

Development of Indigenous Scale of Nomophobia, Urdu Version

Dr. Iram Naz¹, Sadia Mumtaz², Maria Mazhar³

^{1,2,3} Department of Psychology, University of Gujrat, Gujrat Pakistan

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Abstract

Nomophobia is the fear of being without one's mobile phone, and it is considered a modern phobia that has evolved as a result of people's involvement with mobile information and communication technologies, particularly smartphones. In this study, a questionnaire to evaluate nomophobia was devised, and its psychometric features were established while keeping Pakistani cultural norms in mind. As a result, the considerable literature on Nomophobia was researched and evolved into a nomophobia questionnaire. The investigation was divided into three stages. Items were constructed during the first stage based on literature and DSM-V Nomophobia criteria. The second stage comprised the evaluation of items by experts. At the third step, pilot testing was carried out. A total of 55 items from the first version of the Nomophobia Scale were presented to a panel of 5 experts in the relevant field (Two PhD Doctors and Three PhD Scholars in Psychology) for content validity. Following expert approval, the newly developed "Nomophobia Scale" was tested on 150 university students aged 18 to 26 (75 male & 75 female) to assess its usefulness and any potential ambiguities. To collect data, the first generation of the Nomophobia Scale with 55 items was employed. Initial results revealed that the scale has a strong internal consistency, according to the pilot study, with a Cronbach's alpha score of .90. EFA and CFA were used to complete the underlying structure for the newly developed Nomophobia scale. For EFA and CFA, convenient sampling was used to choose a sample of 500 participants (Male =250; Female = 250) ranging in age from 18 to 26 years. Exploratory factor analysis validated a structure of 4 factors with 40 items. Confirmatory factor analysis was employed to verify the structure obtained from EFA, and the model demonstrated a satisfactory fit with (chi-square = 614.130, df = 146, CFI = .964, RMSEA = .073, and GFI = .900). The research has clinical and counseling significance; a common issue can be tackled with the existing scale.

Keywords: Nomophobia Scale, Youngsters, EFA, CFA

Introduction and Literature

In recent times, the usage of mobile phones has turned into a typical and essential aspect of people's lives. In 2016, there were 2.1 billion smartphone users registered globally (Billieux et al., 2016). Improvements in mobile information technology have enabled the extensive adoption of mobile phones. Expected to reach nearly 7 billion, the number of mobile cellular subscribers is projected to coincide with the world population, given a penetration rate of 96 percent (International Telecommunications Union, 2019). The initial mobile phone was launched in 1983; nowadays, these gadgets have evolved into essential items in many communities (Billieux, Linden & Rochat, 2008). One of the countries with the highest statistically significant growth rates in smartphone ownership is Pakistan. According to GSMA Intelligence, mobile phones accounted for 82.2 percent of Pakistan's total population in January 2022, with a 7% increase in Smartphone usage between 2013 (8%) and 2015 (15%). In Pakistan, mobile phone connections users increased by 9.9 million (+5.6%) between 2021 and 2022, placing it 11th among emerging nations that experienced significant increases in

Smartphone ownership during that time. Furthermore, the majority of those polled regularly use their Smartphones to access the Internet, with the majority of those doing so to access social networking sites. Given the rapid rise in Smartphone ownership in Pakistan, particularly among millennials and those with a higher level of education and higher income (Poushter, 2016). It's also important to understand the associated amount of nomophobia, or the fear of not having the phone (Yildirim & Correia, 2015).

Smartphones are now often used as tools to help people with their daily tasks (Kim, Seo & David, 2015). There are already more than 200 online social sites, including Facebook and Instagram, and Snapchat (Yabar et al., 2019). Excessive use of smartphones makes individuals vulnerable to various psychological issues, including Nomophobia (Darvishi, et al., 2019). Mobile phones enable users to perform numerous everyday tasks on a single device, such as messaging and calling others, reading and sending emails, managing appointments, surfing the internet, shopping, participating in social networks, searching for online information, playing games, and additional activities (Park, Kim, Shon, & Shim, 2013).

A psychological condition known as nomophobia is defined by a dread of losing contact with people via mobile devices (Bhattacharya et al., 2019). It might also be described as the anxiety associated with losing access to social media and other mobile phone features (Gonçalves, Dias, & Correia, 2020). The term "nomophobia" first appeared in a 2008 study on anxiety in mobile phone users in the UK conducted by YouGov, a UK research agency (Bhattacharya et al., 2019).

In the twenty-first century, nomophobia is a behavioral problem that is just beginning to be recognized and researched. The difficulty in communicating with others, the loss of connectivity, the inability to access, and abandoning convenience are the four main causes of this condition of poor usage of digital media (Ahmed et al, 2019). One of the most obvious signs of nomophobia is a person who spends a lot of time on their phone every day and who constantly carries a charger around with them, having anxiety and fear about losing one's own phone, as well as when it is far away, lost, or unable to be used owing to poor network reception, a dead battery, or a lack of credit. People avoid using the device in as many settings and circumstances as feasible (such as public transit, restaurants, theaters, and airports). Check the phone's screen to see if any texts or voice calls have come, to keep the phone powered on at all times (24 h a day). To sleep in bed while using a mobile device. Few social face-to-face meetings with humans, causing anxiety and stress, and preferring to communicate through contemporary technology. To incur debts or considerable costs as a result of using a cellphone (Yildirim & Correia, 2015; Bragazzi & Puente, 2014).

