

MOBILE PHONE USAGE PATTERNS, PERCEIVED EFFECTS, AND COPING STRATEGIES AMONG UNDERGRADUATE STUDENTS IN RURAL MAHARASHTRA

* Mrs. Swati Bharatkumar Suryawanshi,

* Assistant Professor, Department of Psychology, DBNP Arts SSGG Commerce and SSAM Science College, Valvan, Lonavala, Tal. Maval, Dist. Pune 410403, Maharashtra, India

Abstract:

Background: Excessive mobile phone use among college students has emerged as a growing concern due to its association with psychological distress, sleep disturbance, and academic difficulties. While global literature is extensive, Indian studies—particularly in rural settings—documenting coping strategies alongside perceived effects remain limited.

Methods: A cross-sectional descriptive survey was conducted among 100 undergraduate students from a rural college in Maharashtra using a self-developed questionnaire assessing mobile phone usage patterns, sleep-related, psychological, academic, physical, and social effects, as well as coping strategies and awareness. Data were analyzed using descriptive statistics, including frequencies, percentages, and modal responses.

Results: Pre-sleep mobile phone use was reported by 87% of students. All participants reported some degree of sleep disturbance. Psychological discomfort when unable to use phones was reported by 84%, while 89% experienced difficulty concentrating on academic tasks. Physical discomfort was reported by 82%, and 80% perceived social withdrawal. Although 81% attempted to reduce usage, only 48% reported success, with behavioral strategies more common than psychological coping methods.

Conclusions: Excessive mobile phone use is highly prevalent among rural undergraduate students and is associated with multidimensional adverse effects, including academic concentration difficulties. Despite awareness, effective self-regulation remains limited, highlighting the need for structured digital well-being interventions at the college level.

Keywords: mobile phone use, undergraduate students, sleep disturbance, academic concentration, coping strategies

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Introduction:

Mobile phones have become an integral part of daily life, particularly among young adults and college students. Their use extends beyond communication to social networking, entertainment, information seeking, and academic activities. While mobile technology offers significant advantages, excessive and uncontrolled use has raised concerns regarding its impact on mental health, sleep quality, academic performance, and social functioning.

Research across countries has consistently reported associations between prolonged mobile phone use and sleep disturbance, anxiety, reduced attention span, and academic difficulties. Night-time mobile phone use, in particular, has been linked to delayed sleep onset and poor sleep quality, which subsequently affects daytime functioning and academic engagement. Psychological consequences such as restlessness, irritability, and anxiety when separated from the device suggest a pattern of emotional dependence rather than clinical addiction.

In the Indian context, the rapid expansion of smartphone access has reached rural areas, yet empirical research focusing on rural undergraduate populations remains relatively sparse. Most existing studies emphasize prevalence or psychological correlates, with limited attention to how students attempt to cope with or regulate their mobile phone use. Understanding coping strategies is crucial for designing effective digital well-being interventions within educational institutions.

Therefore, the present study seeks to descriptively examine mobile phone usage patterns, perceived effects across multiple domains, and coping strategies among undergraduate students in a rural area of Maharashtra, providing baseline evidence to inform future research and institutional practices.

Significance of the Study:

The findings of this study are significant for multiple stakeholders. For students, excessive mobile phone use may adversely affect mental well-being, sleep quality, and academic concentration. For educators and college administrators, understanding usage patterns and coping gaps can aid in developing structured digital well-being programs. At a broader level, the study contributes rural Indian data to an area of research predominantly focused on urban populations.

Statement of the Problem:

The present study seeks to examine patterns of mobile phone use, perceived psychological, sleep-related, academic, physical, and social effects, and coping strategies among undergraduate students in a rural area of Maharashtra.

Objectives of the Study:

- To describe mobile phone usage patterns among undergraduate students
- To assess perceived psychological, sleep-related, academic, physical, and social effects of mobile phone use
- To explore coping strategies adopted by students to regulate mobile phone usage
- To assess awareness regarding mobile phone addiction and willingness to participate in intervention programs

Hypotheses of the Study:

The study is exploratory and descriptive in nature and therefore does not test specific hypotheses

Research Questions:

1. What are the mobile phone usage patterns (duration, purpose, and timing of use) among undergraduate students?
2. To what extent do students use mobile phones before sleep, and what sleep-related problems are reported?
3. What psychological effects are perceived by students in relation to mobile phone usage?
4. What academic difficulties are reported by students in association with mobile phone use?

5. What physical health problems are perceived as a result of prolonged mobile phone usage?
6. What social effects are reported by students related to mobile phone use?
7. What coping strategies are commonly used by students to control or reduce mobile phone usage, and how successful are these attempts?
8. What level of awareness do students have regarding mobile phone addiction, and what is their attitude toward attending awareness programs?

