

**ORIGINAL ARTICLE**

# INCIDENCE OF NOMOPHOBIA AND SMARTPHONE ADDICTION AMONG YOUNG PHYSICAL THERAPIST IN KARACHI

**ABSTRACT****BACKGROUND AND AIMS**

Nomophobia is a term used to describe a fear of being without a mobile phone which is a growing problem of today's world. This digital media effecting young generation with a variety of psychological symptoms like anxiety, nervousness and panic attack. To identify the prevalence and correlation of nomophobia and smart phone addiction in young adult physical therapist of Karachi with age range of 18 – 35 years.

**METHODOLOGY**

NMP and SAS-VS questionnaire were used to measure mobile addiction and nomophobia of 309 participants. The descriptive and inferential statistics were used to analyze the data at p-value<0.05 using SPSS version 20.

**RESULTS**

The statistical analysis revealed significant correlation found between nomophobia and smartphone addiction among young physical therapist of Karachi. Among all participants 182 (58.9%) physical therapist effected with severe nomophobia and 170 (55.0%) physical therapist reported moderate smart phone addiction.

**CONCLUSION**

Consistent use of smart phone among physical therapist makes them addicted and severely Nomophobic. Further studies should be conducted to address the preventive measure of nomophobia and smart phone addiction with different population and responses should be conducted all across Pakistan indulging different sub specialties.

**KEYWORDS**

*Communication Technology, Hazardous, Social Isolation, Musculoskeletal Pain, Behavior, Anxiety.*

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## INTRODUCTION

Use of smart phone is increasing by 2.5 billion in 2019 globally. 97% of population using smartphone, two years back, 64% population of United States America uses smartphone whereas in India 36% population owns smartphone<sup>1</sup>. The prevalence of Smartphone users in Switzerland is about 98% of young adult.<sup>2</sup> In recent years china reported that number of smartphone users increases 1.306 billion and if this situation persists then the widespread use of communication technologies causes smart phone addiction.<sup>3</sup> The increasing usage of smartphone has arisen one of the complications that is nomophobia which is fear of being away from mobile phone<sup>4</sup>. There has been expanding concern on the negative aspect of smartphone that badly effects on concentration and attentiveness of individuals.<sup>5</sup> Excessive smartphone utilization in young people may possibly be characteristic of such addictive behavior.<sup>6</sup> Nomophobia is a fear related to loss of access to information, and communication as increase number of difficulties associated with mobile phones day by day.<sup>7</sup>

Some Researches Proposed that Nomophobia can be considered as Psychopathology because it leads to anxiety and distress.<sup>8</sup> A study was conducted among the 554 students of D.J College shows that nomophobia is highly greater in females as compared to males.<sup>9</sup> A number of researches have found that people are getting dependent to their phones and these devices can be aid in the time of stress.<sup>10</sup> In the past 10 years, technological evolution makes the cell phone for easy access and sharing information.<sup>11</sup> These virtual communication and high technology devices give benefits as well as some serious concerns like social separation and economic problems<sup>6</sup>. Smart phones become the reason of workstation replacement and provision of access to use whereas the adverse effects of using smart phones for prolong time are visual display terminal syndrome of vision and carpal tunnel syndrome.<sup>12</sup> The impact of nomophobia on employees is still ambiguous in their work engagement, emotional exhaustion and job productivity.<sup>13</sup> There is a developing concern that a lot of children and youths would experience a mental challenge such as nomophobia<sup>14</sup>.

The smart phone emits radiations at a frequency ranges from 3 kHz to 3000 kHz and can produce hazardous effects after prolong use.<sup>15</sup> Absence of mobile phone causes disturbing in concentration level of students.<sup>9</sup> Another study demonstrated that people who are suffering from depression and societal stress being alone uses their smartphone less than others people.<sup>16</sup> Various studies shows that the people of US uses their smart phones to use different application and they utilize their mobile phones for fun<sup>17</sup>. Research also stated that muscu-

loskeletal problems are also associated with the use of mobile.<sup>11</sup> The varieties of symptoms are correlate with Smartphone users such as irritation without smart phone and agitation.<sup>18</sup> Nomophobic Behaviors develops when people were not having phone along with them and they also avoid those social places where mobile phones are prohibited.<sup>19</sup> People who have nomophobia also suffer from anxiety disorder<sup>20</sup>. Cellphone dependency among young students has a negative impact on educational performance increase internet dependency, depression and lack of sleep and quality of life<sup>21</sup>.

