

The Impact of Social Media Addiction on Procrastination, Sleep Quality and Depression among Young Adults

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Abstract: *The increasing use of social media has become an important behavioural and psychological concern among young adults. Excessive and uncontrolled social media use may interfere with daily functioning, productivity, sleep patterns, and psychological well-being. The present study examined the relationship between social media addiction, procrastination, sleep quality, and depressive symptoms among young adults. It also investigated whether procrastination and sleep quality mediated the relationship between social media addiction and depression. A quantitative, cross-sectional, correlational research design was adopted. The final eligible sample consisted of 149 young adults aged 18–35 years. Data were collected using the Bergen Social Media Addiction Scale (BSMAS), Pure Procrastination Scale (PPS), Pittsburgh Sleep Quality Index (PSQI), and Beck Depression Inventory-II (BDI-II). Data were analysed using descriptive statistics, reliability analysis, Spearman's rank-order correlation, and simple mediation analysis using 5,000 bootstrap resamples. Social media addiction was significantly and positively associated with procrastination ($p = .517, p < .001$), poorer sleep quality ($p = .376, p < .001$), and depressive symptoms ($p = .311, p < .001$). Procrastination and poorer sleep quality were also significantly associated with depressive symptoms. Mediation analysis showed that procrastination did not significantly mediate the relationship between social media addiction and depression, as the indirect effect was .213 with a 95% bootstrap confidence interval of $[-.028, .488]$. In contrast, sleep quality significantly mediated the relationship, with an indirect effect of .134 and a 95% bootstrap confidence interval of $[-.010, .316]$. The findings highlight the importance of healthy social media habits and adequate sleep in promoting psychological well-being among young adults.*

Keywords: Social media addiction, procrastination, sleep quality, depression, young adults, mediation

1. Introduction

Social media has become deeply integrated into everyday life, particularly among young adults. Platforms such as Instagram, WhatsApp, Facebook, Snapchat, TikTok, X, and LinkedIn are widely used for communication, entertainment, education, professional networking, and maintaining interpersonal relationships. The widespread availability of smartphones and affordable internet access has further increased social media engagement.

Although social media provides several benefits, excessive and uncontrolled use may become problematic when it interferes with daily responsibilities and psychological well-being. Social media addiction is generally characterized by excessive preoccupation with social networking platforms, difficulty controlling use, and continued engagement despite negative consequences. The behavioural addiction framework proposed by Griffiths (2005) identifies components such as salience, mood modification, tolerance, withdrawal, conflict, and relapse, which are reflected in the Bergen Social Media Addiction Scale.

One important behavioural outcome associated with excessive social media use is procrastination. Procrastination refers to the voluntary delay of intended tasks despite expecting negative consequences. Social media platforms provide continuous entertainment, notifications, social interaction, and immediate rewards, which may make it difficult for individuals to maintain attention on important academic, occupational, or personal tasks. Previous research

has reported associations between problematic technology use and procrastination.

Sleep quality is another important area potentially affected by excessive social media use. Social media engagement before bedtime may prolong screen exposure, increase mental stimulation, and delay sleep. Notifications and the urge to remain connected may further interfere with regular sleep patterns. Poor sleep quality is important because inadequate or disturbed sleep may affect mood, concentration, emotional regulation, and daily functioning.

Excessive social media use has also been associated with depressive symptoms. Social comparison, fear of missing out, negative online interactions, loneliness, and reduced meaningful face-to-face interaction may contribute to psychological distress. Previous research has reported relationships between problematic social media use, sleep problems, and depressive symptoms among young people.

However, the relationship between social media addiction and depression may involve multiple behavioural pathways. Procrastination may represent one possible pathway because excessive social media use can interfere with task completion and productivity. Sleep quality may represent another pathway because excessive use, particularly around bedtime, may contribute to disturbed sleep, which may subsequently be associated with depressive symptoms.

Therefore, the present study examined the relationships between social media addiction, procrastination, sleep quality, and depression among young adults. It further

examined whether procrastination and sleep quality significantly mediated the relationship between social media addiction and depression.

Objectives

- 1) To assess the level of social media addiction among young adults.
- 2) To examine the relationship between social media addiction and procrastination.
- 3) To examine the relationship between social media addiction and sleep quality.
- 4) To examine the relationship between social media addiction and depression.
- 5) To determine whether procrastination mediates the relationship between social media addiction and depression.
- 6) To determine whether sleep quality mediates the relationship between social media addiction and depression.

2. Method

Research Design

A quantitative, cross-sectional, correlational research design was used. The design was selected to examine associations among social media addiction, procrastination, sleep quality, and depression without manipulating the study variables. The study also examined the proposed mediating roles of procrastination and sleep quality.

Participants and Sampling

The study focused on young adults aged 18–35 years who actively used at least one social media platform and were able to read and understand English. Participants were required to provide informed consent. The dissertation initially targeted 150 participants; however, 151 responses were received. Two responses were excluded because the participants were outside the specified age range, resulting in 149 eligible participants. The effective sample size varied across analyses because of incomplete or non-computable scale responses. BSMAS and PPS analyses used 149 participants, BDI-II analyses used 147 participants, and PSQI analyses used 132 participants.

