

The Relationship between Five Main Factors of Personality and Addiction to SMS in High School Students

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Abstract: Today, mobile phones compared with computers and Internet technology, have a greater impact on social life, people's lifestyle and their consumer behavior, because mobile phones are cheap and easy to use. This paper aims to examine the relationship between 5 main personality factors, neuroticism, extroversion and addiction of students to SMS. The statistical population consisted of all high school students studying in the academic year (2011-2012) which totally are 7520 people of which 364 students were selected as study samples using random sampling method. Research tools include questionnaire for addiction to text messaging and NEO-FFI questionnaire for 5 main personality factors. Pearson correlation coefficient and t-test were used for data analysis. Data analysis results showed that neuroticism and addiction to text messaging are positively related and it has a significant negative correlation with extraversion. Other findings indicate that there is no significant difference between male and female students in terms of addiction to SMS and personality characteristics. Results show the importance of the personality characteristics in predictions of SMS addiction.

Keywords: Five main personality factors, SMS addiction, students

INTRODUCTION

Today, cell phones as one of the manifestations of communication technology have a strong position in modern life and human society and are considered as an integral part of everyday relations. It can be said that for many people living without mobile phones is not possible or at least is not desirable. Although there has been a little study about the excessive use of SMS, evidences indicate that problematic use of mobile phone can be considered as a form of technological addiction. Many mobile phone addicts are people with low self-esteem and have difficulty in their social relationships and feel that they need to constantly contact with others. Turning off mobile phones can provide anxiety, sensitiveness and sleep disorders and insomnia and even shivering and digestive problems (Hassanzadeh and Rezaei, 2011). Also it creates emotional attachment for users, so these people believe that without the use of mobile phones they are unable to live. These findings support the negative impact of excessive use of mobile phones and its negative impact on physical and psychological health of students (Kamibeppu and Sugiura, 2005).

In today's communicational world mobile phone are used largely as a means of personal communication. The idea of moving (mobile) phone and using it in different places to take more advantage of this device was formed since 1960s in Scandinavia. SMS or text messaging service was first introduced in Europe in 90s and quickly faced the public reception. This technology

was available for mobile phones in Iran since 2002. SMS technology which provides a kind of written and fast communication for mass users was greatly welcomed in Iran in such a way that caused the birth of a new phenomenon called message game and nowadays on average more than 20 million messages per day are being sent in Iran which has surpassed its source nation i.e., the United Kingdom (Hassanzadeh *et al.*, 2012). Now the question is that how a person's character affects SMS addiction? The 1st effect is that sending SMS can become an addiction. People who are addicted to text messaging always have mobile phones in their hands and are waiting to hear the beep SMS alarm and respond swiftly. Frequent medical research results about the health effects of mobile phones show that this communication tool is not in favor of health, for example, the results of some epidemiologic studies indicate that mobile phone radiation can cause changes in genetic regulation (Zhao *et al.*, 2007) and can intensify the oxide pressure on the cornea and lens tissues (Balci *et al.*, 2007).

In this study, we sought to examine this Relation: The Relationship between 5 Main factors of Personality and Addiction to SMS in High School Students.

LITERATURE REVIEW

Long-term use of mobile phones may cause hearing and visual problems (Meo and Al-Drees, 2005). Recent studies also have shown that prolonged use of mobile phones may cause brain tumors (Hansson *et al.*,

2007; Hepworth *et al.*, 2006). However, there are a low number of psychologists, sociologists and education scholars who considered and qualitatively studied the adolescents SMS addiction, as a psychological disorders resulted from modern technology. For example, Niemz *et al.* (2005) found that the harmful use of Internet and self-esteem are significantly related. Kreut *et al.* (1998) also found that the use of new communication technologies decreases social relations in real mode and reduced welfare due to loneliness, depression and isolation. Kamibeppu and Sugiura (2005) and Bilioux *et al.* (2007) stated that the addictive potentials of mobile phones should not be neglected. Harmful use of mobile phones is a condition that is determined by the excessive use and preoccupation of mobile phones (Jenaro *et al.*, 2007). Researchers such as Kasesniemi and Rautiainen (2002), Ling and Ttri (2002) have examined the psychological effects of SMS on social interaction among normal users and also long-term consequences of massaging in creation and consistency of these relationships. Pierce (2009), Leary and Kowalski (1995) and Madell and Muncer (2007) in a research found that the use of information and communications technology among adolescents and young people has led to social anxiety and reduce of face to face relationships. Laughlin (2001) and Audrey (2004) Social anxiety, Reid and Reid (2004), increased sense of confidence and feeling of being accepted in social network are also emerged by the mobile phones and researchers have confirmed them. Sohail (2010) in a research in Pakistan argues that the use of calls and text messages were similar in male and female students and there were no significant differences. While some studies believe that the communication pattern is the same between boys and girls, some other studies (Hans, 2006) have considered the completely different attitudes of girls and boys. Most of the male and female students have stated that they have an average daily use of mobile phones and there was not a statistically significant difference between boys and girls (Sheereen and Rozumah, 2009).

