

Evaluation of Cell Phone Addiction in Shahid Beheshti Hospital Nurses in Kashan 2016

Hamidreza Saberi¹, Masoud Motalebi Kashani¹, Hakime Zamani Badi²

¹Department of Occupational Health, School of Health and Social Determinants of Health Research Center, Kashan University of Medical Sciences, ²Department of Health, Safety and Environment Management, Faculty of Health, Kashan University of Medical Sciences, Kashan, Iran

ORCID:

Hamidreza Saberi: <https://orcid.org/0000-0002-9941-3061>

Hakime Zamani Badi: <https://orcid.org/0000-0001-7891-9269>

Abstract

Background and Purpose: Excessive use of communication technologies such as mobile phones can lead to addiction; in this research, the prevalence of mental disorders among nursing staff dealt with the situation has been examined. **Materials and Methods:** This descriptive study has been implemented on 222 nurses Shahid Beheshti Hospital of Kashan in 2016. Data of mobile-phone addiction were assessed using a Persian questionnaire with standard reliability validity. The questionnaire included demographic information, including age, sex, marital status, education, and information about the possibilities of mobile features. The data analyzed by software SPSS and descriptive and analytical statistical methods were used. **Results:** Totally, 32 cases (14.4%) had scores higher than the overall mean score of the questionnaire, in addition to there was a significant difference regarding the sex, time, stress, difficulty in concentrating, error in clinical practice, and the mean score of mobile addiction ($P = 0.001, <0.001, 0.003, >0.001, \text{ and } 0.027$). In addition, there was a significant relationship between the accident, job performance, speed, accuracy, and overall mean addiction to mobile-phone addiction. **Conclusion:** This study revealed that lots of people suffer from addiction to mobile phones, their work indexes are affected in some cases.

Keywords: Addiction to cell phone, Kashan, nurses

INTRODUCTION

The invention of modern communication devices has led to the formation of an information society that at the end of the last years of the twentieth century has changed the social vision of human life.^[1]

New communication technologies can separate a person from his own place and link the world to others. Developments in technology, in addition to the impact on the tastes and needs people communicate, spend leisure time people are affected, and makes people more time to himself alone and deserted spend for engaging in increasingly new media relied on.^[2] One of the most important inventions that have revolutionized the communications world is the mobile.^[3]

The penetration rate of mobile phones in some European countries is more than 100%.^[4] The World Health Organization estimates that the number of mobile subscribers worldwide is

estimated at 5 billion by 2010.^[5] Furthermore, according to the information technology news website, Iran has 73 million mobile subscriptions^[6] has a population of 77 million.^[6,7]

The mobile phone market in Iran has grown over 387% in the past 5 years.^[8] While the mobile phone is attractive as a means of communication and interpersonal interactions, there has always been a growing risk of problematic use of them. Studies have shown that there is a positive correlation between the excessive use of mobile phones with aggression, smoking, suicidal tendencies, and low self-esteem in all ages and two sexes.^[9] Mobile users are subject to literature, images, and pornographic videos. The emergence of some psychological

Address for correspondence: Hakime Zamani Badi, M.Sc of Health, Department of Health, Safety and Environment Management, Faculty of Health, Kashan University of Medical Science, Kashan, Iran.
E-mail: hakime2326@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Saberi H, Kashani MM, Badi HZ. Evaluation of cell phone addiction in shahid beheshti hospital nurses in Kashan 2016. *Int Arch Health Sci* 2019;6:12-7.

