

Construction and Standardisation of Nomophobic Rating Scale for Higher Secondary School Students

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ABSTRACT

Usage of mobile phones has increased among the adolescents in the context of the lock down due to Covid-19. The usage of mobile phones for entertainment as well as educational purposes makes them more addicted to gadgets. In this scenario, sufficient studies on Nomophobia, that is fear towards the situation when there is no phone, has increased. Investigators developed and standardised a Nomophobia rating scale to identify the addiction rate of Higher Secondary school students to mobile phones. NPRS is a five point Likert type scale consisting of 24 items. Reliability of the scale has been established using split-half method and Cronbach alpha test. Content validity by experts and Spear-son correlation method were established for the rating scale.

1.INTRODUCTION

The pandemic situation increased the usage of technology in the nook and cranny of life. It had a clear impact on the teaching and learning process at every level. In the context of COVID-19 and its effect on the changing teaching learning strategies, a predominant role goes to the usage of mobile phones and social media among students as well as teachers. Even before the widespread of COVID -19, adolescent students had high affinity towards modern gadgets like smart phones for the purpose of playing online games and using various social media applications. This affinity towards the smart phones coined a new term among the psychologists, which is known as nomophobia.

The term NOMOPHOBIA or NO Mobile Phone PhoBIA is used to describe a specific psychological condition when people have a fear of being detached from their mobile phone connectivity. Nowadays nomophobia has become a psycho-social condition because the socialisation process is carried out through social media and most of the people have access to social media through their smartphone.

In the current study, the investigator has developed a Nomophobic Rating Scale to establish the nomophobic rate of Higher Secondary level students. A five point Likert type scale has been constructed, developed and standardised.

2. REVIEW OF RELATED LITERATURE

Among the very first research studies on nomophobia (King, Valença, &Nardi, 2010), it is considered as a 21st century disorder resulting from new technologies and is defined as

discomfort or anxiety when out of mobile phone (MP) or computer contact. Daei, A., Ashrafi-Rizi, H., & Soleymani, M. R. (2019) conducted a cross-sectional study in which 320 students were selected via cluster sampling. They used a Nomophobia and smartphones use questionnaire to collect data. The results show that the incidence rate of nomophobia among the students was moderate and 73% of the students were moderate smartphone users. They also found that Nomophobia had a significant relationship with age group, gender, and level of education; and the frequency of using smartphones had a significant relationship with level of education and age group .

During a cross-sectional study among undergraduate students who were using mobile phones for more than one year, Thapa, K., Lama, S., Pokharel, R., Sigdel, R., & Rimal, S. P. (2020) found that phone dependence among the undergraduate students was common and there was no difference between the male and female students. Shankar, V., Singh, K., & Jangir, M.K. (2018) undertook a questionnaire based survey having 30 different mobile phone usability related questions. Based on the responses the total percentage of addiction found by them was 40.93 and the study also showed that females were more addicted to mobile phones than male. Gnanadhas, Jilisha & J, Venkatachalam & Menn, Vikas & Olickal, Jeby. (2019) carried out a study on perception among College Students in Puducherry about nomophobia and found a sizeable minority of the students showed signs of severe nomophobia, distinct patterns of usage, and misperceptions regarding health and their usage pattern.

3.NEED AND SIGNIFICANCE OF THE SCALE

Review of related literature shows that several studies have been conducted in the field of nomophobia by several researchers at different levels. But usage of secondary or higher secondary school students was not investigated in detail by any of the studies, especially from India. The main reason behind the negligence of that age group is that they didn't possess a mobile phone . But when the pandemic situation necessitated an academic ambience where mobile phone was indispensable, most parents were forced to purchase it for their wards. The study is conducted at the time when one year is over after the first COVID -19 case was reported in the world and so seems significant for the current context.

