

## A NOMOPHOBIA AND ITS CORRELATION WITH QUALITY OF SLEEP AMONG ADOLESCENTS

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### Abstract

Digital communication and mobile phones have permeated everyday existence. Online connectivity has made a lot of things easier. When used excessively, mobile phones can lead to a variety of psychological and physical issues. The aim of this study was to assess the Level of Nomophobia, Quality of Sleep and to analyses the correlation between Nomophobia with Quality of Sleep among the adolescents. A correlational study was conducted among 76 students of 1<sup>st</sup> and 2<sup>nd</sup> semester BSc Nursing at selected colleges, Bengaluru. Sample were selected by using convenient sampling technique. Nomophobia Questionnaire (NMP-Q) was used to assess the level of Nomophobia and the Quality of sleep was assessed by Sleep quality scale (SQS). The data were analyzed by using descriptive and inferential statistics. The study revealed that, more than half of the students (58%) had moderate level of Nomophobia, majority of students (68%) had moderate level of sleep quality. There is a significant moderate positive relation between Nomophobia and Quality of sleep among adolescents.

**Keywords:** Nomophobia, Quality of sleep, Adolescents, Sleep quality scale & Nomophobia Questionnaire.

### Introduction: -

In the present era of globalization, human beings are completely dependent on technology, especially communication systems.<sup>1</sup>

Social media and digital communication have become a part of every aspect of life.<sup>2</sup> Smart phones are very important and are being incorporated into the daily lives of individuals. Every individual is dependent on mobile phones in one way or another like for personal

dairy, instant messaging, email exchanges, music, video play, games, cameras, calculators, and other activities like online shopping, payments, traveling tickets, QR code assessments and many more.<sup>1</sup>

Nomophobia (No Mobile Phone Phobia) or excessive usage of smart phones, is one of the psychological problems in which a person will get afraid of being away from their smart phones.<sup>3</sup> It is one of the emerging digital and

virtual societal disorders that causes the pathological anxiety of being without a mobile phone device. The following four conditions, such as fear of not being able to interact with others, concern about losing connection, difficulty getting information quickly and discomfort of not having a mobile phone with self are faced by nomophobia.<sup>1</sup>

Nomophobia itself can be associated with a person who is more dependent on their mobile phone. Most of the time, it affects both the physical and psychological aspects of the individual.<sup>1</sup> An individual's level of contentment with every facet of their sleep experience is referred to as their sleep quality. Sleep quality has four attributes, such as sleep efficiency, sleep latency, sleep duration and wakefulness after sleep onset. Sleep quality is different from sleep quantity, but both are affected by sleep hygiene.<sup>4</sup> Good sleep improves brain performance, mood and health. The quantity of sleep needed varies based on age and personal requirements. The Sleep Health Foundation recommends that new-born babies need 12–16 hours of sleep, toddlers need 11–14 hours of sleep, schoolchildren need 9–11 hours of sleep, 8–10-year-olds need 7-9 hours of sleep, adults need 6–8 hours of sleep and older adults need 7-8 hours of sleep.<sup>5,6</sup> There are many factors that can affect sleep quality, such as lifestyle behaviors, sleeping environments, work load, sleep disorders, chronic pain, mental health, etc.

### Need for The Study

Sleep is vital for the health and well-being of every individual, from childhood to adulthood.<sup>1</sup> Healthy sleep is important for cognitive functioning, memory, performance, mental health, cardiovascular and cerebrovascular issues, immune system issues

and metabolic health. Adequate quality and quantity of sleep play an important role in reducing the risk of accidents and injuries caused by sleeplessness and fatigue. Sleep can also cause psychological and physical disorders such as loss of energy, mood swings, and the inability to concentrate on studying.<sup>7</sup>

According to baseline statistics from surveys done by the Maternal and Child Health Bureau (MCHB) and the Centers for Disease Control and Prevention (CDC), 34.1% of children, 74.6% of high school students and 32.5% of adults fail to get a sufficient duration of sleep on a regular basis, making sleep duration an important target for health improvement.<sup>7</sup>

Smartphones are designed to make our lives easier and more productive, as well as entertain us and provide information. However, the age of smartphones has made us feel as though we are never truly able to unplug, not even while we are asleep.<sup>8</sup> Nomophobia is one of the influencing factors for the lack of sleep in students.<sup>1</sup> In addition, the effects that occur in students are that they feel excessive sleepiness during the day and unhealthy sleep habits will be adapted. It also leads to several risks, among the individuals like becoming more stressed and less focused on things around them, individuals are more concerned with interactions in cyberspace and experience insomnia.<sup>1</sup>