Access this article online

Quick Response Code:



Website:
<http://iahs.kaums.ac.ir>

DOI:
10.4103/iahs.iahs_16_18

problems, the level of social relations, and the reduction of social security (issues such as electronic bullying, aggression, and insult) are among other uses of mobile phones.^[10]

Many young people are using their cell phones extensively, so that it's continuous, even while sleeping,^[11] driving,^[12] classrooms,^[13] watching television, and eating easily, which can cause many problems, including sleep disturbance,^[11] academic failure,^[14,15] financial problems,^[14] and many biological problems.^[4] A study also found that the use of mobile phones during driving up to four increases the likelihood of driving accidents.^[16] The results of Yaseminejad (2009) study show that there is a positive and significant relationship between the traumatic use of mobile phones and neuroticism.^[17] The use of mobile phone damage is a condition that is characterized by abundant use and mental employment of the mobile phone.^[9] Excessive use of communication technologies can lead to addiction-related mental disorders, especially in people with special emotional needs and as much as in adolescents,^[17] and Hoseini *et al.* said that addictive mobile capabilities should not be neglected.^[18]

Hyun's study on the causes of mobile phone addiction on 548 showed that 88.7% of the participants had moderate dependence on the phone, and 8.8% had severe dependence and 2.9% were mobile addicts.^[19] Khazai's study in Birjand, 95.3% of adolescents were moderate, 3.4% had severe dependence, and 1.2% had severe addiction.^[20] Jenaro *et al.* found that 8% of college students at the University of Spain were using inappropriate mobile phones.^[21] In a study conducted in Korea in 2015, the level of smartphone addiction among nursing students is 33.1%–1.21%, which is similar to or greater than the incidence of addiction to students from other universities.^[22]

Mobile addictive behaviors are a serious problem for people's work and social life. Addicted people, if they are not mobile, feel depressed, defeat, and loneliness. Sometimes, their work and life are affected by frequent calls, text messages, web surfing, and conversation.^[9]

Despite the widespread use of mobile phones in Iran, quantitative research has examined the potential use of emergencies or addictions in various occupational and social groups.^[20] In our country, unlike most European countries and the United States, the use of mobile healthcare personnel at work is not forbidden. Therefore, in this study, considering the importance of the work of nurses and the possible impact of mobile phones on their work and the lack of research studies in this field, to study the prevalence of mobile-phone addiction and its related factors including age, sex, marital status, and stress in Kashan, and to provide the necessary strategies for raising awareness, policymaking, raising standards safety at work, and to reduce work accidents.

MATERIALS AND METHODS

This cross-sectional study was conducted to assess addiction to mobile phone on 222 nurses of Shahid Beheshti Hospital in

2016. Inclusion criteria included having a mobile phone and a willingness to participate in the study, and exclusion criteria were unwillingness or lack of opportunity to participate in the study or not using the cell phone. To comply with ethical considerations, information was examined anonymous and confidential.

Data were collected using two sectional questionnaires and self-reporting. The first section of questionnaire consisted of demographic data, including marital status and mobile phone accessories, while the second section included the questions related to mobile-phone addiction. The second part of the questionnaire consisted of 15 questions and three components (the first component was related to using, the second component was related to addiction, and the last component was related to the internet addiction) that have been designed by Mazaheri Amidi and its validity and reliability have been reported acceptable. Mazaheri Amidi calculated its reliability by Cronbach's as 0.8 and is acceptable and valid due to be higher than 0.7.^[23]

The questionnaire was used for measuring the addiction to mobile phones of personnel on 5-point Likert range (rarely, sometimes, often, too much, and always) by themselves that its scores are calculated in a Likert scale ranging from rarely^[1] to always.^[5] There are three subparts in the questionnaire that included the inability to lack of cell phone usage, feeling anxious and lonely, and improvement of the mood.

RESULTS

Among 222 studied participants, the average age of 26.80 ± 5.82 , the lowest age as 18, and maximum of 50 years. Among the nurses participated in the research, 46.8% were single and 53.2% were married; 27% were male and 73% were female; 22.1% of nurses worked days and 3.6% worked at nights and 74.3% worked in rotation shift; and 77.5% used mobile phone in the workplace that 95% of them had Android operating system and 5% had Java. Table 1 represents the time of using cell phone as minutes.

