study demonstrate convergent validity as all constructs exceed the threshold of 0.50. Therefore, these findings support the convergent validity of the measurement instruments employed in this study.

An Evaluation of the Structural Model

In this study, the latent variables held in the inner model (with 5,000 resamples) were examined with the bootstrapping technique to examine their collinearity, the coefficient of determination (R^2), the slope coefficient (beta) and the significance of variables (Hair et al. 2014) standard mean square root (SRMR) was used to measure model fit. According to Hu and Bentler (1999), a structural model can be considered a good fit if its SRMR value is equal to or less than 0.08. The SRMR value for the current study is 0.069, indicating a good model fit.

Hypothesis Testing

The study considers two research models as part of its analysis. The first model identifies direct effects on the relationships between variables. In contrast, the second model identifies the indirect impact of FoMO on the relationships between self-control and social media addiction. An analysis of 5,000 subsamples was employed as a bootstrapping technique to ensure that the path coefficients and loadings were significant (Hair et al. 2017; Hair et al. 2014).

Table 6: Results of Hypothesis Testing

	<i>Original Sample</i>	<i>T statistics</i>	<i>P values</i>
Fear of Missing Out-> Social Media Addiction	0.377	5.33	0.000
Self-Control-> Fear of Missing Out	0.626	14.73	0.000
Self-Control-> Social Media Addiction	0.176	2.529	0.011
Self-Control-> Social Media Addiction	0.236	4.969	0.000

As can be seen from the p-values of the overall effects presented in Table 6, self-control FoMO and self-control social media addiction has statistically significant path coefficients of 0.626 and 0.176, respectively. There is support for all three hypotheses (H1, H2 and H3) presented in this study. In addition, the current study suggests that FoMO may mediate the relationship between self-control and social media. Thus, self-control leads to an increase in FoMO, which may lead to a dependence on social media. Given that the coefficient for the indirect effect is 0.236 and the significance level is 0.001, it can be concluded that partial mediation has occurred supporting the mediation relationship.

Table 7 summarizes the hypotheses tested in this study.

Table 7: Summary of Research Findings

	<i>Decision</i>
Fear of Missing Out-> Social Media Addiction	Supported
Self-Control-> Fear of Missing Out	Supported
Self-Control-> Social Media Addiction	Supported
Self-Control-> Social Media Addiction	Supported

As can be seen in Table 7, all hypotheses were supported.

Discussion

The results of this study are consistent with those of previous studies. There was a significant and positive association between self-control and social media addiction. The outcomes validating (H1) of the study (Zahrai et al. 2022) found that social media addiction impacts self-control and students' behaviour when using social network sites. There might be a reason for this most respondents indicated that they spent most of the day on their smartphones, sending messages, surfing the internet, playing games, chatting or talking on the phone, or using social media when they were with others. The study found that individuals with high levels of social media addiction, as measured by the scale adapted from Davey, Davey, and Singh (2016), where the item "I check my social media accounts (e.g. Twitter, TikTok, WhatsApp, Instagram, and Facebook) even when I have something else to do" had the highest mean score. It seems that such behavior may unwittingly influence an individual's well-being and health. Thus, there is evidence to suggest that the availability of smartphones plays an important role in fueling social media addiction, as respondents in this study stated that they could not cope without them. As students are constantly checking the accounts of people they know, they find it difficult to control themselves when using social media sites, leading to a lack of self-control. If students lack self-control, it will be difficult to control their behavior when accessing social media sites (Brevers and Turel 2019). In the section dealing with the evaluation of the structural model, the criteria used in PLS-SEM are presented.

Furthermore, the results suggest a significant relationship between social media use and FoMO, which confirms the study's hypothesis (H2). In support of these findings, Blackwell et al. (2017) and Richter (2018) have reported that excessive use of social media platforms is associated with high levels of FoMO. Students are expected to behave in this way when it comes to social media platforms. According to Zahoor (2022), the main cause of students' addiction to social media is the fear of missing out, as they are worried that they would miss out on rewarding experiences in others' lives if they did not use social media. Furthermore, the study of Casale, Rugai, and Fioravanti (2018) supports the positive relationship between FoMO and social media. This is true even for the current study, where respondents reported higher levels of FoMO and spent more time viewing social media activities, current events, and popular videos. They also constantly checked their phones to make sure they did not lose track of information that might have been updated.