India has the largest adolescent population, those between the ages of 10 and 19 in the world. In 2023, there will be 250.8 million people in India nearly one-fifth of the country's population are adolescents.<sup>9</sup> By 2023, there will be 7.41 billion mobile phone users worldwide, comprising both smart and feature phones. This represents 91.61% of the global population, which makes 91.61% of people in the world cell phone owners. Of that, 6.7 billion are smart

phone users.<sup>10</sup> As per the New Delhi Ministry of Information and Broadcasting Secretary, India has 1.2 billion mobile phone users, of which 659 million are smart phone users. 36% of smart phone users were found in 2018 but increased to 74% in 2022. The highest penetration rate of smart phone users was in the age group of 16 to 24 years, which is 37%.<sup>11</sup>

Going to bed and falling asleep should be a peaceful, happy and relaxing experience. Engaging with phones too close to bedtime can have a negative impact on those feelings.<sup>8</sup> Healthy sleep requires adequate sleep duration, appropriate timing, regularity, the absence of sleep disorders, and good quality.<sup>7</sup> Hence the researcher felt the need to correlate the Nomophobia with the Quality of Sleep among the adolescents.

### Methodology

The objectives of the study were

1. To assess the level of nomophobia among adolescents at selected colleges.
2. To determine the quality of sleep among adolescents at selected colleges.
3. To analyse the correlation between nomophobia and quality of sleep among adolescents at selected college.

### Results and Interpretation

**Table 1. Frequency and percentage distribution of selected socio-demographic variables of B.Sc. Nursing students.** (n = 76)

Sl.No	Demographic Variables	Frequency (N)	Percentage (%)
1	Age in years		
	a. 17 years	06	7.9
	b. 18 years	42	55.3
	c. 19 years	28	36.8
2.	Gender		
	a. Male	22	28.9
	b. Female	54	71.1

4. To find out the association between the level of nomophobia among adolescents with selected socio-demographic variables.
5. To associate the quality of sleep among adolescents with selected socio-demographic variables.

#### Hypothesis: -

**H<sub>1</sub>:** There will be a significant correlation between nomophobia and quality of sleep.

**H<sub>01</sub>:** There may be no significant association between the selected socio- demographic variables with nomophobia and quality of sleep.

The research approach adopted for the study was quantitative approach and the design was Non-experimental correlational research design. The study was conducted on adolescents at the selected colleges aged between 17-19years who fulfils the inclusion criteria are included in the study. The samples are selected using convenient sampling technique. The tool consists of three sections **Section A-** Socio-Demographic data, **Section B-** Nomophobia questionnaire (NMP-Q) & **Section C-** Sleep Quality Scale (SQS). The data was analysed using descriptive and inferential statistics.

3.	Religion		
	a. Hindu	35	46.1
	b. Muslim	07	09.2
	c. Christian	34	44.7
4.	Type of family		
	a. Nuclear	67	88.2
	b. Joint	09	11.8
5.	Student resident status		
	a. Home	08	10.5
	b. Hostel	45	59.2
	c. P G	23	30.3
6.	Place of residence		
	a. Urban	54	71.1
	b. Rural	22	28.9
7.	Involvement in social media		
	a. Passive	66	86.8
	b. Active	10	13.2
8.	Hours spent in social media		
	a. 1-2 hours	15	19.7
	b. 2-3 hours	23	30.3
	c. 3-4 hours	14	18.4
	d. More than 4 hours	24	31.6
9.	Previous knowledge on Nomophobia		
	a. Yes	26	34.2
	b. No	50	65.8
10.	Source of information on Nomophobia		
	a. Mass media	20	76.9
	b. Friends and relative	4	15.4
	c. Books	2	7.7
11.	Previous knowledge on sleep quality		
	a. Yes	60	78.9
	b. No	16	21.1
12.	Source of information on sleep quality		
	a. Mass media	30	50
	b. Friends and relative	18	30
	c. Books	12	20

The above table shows that majority of students (55%) were in the age group of 18 years, (71.1%) were females, (46.1%) of students belongs to Hindu religion, (88.2%) were from nuclear family, (59.2%) were staying in hostel, (71.1%) were from urban area, (86.8%) were passive social media users, (31.6%) of students were using social media more than four hours a day, (65.8%) of the students were not having any knowledge about Nomophobia, (76.9%) of the students got knowledge regarding nomophobia through mass media, (78.9%) of the students were have knowledge regarding sleep quality.

**Table 2.1 Frequency and Percentage Distribution to assess the level of Nomophobia**

Sl. No	NMP-Q Scale	Frequency	Percentage (%)
1.	Mild	23	30.3
2.	Moderate	44	57.9
3.	Severe	9	11.8

(n=76)

The diagram reveals that more than half (57.9%) of the students have moderate level of Nomophobia.

