

NOMOPHOBIA: Detection and Analysis of Smartphone Addiction in Indian Perspective

Vishnu Shankar¹, Karan Singh¹, Mahendra Kumr Jangir¹

Jawaharlal Nehru Universtiy New Delhi, 110067, India.

Abstract

In the era of science and technology as far as communication is concern it is very important and trending field of research. Since the period of telegram to Long Term Evolution and IP based Smart phone, the pattern of growth is very interesting and it implicates the amazing transformation in human life. Even though the innovation in communication made human life very easy, fast and productive but on the other hand it's excessive mining can be reason of deteriorating the human health. Although numerous studies have examined factors that influence smartphone addiction, few have analyzed the potential protective factors inherent in individual that may benefit future intervention programs for smart phone addiction. In this paper our concern is usability of smartphone and its future consequences. We did questionnaire based survey of 196 Indian people, which includes sexes, teachers and students. Questionnaire set contains 30 different mobile phone usability related questions. Based on the responses from questionnaires we assigned each answer a specific points according to Likert Scale (1 = less concerned and 4 = very concerned). After processing data by using many methods say Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, Bartlett's sphericity test yielding chi square, psychologically we decided the threshold point which shows the addiction point. One who crosses this point is Nomophobic. Nomophobia is considered a modern age phobia introduced to our lives as a byproduct of the interaction between people and mobile information and communication technologies, especially smartphones.

Keywords: Nomophobia, Nomophobia questionnaire, Smartphone, Addiction.

INTRODUCTION

Mobile phones are invented and introduced to make human life easier, but if the same mobile phone becomes the reason of deterioration of human health then definitely it is not a good signal. Very often we have seen that elderly people ask their children to keep away from smart phones, but the reality is that elderly people are also addicted of smart phone. A study by the Boston Medical College [1] on some families during having a meal in restaurants in 2004, it was found that one third of family members were busy on a mobile phone during having a meal. Regarding to usability of Mobile phone a survey was held in California State of the United States of America on public space say school, metro station and restaurants in 1999. In this survey, 90% people argued that it is rude to use a mobile phone in a public place. But now the

scenario is changed, almost every person can be seen busy on their smart phone at public place and it does not seem rude nowadays. Accessing information using mobile phone gives pleasant feeling as having good food or earning good money, this is found in the research of the Harward University. Scientists found that if a child uses a mobile phone in excess, then his Insula or insular lobe, a part of the brain can be affected badly. Mobile phone and there are various apps which make our life easier [2], but it creates digital pollution if it is used in excess. We should use technology, but not be slave of technology [3] so to reduce such pollution we should think of Mobile free day just like car free day.

There are many people who start their day by checking mobile phone and end the day also by mobile phone it implies that they are either addicted to a mobile phone or tends to addict.

THE DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDER

Diagnostic and Statistical Manual of Mental Disorder [4, 5] is the base for assessing the mental health. In 2013 fifth version of DSM [4] has been released, that was followed by its fourth version published in 2000. First version of DSM came in 1952, second in 1968 and third in 1980. In DSM-III that was published in 1980 has "Simple Phobia" later in 1987 it was changed to "Specific Phobia". Specific Phobia were having blood or injection phobia and many more phobia such as zoophobia that is from animals, agrizoophobia that were from wild animal, arachnophobia from insects, acquaphobia from water. The recommendation to modify criteria for specific phobias has been forwarded by DSM-V Anxiety Work Group. In this work we also recommend to add this in to DSM.

NOMOPHOBIA

The fear of not having access to their mobile phone is called Nomophobia, this term was first used by YouGov [6]. The reasons for not being able to access may be the mobile is not having signal or another reason may be mobile is not having battery [7].

A survey done in previous years has shown that around half of the persons don't have ever switched off the phone.[7] There were similar observations for around half of the persons feel uneasy without accessing smartphone. This percentage is gradually increasing. There are various questionnaire used for identifying monophobia we are going to use the following set

of questions that we will use in our study for detection of mobile phone addiction in India.

