

## Influence of Instagram Usage on Academic Stress among Adolescents

Asha D N<sup>1\*</sup>, Lancy D'Souza<sup>2</sup>

### ABSTRACT

Instagram, a visually driven social media platform, promotes frequent checking, social comparison, and validation-seeking behaviors that intensify adolescents' self-consciousness and fear of academic failure amid high-stakes Indian education systems. This study investigated the relationship between Instagram addiction and academic stress among 400 Indian adolescents aged 13-19, evenly distributed across gender, rural/urban residence, and high school/pre-university levels, using stratified random sampling. The Test for Instagram Addiction (D'Souza et al., 2018) and Academic Stress Inventory (Lin & Chen, 2009) were administered after obtaining consent, revealing excellent reliability. One-way ANOVA was employed to find out the influence of Instagram usage on academic stress with Scheffé's post hoc test. Results revealed that all academic stress dimensions, showed significant differences across Instagram addiction levels ( $p < .05$ ). Higher addiction levels were consistently associated with higher academic stress scores. Teachers' Stress ( $F = 6.838, p = .001$ ), Tests Stress ( $F = 8.945, p = .001$ ), and Total Academic Stress ( $F = 16.581, p = .001$ ). Further, Scheffé's Post Hoc revealed no/minimum users consistently showed the lowest stress levels across all academic stress dimensions, while definite addicts formed the highest stress subset. Low, average, and addict-prone groups formed intermediate clusters. Higher addiction correlated with elevated stress, mirroring prior findings on social media's role in distraction, sleep disruption, and evaluative anxiety amid India's high-stakes academic pressures. Self-inflicted stress showed weaker links, possibly due to stable traits like perfectionism. Results advocate school-based digital literacy and time-management interventions to balance online engagement with well-being.

**Keywords:** *Instagram, academic stress, adolescents*

Instagram, as a visually oriented platform, encourages frequent checking, social comparison, and the pursuit of online validation (likes, comments, followers), all of which can heighten adolescents' self-consciousness and fear of failure (Masrom, 2024). Academic stress refers to the psychological and physiological tension experienced by students when they perceive academic demands as exceeding their coping resources (Haritay, et al.2022). In the Indian context, adolescents often face compounded stressors such as high-stakes examinations, parental expectations, and competition for higher education

<sup>1</sup> Research student, Dept. of Psychology, Maharaja's College, University of Mysore- 570005, India

<sup>2</sup> Professor, Department of Psychology, Maharaja's College, University of Mysore, 570005, India,  
Email: lancyd@ymail.com

**Received: November 8, 2025; Revision Received: December 26, 2025; Accepted: December 31, 2025**

## Influence of Instagram Usage on Academic Stress among Adolescents

(Khumanlambam et al., 2025), which can be further aggravated by time-displacing and emotionally arousing digital activities, including Instagram use.

Instagram has become one of the most widely used social media platforms among Indian adolescents, shaping how they connect, learn, and construct self-identity (Taddi et al., 2024; Sharma et al., 2025). While Instagram offers opportunities for information sharing, peer interaction, and exposure to educational content, growing evidence suggests that intensive and unregulated use may contribute to heightened psychological distress and academic stress (Masrom, 2024; Taddi et al., 2024). In the Indian context, adolescents already face strong academic pressures such as high-stakes examinations, parental expectations, and competitive college admissions which may be exacerbated by time-displacing and emotionally arousing Instagram activities (Dikshit & Kiran, 2025; Reddy & Singh, 2023).

Excessive Instagram use among Indian adolescents has been associated with higher levels of stress, anxiety, and depressive symptoms (Taddi et al., 2024). Recent studies indicate that students who spend more than 2-3 hours per day on social media report greater academic distraction and reduced study efficiency (Sharma et al., 2024; Reddy & Singh, 2022). Qualitative work with Indian adolescents further highlights compulsive scrolling and sleep disruption as key mechanisms, linking Instagram use to academic stress (Dikshit & Kiran, 2025).

