

Research Paper

Pattern of Mobile Usage and Psychological Morbidity Among Physiotherapy Students Studying in Rural District of Karnataka

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ABSTRACT

Background: Mobile use has become an integral part of everyone's life and current day to day living. Mobile-internet addiction has become a major public issue among various stakeholders, policy makers, school management including mental health professionals. Although mobile phones and the Internet are used as communication tools, excessive use of these technological tools causes individuals to become addicted. **Methodology:** This descriptive cross-sectional study was carried out among the physiotherapy students at Sri Devaraj Urs Medical College, Tamaka, Kolar. Data was collected using the Problematic Mobile phone usage questionnaire (PMPUQ) to assess pattern of mobile phone use and MINI Plus to assess psychological morbidity. **Results:** Among the 60 participants in our study, 26(43.33%) of them had psychiatric morbidity. The most common disorder identified was major depressive disorder (20%). Out of those that had psychiatric morbidity, 20(33.33%) of them scored high on the dependence subscale of the PMPUQ. **Conclusion:** Excessive use of mobile phones leads to negative psychological consequences. There is an urgent need to create awareness as well as develop effective preventive measures and treatment strategies in order to curb the inappropriate use of mobile phones especially among the student population

Keywords: Mobile Use, Addiction, Physiotherapy Students, Psychological Morbidity

Mobile use has become an integral part of everyone's life and current day to day living. There are more mobile owners in India than those who actually own a television or even a two-wheeler. Mobile-internet addiction has become a major public issue among various stakeholders, policy makers, school management including mental health professionals. The findings of some studies have indicated that problematic use of mobile phones has negative effects. Although mobile phones and the Internet are used as communication tools, excessive use of these technological tools causes individuals to become addicted. (1) In a study done by Yu et al they found that the excessive mobile phone

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user group experienced more depressive symptoms, difficulty in expression of emotion than the comparison group did.(2)Research shows that teenagers are far more likely to become dependent on mobile phones as compared to adults.(2,3) Studies show that mobile phone dependence in adolescents interferes with their school and personal activities, leading to social and relationship problems.(4,5) Excessive smart phone use is associated with difficulties in cognitive-emotion regulation, impulsivity, impaired cognitive function, addiction to social networking, shyness and low self-esteem.(6)

Cell phone usage badly affects mental health of adolescents and they look anxious, depressed and angry or sometimes commit suicide. The suicidal rate is increasing in this era. (7) Very few studies have been done on mobile phone use among physiotherapy students. Hence, this study was taken up to explore the patterns of mobile phone use among physiotherapy students.

Objectives of the study:

- a) To study the pattern of mobile usage among physiotherapy students
- b) To assess for psychological morbidity

METHODOLOGY

The present study is a descriptive cross-sectional study, conducted in Sri RL Jalappa hospital and research center, Tamaka, Kolar. The physiotherapy students studying doing the BPT (Bachelors of Physiotherapy) course served as the study population. Sixty consecutive individuals fulfilling the inclusion criteria were chosen for the study. The participants were interviewed using the Problematic Mobile phone usage questionnaire (PMPUQ) and MINI Plus was used to assess for psychological morbidity. A written informed consent was taken from all participants and ethical clearance was obtained from the Institute's Ethical Committee.

Inclusion criteria

- Age more than 18 years
- Students willing to give written informed consent
- Students who own a smart phone

Exclusion criteria

- Students with substance dependence other than nicotine
- Students who have been diagnosed with psychiatric illness
- Students who are taking psychotropic medications or undergoing counselling.

Statistical analysis

Data were analyzed using the IBM SPSS Statistics V22.0(IBM United States). Statistical analysis was performed using Kruskal Wallis Test and Mann Whitney test. Level of significance was set as $P < 0.05$.

Sampling method

Purposive sampling method was employed.