Low self-worth and an outgoing personality are additionally linked to nomophobia. Nomophobia can worsen other mental health conditions like social phobia or social anxiety (Bhattacharya et al., 2019). Anxiety and fear of being disconnected from mobile phones may rise with an increase in the length of smartphone use, daily time spent on them, frequency of checking smartphones, and daily time spent online via mobile.

Nomophobia is a difficult contemporary phobia that is increasing. This growing condition, which is not yet acknowledged as an illness in official psychiatric diagnostic guides, has recently caught the interest of both the media and psychological professionals. Nomophobia, a term derived from "No Mobile Phone Phobia," refers to the irrational anxiety related to not having or being unable to use a mobile phone (Yildirim & Correia, 2015).

Polls show that young people are more likely to become nomophobia addicts. The majority of young people, or 77%, reported feeling anxious when they were without their cell phones. Having self-defeating attitudes, being younger, having poor self-esteem and self-efficacy, being very extroverted or introverted, acting impulsively, and experiencing a sense of urgency, and desiring (Bianchi & Phillips, 2015).

The popularity of smartphones among college students can be due to the numerous functions and capabilities they provide. Smartphones allow you to accomplish numerous daily activities on a single device, including contacting and messaging individuals, managing and sending emails, organizing appointments, browsing the Internet, shopping online, using social networking sites, researching information on the Web, gaming, and enjoying entertainment, among other functions (Park, Kim, Shon, & Shim, 2013).

After waking up in the morning, 61% of adults, according to one poll, check their cellphones (Walsh, 2015). Nomophobia's endure anxiety when they misplace their cell phones, lose their Internet connection, or have their batteries run out. They are progressively choosing to communicate via technological devices rather than in-person interactions, and they feel comfortable when receiving calls on their cell phones (Drago, 2015).

The frequent usage of cell phones by students has been related to lower grade point averages (GPA) and higher levels of anxiety. The distraction brought on by students using their phones too much in class may be to blame for the reduction in GPA. The pressure to be continually connected to social (virtual) networks may cause anxiety since it leaves us with little opportunity to unwind in isolation, which is essential for our wellbeing (Lep, 2014).

Numerous studies on nomophobia are being undertaken in Pakistan. In their experimental investigation on nomophobia on university students, Batool and Zahid (2019) found that most students (68%) exhibited a moderate level of the condition. Latif, 2020 discovered a link between internet addiction and nomophobia among physical therapists in Karachi, Pakistan. To assess the prevalence of the syndrome and the factors contributing to it among undergraduate students, Farroq et al., 2022 carried out a study in Pakistan. The study's findings reveal that a majority of students experience nomophobia. In a study assessing the effects of nomophobia on anxiety among undergraduate students, Mir, Rija, and Akhter (2020) discovered that nomophobia significantly influenced students' anxiety levels.

Other traits that people might display include spending the majority of their time on a mobile phone (on average 34 times per day), keeping it on all the time, sleeping in bed with it, checking the screen to see if there are any calls or messages, feeling anxious at the thought of losing or misplacing the phone, or worrying when it is not charged or has no signal coverage (Bragazzi & Del, 2014)

Despite the fact that research on the root causes of nomophobia is scant, several components of this disorder have been found. According to Bianchi and Philips' definition of phobia, it is brought on by a number of psychological factors. The term "FOMO," or "fear of missing out," refers to a sort of social anxiety connected to social networks that is defined by the urge to be always online and may result in nomophobia (Fuster, Chamarro & Oberst, 2017). Extrovert and perfectionist personalities may have an unhealthy obsession with attending social gatherings and a paranoid fear of being apart from their mobile devices (Bhattacharya et al., 2019).

Additionally, studies have discovered a connection between increasing cell phone use and a number of health issues, including anxiety, depression, insomnia, and others (Taneja, 2014). When they are in poor network areas or when their phone credits accidentally run out, it has been shown that heavy mobile phone users typically experience bouts of worry (Coyne, Stockdale & Summers, 2019). In addition, a study of secondary school students in Hong Kong discovered a connection between problematic mobile phone use and afternoon sleepiness as well as hopelessness (Ng et al., 2020).

Nomophobic people feel the urge to sleep with their phones nearby since they are continually looking for alerts. After lights out, a Japanese study on mobile phone use and sleep patterns found that the group under study had insomnia, worse sleep quality, and less total hours of sleep (Amra et al., 2017). Additionally, nomophobia is commonly linked to problems with impulse control and the inability to wait gratification when it comes to new mobile phone capabilities. Attitudes driven by a need for novelty eventually have a tendency to increase impulsivity and cause a lack of self-control (Dongre, Inamdar & Gattani, 2017).