4. METHODOLOGY

4.1STANDARDISATION OF THE SCALE

The Nomophobic Rating Scale abbreviated as NPRS has been developed in three stages. NPRS is a Likert type rating scale which has five options, Strongly Agree(SA), Agree(A), Undecided(U), Disagree(D) and Strongly Disagree (SD) . In the first stage of development, the investigator formulated around 46 statements with the help of research advisor and from the ideas gained from the review of related literature. These statements give an idea that the subject is using a mobile phone or always thinking about his/her mobile phone. Among the 46 statements, 23 items had positive polarity and 23 items were negatively polar. Then the drafted items were given to experts in the field and experts in language. The items were modified and reconstructed according to the suggestions and converted into a Googleform. This Google form was shared to 20 Higher Secondary School students for pre -try out and

necessary changes were incorporated to the statements.

4.2 TRY -OUT

After pre- try out, the NPRS shared to Higher Secondary School students who were in different streams of study through WhatsApp groups of their respective schools and 230 responses were collected through Google form. The collected responses were transformed into scores as per the scoring key. The scoring key was prepared by awarding 5,4,3,2 and 1 scores to the responses Strongly Agree(SA), Agree(A), Undecided(U), Disagree(D) and Strongly Disagree (SD) respectively for a positively polar statements and vice versa for a negatively polar statement. The total score of the scale is the sum of scores of all the items. The 230 responses were arranged in descending order of their total score. 27 % of the responses with highest score and 27% of the responses with lowest score were separated out. They were termed as upper group and lower group. To evaluate the statements, t value between the scores of each statement was found out. Items with t value greater than 1.75 was regarded as a good item, which possesses internal consistency and hence discriminating power (Edwards, 1957). The items with t value equal to or above 2.65 were selected and below 2.65 were rejected from the draft to form a final rating scale. Thus the final scale consists of 24 items and 6 among them were negatively polarised and 18 were positively polarised.

Positively polar statements were items 1,2,3,5,6,7,9,10,11,12,14,15,16,18,20,21,22 and negatively polar statements were 4,8,13,17,19,23.

4.3 RELIABILITY

A rating scale should be stable and trustworthy at any instance. In order to confirm that, the investigator should verify the reliability and validity of the items. Split -half method and Cronbach's Alpha test were used to check the reliability of the items after pilot study. The final draft was given to 126 higher secondary school students as Google form and collected their responses as Google sheet. Cronbach's Alpha test gives an alpha value of 0.812 which shows that the scale is highly reliable. The Spearman-Brown Coefficient is 0.808 from the split-half method which also confirms the reliability of the test.

4.4 VALIDITY

Validity of the test was checked by content validity and Pearson correlation method. The items were thoroughly checked by the experts in the field and validated. Pearson correlation analysis shows that all variables having a coefficient value higher than 0.174 with total. It ensured the validity of items. The various statements in the final scale are as following.

1. When I wake up, the first thing I do is to take my phone.
2. I usually look into the phone while having food.
3. Would like to keep a phone with me while going to school.
4. I never check my mobile phone during my study time.
5. I have an attractive pouch for my phone.
6. When I attend a function, I sit alone and browse through my phone.
7. I spend time familiarising myself with new apps in the play store.

8. Haven't done online shopping using my phone.
9. A Mobile phone can replace a calendar.
10. I set an attractive ringtone in my phone.
11. I feel lonely when I forget to take my phone.
12. I am an active user of WhatsApp.
13. I prefer a timepiece to my phone for setting an alarm
14. I watch porn videos / pictures through my phone.
15. While I wait for a bus, I check the time frequently on my mobile.
16. While travelling, I prefer scrolling through my phone rather than talking with a fellow traveller.
17. I am not much comfortable to use a new android phone
18. If I want to know about something, I refer to it using my Smartphone.
19. When my phone is in silent mode, I never check it.
20. I attend a call even while studying.
21. I feel nervous and excited when my mobile rings.
22. My friends and parents get my help to clear doubts about using a new phone.
23. I can stay away from my phone for a week or more during my examination time.
24. I use my mobile camera as a mirror to comb my hair.

5. RESULTS AND DISCUSSION

The NPRS was constructed and standardised according to the standard techniques for the standardisation of a Likert type scale with five point rating scale. It contains 24 items among 7 of them are negatively polar and the rest were positively polar. The maximum score which can be obtained by a sample is 120 and the minimum score is 24. If the sample is 100% neutral to the statement, the score will be 72.

