ORIGINAL ARTICLE

Anger control is the most influential risk factor of mobile phone addiction among nursing and midwifery students of Zahedan University of Medical Sciences

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ABSTRACT

BACKGROUND

Religious attitude and anger management are two psychopathological constructs receiving little empirical scrutiny in relation to smart phone addiction, but theoretically should demonstrate significant relationships. Today one of these new media that is used by many people around the world, is the mobile phone. Students are one of the most important groups that are affected by mobile social networks. The aim of this study was to determine religious attitudes and anger management as risk factors of mobile phone addiction in nursing and midwifery students.

METHODS

This study was a cross-sectional study involving 200 nursing and midwifery students. Relevant data were collected through demographic information questionnaire, anger management skills questionnaire, religious attitude questionnaire, and mobile phone addiction questionnaire. A multiple regression model was used to examine the relationship between variables.

RESULTS

The mean age of the research subjects was 22.04 ± 3.30 years. Anger control and religious attitude were a significant risk factors of smartphone addiction (β=-0.500; p=0.000; β= -0.069; p=0.004, respectively). The variables of anger ýcontrol and spiritual attitude can predict ýand explain 33.6% and 2.7% (36.3% in total) of the ýchanges in the mobile addiction score. Anger control is the most influential risk factor of mobile phone addiction among nursing and midwifery students (Beta=-0.385)

CONCLUSION

Findings indicate the importance of controlling anger and strengthening religious attitude in reducing the rate of mobile phone addiction in students. This provides guidance to the future development of smartphone addiction prevention programs for students.

Keywords: Anger control, religious, attitude, nursing and midwifery students, mobile phone addiction

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INTRODUCTION

Mobile phones have entered the world as a communication tool, but gradually, its developing capacities and capabilities have elevated the use of this communication tool as a media or multimedia.[1] Mobile phones have found a powerful place in human social and personal life.[2] Today, the mobile phone is not just a voice device among users; rather, through internet access, texting, videos, photos, cyberspace, and watching movies online has become an important part of people's daily lives.[3] Because people can communicate with each other, mobile phones increase the sense of security. In addition, studies have shown that the mobile phone can also be a useful teaching aid.[4] Although these connections have accelerated tasks and reduced distances,[5] this new communication technology can cause many disadvantages and problems.[6] Researchers believe that the unreasonable and excessive use of mobile phones has led to the emergence of a phenomenon called mobile phone addiction.[3]

Mobile phone addiction is a non-drug and behavioral addiction in which sometimes excessive use of this device is done without awareness. In the present century, its use has been mentioned as an obsessive-compulsive disorder and addiction.[7] Among the important users of this technology are students. Features and facilities in mobile phones, such as quick access to resources and information, and the existence of social networks, have transformed students' learning.[8] Students are among the users who in addition to facing problems of educational, economic, and cultural and social changes during their study period, are exposed to the harms caused by excessive use of mobile phones.[5] International studies showed that 6% of mobile phone users are addicted to this device.[9] In Iran, the prevalence of mobile phone addiction is relatively high among students (prevalence of 10% among students of the University of Tehran and 18.5% among students of the University of Birjand).[10,11] People addicted to mobile phones feel depressed, lost, and isolated compared to ordinary people without mobile phones. Sometimes their work and life are disrupted due to the abundance of contacts, text messages, web browsing, and online chats.[12] Mobile phone addiction has been introduced in the Fifth International Classification of Mental Disorders (DSM-V), as a technology-related disorder. Studies have shown that this addiction leads to mental health problems.[13,14]

In the meantime, nursing students should be given special attention, as society's health depends on their knowledge, attitude, and behavior, and they will ultimately be in occupations that convey health messages. The results of a study in Turkey showed that smartphone addiction has a negative effect on nursing students' empathy with patients.[15] Studies have shown that there is a positive relationship between problematic use of mobile phones and aggression.[16] Studies show that people with aggressive characteristics are addicted to smartphones.[17]

Trust in technology to increase social communication may have psychological consequences, such as creating technological dependencies, extroverted personality traits (deepening interpersonal interactions), and anger. The results of the Kim study showed that smartphone addiction is influenced by psychosocial factors such as aggression.[18] This is because one of the topics that has attracted a lot of empirical and theoretical attention in the last two decades, is the discussion of emotions which can be due to the role of emotional regulation in external behaviors (individual). Anger is a fundamental emotion and an inner state that regulates the type of reaction against the environment. In fact, anger is characteristic of the initial stage of the development of hostility and aggression.[19] Research has shown that there is a positive relationship between problematic cell phone use and aggression.[20]

The religious attitude has an effective role in cognition, emotions, and behavior of people

towards internal and environmental factors, and it can affect the mental and social health of people. However, Adlipour and Kianpour [21] showed that interaction in cyberspace of internet social networks affects the religiosity of young people. Various aspects of people's lives have been comprehensively influenced by new media, including the internet and mobile phone social networks, so that the effects and consequences of these new information and communication technologies cannot be denied. Therefore, this study aimed to determine the relationship of religious attitudes and anger control with mobile phone addiction among nursing and midwifery students of Zahedan University of Medical Sciences.