Psychometric tools are needed by academics and medical practitioners to identify and quantify nomophobia due to the rise in interest in the condition. The Nomophobia Questionnaire (NMP-Q) is the only instrument that has been created and tested thus far (González-Cabrera et al., 2017; Yildirim & Correia, 2015). Unfortunately, there is a lack of locally produced tools for diagnosing nomophobia despite a statistically significant increase in Smartphone usage in Pakistan. Western instruments were used in all of the investigations mentioned above to gather data. To the best of the authors' knowledge, Pakistan has not yet developed a nomophobia scale. The current study makes an effort to close this gap by developing a local nomophobia scale for Pakistani adolescents. The purpose of this study was to develop a questionnaire to measure nomophobia among college students in Pakistan. Before creating a survey to measure nomophobia, the past research was evaluated.

Methodology

In the current study, the Nomophobia Scale was developed according to Pakistani culture to meet the need for an indigenous scale to quantify the level of anxiety associated with not having a cell phone.

Phase I: Scale Development

The initial phase of the study was segmented into three stages. Items were created in the initial phase grounded on literature and DSM-V standards of Nomophobia. During the second step of phase 1, an evaluation of items by experts was conducted. In the third stage, pilot testing took place.

Stage I: Generation of item pool. A pool of items was created by examining literature and based on DSM-5 criteria for Nomophobia. A total of 55 items in Urdu were created.

Stage II: Content validity via assessment of items by experts. To assess content validity, a total of 55 items from the original form of the Nomophobia Scale was presented to a panel consisting of 5 experts (two PhD holders and three PhD candidates in Psychology) within the pertinent field. The goal of the expert assessment was to gather insights from specialists regarding the data included in each component, including the evaluation of nomophobia in young people.

The relevancy of the items on the scale was rated by experts as essential, and useful but not essential and not necessary (Lawshe, 1975). They also discussed the ambiguity and inappropriateness of certain words or items. According to experts, the majority of the items on the targeted topics under evaluation were appropriate and reasonably developed. However, their recommendations led to minor adjustments in the way some items were written. A few words were changed to simpler alternatives that the general public might understand. After expert evaluation total all the 55 items were retained and finalized for pilot testing.

Stage III: Pilot study. After expert validation, this newly created "Nomophobia Scale" was tested on 150 university students (75 males and 75 females) aged 18 to 26 years to evaluate its effectiveness and any possible uncertainties. They were asked orally about their comprehension and clarity of the items presented in the scale, and based on their responses, ambiguous and unclear items were either eliminated or rephrased. Data were gathered using the original version of the Nomophobia Scale, which contains 55 items.

The preliminary study showed that the scale possesses a Cronbach's alpha of .90, indicating strong internal consistency (Downing, 2004; Field, 2009). A .90 alpha value is regarded as excellent (George & Mallery, 2011). Thus, it was suggested that the scale was suitable for use in the primary study.

Phase II: Establishing Psychometric Properties

This study aimed to identify the psychometric characteristics of the Nomophobia Scale. After finishing the previous steps, it was now time to implement the scale in the main study.

Exploratory and Confirmatory Factor Analysis:

This study aimed at establishing the psychometric properties of the Nomophobia Scale. After the sequence of the above-mentioned stages, it was now all set to administrate on the devised main study. Prior to EFA, the overall item correlation for each item was assessed, and items with correlations

below 0.3 were removed according to Field's (2005) standards. The remaining 40 items were finalized for EFA. EFA and CFA were used to complete the fundamental framework of the newly established Nomophobia scale. EFA was used to identify the structure of the factors, whereas CFA was used to corroborate the structure of the factors proposed in EFA.

Participants

By using Convenient sampling, a sample of 500 participants (Males = 250 & Females = 250) with ages ranged from 18 to 26 years were selected for EFA and CFA. The students (males & females) enrolled in undergraduate and graduate degree programs in different departments of University of Gujrat who had owned a mobile phone for at least a year, had internet connection, and used mobile phone for more than an hour. Participants with any form of mental or physical difficulties were removed from the research to maintain homogeneity.

Measures

Demographic Form

The demographic form has been divided into two sections: Part I contains details about the age, gender, degree, semester, residence location, family system, and family income. Part II contains information on the period of mobile phone ownership, the duration of mobile phone usage, the frequency with which the mobile phone is checked for calls, messages, and emails, the number of Apps accessed on the mobile phone, and the purpose for which the mobile phone is used.

Nomophobia Scale for Youngsters

The newly indigenously developed Nomophobia Scale measures nomophobia among youngsters. It consisted of 40 items with points Likert scale ranging from strongly disagree (1) to strongly agree (7). Total scores are calculated by summing up responses to each item, resulting in a nomophobia score ranging from 7 to 280. Higher scores on the scale indicate a higher level of nomophobia. The alpha reliability of scale is 0.94

Procedure

The approval from research committee and the Higher authority of the University was acquired for the purpose of data collection. Participants were chosen at random using convenience sampling, and the sample included students from the University of Gujrat. When approached individually, participants were given the study's ethical criteria as well as a brief explanation of its goal. They were also assured that the information acquired from them would be kept anonymous and would only be used for the study. Every participant had the choice of participating or leaving the research at any time. Participants were given a protocol that included measures for demographic characteristics as well as the Nomophobia Scale for Youngsters. The questionnaire takes around 10 minutes to complete for each participant. A debriefing session was held to answer participants' questions regarding the study and to resolve if they have any concerns. The acquired data were input into SPSS version 21 for further analysis and interpretation.

