

## **Predicting Harmful Use of the Internet on the Basis of Personality Traits**

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**ABSTRACT** — This study explore that if personality traits can predict harmful usage of the Internet . It is a descriptive and correlational study. The population of this study were male students Teachers. The sample consisted of 112 students from various academic disciplines of the university who were selected by cluster random sampling .NEO Personality Inventory - Short Form (NEO-FFI) questionnaire and Harmful use of the Internet inventory were used. For analyzing the data descriptive statistics (mean and standard deviation) and inferential statistics (correlation and regression analysis) were used. results showed that: Between The personality trait Neuroticism and factors (spending time, negative consequences of Internet use, preoccupation and social symptoms) - harmful use of the Internet, there is an inverse significant relationship; Between the personality trait extraversion and factors (negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance) - harmful use of the Internet, there is a significant direct relationship. Between the personality trait of openness to experience and factors (mood change, and social symptoms) - harmful use of the Internet, there is a significant direct relationship. Between the personality trait of agreeableness and factors (negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance)-of harmful use of the Internet there is a direct significant correlation. Between the personality trait Conscientiousness and factors (spending time, negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance)- of harmful use of the Internet, there is a significant direct relationship. And also : Openness to experience personality traits can predict social advantage; Personality trait of conscientiousness can predict spending too much time on the Internet; Personality traits of neuroticism and conscientiousness can predict preoccupation; Openness to experience, agreeableness personality traits can predict mood changes; Openness to experience, agreeableness and conscientiousness personality characteristics, have predictive power to social indicators; Agreeableness and conscientiousness personality traits can predict the impact on academic performance.

**KEY WORDS:** personality traits, Openness to experience, agreeableness, conscientiousness, neuroticism, Extroversion, Harmful use of the Internet.

### **Introduction**

Despite the many advantages and capabilities that using the internet in the various activities of human life has, this media as well as other manifestations of human technology, also have negative side effects, such as the use of harmful or Internet addiction (Young, 1998). In this case the lack of control of the use of this emerging technology and sick of it, leading to problems with family and personal life. Internet addiction like other forms of addiction, is a mental disorder - has social characteristics such as, action (to increase the time required to act utility ), withdrawal symptoms (especially anxiety and impatience) , affective disorders (depression, irritability and moodiness) and the rupture of social relations (reduction or lack of social relationships in terms of quantity and quality) (Omidvar Saremi, 1381). the incidence of this complication has been reported in ranges between 6.4% and 18.3% of the general population (Kaltyal, Lyntvnn and Rympla, 2004; Nice, et al., 2005) .One of the groups that seem to be more willing to use the Internet and naturally more vulnerable to the risks of abuse are young people According to Saunders et al. (2000) excessive use of the internet, reduced communication and contact with parents and adolescents, leading to reduced social support and social contact. And ultimately lead to depression and loneliness (Ghaffari Vahedi, 1386). in the etiology of motivation of a number of people to inappropriate use of the Internet cited several reasons, among which can be raised, needs, preferences, values and emotions, personal motivation and other factors and characteristics related to personality . Personality traits, are traits that are stable in different situations, they will not change much and trends stable and durable response to the same stimulus in different ways and in different situations, predict people's behavior (Schultz Schultz, 2013). Several scholars have addressed the issue of personality traits such as Costa and Mckerry (1993) with a theory or NEO Five-Factor personality. These factors include: extroversion, neuroticism, openness to experience, conscientiousness and agreement. In terms of personality and its relationship with harmful use of the Internet, studies show interesting results including Bliss, Krill,

Full and Connolly, 2008; Huang, 2010 have found that high levels of Internet use, can reduce mental health and the quality of relations with others (Schultz and Schultz, 2013). Several studies have been conducted in this area following some of them offered separately (based on the relationship between big five personality factors and Internet Addiction).

A) The characteristics of extroversion, people who have high extroversion, have interest in sociability, and soon attracted in the environment that and tend to search for new content in the Internet. including the research supporting the existence of significant positive correlation between extraversion and inappropriate use of the Internet, we can refer to the following: Azizi and colleagues (1394) in a study designed to determine the correlation between Internet addiction with HEXACO personality of high school students, Introduced Extroversion as good predictors of Internet addiction. Tamanaiefar and colleagues (1388) found that between extroversion and Internet addiction, with a 95% confidence there is a significant relationship. Khajeh Mugahi and Alasvand (1389) in connection with the extroversion have been considered seeking character and activity thrills as predictors of Internet addiction. In contrast to the above studies, some researchers have reported between extraversion and Internet addiction, significant negative relationship. Such as Kounymora et al (2000) quoting by Bidokhti, Rahaie and Daneshzadeh, (1390) Concluded that between extraversion and Internet addiction, there is a significant negative correlation. Results of Landes and Bary (2008) represents extroverted people have less tendency to use the Internet. Also Bidokhti et al (1390) Concluded that is a significant and negative relationship between internet dependence and extroversion.

