

Relationship Between Instagram Usage and Stress Among College Students

Rajani Aithal

Home Science College, Hassan, India

Corresponding email: rajani.aithal@gmail.com

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ABSTRACT

The present study examined the relationship between Instagram usage and stress among college students. Social networking applications have become deeply embedded in students' academic, social, and emotional lives, and concerns have increased regarding the mental health effects of excessive use. The study aimed to determine whether higher levels of Instagram usage are associated with greater stress among college students. A sample of 150 degree college students from Mysuru city, Karnataka, was selected randomly for the study. The sample included 75 male students and 75 female students, and the age of the participants ranged from 18 to 25 years, with a mean age of 23.16 years and a standard deviation of 1.91 years. Data were collected using the Test for Instagram Addiction (TIA; D'Souza et al., 2018) and the stress component of the Depression Anxiety Stress Scales-21 (DASS-21; Lovibond & Lovibond, 1995). Pearson's product-moment correlation and regression analysis were used to analyze the data. The results showed that all dimensions of Instagram addiction were positively and significantly related to stress, and the total Instagram addiction score was also positively correlated with stress, indicating that higher Instagram addiction is associated with higher stress among college students. The findings suggest that excessive and obsessive Instagram use may contribute to psychological strain in students, and the study highlights the need for awareness, prevention, and healthy digital behavior among young adults.

Introduction

The rapid growth of digital communication has transformed the everyday lives of young people, especially college students, who now rely heavily on social networking platforms for communication, entertainment, self-expression, and identity formation. Among these platforms, Instagram has become one of the most influential applications because of its highly visual format, ease of interaction, and constant availability through smartphones. For many students, Instagram is more than a communication tool; it has become part of their daily routine and social environment. Although such platforms provide opportunities for social connection and creative engagement, their excessive use

may also create psychological risks, particularly when users become overly dependent on them for emotional satisfaction and social approval.

Research has increasingly shown that problematic social media use is associated with elevated levels of psychological distress. Problematic Instagram use is linked with anxiety and stress and may show a stepwise increase, with heavier users reporting greater distress than lighter users (Kaur & Singh, 2025). As online engagement increases, students may become more vulnerable to stress due to social comparison, fear of missing out, compulsive checking, sleep disruption, and pressure to maintain an idealized online image.

Instagram may also affect students through behavioral and cognitive pathways. Features such as scrolling feeds, stories, reels, notifications, likes, and repeated social feedback can encourage prolonged use and repeated checking behavior. When this pattern becomes excessive, students may neglect academic responsibilities, sleep routines, and real-world relationships. The Test for Instagram Addiction conceptualizes this problematic involvement through dimensions such as lack of control, disengagement, escapism, health and interpersonal troubles, excessive use, and obsession (D'Souza et al., 2018). These dimensions provide a useful framework for examining the extent to which Instagram use may be related to stress.

The issue is particularly important in the Indian college context, where smartphone use and internet access have expanded rapidly among youth. College students already experience substantial academic, social, and personal demands, and excessive engagement with social media may intensify these pressures. Stress related to examinations, career uncertainty, peer influence, and family expectations may be further aggravated when Instagram becomes a source of comparison, distraction, and emotional overinvolvement. For this reason, the relationship between Instagram usage and stress warrants careful empirical examination.

Need for the Study

Studying the relationship between Instagram usage and stress is important for understanding the changing psychological realities of students in the digital age. As digital platforms become increasingly integrated into everyday life, it becomes necessary to determine whether these platforms function merely as tools of communication or whether their overuse contributes to emotional distress in significant ways.

Infinite scroll and curated lifestyle feeds may contribute to psychological distress, making platform-specific investigation essential rather than relying only on broad discussions of internet use. College students form a particularly relevant population for such research because they are in a transitional phase marked by emotional sensitivity, identity development, peer approval needs, and academic stress. If Instagram use is significantly associated with stress, then preventive interventions can be designed to improve self-regulation, digital literacy, and mental health support within educational settings.

The study is also needed because the effects of problematic social media use may extend beyond leisure habits and influence sleep, concentration, productivity, interpersonal relationships, and psychological well-being. By examining whether a statistically meaningful relationship exists between Instagram addiction and stress, the present study contributes to research on behavioral addiction, student mental health, and the psychosocial consequences of digital media use.