About 69.8% of nurses were using a cell phone while working, 14.4% of their incoming calls at the workplace were related to the work, and 31.5% of incoming messages and calls were responded. 24.3% thought that their cell phones ringed at the workplace while it was true. In addition, 26.6% had stress at the workplace, 30.2% had impaired concentration, 4.5% had accident, and 16.2% had failed due to cell phone usage in the clinical practices. About 36.9% had changes in their job performance, and 33.3% had changes in the accuracy due to the use of mobile phones. In addition, 80.6% of the main reasons for using mobile phones were related to communicate with families, 30.2% communication with friends, 16.7% using entertainment of mobile phones, and 13.5% allocated the use of phones to distraction.

The average overall score for mobile-phone addiction was 30.18 men and 25.91 women. The average mobile usage

time in minutes at work was 23.60, which was statistically significant ($P < 0.001$). Table 2 shows the Cronbach's correlation coefficient between the time in minutes and the average total score of mobile-phone addiction.

The average overall score of mobile-phone addiction was 28.92 for those who used mobile during their rest while those who did not use it were 22.77. The average total score of addiction in those whose incoming calls were related to work was 26.75. The average total score of mobile addiction in those who responded to incoming and outgoing messages was 30.57 and those who did not respond 24.97. The average

overall mobile-phone addiction rate for those who thought their phone was at a runaway job 28.11.

Furthermore, in the present study, the mean scores of mobile-phone addiction in those whose job performance was affected by mobile phone has been 27.58 and 26.77 in those who were affected; however, it was not statistically significant ($P = 0.5$).

The average of overall score for addiction to mobile phone in those their speed and accuracy had been changed was higher (27.54 against 26.83); however, this difference was not statistically significant ($P = 0.4$). Table 3 revealed that the average of overall score associated with the use of mobile-phone addiction in the workplace is mentioned as statistically significant difference. In addition, the most frequent causes of mobile phone use were entertainment and time.

Table 4, the average overall score of mobile-phone addiction in respondents, who respond to their calls and messages while working, is statistically meaningful. In this way, people who responded during the work had the highest score in the lack of control, loneliness, and mood increase for those who did not respond.

The mean of total mobile addiction due to stress, disturbance of focus, and error in clinical activities is presented, which is statistically significant in all three cases [Tables 5-7].

In this study, 36.5% agreed to the ban on mobile phone use at their workplace.

Table 1: Mobile phone usage time in minutes

Mobile usage time (min)	Frequency (%)
Less than one	52.3
Between ten - thirty	32.8
Between thirty - sixty	8.1
Between sixty - hundred	2.3
More than a hundred	4.5

Table 2: Correlation coefficient between mean total addiction score and phone usage time in minutes

Time to use cellphone with min	Overall score	Inability to control	The feeling of loneliness	Increase mood
Crumbach correlation coefficient	0.444	0.420	0.362	0.262
<i>P</i>	<0.001	<0.001	<0.001	<0.001

Table 3: Average total score of mobile-phone addiction with reasons for using mobile phones

The most important reason for using a cell phone	Overall score	Inability to control	The feeling of loneliness	Increase in mood
Communication with family				
Average	18.5	10	5.83	2.66
SD	4.18	3.34	1.60	2.11
Communication with colleagues				
Average	26.74	12.25	10.51	3.97
SD	8.93	4.04	4.68	2.20
Communication with friends				
Average	26.50	11.92	10.34	4.23
SD	7.02	3.21	4.07	1.90
Using side accessories				
Average	28.84	13.05	11.57	4.21
SD	8.35	5.09	4.22	1.96
Entertainment				
Average	30.57	14.28	11.57	4.71
SD	11.04	5.43	3.77	2.36
Time spent				
Average	35.25	16.62	13.12	5.50
SD	9.73	6.34	4.48	1.92
Total				
Average	27.07	12.40	10.56	4.10
SD	8.67	4.16	4.47	2.10
<i>P</i> value	0.01	0.06	0.017	0.041

SD: Standard deviation

Downloaded from http://journals.iwv.com/iahs by BhdMf5eP-HKav1zEoum1tQIN4a+kLLHEZgbsH04XMI0hCwvCX1AW nYOp/IIqHd3i3D00DRy7TvsF14C13VC1y0ab0gQZxdmKZBYtws= on 06/14/2023