Since SMS is an asynchronous communication, people who are dependent on SMS pay too much attention to the messages. Most people attribute delays in response to the inevitable reasons such as: busy recipient, or engaged in conversation with another person. Even though if people with addiction to SMS message do not receive a rapid response to the message they have sent, they may feel rejection or loneliness and their fear of rejection will increase. So these kinds of perceptions, rather than the actual amount of SMS, are the potential causes of mental or behavioral symptoms.

RESEARCH METHODOLOGY

The research method is descriptive and its type is correlation. In this study 5 major personality factors questionnaire and also neo messaging measurement are used. Messaging addiction test was made by Igarashi *et al.* (2005). Addiction test is composed of 15 items.

Addiction test measures three components: emotional reaction (questions 1 to 5), perception of excessive use (questions 6 to 10), maintenance of relations based on SMS (questions 11 to 15). Scoring of addiction test is based on Likert's 5 grade scale. Completely agree: grade 5, agree: grade 4, neutral: grade 3, disagree: grade 2, totally disagree: grade 1. Statistical population in this study consisted of high school students in Semnan city. Sampling method in this study was simple random sampling. Through this method 364 students were selected from the statistical population. Validity of the content, structure and its internal consistency were approved by Igarashi *et al.* (2005). Reliability coefficient of SMS addiction test in this study was calculated as 0.81 by Cronbach's alpha method. In the research by Igarashi *et al.* (2008) the reliability of test was calculated as 0.70 using Cronbach's method. The short form of the test for five main personality factors: this test with 60 questions has been developed by Costa and McCrae (1989) based on normal personality characteristics. Reliability and validity of this test has been proven in various studies, for example, Shokri *et al.* (2006) have reported that the reliability of this test for neuroticism, extroversion, agreeableness, openness and consciousness is respectively 0.79, 0.69, 0.79, 0.55 and 0.83 which shows the desirable statistical stability.

Given that the research tool was standard, therefore it was valid and reliable. When the questionnaires were completed by the researcher and the students were ensured that the results would be confidential and when the required data were collected, these data were analyzed using SPSS software and through appropriate statistical methods (descriptive statistics: graphs, frequency and frequency percentage; inferential statistics: Pearson correlation coefficient and t test).

RESULTS

Descriptive statistics: Descriptive statistics are referred to in this section. Distribution of subjects based on gender is shown in Table 1.

As it is observed in the table, the total number of subjects were 364 student of which 248 were male (68.1%) and 116 were girls (31.9%).

Frequency distribution of subjects according to type of text messages usage is shown in Table 2.

This table shows that most frequencies are related to those who are prone to addiction to text messaging,

Table 1: Distribution of subjects based on gender

Gender statistical indicators	F (frequency)	p (%)
Male	248	68.1
Female	116	31.9
Total	364	100

Table 2: Frequency distribution of subjects according to type of text messages usage

	Frequency	(%)
Normal user	10	3
At risk for addiction	258	71
Addicted to text messaging	96	26
Total	364	100

Table 3: Summary of statistical analysis of the first hypothesis

Statistical indicators	N	df	Calculated t	Critical t	α
Addiction to text messaging and neuroticism	364	362	0.221	0.098	0.003

Table 4: Summary of statistical analysis of the second hypothesis

Statistical indicators	N	Calculated t	Critical t	α
Addiction to text messaging and extraversion	364	0.089	0.098	0.233

Table 5: Summary of statistical analysis of the third hypothesis

Statistical indicators of groups	N	M	S.D.	df	Calculated t	Critical t
Boys	284	43.56	11.54	362	0.110	0.912
Girls	116	43.38	8.050			

i.e., 258 (71%) people and the lowest frequencies are related to those who are normal users and i.e., 10 people (3 %).

Hypothesis testing:

First hypothesis: There is a relationship between addiction to text messaging and neuroticism. Summary of statistical analysis of the first hypothesis is shown in Table 3.

According to Table 3, as the calculated correlation coefficient is (0.221) with df of 362 and coefficient level of 95% ($\alpha = 5\%$) is higher than the critical correlation coefficient of the table (0.098), so the null hypothesis was rejected and the research hypothesis is confirmed. It is concluded that there is a relationship between SMS addiction and neuroticism.