Table 1. The 30 items of Questionnaire

Sr. No.	Questions
1.	Do you feel uncomfortable without constant access to information through Smartphone?
2.	Do you feel annoyed if you are unable to find information on your Smartphone?
3.	Did running of battery of your Smartphone scare you?
4.	Did shortage of credit and hit data limit panic you?
5.	Do you constantly check your signal and/or Wi-Fi connectivity if you are out of network?
6.	Do you feel anxious because you could not instantly communicate your friends and family?
7.	Do you feel nervous because you would not be able to receive calls and text messages?
8.	Do you feel uncomfortable because you could not stay up date with social media?
9.	Do you feel anxious because you could not check your email messages?
10.	Do you feel weird because you would not know what to do without phone?
11.	Did you think about using your smart phone all the day?
12.	Have you become stressed when unable to use the phone?
13.	Have you become angry when unable to use phone?
14.	Have you used phone to feel better and safe?
15.	Have you ignored others say family, friends while using phone?
16.	Have you neglected schooling, work or social events to use the phone?
17.	Did you have fight with others because of your phone habit?
18.	How long you use your phone once you started it?
19.	Have you felt bad after using the phone for a long time?
20.	Did you spend much free time using the phone?
21.	How many hours daily you use smart phone?

Sr. No.	Questions
22.	How many hours do you use social networking say Facebook, WhatsApp, Imo etc.?
23.	How frequent do you check your phone?
24.	How much time you sleep in 24 hr. of a day in your normal schedule?
25.	What do you do just after wake up in morning?
26.	Is smart phone transformed your life?
27.	How long can you live without Smartphone?
28.	How much time you use internet in a day?
29.	Which device do you use most of time in daily life?
30.	Do you use smartphone while driving?

SYMPTOMS OF NOMOPHOBIA

Nomophobia occurs in situations when an individual experiences anxiety due to the fear of not having access to a mobile phone. Anxiety is provoked by several reasons, such as the loss of a mobile phone, loss of reception, and a dead mobile phone battery. Respiratory alteration, perspiration, agitation, disorientation, tachycardia and trembling are some of the symptoms of Nomophobic person. Along with all these symptoms, there are various serious symptoms which can be seen very often in mobile phone addicted person these serious symptoms are Depression, Panic, Fear, Dependence, Rejection, Low self-esteem and Loneliness.

LITERATURE SURVEY

Walsh et al.[8] in his research described measurement tool MPIQ called Mobile Phone Involvement Questionnaire. There work done in Australia, young participate whose age were between fifteen to twenty five years old participated in survey. In Australia youth is the demographic group that is highest in keeping mobile. In this work frequency of mobile phone use and mobile phone involvement conceptualized as base. In this work total participants were nine hundred forty six, the focus here was to differentiate between number of times the person uses the phone and psychological relationship of mobile users with their mobile. In United Kingdom found that Nomophobia is increasing and people, Survey done on one thousand persons by one poll shows that two out of three mobile users has fear of being without their phones. People are having two or more phones for being connected and in a survey it was found that forty one percent people found in this class. This survey was sponsored by Secure Envoy who is the global leader of Tokenless two factor authentications. Fifty percent of them said they will be upset if there messages and phone will be looked by their partner. It was also notices that seventy percent of women were having the fear of losing their mobile

phone and thirty six percent of them were having two phones for being connected. Men were having less fear than women that was sixty one percent but they were having more percent of having two phone and it was forty seven percent. Caglar Yildirim et. al [9] in their work has developed a questioner for majoring mobile phone addiction. In this mixed method of research design was used. There were two phases of this study, qualitative and quantitative respectively first and the second phases. When we are not having much knowledge about the domain then this is the most preferred method used. Semi-structured interviews were conducted in the first phase that was qualitative. Students were those that were using their mobile devices for a longer time and were more dependent on them. The snowball approach was used in this as its good to know who will be the next candidate to be interviewed. They designed questions on seven likert scale. The expert also reviewed the question and corrected its English. They tested along their questioner along with MPIQ (Mobile Phone Involvement Questionnaire) for testing it. There were eighty six undergraduate student who participated in this survey. This questioner shows good internal consistency. Construct validity was also performed by MPIQ. Nazir S. Hawi et.al [10] has raised the questions this work that adverse effect of smartphone addiction is going on to the students on their academic performance. Either male of female both of them are equally susceptible to addiction. In this study two hundred ninety three students participated in online mode. Mobile addiction is classified as impulse control disorder in the literature. There are various non-substance addiction and our mobile addiction will also lie in it. Student are on working on Smartphone while doing their studies. Olatz Lopez-Fernandez [11], in this study mobile addiction has been seen on Spanish and French, this was a cross cultural study of mobile addiction. Mobile addiction is the subset of behavioral addiction. Problematic mobile phone use is very alarming but there is no solid framework to understand that why it develops and why it persists. There were no cross cultural studies conducted before this. In this cross cultural studies they have checked Psychometric properties in both Spanish and French population and checked the presence of smartphone addiction. The survey was done in two universities, University of Barcelona and Catholic University of Louvain. Students and faculties were participated in the survey. There was commitment for the confidentiality. Range of age of Spanish participants was eighteen to sixty eight years. In this study author has reexamined the Smart Phone Addiction scale. Caglar Yildirim et.al [9] in work has done investigation on mobile phone addiction, this study was conducted in Trukey and the target audience was youth. Nomophobia Questioner was used for detection of smartphone addiction and in this study five hundred thirty seven Turkish students participated. In this work they explored that approx. forty three percent students were having smartphone addiction. In this work they have found time of smartphone ownership and gender of mobile user were having impact on their mobile phone addictive behavior. There are other researchers working and giving finding on mobile phone use [12,13,14,15,16,17,18] in several studies.

