Impact of Mobile Phone Dependence on Social Anxiety among University Students

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ARTICLE INFO

ABSTRACT

Mobile phone dependence is a significant condition that people experience all over the world. Dependence on mobile phones, like any phenomenon related to other technologies, is also related to psychological issues such as anxiety, social isolation, hopelessness, and sleep problems. Thus, this study aimed to figure out the impact of mobile phone dependence on social anxiety among students University of Peradeniya. A snowball sample of 115, 79 female and 36 male participants were selected from the Faculty of Arts. Data was gathered administrating a questionnaire as a google form. Quantitative data was gathered by a self-constructed questionnaire that measures mobile phone dependence and social anxiety was measured by using Leibowitz Social Anxiety Scale (LSAS-SR). The correlational analysis shows that there is a relationship between mobile phone dependence and social anxiety. It shows that dependence, loneliness, anxiety positively correlate with mobile phone dependence. The results show that there is a significant impact of mobile phone dependence on social anxiety among undergraduates. This study expected to have a positive relationship between mobile phone dependence and social anxiety among university students. Results revealed that the variable anxiety contributes the most to social

anxiety among university students. In conclusion, university students depend on mobile phones for their academic activities and entertainment. Especially with the Covid-19 pandemic mobile phone dependence behavior of university students may have increased and it might be influencing their social anxiety.

1. INTRODUCTION

Mobile phone dependence has become an emerging problem among many people around the world. Mobile phone dependence, defined as inapt use of a mobile phone, is broadly viewed as a subset of behavioral or technological addiction that could lead to significant social and emotional impairment (Enez et al., 2016). Mobile phone dependence refers to, excessive and uncontrolled use of the mobile phones. An epidemiological study revealed that people who use mobile phones excessively were more likely to experience health problems (e.g. headaches, fatigue, impaired concentration and insomnia). It leads to social and psychological problems such as depression, anxiety, stress, sleep disturbances and social isolation. Social Anxiety is one of the many forms of anxiety. It is the excessive fear of embarrassment in social situations that is extremely intrusive and can have debilitating effects on personal and professional relationships. Research has shown that isolated and anxious individuals thrive from online interaction. Premorbid problems in social communication, such as social anxiety, phobia, and feelings of loneliness, can make individuals vulnerable to excessive use of cyber technology devices, including smartphones (Mei et al., 2018).

Behind the mobile phone dependence among university students, there are a number of affecting factors. Various factors, biological, psychological and sociocultural, are reported to play a role in the development of dependence on mobile phones. According to researchers, depressed people are more likely to fill their leisure time with a mobile

phone as a way to escape real problems, feelings of boredom, guilt, loneliness and anxiety. Xu (2017) conducted a research on the relationship among phone addiction, social anxiety and loneliness in Beijing high school students (Enez et al., 2016). According to the results, 35 students tend to have mobile phone dependence, contributing to the total percentage of 17.95%. Similarly, the mobile phone dependence group has a relatively higher score on fear, avoidance and anxiety than the non- dependence group. Results prove that subjects who tend to rely on mobiles show more remarkable loneliness.

As technology plays a major role in our life, most of our activities are done using mobile phones:- for instance: managing daily work, shopping, banking and having new relationships. University students highly use mobile phones for their academic activities, to maintain distant family relationships and other social relationships, for entertainment purposes and to spend their leisure time. Compared to other groups, university students are highly dependent on mobile phones. Therefore, this is a timely topic to study.

1.1 Research objectives:

To identify whether there is a relationship between mobile phone dependence and social anxiety.

To understand how the selected factors affect mobile phone dependence. Ex: dependence, anxiety, loneliness, prohibit use (ex: while driving, when crossing the road).

1.2 Hypotheses

- H1: There is a relationship between mobile phone dependence and social anxiety.

- H2: There is an impact of mobile phone dependence on social anxiety.

