

# NOMOPHOBIA AND PRIMARY SCHOOL CHILDREN'S EMOTIONAL AND PERSONAL FACTORS

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## Abstract

Nomophobia as a new form of phobia is becoming a very serious topic threatening the ones responsible for education and upbringing of a new generation. The aim of our research was to find out whether nomophobia (assessed by Nomophobia questionnaire, NMP-Q, Yildirim & Correia, 2015) differs in the context of gender (N=110,  $M_{age}=14,51$ ;  $SD=.501$ , 53.6% of girls) and is related to emotional aspects, i.e. trait emotional intelligence (EI, Trait Emotional Intelligence Questionnaire-Adolescent's Short Form, TEIQue-ASF, Petrides, 2009), self-esteem (Rosenberg's Self-esteem Scale, RSS, Rosenberg, 1965) and trait anxiety (Spielberger's Trait Anxiety Inventory, STAI, Spielberger, Gorsuch, & Lushene, 1983). The analysis has proved statistically significant gender differences in nomophobia in favor to boys ( $p=.000$ ), significant negative relations with trait EI and trait anxiety, and significant positive relation with self-esteem. The study discusses the importance of social-emotional education as a form of nomophobia addiction prevention. The study presents the partial results of KEGA 028UMB-4/2021 and KEGA 039UMB-4/2021 projects.

**Keywords:** *Nomophobia, trait emotional intelligence, self-esteem, trait anxiety, socio-emotional learning.*

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## 1. Introduction

Current data indicate an increasing tendency in youngster's emotional disorders. Their mental health has deteriorated significantly as a result of the global COVID-19 pandemic. Current research proves a two-fold increase in their incidence compared to the previous period (Watson et al., 2021). The study offers an empirical analysis of the modern addiction phenomenon, namely nomophobia ("no", "mobile", "phobia") in the context of mental health factors. An increase in youngsters suffering from nomophobia (Qutishat et al., 2020) is characterized by fear of a functioning mobile phone unavailability access. Phone and internet addiction are associated with anxiety, depression, low self-esteem, and loneliness (Kara et al., 2019). Results from Oxford University (Przybylsky et al., 2017) show that the time young people spend with their mobiles increases their well-being. Nomophobia has not been searched sufficiently (Rodríguez Garcia et al., 2020) and has become a public health issue. However, an effective and efficient way to prevent any addictions is one of the fundamental educational goals in the 21<sup>st</sup> century. Based on the studies (Yalcin et al., 2022) revealing the susceptibility of individuals with low emotional intelligence (EI) to addictions, we predicted a potential of EI as a form of prevention. We formulated a research aim to search primary school pupils' nomophobia level in relation to their trait EI, self-esteem, and trait anxiety. In line with the research results mentioned above, we questioned and hypothesized the following.

RQ1: *Is there a gender difference in the level of nomophobia (assessed by the NMP-Q questionnaire)?*

Firstly, (H1) *individuals with higher trait EI would display lower levels of nomophobia.*

Secondly, (H2) *individuals with higher level of self-esteem would display lower levels of nomophobia.*

And, (H3) *individuals with higher level of trait anxiety would display higher levels of nomophobia.*

## 2. Method

### 2.1. Research sample

The research sample consisted of 110 pupils (average age: 14.51 / $SD=.50$ /; 54% of females) of primary schools in their last two years as we assumed that they had owned mobiles for several years. One of the questions was about mobile possession and the number of years they have owned a mobile. Each

participant has a mobile at least for 2 years. The research sample was obtained by targeted sampling as a part of preventive activity realized at schools to talk about modern technologies. The parental approval in a form of informed consent was signed two weeks before assessment.

## 2.2. Method

We used four self-report measures.

Nomophobia Questionnaire (NMP-Q, Yildirim & Correi, 2015). The questionnaire consists of 20-items scaled by 7-point Lickert scale, assessing a global level of nomophobia, a higher rating indicates a higher level of nomophobia. Reliability estimate in the sense of inner consistency was  $\alpha=.87$ .

Trait EI was assessed by the short Slovak version of the Trait Emotional Intelligence Questionnaire-Adolescent's Short Form (TEIQue-ASF, Kaliská, Heinzová, & Nábělková, 2019) created by Petrides (2009). The instrument consists of 30 items answered by a 7-point Likert scale (1-completely disagree to 7-completely agree), a higher rating indicates a higher level of trait EI. Reliability was .88.