Table 4: Average overall score of mobile-phone addiction and response to calls and incoming messages during work

Response to incoming calls and incoming messages	Overall score	Inability to control	The feeling of loneliness.	Increase mood
Yes				
Average	30.57	13.84	12.00	4.72
SD	9.71	4.97	4.56	2.49
No				
Average	24.97	11.79	9.52	3.66
SD	7.78	3.59	4.08	1.87
Most times				
Average	26.28	11.66	10.55	4.07
SD	7.43	3.52	4.58	1.75
<i>P</i>	<0.001	0.006	0.002	0.012

SD: Standard deviation

Table 5: The overall score of mobile-phone addiction and stress

Stress due to the use of mobile phones	Overall score	Inability to control	The feeling of loneliness	Increase mood
Yes				
Average	29.62	13.30	11.96	4.35
SD	8.34	4.11	4.73	2.17
No				
Average	26.14	12.07	10.05	4.01
SD	8.62	4.14	4.28	2.07
<i>P</i>	0.003	0.022	0.006	0.227

SD: Standard deviation

Table 6: The overall score of mobile addiction and disturbance of focus

Concentration disorder due to the use of mobile phones	Overall score	The inability to control	The feeling of loneliness	Increase mood
Yes				
Average	29.82	13.67	11.85	4.29
SD	7.28	3.74	4.59	2.03
No				
Average	25.88	11.85	10.00	4.01
SD	8.97	4.22	4.32	2.13
<i>P</i>	<0.001	<0.001	0.005	0.175

SD: Standard deviation

Table 7: The overall score of mobile addiction and error in clinical activities

Error in clinical activities	Overall score	Inability to control	Feeling lonely	Creating enhancement
Yes				
Average	30	14.38	11.25	4.36
SD	8.93	4.84	4.37	2.34
No				
Average	26.50	12.02	10.43	4.05
SD	8.52	3.91	4.49	2.05

SD: Standard deviation

DISCUSSION

The present study is based on the first studies conducted on nursing mobile-phone addiction; hence, the results of this study were compared with similar studies. Based on the results of this study, mobile-phone addiction among nurses was 15% higher than the average.^[22] In a study on the prevalence of mobile phone dependency and aggression in adolescents in Birjand,

95.3% (611) of moderate to 3.4% (22) had a high dependence, and 1.2% (8) had full mobile-phone addiction.^[20] Hyun study that examined adolescent cell phone addiction, 7.5% had a moderate, 4.8% had severe dependence, and 0.9% addiction.^[19] According to the Lee study on 598 nursing students in Korea, the score for mobile-phone addiction was 17.5% (22). These results are lower than other studies whose addiction among

nursing students was between 24.8%–27.8%^[24,25] and 21.1%–33.1%.^[26,27]

Based on the present study, the mean of total mobile phone stress score ($P=0.003$), concentration disturbance ($P=0.001$), and error in clinical activities ($P=0.027$) had a significant relationship. Based on the results of Lee's research, cell phone addiction has a positive and significant relationship with the level of anxiety in students.^[22] Furthermore, the results of Pour Akbar's study on the use of mobile and anxiety in young people have found that there is a significant relationship between the use of communication devices such as mobile phones with psychological problems such as depression and sleep disorders.^[28]

Studies in Saudi Arabia and Egypt have linked cell phone use with headache, fatigue, dizziness, difficulty concentrating, and sleep disorders.^[29] In general, health complaints, such as fatigue, stress, headache, anxiety, and sleep disorders, are more common in people who use mobile than they would otherwise be.