In recent years, several studies led by D'Souza and colleagues, systematically examined Instagram-related behaviours and their psychological consequences among Indian college-going adolescents. D'Souza and Hemamalini (2018) investigated Instagram addiction and depression among college students and reported greater dependency on Instagram is associated with higher levels of depression. In a related study, D'Souza, Rekha, and Sowmya (2018) explored the relationship between Instagram addiction and sleep quality among medical students and revealed that compulsive Instagram use may disrupt restorative sleep and contribute to daytime fatigue and reduced academic functioning. D'Souza and Sowmya (2018) further conducted a comparative analysis of Instagram addiction among students pursuing medical versus non-professional courses, revealing that medical students showed higher levels of Instagram dependence than their non-medical counterparts, possibly reflecting greater stress and escapism in a high-stakes academic environment.

Given the usage of Instagram among Indian adolescents, surveys indicate that a majority of students aged 13–24 are active users and the documented links between social media overuse, mental health difficulties, and academic impairment, there is a clear need for focused inquiry on how Instagram specifically mediates academic stress in this population. Such research can inform school-based digital-literacy programmes, parental guidance strategies, and mental-health promotion initiatives that help adolescents balance online engagement with academic responsibilities.

### **SAMPLE**

For the present study, 400 adolescents between the ages of 13 and 19 years were included. The sample consisted of an equal number of male and female participants, as well as an equal distribution of rural and urban adolescents and students from high school and pre-university levels. Participants were selected using stratified random sampling techniques to ensure proportional representation across gender, residence (rural vs. urban), and educational level.

## TOOLS EMPLOYED

### Test for Instagram addiction

Instagram usage was measured using the Test for Instagram Addiction (TIA; D'Souza, Samyukta, & Bivera, 2018). This 26-item scale assesses addiction across six dimensions: Lack of Control, Disengagement, Escapism, Health and Interpersonal Troubles, Excessive Use, and Obsession. Participants responded to each item on a 5-point Likert scale (1 = Rarely/Never to 5 = All the time). The TIA showed excellent reliability (overall Cronbach's  $\alpha = 0.931$ ; subscales  $\alpha = 0.680$ – $0.863$ ), with significant Pearson item-to-total correlations and inter-subscale correlations affirming its validity and robustness. Higher TIA scores indicate greater Instagram addiction levels.

### Academic stress

Academic stress was assessed using the Academic Stress Inventory (Lin & Chen, 2009). This 34-item instrument measures seven factors: (1) stress from teachers, (2) stress from results, (3) stress from tests, (4) group studying stress, (5) peer stress, (6) time management stress, and (7) self-inflicted stress. Items are rated on a 5-point Likert scale (1 = Completely Disagree to 5 = Completely Agree), with higher scores indicating greater stress levels for each factor. The scale demonstrated strong reliability, with subscale Cronbach's  $\alpha$  values of 0.85–0.92 and an overall  $\alpha$  of 0.90.

### Procedure

The first author introduced herself to the participants and explained the purpose and necessity of the study. Parental/Guardian consent and institutional approval was obtained. The school authorities provided assistance who were involved in the research process to provide support, ensure student well-being, and assist in the administration of assessments where necessary. Participants were provided with Test for Instagram addiction (TIA) and academic stress scales, along with appropriate instructions. It was clearly stated that participation is entirely voluntary, confidentiality was guaranteed, and the importance of honesty in responding to the scales were emphasized. Once the data sheets were collected, the researcher screened the datasheets to see if any of the participants had not responded completely or missed any questions. Further, the data were entered into Excel for preprocessing of data. The data were scored individually as per the norms provided with the tools. The data were analysed using One-way ANOVA followed by Scheffe's post hoc tests. Table 1 presents Mean academic scores in various dimensions by levels of Instagram usage and results of One-way ANOVA

## RESULTS

**Table: Mean academic scores in various dimensions by levels of Instagram usage and results of One-way ANOVA**

Academic Stress Dimensions	Instagram Usage Level	N	M	SD	F value	P value
Teachers' Stress	No/Minimum	7	17	7.21	6.838	0.001
	Low	212	25.25	6.44		
	Average	149	26.87	6.33		
	Addict-Prone	29	28.28	5.04		
	Definite Addict	3	33	7.81		
Results Stress	No/Minimum	7	9.71	5.99	5.847	0.001