Review of Related Literature

Earlier research on internet addiction has indicated that excessive internet use is associated with a range of psychological and social difficulties. Nalwa and Anand (2003) described internet addiction among students as a growing concern, especially because internet use had become an essential part of youth life. Similarly, Egger and Rauterberg (1996) suggested that internet addiction may contribute to anxiety and stress, indicating that excessive digital engagement can affect emotional functioning.

Those who suffer from anxiety and stress often have trouble in healthy and meaningful social interaction, and problematic internet use may further intensify social fears and avoidance (Lee & Stapinski, 2012). In addition, adolescents with internet addiction have been reported to show reduced functional connectivity across distributed brain networks (Hong et al., 2013), suggesting that excessive digital use may have broader psychosocial and neurofunctional implications.

In relation to Instagram, the available study material reports that problematic use is associated with psychological distress, including anxiety and stress (Kaur & Singh, 2025). This supports the view that social networking platforms should be studied not only as communication technologies but also as behavioral environments that may influence emotional well-being.

Intervention-oriented literature also provides guidance for reducing problematic online behavior. Busari (2016) suggested that unhealthy internet use can be replaced with healthier activities such as yoga, exercise, meditation, and sports participation. Tracking usage time and using cognitive behavior therapy may help reduce addiction to social networking applications by modifying maladaptive thinking patterns. These ideas are relevant for understanding the applied significance of the present study.

Objectives of the Study

The main objective of the study was to find out the relationship between Instagram usage and stress among college students.

Method

Participants

The study was conducted on 150 students studying degree courses in Mysuru city of Karnataka State. The participants were selected randomly for the purpose of the study. Of the total sample, 75 were male students and 75 were female students. Their age ranged from 18 to 25 years, and the mean age of the sample was 23.16 years with a standard deviation of 1.91 years.

Instruments

Test for Instagram Addiction (TIA), Instagram addiction was measured using the Test for Instagram Addiction (TIA), developed by D'Souza, Samyukta, and Bivera in 2018. The instrument contains 26 statements designed to assess Instagram addiction across six components: lack of control, disengagement, escapism, health and interpersonal troubles, excessive use, and obsession (D'Souza et al., 2018). Responses were recorded on a 5-point Likert scale ranging from all the time (5) to rarely/never the tool has high reliability, with a Cronbach's alpha of 0.931 for the total inventory and alpha values ranging from 0.680 to 0.863 for the various components. Item-total correlations and inter-component correlations were reported to be highly significant, supporting the reliability and validity of the instrument.

Stress Measure, Stress was measured using the stress component of the Depression Anxiety Stress Scales-21 (DASS-21), developed by Lovibond and Lovibond (1995). DASS-21 contains 21 items that assess depression, anxiety, and stress, but only the stress subscale was used in the present study (Lovibond & Lovibond, 1995). The stress component includes seven items, DASS has high internal consistency, with a reported Cronbach's alpha of 0.94, as cited from Gloster et al. (2008).

Responses ranged from "Did not apply to me at all" to "Applied to me very much, or most of the time," and scoring was completed according to the original instructions for the scale. The total stress score was multiplied by 2 to obtain the final score, consistent with standard DASS-21 scoring procedure (Lovibond & Lovibond, 1995).

Procedure

After obtaining permission from the respective authorities, the Test for Instagram Addiction and the stress component of DASS-21 were administered to the selected students studying in various courses in Mysuru city. Participants were assured of confidentiality and asked to answer all items. Whenever they had difficulty understanding an item, clarification was provided in the local language to improve comprehension. After data collection, the responses were scored and entered the computer for statistical analysis. The data were analyzed using Pearson's product-moment correlation and simple linear regression. Correlation analysis was used to determine the strength and direction of the relationship between dimensions of Instagram addiction and stress, while regression analysis was intended to identify the major predictors of stress.

Results and Discussion

Results

Results of product-moment correlations

Table 1 presents the correlation coefficients between stress and each dimension of the Test for Instagram Addiction.

