

**Social Media Addiction and Academic Engagement: The Mediating Role of Self-Esteem among University Students**

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**Abstract**

The fast growth of social media has significantly altered the academic and social life of university students; however, overindulgence in the sphere has caused justified fears about the psychological and academic health. Using the prism of the social comparison theory and self-esteem theory, the current question examines the complex of social media addiction and academic performance, making self-esteem an intermediate variable. The quantitative design was chosen, and the information was collected with the help of structured questionnaires among university students. The analytical stage used the IBM SPSS and the PROCESS Macro. Findings show that there is a negative correlation between social media addiction and self-esteem, and self-esteem has a positive predictive value on academic engagement. Mediation analyses establish that self-esteem moderately mediates the correlation between social media addiction and academic involvement. The outcomes of these studies highlight the urgency of adopting healthy social media behaviors and strengthening the self-esteem of the students to enhance their academic activities.

**Keywords:** To be used are social media addiction, self-esteem, academic engagement, university students.

**Introduction**

Social media has also become an essential part of daily life, especially among cohorts of universities in the modern era of digital life. The social media, including Facebook, Instagram, WhatsApp, and TikTok, enable communication, exchange of information, academic cooperation, and socialization (Kuss and Griffiths, 2017; Ellison et al., 2007). Informal learning, group discussions, and access to academic resources are also available through these platforms and, therefore, make them useful pedagogical supplements (Chan et al., 2020). However, the increasing use of these media breeds concerns about unregulated use, that is, social media addiction, and its possible harmful effect on mental health and performance at school (Andreassen et al., 2016).

The addiction to social media is defined by the compulsive nature, the tendency to focus on the Internet use, and the impossibility to control the usage despite the harmful consequences (Bányai et al., 2017). The students of the university are especially vulnerable because of the academic stress, social needs, and the constantly available access to smartphones and the internet. There is empirical

data that excessive use may distract students with academic tasks, destroy concentration, and negatively affect learning performance (Junco, 2012; Karpinski et al., 2013).

Self-esteem is one of the salient psychological constructs that are affected by social media addiction and is defined as the global appraisal of self-worth and global acceptance by an individual (Rosenberg, 1979). According to the social comparison theory, people compare themselves to others basing on ability and success (Festinger, 1954). This process is intensified by the constant bombardment with idealised bodies and accomplishments in the social media, which frequently result in adverse self-assessments (Vogel et al., 2015). Therefore, overindulging students are more likely to have low self-esteem because they are subjected to a continuous upward comparison and reliance on external validation (Jiang and Ngien, 2020; Brailovskaia and Margraf, 2017).

Self-esteem is a crucial factor in academic performance, which determines motivation, confidence, persistence, and emotional strength (Orth and Robins, 2014). Students who have high self-esteem tend to believe that they can handle academic problems, are more motivated in classroom activities, and maintain interest in studying activities (Ersan, 2015). On the other hand, poor self-esteem can trigger either avoidance of academic engagement, fear of failure and detachment which will affect performance adversely (Maslow, 1987).

The issue of academic engagement, including behavioral, emotional, and cognitive engagement, is a well-known strong indicator of academic achievement (Fredricks et al., 2004). Interested students are enthusiastic, put in effort, and work towards the attainment of school goals. The previous studies predict the use of psychological variables as a core of engagement shaping, such as self-esteem (Datu & King, 2018).

Available literature has studied relationships between social media use, self-esteem, and academic performance but most of the studies concentrate on direct relationships without elaborating on the processes that underlie these relationships. The current research attempts to clarify the impact of social media addiction on academic performance of university students through the suggestion of self-esteem as a mediating factor. This is a theoretically based framework that will shed more light on the indirect impact of social media addiction.

In particular, the following questions are answered in the research:

- (1) Does the addiction to social media have a negative impact on self-esteem?
- (2) Does self-esteem have a positive effect on academic engagement?
- (3) Is self-esteem in between social media addiction and academic engagement?

These questions can help in dispelling the research gaps in digital behavior and academic performance and provide practical implications to educators and policymakers aiming to encourage positive social media use and improve academic performance.

## **Theoretical Framework and Hypotheses.**

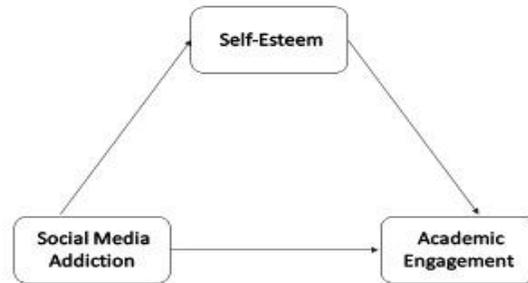
### **Theoretical Framework**

It is based on the Social Comparison Theory (Festinger, 1954) and Self-Esteem Theory (Rosenberg, 1979) that collectively claim that the overload of digital behavior is a drain of the psychological resources and academic performance of students. The model assumes two directions: the social media addiction directly leads to academic involvement, and the indirect one through the mediation of self-esteem.

