Research Article

Relationship between mobile phone dependency, anxiety, depression and somatic complaints among students of Babol Universities (2012)

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ABSTRACT

Background and Purpose: The present age can be a combination of communication and information. In this era, human needs more information to communicate via various communication technologies such as mobile phones over the past. The increase of producing the new devices of communication and the ease of access cause large groups of people with different ages to acquire and increasingly to interest in this technology. In addition to helpful use of mobile, its extreme use is uncontrollable and undesirable and can cause some problems in interaction with others.

Materials and Methods: In this descriptive and correlational study, the population included all students of Babol Universities (Azad and Non–Governmental Universities). Totally, 216 students were selected by simple random sampling. Data were collected using four questionnaires including mobile phone dependency, anxiety, depression and somatic complaints. Data were analyzed using Pearson correlation and t-test.

Results: The analyses showed that there was a significant positive relationship between mobile phone dependency and somatic complaints (P=0.05), anxiety (P=0.01), and depression (P=0.01), respectively.

Conclusion: The results indicated that there was a significant positive relationship between mobile phone dependency and somatic complaints, anxiety and depression.

Keywords: Mobile phone dependency, anxiety, depression, somatic complaints, students, communication

INTRODUCTION

The present age can be a combination of communication and information. In this era, human needs more information to communicate via various communication technologies such as mobile phones over the past. Today, rapid communication information is more available than ever before using various communication and advanced technologies such as mobile phones. The increase of producing the new devices of communication and the ease of access cause large groups of people with different ages to acquire (1) and increasingly to interest in this technology (2).

According to the results of Allen, more than 80% of people (8 of 10 persons) use mobile phone or its services (3).Mobile network is one of the technologies that have dramatically grown in recent years. Short message service (SMS) which everyone tends to use is one of the capabilities of this technology (4). This

service was entered into the cycle of communication services in Europe in 1991 and it took its right place in 1998 (5).

Mobile phone due to the features such as novelty, social impact, excessive use and its influence on society, among the technological communication devices has had a surprising development in recent years.Among the age groups, young adults have shown the greatest attention to it (6).It means that the widespread use of mobile phones by young people is in the first place of globalization (7).Young adults believe that mobile phone is an integral part of life and they feel dispossession and social exclusion (8).In addition to helpful use of mobile phone (9,10) which plays a significant role in facilitating the social interactions, its extreme use is uncontrollable and undesirable and can cause some problems in interaction with parents.Moreover, the intensive use of mobile phones created some problems such as spending many times for the number of mobile calls and texting, disrupting the current trend of life and interpersonal interactions. As a result, they have undesirable effects on health and wellbeing (like sleep deprivation due to the constant calls and texting) (6, 11).

Many believe that the term addiction is simply about behaviors such as drug use and abuse drugs which cause dependency. Researchers have identified certain behaviors which are potentially addiction and overlap with cases caused by drug abuse (12) and DSM diagnostic criteria (13).

A new type of technological addictions such as computer games, Internet, mobile phone and any other important tools that apply in youth communication and entertainment has a particular position in the classification of DSM-V diagnostic criteria (13).

Several etiology patterns influenced by the theories of learning in the form of cognitive-behavioral, social learning, defects of amplifiers, culture, genetics and neuro-biological theories in the field of technological addictions have been suggested (14).A person is addicted to what he/she does and to feelings experienced when doing that work in

technological or behavioral addiction (15).Some people are suffering from addictive behaviors and they feel relaxed through resorting to something outside of themselves. Anxiety (12,16), craving and compulsion, loss of control, insisting on behavior despite negative consequences, isolation from others, poor academic performance, depression (2, 17), mobile dependency syndrome (18), conflict with others and disorders in daily activities, cognitive and behavioral problems (16), poor relationships with parents (2) and limited range of social relations are common to all addictive behaviors (including addiction to SMS) (1).

Experts have claimed that mobile addiction is one of the most important non-drug addictions and its victims suffer from social isolation (18). On the other hand, connecting with cyber world causes to escape from social bitter realities for people especially young adults. Studying the spending leisure time of youth indicates that a significant portion of them tries to take refuge in the cyberspace such as Internet, satellite, drug abuse, Internet dependency, mobile phones and SMS (19).Parents provide mobile phone for their children; in fact, they commit an error since they think that they can apply more control over them through this device, while the children are engaged in new problems (20).Therefore, due to the growing influence of mobile phone on the young people's lives, few studies available on the misuse of mobile phone and negative effects of its excessive use, the aim of the current study was to investigate the relationship between mobile phone dependency and anxiety, depression, and somatic complaints.