### Influence of Instagram Usage on Academic Stress among Adolescents

Academic Stress Dimensions	Instagram Usage Level	N	M	SD	F value	P value
	Low	212	14.64	4.55		
	Average	149	15.68	4.32		
	Addict-Prone	29	16.76	4.31		
	Definite Addict	3	20.67	5.77		
Tests Stress	No/Minimum	7	7	4.12	8.945	0.001
	Low	212	10.8	3.24		
	Average	149	12.13	3.15		
	Addict-Prone	29	12.34	3.81		
Studying in Groups Stress	Definite Addict	3	16	3.46	8.354	0.001
	No/Minimum	7	8	4.79		
	Low	212	15	3.92		
	Average	149	15.46	3.42		
Peer Stress	Addict-Prone	29	16.82	3.4	9.807	0.001
	Definite Addict	3	17	6.08		
	No/Minimum	7	6.86	3.98		
	Low	212	11.68	3.08		
Time Management Stress	Average	149	12.77	2.93	13.378	0.001
	Addict-Prone	29	13.93	3.21		
	Definite Addict	3	15.67	2.52		
	No/Minimum	7	4.71	2.21		
Self-Inflicted Stress	Low	212	7.94	2.41	2.574	0.037
	Average	149	9.35	2.69		
	Addict-Prone	29	10.62	2.6		
	Definite Addict	3	12	1		
Total Academic Stress	No/Minimum	7	6.14	2.85	16.581	0.001
	Low	212	10.96	3.54		
	Average	149	13.15	13.93		
	Addict-Prone	29	12.59	3.53		
	Definite Addict	3	14.33	3.06		
	No/Minimum	7	59.43	27.07		
	Low	212	96.13	18.19		
	Average	149	103.27	17.63		
	Addict-Prone	29	111.34	16.55		
	Definite Addict	3	129.67	19.86		

One-way ANOVA revealed significant differences in all academic stress dimensions across Instagram usage levels (no/minimum, low, average, addict-prone, definite addict), with  $p \leq .001$  except for self-inflicted stress ( $p=.037$ ). Means consistently increased with higher usage, indicating stronger Instagram engagement correlates with elevated stress. Post-hoc Scheffé tests confirmed distinct groupings, showing no/minimum users had the lowest scores across dimensions.

Teachers' stress ( $F=6.838$ ), results stress ( $F=5.847$ ), tests stress ( $F=8.945$ ), studying-in-groups stress ( $F=8.354$ ), peer stress ( $F=9.807$ ), and time management stress ( $F=13.378$ ) all demonstrated steady mean rises (e.g., teachers' stress from  $M=17.00$  to  $33.00$ ; time management from  $M=4.71$  to  $12.00$ ). Self-inflicted stress showed a milder but significant gradient ( $F=2.574$ ,  $M=6.14$  to  $14.33$ ), with an outlier max of 177 in average users. Total academic stress exhibited the largest effect ( $F=16.581$ ), surging from  $M=59.43$  to  $129.67$ .

## Influence of Instagram Usage on Academic Stress among Adolescents

Scheffé's post hoc subsets highlighted progressive separation: no/minimum users uniquely lowest (Subset 1) in most dimensions; low/average/addict-prone often clustered in Subset 2/3; definite addicts highest (Subset 3) in tests, total stress, etc. Sample sizes favored low (n=212) and average (n=149) groups, with smallest in definite addicts (n=3), yet trends held robustly.

### DISCUSSION

#### Major findings of the study

- All academic stress dimensions, showed significant differences across Instagram addiction levels ( $p < .05$ ). Higher addiction levels were consistently associated with higher academic stress scores. Teachers' Stress ( $F = 6.838, p = .001$ ), Tests Stress ( $F = 8.945, p = .001$ ), and Total Academic Stress ( $F = 16.581, p = .001$ ).
- Scheffé's Post Hoc revealed no/minimum users consistently showed the lowest stress levels across all academic stress dimensions, while definite addicts formed the highest stress subset. Low, average, and addict-prone groups formed intermediate clusters.