If a sample gains a score below 72, then it means that the sample is moderately or less nomophobic while a score which is higher than 72 shows that the sample is more addicted to the gadgets. As the score reaches 120, the sample needs adequate attention and may be requested for an intervention from a professional for retrieval from the symptoms.

6. CONCLUSION

Technology is a boon when it is used productively. In the age of digital natives, the creative usage of mobile phones can never be ruled out. During the contemporary scenario when the entire world faces an unprecedented standstill, the mobile phones play a pivotal role in carrying out academic activities by the teachers and the students throughout the globe. Even after the threat of this pandemic vanishes, the academic community will undoubtedly move forward in tune with the technological advancements in the years to come. Still, this study points out certain serious concerns regarding the necessity of proper monitoring among the adolescents with regard to their usage of mobile phones. It also highlights the necessity of timely interventions from the part of teachers, parents and professionals which will invariably enhance the physical, social and emotional development of the students at higher secondary level.

REFERENCES

1. Adawi M, Bragazzi NL, Argumosa-Villar L, Boada-Grau J, Vigil-Colet A, Yildirim C, Del Puente G, Watad A Translation and Validation of the Nomophobia Questionnaire in the Italian Language: Exploratory Factor Analysis JMIR MhealthUhealth 2018;6(1):e24
2. Ahmed S, Pokhrel N, Roy S, Samuel AJ. Impact of nomophobia: A nondrug addiction among students of physiotherapy course using an online cross-sectional survey. Indian J Psychiatry 2019;61:77-80
3. Daei, A., Ashrafi-Rizi, H., &Soleymani, M. R. (2019). Nomophobia and Health Hazards: Smartphone Use and Addiction Among University Students. *International journal of preventive medicine*, 10, 202. https://doi.org/10.4103/ijpvm.IJPVM_184_19
4. Edwards, A. L. (1957). Techniques of Attitude Scale Construction. New York : Appleton Century Crofts, Inc.
5. Gnanadhas, Jilisha& J, Venkatachalam & Menon, Vikas &Olickal, Jeby. (2019). Nomophobia: A Mixed-Methods Study on Prevalence, Associated Factors, and Perception among College Students in Puducherry, India. Indian Journal of Psychological Medicine. 41. 541. 10.4103/IJPSYM.IJPSYM_130_19.
6. IJIP. In. The International Journal of Indian Psychology, Volume 3, Issue 4, No. 82. RED'SHINE Publication. Inc. 2016:213.
7. J.B, B., Preeti, M., Praveen, C., &Jinto, P. (2013). *NOMOPHOBIA - DO WE REALLY NEED TO WORRY ABOUT?*
8. King, A. L., Valença, A. M., &Nardi, A. E. (2010). Nomophobia: the mobile phone in panic disorder with agoraphobia: reducing phobias or worsening of dependence?.*Cognitive and behavioralneurology : official journal of the Society for Behavioral and Cognitive Neurology*, 23(1), 52–54. <https://doi.org/10.1097/WNN.0b013e3181b7eabc>
9. R Gupta (2019). Nomophobia: A Smartphone Addiction. International Journal of Indian Psychology, 7(1), 969-979. DIP:18.01.110/20190701, DOI:10.25215/0701.110
10. Ritu Sanjeev Sood, AaqibAnwaar Butt (2020) Nomo phobia: Review on Smartphone Addiction in Indian Perspective. *Journal of Critical Reviews*, 7 (3), 773-778. [doi:10.31838/jcr.07.03.135](https://doi.org/10.31838/jcr.07.03.135)
11. Shankar, V., Singh, K., & Jangir, M.K. (2018). *NOMOPHOBIA : Detection and Analysis of Smartphone Addiction in Indian Perspective*.
12. Thapa, K., Lama, S., Pokharel, R., Sigdel, R., &Rimal, S. P. (2020). Mobile Phone Dependence among Undergraduate Students of a Medical College of Eastern Nepal: A Descriptive Cross-sectional Study .*Journal of Nepal Medical Association*, 58(224). <https://doi.org/10.31729/jnma.4787>