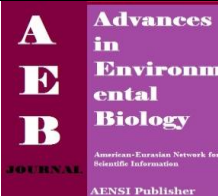




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# Relationships between Personality Traits, Attachment Styles and Mental Health with Internet Addiction

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### ABSTRACT

The present study was an attempt to investigate the relation between personality traits, attachment style, mental health, addiction to Internet. The predictability of personality, attachment style and mental health, age, gender, profession, internet addiction has been also investigated. The population of the study included all the students in the humanities, basic sciences and engineering faculties of Babolsar University. Random cluster sampling method was used to select the statistical sample. The sample size was computed 300 (100 in each field), respectively. The research method was correlation. To analyze the data, descriptive statistics (central tendency and dispersion) were used and to answer the research questions, referential statistical techniques (correlation and regression analysis) were applied. The required data were collected using four questionnaires: NEO personality characteristics, general health Internet addiction, Young, and Collins vein of adult attachment scale used. To measure the validity and reliability the questionnaires, the test-retest method and Cronbach's alpha and expert consensus were used. A the research results revealed, regarding the characteristics of Internet addiction, there is a reverse relation between attachment styles while there is no public health internet addiction, as age increases, the rate of Internet addiction is decreased. Most of Internet addiction and engineering students in the fields of humanities. There is no relation between gender and Internet addiction and Internet addiction in predictability based on personality traits, attachment styles and mental health. The research findings indicated that these factors affect the rate of drug addiction to the internet.

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## INTRODUCTION

It is not a long time that Internet has entered into the collection of mass media. Internet was expanded rapidly, participated in all human fields and found a unique place. Today, people refer to internet to promptly access to their required information about various topics and areas since they can find classified and authentic information in the shortest possible time through various ways. The advent of internet phenomenon has increased information circulation in the world. By the middle of the 1990s, most of social networks were transferred to internet. The appearance of new forms of communication in big computer networks has provided new social spaces and created a wide collection of virtual communities, the border free space influencing social relations.

Nowadays, the role of internet, as an efficient and affective instrument to create and facilitate communications and an instrument to achieve various resources rapidly is not covert. Human, in fact, have always tried to achieve to more welfare and comfort by their creativity during the history and now, they consider themselves as global citizens due to having internet. However, internet, in spite of its advantages, has caused many serious problems.

As its unique features, it can be referred to easy and constant access, simple work, low cost, anonymous user, etc., leading to immense welcome by people all around the world. Although internet is useful, informing, entertaining, with rich resources, these benefits can be changed into mental and behavioral damages and abnormalities for those who overuse it. So that, a phenomenon called internet addiction can be observed which is the hot discussion of information and it is increased by increasing daily access of youth to internet and online sources.

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Internet addiction is a concept which has been considered from 1995 and its various kinds such as chat and poker addiction through network and so forth have gradually appeared. Some unique features which are fruitful in internet addiction capacity may be related somehow with speed, accessibility and informational mass volume exchanged online (ISNA).

Internet addiction or internet overdoes is regarded as individual and social damages somehow so that it is sometimes called “virtual addiction”. According to the existing statistics, most of internet users of the world are young. At the present time, 40 million out of 180 million users in America is below 18 years (ISNA).

Iran has also a young population (22/8%) and just like other countries, young people form a great part of internet users. The results obtained by youth national organization studies (1997, 2002 ad 2005) revealed that the most number of young internet users are between 18 to 28 years so that in 1997, 2002 and 2005, the percentage of young internet users were 10%, 19% and 29%, respectively.

Internet users have been increased especially from 2001. For example, the number of internet users in Northern America has been increased 129/6% during 2000-2008 and almost 74% of the population of this region use internet.

Such growth has been very high in Iran so that it has been increased to 18 million in 2007. That is, the number of Iranian internet users has been increased to 7100 million during these years and 9100 million in 2005 so that it has influenced 35% of Iran’s population. In 2009, this trend has reached to a growth of 44/5% which is a unique and unexpected growth compared with other Middle East and Persian Gulf countries. Young people, generally, and universities students, particularly, are the main users of this technology. Internet allocates an important part of educational, recreational and occupational activities of students to itself. So, there is the possibility that using internet affect the kind of actions, preferences and their direction. Hence, studying internet addiction and its related factors can be of high importance in the current Iranian community.