According to WHO studies excessive usage of smartphone disturbs the lifestyle of a person and may lead to bad behaviors and mood swings.<sup>22</sup> In expansion, web utilization through the smartphone has been considered to cause unsafe behaviors such as violence and cyber-bulling.<sup>23</sup> If the current situation remains same in which people are increasingly attached to their phones and gradually increasing their virtual communication, then it makes individuals isolated from the real world order<sup>19</sup>.

A study published in 2015, reported that high level of smart phone users are 127 with severe level of anxiety, as compared to low Smartphone user<sup>24</sup>. Studies conducted regarding nomophobia indicate that nomophobia in young population is prevailing badly in society in such a way which cannot be ignored.<sup>25</sup> According to a study conducted by De Pasquale investigates that exploration of Smartphone addiction among adolescents had shown that males are significantly addicted to smart phones whereas females do not.<sup>26</sup> One of the study conducted in south Korea in 2016 predicted that participants who has smartphone addiction used their phones for web surfing (36.8% in total, 40.1% among men, 33.1% among women) and concluded that the ratio is greater in males for web surfing than females.<sup>27</sup> An observational study was evaluating the pattern of mobile phone usage and occurrence of nomophobia was found to be 73%.<sup>28</sup> Recently a study was published in 2018, in which 87% individuals were found to be smartphones users and 12.9% were not smartphone users.<sup>29</sup> The ratio of nomophobic individual who were encounter from anxiety is 21% and 83% student experienced panic attack and 61% of students were experiencing headache and lethargy<sup>28</sup>. A study revealed that using smartphone during lecture may affect the attention and impairment in learning.<sup>30</sup> The study reported in 2014, associating the nomophobia and depressed persons with the healthy persons and shows that people who are addicted with mobile phone shows raised heart rate, respiratory alterations and depression related to the lack of mobile phone users.<sup>31</sup> Another study in Middle East population in 2018 concluded that the smartphone addiction and depression is strongly

correlated to each other<sup>16</sup> Study conducted in Turkey, concluded that the prevalence of nomophobia is higher in university students than the school students.<sup>19</sup> A recent study conducted in 2018 was published in the Turkish journal on addictions, focused on youngster's fear of having no mobile phone and a noticeable connection was discovered between fear and time limit to use the social media and dependency of social networking<sup>32</sup> A research was conducted at West Bengal in India shown that 42.6% of medical students and 44.6% of engineering students are nomophobic. Another research which was conducted in the United Kingdom in 2008 among mobile phone users reported that 53% of users are suffered from fear of possessing no mobile phone<sup>11</sup> In 2016 study shows that immediate communication and fulfillment given by the mobile phones are the main cause of nomophobia which is developing into irresistible addiction.<sup>8</sup> A study was carried out in 2016 identified that the ratio of nomophobic and sociophobia greater in Females as compared to males<sup>33</sup> One more study was conducted by Lopez in 2017 found that the frequent problematic user was an adolescent, and 10% of them believed themselves to be an expert user of this technology<sup>34</sup> A large scale survey of 2,500 US college students admit that they are dependent to their smartphone<sup>35</sup> A study was conducted by Sohail Ahmed in 2019 shows that prolong duration of smartphone causes musculo-skeletal problem and have a negative impact on daily activities<sup>11</sup> previously a study was conducted by Arpacı, I on 2019 are "the study concludes that vertical collectivism and nomophobia was higher whereas horizontal collectivism and nomophobia was lower.<sup>36</sup> The objective of study is to identify the prevalence and correlation of nomophobia and smart phone addiction in young adult physical therapist of Karachi with age range of 18 – 35 years.

## METHODOLOGY

### Research Design

Cross sectional study

### Population

Physical therapist of Karachi

### Sampling technique

Non-probability Convenience Sampling Technique

### Study Duration

6-8 months.

### Sample Size

N=368

### Inclusion criteria

Both male and female, physical therapists of Karachi with age range from 18-35 years

### Exclusion criteria

Participants who do not have smartphone and uses smartphone less than 5 hours/day.

