

## ASSESSMENT OF PREVALENCE OF INSTAGRAM ADDICTION AND ITS ASSOCIATION WITH STRESS AMONG COLLEGE STUDENTS IN SELECTED EDUCATIONAL INSTITUTIONS - A CROSS SECTIONAL STUDY.

Ms. Aishwarya. S. Bhalerao<sup>1\*</sup>, Ms. Siddheshwari Barbatkar<sup>2</sup>, Ms. Suman Azad<sup>3</sup>

1. Department of Mental Health (Psychiatric) Nursing VSPM MDINE, Nagpur
2. Professor cum HOD VSPM MDINE, Nagpur
3. Assistant Professor VSPM MDINE, Nagpur

**\*Corresponding Author - Ms. Aishwarya. S. Bhalerao**

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### ABSTRACT

**Introduction:** Social media platforms like Instagram connect billions but raise mental health concerns, especially among college students. Excessive, compulsive use similar to addiction can increase stress and emotional exhaustion.

**Methodology:** The study evaluated the prevalence of Instagram addiction and its association with stress among college students using a descriptive cross-sectional research design conducted at selected educational institutions with 150 students (50 science, 50 commerce, 50 arts), the study employed a quantitative approach. Participants included 11<sup>th</sup> and 12<sup>th</sup> class students of age group 16-18 years with non-probability purposive sampling technique data collection involved Semi structured questionnaire on demographic variables, semi structured questionnaire on Instagram use, The Instagram addiction scale (TIAS), Perceived stress scale. The Instagram Addiction Scale showed good reliability with a correlation coefficient (r) ranging from 0.60 to 0.93, The Perceived Stress Scale was also reliable with an r value of 0.79.

**Result:** The study assessed the prevalence of Instagram addiction and its association with stress among college students in selected educational institutions. The study reveals that the prevalence of Instagram addiction among college students is 28% have mild Instagram addiction, 48.67% of students have moderate Instagram addiction, 21.33% of college students have severe Instagram addiction and 3% of students have extremely severe Instagram addiction. Those who are having Instagram addiction are vulnerable to stress.

**Conclusion:** Disproportionate Instagram use is a growing concern for college students. Research studies indicate that spending too much time on the platform can negatively impact their physical and mental health, as well as their social lives.

**Keywords:** Prevalence, The Instagram Addiction Scale, Perceived Stress Scale, Instagram addiction, Stress.

## INTRODUCTION

Meta's Instagram is a widely used visual platform, facilitates photo and video sharing with features like geotags and filters. While popular across various devices and languages, but its popularity is overshadowed by concerns about its effects on mental health, especially in college-aged users. Issues like excessive scrolling and curated content contribute to these worries. Additionally, the platform is subject to criticism regarding its data handling, policy decisions, and the presence of problematic content.<sup>1</sup> Stress is a common experience, particularly among college students who face diverse pressures. It impacts and individual responses vary widely. College students commonly experience stress from numerous sources, and both the intensity and coping mechanisms differ between individuals.<sup>2</sup>

### **Background of the study:**

Passive social media use correlates with increased anxiety and depression in Icelandic teens, according to a study of over 10,000 adolescents. Active use initially appeared less harmful but lost significance when self-esteem and body image were factored in, leaving only passive use linked to emotional distress. Girls showed a stronger association between social media use and emotional distress, particularly depression. Further research is needed to explore the complex relationship between specific social media activities, individual vulnerabilities, and adolescent mental health.<sup>3</sup> To examine the impact of Instagram likes on women's body image, 220 female students viewed thin-ideal or ordinary photos with high or low like counts. The study revealed that thin-ideal images led to increased body and face dissatisfaction, and higher like counts exacerbated negative feelings about facial appearance. This suggests a direct link between social media approval and women's perceptions of their bodies.<sup>4</sup>

A study in urban Bengaluru examined addiction rates in government and private college students, finding that 36.9% of the 1,870 participants showed signs of addiction. Common problems linked to this included eye strain, irritability, and sleep disruption. The study identified several risk factors, such as being male, using tobacco and alcohol, unhealthy eating habits, and experiencing 'ringxiety' and 'selfitis.' While a significant portion of students were affected, most cases were classified as mild.<sup>5</sup>

### **Need of the study:**

Instagram's growing popularity has led to an increase in Instagram addiction, characterized by symptoms such as anxiety, mood swings, self-loathing, and neglecting real-life issues. With approximately 12% of social media users exhibiting addiction and high prevalence rates like 34% among Chinese students, social networking addiction is a significant public health issue for university students. This study aims to use a systematic review and meta-analysis to determine the global prevalence of Instagram addiction among students, resolving prior research inconsistencies.<sup>6</sup>