*The research objectives:*

*The main objective:*

investigating the relation of personality traits, attachments styles and mental health with internet addiction

*The secondary objectives:*

1. investigating the relation between personality traits and internet addiction
2. investigating the relation between attachments styles and internet addiction
3. investigating the relation between mental health with internet addiction
4. investigating the predictability of internet addiction based on personality traits, attachment styles and mental health
5. investigating the relation between age and internet addiction
6. investigating the relation between gender and internet addiction
7. investigating the relation between major and internet addiction

*The research questions:*

1. Is there any relation between personality traits and internet addiction?
2. Is there any relation between attachments styles and internet addiction?
3. Is there any relation between mental health and internet addiction?
4. If the variables of personality traits, attachment styles and mental health can predict internet addiction?
5. Is there any relation between age and internet addiction?
6. Is there any relation between gender and internet addiction?
7. Is there any relation between major and internet addiction?

*Theoretical framework:*

*Internet addiction:*

According to Holmes, using internet less than 19 hours in a week is referred as natural use. So, Holmes believes that one who uses internet more than 19 hours is internet addicted.

According to Forsyth, addiction is an unconscious behavioral pattern of using drug in which individual is significantly involved in using drug and also after giving it up, individual tend to use drug again [3].

*Personality traits:*

Personality traits are a set of unique and relatively permanent internal and external aspects influencing behavior in various situations. Personality indicates the individual features including intellectual, emotional and behavioral constant patterns (Parvin, trans. Javadi & Kadivar).

*Attachment styles:*

The ability to form interpersonal relations and maintaining them is one of the most important features of human. Such ability which is necessary for all people for survival, reproduction, love, occupation, etc., has different forms but the most satisfying part of these relations is the relation with family, friends and relatives; such emotional-mental cycle takes place through an emotional association called attachment [2].

As Bowlby stated, various methods of mutual actions between child and his/her sitters leads to the formation of three attachment styles of secure, avoiding insecurity and anxiety-ambivalent insecurity [2].

*Mental health:*

World Health Organization (WHO) defines mental health as the capability of harmonic relation with other, changing and modifying individual and social environment, and solving personal conflicts and tendencies emotionally, rationally and appropriately.

Health means good physical-mental and social status but it does not mean the lack of illness and inability. Health is a set of physical, spiritual, social, intellectual, and environmental elements. There are various definitions regarding health as following [4].

The texts related to health psychology are not only limited to negative aspects and removing them in human as positive aspects have been emphasized in the definition presented by WHO and a person with certain biological, mental and social conditions is regarded as a mentally qualified one [8].

*Data analysis:*

The researcher needs to organize the obtained data to describe information, determine the data and specify the significance of the relation and difference between the variables of the research hypotheses. Accordingly, the descriptive and referential statistics have been used to analyze the obtained data. The descriptive statistics of frequency, percentage, tables mean, and standard deviation have been used to describe data based on the variables features. Also, to test the hypotheses, nonparametric tests have been used by considering the variables features based on scales levels (nominal, ordinal, interval, and relative). To measure the variables with interval, nominal and ordinal features and non-normal distribution, Pearson, Yuman Whitney, and Kruskal Wallis tests have been applied. All the statistical procurers have been processed in SPSS software.

*Descriptive statistics:***Table 1:** age distribution table

Accumulative percentage	Percentage	Frequency	
4/3	4/3	13	Below 20 years
86/3	82	246	21-30
97	10/7	32	31-40
100	3	9	Above 40
4/3	100	300	Total

**Table 2:** crosstab of educational majors based on gender and educational degree

Educational degree		Gender		Total
		Male	Female	
Bachelor degree	Engineering	25	25	50
	Humanities	25	25	50
	Basic sciences	25	25	50
	Total	75	75	150
Master degree	Engineering	25	25	50
	Humanities	25	25	50
	Basic sciences	25	25	50
	Total	75	75	150

**Table 3:** personality traits statistics

Indices	Mean	Standard deviation	The most	The least
Neurosis	35/8	6/02	49	22
Extrovertism	32/43	5/66	43	20
Eager to new experiences	35/57	5/23	49	20
Agreeableness	38/18	5/81	51	22
Deontology	40/42	5/59	53	28

**Table 4:** attachment styles statistics

Indices	Mean	Standard deviation	The most	The least
Attachment and security	17/02	6/02	26	11
avoidance	16/99	5/66	24	11
anxiety	16/26	5/23	25	6

**Table 5:** public health statistics

Indices	Mean	Expected mean	Standard deviation	The most	The least
Public health	35/06	42	14/23	72	0

**Table 6:** internet addiction amount statistic

Indices	Mean	Expected mean	Standard deviation	The most	The least
Internet addiction	45/52	63	20/85	100	20

**Table 7:** normality test

Shapiro-Wilk		
df	Sig.	
291	0/000	Neurosis
291	0/000	Extrovertism
291	0/000	Eager to new experiences
291	0/000	Agreeableness
291	0/002	Deontology
291	0/000	Attachment
291	0/000	Avoidance style
291	0/000	Anxiety style
291	0/000	Internet addiction
291	291	Public health

As observed, the data pertained to five-factor personality subcomponents, attachment styles public health, and internet addiction, having normal distribution since their significance level is less than 0/05.