B) Neuroticism, theoretically between neuroticism and causes of Internet addiction, there are many overlapping chapters (Young & Rogers, 1998). through research that have addressed the positive relationship between neuroticism and Internet addiction can trace to followings: The research of F Ko O L.S Hardy and T-Mai o (2007) showed that the addicted group compared with the control group won, higher rates of symptoms of feeling, coping problems, hyperactivity, behavior problems and social and neurosis. Well as reviews by Hardy and T-Mai (2007), and the findings of Azizi and colleagues (1394) has reported a significant positive correlation between neurosis factor with Internet addiction, this means that the increasing in individual neurosis increases probability tendency towards Internet addiction. Khajeh Moogahi and Alasvand (1389) have stated that two feature, vulnerability to stress and neuroticism impulsivity that is a subset of Neuroticism characteristics as predictors of Internet addiction. Through research that show a negative relationship or no relationship between personality factors of neuroticism and Internet addiction You can refer to the following: Nitya and Julius (2005) show no differences in field of neuroticism and extroversion between active and no active users. Also Khanjani and Akbari (1390) did not report relationship between neuroticism and internet addiction.

C) Openness to experience, for people who are very supportive openness to experience, Internet activity can be attractive as an opportunity to search for new experiences. Seeking Top recently, the most meaningful predictor of addiction to the Internet (Bidokhti et al., 1390). Several studies have explored impact of openness to experience on the traumatic use of the Internet. e.g.: (Ferris, 2003; Young, 2004; Niemz, Griffith, die, Prvlins, 2005; Ferraro, Kasi, Amico, Daiy Blas, 2007; Kim, Nam Koong, ku, Kim 2008). The results Azizi et al (1394) suggest that openness to experience factor is a good predictor for Internet addiction.

D) Dimensions of agreeableness and conscientiousness, people with these personality traits based on five-factor personality theory, usually are reliable, responsible, and efficient and determine higher goals for themselves and do better in their work place and school. ( Bareek, Monte, and stress 1993 According to Schultz and Schultz, 2013).

Accordingly Young and Roger (1998) believe that between extraversion and conscientiousness from one hand and internet addiction on the other hand, there is heterogenic and contrast. On the basis of Shayegh, Azad, and Bahrami s research, (1388) in adolescents between agreeableness and conscientiousness there is significant relationship. Landrsn and Brey (2006) have shown that people with agreeableness and conscientiousness features, have less tendency to Internet usage and therefore the risk of inappropriate use of the Internet is less about them. Research results Hashemi (1389), Azizi and colleagues (1392) showed that one of the most important aspects of personality has been considered effective in reducing addiction to the Internet is responsibility. In contrast to the above studies, the results Shayegh, Azadi and Bahrami (1388). Was found a significant correlation between agreeableness and conscientiousness with Internet addiction among boy adolescents.

A review of this research gets two points. First, it seems some personality types in terms of harmful use of Internet show more trends and sensitivity. Secondly, the results of several studies on this issue have been partly contradictory. In this study, the researchers want to investigate:

- 1 - Is there any relationship between personality traits and harmful usage of Internet?
- 2 - Which one of the personality traits can predict harmful usage of the Internet?

## Method

It is a descriptive and correlational study. The population of this study were male students Teachers University of Gilan Province. The sample consisted of 112 students from various academic disciplines of the university who were selected by cluster random sampling.

## Measuring Tools

NEO Personality Inventory - Short Form (NEO-FFI) questionnaire was made to measure personality traits (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) based on the theory of Costa and McCrae (1995) s personality theory and revised in 1992 and reduced to 60 items. The questionnaire has 12 items for each factor that responding them is possible in the form of a Likert scale. (Strongly disagree, disagree, idea, agree, and strongly agree). In terms of the reliability of this questionnaire, several good internal consistency between the scales was reported, such as Costa and McCrae (1992) that reported alpha coefficient between the 68/0 to 86/0 for agreement to neuroses, (Roshan et al., 1385). The reliability of

