

A Cross-Sectional Study on Prevalence of Internet and Selfie Addiction Among Undergraduate Medical Students

A. Snehika¹, Pulluri Sadanandam², Sreenivas G.³

¹Assistant Professor, Department of Community Medicine, Government Medical College, Maheshwaram, Telangana

²Associate Professor, Department of Community Medicine, Government Medical College, Siddipet, Telangana

³Professor and HOD, Department of Community Medicine, Government Medical College, Siddipet, Telangana

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Corresponding Author: Dr. Pulluri Sadanandam

Conflict of interest: Nil

Abstract:

Background: Internet use has become integral to student life, but excessive use can lead to addiction. Similarly, the rise of selfie culture has sparked concerns about compulsive selfie-taking or “selfitis.” This study aims to assess the prevalence of internet and selfie addiction among undergraduate medical students and explore associated factors.

Methods: A cross-sectional study was conducted over three months (Dec 2024–Feb 2025) among 346 MBBS students at Government Medical College, Siddipet, using simple random sampling. Data were collected using a semi-structured questionnaire incorporating the Internet Addiction Test (IAT), Selfie Addiction Scale (SAS), and demographic variables. Statistical analysis was done using SPSS v26.

Results: Of the 346 participants (65.6% females, 34.4% males), the majority (61.8%) were aged 20–24 years. Based on the SAS, 23.6% were normal, 46.8% borderline, 26.5% acute selfitis, and 2.89% chronic selfitis. According to IAT scores, 52% showed no addiction, 35.8% mild, 10.4% moderate, and 1.73% severe internet addiction. Notably, males showed higher severe internet addiction (3.3%) compared to females (0.88%). A majority (51.2%) agreed selfies help preserve memories.

Conclusions: The study reveals a substantial prevalence of borderline and acute selfitis and mild internet addiction among medical students. Targeted interventions, including cognitive-behavioral therapy, mindfulness, and institutional awareness programs, are recommended to curb the progression of these behavioral patterns.

Keywords: Internet addiction, Selfie addiction, Selfitis, Social media behavior, Smartphone addiction, medical students, Behavioral health, Digital addiction.

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Introduction

The internet has become a vital part of modern life, particularly among youth who rely heavily on it for education, social interaction, and entertainment. However, this convenience has given rise to a surge in internet addiction and selfie-related behaviors, which are now considered emerging behavioral concerns in India. Internet addiction is defined as an inability to control internet use, resulting in significant impairment or distress [1]. Cross-sectional studies conducted in India have reported that internet addiction is increasingly prevalent among students, with estimates ranging from 20% to 50% in various professional courses [2–6].

A study among dental students in Uttar Pradesh found that 29% exhibited moderate-to-severe internet addiction, significantly associated with

sleep disturbances and poor academic performance [2]. Similarly, research among engineering students in Gujarat and medical students in Tamil Nadu reported academic decline, mood changes, and interpersonal issues linked to problematic internet use [5,6,7]. Studies also suggest gender, age, and smartphone availability as significant predictors [8–10].

In parallel, the phenomenon of taking and sharing selfies—termed “selfitis”—is emerging as another behavioral pattern with psychosocial implications. A cross-sectional study among medical students in Bengaluru found high frequencies of selfie-taking, especially among females, linked to narcissism and low self-esteem [11]. A study in Maharashtra reported that over 65% of students took at least one

selfie per day, with 35% meeting criteria for selfitis [12]. Other studies have observed risky behaviors such as taking selfies on rooftops, roads, or near railway tracks, which have resulted in injuries and even fatalities [13–15].

Selfie addiction has also been associated with body dysmorphia, anxiety, and the need for peer approval [16–18]. As smartphones and social media use continue to grow, understanding the behavioral, psychological, and social impact of these digital dependencies is essential. Indian studies highlight an urgent need for targeted awareness, media-use education, and psychological support systems in educational institutions to address these concerns [19,20,21].

Aim and Objectives

Aim

To study prevalence of internet and selfie addiction among undergraduate medical students.

Objectives

1. To estimate the prevalence of internet addiction and selfie addiction among medical students.
2. To estimate the relationship between internet and selfie addiction with demographic factors (age, gender, year of study).
3. To assess the association between internet/selfie addiction and academic performance, mental health symptoms (stress, anxiety, depression), and social relationships.

Materials and Methods

Study Design: Cross-sectional study

Study Population: Medical students of college Siddipet.

Inclusion Criteria

- Currently enrolled medical students (MBBS)
- Age: 18-30 years
- Participants who gave informed consent

Exclusion Criteria

- Students with incomplete survey responses
- Students with known psychiatric disorders not related to internet or selfie addiction.