Results

Exploratory Factor Analysis

Principal Component Analysis with Varimax rotation was performed on a sample of 500 to explore the factor structure of Nomophobia Scale. The number of factors determined were based on Eigen values greater than 1 and scree plot (Kim & Mueller, 1978). Forty items exhibited substantial item-total correlation, with .30 or higher loading were retained in a particular factor. KMO sample adequacy value was (.87), and Bartlett's test of Sphericity had a p-value of .001. Cronbach Alpha Reliability was used to describe the scale's internal consistency (.90). Five factors were identified by Scree plot (see figure 1) and verified by Eigenvalue and variances as best describing the data. The initial solution led to the extraction of five factors with initial eigenvalues greater than 1, accounting for 69.3% of the variance. Factor I, which is the inability to communicate, accounted for 39.3% of the item variance, Factor II, which is the loss of connectedness, for 14.1%, Factor III, which is the inability to access

information, for 6.35%, Factor IV, which is the giving up of convenience, for 5.32% of the item variance and factor V which is has 4.13% of total variance. (see table no 1)

Table 1

KMO and Bartlett's test for Sampling Adequacy of 22 items (N=350)

	KMO	Bartlett's test		
		Chi-square	Df	Sig
Nomophobia Scale	.87	25550.930	780	.000

Table 1 show The Kaiser-Meyer-Olkin (KMO)measure sample adequacy for the 40 items of the NPS. KMO was measured at .87'. According to Kaiser (1970), KMO values above .80 are considered meritorious and have a high level of sufficiency. Bartlett's test of Sphericity demonstrated X^2 value of 25550.930 ($p < .001$) which denotes the factorability of the R-matrix and data set of NPS is suitable for exploratory factor analysis.

Table 2

The factor structure of Nomophobia Scale for Youngster with Varimax Rotation(N=500)

Items#	F1	F2	F3	F4	F5
1	.845				
4	.531				
6	.912				
8	.873				
11	.913				
12	.883				
14	.737				
16	.734				
17	.750				
18	.726				
20	.688				
21	.660				
22			.739		
23					.718
24					.817
25					.738
26					.526
30				.690	
31				.784	
32				.837	

34			.739		
35			.802		
36		.743			
37		.768			
38			.695		
39		.823			
40			.491		
41			.629		
44		.745			
45			.746		
46		.724			
47		.823			
48		.653			
49		.512			
50		.826			
51			.746		
52		.827			
53		.537			
54			.741		
55		.343			
Eigen value	15.75	5.66	2.544	2.13	1.654
%Variance	39.38	14.15	6.359	5.325	4.135
Cumulative%	39.38	53.53	59.89	65.22	69.32

According to Table 2, the majority of the items have loadings between .4 and .9. Items that met the requirement of having a loading of at least .30 were retained. If an item loads more than .30 in more than one factor, the retention of that item in that factor is determined by the item's content relevance to other items. It also indicates that all factors have a sufficient number of items.