2. MATERIALS AND METHODS

The present study was designed in a survey method. Data was collected administrating a google form link, allowing the participants to fill the questionnaire as part of the self-report assessment. To ensure strict adherence to ethical protocols, prior to the data collection, participants were informed about the study and their consent to be a part of the study was obtained, through an informed consent form.

The quantitative survey investigated whether there is any impact on the variables. Data was collected through an online survey which was created via a Google form and distributed through WhatsApp, Email and Messenger to obtain a snowball effect sample. This study was conducted during the first peak of the pandemic. A snowball sample was 115 university students (N= 115) 79 female and 36 male students. 68.7% of the sample was female and 31.3% was male participants between 20 – 28 years.

As the research materials, the Leibowitz Social Anxiety Scale (LSAS-SR) which consists of 24 items was used to measure social anxiety. It assesses the range of social interaction and performance situations that patients with social phobia fear and/ or avoid. Ex: (Q2) Participate in small groups- Having a discussion with few others, (Q3) Eating in public places- Do you tremble or feel awkward handling food

Mobile phone dependence was measured by using a self- constructed questionnaire. 26 items were included in this questionnaire (Foerster et al., 2015; Choliz, 2013; Kuss et al., 2018; Kwon et al., 2013; Merlo et al., 2013) and it was a five point likert scale consisting of 4 sub sections; Dependence, Loneliness, Anxiety and prohibited use. Ex: (Q2) I have been trying to hide the time I spent on mobile phone from others.

Quantitative data was analyzed using IBM SPSS Statistics. A correlation test was run to figure out the relationship between the two main variables and Regression analysis results analyzed the mobile phone dependence and its impact on social anxiety.

3. RESULTS AND DISCUSSION

The primary aim of this study is to investigate the impact of mobile phone dependence on social anxiety. The present study conducted a correlation analysis to check whether there is any linear relationship between the variables.

The correlation between mobile phone dependence and social anxiety shows a positive correlation r= .55, *P<0.05.* The result shows that there is a significant correlation between mobile phone dependence and social anxiety. It accepts the H1: There is a relationship between mobile phone dependence and social anxiety.

Table 01: *Mean (M), Standard Deviation (SD), and correlation between variables*

	M	SD	1	2	3	4	5	6
1.Social anxiety Total	73.47	17.0	1					
2.Dependence	2.20	.492	.000**	1				
3.Loneliness	2.56	.596	.000**	.000**	1			
4.Anxiety	2.83	.648	.000**	.000**	.000**	1		
5.Prohibit use	1.92	.416	.002**	.003**	.014*	.002**	1	
6.Mobile Phone dependence	9.53	1.67	.000**	.000**	.000**	.000**	.000**	1

Note: *P<0.05., **P<0.01., ***P<0.001

According to the regression analysis results, dependence and anxiety were predictor variables that had a positive beta value and significant relationship. Dependence: R^2 = .192, F= 26.82, p= .000, Anxious= R^2= .344, F= 19.40, p= .000. The largest beta value denotes the independent variable that has the strongest contribution to the overall variance of the dependent variable. Regression analyzed results revealed that Anxiety is the most contributing variable for Social Anxiety (ß=.467).

The present study ran a hierarchical multiple regression analysis to check the single variable single contribution to the outcome variable and how the single variable collectively with the other variable increases or decreases the impact level to determine the outcome variable. According to the beta coefficient, it allows direct comparisons between independent variables to determine which has the most influence on the dependent variable.

Table 02: *Summary of Hierarchical multiple regression analysis*

Model	R	R Square	Adjusted R Square	Std.Error of the Estimates	Change Statistics					Durbin-Watson
					R square Change	F Change	df1	Df2	Sig F Change	
Dependence	.438[a]	.192	.185	15.36	.192	26.82	1	113	.000	2.11
Loneliness	.482[a]	.232	.219	15.03	.232	16.94	2	112	.000	2.24
Anxious	.587[a]	.344	.326	13.96	.344	19.40	3	111	.000	2.15
Prohibit use	.596[a]	.355	.332	13.90	.355	15.14	4	110	.000	2.14

In Table 02, R^2 interprets the impact of mobile phone dependence on social anxiety. Research results show that when the impact of multiple factors increases, R^2 has increased. If the R^2 is more than 30% there is a good impact. Results of the multiple regression analysis revealed that 31.9% (R^2 = 0.319) of variance in social anxiety could be accounted for by the independent variables.

