Impact of Digital Addiction Through Mobile Phones on the Mental Health of Youth an Empirical Study

Sukesh P.[1], Prof. Chandramouli[2]

[1]Research Scholar, Department of Studies in Social Work, University of Mysore, Mysuru

[2]Professor, Department of Studies in Social Work, University of Mysore, Mysuru

DOI: https://doi.org/10.51244/IJRSI.2026.1306000010

Received: 24 May 2026; Accepted: 30 May 2026; Published: 17 June 2026

ABSTRACT

Today's youth's use of cell phones has drastically altered their behavioural patterns, leading to a phenomena that is becoming more widely recognized as digital addiction. With a focus on stress, sleep disturbance, social interactions, self-esteem, anxiety, and academic performance, this study examines the effects of excessive mobile phone use on young people's mental health and wellness. Fifty students, evenly selected from undergraduate and graduate programs, were given a structured questionnaire survey. The results indicate that a sizable portion of respondents use their mobile devices for more than four hours per day, mostly for communication and social media. The study provides strong evidence linking excessive internet use to detrimental effects on mental health, such as elevated stress, disturbed sleep, short attention spans, social isolation, and compromised coping strategies. The majority of respondents indicated that they needed to restrict how much time they spent on their devices, indicating both knowledge of the issue and a lack of self-control. These results add to the increasing amount of data advocating for institutional and individualized organized digital wellness treatments.

Keywords: Digital addiction, mobile phone usage, mental health, youth, social media, smartphone dependency, sleep disturbance, anxiety

INTRODUCTION

Almost every facet of contemporary life has changed as a result of the quick development of mobile technology. Once thought of as high-end communication devices, smartphones have developed into ubiquitous digital companions that provide social interaction, information access, entertainment, and increasingly, intellectual pursuits. Unquestionably profitable, these advancements have also led to usage patterns that practitioners and researchers are starting to categorize as addictive behaviours.

A major public health concern, especially among teenagers and young people, is digital addiction, which is broadly described as the excessive and uncontrollable use of digital gadgets to the detriment of daily functioning. The persuasive design of social media platforms and smartphone applications disproportionately affects adolescents and young people, whose psychological development makes them particularly vulnerable to reward-based conditioning.

This tendency has significant ramifications for psychological wellbeing. Excessive screen time and social media use are associated with higher rates of anxiety, sadness, loneliness, sleep disturbance, and poor academic performance, and this is according to various studies. However, there is also a dearth of empirical data from particular institutional or geographical contexts, which restricts the range of focused initiatives.

By investigating the connection between mobile phone usage habits and self-reported mental health outcomes among a sample of fifty college students, this study aims to close that disparity. The study gathers information on usage patterns, psychological reactions to disconnection, sleep quality, social connections, self-esteem, and academic influence using a standardized survey instrument. The results are intended to help educators, counsellors, and policy makers who are trying to encourage digital wellness in educational environments.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue VI June 2026

LITERATURE REVIEW

Since Griffiths (1996) found structural parallels between chemical dependence and some compulsive technological behaviours, the idea of behavioural addiction has gained popularity when applied to internet and smartphone use. The mechanisms and effects of this reliance have been thoroughly studied in later research.

Twenge et al. (2018) found a statistically significant correlation between higher incidence of depressive symptoms in teenagers and daily screen use surpassing two hours, with the correlation being stronger in females. According to their longitudinal research, the main mediating routes were the replacement of sleep and in-person interactions by screen-based activities. The idea that vulnerable people are more prone to problematic digital involvement is further supported by Kuss and Griffiths' (2011) findings that social networking site addiction was linked to neuroticism, narcissism, and low self-esteem.

Numerous studies have shown that nomophobia, a portmanteau of "no mobile phone phobia," is a sign of smartphone dependence. According to King et al. (2014), a sizable percentage of college-aged participants reported experiencing severe anxiety, irritation, and difficulties focusing when their mobile devices were taken away. The withdrawal symptoms of drug addiction are quite similar to these symptoms.

One of the most often reported effects of excessive smartphone use is sleep disturbance. Device displays' blue light inhibits the creation of melatonin, which delays the beginning of sleep and shortens its length. According to Brunborg et al. (2011), smartphone addicts reported far worse sleep quality and more daytime drowsiness than their non-addicted peers, which may have an impact on emotional control and cognitive function.