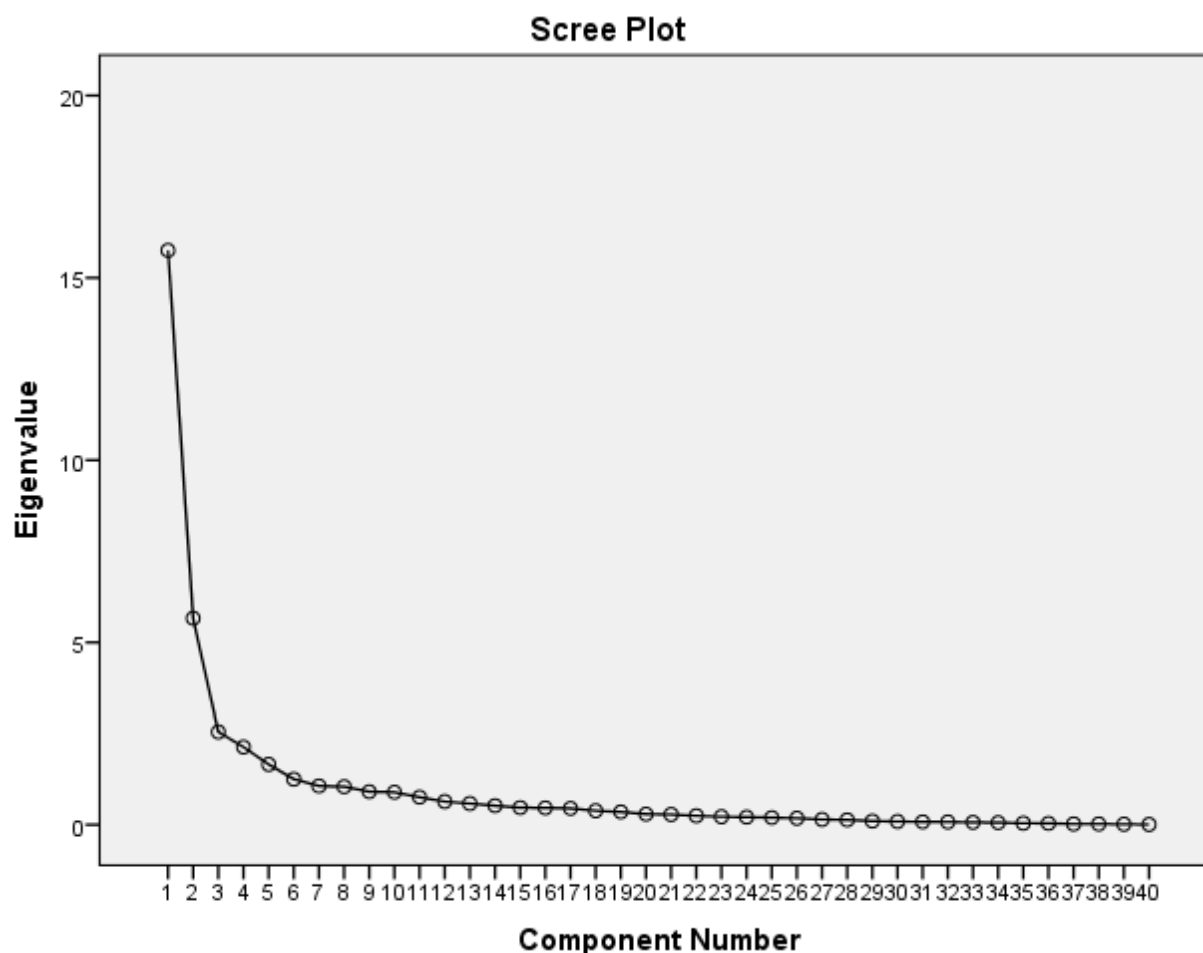


Figure 1. Scree plot showing extraction of factor of Nomophobia Scale for Youngsters

Factors Description

Each factor was assigned a label based on the commonality of the themes identified by the researchers after a close examination of the items corresponding to each factor and the theme.

Factor 1: Giving up Convenience

This factor has three components. The elements in this category examine the amount of expected dread of losing one's mobile phone because they would lose the comfort or ease of use that they have when using the phone. Statements such as "I feel anxious if I don't have my mobile phone, because I would not be able to use my favorite apps". "I feel fear when I don't have my mobile phone because my life has no meanings without the use of mobile phone".

Factor 2: Fear of losing Connectedness

Statements describe the amount of anxiety a person experienced when he did not have his cell phone with him because he became isolated from everyone, he would not be able to speak with the key people in his life. The items are "I feel fear when I don't have my mobile phone with me because I would not be able to contact to my family members". "I feel anxious when I don't have my mobile phone because I would not be able to talk with my friends".

Factor 3: Personal Distress

Statements represent the level of personal distress a person can feel when he is without his mobile phone. Since using a mobile phone has become an addiction for many people, they use them even

when they are not in need of them, and if they can't find their phones in front of them, they become very distressed. There are three statements in this factor. Items are “I feel anxiety when I don't have my mobile phone because I feel lonely at that time”. I become extremely frightened when my phone broke, tumble down, or decease.

Factor 4: Fear of not getting information

There are 3 items in this factor. Statements show the level of anxiety a person feels when they are without their mobile phone since they know they won't be able to get the information they need, such as news, weather, word definition searches, bank account information, academic information, work-related information, etc. I get anxious without my phone since I can't access the information I require, among other things. If I don't possess my phone, I fret that I won't be informed about any happenings in the world.

Confirmatory Factor Analysis. After conducting EFA, CFA was carried out on the data provided by participants to evaluate the model, factor structure, and dimensionality of the preliminary version of NPS using AMOS-21. CFA executed via AMOS. Model 1 suggests that a structure did not appropriately fit the data. The model was reexamined with modification indices, considering the covariance and regression weights. Due to their problematic nature, items with high regression weights were removed from the model. Covariance was calculated to have a fit model. To assess the model, CFA was conducted once more on these 14 items. It validates the 4 factors consisting of 14 items. Factor 5 was eliminated due to its lack of relevance to Pakistani culture.

Table 3

Model Fit summary of Confirmatory Factor Analysis(N=500)

Indexes	CMIN/DF	CFI	GFI	TLI	RMSEA
Model-1	12.76	.671	.471	.761	.182
Model-2	3.67	.963	.934	.953	.780

Table 3 presents the summary of the model fit for the Confirmatory factor analysis. The structure of model 1 was insufficient for the data, as the CFI value fell short of the acceptable threshold of .90 (chi-square = 5961.238, df = 367, CFI = .671, RMSEA = .182, and GFI = .471). The model showed a strong fit, evidenced by (chi-square = 573.821, df = 137, CFI = .964, RMSEA = .080, and GFI = .900). In the final model, 20 items were validated across 4 factors. When the values of GFI, CFI, and IFI exceed .90, the model fits satisfactorily. (Hoyle & Panter, 1995). In this scenario, the values of CFI and IFI exceed .90, indicating that the model fits adequately.