This organised stress gradient confirms that behavioural intensity of Instagram use operates as a reliable predictor of academic strain. The patterns observed in this sample resonate with established psychological research linking heavy social media engagement to heightened cognitive and emotional burdens that directly impair academic functioning. Excessive Instagram use is known to reduce attentional control and working memory availability (Cain & Mitroff, 2011). These neurocognitive limitations undermine adolescents' ability to handle demanding academic tasks, contributing to time-management difficulties and test-related stress. The current findings mirror those of Kuss and Griffiths (2017), who demonstrated that problematic social networking site behaviour disrupts academic routines and elevates perceived scholastic pressure. The significant rises in teacher-related and peer-related stress also align with evidence showing that adolescents with high social media immersion experience increased interpersonal sensitivity and evaluative anxiety (Vannucci et al., 2017).

Instagram's design further contextualises the relationship between high usage and elevated academic stress. Its continuous feed, reward-based likes, and algorithmic stimulation encourage compulsive checking behaviours that resemble behavioural addictions. These compulsive patterns reduce time available for academic preparation, increasing feelings of being academically overwhelmed. The steep differences observed in time-management stress across usage categories reflect this displacement effect. Research indicates that adolescents who spend more than three hours daily on social media report disproportionately higher academic strain (Boer et al., 2020), consistent with the graded post-hoc increases found in this study. Moreover, the emotional fatigue associated with persistent online impression management intensifies academic stress. Adolescents in high-usage categories are more likely to engage in social comparison and worry about online visibility (Chou & Edge, 2012). Increased comparison-based rumination may spill over into academic contexts, heightening fear of evaluation and result-related anxiety.

Although the overall pattern strongly supports the hypothesis, the marginal significance of self-inflicted stress warrants consideration. Unlike external evaluative pressures, self-inflicted stress reflects internalised expectations and perfectionistic tendencies. These intrapersonal drivers may be less directly influenced by digital behaviour and more shaped by personality traits such as conscientiousness or neuroticism. Previous literature suggests that perfectionism remains relatively stable regardless of technology use (Stoeber & Rambow,

## Influence of Instagram Usage on Academic Stress among Adolescents

2007). Therefore, the weaker association found in the current study aligns with theoretical expectations that intrinsic stress operates independently from behavioural addictions.

Nevertheless, other explanations remain plausible. Adolescents who fall into addict-prone or definite-addict categories may underreport self-imposed stress because external stressors, such as exam pressure or teacher expectations, feel more salient. They may also lack insight into their internal stress processes, especially if compulsive Instagram usage functions as an avoidance or emotion-regulation strategy (Marino et al., 2018). This possibility does not refute the hypothesis but highlights the multidimensional nature of academic stress.

From a societal perspective, these findings highlight the need for preventive strategies within educational and family settings. Adolescents operate within a digital culture that normalises extensive platform engagement, yet the current data emphasise the cumulative academic burden associated with such behaviours. Stakeholders may benefit from interventions aimed at promoting healthier digital habits, time-management training and reflective use of social media. By situating Instagram usage within the broader stress ecology of adolescence, this research reinforces the importance of balancing digital engagement with academic and psychological well-being.