According to results, Mobile phone dependence and social anxiety among university students is shown as having a significant impact. Also, there is an impact of sub components of mobile phone dependence. Dependence =19% (R^2 =.192), Loneliness =23% (R^2 = .232), Anxious = 32% (R^2 = .344), Prohibit use = 35% (R^2= .355). The results of the summary of hierarchical multiple regression analysis shows that when independent variables add up one by one, R^2 has increased. The inclusion of additional variables produced a statistically significant increase in variance accounted for in the outcome variable. According to these results, H2 hypothesis can be accepted: There is an impact of mobile phone dependence on social anxiety.

Discussion of the study can be identified under the following themes.

3.1 Relationship between mobile phone dependence and social anxiety

This study hypothesized that a significant relationship/correlation would exist between mobile phone dependence and social anxiety. According to the results of the correlation analysis, the relationship between mobile phone dependence and social anxiety was found to be a positive relationship (p<0.001***) and also a significant correlation exists between the two variables. Wu (2018) figured out that there was a significant positive correlation between smartphone addiction and interaction anxiousness. It can be seen that people with high social anxiety are likely to appear dependent on their smartphones. This study assumed that people with heavy social anxiety tend to rely on mobile phones to communicate with the outside world and can there by avoid direct exposure to the public environment or direct social pressure.

3.2 Impact of mobile phone dependence on social anxiety

This study included four sub components of mobile phone dependence: Dependence, Loneliness, Anxious and Prohibit use. Results revealed that there is a positive correlation between mobile phone dependence and the dependence component (r=.000, P<.05*). Loneliness and Anxious variables have positive correlation with mobile phone dependence (r=.000, P<.05*). Research by Enez Darcin and colleagues (2016) found that social anxiety and loneliness related to excessive smartphone use. Researchers suggested that people with feelings of loneliness prefer other activities with their smartphones rather than texting (Internet surfing, games, etc). Relationship between prohibit use and mobile phone dependence is positive (r=.002, P<.01**). Regression analysis results show that there combination of mobile phone dependence sub components (Dependence, Loneliness, Anxiety and Prohibit use) positively correlate with social anxiety. Loneliness and prohibit use components do not correlate with social anxiety. According to Xu (2017), the mobile phone dependence group has a relatively higher score on fear, avoidance and anxiety than the non- dependence group. Wu (2018) in his study stated that the more one relies on mobile phones, the more likely one is to become increasingly lonely and anxious. Excessive use of smartphones for contact or entertainment may lead to reduced social connections and draw people into deeper social anxiety.

4. CONCLUSION

In conclusion, the present study sought to investigate (a) whether a relationship existed between mobile phone dependence and social anxiety, (b) the impact of mobile phone dependence on social anxiety. Results of this study show that mobile phone dependence has a positive and significant relationship with social anxiety among university students. Results show that there is an impact of mobile phone dependence on social anxiety.

When conducting this study there were some limitations. The present study was conducted during the COVID -19 pandemic which led to several difficulties in interacting with the participants. Therefore, the sample had to be limited to 115 participants. During the COVID- 19 pandemic period, the university students had to do their studies and all other academic activities using mobile phones and laptops. Lack of social interactions within COVID -19 could increases loneliness that in return may increase social anxiety.

Future research can be conducted in order to find out loneliness, sleeping problems, depressión and those factors' impact on mobile phone dependence. Moreover the present study can be conducted representing the whole university population.

ACKNOWLEDGEMENT

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