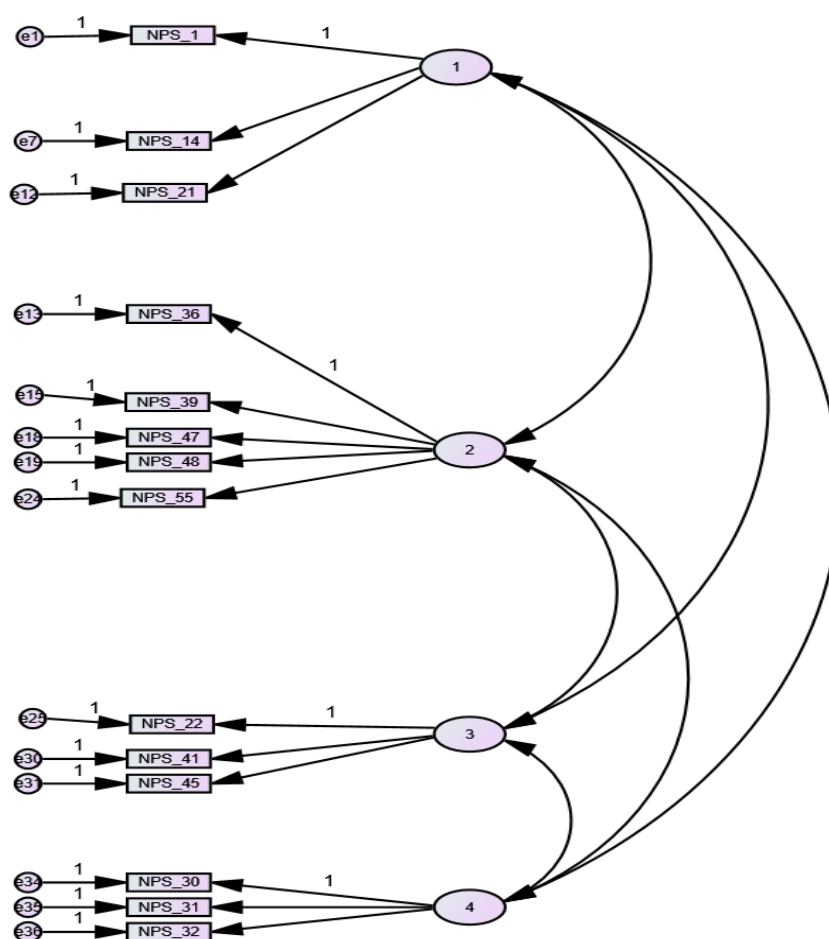


Figure 2. Final Model Confirming Factor Structure of Nomophobia Scale

Discussion

The primary goal of this study was to develop a valid and reliable instrument for assessing nomophobia in young people. Items were developed on the basis of review of the literature, and DSM-5 criteria for Phobia. Expert advice led the removal of ambiguity and inappropriateness of certain words in items. As a result, the 55 items were selected for pilot testing and then after pilot testing 40 items were retained for EFA. EFA was performed on the data of 500 participants and it yielded 5 factor structure and finally CFA confirmed 14 items of an indigenous nomophobia scale for youngsters with 4 factors. So, all statistical procedures from item pool generation to factor analysis and psychometric validation were followed to develop the valid scale of nomophobia (NPS). On the data of 500 items exploratory factor analysis was completed to see the validation of factors and significance of items in the scale ($KMO = .87$). Significance of Bartlett's test was at ($p < .001$). The results are supported by Kaiser (1974) who claimed that values above .9 are marvelous, .8 are meritorious, .5 are miserable, and .5 are not acceptable. Exploratory factor analysis was fixed to 4 factors, Rahn (2018) has stated that the adequate value of the factor loading should be at least 0.3. Exploratory factor analysis (EFA) displays there were

3 items in “Factor 1”, 5 items in “Factor 2”, 3 items in “Factor 3”, 3 items in “factor 4” respectively. In the present study the values are almost near to the standard value.

In terms of content, the results validated the organization of the factors. Moreover, results align with The Nomophobia Questionnaire created by Yildirim and Correia (2015), employing a thorough method with phases for both qualitative and quantitative information. The NMP-Q comprises four elements (Factor 1: inability to communicate; Factor 2: loss of connectedness; Factor 3: lack of access to information; and Factor 4: relinquishing convenience), while the NPS evaluates five factors: communication challenges, losing connectivity, inability to access information, and sacrificing convenience.

Same indicators are evaluated in the Mobile Phone Involvement Questionnaire (MPIQ) created by Walsh, White, and Young (2010), an 8-item addiction scale that measures how much a person is involved with using a mobile phone. Considering the previously mentioned research, the results of the current study align with the viewpoint of Pakistani society.