Among the 149 eligible participants, 80 (53.7%) were female and 69 (46.3%) were male. Participants aged 25–30 years constituted the largest age group (36.2%), followed by 19–24 years (34.2%) and 30–35 years (29.5%). Most participants reported 3–4 hours of daily social media use (45.6%).

Measures

Bergen Social Media Addiction Scale (BSMAS)

The BSMAS developed by Andreassen et al. (2016) consists of six items assessing the core components of behavioural addiction. Responses are rated on a five-point Likert scale, with higher scores indicating greater social media addiction.

Pure Procrastination Scale (PPS)

The PPS developed by Steel (2010) consists of 12 items assessing the tendency to delay important tasks despite anticipated negative consequences. Higher scores indicate greater procrastination.

Pittsburgh Sleep Quality Index (PSQI)

The PSQI developed by Buysse et al. (1989) assesses sleep quality across seven components, including subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medication, and daytime dysfunction. Higher global scores indicate poorer sleep quality. A global score above 5 is generally considered indicative of poor sleep quality.

Beck Depression Inventory-II (BDI-II)

The BDI-II developed by Beck, Steer, and Brown (1996) consists of 21 items assessing depressive symptoms experienced during the previous two weeks. Scores range from 0 to 63, with higher scores representing greater depressive symptom severity.

Procedure

Data were collected using a socio-demographic questionnaire and standardized psychological measures. Participants were informed about the purpose of the study and provided informed consent before participation. The questionnaires were administered through Google Forms. Participation was voluntary, and confidentiality and anonymity were maintained. Responses were screened for completeness and validity before statistical analysis.

Statistical Analysis

Descriptive statistics and internal consistency reliability were calculated for the study measures. Spearman's rank-order correlation was used to examine associations between the variables because of the ordinal nature of several questionnaire variables and the positive skewness of BDI-II scores. Two simple mediation models were tested using 5,000 bootstrap resamples: one examining procrastination as a mediator and another examining sleep quality as a mediator.

3. Results

Descriptive Statistics and Reliability

The mean BSMAS score was 14.08 (SD = 5.07), while the mean PPS score was 26.68 (SD = 11.13). Among participants with computable PSQI scores, the mean global score was 5.89 (SD = 3.41). The mean BDI-II score was 9.29 (SD = 11.87). Twenty-six participants (17.4%) scored at or above the BSMAS screening threshold of 19. Additionally, 69 of 132 participants (52.3%) had PSQI scores above 5. Among the 147 participants with complete BDI-II scores, 103 were classified as minimal, 16 as mild, 19 as moderate, and 9 as severe.

Measure	N	M	SD
BSMAS	149	14.08	5.07
PPS	149	26.68	11.13
PSQI	132	5.89	3.41
BDI-II	147	9.29	11.87

The internal consistency of the measures was satisfactory to excellent. Cronbach's alpha was 0.766 for BSMAS, 0.940 for PPS, and 0.957 for BDI-II.

Correlation Analysis

Spearman's correlation analysis showed significant positive associations between social media addiction and all three

major variables. Social media addiction was significantly associated with procrastination ($p = .517, p < .001$), poorer sleep quality ($p = .376, p < .001$), and depressive symptoms ($p = .311, p < .001$). Procrastination was also significantly associated with poorer sleep quality ($p = .439, p < .001$) and depressive symptoms ($p = .319, p < .001$). Poorer sleep quality was significantly associated with depressive symptoms ($p = .277, p = .001$).

Variables	N	Spearman's ρ	p
Social media addiction – Procrastination	149	.517	<.001
Social media addiction – Sleep quality	132	.376	<.001
Social media addiction – Depression	147	.311	<.001
Procrastination – Sleep quality	132	.439	<.001
Procrastination – Depression	147	.319	<.001
Sleep quality – Depression	131	.277	.001

Mediation Analysis

Two separate simple mediation models were tested. In the first model, procrastination was examined as a mediator between social media addiction and depression. The indirect effect was 0.213, with a 95% bootstrap confidence interval of $[-.028, .488]$. Since the confidence interval included zero, the indirect effect was not statistically significant. Therefore, procrastination did not significantly mediate the relationship between social media addiction and depression.

In the second model, sleep quality was examined as a mediator. The indirect effect was 0.134, with a 95% bootstrap confidence interval of $[.010, .316]$. Since the confidence interval did not include zero, the indirect effect was statistically significant. The direct effect remained significant, indicating an indirect pathway through sleep quality alongside a remaining direct association.

Mediator	Indirect Effect	95% Bootstrap CI	Interpretation
Procrastination	.213	$[-.028, .488]$	Not significant
Sleep quality	.134	$[.010, .316]$	Significant

4. Discussion

The present study examined the relationships among social media addiction, procrastination, sleep quality, and depression among young adults and investigated the mediating roles of procrastination and sleep quality.