METHOD

A valid questionnaire was distributed for the pretest. We recruited Indian students and school teachers to serve the study as participants by using the purposive sampling. A total of 200 participants were distributed questionnaires, 196 candidates responded. Valid questionnaires with no neutral and no empty responses were recovered 193 (the recovery rate is 98.46%). When using the MLE method, data must satisfy the assumption of multivariate normality. Therefore, the sample size cannot be less than 100, that's why we choose 200 which is quite fair. Final 193 participants are between 18.5 to 45 age groups. We distributed these participants into three groups as per the age, first is 18-25 age groups contains 87 members (45.07%), second age group is 26-35 having total 57 candidates (29.53%) and last one is of age group 36 and above total 49 candidates (25.38%). The survey was based on both of sex, involvement of male is 126 in numbers (65.28%), and remaining 67 candidates (34.72%) were female. As above stated it was purposive sampling, where 50 questionnaires (25.90%) were received from teacher employees in Kendriya Vidyalaya Samiti India, and remaining 143 (74.10%) were students, from various institutes. The distribution of some of the questionnaires was done by using Google form and remaining by physical hard copies so that a fair record can be restored. We considered 27 questions for final research, 3 questions were dummy so removed for analysis. Participants were given enough time to fill the survey.

MEASURES

The Kaiser-Meyer-Olkin (KMO) test describes the suitability of our data that how suited our data for Factor Analysis. KMO test measures the sampling adequacy for each variable in the model and for the complete model. The statistic is a measure of the proportion of variance among variables that might be common variance. The lower the proportion, the more suited our data is to Factor Analysis.

KMO returns values between 0 and 1. KMO value less than 0.6 indicates that sampling is not adequate. The criteria for factor inclusion were eigenvalues greater than 1 and the results of a slope test. Varimax rotation was conducted for orthogonal rotation.

$$KMO_j = \frac{\sum_{i \neq j} r_{ij}^2}{\sum_{i \neq j} r_{ij}^2 + \sum_{i \neq j} a_{ij}^2}$$

The Bartlett's Sphericity test is conducted to calculate the correlation between the variables. It checks if there is a certain redundancy between the variables that we can summarize with a few numbers of factors. If the variables are perfectly correlated, only one factor is sufficient. If they are orthogonal, we need as many factors as variables.

The Bartlett's test is used to test the null hypothesis, H_0 that all k population variances are equal against the alternative that

at least two are different. If there are k samples with size N_i and sample variance is S_i^2 the Bartlett's test is.

$$\chi = \frac{(N-k) \ln s_p^2 \sum_{i=1}^k (N_i - 1) \ln s_i^2}{1 + (1/(3(k-1))) (\sum_{i=1}^k \frac{1}{N_i - 1} - 1) - 1/(N-k)}$$

$$s_p^2 = \sum_{i=1}^k (N_i - 1) s_i^2 / (N - k)$$

In the above, s_i^2 is the variance of the i^{th} group, N is the total sample size, N_i is the sample size of the i^{th} group, k is the number of groups, and s_p^2 is the pooled variance.

DATA ANALYSIS

The measured variable included here is related to the university students and teaching employees. To measure the life stress and smartphone addiction the responses of the questionnaire is converted into the 5 point Likert scale (1 represents less concern and 4 is very concerned). The Score is calculated by using a statistical model called ANOVA where higher the score implies more life stress and more tends to smart phone addiction and lower the score means fewer life concern. To see the clear pattern we divided the questionnaire into various categories say male, female and different age groups.