This study also examined the effect of FoMO as a mediating factor between social media addiction and self-control. FoMO positively mediates social media addiction and self-control. FoMO thus partially mediates between self-control and addiction to social media. From the results of this study, it can be concluded that students who exhibit high levels of FoMO are also likely to exhibit very high levels of social media addiction. The overall results of this study suggest that individuals who engage in these behaviours and frequently worry about missing out on enjoyable social media experiences may inadvertently reduce their well-being, highlighting the psychological impact of FoMO on social media addiction. The current study contributes to the literature on social media addiction by examining the impact of self-control and FoMO on the development of social media addiction.

Limitations and Future Research

Several limitations are noted. Firstly, the study is limited due to self-reported data collected from one TVET college in one South African province. This may limit the generalized applicability of the study results. Future research should consider covering more than one TVET college in the province. Also, a comparative study could be done between countries to examine the impact of FoMO and self-control when using social media. While these variables have been shown to impact social media addiction, socio-demographic variables are also mentioned in the addiction literature. However, the present study did not examine how sociodemographic factors influence addiction. Therefore, the researchers of this study suggest that future research should examine the causal relationship between gender, age, family history, social media addiction, and self-control.

Despite these limitations, this study has both theoretical and practical implications. From a theoretical view, the findings provide evidence of the positive association between social media addiction and self-control. The positive relationship between social media use and FoMO enhances the social media addiction literature. Regarding the practical contribution,

the study results can assist colleges in developing intervention strategies that would minimize college students' social media addiction, so that they can control their conduct. Also, with the results of the current study, the college management and lecturers will be able to identify the factors related to social media addiction. These findings will equip them with knowledge on how to minimize the behaviour.

Conclusion

Social media has become increasingly popular in present-day society. Thus, there is a need to gain knowledge on social media addiction as it has become a challenging issue of concern. The challenge is that students addicted to social media platforms are spending excessive time checking and updating themselves on what other people are doing due to fear of missing out (FoMO), ultimately being unable to control their actions when using social media. Again, it is important to understand the association between FoMO and social media because high levels of FoMO may result in problematic and excessive use of social media. The role of self-control when using social media platforms is important. Lack of self-control prevents individuals from regulating their minds, emotions and behaviours. Consequently, it will be easier for students to access social media platforms constantly without any control and become addicted.

In light of the study results, all the study hypotheses were confirmed by the study findings. This study found that TVET students participating in the study were indeed addicted to social media. For example, there was a positive relationship between social media addiction and self-control. Also, the study found a significant positive association between social media addiction and FoMO. Lastly, the results of the mediating analysis showed that FoMO is the mediating factor between social media and self-control. Therefore, the implication is that increased social media addiction, FoMO, and lack of self-control may affect the student's mental and physical health.

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Informed Consent

The authors have obtained informed consent from all participants.

Conflict of Interest

The authors declare that there is no conflict of interest.