the test and ballad using Cronbach's alpha coefficient for personality traits (neuroticism, extraversion, openness to experience and conscientiousness) obtained in order (83/0, 77/0, 78/0 and 74/0; 68 / and 68/0, 75/0 and 72/0) (Saraneh, Mktabi and Haji Yakhchali, 1393). Harmful use of the Internet inventory: the survey is taken by Kaplan in 2002 to assess the severity of Internet addiction and contains 29 questions and is scored in the Likert scale. the questionnaire reviews , 6 factors related to general issues and a factor of the negative consequences that include: Changes in mood (questions 1, 2, 3, 22, 26) taking profitable Social advantage (Questions 3, 4, 5, 6, 7, 8, 11, 27, 28) Spending too much time on the Internet (Questions 15, 18, 19, 20, 21) preoccupation over the Internet (Questions 12, 20, 22, 23, 24, 25, 26) Social symptoms (Questions 7, 9, 18, 25, 26, 27, 28, 29) negative consequences of Internet use (questions 11, 13, 14, 15, 16, 17, 26) have an impact on job and education performance (Question 8 , 9, 10, 11, 12, 13, 14). The questions have good internal reliability with the range of 78.5 to 85.5. Kaplan also has mentioned the reliability as 93.0 By Cronbach Alpha method (Kaplan, 2009). In the study of Kim and Davis (2009), the internal reliability of the questionnaire is given 92/0. Asadi Darbandi (1382) reported the reliability of this survey as an average of 82.0. In this Ghaffari and Ahadi (1386) the reliability found By Cronbach's alpha ranged from 63 to 89.

**Methodology and Analysis**

The research questionnaire (big five personality factors and harmful use of the Internet) after necessary explanations were answered by self-report for analyzing the data descriptive statistics (mean and standard deviation) and inferential statistics (regression analysis) were used

**Results**

**Table 1: Descriptive statistics of research’s variables**

Variables		Mean	The standard deviation	Frequency
Personality characteristics	Neuroticism	20.63	3.9	112
	Extroversion	17.29	4.5	112
	Openness to experience	24.05	3.6	112
	Agreeableness	19.46	3.86	112
	Conscientiousness	17.92	5.73	112
Harmful using of the Internet	Changes in mood	9.87	2.01	112
	taking profitable social advantage			112
	Spending too much time on the Internet	8.82	2.08	112
	Preoccupation to the Internet	11.17	2.63	112
	Social symptoms	14.86	3.07	112
	Negative consequences of using the Internet	13.57	2.63	112
	The impact on academic performance	13.08	2.71	112

As can be seen in the table; In this sample in the case of personality traits, the highest average belongs to openness to experience (mean 24.05 and standard deviation 3.6) and the lowest average belongs to extroversion (mean 17.29 and a standard deviation of 4.5) On the other hand about the use of the Internet variable, the highest average belongs to taking social profitable advantage (mean 23.25, SD = 5.09) and the lowest belongs to change the mood (mean 9.87, SD = 2.01) Now we examines the study questions:

**Table 2: Correlation between personality characteristics and harmful using of the Internet**

		taking profitable social advantage	Spending too much time on the Internet	Negative consequences of using the Internet	Preoccupation to the Internet	Changes in mood	Social symptoms	The impact on academic performance
Neuroticism	r	.108	-.232*	-.349**	-.456**	.054	-.268**	<b>-.161</b>
	sig	.281	.015	.000	.000	.574	.005	<b>.097</b>
Extroversion	r	-.043	+.187	.221*	.339**	.028	.382**	<b>.287**</b>
	sig	.669	.050	.024	.000	.774	.000	<b>.003</b>
Openness to experience	r	-.255**	.125	-.005	.131	.267**	.396**	<b>-.006</b>
	sig	.010	.193	.962	.173	.005	.000	<b>.948</b>
Agreeableness	r	.050	.160	.504**	.477**	.180	.526**	<b>.497**</b>
	sig	.618	.096	.000	.000	.063	.000	<b>.000</b>
Conscientiousness	r	.152	.521**	.533**	.423**	-.077	.363**	<b>.547**</b>
	sig	.126	.000	.000	.000	.425	.000	<b>.000</b>

According to the table above and in the significance level of  $p < 0.05$ , we can conclude: The personality trait Neuroticism and factors (spending time, negative consequences of Internet use, preoccupation and social symptoms) - harmful use of the Internet, there is an inverse significant relationship. Between the personality trait extraversion and factors (negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance) - harmful use of the Internet, there is a significant direct relationship. Between the personality trait of openness to experience and factors (mood change, and social

symptoms) - harmful use of the Internet, there is a significant direct relationship. Between the personality trait of agreeableness and factors (negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance)-of harmful use of the Internet there is a direct significant correlation. . Between the personality trait Conscientiousness and factors (spending time, negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance)- of harmful use of the Internet, there is a significant direct relationship.

Now with regression analysis examine which characteristics can be used to predict harmful Internet usage.

