

**“EVALUATE THE PATTERN OF MOBILE PHONE USAGE AND ITS IMPACT ON PSYCHOLOGICAL HEALTH AND ACADEMIC PERFORMANCE AMONG NURSING STUDENTS IN SELECTED NURSING COLLEGES, CUTTACK”**

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**ABSTRACT:**

In today's world, very few people do not own or use a mobile phone. Mobiles have become a priority in everyone's life, with people using them daily for communication, business, and various other activities. The mobile phone has profoundly transformed individual lives, but it also has negative effects. Constant use and addiction to cell phones have impacted people physically, psychologically, and socially. **Objectives:** The aim of this study is to examine the patterns of mobile phone usage among nursing students and to evaluate its effects on their psychological well-being and academic performance. **Materials and Methods:** A descriptive cross-sectional research design was adopted, and 200 B.Sc Nursing students were randomly selected as participants. For data collection, a Self-structured questionnaire was used to assess mobile phone usage patterns, psychological health, and academic performance. The data was analyzed by using descriptive and inferential statistics such as percentage distribution, and chi-square test. **Results:** The majority i.e. 121(60.5%) feel that smartphone negatively affects daily work performance and experience stress due to prolonged use of mobile. The majority of students use mobile phones for 4-5 hrs. per day and also tend to check messages frequently while studying. The association test was done on the duration of mobile phone use per day with the deprivation of study habits and was found to be greater than the table value at a 0.05% level of significance which implies that there is a significant relationship between them. **Conclusion:** This study revealed that mobile phone use is widespread among nursing students. It is crucial to examine how mobile phone use impacts mental health and academic performance. While mobile phones offer both benefits and drawbacks, using them responsibly is essential for promoting overall health and well-being in society.

**Keywords:** Mobile phone. pattern of mobile phone usage, addiction, psychological, and academic performance

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## **Introduction:**

Over the past few decades, mobile phones have become an integral part of everyday life, even for young children. Their popularity has surpassed that of other media devices, thanks to their small size, ease of portability, ability to stream content, interactive functions, and affordability [Shah Saumya Amin-2023].

Mobile phones serve a variety of functions, including browsing the internet, making phone calls, listening to music, accessing social media platforms, sharing photos and videos, conducting banking transactions, shopping online, using GPS for navigation and location-based services, making video calls, and utilizing payment applications[Fu Kate,2023].

In the modern era, it is rare to find someone without a mobile phone or not using one. Mobile phones have become an essential part of daily life, widely used for communication, business, and various other activities. They have significantly transformed the way individuals live and interact. Mobile phones offer several benefits for students, such as enabling communication with family and friends, supporting learning, providing access to academic information, allowing quick information retrieval during class, and assisting in completing and submitting assignments. However, despite these advantages, mobile phones also come with certain drawbacks. These include classroom distractions from ringing phones, loss of focus, accessing inappropriate online content, playing games and watching videos during study time, time wastage, and the sharing of unsuitable images and messages[Abbas Nargis, Aashiq Uzma et al,2020].

According to a 2023 survey by ASER conducted after the post-COVID period, approximately 90% of young people now own a smartphone. Among those capable of using smartphones, nearly two-thirds utilized them for educational purposes, such as watching study-related online videos, clarifying doubts, or sharing notes [Gohain Manash Pratim, 2024]. Globally, the number of smartphone users has reached around 5.22 billion, representing 66.6% of the world's population, and this figure is expected to increase by hundreds of millions in the coming years. The highest ownership is seen among individuals aged 18 to 29, with 96% using smartphones, followed by 92% in the 30 to 49 age group (Silver L, Huang C,2019)

Modern operating systems like Android and various educational apps designed for professional courses have proven to be beneficial for students. However, on the downside, mobile phones also present the risk of psychological dependency. Recent studies have highlighted a connection between excessive smartphone use, internet addiction, and the presence of

psychiatric disorders, indicating a concerning co-morbidity among these issues.[**Naidu RD Ramesh,2021**].

### **Need For The Study**

Globally, it is estimated that there are around 5.22 billion smartphone users, representing 66.6% of the world's population, and this number is projected to increase by hundreds of millions in the coming years. The highest smartphone ownership is observed among individuals aged 18 to 29, with 96% usage, followed by 92% in the 30 to 49 age group. The term **Nomophobia** refers to the official name for smartphone addiction, characterized by the fear or anxiety of being without access to a mobile phone [**Machado Joyce,2023**].

