

## “Study of Nomophobia and Its Impact on Quality of Life in Medical Students and Resident Doctors”

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### Abstract

**Background:** Nomophobia “no mobile phone” and phobia” is a pathological fear of being out of contact with a mobile phone, has no mobile networks, or has insufficient balance or battery.

**Aim:** The present study aims to assess the effect of Nomophobia and its impact on Quality of Life in Medical Students and resident doctors in a tertiary care hospital.

**Materials and Methods:** An online survey using Google Forms online platform was carried out to evaluate Nomophobia using Nomophobia Questionnaire and quality of life using WHOQOL-BREF scale.

**Results:** The study sample comprised 252 participants with mean age of 21.31 years. 66.7% (n=168) of them were Females and 33.3% were males (n=84). Mean score of nomophobia is 74.79 and there is a Negative correlation between Nomophobia and overall Quality of Life ( $r = -.198$ ,  $p \text{ value} = .002$ ). Among all domains of QOL, physical ( $r = -.291$ ,  $p = .000$ ) and environment domains ( $r = -.207$ ,  $p = .001$ ) are mostly affected.

**Conclusion:** There is a high prevalence of Nomophobia among medical students with a significant negative impact on QOL which indicates that nomophobia is an emerging mental health problem that needs to be addressed.

**Keywords:** Nomophobia, Quality of life, Medical Students, Doctors

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### I. Introduction

As the world becomes increasingly interconnected, both economically and socially, technology adoption has been one of the defining factors of human progress<sup>[1]</sup>. Present digital world has observed maximum innovations in the field of information and communication, and the most dominant is the mobile phone<sup>[2]</sup>. In Growing World More number of people addicted to their phones which alters their normal functioning<sup>[3]</sup>. People fail to realize addiction to smartphone usage is a serious issue that can have a negative effect on the person's thoughts, behaviour, and sense of well-being<sup>[4]</sup>.

Nomophobia – “no mobile phone” and phobia” – is fear of being out of contact with a mobile phone, having no mobile network, or having insufficient battery or balance<sup>[5]</sup>. It causes discomfort, anxiety, nervousness, depression by being out of contact with a mobile phone<sup>[6]</sup>.

Nomophobia is a very prevalent pathology among younger population, especially those in the healthcare field. We therefore aimed to assess the presence of Nomophobia and its impact on quality of life in medical students and resident doctors.

### II. Materials And Methods

This is a web based cross sectional study which was carried out at Department of Psychiatry from October 2021 to November 2021 on medical students and resident doctors at Maharajah's Institute of Medical Sciences and General Hospital, Vizianagaram. A total 252 subjects (both male and females) were for in this study.

**Study Design:** A Web-based cross-sectional survey

**Study Location:** This was a tertiary care teaching hospital-based study done in Department of Psychiatry, at Maharajah’s Institute of Medical Sciences and General Hospital, Vizianagaram, Andhra Pradesh.

**Study Duration:** October 2021 to November 2021

**Sample Size:** 252 participants

**Sample Size Calculation:** Sample size was calculated using Epi Info V.7 using the prevalence of Nomophobia and its impact on quality of life, with a confidence level 95% and a margin of error of 5%.

**Subjects and selection method:** The study population was drawn from medical students and Resident Doctors from all Departments working at Maharajah’s Institute of Medical Sciences and General Hospital. The study was approved by the institutional ethics committee. An online written informed consent was obtained from all the participants.

**Inclusion criteria:**

1. Doctors and Medical students who are having a smartphone and ability to provide internet access by phone.
2. Doctors of either sex aged between 18-36 years.
3. Participants who have given Consent for the Study.

**Exclusion criteria:**

1. Doctors who have not given consent.
2. History of psychiatric illness.

**Procedure Methodology:**

Informed consent was taken from the respondents before the study and an option to terminate was made available anytime they desired in the form itself. A pre-designed, pre-tested validated semi-structured questionnaire was administered to the study subjects wherein objectives were explained, respectively. The questionnaires included Semi- Structured Questionnaire included age, gender, designation.