MATERIALS AND METHODS:

In this descriptive and correlational study, the population included all students of Babol Universities (Azad and Non–Governmental Universities) in 2012. Totally, 216 students were selected from an Azad University and one Non–Governmental University according to Krejcie and Morgan Tableusing simple random sampling. The measuring tools of the study include:

1- Questionnaire containing 22 questions of dependence on the mobile phone
2- Scale containing 112 questions of somatic complaints
3- Beck Anxiety Inventory containing 21 questions
4- Beck Depression Inventory containing 21 questions
To analyze the data, descriptive methods including drafting tables, calculating averages and percentages, and analytical methods containing t-test and correlation coefficient were applied.
Severity of illness scoring:
This scale includes 112 questions. In this scale, some factors such as headache, gastrointestinal problems, pain, discomfort in the chest and heart, respiratory distress, diarrhea, constipation, cramps, dizziness are mentioned. The scale was translated for the first time by Shokrkon. Reliability coefficient of the scale was 0.81 based on Cronbach's alpha. Its reliability was 0.32 through correlating the score of this scale to SCL-90-R which was significant at 0.01. The minimum and maximum scores of this questionnaire were 112 and 448, respectively. The higher scores on this scale were the sign of the intensity of discomfort and health problems (21). Beck Anxiety Inventory: This questionnaire containing 21 questions has been developed by Beck et al. Total scores can range from 0 to 63.

The concurrent validity and retest reliability of the questionnaire were 0.79 and 0.67, respectively. In Iranian culture, Cronbach's alpha coefficient to determine the reliability reported 0.84 through internal consistency and split-half correlation computed by odd and even was 0.7 (22).
Beck Depression Inventory: This questionnaire containing 21 questions has been developed by Beck in 1961. In addition, its validity and reliability had been proven during the first decade after its formulation. Total scores can range from 0 to 63. Total scores of adults with normal level were 0 to 17, with mild depression were 17 to 28, with moderate depression were 28 to 35 and with severe depression were 35 to 63 (23). The internal consistency and retest reliability of questionnaire were 0.92 and 0.7, respectively. The reliability of this test was 0.78 based on Cronbach's alpha and desirable validity also achieved in Iran (22).

RESULTS
As shown in table 1, the mean scores of students have significant difference in terms of somatic complaints and anxiety between two Azad and Non-Governmental Universities. In somatic complaints, this mean was higher among the students of Azad University (90.94). This mean was higher in anxiety among the students of Non-Governmental University (25.42).

Table 1: Statistical analysis of the relationship between the main variables

statistical groups

	University	Number	Mean	Standard Deviation
Mobile	Azad	108	25.6852	18.99171
	Non-Governmental	108	25.7315	18.39931
Somatic complaints	Azad	108	**90.9444**	84.74964
	Non-Governmental	108	61.1481	58.91620
Depression	Azad	108	13.9815	8.61533
	Non-Governmental	108	15.8889	10.99136
Anxiety	Azad	108	20.3056	12.96686
	Non-Governmental	108	**25.4259**	12.98756

Table 2: Statistical analysis of the relationship between the main variables

Independent Samples Test

		Levene's Test for Equality of Variances				
		F	Sig.	t	Df	Sig. (2-tailed)
Mobile	Equal variances assumed	.187	.666	-.018	214	.986
	Equal variances not assumed			-.018	213.785	.986
Somatic Complaints	Equal variances assumed	12.759	.000	3.000	214	**.003**
	Equal variances not assumed			3.000	190.840	.003
Depression	Equal variances assumed	7.363	.007	-1.419	214	.157
	Equal variances not assumed			-1.419	202.449	.157
Anxiety	Equal variances assumed	1.728	.190	-2.899	214	**.004**
	Equal variances not assumed			-2.899	213.999	.004

The study suggested that there was a significant positive relationship between mobile dependency and somatic complaints (P= 0.05). Further, the mobile dependency and anxiety had a significant positive relationship (P = 0.01). In addition, a significant positive relationship was found between mobile dependency and depression (P = 0.01).