Study Period: 3 months (December 2024 to February 2025)

Sample Size: A prevalence of 76% was found in the study on various effects of internet and selfie

dependence among undergraduate medical students. [6]

$$\begin{aligned}\text{Sample size} &= 4pq/l^2, P= 76\%, q= 100-76= 24 \\ &= 4 \times 76 \times 24 / 4.5 \times 4.5 \\ &= 346\end{aligned}$$

Sampling Technique: Simple Random sampling method and "346" participants will be recruited through email invitations and social media platforms affiliated with the medical college.

Study Tools: A predesigned semi structured questionnaire was prepared for data analysis based on internet addiction Test and selfie addiction scale

Data Collection Tools

1. **Internet Addiction Test (IAT) [3]:** A widely-used tool with established validity and reliability to assess the level of internet addiction.
2. **Selfie Addiction Scale (SAS) [5]:** A specific scale developed for selfie addiction, typically assessing compulsive behaviors related to selfie-taking, frequency, and social media posting [4].
3. **Demographic Questionnaire:** Questions covering age, gender, academic year, and other relevant demographic factors.

Data Analysis: The data obtained was compiled, tabulated and statistically analyzed using Microsoft Excel, Epi info software version 7.1 and Statistical Package for the Social Sciences (SPSS) version 26 (Trial). Statistical measures obtained were frequencies, percentages, mean and standard deviation. Chi square test was used to determine any associations with P less than 0.05 was considered statistically significant.

Results

The study population contains 346 students among that 119 (34.4%) were males and 227 (65.6%) were females.

The study population consists mostly of young individuals, with 98.7% belonging to the 14-24 years age group. The 20-24 years group has the highest representation (61.8%), followed by the 14-19 years group (36.9%). The 25-34 years groups are minimally represented (1.14% combined), indicating a skewed sample toward younger participants. This may limit the generalizability of findings to older age groups.

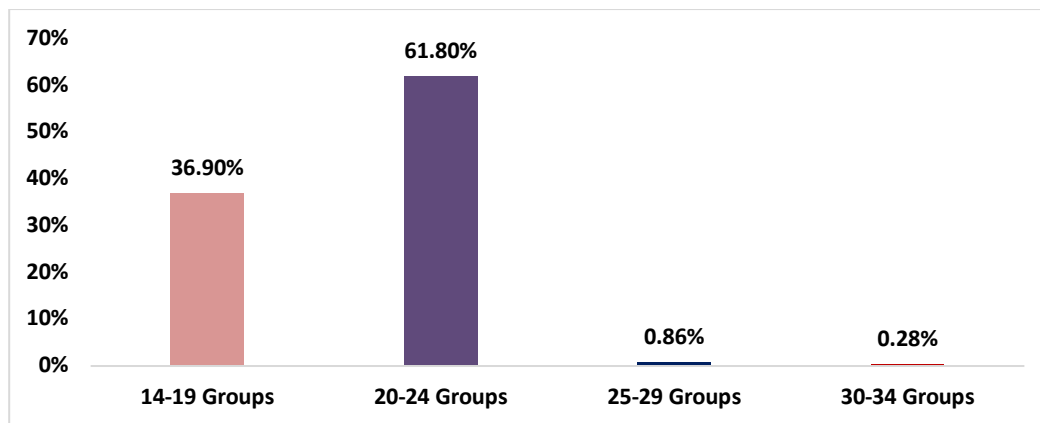


Fig 1: Distribution of Study Population According to Age Group

Among all undergraduate medical students of Our college sample from batch of 2021 was more (30.6%). Least participants are from batch 2022 (8.67%).

Table 1: Distribution of Study Participants According to Selfitis Behavior Scale

Score Grading	Frequency	Percentage
Normal (20-39)	82	23.6%
Borderline (40-59)	162	46.8%
Acute selfitis (60-79)	92	26.5%
Chronic selfitis (80-100)	10	2.89%
TOTAL	346	100%

Borderline selfitis is the most common category in both males (47%) and females (46.6%), followed by acute selfitis (30.2% in males, 24.6% in females).

Chronic selfitis is rare, affecting only 4.2% of males and 2.2% of females. Overall, females (227) outnumber males (119) in the study population.