Nomophobia Questionnaire–Self report instrument used to identify nomophobia. It has 20 questions, each scored on a 7-point Likert scale rated from 1 Strongly disagree to strongly agree. A score of 20 indicates Absence of nomophobia. A score of 21–59 indicates mild level of nomophobia. A score of 60–99 indicates moderate level of nomophobia. A score of 100-140 indicates severe nomophobia.

W.H.O Quality of Life BREF (WHOQOL-BREF) scale to assess quality of life. It is a self-administered questionnaire comprising 26 questions on the individual's perceptions of their health and well-being over the previous four weeks. Responses to questions are on a 1-5 Likert scale where 1 represents "disagree" or "not at all" and 5 represents "completely agree" or "extremely".

The questionnaires were prepared in the format of a Google forms which were sent across through social media platforms such as WhatsApp and e-mail starting from October 2021 to November 2021. We have activated the 'limit to one response' option to avoid duplicate responses. Complete confidentiality of the respondents was ensured, and no personal details were recorded for the purpose of the study such as name, address, and contact details.

**Statistical Data:**

Data were analyzed using statistical package for social sciences, sixteenth edition (SPSS-16) (SPSS Inc. Released 2007. SPSS for Windows, Version 16.0. Chicago, SPSS Inc.). Continuous variables were analyzed in the form of mean, standard deviation (SD), and median. Categorical variables were assessed as frequency and percentages.

**III. Result**

- The study sample comprised 252 participants with mean age of 21.31 years. Majority of them were Females 66.7% (n=168) and 33.3% were males (n=84).
- Mean score of nomophobia is 74.79. Among all the participants, 20.2% (n=51) had mild, 68.7% (n=173) had moderate, 11.1% (n=28) had severe nomophobia.
- Among all the participants, 58.33 % (n=147) were MBBS students, 19.73 % (n=29) MBBS students had mild, 68.03% (n=100) had moderate, 12.24 % (n=18) had severe nomophobia.
- Among all the participants, 41.67 % (n=105) were Doctors, 20.95 % (n=22) Doctors had mild, 69.52% (n=73) had moderate, 9.52% (n=10) had severe nomophobia.
- Based on gender, among females, 20.83% (n=35) had mild, 66.07% (n=111) had moderate, 13.1% (n=22) had severe nomophobia. Among males, 19.05% (n=16) had mild, 73.81% (n=62) had moderate, 7.14% (n=6) had severe nomophobia.

- There is a significant negative correlation between Nomophobia and overall Quality of Life affecting all domains ( $r=-.198$ ,  $p$  value=.002). Among all domains of QOL, physical ( $r=-.291$ ,  $p=.000$ ) and environment domains ( $r=-.207$ ,  $p=.001$ ) are mostly affected.

**Table no - 1 Show Percentage of Nomophobia among Medical students and Resident Doctors**

Nomophobia	Frequency	Percent
MILD	51	20.2
MODERATE	173	68.7
SEVERE	28	11.1
Total	252	100.0

**Table no - 2 show Comparison of Percentage of Nomophobia among Medical students and Resident Doctors**

OCCUPATION	NOMOPHOBIA			Total	P Value
	MILD	MODERATE	SEVERE		
MBBS STUDENT	29	100	18	147	
DOCTORS	22	73	10	105	
Total	51	173	28	252	

**Table no - 3 show Comparison of Percentage of Nomophobia among Males and Females**

		NOMOPHOBIA			Total	P Value
		MILD	MODERATE	SEVERE		
SEX	FEMALE	35	111	22	168	
	MALE	16	62	6	84	
Total		51	173	28	252	

**Table no –4 show Percentage of Nomophobia affecting overall quality of life and four domains among medical students and Resident Doctors**