A study was conducted on Indian survey highlights a widespread issue of excessive screen time replacing outdoor play, with 40% of parents of children aged 9-17 believing their kids are addicted to social media and video games. This digital overuse is linked to negative effects like poor sleep, stress, anxiety, depression, and low self-esteem. Significantly, 62% of 13-17-year-olds and 49% of 9-13-year-olds spend over three hours daily on these digital activities, and 68% of parents feel the current minimum age of 13 for social media should be raised.<sup>7</sup>

A cross-sectional study of 381 Indian medical students found a high prevalence of internet addiction (61.4%), predominantly mild to moderate. Using Kimberly Young's Internet Addiction Questionnaire and sessional marks, the research established a significant negative correlation between internet addiction and academic performance. The findings stress the critical need for early intervention and awareness programs to prevent internet addiction among medical students.<sup>8</sup>

## **METHODOLOGY**

### **Primary Objective**

1. To assess the prevalence of Instagram addiction and its association with stress among college students.

### **Secondary Objective**

1. To correlate Instagram addiction and its association with stress.
2. To find out the association of Instagram addiction among college students with selected demographic variables.
3. To find out the association of stress among college students with selected demographic variables.

### **Assumptions**

1. College students may have high prevalence of Instagram addiction.
2. There may be significant association between Instagram addiction and stress.
3. There may be significant association between Instagram addiction, stress and its selected demographic variables.

### **Research Approach**

In this study the quantitative research approach is used.

### **Research Design**

The research design selected for the study was “Descriptive Study- A Cross-Sectional Research design.

### **Setting Of The Study:**

The present study was conducted in selected educational institutions where prevalence of Instagram addiction and stress is assessed after obtaining permission from concerned authority.

### **Variables**

- **Research Variable:** In the present study research variable is assessment of prevalence of Instagram addiction and its association with stress among college students.

- **Demographic Variable:** In the present study demographic variables include age, gender, year of study, course of study, family monthly income and area of residence.

## Population

- **Target Population:** In this study the target population includes college students between age group of 16-18 years at selected educational Institutions.
- **Accessible Population:** In this study accessible population includes all college students. Students studying in selected educational institutions of the city and are available at the time of data collection.

## Sampling Technique

The sampling technique use in this study was non-probability purposive sampling technique.

## Sample Size

In this study sample size consist of 150 college students of selected educational institutions.

## Validity And Reliability

The tool was validated by 16 Mental health nursing experts ,2 Statistician and 2 Psychiatrist. The correlation coefficient of Instagram addiction scale was formalised and correlation measure 'r' of the tool was 0.60-0.93 and hence the tool was setup to be dependable.

The correlation measure of the perceived stress tool was 0.9969 which was further than 0.79 and hence the tool was found to be dependable.

## Pilot Study

A sample of 10% of college students was selected from selected educational institutions. The pilot study was feasible in term of time, money, material and resources.

## Description Of Tool

### Section A – Semi Structured Questionnaire

It includes total 6 demographic variables such as age, gender, year of study, family monthly income and area of residence.

### Section A.1: Semi Structured Questionnaire On Instagram Use.

This tool to collect the data on Instagram use consisting of years of Instagram use, Instagram use per day, expenditure on internet per month, most commonly used gadget for Instagram, most common modes of Instagram access, most common location of Instagram access, parents know about my Instagram activities and use of Instagram for.

### Section B – The Instagram Addiction Scale

The standardized Instagram addiction scale was used by reviewing the related literature and consultation with experts. This scale consisted of 20 questions. The Questions for assessment of level of mental health status of police constables. Total score is 100.

Where, 1-25 is no addiction, 26-50 is low Instagram addiction, 51-75 medium Instagram addiction, 76-100 high Instagram addiction.

### Section C – Perceived Stress Scale

This Standardized perceived stress scale was used by reviewing the related literature and consultation with experts. This scale consisted of 10 questions.

Questions for assessment of level of perceived stress, Total score is 40.

1. First, reverse your scores for questions 4, 5, 7, and 8. On these 4 questions, change the scores like this: 0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0.
2. Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress.
3. 0-13 is low stress, 14- 26 moderate stress, 27-40 high perceived stress.

## **Ethical Aspect**

The study strictly followed ethical guidelines, receiving institutional ethics committee approval and complying with national human research standards. Participant safety was prioritized by reviewing the design to prevent harm, and confidentiality was rigorously maintained through the use of coded identification numbers.