The KMO measure of sampling adequacy (MSA) for the Female candidates is 0.689 which is mediocre in nature and Bartlett's Sphericity test yielding $\chi^2 (67) = 861.253$ and the degree of freedom df within the group is 351 ($p < 0.001$). Principal Component Analysis (PCA) method is used to extract the components. Total 8 components were extracted here in case of Female data. Varimax with Kaiser Normalization is the Rotation Method which is used to converge the data. The rotation converged in 17 iterations.

There are 126 male participants, which is 65.28% of total candidates, the KMO MSA is 0.736 which says that the sampling is adequate. $\chi^2 (126) = 1075.645$ and the degree of freedom df is 351 ($p < 0.001$). PCA extracted 8 components out of total 27, and Rotation converged in 10 iterations.

Participants were divided into three age groups first 18 to 25 age group whose KMO MSA is 0.703 which says that data is adequate for sampling. Bartlett's Sphericity test $\chi^2 (87) = 860.508$ and Principal Component Analysis Method is used for extraction of components. Rotation converged in 8 iterations. Rotation method used is Varimax with Kaiser Normalization. Second age group is of age 26 to 35 which contains 57 participants 29.53% of all, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy of this group is 0.630 and $\chi^2 (57) = 718.169$. This shows that the sample which we took is quite adequate for our experimental analysis.

Table 2. Extraction Method: Principal Component Analysis.

Variable	Initial	Female	Male	18-25	26-36	36 and above	KV Teacher	Unemployed
Q1	1.000	.521	.534	.410	.735	.647	.730	.371
Q2	1.000	.600	.581	.518	.653	.627	.696	.490
Q3	1.000	.646	.663	.621	.722	.656	.636	.466
Q4	1.000	.748	.499	.623	.780	.589	.770	.542
Q5	1.000	.660	.396	.666	.678	.614	.698	.483
Q6	1.000	.684	.605	.738	.765	.686	.704	.556
Q7	1.000	.759	.638	.697	.853	.809	.846	.704
Q8	1.000	.736	.729	.629	.760	.776	.795	.590
Q9	1.000	.698	.720	.683	.592	.670	.788	.606
Q10	1.000	.585	.603	.604	.667	.685	.680	.577
Q11	1.000	.839	.612	.481	.689	.642	.690	.515
Q12	1.000	.633	.656	.702	.669	.677	.607	.638
Q13	1.000	.741	.582	.754	.641	.668	.790	.631
Q14	1.000	.776	.626	.551	.674	.756	.656	.477
Q15	1.000	.723	.637	.644	.719	.651	.725	.658
Q16	1.000	.846	.654	.675	.693	.826	.708	.627
Q17	1.000	.754	.607	.599	.771	.775	.708	.528
Q18	1.000	.598	.702	.536	.656	.707	.603	.658
Q19	1.000	.700	.655	.727	.709	.803	.627	.617
Q20	1.000	.642	.564	.635	.573	.729	.692	.542
Q21	1.000	.756	.747	.768	.738	.709	.820	.725
Q22	1.000	.624	.659	.719	.737	.627	.635	.654
Q23	1.000	.546	.617	.750	.638	.592	.608	.663
Q24	1.000	.663	.737	.751	.607	.738	.776	.751
Q25	1.000	.813	.479	.673	.722	.706	.628	.536
Q26	1.000	.777	.635	.681	.720	.544	.803	.616
Q27	1.000	.788	.511	.828	.543	.813	.766	.714

Table 3. Measure of sampling Adequacy and chi square

Variable	KMO MSA	BTS (χ^2)
Female	0.689	861.253
Male	0.736	1075.645
18 to 25	0.703	860.508
26 to 35	0.630	718.169
36 and above	0.660	566.395
KV Teachers	0.612	692.100
Unemployed	0.823	1232.537

Table 4. Statistical Analysis of data using Single factor ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1156.386	26	44.47639	65.61498	0	1.497729
Within Groups	3513.917	5184	0.677839			
Total	4670.303	5210				

RESULTS AND ANALYSIS

In our survey, after eliminating 3 candidates which did not gave their feedback properly, we have 193 valid questionnaires. Likert scale is used for each variable to assign the score between 0 and 4, where 0 represents least concern and 4 is most serious. To find result we classified data into different seven classes based on Nomophobic Score. The Nomophobic score is assigned by the help of Psychiatry experts. The score is divided between four ranges, if it is below $2 \times 27 = 54$ then candidate is considered as not addicted and in graph he is represented by green color line.