With mobile phones playing such a central role in daily life—through constant texting, calling, listening to music, gaming, or simply as a source of entertainment—many individuals feel anxious or paranoid when their phones are not within reach. Some researchers have suggested that excessive mobile phone use could be an indicator of underlying depression. Factors such as the total time spent on phones each week, the proportion of time used for social interaction, and the percentage of time spent on positive activities are key indicators that may contribute to mobile phone addiction. As of September 2024, India had over 1.19 billion telephone subscribers, including both fixed-line and mobile users. The country offers some of the lowest call rates globally, thanks to intense competition among numerous major telecom providers. Additionally, India ranks second in the world for internet usage, with more than 949.21 million broadband subscribers [**Telecom Regulatory Authority of India, 2025**]. Despite its many benefits, communication technology also has some downsides. Continuous use and addiction to mobile phones have impacted individuals physically, mentally, and socially. Overuse of mobile devices has been linked to various health issues, including reduced concentration, headaches, dizziness, fatigue, a warm sensation near the ear, skin irritation on the face, increased stress, disrupted sleep from nighttime phone use, and feelings of frustration [**Gupta Naveenta, 2016**].

Many users develop a strong emotional dependence on their mobile phones, feeling as though they cannot live without them. Research by **Igarashi et al. (2008)** has highlighted the harmful effects of excessive mobile phone use on students' physical and mental well-being. Prolonged exposure to mobile phones has also been linked to the development of brain tumors. From a psychological perspective, communication technology can diminish social connections and overall well-being, contributing to feelings of loneliness, depression, and isolation. According to Beydokhti et al., the use of information and communication technology among both adults

and youth can result in social anxiety and sleep-related problems [Akashe Zahra Babadi et al. 2014]

Texting, emailing, browsing the internet, and using social media often lead students to multitask, which negatively impacts their academic performance [Rather and Khazer (2019)]. Studies on the influence of smartphones on students' academic outcomes have shown that excessive use shifts their focus away from educational tasks to non-academic ones, ultimately leading to poorer academic results [Kibona and Mgaya, 2015].

Engaging in activities such as texting, emailing, internet browsing, and using social networking platforms encourages students to multitask, which can hinder their academic performance [Rather and Khazer (2019)]. Research on smartphone usage and its impact on students' education reveals that frequent use often distracts them from academic responsibilities, resulting in decreased academic achievement [Kariya Viren B, 2019].

Numerous studies have explored the health impacts of mobile phone use among children and adolescents. Therefore, the researcher recognized the importance of examining the usage patterns of mobile phones and their associated health effects among nursing students.

### **Materials and Methods**

A cross-sectional survey design was employed to explore the pattern of smartphone usage and its effects on the psychological well-being and academic performance of nursing students. Data were collected from 200 nursing students, with the nursing college selected through purposive sampling and the participants chosen using a convenience sampling method. A semi-structured questionnaire was used to assess the pattern of smartphone usage, items about assessing psychological health problem, and academic performance. The collected data was organized, tabulated & analysis by using descriptive and Inferential statistics.

### **RESULTS:**

**Sample Characteristics:** A total of 209 adolescents were screened for smartphone addiction. The distribution of the nursing students regarding pattern of mobile phone usages according to their age shows that about (52%) of nursing student belonged to the age group (20-22) years, (40.5%) belonged to the age group (17-19) years and 07% belongs to the age group (23-25) years respectively. Nearly 68(34 %) belong to urban & 132 (66 %) belong to rural residential areas. Under gender, nearly 170 (85%) were female, & 30 (15 %) were male. Regarding family annual income, majority of family has annual incomes of 3-5lakhs (80%) followed by <3lakhs (11.5 %) , 5-7lakhs (4%) and >7lakhs (6,5%) respectively.