REFERENCES

- Al-Furaih, Suad AA, and Hamed M. Al-Awidi. 2021. "Fear of Missing Out (FoMO) among Undergraduate Students in Relation to Attention Distraction and Learning Disengagement in Lectures." *Education and Information Technologies* 26 (2): 2355–2373. <https://doi.org/10.1007/s10639-020-10361-7>.
- Alt, Dorit. 2015. "College Students' Academic Motivation, Media Engagement and Fear of Missing Out." *Computers in Human Behavior* 49:111–119. <https://doi.org/10.1016/j.chb.2015.02.057>.
- Alutaybi, Aarif, Dena Al-Thani, John McAlaney, and Raian Ali. 2020. "Combating Fear of Missing Out (FoMO) on Social Media: The Fomo-r Method." *International Journal of Environmental Research and Public Health* 17 (17): 6128. <https://www.mdpi.com/1660-4601/17/17/6128>.
- Arifin, Siti Roshaidai Mohd. 2018 "Ethical Considerations in Qualitative Study." *International Journal of Care Scholars* 1(2): 30–33.
- Atroszko, Paweł A., Julia M. Balcerowska, Piotr Bereznowski, Adriana Biernatowska, Ståle Pallesen, and Cecilie Schou Andreassen. 2018. "Facebook Addiction Among Polish Undergraduate Students: Validity of Measurement and Relationship with Personality and Well-Being." *Computers in Human Behavior* 85:329–338. <https://doi.org/10.1016/j.chb.2018.04.001>
- Berger, Sebastian, Annika M. Wyss, and Daria Knoch. 2018. "Low Self-Control Capacity is Associated with Immediate Responses to Smartphone Signals." *Computers in Human Behavior* 86:45–51. <https://doi.org/10.1016/j.chb.2018.04.031>.
- Bertot, John Carlo, Paul T. Jaeger, and Derek Hansen. 2012. "The Impact of Policies on Government Social Media Usage: Issues, Challenges, and Recommendations." *Government Information Quarterly* 29 (1): 30–40. <https://doi.org/10.1016/j.giq.2011.04.004>.
- Bheo, Dorothea Lidyaprima, M. Dinah Charlota Lerik, and R. Pasifikus Christa Wijaya. 2020. "Self-Control with Social Media Addiction in Students of SMA Negeri 3 Kota Kupang." *Journal of Health and Behavioral Science* 2 (4): 290–304. <https://doi.org/10.35508/jhbs.v2i4.2827>.
- Blackwell, David, Carrie Leaman, Rose Trampusch, Ciera Osborne, and Miriam Liss. 2017. "Extraversion, Neuroticism, Attachment Style and Fear of Missing Out as Predictors of Social Media Use and Addiction." *Personality and Individual Differences* 116: 69–72. <https://doi.org/10.1016/j.paid.2017.04.039>
- Brevers, Damien, and Ofir Turel. 2019. "Strategies for Self-Controlling Social Media Use: Classification and Role in Preventing Social Media Addiction Symptoms." *Journal of Behavioral Addictions* 8 (3): 554–563. <https://doi.org/10.1556/2006.8.2019.49>.