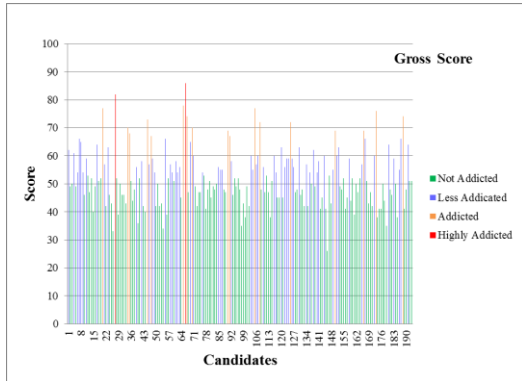


Figure 1. NMP Score of Gross data.

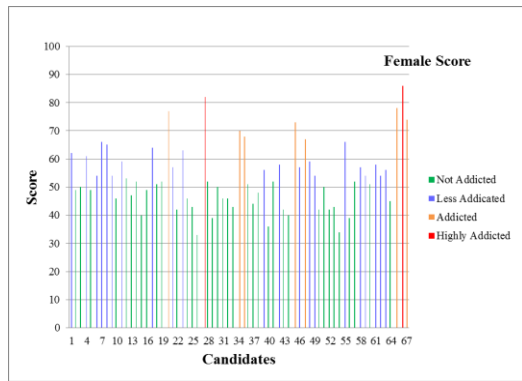


Figure 2. NMP Score of Female Candidate

If the Nomo score is greater than 54 and less than $2.5 \times 27 = 67.5$, then one is considered Less Addicted and is represented by blue color. If the score is in between 67.5 and 81 then candidate is Addicted, yellow color indicates addicted candidates. Finally if the score is more than 81 then it is so serious and candidate is extremely addicted. Figure 1 represents the gross data, where 60 candidates are less addicted, 17 are addicted and 2 are extremely addicted. The total percentage of addiction is 40.93%. Figure 2 shows the addiction level in female candidate. There are total 67 female candidates, out of them 30 (44.77%) are addicted.

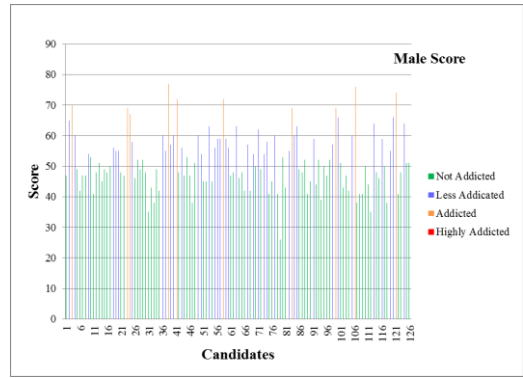


Figure 3. NMP Score of Male Candidate.

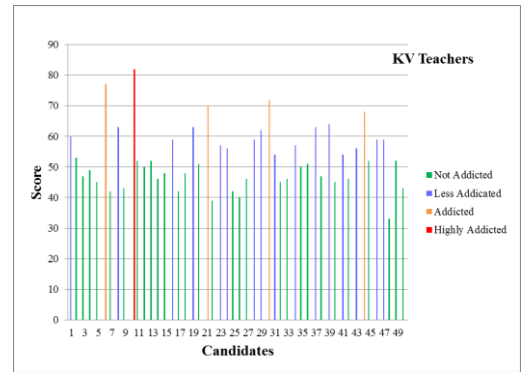


Figure 4. NMP Score of Employees.

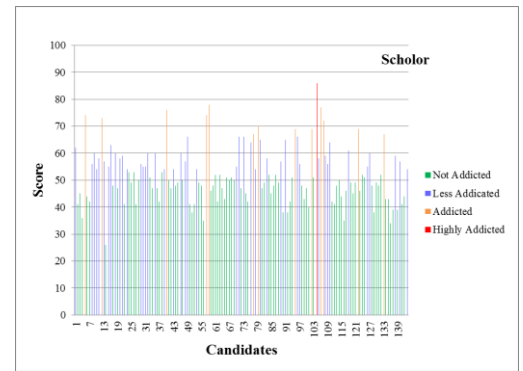


Figure 5. NMP Score of Scholars.