## **RESULTS**

### **Demographic Data**

The demographic data of the study participants provides a comprehensive overview of their background characteristics. The majority of respondents were 17 years old (49.3%), followed by those aged 16 years (41.3%), while only 9.3% were 18 years old, indicating that most participants were in mid-adolescence. In terms of gender, females constituted a higher proportion (60%) compared to males (40%), and no participants identified as transgender. Regarding the year of study, most students were enrolled in the 12th class (58%), with the remaining 42% from the 11th class, showing a predominance of senior students. The course of study was evenly distributed among Arts, Commerce, and Science streams (33.3% each), ensuring balanced academic representation. With respect to family income, a large proportion of respondents' families earned between ₹20,001–₹30,000 per month (40%), followed by ₹10,000–₹20,000 (29.3%), while smaller groups reported incomes above ₹40,000 (17.3%) and between ₹30,001–₹40,000 (13.3%), suggesting that most participants belonged to middle-income families. Furthermore, the area of residence data revealed that 68.7% of students were from urban areas, while 31.3% resided in rural regions. Overall, the demographic profile highlights that the majority of respondents were 17-year-old female students from urban areas, studying in the 12th class, and primarily belonging to middle-income families across diverse academic streams

## Pattern Of Instagram Use

**Table 1: Percentage wise distribution of College Students according to responses related to pattern of Instagram Use.**

<b>n=150</b>		
<b>Instagram Use</b>	<b>Frequency (f)</b>	<b>Percentage (%)</b>
<b>Years of Instagram use</b>		
1-2	104	69.3
3-4	26	17.3
More than 4	20	13.3
<b>Instagram use per day</b>		
1-2	119	79.3
3-4	23	15.3
5-6	2	1.3
More than 6	6	4.0
<b>Expenditure on internet per month (in Rs)</b>		
Less than 200	53	35.3
201-400	82	54.7
401-600	10	6.7
More than 600	5	3.3
<b>Most commonly use gadget for Instagram</b>		
Mobile Phone	146	97.3
Desktop	1	0.7
Laptop	2	1.3

Tablet	1	0.7
<b>Most common mode of Instagram access</b>		
Mobile Internet	129	86.0
Wi -Fi	18	12.0
Broadband	0	0
Data Card	3	2.0
<b>Most common location of Instagram access</b>		
Residence	95	63.3
Classroom and library	2	1.3
Cybercafe	0	0
Anywhere	53	35.3
• Tuition Classes	22	14.67 9.33
• Travelling	14	
Walking	17	
<b>Parents know about my Instagram activities</b>		
• Never	22	14.7
• Rarely	18	12.0
• Sometime	35	23.3
• Always	75	50.0
<b>Use of Instagram for</b>		
• Shopping	22	14.67
• Reels	122	81.33

• Feeds	45	30.00
• Stories	115	76.67
• Chatting	91	60.67
• Business	20	13.33
• Content creation	22	14.67
• Sharing memes with friends	80	53.33

The above table.1 shows that 97.3% College students overwhelmingly use Instagram on mobile phones, 86%, college students use via mobile data, 63.3% of college students primarily use Instagram from their residence. Most students are relatively new users, having been on the platform for 1-2 years 69.3%, and spend a short amount of time daily, with 79.3% using it for only 1-2 hours. The main activities are consuming visual content, dominated by watching Reels 81.33% and Stories 76.67%, followed by chatting and sharing memes; interest in business or shopping is very low. Finally, a significant portion of students 50.0% report that their parents are aware of their activities.

### Assessment Of Level Of Instagram Addiction

**Table 2: Assessment of level of Instagram Addiction**

**n=150**

Level of Instagram Addiction Scale Score	Score Range	Level of Instagram Addiction Scale Score	
		frequency	Percentage
No Instagram Addiction	1-20	0	0
Mild Instagram Addiction	21-40	42	28
Moderate Instagram Addiction	41-60	73	48.67
Severe Instagram Addiction	61-80	32	21.33
Extremely Severe Instagram Addiction	81-100	3	3

Minimum score	22
Maximum score	88
Mean score	49.54±13.23
Mean % Score	49.54±13.23

The above table.2 shows that 42% of college students had mild Instagram addiction score, 48.67% had moderate and 21.33% of college students had severe Instagram addiction score. Minimum Instagram addiction scale score was 22 and maximum Instagram addiction score was 88. Mean Instagram addiction score was 49.54±13.23 and mean percentage of addiction score was 49.54±13.23.