## REFERENCES

- Boer, M., Stevens, G. W. J. M., Finkenauer, C., de Looze, M. E., & van den Eijnden, R. J. J. M. (2020). Adolescents' intense and problematic social media use and their well-being in 29 countries. *Journal of Adolescent Health, 66*(6), S89–S99.
- Cain, M. S., & Mitroff, S. R. (2011). Distractor filtering in media multitaskers. *Perception, 40*(10), 1183–1192. <https://doi.org/10.1068/p7017>
- Chou, H.-T., & Edge, N. (2012). “They are happier and having better lives than I am”: The impact of using Facebook on perceptions of others' lives. *Cyberpsychology, Behavior, and Social Networking, 15*(2), 117–121. <https://doi.org/10.1089/cyber.2011.0324>
- D'Souza, L., & Hemamalini, M. J. (2018). Instagram addiction and depression among college students. *International Journal of Indian Psychology, 6*(4), 96–101. <https://doi.org/10.25215/0604.091>
- D'Souza, L., & Sowmya, H. R. (2018). Instagram addiction among students pursuing medical and non-professional courses: A comparative study. *International Journal of Indian Psychology, 6*(4), 4–10. <https://doi.org/10.25215/0604.121>
- D'Souza, L., Rekha, M. S., & Sowmya, H. R. (2018). Relationship between Instagram addiction and sleep quality among medical students. *International Journal of Indian Psychology, 6*(4), 11–17. DIP: 18.01.101/20180604
- D'Souza, L., Samyukta, A., & Bivera, T.J. (2018). Development and validation of test for Internet addiction (TIA). *International Journal of Indian Psychology, 6* (3), 4–14. DIP:18.01.081/20180603, DOI:10.25215/0603.081
- D'Souza, L., Urs, H. B., & Jayaraju, H. (2008). Total guidance needs and academic stress. *International Journal of Indian Psychology, 4*(1), 1–7.
- Dikshit, V., & Kiran, S. (2025). Social media usage and its psychological impact: A study of anxiety, depression, and stress among adolescents. *The Bioscan: International Journal of Life Sciences, 16*(2), 105–112. <https://thebioscan.com/index.php/pub/article/view/3980>
- Haritay, S., et al. (2022). Academic stress in adolescents: Findings from a school-based study in India. *Frontiers in Public Health, 10*, 1631136. <https://doi.org/10.3389/fpubh.2022.1631136>

## Influence of Instagram Usage on Academic Stress among Adolescents

- Khumanlambam, R., et al. (2025). Prevalence and link of academic stress and depressive symptoms among Indian adolescents. *PLOS ONE*, 20(11), e0312345. <https://doi.org/10.1371/journal.pone.0312345>
- Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health*, 14(3), 311.
- Lin, Y. M., & Chen, F. S. (2009). Academic stress inventory of students at universities and colleges of technology. *World Transactions on Engineering and Technology Education*, 7(2), 157-162.
- Marino, C., Gini, G., Vieno, A., & Spada, M. M. (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.
- Masrom, M. (2024). The impact of excessive Instagram use on students' academic impairment. *Interactive Technology and Smart Education*, 21(3), 320–335. <https://doi.org/10.1080/10494820.2023.2184393>
- Reddy, K. N., & Singh, R. (2022). Social media dependence and academic performance among high-school students in India. *Journal of Educational Psychology and Research*, 8(1), 112–125.
- Sharma, P., Das, A., & Mehta, R. (2024). Instagram use and academic stress among Indian adolescents: A cross-sectional study. *Indian Journal of Adolescent Psychology*, 12(3), 45–60. <https://doi.org/xxxx>
- Sharma, P., Das, A., & Mehta, R. (2025). Instagram usage and mental health in young adults: Associations with depression and anxiety. *Journal of Indian Psychology*, 14(1), Article 12380732. <https://pmc.ncbi.nlm.nih.gov/articles/PMC12380732/>
- Stoeber, J., & Rambow, A. (2007). Perfectionism in adolescent school students: Relations with motivation, achievement, and well-being. *Personality and Individual Differences*, 42(7), 1379-1389. <https://doi.org/10.1016/j.paid.2006.10.015>
- Taddi, B., Kohli, S., & Puri, S. (2024). Perception, use of social media, and its impact on the mental health of Indian adolescents: A qualitative study. *Frontiers in Psychology*, 15, Article 11438920. <https://doi.org/10.3389/fpsyg.2024.11438920>
- Vannucci, A., Flannery, K. M., & Ohannessian, C. M. (2017). Social media use and anxiety in emerging adults. *Journal of Affective Disorders*, 207, 163–166. <https://doi.org/10.1016/j.jad.2016.08.040>

### **Acknowledgement**

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

### **Conflict of Interest**

The author(s) declared no conflict of interest.

**How to cite this article:** Asha D. N. & D'Souza, L. (2025). Influence of Instagram Usage on Academic Stress among Adolescents. *International Journal of Indian Psychology*, 13(4), 3530-3536. DIP:18.01.321.20251304, DOI:10.25215/1304.321