Rosenberg's Self-esteem Scale (RSS, Rosenberg, 1965) was used to assess the self-esteem level. Reliability estimate in the sense of inner consistency was .749.

The State-Trait Anxiety Inventory was used to measure trait anxiety (STAI, adapted in Slovakia by Muller et al., 1980). Reliability estimate was .874.

All used tools reached highly acceptable values of Cronbach's alpha coefficients. After testing the normal distribution for further data analysis, apart from descriptive statistics, Student's t-test and Pearson's correlation analyses were run to estimate the differences and relations of nomophobia to other variables.

## 3. Results

The statistical analysis of gender differences in nomophobia level is presented in Table 1.

Table 1. Gender Difference in Nomophobia.

	Females (N=59)	Males (N=51)	t	p	d
Min	32.00	35.00	4.079	.000	.78
Max	124.00	117.00			
AM	84.34	69.14			
SD	19.10	19.82			
Med	84.00	65.00			
Skewness	-.027	.288			
Kurtosis	-.147	-.716			

*t* – Student's t-test value, *p* – statistical significance, *d* – Cohen's d effect size

As the data were normally distributed, we used Student's t-test analysis to find out the differences between girls and boys in the level of nomophobia. A statistically significant difference with a large effect size in favor of boys who reached lower levels of nomophobia was proved.

Our next three research hypotheses were based on searching the relations between nomophobia and trait EI, self-esteem and trait anxiety. Trait EI was taken as a personality trait related to an individual's emotionality, and also trait anxiety was analyzed as a personality factor. The results are presented in Table 2.

Table 2. Relations between Nomophobia and Trait EI, Trait Anxiety and Self-esteem.

Nomophobia	N=110	Trait EI	Trait Anxiety	Self-esteem
	Total sample (N=110)	-.289**	.354***	-.255*
	Girls (N=59)	-.318**	.334**	-.239
	Boys (N=51)	-.184	.088	-.073

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ;

We can state nomophobia is significantly weakly related to trait EI and self-esteem and significantly moderately related to trait anxiety only for girls. These results also support the construct validity of nomophobia, especially its convergent aspect to trait anxiety and discriminant aspect to trait EI and self-esteem for the girls. There were no significant relations for a boy's group.

## 4. Conclusions

We have proved a statistically significant gender difference in nomophobia. As Daei et al. (2019) confirm more frequent symptoms of nomophobia for females. Nomophobia determines an individual's (especially female's) personal, emotional and social life and self-perception possibly endangering their

mental health. Our presumption of trait EI lower level related to any addition, in our case to nomophobia, was also supported only for girl's sample. The same results were obtained with different research samples (e.g., university females in Yalcin et al., 2022).

Wahyuningtyas et al. (2020) found students' lower self-esteem related to nomophobia symptoms as supported by our results for girls. Nomophobia as another form of addiction has a negative effect on self-image, as girls are more sensitive. Low youngster's self-esteem is triggered by social medias. Low self-esteem causes feelings of inferiority and lack of self-confidence. If an individual does not have self-esteem, she (but also, he) can become more vulnerable to addiction. This leads us to further analysis of significant relation between nomophobia and trait anxiety as proved by Veerapu et al. (2019). Frequent use of phones leads to pathological addiction, depression symptoms, e.g., fear and anxiety possibly leading into trait anxiety. It determines also other mental disorders that need to be studied further on.

There are several limitations of our research, e.g., choice of primary school pupils; the specific research sample does not allow to generalize the results to other subject groups; usage of self-report instruments may be influenced by the desirability effect, and the study design itself.

The results of our research presuppose nomophobia as a modern technological threat can contribute to mental disorder increase creating a precondition for other addictions. Our primary role as teachers is to support youngster's mental health. One possible solution is to implement the 4Cs of the Philosophy for Children concept, where via development of four competences (critical and creative thinking and caring and cooperative competences) using socio-emotional learning and counselling from professionals helps to overcome negative emotions, prevents also other additions as „FOMO“ (Fear Of Missing Out) or „FOBO“ (Fear Of Being Offline).

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