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Study tool

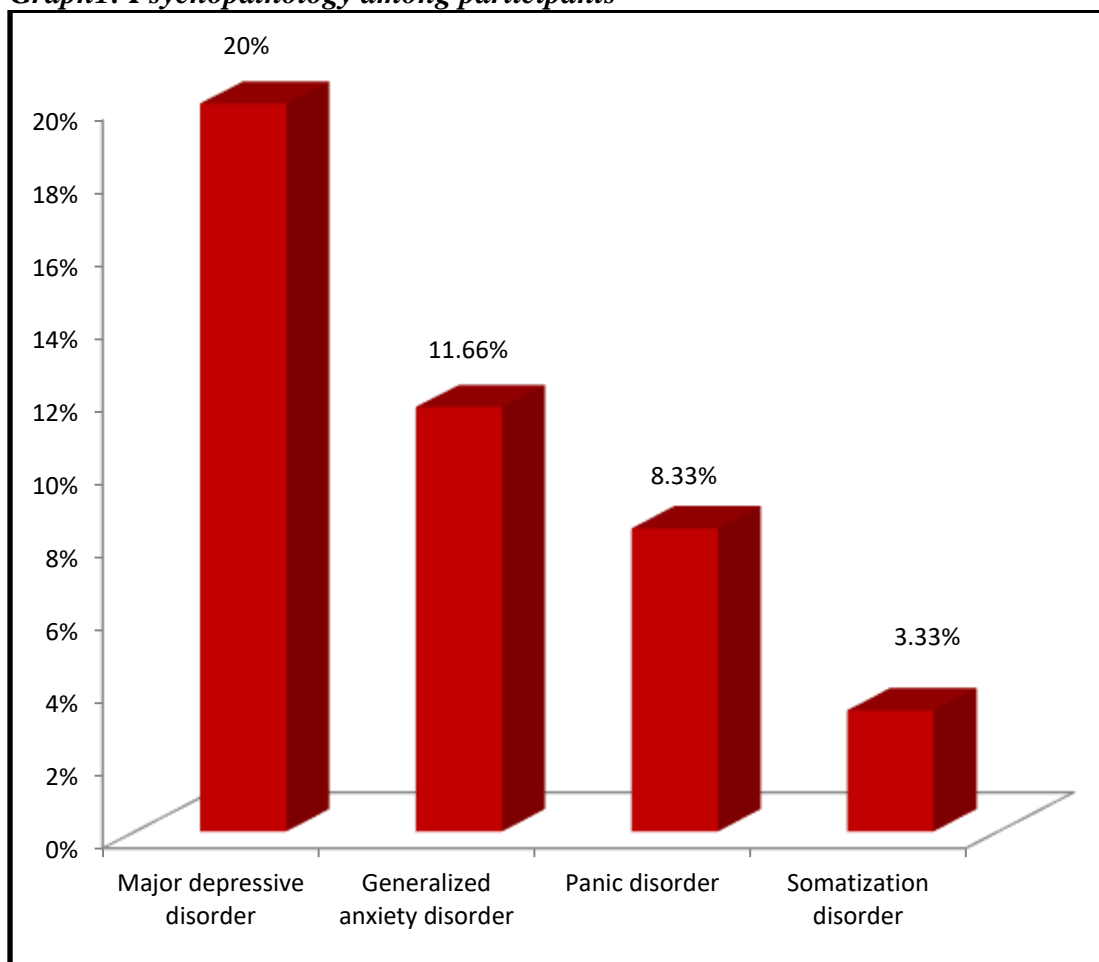
The Problematic Mobile Phone Use Questionnaire (PMPUQ) is a validated instrument that was developed to assess various facets of problematic mobile phone use. The questionnaire includes four subscales: (1) prohibited use; (2) dangerous use; (3) dependent use, and (4) financial problems resulting from use. Each subscale comprises five items, which were scored from 1 ('I strongly agree') to 4 ('I strongly disagree'). Overall scores ranged from 15 to 60, with higher scores indicating more potential problems due to mobile phone use.

The MINI-International Neuropsychiatric Interview (MINI Plus) is a structured diagnostic interview, developed to assess the diagnoses of psychiatric patients according to DSM-IV and ICD-10 criteria.

RESULTS

60 participants took part in the study. 44(73.3%) were aged more than 21 years, 40(66.7%) were females, 44(77.3%) considered themselves addicted, 38(63.3%) had used mobiles less than one year, 25(41.7%) made calls more than 5 per day, 53(86.7%) spent more than 30 minutes per day and 37(61.7%) sent SMS more than 10 per day.

Graph1: Psychopathology among participants



Psychiatric illness was diagnosed among 43.3% of the participants. Out of which, 20% had major depressive disorder, 11.66% had generalized anxiety disorder, 8.33% had panic disorder and 3.33% had somatization disorder.