**Table 1: Frequency and Percentage distribution on the pattern of mobile phone usage**

N=200

Sl.no		FREQUENCY	PERCENTAGE
1	Number of mobile phone usage		
	1	183	91.5
	2	10	5
	3	07	3.5
2	Duration of usage of mobile phones		
	<3 years	101	50.5
	3-4 Years	67	33.5
	Above 4 years	32	32
3	Type of Phone		
	Keypad	7	3.5
	Android	181	90.5
	Both	12	06
4	Duration of mobile phone use per day		
	<4 hrs.	29	14.5
	4-5 Hrs.	151	75.5
	Above 5hrs.	20	10
5	Often use mobile phone for		
	Call	36	18
	SMS	5	2.5
	Social Media	50	25
	Study	101	50.5
	Games	8	4
6	Prefer to use mobile operator service		
	Airtel	69	34.5
	Jio	111	55.5
	VI	11	5.5
	Other	9	4.5
7	Scheme use for mobile service		



	Postpaid	102	51
	Prepaid	98	49
<b>8</b>	Source of information for mobile operator		
	Advertisement	20	10
	Sales promotion	6	4
	Direct selling	44	22
	Friends and relatives	130	65
<b>9</b>	Frequency of changing mobile phone		
	Every other year	7	3.5
	Every other month	4	2
	When the phone breaks down	189	94.5
<b>10</b>	The time of maximum use of mobiles mostly		
	Morning	28	14
	Night	114	57
	Evening	48	24
	Afternoon	10	5
<b>11</b>	Take your mobile phone at the time of sleep		
	Yes	81	40.5
	No	119	59.5
<b>12.</b>	While studying, feel the urge to check your phone repeatedly		
	Yes	125	62.5
	No	75	37.5
<b>13</b>	You always carry a mobile phone when going out		
	Yes	163	81.5
	No	37	18.5
<b>14.</b>	Have a try schedule or control the use of a mobile phone		

Yes	150	75
No	50	25

The data presented in **table-1** is regarding students' patterns on mobile phone usage, it was seen that the majority, 183(91.5%) students use only 1 number of mobile phone. 90.5% of students use android phone, majority 151(75.5%) use mobile phone for 4-5hrs per day. The main smartphone usage was for study, 101(50.5%) followed by media 50(25%). Most use of smartphone was in the night 141(57%). Majority 119 (96.5%) don't take mobile phone at the time of sleep. Around 163(81.5%) carry mobile phones while going out and 150(75%) students have tried to control mobile phone use.

**Table: 2 Frequency and percentage distribution of psychological health related to mobile usage**

**N=200**

Sl.no		FREQUENCY	PERCENTAGE
1	Do you think you are addicted to smart phone?		
	Yes	58	29
	No	142	61
2	Does your smart phone use negatively affect your daily work performance?		
	Yes	79	39.5
	No	121	60.5
3	Do you lose your time when you use smart phone?		
	Yes	171	85.5
	No	29	14.5
4	Do you feel stress due to prolonged use of mobile?		
	Yes	121	60.5
	No	79	39.5
5.	Do you aware that mobile phone usages has many health problems like cardiac problem, hearing problems & infertility?		

	Yes	156	78
	No	44	22
<b>6</b>	Has your mobile phone usages affected the relation among your family members?		
	Yes	50	25
	No	150	75
<b>7.</b>	Did you feel accessibility to stress due to mobile phone usage?		
	Not all all	89	44.5
	A little	102	51
	Very much	09	4.5
<b>8</b>	Have you ever been frustration when your dearest person doesn't receive the call?		
	Not all all	48	24
	A little	85	42.5
	Very much	87	43.5
<b>9</b>	Have you thrown mobile while in angry mood?		
	Not all all	153	76.5
	Sometimes	40	20
	Most of the time	07	3.5
<b>10</b>	What would you prefer on a stressful day?		
	Talk to your family	163	81.5
	Call them on phone	29	14.5
	Send messages to them	08	4
<b>11.</b>	What would you do if your phone broke down?		
	Buy a new phone immediately	30	15
	Try to live without a phone	48	24
	Wait for some time before buying a new phone.	122	61



The above **table 2** illustrates students' psychological health of mobile usage among nursing students, the majority 142 (61%) think that they are addicted to smartphones. 121(60.5%) students feel that smartphone use negatively affects their daily work performance. Maximum 121(60.5%) experience stress due to prolonged use of mobile. Majority of 156 (78%) students were aware of health problem due to mobile phone usage, and 150 (75%) felt that mobile phone usage does not affect the relation among family members. Majority 102 (51%) feel the accessibility to stress due to mobile phone usage. Majority 163 (81.5%) prefer to speak to their family member on a stressful day. In case of phone break down, majority 122(61%) students wait for sometime before buying new phone.