**Table 3: multivariate regression of personality traits and taking profitable social advantage (by enter method)**

Criteria variable	Predictor variables	Regression coefficients		T	Sig	R	R <sup>2</sup>	F ratio P level
		B	B					
taking profitable social advantage	Neuroticism	.247	.199	1.832	.07	0.34	0.12	F=2.49 Sig=0.03
	Extroversion	-.017	-.015	-.125	.901			
	Openness to experience	-.368	-.278	-2.681	.009			
	Agreeableness	.128	.102	.817	.416			
	Conscientiousness	.141	.165	1.521	.132			

According to the table above and in the significance level of  $p < 0.05$ , we can conclude: Openness to experience personality traits can predict the taking social profitable advantage: ( $\beta = -2.68$  and  $\text{sig} = 0.009$ ). While other personality traits cannot predict taking profitable social advantage.

**Table 4: multivariate regression of personality traits and Spending too much time on the Internet (by enter method)**

Predictor variables	Regression coefficients		T	Sig	R	R <sup>2</sup>	F ratio P level
	B	$\beta$					
Neuroticism	.082	.153	1.670	.098	0.55	0.305	F=8.53 Sig=0.0001
Extroversion	.000	.000	-.003	.997			
Openness to experience	.077	.134	1.491	.139			
Agreeableness	-.014	-.027	-.245	.807			
Conscientiousness	.205	.557	5.928	.0001			

According to the table above and in the significance level of  $p < 0.05$ , we can conclude: Conscientiousness personality traits can predict Spending too much time on the Internet: ( $\beta = 0.55$  and  $\text{sig} = 0.001$ ). While other personality traits cannot predict taking profitable social advantage.

**Table 5: multivariate regression of personality traits and Negative consequences of using the Internet (by enter method)**

Criteria variable	Predictor variables	Regression coefficients		T	Sig	R	R <sup>2</sup>	F ratio P level
		B	B					
taking profitable social advantage	Neuroticism	-.016	-.026	-.289	.773	0.61	0.37	F=11.53 Sig=0.0001
	Extroversion	-.028	-.052	-.527	.599			
	Openness to experience	-.053	-.080	-.931	.354			
	Agreeableness	.236	.375	3.585	.001			
	Conscientiousness	.167	.392	4.374	.0001			

According to the table above and in the significance level of  $p < 0.05$ , we can conclude: Agreeableness ( $\beta = 0.37$  and  $\text{sig} = 0.001$ ) and Conscientiousness ( $\beta = 0.39$  and  $\text{sig} = 0.0001$ ) personality traits can predict Negative consequences of using the Internet while other personality traits cannot predict it.

**Table6: multivariate regression of personality traits and Preoccupation to the Internet (by enter method)**

Criteria variable	Predictor variables	Regression coefficients		T	Sig	R	R <sup>2</sup>	F ratio P level
		B	B					
Preoccupation to the Internet	Neuroticism	-.177	-.262	-2.962	.004	0.61	0.37	F=11.45 Sig=0.0001
	Extroversion	.087	.147	1.491	.139			
	Openness to experience	.018	.025	.294	.770			
	Agreeableness	.134	.197	1.880	.063			
	Conscientiousness	.111	.240	2.679	.009			

According to the table above and in the significance level of  $p < 0.05$ , we can conclude: Neuroticism ( $\beta = -0.26$  and  $\text{sig} = 0.004$ ) and Conscientiousness ( $\beta = 0.24$  and  $\text{sig} = 0.009$ ) personality traits can predict Preoccupation to the Internet while other personality traits cannot predict it.

**Table7: multivariate regression of personality traits and Changes in mood (by enter method)**

Criteria variable	Predictor variables	Regression coefficients		T	Sig	R	R <sup>2</sup>	F ratio P level
		B	$\beta$					
Changes in mood	Neuroticism	.051	.098	.933	.353	0.34	0.11	F=2.51 Sig=0.03
	Extroversion	-.039	-.086	-.738	.462			
	Openness to experience	.126	.228	2.239	.027			
	Agreeableness	.130	.249	1.997	.049			
	Conscientiousness	-.034	-.096	-.898	.371			

According to the table above and in the significance level of  $p < 0.05$ , we can conclude: Openness to experience ( $\beta = 0.228$  and  $\text{sig} = 0.027$ ) and Agreeableness ( $\beta = 0.249$  and  $\text{sig} = 0.049$ ) personality traits can predict Changes in mood while other personality traits cannot predict it.