- Carver, Charles S., Michael F. Scheier, and Suzzane C. Segerstrom. 2010. "Optimism" *Clinical Psychology Review* 30 (7): 879–889. <https://doi.org/10.1016%2Fj.cpr.2010.01.006>.
- Casale, Silvia, Laura Rugai, and Giulia Fioravanti. 2018. "Exploring the Role of Positive Metacognitions in Explaining the Association Between the Fear of Missing Out and Social Media Addiction." *Addictive Behaviors* 85:83–87. <https://doi.org/10.1016/j.addbeh.2018.05.020>.
- Chai, Huan-You, Geng-Feng Niu, Shuai-Lei Lian, Xiao-Wei Chu, Sanyuya Liu, and Xiao-Jun Sun. 2019. "Why Social Network Site Use Fails to Promote Well-Being? The Roles of Social Overload and Fear of Missing Out." *Computers in Human Behavior* 100:85–92. <https://doi.org/10.1016/j.chb.2019.05.005>.
- Chen, Jun, and Xiao-Liang Shen. 2015. "Consumers' Decisions in Social Commerce Context: An Empirical Investigation." *Decision Support Systems* 79:55–64. <http://dx.doi.org/10.1016/j.dss.2015.07.012>.
- Cudo, Andrzej, Tomasz Misiuro, Mark D. Griffiths, and Małgorzata Torój. 2020. "The Relationship Between Problematic Video Gaming, Problematic Facebook Use, and Self-Control Dimensions Among Female and Male Gamers." *Advances in Cognitive Psychology* 16 (3): 248. <https://doi.org/10.5709%2Fapc-0301-1>.
- Curci, Antonietta, Tiziana Lanciano, Emanuela Soleti, and Bernard Rimé. 2013. "Negative Emotional Experiences Arouse Rumination and Affect Working Memory Capacity." *Emotion* 13 (5): 867. <https://doi.org/10.1037/a0032492>.
- Davey, Sanjeev, Anuradha Davey, and J. V. Singh. 2016. "Emergence of Problematic Internet Use Among Indian Adolescents: A Multi Method Study." *Journal of Indian Association for Child and Adolescent Mental Health* 12 (1): 60–78. <https://journals.sagepub.com/doi/pdf/10.1177/0973134220160104>.
- DeLisi, Matt. 2014. "Low Self-Control is a Brain-Based Disorder." In *The Nurture Versus Biosocial Debate in Criminology: On the Origins of Criminal Behaviour and Criminality*, edited by Kevin M. Beaver, J. C. Barnes, and Brian B. Boutwell, 172–184. Thousand Oaks, CA: Sage. <https://doi.org/10.4135/9781483349114.n11>.
- Dempsey, Abigail E., Kelsey D. O'Brien, Mojisola F. Tiamiyu, and Jon D. Elhai. 2019. "Fear of Missing Out (FoMO) and Rumination Mediate Relations Between Social Anxiety and Problematic Facebook Use." *Addictive Behaviors Reports* 9:100–150. <https://doi.org/10.1016/j.abrep.2018.100150>.
- De Ridder, Denise T. D., Gerty Lensvelt-Mulders, Catrin Finkenauer, F. Marijn Stok, and Roy F. Baumeister. 2012. "Taking Stock of Self-Control: A Meta-Analysis of How Trait Self-Control Relates to a Wide Range of Behaviours." *Personality and Social Psychology Review* 16 (1): 76–99. <https://doi.org/10.1177/1088868311418749>.
- Dhir, Amandeep, Yossiri Yossatorn, Puneet Kaur, and Sufen Chen. 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. <https://doi.org/10.1016/j.ijinfomgt.2018.01.012>.
- Ekşi, Halil, Tuğba Turgut, and Erdem Sevim. 2019. “The Mediating Role of General Procrastination Behaviors in the Relationship Between Self-Control and Social Media Addiction in University Students.” *Addicta: The Turkish Journal on Addictions* 6 (3): 717–745. <https://doi.org/10.15805/addicta.2019.6.3.0069>.
- Elhai, Jon D., Haibo Yang, and Christian Montag. 2020. “Fear of Missing Out (FOMO): Overview, Theoretical Underpinnings, and Literature Review on Relations with Severity of Negative Affectivity and Problematic Technology Use.” *Brazilian Journal of Psychiatry* 43:203–209. <http://dx.doi.org/10.1590/1516-4446-2020-0870>.
- Fang, Jie, Xingchao Wang, Zhonglin Wen, and Jianfeng Zhou. 2020. “Fear of Missing Out and Problematic Social Media Use as Mediators Between Emotional Support from Social Media and Phubbing Behavior.” *Addictive Behaviors* 107:106430. <https://doi.org/10.1016/j.addbeh.2020.106430>.
- Fornell, Claes, and David F. Larcker. 1981. “Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics.” *Journal of Marketing Research* 18 (3) 382–388.
- Franchina, Vittoria, Mariek Vanden Abeele, Antonius J. Van Rooij, Gianluca Lo Coco, and Lieven De Marez. 2018. “Fear of Missing Out as a Predictor of Problematic Social Media Use and Phubbing Behavior among Flemish Adolescents.” *International Journal of Environmental Research and Public Health* 15 (10): 2319. <http://dx.doi.org/10.3390/ijerph15102319>.
- Fuster, Héctor, Ander Chamarro, and Ursula Oberst. 2017. “Fear of Missing Out, Online Social Networking and Mobile Phone Addiction: A Latent Profile Approach.” *Aloma: Revista de Psicologia, Ciències de l'Educació i de l'Esport* 35 (1): 22–30. <https://doi.org/10.51698/aloma.2017.35.1.22-30>.
- Gao, Junling, Pinpin Zheng, Yingnan Jia, Hao Chen, Yimeng Mao, Suhong Chen, Yi Wang, Hua Fu, and Junming Dai. 2020. “Mental Health Problems and Social Media Exposure During COVID-19 Outbreak.” *Plos one* 15 (4): e0231924. <https://doi.org/10.1371/journal.pone.0231924>.
- Geng, Jingyu, Lei han, Fengqiang Gao, Min Jou, and Chun-Chiang Huang. 2018. “Internet Addiction and Procastination Among Chinese Young Adults: A Moderate Medication Model.” *Computers in Human Behavior* 84:320–333. <https://doi.org/10.1016/j.chb.2018.03.013>.
- Gioia, Francesca, Giulia Fioravanti, Silvia Casale, and Valentina Boursier. 2021. “The Effects of the Fear of Missing Out on People’s Social Networking Sites Use during the COVID-19 Pandemic: The Mediating Role of Online Relational Closeness and Individuals’ Online Communication Attitude.” *Frontiers in Psychiatry* 12: 620442. <https://doi.org/10.3389/fpsy.2021.620442>.