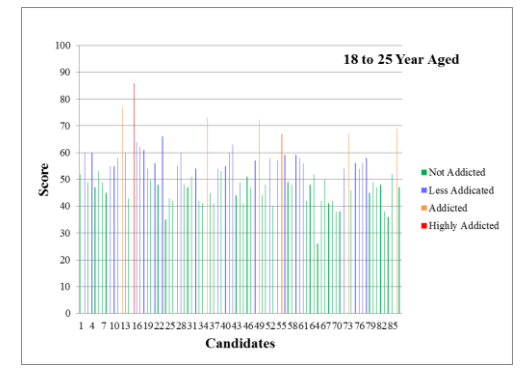


Figure 6. NMP Score of 18-25 Aged.

The level of addiction found less in 21 females where as 7 participants were found addicted and 2 are extremely addicted. The Nomo score of Male candidates is shown in figure 3, out of 126 male candidates 49 (38.88%) are found addicted.

There is not a single man identified extremely addicted. Figure 4 shows the addiction level of KV teachers i.e. employees. We have taken 50 employees for our test, 21(42.0%) among them found addicted. 16 employees are less addicted to smart phone, 4 are addicted and one is extremely addicted which is female employee.

For our experiment we have also collected sample from scholars as shown in figure 5, we took 143 scholars from different locality for healthy sampling. Total addicted scholars are 143 in numbers; the percentage of addicted scholars we found was 40.56%. 44 scholars are less addicted whereas 1 is extremely addicted. We divided the candidates into three age groups to show the pattern of addiction in different age section. First age group is of 18 to 25 shown in figure 6.

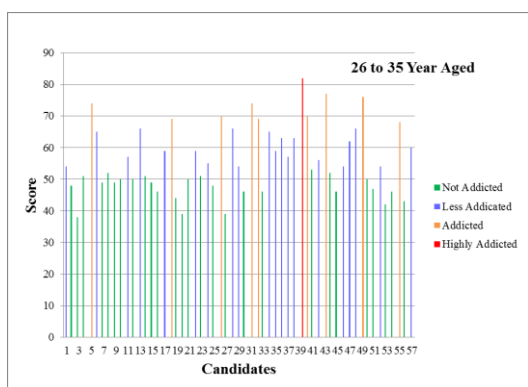


Figure 7. NMP Score of 26-35 Aged.

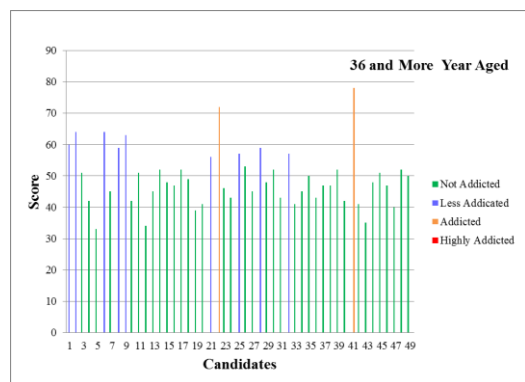


Figure 8. NMP Score of age 36 and more.

There are total 87 candidates fall under this category out of them 38 (43.67%) are found addicted. No of less addicted persons in this age group is 31 whereas mild addicted is 6. One person is extremely addicted in this category. Figure 7 shows the age group 26 to 35. Highest no of addicted persons fall under this category say 30 (52.63%) out of 57 candidates.

One candidate is extremely addicted in this category. There are total 49 participants we took under category of age greater than 35. We found 11 (22.45%) as addicted which is least in our experiments, there is no one who is found extremely addicted.