Studies on digital addiction among student populations have become more prevalent in India. According to Bapat and colleagues (2020), almost 40% of medical students polled reported having a smartphone addiction, and higher scores on addiction measures were associated with higher stress levels and poorer academic performance. Although these results are consistent with more general worldwide trends, they highlight the necessity of institution-specific data to direct focused initiatives.

METHODOLOGY

Research Design

A cross-sectional, descriptive survey design is used in this investigation. To gather quantitative information on respondents' demographics, mobile phone using habits, and self-reported behavioural and mental health outcomes, a structured questionnaire was created. A single point evaluation of the connections between digital usage and mental health markers at a certain moment in time is made possible by the cross-sectional method.

Sample

28 male students (56%) and 22 female students (44%) made up the purposive sample of 50 students selected from higher education institutions. With 25 students (50%) enrolled at each level, the sample was split evenly between undergraduate and graduate programs. With 40% of respondents in the 18–20 age range, 28% in the 20–25 age range, and the remaining respondents spread throughout older age groups up to 40 years, the age distribution was disproportionately young.

Instrument

Closed-ended questions on the following topics were included in the questionnaire: (a) demographic variables, such as age, gender, and educational attainment; (b) device-related variables, such as phone type and daily usage duration; (c) purpose-of-use variables, such as primary applications accessed; and (d) mental health and behavioral variables, such as stress reactions to relationships, sleep disruption, social relationship quality, attention span, self-esteem, anxiety, and academic performance. When applicable, dichotomous, frequency-based, and five-point Likert scales were used to record the responses.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue VI June 2026

Data Analysis

Descriptive statistical techniques were used to analyse the data, and percentages and frequencies were calculated for every survey item. The analysis focuses on finding noteworthy usage patterns and how they relate to participants' stated behavioural and mental health self-assessments.

RESULTS AND ANALYSIS

Demographic Profile

Table 1: Gender Distribution

Gender	Frequency	Percentage (%)
Male	28	56.0
Female	22	44.0
Total	50	100.0

Table 2: Age Distribution

Age Group	Frequency	Percentage (%)
18–20	20	40.0
21–25	14	28.0
26–30	12	24.0
31–35	3	6.0
36–40	1	2.0
Total	50	100.0

The sample consisted of 28 males (56%) and 22 females (44%) respondents. The majority (40%) fell in the 18–20 age group, reflecting the predominantly younger composition of the student population surveyed. Undergraduate and postgraduate students were represented equally at 50% each.

Device Usage Patterns

The majority of respondents used Android devices (62%), followed by iPhones (34%), with a small minority (4%) still using basic keypad phones. This distribution broadly reflects national smartphone market trends and suggests that the sample is drawn largely from middle-income backgrounds.

Table 3: Daily Mobile Phone Usage Duration

Daily Usage	Frequency	Percentage (%)
Less than 1 hour	3	6.0
1–2 hours	10	20.0
2–3 hours	9	18.0
3–4 hours	11	22.0
More than 4 hours	17	34.0
Total	50	100.0

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue VI June 2026

Usage duration data are particularly striking. Only 6% of respondents used their mobile phones for less than one hour per day. The largest single group 34% reported using their phones for more than four hours daily. Collectively, 56% of respondents reported usage exceeding three hours per day, a figure that substantially exceeds durations associated with healthy use in the literature.

In terms of primary purposes, communication via calls, messages, and email accounted for the highest proportion of use (24.4%), followed by Instagram (19.4%), Whatsapp (22.5%), and educational content access (18.8%). Facebook usage was comparatively low (5.0%), consistent with broader trends showing declining engagement among younger demographics.

Stress and Anxiety Responses

Table 4: Stress When Without Mobile Phone

Response	Frequency	Percentage (%)
Yes, always	8	16.0
Yes, sometimes	24	48.0
No	15	30.0
Not sure	3	6.0
Total	50	100.0

A substantial proportion of respondents reported stress responses when deprived of their mobile phones. Specifically, 48% indicated they felt stressed 'sometimes' and a further 16% reported experiencing stress 'always' in such situations. Only 30% reported no stress response, with 6% uncertain. Taken together, 64% of the sample acknowledged a stress reaction to phone unavailability, a pattern consistent with dependency-related withdrawal responses described in the literature.