- Gottfredson, Michael R., and Travis Hirschi. 1990. *A General Theory of Crime*. Redwood City, CA: Stanford University Press. <https://doi.org/10.1515/9781503621794>
- Hair, Joseph F., G. Tomas M. Hult, Christian M. Ringle, Marko Sarstedt, and Kai Oliver Thiele. 2017. "Mirror, Mirror on the Wall: A Comparative Evaluation of Composite-Based Structural Equation Modeling Methods." *Journal of the Academy of Marketing Science* 45: 616–632. <https://doi.org/10.1007/s11747-017-0517-x>.
- Hair, Joseph F., G. Tomas M. Hult, Christian M. Ringle and Marko Sarstedt. 2014. "Partial Least Squares Structural Equation Modeling (PLS-SEM): An Emerging Tool in Business Research." *European Business Review* 26:106–121. <https://doi.org/10.1108/EBR-10-2013-0128>.
- Henseler, Jörg, Christian M. Ringle, and Rudolf R. Sinkovics. 2009. "The Use of Partial Least Squares Path Modeling in International Marketing." In *New Challenges to International Marketing*. Manchester: Emerald Group Publishing Limited. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014).
- Henseler, Jörg, Christian M. Ringle, and Marko Sarstedt. 2015. "A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling." *Journal of the Academy of Marketing Science* 43:115–135. <https://doi.org/10.1007/s11747-014-0403-8>.
- Hu, Li-tze, and Peter M. Bentler. 1999. "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives." *Structural Equation Modeling: a Multidisciplinary Journal* 6 (1): 1–55. <https://doi.org/10.1080/10705519909540118>.
- Inzlicht, Michael, Brandon J. Schmeichel, and C. Neil Macrae. 2014. "Why Self-Control Seems (but may not be) Limited." *Trends in Cognitive Sciences* 18 (3): 127–133. <http://dx.doi.org/10.1016/j.tics.2013.12.009>.
- Keles, Betül, Niall McCrae, and Annmarie Grealish. 2020. "A Systematic Review: The Influence of Social Media on Depression, Anxiety and Psychological Distress in Adolescents." *International Journal of Adolescence and Youth* 25 (1): 79–93.
- Leong, Lai-Ying, Teck-Soon Hew, Keng-Boon Ooi, Voon-Hsien Lee, and Jun-Jie Hew. 2019. "A Hybrid SEM-Neural Network Analysis of Social Media Addiction." *Expert Systems with Applications* 133:296–316. <https://doi.org/10.1016/j.eswa.2019.05.024>.
- Li, Caina, Jianning Dang, Xiaoling Zhang, Qianqian Zhang, and Jingjing Guo. 2014. "Internet Addiction Among Chinese Adolescents: The Effect of Parental Behavior and Self-Control." *Computers in Human Behavior* 41: 1–7. <https://doi.org/10.1016/j.chb.2014.09.001>.
- Ma, Shutao, Yuhuai Huang, and Yankun Ma. 2020. "Childhood Maltreatment and Mobile Phone Addiction Among Chinese Adolescents: Loneliness as a Mediator and Self-Control as a Moderator." *Frontiers in Psychology* 11:813. <https://doi.org/10.3389/fpsyg.2020.00813>.