METHODS

Research design

This was cross-sectional study that was conducted at Zahedan School of Nursing and Midwifery from January to March 2021.

Research subjects

This study was performed on 200 nursing and midwifery students. The formula (N= ≥50 + 8) for the minimum sample size in regression analysis was used,[22] where N is the number of predictor variables. Considering that the number of predictor variables in the present study was 3, and using the Zanjani study, the minimum size of the required sample was 74 people, which was increased to 200 people to ensure the adequacy of the sample.[23] The inclusion criteria were: 1- student is studying in the field of nursing or midwifery at the bachelor or master level. 2- student must have a smartphone. 3- he/she must not suffer from mental illness and chronic diseases. 4- he/she does not use drugs that affect the nervous and mental system. Exclusion criteria: 1- dissatisfaction to participate in the study or cancelling the continuation of the study for any reason. 2- occurrence of acute problems and diseases during the study.

Evaluative Tools

The instruments of this research included: a demographic questionnaire, religious attitude questionnaire, standard questionnaire of anger management skills (Positive Adolescence Choices Training), and mobile phone addiction questionnaire.

Demographic questionnaire

The researcher-made demographic questionnaire includes age, gender, education, course of study, field of study, marital status, occupation, housing, and economic status.

Religious attitude questionnaire

The religious attitude questionnaire was developed by Khodayarifard et al.[24] and includes 40 questions, and 6 dimensions of worship, ethics, values, influence on behavior and life, social factors, worldview, beliefs, science, and religion. This questionnaire is based on the Likert scale, and is arranged and scored in 5 options in the range of strongly agree to strongly disagree. Khodayarifard et al.[24] in a study reported the split-half reliability coefficient of the questionnaire by the Spearman and Guttman methods to be 0.93 and 0.92, respectively, while the alpha coefficient was reported to be 0.95.

Anger management skills questionnaire

Standard questionnaire of anger management skills (Positive Adolescence Choices Training) was developed by Hamond, Warfield and Young,[25] and is used as one of the authoritative programs in the field of anger control. This questionnaire has 8 questions, and its scoring is based on the Likert scale. Subjects should rate their answers within 5 degrees (very disagree, disagree, no comment, agree, very agree.

Smartphone addiction self-report scale

Sevari [26] in the study "Construction and validation of a mobile addiction questionnaire" to measure the variable of mobile phone addiction,

used some foreign questionnaires and some findings of foreign research. First, with their help, she made 15 questions, and after presenting them to some expert professors in psychological issues, two questions were removed from them, and a preliminary questionnaire consisting of 13 questions was used. Then, to extract the causes of cell phone addiction, exploratory factor analysis was used. The analysis showed that after twenty-five experimental rotations on the data, 13 questions and three factors called de-creativity (7 questions), desire (3 questions), and loneliness (3 questions) were obtained Questionnaire questions are graded on a five-point scale from never (1) to most of the time (5).

The minimum possible score will be 0 and the maximum will be 52. The score between 0 and 13: Low sense of cohesion. The score between 13 and 26: Medium sense of cohesion. A score above 26: High sense of cohesion. The total reliability of the questionnaire was 0.87, the de-creativity factor was 0.78, the desire factor was 0.76, and the loneliness factor was 0.84. The validity of the questionnaire was determined by confirmatory studies.

Ethical considerations

After approval of the study by the ethics committee of the university (ethics code: IR.ZAUMS.REC.1399.509), and obtaining permission from the officials of the School of Nursing and Midwifery, the investigators conducted the study.

Statistical analysis

We used the statistical package for the social sciences (SPSS) for Windows version 22.0 (IBM, Armonk, NY, USA) and a p-value of <0.05 was considered statistically significant. Data were normally distributed according to the Kolmogorov-Smirnov test. Therefore, it was possible to use parametric tests such as regression. Descriptive statistics were used to analyze the demographic characteristics, and simple and multiple regression analysis models were used to examine the relationship between variables.

RESULTS

Table 1 shows the demographic characteristics of the subjects. The mean and standard deviation of the age of the research subjects were 22.04 and 3.30, respectively. In addition, 45.5% (91 subjects) were boys and 54.5% (109 subjects) were girls, 88% (176 subjects) were single and 12% (24 subjects) were married, 92% (184 subjects) and 8% (16 subjects) were taking the bachelor and master course, respectively.