CONCLUSION AND FUTURE SCOPE

Smart phone addiction is latest discovered addiction which is very common among all sections of society, the percentage of addiction vary from one section to another. We have conducted this study on 196 persons out of them 3 samples are found improper so finally we took 193 samples from various geographical regions in India for our experiment. On the basis of this Nomophobic study we reached on the conclusion that 40.93% of Indian who are above 18 year old is addicted to smart phone addiction called Nomophobia. Female are more addicted as compare to male, the percentage of addiction in female is 44.77% where as in male it is 38.88%. We also find that person who belongs to 26 to 35 age group are more Nomophobic (52.693%) as compare to other defined age groups. 42% teachers in KVS are identified as addicted in our study and 40.56% scholars are also found Nomophobic. To reduce the above stated addiction combination of psychotherapy and some pharmacological interventions can play vital role. A “reality approach” is also highly recommended, asking the patient to focus on his/her own behaviors, also using motivational interviewing. By keeping persons engage in Meditation and outdoor activities their Nomophobic score can be controlled. Nomophobia is very latest and is found all around world so there is lot of scope to research in this field. How to prevent it is really a challenging task, one can think to create a platform which regularly assist user and alarm him if one crosses the limit.

ACKNOWLEDGEMENT

This work is carried out in Security and Computing Laboratory, SC&SS, JNU, New Delhi, India and sponsored by the UGC Startup grant. We would like to thank Dr. Rachna Bhargava, Associate professor Department of Psychiatry, AIIMS, New Delhi, India.

REFERENCES

- [1] Yildirim, C., & Correia, A. P. (2015). Exploring the dimensions of nomophobia: Development and validation of a self-reported questionnaire. *Computers in Human Behavior*, 49, 130-137.
- [2] Bellman, S., Potter, R. F., Treleven-Hassard, S., Robinson, J. A., & Varan, D. (2011). The effectiveness of branded mobile phone apps. *Journal of interactive Marketing*, 25(4), 191-200.
- [3] Chen, Y. F. (2004). The relationship of mobile phone use to addiction and depression amongst American college students. *Korean Broadcasting Institute Seminar and Report*, 344-352.

- [4] American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (DSM-5®). American Psychiatric Pub.
- [5] Spitzer, R. L., & Williams, J. B. (1980). Diagnostic and statistical manual of mental disorders. In American Psychiatric Association.
- [6] JB, B., Preeti, M., Praveen, C. T., & Jinto, P. (2013). Nomophobia-Do we really need to worry about?.
- [7] Bianchi, A., & Phillips, J. G. (2005). Psychological predictors of problem mobile phone use. *CyberPsychology & Behavior*, 8(1), 39-51.
- [8] Walsh, S. P., White, K. M., & Young, R. M. (2010). Needing to connect: The effect of self and others on young people's involvement with their mobile phones. *Australian Journal of Psychology*, 62(4), 194–203.
- [9] Yildirim C, Correia A-P (2015) Exploring the dimensions of nomophobia: Development and validation of a self-reported questionnaire. *Computers in Human Behavior* 49: 130–137.
- [10] Hawi, N.S., Samaha, M., 2016. To excel or not to excel: strong evidence on the adverse effect of smartphone addiction on academic performance. *Comput. Educ.* 98 (July), 81–89
- [11] Lopez-Fernandez, Olatz. "Short version of the Smartphone Addiction Scale adapted to Spanish and French: Towards a cross-cultural research in problematic mobile phone use." *Addictive behaviors* 64 (2017): 275-280.
- [12] Sokolowski, R. (2000). Introduction to phenomenology. Cambridge University Press. Tabachnick, B. G., & Fidell, L. S. (2013). Using multivariate statistics. Boston: Pearson. Thurstone, L. L. (1947). Multiple-factor analysis. Chicago, IL: University of Chicago Press.
- [13] SecurEnvoy (2012). 66% of the population suffer from Nomophobia the fear of being without their phone.
- [14] Salehan, M., & Negahban, A. (2013). Social networking on smartphones: When mobile phones become addictive. *Computers in Human Behavior*, 29(6), 2632–2639.
- [15] Park, N., Kim, Y. C., Shon, H. Y., & Shim, H. (2013). Factors influencing smartphone use and dependency in South Korea. *Computers in Human Behavior*, 29(4), 1763–1770.
- [16] Oulasvirta, A., Rattenbury, T., Ma, L., & Raita, E. (2012). Habits make smartphone use more pervasive. *Personal and Ubiquitous Computing*, 16(1), 105–114.
- [17] Matusik, S. F., & Mickel, A. E. (2011). Embracing or embattled by converged mobile devices? Users' experiences with a contemporary connectivity technology. *Human Relations*, 64(8), 1001–1030.
- [18] Lee, S., Tam, C. L., & Chie, Q. T. (2013). Mobile phone usage preferences: The contributing factors of personality, social anxiety and loneliness. *Social Indicators Research*, 118(3), 1205–1228.