### Ethical consideration

Informed consent will be taken from participants with adequate level of privacy and confidentiality of participants maintained.

### Data collection tool and procedure

Total 309 physical therapist from different hospitals and institutions, who were meeting the inclusion criteria has been selected for the study. Before the beginning of the survey, the study was explained to the participants. The data was collected through questionnaire which were distributed to the physical therapist and they return them after filling.

Demographic data was also documented on the questionnaire, nomophobia questionnaire (NMP-Q) and smart phone addiction scale short version (SAS-SV) was used to evaluate the addiction of smartphone.

### Data analysis:

We used (statistical product and service solution) SPSS version 20 to analyze our data. The frequency distribution, percentages, mean and standard deviation (SD) were determined for descriptive variables that include nomophobia and smart phone addiction. P value of 0.01 was considered significant. Results were compared among nomophobia and smartphone addiction.

## RESULTS

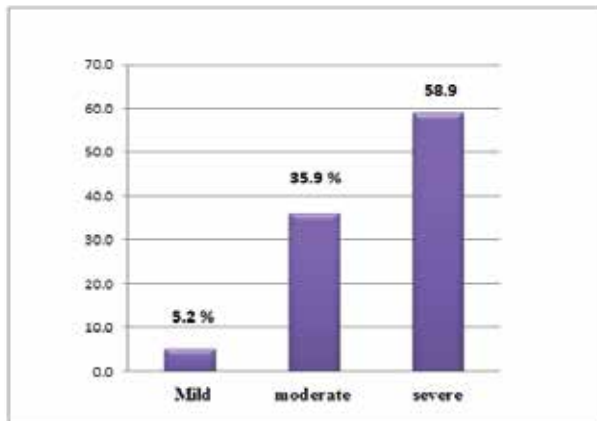
Questionnaire was distributed to 309 physical therapists. The response rate was 84% as only data collected from 309 physical therapists out of 368 participants.

Among all participants 182 (58.9%) participants were found severely nomophobic whereas 170 (55.0%) reported moderately addicted to smart-phone. The statistical analysis shows fairly significant relationship between nomophobia and smart phone addiction with (P value 0.01).

**Table.1 Demographics Characteristics**

No. of participants	N = 309
Age in years (Mean ± SD)	27.81±3.320
Gender	
Male	121 (39.2%)
Female	188 (60.8%)

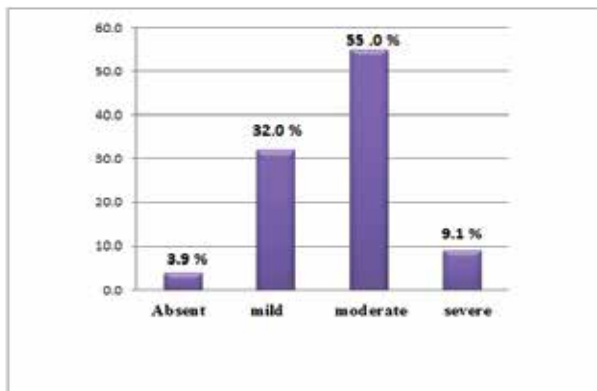
**The demographic characteristics of participants shown in table 1.**



**Figure.1 Percentage of participants having Nomophobia**

Sixteen physiotherapist (5.2 %) reported mild nomophobic, 111 physiotherapist (35.9%) reported moderate nomophobic and 182 physiotherapist (58.9%) reported severe nomophobic as illustrated in Figure-1

Survey estimate that twelve physiotherapist (3.9%) having no addiction of smart phone,99 physiotherapist (32.0 %) reported mild addiction,170 physiotherapist (55.0 %) reported moderate addiction and 28 physiotherapist (9.1%) reported severe addicted as illustrated in Figure- 2



**Figure.2 Percentage of participants having smart phone addiction**

Pearson correlation was run to determine the coefficient of correlation between nomophobia and smartphone addiction. Fairly significant positive correlation is observed between nomophobia and smart phone addiction as shown in table 4.

**Table.4 Coefficient of correlation between nomophobia and smartphone addiction**

Relationship between	r	*p - value
Nomophobia	0.47	
Smartphone Addiction	0.47	

Significant p value \*( 0.01) of coefficient of correlation

**DISCUSSION**

This study revealed that the large number of physical therapist are affected with severe nomophobia (58.9%) and moderate smartphone addiction (55.0%) with significant fairly positive correlation between nomophobia and smartphone addiction in young adult physical therapist of Karachi.