Based on the results of the Shahbazi study, all of the students studied had 7% headache, 29% stress, 22% anger, and 22% more sleep disorder after the purchase of mobile phones.^[29]

The mean of mobile phone usage in the present study in males and females was 30.18 and 25.91, respectively, which contrasts with other studies so that this score was significantly higher in men than in women. Beranuy reported that men show more addictive behaviors than the Internet and mobile phones, while women use mobile phones more as a means of communicating emotionally.^[30] Furthermore, in Chen's study, female student addiction to mobile phone was significantly higher than that of male students.^[31] The interpretation of lower female addiction rates in comparison with scientifically related studies is cautious. The reason for this is that this study was designed based on the sample size. In the present study, the time to use a mobile phone at work in minutes and the mean total score of addiction was statistically significant ($P < 0.001$). The results of Jeong's studies suggest that the higher the use of mobile phones and the greater the number of addictions, while the number of friends is greater, due to the increased communication with the text message, it is natural that the time of use from mobile phones.^[22]

The average overall score of mobile-phone addiction was significantly higher with the most important reasons for using mobile phones, including connecting with family, friends, coworkers, hobby and recreation, and using additional features. Based on the results of Shahbazi, 72% of the students used mobile phones to contact the family. It was also shown in his study that more than 67% of the sampled samples spent a lot of time using mobile side accessories, which is not very useful for them, and 95% of students said that nonvoice calls and short message service, it takes a lot of time to waste them. Various studies have also shown that more users have used mobile phones for their families.^[32,33] Student research^[34] also found

that 38% of Indian students were most likely to feel the need for a telephone, the companions have been linked with their families; however, American students have only 8% said they use the mobile phone for this reason.

CONCLUSION

Considering that the addiction score in nurses was higher than the average, nurses seem to be exposed to mobile-phone addiction, which causes changes in their performance and indicators, which require management arrangements as well as training classes. Do not lead to an accident and do not work.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Leskovec J, Lang KJ, Dasgupta A, Mahoney MW. Statistical properties of community structure in large social and information networks. In: Proceedings of the 17th International Conference on World Wide Web. ACM; 21 April, 2008. p. 695-704.
- North S, Snyder I, Bulfin S. Digital tastes: Social class and young people's technology use. *Inf Commun Soc* 2008;11:895-911.
- Ameli SR, Sabbar SH, Ranjbar Ramezani M. *Studies Mobile Phone*. Tehran: Life on the Move, the Publisher; 1387.
- Söderqvist F, Carlberg M, Hardell L. Use of wireless telephones and self-reported health symptoms: A population-based study among Swedish adolescents aged 15-19 years. *Environ Health* 2008;7:18.
- World Health Organization. *World Health Assembly New Political, Economic, Social and Environmental Realities*. Draft Twelfth General Programme of Work. Geneva: World Health Organization; 2013.
- Chanpa R. Information and communication technology and its effect on tourism industry of Khoy-Iran. *International Journal of Academic Research* 2012;4(4).
- Rahmani M, Nabizadeh R, Yaghmaei K, Mahvi AH, Yunesian M. Estimation of waste from computers and mobile phones in Iran. *Resour Conserv Recycling* 2014;87:21-9.
- Manteghi M. How male and female students use the facilities of mobile phone, information and communication. *Technol Educ Sci* 2010;1:95-128.
- Takao M, Takahashi S, Kitamura M. Addictive personality and problematic mobile phone use. *Cyberpsychol Behav* 2009;12:501-7.
- Manteghi M. Studying the use of mobile phone by female and male students. *Information And Communication Technology In Educational Sciences* 2011;1:95-128.
- Munezawa T, Kaneita Y, Osaki Y, Kanda H, Minowa M, Suzuki K, *et al.* The association between use of mobile phones after lights out and sleep disturbances among Japanese adolescents: A nationwide cross-sectional survey. *Sleep* 2011;34:1013-20.
- Walsh S, White K. Ring, ring, why did I make that call? Mobile phone beliefs and behavior among Australian university students. *Youth Stud Aust* 2006;25:49.
- Srivastava L. Mobile phones and the evolution of social behaviour. *Behav Inf Technol* 2005;24:111-29.
- James D, Drennan J. Exploring addictive consumption of mobile phone technology. In: *Australian and New Zealand Marketing Academy Conference*. Perth, Australia; 2005.
- End CM, Worthman S, Mathews MB, Wetterau K. Costly cell phones: The impact of cell phone rings on academic performance. *Teach Psychol* 2009;37:55-7.
- McEvoy SP, Stevenson MR, McCart AT, Woodward M, Haworth C,