Second hypothesis: There is a relationship between addiction to text messaging and extraversion. Summary of statistical analysis of the second hypothesis is shown in Table 4.

According to Table 4, as the calculated correlation coefficient is (0.098) with df of 362 and coefficient level of 95% ($\alpha = 5\%$) is lower than the critical correlation coefficient of the table (0.098), so the null hypothesis is confirmed and the research hypothesis is rejected. It is concluded that there is no relationship between SMS addiction and extraversion.

The third hypothesis: There is a significant difference between SMS usage in male and female. Summary of statistical analysis of the third hypothesis is shown in Table 5.

As the calculated t (0.110) with df of 362 and coefficient level of 95% is lower than the critical t of the table (0.912), so the null hypothesis is confirmed and the research hypothesis is rejected. It is concluded that there is no significant difference between boys and girls in terms of SMS usage.

CONCLUSION

Results showed that there is a relationship between addiction to text messaging and neuroticism. There is no relationship between addiction to text messaging and extraversion and there is no significant difference between girls and boys in terms of SMS usage.

Addiction to mobile phones, SMS and addiction to immoral relations are considered as addictive behaviors by sociologists. In the last 2 decades, addiction psychologists and researchers gradually have accepted that people can be addicted to things other than drugs. In addictive behavior the person is addicted to what he does and the feelings that are experienced by doing that task. Early access to friends, the ability to hide conversations from family, taking advantage of SMS system for more hiding, are some of the advantages of cell phones for youth and adolescents. Addiction to new technologies such as Internet, computer games, mobile phones (SMS) has become a serious injury and crisis. Reviews showed that the excessive use of mobile phones (SMS) which is associated with variables of loneliness, feelings of isolation, anxiety, alteration in moods and inappropriate social behaviors can cause addictive behavior. About the concept of dependence and addiction to mobile phones it is also true that there is a same physiological basis for drug addiction and behavioral addiction. Based on research findings, it is concluded that the problematic use of mobile phones can be considered as one of the technological addiction forms.

Since, there is no class provide for addictions (American Psychiatric Association, 2000), there have been confusions in diagnosis, treatment and research of these kinds of problems. A common response which is obtained from the efforts of researchers in the field of addiction, including (Griffiths, 1996), is that addiction to things other than drugs is compared by the diagnose criteria for drug addiction, to provide a bio-psycho-social underlying as well as a path for a comprehensive model of addiction (Grant *et al.*, 2006; Rutland *et al.*, 2007). Ezoë (2009) in a research on female nursing students found that there is a relationship between the dependence on mobile phones and a poor quality lifestyle and extroversion and neuroticism characteristics. There is a positive relationship between neuroticism and dependency to mobile phone; and there is a negative relationship between extraversion and dependency to mobile phone. Toda *et al.* (2006) also mentioned that there is a relationship between traumatic use of cell phone and unhealthy lifestyles. Igarashi *et al.* (2008) reported that extraversion and neuroticism are important personality factors that are related to excessive use of mobile phones.

Kamibeppu and Sugiura (2005) also found that the obsession and feelings of blame about why I have not received the SMS or phone call, causes the addicts to stay awake late at night and engage in sending and receiving SMS and their daily programs will also be disrupted. Ha *et al.* (2006) and Yen *et al.* (2009) showed that depression as a common phenomenon in adolescents and students is related to problematic use of technological devices and cell phone use. Egger *et al.* (2003) believe that since depression in students may lead to escape from the house or the educational institutes and increase the risk of addiction and suicide, this is an important subject and requires careful assessment and specialized and professional intervention. Bianchi and Phillips (2005) in a recent study found that the problematic use of mobile phone is associated with extraversion and low self-esteem. Igarashi *et al.* (2008) in their study titled: "No mobile, no life; self-scrutinizing and willingness to use text messaging among high school students in Japan" pointed out that in Japan in 2006, about 97 million Japanese (88% of the population) have used the mobile phone and 73% of the subscribed people connected to the Internet via mobile phone. Especially, more than 90% of Japanese high school students have their own cell phones. Balci *et al.* (2007) and Madell and Muncer (2007) argue that serious professional intervention is needed because there is a high prevalence of dependence to text messaging among adolescents and youth. Finally, reviewing the research background and physical and psychological effects of excessive use of mobile phones and addiction to text messaging in both girls and boys, there is a need to understand the personality characteristics. No doubt today's technology and especially mobile phones has affected different aspects of life and recognizing the importance of these effects needs investigation in this area.

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