As many researches has confirmed the highest prevalence of nomophobia among youth in Pakistan and reported reason behind nomophobia were stated youngsters in form of confronting communication difficulties, losing connectivity, being unable to obtain information, and sacrificing convenience (Farroq et al., 2022; Mir, Rija, and Akhter, 2020). As the current scale items are also measuring similar indicators of nomophobia so it confirmed the validity and cultural representativeness of the newly developed indigenous Nomophobia scale.

A good value for confirmatory factor analysis (CFI) lies between 0.90 and 0.95 (Hu & Bentler, 1999). Thus, the scale's effectiveness was validated with a CFI value of .96. The importance of the model is shown with a p-value of less than .001. If the GFI, CFI, and IFI values exceed .90, then the model fits adequately. (Hoyle & Panter, 1995). In this scenario, the values for CFI and IFI exceed .90, indicating that the model fits adequately.

Limitations and Suggestions

Some limitation of the study is that sample was selected from only one university and by convenience sample. This may limit the generalizability of the study's findings. Therefore, when interpreting the findings of this study, this limitation should be taken into account. The findings of the current study should be replicated in future studies using more representative samples. Second, due to social desirability bias, the self-reported structure of the scale may be limited, as it is with any other self-reported questionnaire.

Clinical Implications

This research yields a number of significant contributions to academia. There is no scale development related research on nomophobia in Pakistan in the literature. Since mobile phone prevalence in Pakistan has expanded dramatically as 82.2% in 2022, it is critical to examine the risk that mobile phone usage and addiction would result in nomophobia behaviors in the Pakistani community. This study also adds to our understanding of nomophobia by examining psychological illnesses and features that may be associated with it. Our findings can help academics measure nomophobia and identify probable associations.

Research Implications

Future study should look at the psychometric qualities of the NMP-Q Urdu version as well as the psychological reasons that underpin nomophobia. Studies exploring the psychological aspects associated with nomophobia, in particular, are critical. Furthermore, more research on the incidence of nomophobia among different demographic groups in various circumstances is required. Given these inconsistencies, more research is needed to determine if males and females vary in their predisposition to nomophobia. Furthermore, future study should seek to discover which characteristics predict nomophobia, which might be valuable for identifying risk groups and designing preventative methods to assist those groups in dealing with nomophobia. Overall, we believe that more study into the

phenomena of nomophobia is feasible, and that the NMP-Q Urdu version, as a self-reported measure of nomophobia, will be beneficial for future research.

Conclusion

Despite the limitations described above, the current study, which attempted to produce an Urdu version scale, was deemed to be an effective way of predicting Nomophobia based on the DSM-V diagnostic of specific phobia. Furthermore, in the clinical, community, and educational settings, this scale can be utilised to identify a possible high-risk category for persons with nomophobia. Future research into their features, programme creation, and plan implementation should all be included in the prevention of Nomophobia.

References

- Ahmed, S., Pokhrel, N., Roy, S., & Samuel, A. J. (2019). Impact of nomophobia: A nondrug addiction among students of physiotherapy course using an online cross-sectional survey. *Indian Journal of Psychiatry*, 61(1), 77–80. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_145_18
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.
- Amra, B., Shahsavari, A., Shayan-Moghadam, R., Mirheli, O., Moradi-Khaniabadi, B., Bazukar, M., ... & Kelishadi, R. (2017). The association of sleep and late-night cell phone use among adolescents. *Jornal de Pediatria*, 93, 560–567. <https://doi.org/10.1016/j.jped.2017.01.005>
- Batool, I., & Zahid, A. (2019). Nomophobia an emerging fear: An experimental exploration among university students. *Peshawar Journal of Psychology and Behavioral Sciences*, 5(1), 67–67.
- Bhattacharya, S., Bashar, M. A., Srivastava, A., & Singh, A. (2019). Nomophobia: No mobile phone phobia. *Journal of Family Medicine and Primary Care*, 8(4), 1297. https://doi.org/10.4103/jfmpe.jfmpe_71_19
- Bianchi, A., & Phillips, J. G. (2005). Psychological predictors of problem mobile phone use. *CyberPsychology & Behavior*, 8(1), 39–51. <https://doi.org/10.1089/cpb.2005.8.39>
- Billieux, J., Maurage, P., Lopez-Fernandez, O., Kuss, D. J., & Griffiths, M. D. (2015). Can disordered mobile phone use be considered a behavioral addiction? An update on current evidence and a comprehensive model for future research. *Current Addiction Reports*, 2(2), 156–162. <https://doi.org/10.1007/s40429-015-0054-y>
- Bragazzi, N. L., & Del Puente, G. (2014). A proposal for including nomophobia in the new DSM-V. *Psychology Research and Behavior Management*, 7, 155–160. <https://doi.org/10.2147/PRBM.S41386>
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). Routledge.
- Coyne, S. M., Stockdale, L., & Summers, K. (2019). Problematic cell phone use, depression, anxiety, and self-regulation: Evidence from a three-year longitudinal study from adolescence to emerging adulthood. *Computers in Human Behavior*, 96, 78–84. <https://doi.org/10.1016/j.chb.2019.02.020>
- Darvishi, M., Noori, M., Nazer, M. R., Sheikholeslami, S., & Karimi, E. (2019). Investigating different dimensions of nomophobia among medical students: A cross-sectional study. *Open Access Macedonian Journal of Medical Sciences*, 7(4), 573–578. <https://doi.org/10.3889/oamjms.2019.126>
- Dixit, S., Shukla, H., Bhagwat, A. K., Bindal, A., Goyal, A., Zaidi, A., & et al. (2010). A study to evaluate mobile phone dependence among students of a medical college and associated