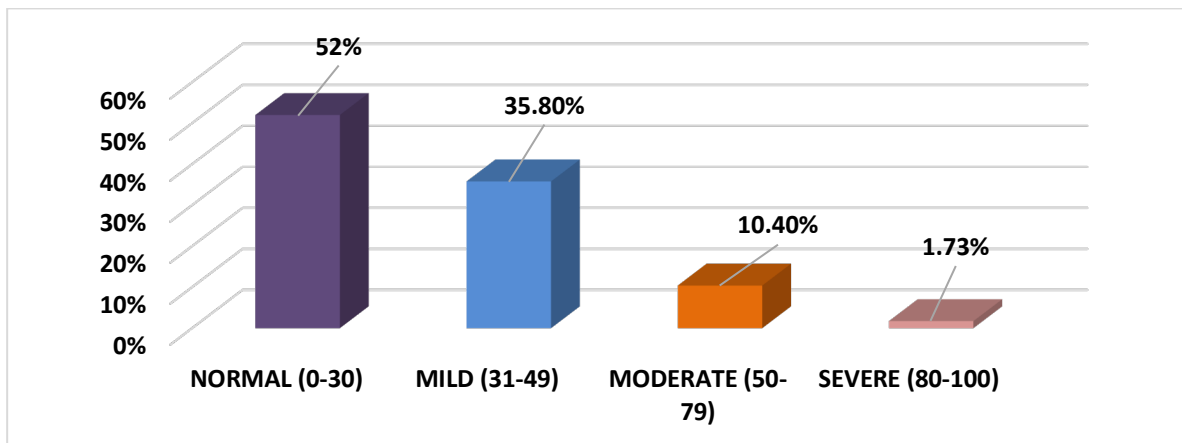


Fig 2: Distribution of Study Participants According to Internet Addiction Test

52% (180 individuals) fall into the normal category, indicating no significant addiction. 35.8% (124 individuals) exhibit mild addiction, while 10.4% (36 individuals) have moderate addiction. Only 1.73%

(6 individuals) show severe internet addiction, suggesting that problematic internet use is relatively low in the study population.

Table 3: Distribution of Study Participants in Gender According to Internet Addiction Test

Score	Male	Female	P-value
NORMAL (0-30)	53 (44.53%)	127 (55.9%)	<0.05
MILD (31-49)	50 (42%)	74 (32.5%)	
MODERATE (50-79)	12 (10%)	24 (10.5%)	
SEVERE (80-100)	4 (3.3%)	2 (0.88%)	
TOTAL	119(100%)	227(100%)	

A higher proportion of females (55.9%) fall in the normal category compared to males (44.53%), indicating lesser internet addiction among females. Mild addiction is more common in males (42%) than females (32.5%). Moderate addiction levels are nearly equal in both genders (10% in males, 10.5%

in females). However, severe addiction is higher in males (3.3%) compared to females (0.88%), suggesting that males are more prone to extreme internet addiction. This is statistically significant with p value of <0.05

Table 4: Distribution of Study Population According to Students Taking Selfies Provide Better Memories

Selfies For Memories	Frequency	Percentage
Agree	177	51.2%
Disagree	23	6.6%
Neither Agree nor Disagree	71	20.5%
Strongly Agree	59	17.1%
Strongly Disagree	16	4.6%
Total	346	100%

A majority (51.2%) agree, while 17.1% strongly agree, indicating that most believe selfies enhance memory. 20.5% remain neutral, suggesting some uncertainty. Only 6.6% disagree and 4.6% strongly disagree, showing minimal opposition. Overall, the data suggests that most students perceive selfies as beneficial for memory retention.

Discussion

The present study found that 47% of students were in the borderline selfitis category, and 10.4% had moderate internet addiction, which is consistent with similar studies conducted in India. For example, Bisen and Deshpande (2018) reported that over 40% of medical students demonstrated borderline to acute selfitis tendencies [1]. Internet addiction prevalence in our study (12.1% moderate/severe) aligns with Goel et al. (2013), who observed 18.8% of medical students in the addicted category [2].

Gender-wise differences indicated that males had higher severe internet addiction, corroborating earlier findings by Dixit et al. (2010), which linked higher screen time in males to problematic use [3]. The strong agreement (68.3%) with the belief that selfies enhance memory supports psychological literature stating selfies serve as a form of digital autobiographical memory [4].

The findings reiterate that both addictions are intertwined with academic decline, social comparison, and self-esteem issues, requiring early mental health interventions in colleges.

Limitations

This study has some limitations. Since it's cross-sectional, it can't prove cause and effect. Self-reported data may be biased. It included students from just one college, mostly undergraduates, limiting generalizability. Mental health wasn't assessed with standard tools, and academic versus recreational internet use wasn't separated, possibly affecting addiction scores.

Conclusion

Many medical students show signs of mild to moderate internet and selfie addiction, with young males more affected by severe levels. Nearly half experience borderline selfitis. These habits impact mental health and academics, highlighting the need for awareness, balanced tech use, and digital hygiene education in medical training.

Recommendations:

Colleges should run digital literacy sessions and regularly screen students using tools like the IAT and Selfitis Scale. Easy access to trained counselors is vital. Faculty must be aware of digital overuse signs. Promoting mindful tech habits, like digital detox and time tracking, can help students achieve healthier balance.

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