**Table8: multivariate regression of personality traits and Social symptoms (by enter method)**

Criteria variable	Predictor variables	Regression coefficients		T	Sig	R	R <sup>2</sup>	F ratio P level
		B	$\beta$					
Social symptoms	Neuroticism	-.060	-.077	-.921	.359	0.34	0.12	F=14.89 Sig=0.0001
	Extroversion	.038	.055	.588	.558			
	Openness to experience	.237	.286	3.508	.001			
	Agreeableness	.284	.361	3.635	.0001			
	Conscientiousness	.099	.185	2.175	.032			

According to the table above and in the significance level of  $p < 0.05$ , we can conclude: Openness to experience ( $\beta = 0.237$  and  $\text{sig} = 0.001$ ) and Agreeableness ( $\beta = 0.361$  and  $\text{sig} = 0.0001$ ) personality traits can predict Social symptoms while other personality traits cannot predict it.

**Table9: multivariate regression of personality traits and the impact on academic performance (by enter method)**

Criteria variable	Predictor variables	Regression coefficients		T	Sig	R	R <sup>2</sup>	F ratio P level
		B	$\beta$					
The impact on academic performance	Neuroticism	.055	.080	.945	.347	0.63	0.40	=13.22 Sig=0.0001
	Extroversion	.007	.012	.122	.903			
	Openness to experience	-.093	-.127	-1.526	.130			
	Agreeableness	.283	.406	4.059	.0001			
	Conscientiousness	.188	.397	4.574	.0001			

According to the table above and in the significance level of  $p < 0.05$ , we can conclude: Conscientiousness ( $\beta = 0.397$  and  $\text{sig} = 0.0001$ ) and Agreeableness ( $\beta = 0.406$  and  $\text{sig} = 0.0001$ ) personality traits can predict the impact on academic performance while other personality traits cannot predict it.

### Conclusions

The personality trait Neuroticism and factors (spending time, negative consequences of Internet use, preoccupation and social symptoms)- harmful use of the Internet, there is an inverse significant relationship It is Consistent with research of F Ko O L.S Hardy and T-Mai o and Hardy and T-Mai and the findings of Azizi and colleagues also Khajeh moogahi and Alasvand . On the other hand it is not Consistent whit Nitya and Julius also Khanjani and Akbari s results. Between the personality trait extraversion and factors (negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance)- harmful use of the Internet, there is a significant direct relationship. It may be because of this: people who have high extroversion, have interest in sociability, and soon attracted in the environment that and tend to search for new content in the Internet. It is Consistent with Azizi and colleagues, Tamanaiefar and colleagues Khajeh Mugahi and ALasvand s results of research .and is not Consistent with Kounymora et al and of Landes and Bary also Bidokhti et al results of reaserch. Between the personality trait of openness to experience and factors (mood change, and social symptoms) - harmful use of the Internet, there is a significant direct relationship. Between the personality trait of agreeableness and factors (negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance)-of harmful use of the Internet there is a direct significant correlation. Between the personality trait Conscientiousness and factors (spending time, negative consequences of Internet use, preoccupation and social symptoms and impact on academic performance)- of harmful use of the Internet, there is a significant direct relationship. It may be because of this: conscientiousness, people with this personality, usually are reliable, responsible, and efficient and determine higher goals for themselves and do better in their work place and school. It is Consistent whit Shayegh ,Azad,and Bahrami s research, and Landrsn and Brey and Hashemi ,Azizi and colleagues s results .In contrast to the above studies, it is not Consistent with the results of Shayegh ,Azadi and Bahrami . Openness to experience personality traits can predict social advantage; it may be because of this: for people who are very supportive openness to

experience, Internet activity can be attractive as an opportunity to search for new experiences. Seeking Top recently, the most meaningful predictor of addiction to the Internet .it is Consistent whit several studies have explored impact of openness to experience on the traumatic use of the Internet. e.g.: (Ferris; Young; Niemz, Griffith, die, Prvlns, Ferraro ;Kasi, Amico, Daiy Blas; Kim, Nam Koong, ku, Kim) and Azizi et al . Personality trait of conscientiousness can predict spending too much time on the Internet; Personality traits of neuroticism and conscientiousness can predict preoccupation; Openness to experience, agreeableness personality traits can predict mood changes; Openness to experience, agreeableness and conscientiousness personality characteristics, have predictive power to social indicators; Agreeableness and conscientiousness personality traits can predict the impact on academic performance.

### Limitations and Suggestions

This research was done in sample of male gender teacher candidates and to generalization of the results to other communities should be given the necessary precautions. The advantage of this study is that in practice it can prevent traumatic use of the Internet, according to the characteristics. This purpose can be achieved by providing appropriate advice to these people, introduced them with their personality and preparations for shifting to Internet addiction and the effects and potential losses caused by it.

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