**Table 3: Frequency and Percentage distribution on academic performance related to mobile phone usage**

**N=200**

Sl.no		FREQUENCY	PERCENTAGE
<b>1</b>	Are you regularly attending the classes?		
	Yes	193	96.5
	No	07	3.5
<b>2</b>	Are you satisfied with the performance of the internal grades?		
	Yes	124	62
	No	76	38
<b>3</b>	Are you declining in concentration and study habits?		
	Yes	131	65.5
	No	69	34.5
<b>4</b>	Do you wake up late in the morning?		
	Yes	109	54.5
	No	91	45.5
<b>5</b>	Do you arrive late for the class?		
	Yes	28	14
	No	172	86
<b>6</b>	Does a mobile phone provide any help in the study?		

	Yes	193	96.5
	No	07	3.5
7	Did your mind get distracted by receiving calls during your studies?		
	Yes	131	65.5
	No	69	34.5
8	Did you read and text message during class?		
	Yes	80	40
	No	120	60
9	Does the use of smartphones keep the students from reaching out to their lectures?		
	Yes	117	58.5
	No	83	41.5
10	Do smartphones help academically in doing research assignments and preparing notes?		
	Yes	185	92.5
	No	15	7.5

The data in **Table 3** describe the academic performance of students related to mobile phone usage. The majority of 193 (96.5%) students are regularly attending the class, and 124 (62%) are satisfied with the performance of the internal grades. The majority of the students i.e. 131 (65.5) declined in concentration and study habits. 109 (54.5%) students wake up late in the morning. The majority of 172(86%) students reached college in time for classes, and 193(96.5%) say that mobile help in study. 131(61.5%) minds are distracted due to messages and calls. 185(92.5%) agreed that smartphones help in research study and writing assignments.

**Table 4: Association between duration of mobile phone usage per day and their study habits among B.Sc. (N) students.**

Duration of mobile phone use per day	Deprived of Study Habits		Total
	yes	no	
<3hrs	14	32	46

4-5hrs	50	24	74
>5hrs	67	13	80
	131	69	200

**Chi- square test = 6.9497, df = 2 , p value= 0.030966 at level of significance 0.05%**

Table –4. The chi-square values computed for the duration of mobile phone use per day with the deprivation of study habits were found to be lesser than the table value at 0.05% level of significance which implies that there is significant relationship between them.

### Discussion

In the present study, distribution of nursing students regarding pattern of mobile phone usages according to their age shows that about (52%) of nursing student belonged to the age group (20-22) years, (40.5%) belonged to the age group (17-19) years and 07% belongs to the age group (23-25) years respectively. Nearly 68(34 %) belong to urban & 132 (66 %) belong to rural residential area. Students' patterns on mobile phone usage showed that the majority, 183(91.5%) students use only 1 number of mobile phone. 90.5% of students use an Android phone, majority 151(75.5%) use a mobile phone for 4- 5 hours per day. The majority of the students i.e. 131 (65.5) declined in concentration and study habits. 109 (54.5%) students wake up late in the morning. 131(61.5%) minds are distracted due to messages and calls. 185(92.5%) agreed that smartphones help in research study and writing assignments.

The study conducted by Joyce Machado, Radhika R. Pai et al (2023) found that a majority of participants, 243 (90.0%), were using 4G-enabled phones. Around 88 participants (32.6%) reported using their smartphones for less than two hours at a stretch each day. The highest frequency of smartphone use occurred at night, as reported by 155 participants (57.4%). Entertainment was identified as the primary purpose for smartphone use by 213 participants (78.9%). Furthermore, 196 participants (72.6%) showed a moderate level of smartphone addiction. Regarding health complaints, 109 participants (40.2%) experienced headaches, while 83 (30.6%) reported eye strain.

### Conclusion:

The study concludes that identifying smartphone usage patterns is crucial to preventing the consequences of addiction and the associated health problems. And also observed that many nursing students excessively and inappropriately use mobile phones during late-night hours and in classrooms, often prioritizing them over traditional methods for studying and research. Given the high prevalence of mobile phone usage among college students, its impact on mental

health, sleep, academic performance, and the environment warrants discussion, and judicious use should be recommended. The following recommendations are proposed to help adolescent students use mobile phones more effectively: organizing training sessions for both students and teachers on utilizing mobile phones for educational purposes, along with conducting awareness programs for parents. Schools should encourage students to follow a structured schedule for using smart classrooms and tablet devices. The study concluded that recognizing smartphone usage patterns is essential to prevent potential addiction and related health issues.

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