Regarding internet unavailability, 16% reported feeling stressed very often and 18% often, while 44% experienced this sometimes. Only 22% reported rarely or never feeling stressed by loss of internet access. Social media-specific anxiety was acknowledged by 32% of respondents (combining 'strongly agree' and 'agree'), with 34% remaining neutral.

Sleep Disruption

Table 5: Night-time Mobile Use and Sleep Disruption

Response	Frequency	Percentage (%)
Yes, frequently	10	20.0
Yes, occasionally	22	44.0
No	15	30.0
Not sure	3	6.0
Total	50	100.0

Sleep disturbance emerged as a prominent theme. When asked whether night-time phone use disrupted their sleep, 20% agreed this occurred frequently and 44% occasionally. a combined 64% reporting sleep disruption. This aligns with established findings on blue-light suppression of melatonin and the stimulating effects of social media engagement before sleep.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue VI June 2026

When the question was framed around whether phone deprivation itself caused insomnia, 12% reported this frequently and 32% occasionally. While the relationship here may be less direct than the preceding finding, it nonetheless suggests a bidirectional association between mobile use and sleep quality.

Social Relationships and Interpersonal Behaviour

The social dimensions of digital addiction were evident across multiple survey items. When asked whether digital platform use had weakened personal relationships, 44% agreed 'to some extent' and 8% 'significantly'. Of those who acknowledged such weakening, 50% (19 respondents) reported that the deterioration had negatively affected their behaviour.

Responses to the item on irritability during phone use were revealing: 40% of respondents agreed that they felt irritated when interrupted while using their phones, while 38% were neutral. This degree of absorption in device use, to the point of irritability upon interruption, is a recognised behavioural marker of problematic smartphone use.

A notable 34% of respondents reported feeling lonely despite being connected online. a paradox well-documented in the social media literature, where the curated, asynchronous nature of digital interaction fails to fulfil the needs for genuine social connection.

Attention, Self-Esteem, and Cognitive Impact

Fifty percent (50%) of respondents agreed that excessive mobile use was reducing their attention span (combining 'strongly agree' and 'agree'), with a further 34% neutral. This is consistent with neuro-scientific research on how intermittent reward schedules the basis of social media design condition reduced sustained attention.

On self-esteem, 34% agreed that increased mobile use was negatively affecting their self-image, while the largest single group (50%) remained neutral. The relatively muted self-esteem findings may reflect social desirability bias or a genuine lag between usage and internalised self-concept effects.

With respect to stress-coping capacity, 44% agreed that excessive digital use had weakened their ability to cope with stress, while 40% were neutral. The displacement of healthy coping behaviours physical activity, social engagement, creative pursuits by passive screen consumption is a plausible mechanism for this self-reported diminution.

Academic Performance

Table 6: Perceived Impact on Academic Performance

Response	Frequency	Percentage (%)
Strongly agree	6	12.0
Agree	17	34.0
Neutral	16	32.0
Disagree	7	14.0
Strongly disagree	4	8.0
Total	50	100.0

Forty-six percent of respondents (combining 'strongly agree' and 'agree') acknowledged that mobile phone addiction had negatively impacted their academic performance, with 32% neutral and 22% disagreeing. This finding is consistent with time-displacement hypotheses: hours devoted to social media and entertainment are hours unavailable for study, rest, or face-to-face learning.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue VI June 2026

Overall Mental Health and Perceived Need for Change

Table 7: Digital Addiction and Mental Health Impact

Response	Frequency	Percentage (%)
Strongly agree	11	22.0
Agree	14	28.0
Neutral	18	36.0
Disagree	3	6.0
Strongly disagree	4	8.0
Total	50	100.0

Fifty percent of respondents affirmed that digital addiction had negatively affected their mental health overall (22% strongly agree, 28% agree), with only 14% disagreeing. Notably, 58% expressed a desire to reduce their mobile and social media usage (32% strongly agree, 26% agree), indicating a degree of metacognitive awareness that could serve as a foundation for intervention programmes.

DISCUSSION

The results of this study corroborate and extend existing evidence on the relationship between mobile phone dependency and mental health in young people. The high prevalence of extended daily usage with more than half the sample exceeding three hours per day situates the respondents firmly within usage ranges associated with adverse outcomes in the literature.