According to the social comparison theory, people evaluate their abilities, accomplishments and value through comparison with peers. This comparison is exacerbated by social media which continuously offers edited, idealized images of success, life, and academic achievements of others. Overindulgence Leads to upward comparison, which creates inadequacy and low self-esteem, which is why this is expected to negatively impact self-esteem due to excessive use of drugs.

The self-esteem theory also argues that international self-assessments influence motivation, trust, and behavioral involvement. Higher self esteem in an academic setting leads to confidence, resilience and engagement. On the other hand, lower self-esteem initiates academic avoidance and low involvement.

The model consequently considers self-esteem as an intermediary between the social media addiction and academic engagement. Overuse of it destroys self-esteem, which, consequently, reduces motivation and engagement. The dotted arrow indicates the direct route, but the indirect route through self-esteem indicates the psychological process that is involved in this relationship.



### **Hypotheses Development**

H1: Self-esteem is negatively related to social media addiction.

This hypothesis is based on the social comparison theory, according to which the continuous comparison with idealized online images leads to the development of dependence on external confirmation at the expense of self-worth. In such a way, students with the higher levels of addiction are supposed to report less self-esteem.

H2: Self-esteem has a positive relationship with academic engagement.

The self-esteem theory assumes that high self-esteem brings in more confidence, intrinsic motivation and persistence. As a result, high self-esteem students are more active, focused, and they work tirelessly. Therefore, a good correlation between academic engagement and self-esteem is expected.

H3: Social media addiction has a mediating effect on academic engagement due to self-esteem.

Based on the above hypotheses, the study hypothesizes the mediating role of self-esteem in the relationship between social media addiction and academic engagement. Overuse lowers self-esteem by promoting negative comparison and social approval. This low self-esteem in turn decreases motivation, confidence, and desire to engage hence giving a theoretically based explanation of the relationship that was observed.

Taken together, these hypotheses preempt self-esteem as a significant psychological pathway between social media addiction and academic activity.

### **Methodology**

#### **Research Design**

The study is a quantitative and cross-sectional investigation in which the researcher uses this design to study the relationships between social media addiction, self-esteem, and academic engagement. The

Quantitative method allows hypothesized pathways including mediation effects to be accurately measured and statistically tested. The cross-sectional design will allow the collection of data at one time point, the perceptions of the use of social media and academic activity at the time.

#### **Population and Sample**

The target group will include university students who are studying in both the public and the private

institutions. The students have been chosen because of their high exposure to social media and being susceptible to its psychological and academic impacts. Random sampling provided equal probability of participation which improved the generalisability. The sample size was more than the mediation analysis requirement, which offered sufficient statistical power.

### **Data Collection Procedure**

The data collection was through a self-administered structured questionnaire. The purpose of the study was explained to the participants, and they agreed to participate on a voluntary basis. The questionnaire was filled either through printed form or through an online platform. To reduce the bias in response, confidentiality and anonymity were guaranteed.

### **Measurement Instruments**

Social Media Addiction: items based on a popular addiction scale, rated on a five-point Likert scale (1=strongly disagree, 5=strongly agree).

- Self-esteem: The rating is done using a standardized self-esteem scale that measures overall self-worth and acceptance, which has been tested on a variety of psychological and educational research.

Academic Engagement: Items included that focused on behavioral, emotional and cognitive engagement- such as participation in classes, concentration and interest to learn.

All the instruments showed good psychometric characteristics and were designed to suit the study situation.

### **Reliability and Validity**

Internal consistency was guaranteed by Cronbach alpha coefficients ( 0.70) above. The content validity was obtained through the expert review of the scale which had been proven to be valid before.

### **Control Variables**

The use of age and gender was included as controls, as they were found to have an effect on the use of social media and academic activity.

### **Ethical Considerations**

The research followed the ethical principles of human research. The involvement was voluntary and informed consent was taken. Any participant was allowed to pull out without any penalty. Anonymity and confidentiality were strictly followed and no data that identified the participants were gathered. The study posed minimal risk.

### **Data Analysis**

The IBM SPSS Statistics (Versions 25/27) and the PROCESS Macro (Model 4) were applied to analyzed the data. The data were filtered against accuracy, amusingness and normality assumptions. Distributional properties were measured by descriptive statistics (mean, SD, skewness, kurtosis), and they were acceptable.