Table 1. Correlations between stress scores and factors of Instagram addiction

Variable 1	Variable 2	Correlation coefficient
Factors of TIA		
Lack of control	Stress	0.488***
Disengagement	Stress	0.541***
Escapism	Stress	0.499***
Health and interpersonal troubles	Stress	0.487***
Excessive Use	Stress	0.589**
Obsession	Stress	0.595***
Total scores		0.596***

Note: Df=148; *** P=.001, **P=.01

The coefficients in Table 1 indicate moderate positive relationships between stress and all components of Instagram addiction. Among the six factors, obsession showed the highest correlation with stress ($r = .595$), followed closely by excessive use ($r = .589$), while the total Instagram addiction score showed the strongest overall association with stress ($r = .596$). These findings suggest that students who are more psychologically preoccupied with Instagram and those who use it excessively tend to report greater stress. The remaining dimensions, including disengagement, escapism, lack of control, and health and interpersonal troubles, were also significantly associated with stress. This indicates that the relationship between Instagram usage and stress is not limited to a single aspect of problematic use but is distributed across several maladaptive features of social media involvement. The findings support the hypothesis that Instagram usage and stress are significantly related among college students.

The strongest pattern was observed for obsession and excessive use, which may indicate that the emotional hold of Instagram is more stressful than ordinary usage intensity. Students who think constantly about Instagram, repeatedly check updates, or feel compelled to remain connected may be especially vulnerable to psychological strain. In educational settings, such patterns may interfere with study routines, sleep, and social functioning, thereby amplifying stress over time.

Discussion

The findings of the study show that Instagram addiction and stress are significantly and positively related among college students. As addiction to Instagram increased, stress also increased in a linear and significant manner. These findings support the study hypothesis and indicate that problematic social media use may be an important mental health concern in the college population. The findings suggest that stress rises alongside each major dimension of Instagram addiction. Lack of control reflects difficulty in regulating use, disengagement reflects withdrawal from other activities or responsibilities, escapism suggests turning to Instagram to avoid problems, health and interpersonal troubles indicate negative consequences of overuse, excessive use reflects prolonged involvement, and obsession represents persistent mental preoccupation with the platform (D'Souza et al., 2018). Because all of these dimensions were significantly associated with

stress, the results imply that Instagram may influence well-being through multiple pathways rather than through frequency of use alone.

One possible explanation is that students who spend excessive time on Instagram may gradually lose control over their use, leading to reduced time for academic work, disturbed sleep, distraction, and interpersonal difficulties. In addition, Instagram often encourages comparison with idealized representations of others' lives, which may create dissatisfaction, insecurity, and emotional overload. Over time, these experiences may increase stress levels and reduce the student's ability to cope effectively with everyday demands.

The findings may also be understood in light of broader literature on internet addiction and psychological distress. Internet addiction has been described as having negative psychological, physical, and physiological effects and as contributing to anxiety and stress (Egger & Rauterberg, 1996). Similarly, problematic internet use may worsen social fears and avoidance of face-to-face interactions (Lee & Stapinski, 2012). The present findings extend that logic to Instagram use among college students.

The observation that obsession and excessive use emerged as major predictors is particularly meaningful. Excessive use consumes time and attention, while obsession suggests that Instagram continues to occupy the mind even when the user is offline. This combination may create a persistent cognitive-emotional load that keeps the student psychologically aroused, distracted, or worried. Such a state may increase stress not only because of what happens on the platform but also because of the inability to mentally disengage from it.

Suggestions for Future Research

Future studies may use larger and more diverse samples drawn from different districts, states, or academic settings. Researchers may also compare undergraduate and postgraduate students, rural and urban populations, or students from different disciplinary backgrounds. Longitudinal studies would be particularly useful for understanding whether problematic Instagram use predicts later stress or whether stress increases dependence on Instagram over time.

Further research may also examine mediating and moderating variables such as self-esteem, loneliness, sleep quality, emotional regulation, fear of missing out, and academic performance. Qualitative studies may offer deeper insight into why students use Instagram excessively and how they experience stress in relation to online activity. Intervention studies may help identify the most effective ways to reduce harmful use and improve student well-being.

Conclusion

The study indicates that Instagram usage is significantly related to stress among college students. All six dimensions of Instagram addiction showed positive correlations with stress, and the total Instagram addiction score also had a significant positive association with stress. The findings suggest that as students become more dependent

on Instagram, their level of stress also increases. The results underline the importance of recognizing problematic Instagram use as a mental health issue in the college population. Obsession and excessive use appear to be especially important dimensions, indicating that the compulsive and intrusive aspects of social media engagement may be central to the experience of stress. Promoting healthy technology habits, self-regulation, and supportive interventions may therefore be essential for improving student well-being in the digital age.

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