The mean and standard deviation of mobile phone addiction scores in this study were 36.9 and 13.14, respectively, indicating the high dependence of the subjects on mobile phones. The mean and standard deviation of anger control scores were 20.77 and 7.70, respectively; which indicates the average ability of the subjects to

Table 1. Demographic characteristics of the participants (n=200)

Variables	n (%)
Age (years)	22.04 ± 3.30
Gender	
Female	91 (45.50)
Male	109 (54.50)
Marital status	
Single	176 (88.0)
Married	24 (12.0)
Course of study	
Bachelor	184 (92.0)
Master	16 (8.0)
Field of study	
Nursing	134 (67.0)
Midwifery	66 (33.0)
Employment status	
Unemployed	179 (89.5)
Employed	21 (10.5)
Housing	
Dorm	101 (50.5)
With family	90 (45.0)
Private house	9 (4.5)
Interest in chosen field of study	
Interesting	136 (68.0)
No comment	47 (23.5)
Uninteresting	17 (8.5)
Smartphone addiction	36.90 ±13.14
Anger control	20.77 ± 7.70
Spiritual attitude	104.56 ± 47.94

Data presented as n (%), except for age, smartphone addiction, anger control and spiritual attitude as Mean ± SD

Table 2. Multiple linear regression analysis of several predictor variables and smartphone addiction

Predictor variables	β	Beta	95% C.I	p value	R^2
Age	0.199	-0.050	0.865 – 0.878	0.880	-
Anger control	-0.56	-0.385	-4.386 – 14.422	0.000	0.336
Religious attitude	-0.069	-0.252	-2.878 – -2.904	0.004	0.027

β = regression coefficient, Beta = standardized regression coefficient

control their anger. Also, the mean and standard deviation of the religious attitude scores were 104.56 and 47.94, respectively, indicating low religious attitude.

To predict the score of mobile phone addiction from scores of anger control and religious attitude, and some demographic characteristics, the regression model was used. The results showed that there was a significant correlation between mobile phone addiction score and predictor variables (p=0.001, F=56.13). Based on the final model, the variables of religious attitude and anger control remained in the model. So that, the variables of anger control and religious attitude can predict and explain 33.6% and 2.7% (36.3% in total) of the changes in the mobile addiction score, respectively. Anger control was the most influential risk factor of smart phone addiction (Table 2).

DISCUSSION

The results of this study showed that there is a significant and negative statistical correlation of the variables of religious attitude and anger control with mobile phone addiction, and these two variables together can predict 36.3% of the changes in the mobile phone addiction score, but there was no statistically significant correlation between any of the demographic variables and mobile phone addiction.

Khazaei et al.[10] in a study found a significant correlation between mobile phone dependence and the incidence of aggression in students, and also, no significant correlation was found between demographic characteristics and mobile phone addiction. Ahangari [27] in a study among students in Kashmar found that there is an inverse and significant correlation between the use of mobile phone social networks and adherence to religious beliefs. Hariri et al.[28] in their study on students of Kharazmi University, found a negative and significant correlation between internet addiction and religious attitudes. Kim et al.[29] conducted a study titled "Smartphone addiction: (Focusing on the three variables of depression, aggression, and motivation) among students". The results of the study showed that there is a positive and significant correlation of smartphone addiction with depression and aggression. Knabb [30] conducted a study among Christian students and concluded that connection with God has a significant inverse effect on internet dependence, and neglect of tasks and relationships due to internet use. The results of the above studies are consistent with the results of the present study.

Charlton et al.[31] concluded in their study that there is a negative correlation between religiosity and internet addiction in the four religions of Islam, Hinduism, Buddhism, and Christianity, which is consistent with the results of the present study. However, they found that there is a significant correlation between gender and mobile phone addiction, and women who are more committed to religious norms than men, have a stronger negative correlation between religiosity and mobile phone addiction, which is not consistent with the present study. The reason can be attributed to the definitions of religiosity in different religions, differences in societies, etc.

The results of the present study also showed that the students participating in this study have high mobile phone addiction, moderate anger control, and low spiritual attitude. Najafi-Sharjabad [32] in a study on 300 students concluded that half of the students are unable to control their anger. Pavithra et al.[33] in a study in Bangalore concluded that nomophobia or mobile phone addiction is very common among students. The

results of these two studies are consistent with the present study.

Mamashli et al.[34] found in a study that nursing students are in a relatively good condition in terms of internet addiction and mobile phone injuries, which is not consistent with the results of the present study. The reason for this discrepancy can be attributed to the method of data collection, the research community (which in our study comprised only nursing students), and climatic characteristics.

One of the limitations of the research was the lack of cooperation of some students in completing the questionnaires. Due to the high dependence of students on mobile phones and the negative impact of mobile phone addiction on spiritual attitudes and anger management, long-term and effective planning should be done in the field of students' optimal use of mass media. Future research should also use longitudinal research designs to follow participants over time in studying associations between psychopathology and smartphone addiction severity.

CONCLUSION

According to the results of the present study and the high dependence of students on mobile phone use, anger control was the most influential risk factor of smartphone addiction. Because of the destructive psychological effects of mobile phone overuse, and the resulting disorder in the education of students, long-term and effective planning should be done in the field of optimal use of mass media by students, and education in this regard should be started at an early age, in the family as well as at school.

CONFLICT OF INTEREST

Authors have no conflict of interest.

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CONTRIBUTORS

Conceptualization: SD. Data curation: NM. Formal analysis: FKS. Funding acquisition: Zahedan University of Medical Sciences. Methodology: SD, FS. Project administration: NGK. Writing of original draft: MB, FS. Writing of review and editing: SD. All authors have read and approved the final manuscript. ✠

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