- Mackson, Samantha B., Paula M. Brochu, and Barry A. Schneider. 2019. "Instagram: Friend or foe? The Application's Association with Psychological Well-Being." *New Media & Society* 21 (10): 2160–2182. <https://doi.org/10.1177/1461444819840021>.
- Marino, Claudia, Gianluca Gini, Alessio Vieno, and Marcantonio M. Spada. 2018. "The Associations Between Problematic Facebook Use, Psychological Distress and Well-Being Among Adolescents and Young Adults: A Systematic Review and Meta-Analysis." *Journal of Affective Disorders* 226:274–281. <https://doi.org/10.1016/j.jad.2017.10.007>.
- Nęcka, Edward, Klaudia Korona-Golec, Teresa Hlawacz, Michał Nowak, and Aleksandra Gruska-Gosiewska. 2019. "The Relationship Between Self-Control and Temperament: A Contribution to the Self-Control Definition Debate." *Current Issues in Personality Psychology* 7 (1): 24–31. <https://doi.org/10.5114/cipp.2019.8292>.
- Nie, Jia, Wendi Li, Jie Long, Pan Zeng, Pengcheng Wang, and Li Lei. 2020. "Emotional Resilience and Social Network Site Addiction: The Mediating Role of Emotional Expressivity and the Moderating Role of Type D personality." *Current Psychology* 41:2264–2276. <https://doi.org/10.1007/s12144-020-00745-w>.
- Obar, Jonathan A., and Steven S. Wildman. 2015. "Social Media Definition and the Governance Challenge-an Introduction to the Special Issue." *Obar, JA and Wildman, S. (2015). Social Media Definition and the Governance Challenge: An Introduction to the Special Issue. Telecommunications Policy* 39 (9): 745–750. <https://doi.org/10.2139/ssrn.2663153>.
- Osatuyi, Babajide, and Ofir Turel. 2018. "Tug of War Between Social Self-Regulation and Habit: Explaining the Experience of Momentary Social Media Addiction Symptoms." *Computers in Human Behaviour* 85:95–105. <https://doi.org/10.1016/j.chb.2018.03.037>.
- Paakkari, Leena, Jorma Tynjälä, Henri Lahti, Kristiina Ojala, and Nelli Lyyra. 2021. "Problematic Social Media Use and Health Among Adolescents." *International Journal of Environmental Research and Public Health* 18 (4): 1885. <https://doi.org/10.3390/ijerph18041885>.
- Przybylski, Andrew K., Kou Murayama, Cody R. DeHaan, and Valerie Gladwell. 2013. "Motivational, Emotional, and Behavioral Correlates of Fear of Missing Out." *Computers in Human Behavior* 29 (4): 1841–1848. <http://dx.doi.org/10.1016/j.chb.2013.02.014>.
- Quaglieri, Alessandro, Silvia Biondi, Paolo Roma, Manuel Varchetta, Angelo Frascchetti, Jessica Burrai, Giulia Lausi. 2021. "From Emotional (Dys) Regulation to Internet Addiction: A Mediation Model of Problematic Social Media use Among Italian Young Adults." *Journal of Clinical Medicine* 11 (1): 188. <https://doi.org/10.3390/jcm11010188>.