- Palamara P, *et al.* Role of mobile phones in motor vehicle crashes resulting in hospital attendance: A case-crossover study. *BMJ* 2005;331:428.
17. Yaseminejad P, Golmohammadian M. Study the Relationship of Big Five Factors and Cell-Phone Over-Use in Students. *Social Psychology Research* 2011;1:79-105.
 18. Hoseini SH, Khalilian A, Vahedi A. Psychopathological screening of high school students based on SL-90-R in Sari2002-2003. *Journal of Mazandaran University of Medical Sciences* 2004;14:60-7.
 19. Ha JH, Chin B, Park DH, Ryu SH, Yu J. Characteristics of excessive cellular phone use in Korean adolescents. *Cyberpsychol Behav* 2008;11:783-4.
 20. Khazaie T, Saadatjoo A, Dormohamadi S, Soleimani M, Toosinia M, Zadeh FM. Prevalence of mobile dependency and adolescence aggression. *J Birjand Univ Med Sci* 2013;19:430-8.
 21. Jenaro C, Flores N, Gómez-Vela M, González-Gil F, Caballo C. Problematic internet and cell-phone use: Psychological, behavioral, and health correlates. *Addict Res Theory* 2007;15:309-20.
 22. Jeong H, Lee Y. Smartphone addiction and empathy among nursing students. *Adv Sci Technol Lett* 2015;88:224-8.
 23. Mazaheri MA, Karbasi M. The Use of Mobile Phone Features Among Students in Isfahan University of Medical Sciences in Iran. *Scimetr* 2014;2(3).
 24. Park S, Kwon MA, Baek MJ, Han NR. Relation between smartphone addiction and interpersonal competence of college students using social network service. *J Korea Contents Assoc* 2014;14:289-97.
 25. Kim BN, Ko EJ, Choi HI. A study on factors affecting smart-phone addiction in university students: A focus on differences in classifying risk groups. *Stud Korean Youth* 2013;24:67-98.
 26. Kim SM. Smartphone use Level of Nursing College Students, the Relationship between Communication Competence, Social Avoidance and Distress. Unpublished Master's Thesis). Chungnam National University, Daejeon; 2014.
 27. Cho M. The relationships among smart phone use motivations, addiction, and self-control in nursing students. *J Digit Convergence* 2014;12:311-23.
 28. Pourakbaran E. The survey of the use of new communication devices (Internet, satellite, and mobile) among young people and their relationship with anxiety, stress and depression. *Magazine Principles Ment Health* 2015;17:254-9.
 29. Baghianimoghadam MH, Shahbazi H, Masoodi Borojjeni D, Baghianimoghadam B. Attitude and usage of mobile phone among students in Yazd university of medical science. *Iran Red Crescent Med J* 2013;15:752-4.
 30. Beranuy M, Oberst U, Carbonell X, Chamarro A. Problematic Internet and mobile phone use and clinical symptoms in college students: The role of emotional intelligence. *Comput Hum Behav* 2009;25:1182-7.
 31. Chen YF. The Relationship of Mobile Phone use to Addiction and Depression amongst American College Students; 2004. p. 344-52.
 32. Choocom O, Chuawanlee W, Sucaromana A, Boonprakob P, Boonprakob M, Thongpukdee T. Survey of Thais' mobile phone-battery usage and disposal. *Int J Behav Sci* 2009;4:23-35.
 33. Michailidou A. "Second-order" elections and online journalism: A comparison of the 2009 European Parliament elections' coverage in Greece, Sweden and the United Kingdom. *J Pract* 2012;6:366-83.
 34. Chakraborty S. Mobile Phone Usage Patterns amongst University Students: A Comparative Study between India and USA; 2006.