**Table 2.2. Significant differences showing the Level of Nomophobia**

(n = 76)

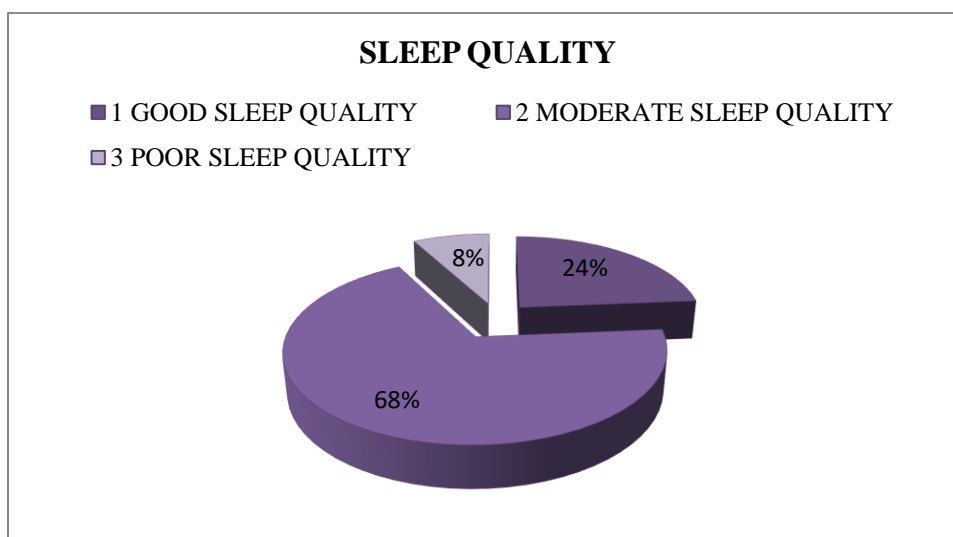
Group	Minimum Score	Maximum Score	Mean	Standard Deviation
Level of Nomophobia	27	139	71.45	25.767

The overall actual scores of the Nomophobia Scale (NMPQ) are in the range 20-140. The above table shows that the minimum score of this scale is 27, whereas maximum score is 139, with the mean of 71.45 and a standard deviation of 25.767.

**Table 3.1: Frequency and Percentage Distribution to assess Quality of sleep**

(n=76)

Sl. No	Sleep Quality Scale	Frequency	Percentage (%)
1.	Good Sleep Quality	18	23.7
2.	Moderate Sleep Quality	52	68.4
3.	Poor Sleep Quality	06	07.9



The diagram shows that more than half (68%) of the students have moderate sleep quality.

**Table 3.2 Significant differences showing the Sleep quality**

(n=76)

Group	Minimum Score	Maximum Score	Mean	Standard Deviation
Quality of Sleep	6	76	36.1	12.081

The overall actual scores of the Sleep Quality Scale (SQS) are in the range 0-84. The above table shows that the minimum score of this scale is 6, whereas maximum score is 76, with the mean of 36.1 and a standard deviation of 12.081.

**Table 4. Correlation between Nomophobia and Quality of sleep.**

Sl.No	Nomophobia Interpretation	Frequency Percentage f (%)	Sleep quality interpretation	Frequency Percentage f (%)	Pearson Correlation coefficient(r)	P value
1.	Mild	23 (30.3%)	Good sleep quality	18 (23.7%)	+0.378	0.001
2.	Moderate	44 (57.9%)	Moderate sleep quality	52 (68.4%)		
3.	Severe	9 (11.8%)	Poor sleep quality	6 (7.9%)		

Correlation is significant at the 0.01 level (2-tailed).

The above table shows that the P value is 0.001(<0.01) and Pearson correlation coefficient is 0.378 (between 0.3-0.7) so, there is a significant moderate positive relationship between Nomophobia and Sleep quality among adolescents.

**Table: 5 Association between the level of nomophobia with selected socio-demographic variables.**

The results of association between level of nomophobia with selected socio-demographic variables shows there was no significant association among adolescents.

**Table 6: Association between the Quality of sleep with selected socio-demographic variables.**

SL. NO	Socio-Demographic variables	Sleep quality			Chi Square	P Value
		Good Sleep Quality	Moderate Sleep Quality	Poor Sleep Quality		
1.	<b>Age in years</b>				10.987 df-4 S	0.027
	17 years	0	4	2		
	18 years	14	25	3		
	19 years	4	23	1		
2.	<b>Hours spent in social media</b>				14.108 df-6 S	0.028
	1-2 hours	4	11	0		
	2-3 hours	9	13	1		
	3-4 hours	1	13	0		
	More than 4 hours	4	15	5		



The above table shows the result of association between Sleep Quality and selected socio-demographic variables among adolescents. There is a significant association between the Sleep Quality with age ( $P=0.027$  i.e.  $P<0.05$ ), and hours spent in socio media ( $P=0.028$  i.e.  $P<0.05$ ) among adolescents and it was not associated with gender, religion, type of family, student resident status, place of residence, involvement in social media, previous knowledge on nomophobia & sleep quality, source of information on nomophobia & sleep quality.

### Conclusion

There is a significant moderate positive relation between Nomophobia and Quality of sleep. More than half of the adolescent had moderate level of nomophobia, and majority of them had moderate level of sleep quality. So, it is very much essential to reduce over usage of mobile phone to maintain good health by improving the sleep quality.

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