The stress responses observed upon mobile deprivation reflect what Billieux et al. (2015) term the 'reassurance-seeking' dimension of smartphone addiction, wherein the device becomes a primary mechanism for regulating negative affect. When this mechanism is unavailable, stress ensues a pattern that mimics withdrawal dynamics in substance dependency, though the underlying neurochemistry remains distinct.

Sleep disruption findings are particularly consequential, given the well-established role of sleep quality in cognitive functioning, emotional regulation, and academic performance. The 64% of respondents who reported that night-time phone use disrupted their sleep represent a cohort at significant risk of cumulative academic and psychological harm, since sleep deprivation compounds nearly every other adverse outcome identified in this study.

The paradox of online loneliness reported by 34% of respondents merits specific theoretical attention. Social comparison theory offers one explanatory framework: users who consume idealised self-presentations on platforms such as Instagram are prone to unfavourable self-assessments and a heightened awareness of their own perceived social deficits. The result is not social satisfaction but social inadequacy a dynamic that both drives continued engagement and intensifies its negative emotional effects.

The 58% of respondents who expressed a desire to reduce their usage represent a promising point of leverage for intervention. Awareness of problematic use does not automatically translate into behavioural change. The 'intention-behaviour gap' is well-documented in health psychology but it indicates receptivity to structured support. Digital literacy programmes, screen time management tools, and campus-based counselling initiatives may all serve to convert this awareness into sustainable behavioural adjustment.

CONCLUSIONS AND RECOMMENDATIONS

This study provides empirical evidence that digital addiction through mobile phones is associated with a broad spectrum of adverse mental health outcomes among university students, including heightened stress, disrupted

sleep, weakened social relationships, reduced attention span, anxiety, and diminished academic performance. The findings are consistent with international literature and underscore the urgency of addressing this issue within Indian higher education.

Several recommendations emerge from the evidence:

1. Institutional Digital Wellness Programmes: Universities should implement structured digital wellness curricula that build awareness of addiction mechanisms, promote healthy usage habits, and develop offline coping strategies.
2. Counselling Integration: Mental health counselling services should incorporate smartphone addiction screening as a routine component of student wellbeing assessments, with referral pathways to digital detox support.
3. Sleep Hygiene Education: Given the prevalence of night-time device use and its sleep-disrupting effects, targeted sleep hygiene education should be provided to students, including guidance on device-free sleep environments.
4. Further Research: This study's cross-sectional, self-report design limits causal inference. Longitudinal studies with objective usage data, validated addiction scales, and clinical mental health assessments would substantially advance understanding of these relationships.
5. Platform-Level Accountability: Educational institutions and policymakers should engage with technology companies regarding the design of platform features that promote compulsive use among young people, advocating for transparency and ethical design standards.

The widespread self-reported desire to reduce usage (58%) reveals that students are not passive victims of digital addiction but active agents capable of change, provided appropriate structural support is made available. Realising that potential is both the challenge and the opportunity facing educators and mental health professionals in the digital age.

REFERENCES

1. Billieux, J., Maurage, P., Lopez-Fernandez, O., Kuss, D. J., & Griffiths, M. D. (2015). Can disordered mobile phone use be considered a behavioral addiction? An update on current evidence and a comprehensive model for future research. Current Addiction Reports, 2(2), 156–162.
2. Brunborg, G. S., Mentzoni, R. A., Molde, H., Myrseth, H., Skouverøe, K. J. M., Bjorvatn, B., & Pallesen, S. (2011). The relationship between media use in the bedroom, sleep habits and symptoms of insomnia. Journal of Sleep Research, 20(4), 569–575.
3. Griffiths, M. D. (1996). Behavioural addiction: An issue for everybody? Employee Counselling Today, 8(3), 19–25.
4. King, A. L. S., Valença, A. M., Silva, A. C., Sancassiani, F., Machado, S., & Nardi, A. E. (2014). 'Nomophobia': Impact of cell phone use interfering with symptoms and emotions of individuals with panic disorder compared with a control group. Clinical Practice & Epidemiology in Mental Health, 10(1), 28–35.
5. Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction — a review of the psychological literature. International Journal of Environmental Research and Public Health, 8(9), 3528–3552.
6. Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. Clinical Psychological Science, 6(1), 3–17.