A study was carried by Pasquale De stated that the male participants were found to have more smartphone addiction as compared to female participants. The male score was found to be 51.80 out of 60 whereas the female score was recorded as 29.69 out of 60. <sup>26</sup> Whereas in our study female were found to have sever nomophobia and smartphone addiction than males. The male score was found to be 39.2 % whereas female score was recorded as 60.8%.

Another study conducted by Arpacı I on nomophobia in which their findings suggested that there is an inverse relationship between mindfulness and nomophobia. Participants with less mindfulness behaviour had more nomophobic findings and vice versa with the participants of higher mindfulness behaviour. <sup>36</sup> However, in our study all the participants having severe nomophobia and moderately addicted to their smart phone.

One study revealed that there is a significant relationship between nomophobia and social phobia disorder as people try to avoid their current situations and their direct personal relationships so they keep themselves busy on mobile phones. <sup>18</sup> While comparing to our study participants were nomophobic as they felt insecure when they were not in a close contact with their smartphones. According to the American Psychiatric Association, online gaming and excessive usage of social media are now can be considered as non-substance related addiction . <sup>11</sup> However participants of our study were found to be potent users of social media to keep in contact with their friends and families. Similarly a study by James A Robert in 2014 reported that smartphone is possibly the biggest non-drug addiction of the 21 century. <sup>35</sup> However in our study more than 50% of smartphone addiction were significantly found to have in participants. A study conducted to assess nomophobia among medical students discloses that 39.5% students were nomophobic out of 200 students. <sup>4</sup> where as in our study 121 males and 188 female physical therapists were affected with nomophobia and smartphone addiction out of 309. A similar study was conducted in which nomophobes was highest among clinical (52.6%) and least among interns (32.2%). <sup>9</sup> whereas in our study the female physical therapist were highly effected from nomophobia. Similar study concluded by Bell R concludes that female participants are psychologically and emotionally had

more addiction to their smartphones as compared to male<sup>17</sup>. One more study revealed that symptoms like less concentration, facial dermatitis, and pain behind the ear are most common symptoms of smartphone addiction.<sup>28</sup> One more study conducted by Veon Lee upon smartphone addiction which revealed that median nerve get thickened due to continuous use of smartphone and shows highest frequency of accumulated injuries and neuropathy in the wrist area.<sup>12</sup> Another study suggested their findings that the females report higher problematic phone use scores compared to males.<sup>1</sup> However also in our study the female participants were majorly victimised by the smartphone addiction (188) than male participants (121). Moreover one study suggested their findings that they found negative effects of the mobile phones among the male students which can cause many different risk factors whereas in our study the male participants were less affected.<sup>11</sup> One more study was conducted by Boumosleh their findings were found that both genders involved equally to in which 38.1% participants reported that they had sleep disturbance due to night time smartphone usage, 35.8% reported that they sleep for less than 4hours due to smartphone usage<sup>21</sup>. According to a survey mobile phone releases different rays which are very harmful for healthy lifestyle they mainly effect human DNA which cause serious side effects<sup>15</sup>. Moreover our study doesn't focus to found such side effect. Another study conclude that higher users of smartphone had significantly higher level of anxiety and depression than the participants who uses less smartphone.<sup>24</sup> King et al conclude that mobile phone usage during panic disorder can elevate anxiety, fear, perception, tachycardia and respiratory alteration<sup>20</sup>. Whereas our study findings suggested that the relationship of anxiety and depression is directly proportional to the fear of not having smartphones with one's own self. A study conducted in 2016 which declared that the college student's females are mostly addicted to smart phones with high levels of anxiety and neurotic personality.<sup>5</sup> Likewise in our study the female physical therapist were highly affected. Another study highlighted that Nomophobia has effects on academics and difficulty in learning and coping mechanism.<sup>7</sup> However our study also revealed that the participants were having difficulty in memorizing task.

### CONCLUSION

Persistent use of smart phone among young physical therapist makes them addicted and severely Nomophobic. Further studies should be conducted to adrese the preventive measure of nomophobia and smart phone addiction with different population and responses should be conducted all across Pakistan indulging different sub specialties.

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