- hospital of central India. *Indian Journal of Community Medicine*, 35(2), 339–341. <https://doi.org/10.4103/0970-0218.66878>
- Dongre, A. S., Inamdar, I. F., & Gattani, P. L. (2017). Nomophobia: A study to evaluate mobile phone dependence and impact of cell phone on health. *National Journal of Community Medicine*, 8(11), 688–693.
- Drago, E. (2015). The effect of technology on face-to-face communication. *Elon Journal of Undergraduate Research in Communications*, 6(1), 13–19.
- Farooq, M., Rizvi, M. A., Wajid, W. A., Ashraf, M., Farooq, M., Javed, H., ... & Tayyba, A. (2022). Prevalence of nomophobia and an analysis of its contributing factors in the undergraduate students of Pakistan. *Cyberpsychology, Behavior, and Social Networking*, 25(2), 147–153. <https://doi.org/10.1089/cyber.2021.0112>
- Fuster, H., Chamarro, A., & Oberst, U. (2017). Fear of missing out, online social networking and mobile phone addiction: A latent profile approach. *Aloma: Revista de Psicologia, Ciències de l'Educació i de l'Esport*, 35(1), 22–30.
- Gonçalves, S., Dias, P., & Correia, A. P. (2020). Nomophobia and lifestyle: Smartphone use and its relationship to psychopathologies. *Computers in Human Behavior Reports*, 2, 100025. <https://doi.org/10.1016/j.chbr.2020.100025>
- Jeri-Yabar, A., Sanchez-Carbonel, A., Tito, K., Ramirez-delCastillo, J., Torres-Alcantara, A., Denegri, D., & Carreazo, Y. (2019). Association between social media use (Twitter, Instagram, Facebook) and depressive symptoms: Are Twitter users at higher risk? *International Journal of Social Psychiatry*, 65(1), 14–19. <https://doi.org/10.1177/0020764018814270>
- Kim, J. H., Seo, M., & David, P. (2015). Alleviating depression only to become problematic mobile phone users: Can face-to-face communication be the antidote? *Computers in Human Behavior*, 51, 440–447. <https://doi.org/10.1016/j.chb.2015.05.030>
- King, A. L. S., Valença, A. M., Silva, A. C., Sancassiani, F., Machado, S., & Nardi, A. E. (2014). “Nomophobia”: Impact of cell phone use interfering with symptoms and emotions of individuals with panic disorder compared with a control group. *Clinical Practice and Epidemiology in Mental Health*, 10, 28–35. <https://doi.org/10.2174/1745017901410010028>
- Latifi, T. T. (2020). Incidence of nomophobia and smartphone addiction among young physical therapist in Karachi. *Pakistan Journal of Rehabilitation*, 9(2), 36–41.
- Lepp, A. (2014). The relationship between cell phone use, academic performance, anxiety, and satisfaction with life in college students. *Computers in Human Behavior*, 31, 343–350. <https://doi.org/10.1016/j.chb.2013.10.049>
- Lopez-Fernandez, O., Honrubia-Serrano, L., Freixa-Blanxart, M., & Gibson, W. (2014). Prevalence of problematic mobile phone use in British adolescents. *Cyberpsychology, Behavior, and Social Networking*, 17(2), 91–98. <https://doi.org/10.1089/cyber.2012.0260>
- Mir, R., & Akhtar, M. (2020). Effect of nomophobia on the anxiety levels of undergraduate students. *Journal of the Pakistan Medical Association*, 70(9), 1492–1496.
- Ng, K. C., Wu, L. H., Lam, H. Y., Lam, L. K., Nip, P. Y., Ng, C. M., ... & Leung, S. F. (2020). The relationships between mobile phone use and depressive symptoms, bodily pain, and daytime sleepiness in Hong Kong secondary school students. *Addictive Behaviors*, 101, 105975. <https://doi.org/10.1016/j.addbeh.2019.04.024>
- Pallant, J. (2013). *SPSS survival manual: A step-by-step guide to data analysis using SPSS* (4th ed.). Allen & Unwin.
- Poushter, J. (2016). Smartphone ownership and internet usage continues to climb in emerging economies. *Pew Research Center*, 22(1), 1–44. <https://www.pewresearch.org/global/2016/02/22/smartphone-ownership-and-internet-usage-continues-to-climb-in-emerging-economies/>

- Taneja, C. (2014). The psychology of excessive cellular phone use. *Delhi Psychiatry Journal*, 17(2), 448–451.
- Walsh, S. P. (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.
<https://doi.org/10.1080/00049530903567229>
- 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.
<https://doi.org/10.1016/j.chb.2015.02.059>