Group Statistics					
GOC		N	Mean	Std. Deviation	Std. Error Mean
NOMOPHOBIA	DOCTORS	105	74.79	19.892	1.941
	MBBS STUDENT	147	77.19	18.791	1.550
Overall QOL	DOCTORS	105	7.32	1.290	.126
	MBBS STUDENT	147	7.05	1.379	.114
DOMAIN1	DOCTORS	105	26.21	3.668	.358
	MBBS STUDENT	147	24.54	4.007	.331
DOMAIN2	DOCTORS	105	20.19	3.547	.346
	MBBS STUDENT	147	19.25	3.816	.315
DOMAIN3	DOCTORS	105	10.40	2.124	.207
	MBBS STUDENT	147	10.16	1.821	.150
DOMAIN4	DOCTORS	105	27.64	4.055	.396
	MBBS STUDENT	147	27.14	4.307	.355
D1TS	DOCTORS	105	79.3197	13.10071	1.27850
	MBBS STUDENT	147	73.3722	14.31157	1.18040
D2TS	DOCTORS	105	67.4603	14.77772	1.44216
	MBBS STUDENT	147	63.5488	15.89871	1.31130
D3TS	DOCTORS	105	53.3333	17.70032	1.72737
	MBBS STUDENT	147	51.3605	15.17405	1.25153
D4TS	DOCTORS	105	73.8690	12.67252	1.23671
	MBBS STUDENT	147	72.3214	13.45854	1.11004

**Table no - 5 correlation between Nomophobia and overall Quality of Life among Medical students and Resident Doctors**

		Correlations				
		NOMOPHOBIA	Overall QOL	D1TS	D2TS	D3TS
NOMOPHOBIA	Pearson Correlation	1	-.198**	-.291**	-.158*	-.125*
	Sig. (2-tailed)		.002	.000	.012	.047
	N	252	252	252	252	252
Overall QOL	Pearson Correlation	-.198**	1	.579**	.607**	.358**
	Sig. (2-tailed)	.002		.000	.000	.000
	N	252	252	252	252	252
D1TS	Pearson Correlation	-.291**	.579**	1	.645**	.440**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	252	252	252	252	252
D2TS	Pearson Correlation	-.158*	.607**	.645**	1	.515**
	Sig. (2-tailed)	.012	.000	.000		.000
	N	252	252	252	252	252
D3TS	Pearson Correlation	-.125*	.358**	.440**	.515**	1
	Sig. (2-tailed)	.047	.000	.000	.000	
	N	252	252	252	252	252
D4TS	Pearson Correlation	-.207**	.551**	.618**	.629**	.609**
	Sig. (2-tailed)	.001	.000	.000	.000	.000
	N	252	252	252	252	252

#### IV. Discussion

The present study reflects the psychological impact of the use of mobile phones excessively as an attempt to escape from unpleasant feelings and reality [7]. The increasing utilization of new technological devices and virtual communication involving personal computers and mobile phones is causing changes in individuals' behavior and daily habits [10]. Studies done on doctors, using the similar scales across the different parts of the globe, suggest that 35.1% had Mild nomophobia, 52.7% had Moderate, 11.8% had Severe nomophobia [1]. Findings of the present study are within the reported range. Similar studies done in India by Madhusudan M, et al., involving 429 medical students, Kumar Krishna Anjana, et al., involving 246 medical students, Manu Sharma, et al., involving 1386 high school students had shown the similar results. Coping Strategies such as problem solving, expression of emotion and positive reinterpretation which involves active engagement of the student, facilitates student's adaptation and mental wellbeing [8,9].

#### V. Conclusion

To conclude, the present study suggests that there is a high prevalence of Nomophobia among medical students with a significant negative impact on QOL which indicates that nomophobia is an emerging mental health problem that needs to be addressed.

#### VI. Limitations

Limitations of the study include small sample size. and H/o Psychiatric and Physical co-morbidities were not taken into consideration

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