- Radovic, Ana, Theresa Gmelin, Bradley D. Stein, and Elizabeth Miller. 2017. "Depressed Adolescents' Positive and Negative Use of Social Media." *Journal of Adolescence* 55:5–15. <https://doi.org/10.1016/j.adolescence.2016.12.002>.
- Rasheed, Muhammad Imran, Muhammad Jawad Malik, Abdul Hameed Pitafi, Jawad Iqbal, Muhammad Khalid Anser, and Mazhar Abbas. 2020. "Usage of Social Media, Student Engagement, and Creativity: The Role of Knowledge Sharing Behavior and Cyberbullying." *Computers & Education* 159:104002. <https://doi.org/10.1016/j.compedu.2020.104002>.
- Richter, Kylie. 2018. "Fear of Missing Out, Social Media Abuse, and Parenting Styles." Master's thesis, Abilene Christian University. <https://digitalcommons.acu.edu/etd/81>.
- Roberts, James A., and Meredith E. David. 2020. "Boss Phubbing, Trust, Job Satisfaction and Employee Performance." *Personality and Individual Differences* 155:109702. <https://doi.org/10.1016/j.paid.2019.109702>.
- Rozgonjuk, D., J. D. Elhai, T. Ryan, and G. G. Scott. 2019. "Fear of Missing Out is Associated with Disrupted Activities from Receiving Smartphone Notifications and Surface Learning in College Students", *Computers and Education* 140:103–590. <https://doi.org/10.1016/j.compedu.2019.05.016>.
- Sahin, Cengiz. 2018. "Social Media Addiction Scale-Student Form: The Reliability and Validity study." *Turkish Online Journal of Educational Technology-TOJET* 17 (1): 169–182.
- Schimmenti, Adriano, Joël Billieux, and Vladan Starcevic. 2020. "The Four Horsemen of Fear: An Integrated Model of Understanding Fear Experiences During the COVID-19 Pandemic." *Clinical Neuropsychiatry* 17 (2): 41. <https://doi.org/10.36131/2FCN20200202>.
- Taber, Keith S. 2018. "The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education." *Research in Science Education* 48:1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>.
- Tangney, June P., Roy F. Baumeister, and Angie Luzio Boone. 2004. "High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success." *Journal of Personality* 72 (2): 271–324.
- Wartberg, Lutz, Levente Kriston, and Rainer Thomasius. 2020. "Internet Gaming Disorder and Problematic Social Media Use in a Representative Sample of German Adolescents: Prevalence Estimates, Comorbid Depressive Symptoms and Related Psychosocial Aspects." *Computers in Human Behavior* 103:31-36. <https://doi.org/10.1016/j.chb.2019.09.014>.
- We Are Social Ltd. 2019. "Digital Q4 Global Digital Statshot." *Datareportal*, October 23, 2019. <https://datareportal.com/reports/digital-2019-q4-global-digital-statshot>.
- Wegmann, Elisa, Benjamin Stodt, and Matthias Brand. 2015. "Addictive Use of Social Networking Sites can be Explained by the Interaction of Internet Use Expectancies,

- Internet Literacy, and Psychopathological Symptoms.” *Journal of Behavioral Addictions* 4 (3): 155–162. <https://doi.org/10.1556/2006.4.2015.021>.
- Vainik, Uku, Isabel García-García, and Alain Dagher. 2019.” Uncontrolled Eating: a Unifying Heritable Trait Linked with Obesity, Overeating, Personality and the Brain.” *European Journal of Neuroscience* 50 (3): 2430–2445. <https://doi.org/10.1111/ejn.14352>.
- Zahoor, Khadija. 2022. “Impact of Fear of Missing Out and Social Curiosity on Social Media Addiction in Young Adults of Pakistan.” *Clinical and Counselling Psychology Review* 4 (1): 65–81. <https://doi.org/10.32350/ccpr.41.05>.
- Zahrai, Kseniia, Ekant Veer, Paul William Ballantine, Huibert Peter de Vries, and Girish Prayag. 2022. “Either You Control Social Media or Social Media Controls You: Understanding the Impact of Self-Control on Excessive Social Media Use from the Dual-System Perspective.” *Journal of Consumer Affairs* 56 (2): 806–848. <https://doi.org/10.1111/joca.12449>.
- Zhao, Lei. 2021. “The Impact of Social Media Use Types and Social Media Addiction on Subjective Well-Being of College Students: A Comparative Analysis of Addicted and Non-Addicted Students.” *Computers in Human Behavior Reports* 4:100122. <https://doi.org/10.1016/j.chbr.2021.100122>.
- Zhou, Baohua. 2019. “Fear of Missing Out, Feeling of Acceleration, and Being Permanently Online: A Survey Study of University Students’ Use of Mobile Apps in China.” *Chinese Journal of Communication* 12 (1): 66–83. <https://doi.org/10.1080/17544750.2018.1523803>.

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