The first major finding was a significant positive relationship between social media addiction and procrastination ($p = .517, p < .001$). Young adults reporting higher levels of social media addiction also tended to report greater procrastination. This relationship may be explained by the distracting and immediately rewarding nature of social media. Continuous notifications, short-form content, entertainment, and social interaction may compete with tasks requiring sustained attention and effort. Individuals may therefore postpone academic, occupational, or personal responsibilities while engaging with social media. The finding is consistent with previous research cited in the dissertation, including studies reporting relationships between problematic technology use and procrastination.

The second finding showed a significant positive relationship between social media addiction and poorer sleep quality ($p = .376, p < .001$). This suggests that greater social media addiction was associated with greater sleep-quality problems. Social media use before bedtime may prolong screen exposure and mental stimulation and make it more difficult for individuals to disengage and prepare for sleep. The finding is consistent with previous research reporting associations between social media or electronic-device use and poorer sleep quality.

The third major finding was a significant positive relationship between social media addiction and depressive symptoms ($p = .311, p < .001$). Young adults with higher social media addiction scores tended to report higher depressive symptoms. Several mechanisms may contribute to this association, including social comparison, fear of missing out, exposure to unrealistic lifestyles, negative online interactions, loneliness, and reduced meaningful face-to-face interaction. Previous research cited in the dissertation has similarly reported associations between problematic social media use and poorer mental health.

Although procrastination was significantly associated with both social media addiction and depressive symptoms, it did not significantly mediate the relationship between social media addiction and depression. The indirect effect was .213, but the 95% confidence interval $[-.028, .488]$ included zero. This indicates that procrastination may not be the principal pathway connecting social media addiction with depressive symptoms in the present sample. Other factors, such as stress, anxiety, loneliness, self-esteem, and individual differences, may contribute to the relationship. Therefore, the non-significant mediation does not indicate that procrastination is unimportant; rather, it suggests that its role as a mediator was not supported in this particular sample.

In contrast, sleep quality significantly mediated the relationship between social media addiction and depression. The indirect effect was .134, with a 95% confidence interval of $[.010, .316]$. The direct effect remained significant, suggesting that sleep quality represented an important pathway while social media addiction continued to have an association with depressive symptoms beyond this pathway. These findings suggest that higher social media addiction may contribute to poorer sleep quality, which may subsequently be associated with greater depressive symptoms. Poor sleep may influence mood, concentration, emotional regulation, and daily functioning and may increase vulnerability to depressive symptoms. The finding is consistent with previous research reporting a mediating role of sleep or insomnia in the relationship between problematic technology or social media use and mental health.

Overall, the findings demonstrate that social media addiction is associated with multiple aspects of young adults' functioning. However, the mediation results indicate that these relationships may operate through different pathways. While procrastination was associated with social media addiction and depression, it did not significantly explain the pathway between them. Sleep quality, on the other hand, emerged as a significant mediator. This highlights the

importance of considering sleep when examining the psychological consequences of excessive social media use.

5. Implications

The findings have practical implications for psychological and educational settings. Awareness programmes can help young adults recognize potentially unhealthy patterns of social media use. Counsellors and psychologists can incorporate digital habits, time management, and sleep hygiene into interventions for young adults experiencing difficulties related to excessive social media use.

Particular attention may be given to social media use before bedtime. Encouraging individuals to establish regular sleep routines and reduce unnecessary social media engagement at night may support better sleep quality. Educational institutions may also conduct programmes promoting responsible digital behaviour and awareness of the possible effects of excessive social media use on psychological well-being.

6. Limitations

The findings should be interpreted in light of several limitations. First, the study was based on a relatively limited sample of young adults, which may restrict generalizability. Second, self-report measures were used, and responses may be influenced by recall or response biases. Third, the study was conducted within a limited population, which may reduce applicability to other populations.

Most importantly, the cross-sectional design does not permit conclusions about cause and effect. Therefore, the findings demonstrate associations and mediation patterns within the analysed data but should not be interpreted as establishing that social media addiction directly causes procrastination, poor sleep, or depression. In addition, potentially relevant factors such as stress, anxiety, loneliness, family difficulties, and academic difficulties were not included in the model.

7. Conclusion

The present study examined the relationships between social media addiction, procrastination, sleep quality, and depression among young adults. Social media addiction was significantly associated with greater procrastination, poorer sleep quality, and greater depressive symptoms. Procrastination and sleep-quality problems were also associated with depressive symptoms.

However, the mediation analyses produced different findings for the two proposed mediators. Procrastination did not significantly mediate the relationship between social media addiction and depression. In contrast, sleep quality significantly mediated this relationship, suggesting that sleep may represent an important pathway linking excessive social media use with depressive symptoms.

The findings emphasize the importance of promoting healthy digital habits and maintaining adequate sleep among young adults. Future research should use larger and more diverse samples, longitudinal designs, and additional psychological

variables to further clarify the pathways linking social media use and mental health.

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