The alpha of Cronbach ensured that it was reliable in the scales and that it was above 0.70. Pearson correlations were used to test vicariate relationships between variables. Findings showed that social media addiction is negatively correlated with self esteem and academic engagement, and positively correlated with self esteem and academic engagement.

The mediation was evaluated using PROCESS (Model 4) using 5,000 bootstrap samples. The independent variable was social media addiction, the mediator was self-esteem, and academic engagement was the dependent variable. Age and gender were held in check. The bias-corrected 95 percent confidence intervals were used in the evaluation of indirect effects; the significance test demanded that the interval excludes zero. The results showed that there exists a strong indirect effect, which validates the mediating effect of self-esteem.

The analytical plan offered a thorough look at the direct and indirect pathways, which supported the methodological rigour and strong inference.

## Results

**Table 1**

Descriptive Statistics and Study Variables Reliability.

Variable	N	Mean	SD	Cronbach's $\alpha$
Social Media Addiction	475	3.68	0.91	0.87
Self-Esteem	475	3.42	0.76	0.89
Academic Engagement	475	3.55	0.82	0.85

### Explanation:

Table 1 show that there are moderate mean scores of social media addiction, self-esteem, and academic engagement among the participants. The alphas of all Cronbach are above the 0.70 mark, which proves internal consistency.

**Table 2**

Pearson Correlation Matrix among Study Variables

Variable	1	2	3
1. Social Media Addiction	—		
2. Self-Esteem	-0.41***	—	
3. Academic Engagement	-0.36***	0.52***	—

\*\*p < 0.001

### Explanation:

Table 2 indicates that there are significant negative relations between social media addiction and the self-esteem and academic engagement as well as a significant positive relation between the self-esteem and academic engagement.

**Table 3**

Mediation Analysis Results (PROCESS Macro Model 4)

Path	$\beta$	SE	t-value	95% CI
Social Media Addiction → Self-Esteem	-0.43	0.05	-8.60	[-0.53, -0.33]
Self-Esteem → Academic Engagement	0.49	0.06	8.17	[0.37, 0.61]
Direct Effect (SMA → AE)	-0.15	0.04	-3.75	[-0.23, -0.07]
Indirect Effect (via Self-Esteem)	-0.21	—	—	[-0.30, -0.14]

Bootstrapping = 5,000 resample.

### Explanation:

Table 3 indicates that there are significant negative effects of social media addiction on self-esteem and positive effects of self-esteem on academic engagement. The mediating impact is also substantial, which supports the mediation of the self-esteem factor.

**Table 4**

Overall, the hypothesis testing indicated a significant link between the social environment and the nervous system, with the latter altering the social environment and the reverse as well. Overview of Hypotheses Testing. In general, the hypothesis testing showed that there

was a strong correlation between the social environment and the nervous system, and the latter changes the former and vice versa.

Hypothesis	Relationship	Result
H1	Social Media Addiction → Self-Esteem	Supported
H2	Self-Esteem → Academic Engagement	Supported
H3	Self-Esteem mediates SMA → Academic Engagement	Supported

**Explanation:** All the hypotheses were empirically supported and proved the negative effect of addiction on self-esteem, the positive effect of self-esteem on engagement, and the mediating role of self-esteem.

## Discussion

The empirical data show that social media addiction has a strong indirect effect on the academic engagement through self-esteem among college students. In line with the social comparison theory, regular use of social media subjects students to idealized images of other students, which increases upward comparison and decreases self-perceptions. In turn, the increase in addiction is associated with a decrease in self-esteem, which negatively affects motivation, confidence, and perseverance in the academic process-the effects that manifest themselves in previous scholarship (Banyai et al., 2017; Karpinski et al., 2013).

The good relationship between self-esteem and academic engagement is a strong affirmation of the role of self-worth in maintaining academic participation. Learners who have strong self-esteem would be more willing to attend, stay concentrated, and focus on learning. These findings of mediation support the idea that self-esteem is a mediating factor that amplifies the negative impact of addiction on engagement, which provides a more direct and theoretically conjoined account of the relationship between digital behavior and academic performance.

## Conclusion

Overall, self-esteem turns out to be one of the key mediators between the social media addiction and academic engagement of university students. The uncontrollable and overuse of social media destroys self-esteem, which consequently reduces the involvement in academics. The results highlight the importance of focusing on psychological health to curb the negative academic effects of social media addiction. Schools are advised to promote healthy media practices, introduce self-esteem building programmes and provide conducive learning conditions that foster confidence and participation. In general, this piece of work adds to the literature as it introduces a parsimonious framework that predicts self-esteem as a pivotal channel between digital behavior and academic performance.

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