### Assessment Of Level Of Stress

**Table 3: Assessment with level of Stress**

**n=150**

Level of Perceived Stress Scale Score	Score Range	Level of Perceived Stress Scale Score	
		frequency	Percentage
Low Stress	0-13	13	8.67
Moderate Stress	14-26	127	84.67
High Stress	27-40	10	6.67
Minimum score		8	
Maximum score		37	
Mean score		19.63±4.66	
Mean % Score		24.54±5.82	

The above table 3 shows that 8.67% of college students had low stress, 84.67% had moderate stress and 6.67% of them had high stress scale score. Minimum stress score was 8 and maximum stress score was 37. Mean stress score was 19.63±4.66 and mean percentage of stress score was 24.54±5.82.

**Correlation Between Instagram Addiction And Stress**

**Table 4: Correlation between Instagram addiction and stress among college students**

**n=150**

Scale	Mean	SD	r-value	p-value
Instagram Addiction Scale	49.54	13.23	0.267	0.001 S, p<0.05
Perceived Stress Scale	19.63	4.66		

The above table 4 shows the correlation between Instagram Addiction and Stress among college students from selected educational institutions of the city. Correlation between Instagram Addiction and Stress was found with the help of Pearson’s Correlation Coefficient and significance of difference at 5% level of significance. The positive correlation was found between Instagram addiction and stress.

**Association**

- 1. Association of Instagram Addiction among College Students in relation to Demographic Variables:** There is significant association of the Instagram addiction with the age and course of study.
- 2. Association of Stress among College Students in relation to Demographic Variables:** There is significant association of stress with course of study.
- 3. Association of level of Instagram addiction in relation to the pattern of Instagram use:** There is significant association of Instagram addiction with years of Instagram use, Instagram use per day, most common location of Instagram access and parents know about my Instagram activities
- 4. Association of stress among College Students in relation to pattern of Instagram use:** There is significant association of stress with Instagram use per day, parents know about my Instagram activities and use of Instagram.

**Prevalence Of Instagram Addiction**

The prevalence of Instagram addiction among college students is 28% have mild Instagram addiction ,48.67% of students have moderate Instagram addiction ,21.33% of college students have severe Instagram addiction and 3% of students have extremely severe Instagram addiction.

**DISCUSSION**

A study was conducted to assess the prevalence of Instagram addiction and its association with stress among college students in selected educational institutions. A cross-sectional study was used for this study, the sampling technique used in the study was non probability purposive sampling technique. A sample size of 150 samples selected on the basis of inclusion criteria using non-probability purposive sampling technique.

Across-sectional study in Nagpur, India, (Uday Wasudevrao Narlawar 2016-2017), examined internet dependence and its internal health consequences among council scholars. Using questionnaires, experimenters assessed internet dependence and internal health in scholars aged 17- 25. The results showed that over 30 had mild internet dependence, over 26 had moderate, and a small bit had severe dependence. further than half of the actors were manly. Importantly, scholars with internet dependence were doubly as likely to witness internal health problems. The study concluded that internet dependence is a significant issue among council scholars, negatively impacting their overall well- being and challenging intervention to help farther internal health decline.<sup>9</sup>

The prevalence of Instagram addiction among college students is 28% have mild Instagram addiction ,48.67% of students have moderate Instagram addiction ,21.33% of college students have severe Instagram addiction and 3% of students have extremely severe Instagram addiction. There is association of the Instagram addiction with the age and course of study None of the demographic variables associated with the level of stress except the course of study.

There is association of Instagram addiction with years of Instagram use, Instagram use per day, most common location of Instagram access and parents know about my Instagram activities and the demographic variable (pattern of Instagram use) associated with stress are Instagram use per day, parents know about my Instagram activities and use of Instagram.

## CONCLUSION

The study revealed that a considerable proportion of college students experience different levels of Instagram addiction, ranging from mild to severe. The findings indicate that the frequent and prolonged use of Instagram has become an integral part of students' daily routines, often influencing their emotional and psychological well-being. Most of the participants were found to experience moderate levels of stress, suggesting that social media engagement may be linked to increased pressure, comparison, and anxiety among young adults.

The analysis showed that Instagram addiction is significantly associated with factors such as age, course of study, years and frequency of Instagram use, the location from which students access the app, and parental awareness of their online activities. These results highlight how both personal characteristics and behavioral patterns contribute to the development of addictive social media habits.