Pearson's correlation coefficient was used to investigate the relationship between mobile dependency and somatic complaints. The results of table 3 illustrate that there is a significant positive relationship between the scores of mobile dependency and somatic complaints (R=161) because the obtained correlation coefficient is significant at the level of 0.05. Thus, it can be said that there is a significant relationship between mobile dependency and somatic complaints with 95% confidence; it means that, the greater dependency on mobile causes the more somatic complaints.

Table 3: Statistical analysis of the relationship between the main variables

Correlation

		Mobile	Somatic Complaints
Mobile	Pearson Correlation	1	**.161**[*]
	Sig. (2-tailed)		.018
	N	216	216
Somatic Complaints	Pearson Correlation	.161[*]	1
	Sig. (2-tailed)	.018	
	N	216	216

*. Correlation is significant at the 0.05 level (2-tailed).

Pearson's correlation coefficient was used to investigate the relationship between mobile dependency and anxiety. The results of table 4 represent that there is a significant positive relationship between the scores of mobile dependency and anxiety (R=190) since the obtained correlation coefficient is significant at the level of 0.01.Thus, it can be said that there is a significant relationship between mobile dependency and anxiety with 99% confidence; it means that, the greater dependency on mobile causes the more anxiety.

Table 4: Statistical analysis of the relationship between the main variables

Correlation

		Mobile	Anxiety
Mobile	Pearson Correlation	1	**.190**[**]
	Sig. (2-tailed)		.005
	N	216	216
Anxiety	Pearson Correlation	.190[**]	1
	Sig. (2-tailed)	.005	
	N	216	216

**. Correlation is significant at the 0.01 level (2-tailed).

Pearson's correlation coefficient was used to investigate the relationship between mobile dependency and depression. The results of table 5 indicate that there is a significant positive relationship between the scores of mobile dependency and depression (R=295) for the obtained correlation coefficient is significant at the level of 0.01. Thus, it can be said that there is a significant relationship between mobile dependency and depression with 99% confidence; it means that, the greater dependency on mobile causes the more anxiety.

Table 5: Statistical analysis of the relationship between the main variables

Correlation

		Mobile	Depression
Mobile	Pearson Correlation	1	**.295**[**]
	Sig. (2-tailed)		.000
	N	216	216
Depression	Pearson Correlation	**.295**[**]	1
	Sig. (2-tailed)	.000	
	N	216	216

**. Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

The results of the current study suggested that there was a significant relationship between mobile dependency and anxiety among students. It means that, the greater dependency on mobile creates the more anxiety. This result is consistent with that of Ashouri et al. in Iran. Their studies showed a significant relationship between interest style and dependency on SMS. They stated that people with secure interest indicated less dependence on SMS while those with insecure interest (which is specified with symptoms such as isolation, anxiety and etc) showed more dependence on SMS (19).

Azuki in America found that young adults who use extremely and addictively SMS had high levels of impulsivity, loneliness and social anxiety (24).

Tavakoli et al. demonstrated that depression and anxiety had a significant and positive contribution in predicting the students' dependence on mobile phones and SMS (25).

The results of some studies indicated that applications which are available for young people through multi-media mobile create powerful effects on them (26).

In a study conducted by Busko, it was found that people who suffer from high anxiety use mobile phone extremely and addictively (27).

John Gruhalin a review of literature on addiction to texting revealed that persons who have less ability to meet other people try to use SMS as a communication tool. Moreover, the replicable research indicated that extreme users of SMS have mental disorders and communication abnormalities (28).

There was a positive correlation between the number of sent SMS in a day and anxiety as Billieux pointed out in a study (11).

Sonu et al. cleared that the excessive use of mobile phone makes somatic problems such as headache (20), mental pressure, sleep disorders and depression (29-30).

The present study represented that there was a significant positive relationship between mobile dependency and depression. The greater dependency on mobile creates the more depression, which is similar to the results of Igarashi et al. In their study, some people indicated a high sensitivity to maintain telephone contact with others, and disconnect and lack of contact with their friendsvia mobile phone and SMS made them worried (31).

Pierce in a study claimed that the use of communication technologies such as mobile phones and text messaging reduces a person's relationship with family and the surrounding social circle and increases the loneliness and isolation and said that women are more dependent than man on SMS (32).

The current study suggested that there was a significant positive relationship between mobile dependency and somatic complaints. The greater dependency on mobile created the more somatic complaints, which is the same as the results of Sonu et al. who stated that the excessive use of mobile phone makes somatic problems such as headache (20), mental pressure, sleep disorders and depression (29-30).

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