Delimitation of the Study:

- The study was limited to undergraduate students from one rural college in Maharashtra
- Only self-reported data were collected
- The study employed a cross-sectional design
- The sample size was limited to 100 students
- No standardized diagnostic tools were used

Review of Related Literature:

Previous studies have demonstrated that excessive mobile phone use among college students is associated with sleep problems, psychological distress, and impaired academic functioning. International research highlights night-time usage as a strong predictor of poor sleep quality. Indian studies similarly report high prevalence of pre-sleep mobile phone use and academic distraction, though most focus on urban samples.

Recent literature emphasizes the importance of coping strategies, noting that awareness alone does not translate into behavioral change. Behavioral controls such as screen-time limits are more commonly used than psychological strategies like mindfulness. However, evidence from rural settings, particularly among undergraduate populations, remains limited. The present study addresses this gap by integrating usage patterns, perceived effects, and coping strategies within a rural Indian context.

Research Methodology:

A cross-sectional descriptive survey design was employed, as it is appropriate for documenting prevalence patterns and self-reported experiences without attempting causal inference.

Population of the Study

The population comprised undergraduate college students enrolled in degree programs in rural Maharashtra.

Sample of the Study:

The sample consisted of 100 undergraduate students selected using convenience sampling. Participants included students from various academic streams, aged approximately 18–22 years.

Tool for Data Collection:

Data were collected using a self-developed questionnaire covering:

- Mobile phone usage patterns
- Sleep-related effects
- Psychological effects
- Academic effects

- Physical and social effects
- Coping strategies and awareness

Responses were recorded in categorical formats:

Statistical Techniques Used:

Descriptive statistics such as frequencies, percentages, and modal responses were used for data analysis. Data was processed using spreadsheet-based analysis.

Results and data Analysis:

Usage Patterns and Sleep Effects:

Pre-sleep mobile phone use was reported by 87% of students, with “always” emerging as the modal response. All participants reported some level of sleep disturbance, indicating widespread disruption of sleep routines associated with mobile phone use.

Psychological and Academic Effects:

A large proportion (84%) reported anxiety or discomfort when unable to access their phones. Difficulty concentrating on academic work was reported by 89%, suggesting cognitive interference linked to frequent mobile phone use.

Physical and Social Effects:

Physical discomfort such as eye strain and body pain was reported by 82%, while 80% perceived reduced face-to-face social interaction, indicating broader functional impacts.

Coping Strategies and Awareness:

Although 81% attempted to reduce mobile phone use, only 48% reported success. Behavioral strategies such as setting time limits were more common than psychological coping methods. Awareness of mobile phone addiction as a serious issue was high, and 78% expressed willingness to attend awareness programs.

Table 1
Mobile Phone Usage Patterns and Sleep-Related Effects (N = 100)

Variable	Response Category	n	%
Mobile phone use before sleep	Always	51	51
	Sometimes	36	
	Rarely	8	
	Never	5	
Sleep-related problems	Sleep late & wake tired	38	38
Sometimes disturbed		46	
Unable to sleep		16	

Findings of the Study

- Pre-sleep mobile phone use was reported by 87% of students
- All participants experienced some form of sleep disturbance
- Psychological discomfort was reported by 84%
- Academic concentration difficulties were reported by 89%
- Physical discomfort affected 82% of students
- 81% attempted to reduce usage, but only 48% succeeded

Note. The modal response for pre-sleep mobile phone use was “Always.”

Table 2

Perceived Psychological, Academic, Physical, and Social Effects of Mobile Phone Use

Domain	Reported Effect	n	%
Psychological	Anxiety when phone unavailable	84	84
Academic	Difficulty concentrating	89	89
Physical	Eye strain / body pain	82	82
Social	Reduced social interaction	80	80

Table 3

Coping Strategies and Awareness Regarding Mobile Phone Use

Variable	Category	n	%
Attempted to reduce usage	Yes	81	81
Successful reduction	Yes	48	48
Coping strategy (most common)	Time limits	39	39
Awareness of problem	Serious issue	47	47
Willingness to attend workshops	Yes	78	78

Summary of the Study:

The study descriptively examined mobile phone usage patterns, perceived effects, and coping strategies among 100 undergraduate students in rural Maharashtra using a cross-sectional survey design. Findings indicate widespread excessive use, multidimensional adverse effects, and limited success in self-regulation despite high awareness.



Conclusion of the Study:

The study concludes that excessive mobile phone use is highly prevalent among rural undergraduate students and is associated with psychological discomfort, sleep disturbance, and academic concentration difficulties. While students demonstrate awareness and intent to reduce usage, coping efforts remain insufficient. Colleges should incorporate structured digital well-being and awareness programs to promote healthier technology use and academic engagement.

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