In terms of stress, only the course of study and specific usage patterns—particularly daily time spent on Instagram and parental awareness—showed a significant relationship. This implies that excessive use of Instagram may lead to higher stress levels, especially when not monitored or balanced with other activities. Overall, the study emphasizes the growing concern of Instagram addiction among college students and underlines the need for awareness programs promoting healthy and responsible social media use.

## RECOMMENDATION

1. A Interventional study can be conducted to Suggest trials testing the effectiveness of interventions like digital detox programs, CBT, or behavioural therapy in reducing Instagram dependency.
2. A Longitudinal study can be recommended for future longitudinal research to track the causal relationship between Instagram addiction and stress over time.
3. A study with larger and more diverse populations across multiple geographic locations and disciplines to improve generalizability.
4. Future studies could include qualitative components (e.g., interviews or focus groups) to gain deeper insights into students' personal experiences, coping strategies, and emotional triggers related to Instagram use.
5. A comparative study to assess differences in addiction and stress levels across various platforms such as TikTok, Facebook, Snapchat, and X (formerly Twitter).
6. Future research should explore mediators (e.g., self-esteem, fear of missing out) and moderators (e.g., gender, academic year, personality traits) in the relationship between Instagram use and stress.

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## Conflict of Interest:

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

## REFERENCES

1. Wikipedia contributors. Instagram [Internet]. Wikipedia, The Free Encyclopedia.2024. Available from:<https://en.wikipedia.org/w/index.php?title=Instagram&oldid=1216427596>
2. College stress [Internet]. Learning Center. UNC-Chapel Hill Learning Center; 2018 [cited 2024 Apr 1]. Available from: <https://learningcenter.unc.edu/tips-andtools/managing-college-stress/>
3. Thorisdottir IE, Sigurvinsdottir R, Asgeirsdottir BB, Allegrante JP, Sigfusdottir ID. Active and passive social media use and symptoms of anxiety and depressed mood among Icelandic adolescents. *Cyberpsychol Behav Soc Netw* [Internet]. 2019;22(8):535–42. Available from: <http://dx.doi.org/10.1089/cyber.2019.0079>

4. Tiggemann M, Hayden S, Brown Z, Veldhuis J. The effect of Instagram “likes” on women’s social comparison and body dissatisfaction. *Body Image* [Internet]. 2018;26:90–7. Available from: <http://dx.doi.org/10.1016/j.bodyim.2018.07.002>
5. Pruthvi S, Ramesh Masthi NR, Phaneendra MS. A comparative study on social media usage and health status among students studying in pre-university colleges of urban Bengaluru. *Indian J Community Med* [Internet]. 2018;43(3):180. Available from: [http://dx.doi.org/10.4103/ijcm.ijcm\\_285\\_17](http://dx.doi.org/10.4103/ijcm.ijcm_285_17)
6. Salari N, Zarei H, Hosseinian-Far A, Rasoulpoor S, Shohaimi S, Mohammadi M. The global prevalence of social media addiction among university students: a systematic review and meta-analysis. *Z Gesundh Wiss* [Internet]. 2023; Available from: <http://dx.doi.org/10.1007/s10389-023-02012-1>
7. Online ET. Social media addiction is real! 40% Indian parents admit their tween kids addicted to smartphones [Internet]. *Economic Times*. 2022 [cited 2024Apr1]. Available from: <https://economictimes.indiatimes.com/magazines/panache/social-media-addiction-is-real-40-indian-parents-admit-their-tween-kids-addicted-to-smartphones/articleshow/95944708.cms>
8. Researchgate.net. [cited 2025 Mar 1]. Available from: [https://www.researchgate.net/publication/331928006\\_Internet\\_Addiction\\_among\\_Medical\\_Students\\_and\\_Its\\_Impact\\_on\\_Academic\\_Performance\\_An\\_Indian\\_Study#:~:text=Prevalence%20of%20internet%20addiction%20was,negative%20association%20with%20internet%20addiction](https://www.researchgate.net/publication/331928006_Internet_Addiction_among_Medical_Students_and_Its_Impact_on_Academic_Performance_An_Indian_Study#:~:text=Prevalence%20of%20internet%20addiction%20was,negative%20association%20with%20internet%20addiction).
9. Bagdey P, Adikane H, Narlawar U, Dhage D, Surwase K, Kaware . A cross sectional study of prevalence of internet addiction and its association with mental health among college going students in Nagpur city. *Int J Community Med Public Health* [Internet]. 2018 [cited 2024 Mar 17];5(4):1658. Available from: <https://www.ijcmph.com/index.php/ijcmph/article/view/2760>