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Table 1: Comparison between various factors with Dependence domain and dangerous use domain

PARAMETERS		Dependence Domain			Dangerous use Domain		
		Median	IQR	P value	Median	IQR	P value
OWN MOBILE PHONE	Less than one yr	15	10-21	0.001*	6	5-6	0.001*
	1-5yrs	23	21-23		11.5	10.7-12	
	more than 5yrs	25	25-28		17	13.5-18	
Calls made per day	0-2	11	7-14	0.001*	5	5-6	0.001*
	3-5	20	18-21		7	6-7	
	more than 5	23	21-25		12	11-17	
Time spent per day	less than 10min	7	7-8	0.001*	5	3-5	0.001*
	10-30min	7	7-8		5	5-5	
	more than 30min	21	16-23		9.5	6-12	
SMS per day	0-3	7	7-8.5	0.001*	5	5-6	0.001*
	4-10	15	13-15		6	5-6	
	Morethan10	21	21-25		11	7.5-14	
Have a driving license	YES	7.5	7-10	0.001#	5	5-6	0.001#
	NO	21	18-23.7		10	6.2-12.5	
Consider myself addicted	Yes	9	7-12.7	0.001#	5	5-5.75	0.001#
	No	21	18.5-24.7		10	7-13	
AGE	Age < 21	9	7-12.7	0.001#	5	5-5.75	0.001#
	Age>21	21	18.5-24.7		10	7-13	
Gender	Male	11	7-14	0.001#	5	5-6	0.001#
	Female	21	21-25		10.5	7-13	

* Kruskal Wallis Test, # Mann Whitney test

Higher median scores were seen in participants those who own mobile phone for more than 5 years, participants who made calls more than 5 per day, time spent more than 30 mins per day, those who sent more than 10 SMS per day, those who have driving license, those who considered themselves as non- addicted, those aged more than 21 years and participants who were females and this difference was statistically significant.

DISCUSSION

Among the 60 participants in our study, 26(43.33%) of them had psychiatric morbidity. The most common disorder identified was major depressive disorder. Out of those that had psychiatric morbidity, 20(33.33%) of them scored high on the dependence subscale of the PMPUQ. This finding is consistent with those of other studies. A study done by Ha, Chin, Park, et al in Korea found that the excessive mobile phone user group expressed more depressive symptoms, higher interpersonal anxiety, and lower self-esteem than the comparison group did.(8)In another study they found that more cell phone calling was associated with greater loneliness, however more face-to-face interactions were associated with lower levels of loneliness.(9) A few studies from India conducted in adults have identified mobile phone addiction as ranging from 33.5% to 39.6%.(10,11) In a study done by Jenaro et al, they found that cell-phone over-users were more likely to experience somatic complaints, insomnia, social dysfunction, anxiety, and depression.(12) In another study done by Sohn et al, Problematic smart phone use was found to be associated with an increased odds of depression, increased anxiety ; higher perceived stress and poorer sleep quality.(13)While comparing the relationship between mental health and addiction to mobile phones, Babadi et al found that students were affected with depressive disorder (17.30%), obsessive compulsive disorder (14.20%), and interpersonal sensitivity (13.80%). The results

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showed that there was a significant inverse relationship between mental health and habitual behaviors. (14) In our study, higher median scores were seen in the dependence subscale of the PMPUQ in participants who own mobile phone for more than 5 years, those who made more than 5 calls per day, spent more than 30 mins per day and those who sent more than 10 SMS per day. This was found to be statistically significant. (p value =0.001). Similarly Sahin et al., in their study found that as the frequency of mobile phone use during the day increased, the level of addiction also increased.(15) Aggarwal et al., in their study found that mean duration of mobile phone use per day to be 1.8 ± 1.6 hours and there was a significant positive correlation between duration of use of mobile phone per day and harmful use criteria of dependence on ICD-10 criteria.(16) In a study done by Nikhita CS et al., in participants with MPD(Mobile Phone Dependence), average time spent on mobile phone was 199.8 ± 127.4 minutes per day and mean years of mobile phone use was 2.3 ± 1.5 years. The participants with MPD were significantly associated with increasing amount of time spent on mobile per day and more than 3 years of mobile phone use. The proportion of participants who were dependent also steadily increased as the number of years of use increased. (17) We also observed in our study that those aged more than 21 years and participants who were females had higher median scores on the dependence subscale of the PMPUQ and this difference was statistically significant. Sanchez et al in their study found that the estimated prevalence of cell phone dependence was 20% (26.1% in females, 13% in males).(18) In contrast to findings in our study, Carbonell et al, in their study observed that males reported more intensive usage of cell phones than females except in text messages and calls.(19)

CONCLUSION

Excessive use of mobile phones leads to negative psychological consequences. There is an urgent need to create awareness as well as develop effective preventive measures and treatment strategies in order to curb the inappropriate use of mobile phones especially among the student population.

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Conflict of Interest

The author declared no conflict of interests.

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