*Referential statistics:*

*Testing hypotheses:*

$H_0$ : There is no significant relation between personality traits and internet addiction.

$H_1$ : There is a significant relation between personality traits and internet addiction.

**Table 8:** Pearson test result

Variables	Sig	Correlation intensity
Neurosis	0/062	0/108
Extrovertism	0/000	0/316
Eager to new experiences	0/005	-0/163
Agreeableness	0/000	-0/212
Deontology	0/000	-0/313

$H_0$ : There is no significant relation between attachment styles and internet addiction.

$H_1$ : There is a significant relation between attachment styles and internet addiction.

**Table 9:** Pearson test result

Variables	Sig	Correlation intensity
Attachment	0/994	0/000
Avoidance-closeness	0/100	0/095
Anxiety	0/524	0/037

$H_0$ : There is no significant relation between public health and internet addiction.

$H_1$ : There is a significant relation between public health and internet addiction.

**Table 10:** Pearson test result

Variables	Sig	Correlation intensity
Physical signs	0/158	0/058
Depression signs	0/337	-0/024
Anxiety and insomnia	0/002	0/169
Social performance disorder	0/005	0/149
Public health	0/356	-0/054

$H_0$ : There is no significant relation between age and internet addiction.

$H_1$ : There is a significant relation between age and internet addiction.

**Table 10:** Pearson test result

Variables	Sig	Correlation intensity
Age	0/004	• 0/166

$H_0$ : There is no significant relation between major and internet addiction.

$H_1$ : There is a significant relation between major and internet addiction.

**Table 12:** Kruskal Wallis test result

	Internet addiction amount
$X^2$	7/32
Degree of freedom	2
Sig	0/026

**Table 13:** internet addiction amount in majors

Major	Mean	Number
Technical -Engineering	168/93	100
Humanities	145/6	100
Basic sciences	136/98	100

$H_0$ : There is no significant relation between gender and internet addiction.

$H_1$ : There is a significant relation between gender and internet addiction.

**Table 14:** test of internet addiction based on gender

	Internet addiction amount
Test value	10335
Wilcoxon value	21660
Z	-1/224
Sig	0/221

*Predictability of internet addiction based on personality traits, attachment styles and mental health:*

$H_0$ : Personality traits, attachment style and mental health cannot predict internet addiction amount.

$H_1$ : Personality traits, attachment style and mental health can predict internet addiction amount.

Multiple variables regression is a method to analyze individual and group participation of two or more independent variables  $X_i$  in the variations of dependent variable  $Y$ . this test determines the direction, intensity and kind of relation between variables. Notably, multiple variables regression is true and used about other relations of this research.

**Table 15:** regression analysis results regarding the effect of personality traits, attachment styles and public health in internet addiction

Variables entrance method: obligatory entrance	Method=Enter
Multiple correlation coefficient	R=0/481
Determination coefficient	$R^2=0/232$
Balanced determination coefficient	$R^2_{adj}=0/017$
Error criterion	S.E=0/207
Interactive variance analysis	ANOVA=9/41
Sig	Sig=0/000

**Table 16:** weight coefficients of regression analysis test regarding the effect of personality traits, attachment styles and public health in internet addiction

Independent variables	b	Beta	S.E	t	Sig
Constant value	30/388		23/376	1/3	0/195
Neurosis	0/581	0/172	0/247	2/356	0/019
Eager to new experiences	0/757	0/192	0/224	3/377	0/001
Agreeableness	-0/941	-0/268	0/246	-3/831	0/000
Deontology	-0/68	-0/18	0/261	-2/601	0/010
Avoidance style	0/965	0/139	0/424	2/275	0/024
Public health	-0/207	-0/143	0/098	-2/12	0/035

*Test analysis:*

With respect to the research findings, standard regression equations can be written as following:

$$Z\hat{Y} = B + B_1Z_1 + B_2Z_2 + \dots + B_kZ_k$$

Public health (0/143) + avoidance style (0139) + deontology (-0/18) + agreeability (-0/268) + eager to new experiences (0192) + neurosis (0172) + 30/388 = internet addiction

Considering the p-values (less than 0/05) obtained from all above relations, these factors influence internet addiction and can predict variance of the dependent variable. Moreover, for further study on the effect in dependent variable and its prediction based on each these factors, their Beta value should be considered

As observed, most of variation and effect coefficient pertains to the variable f agreeability (-0/268) with negative and reverse direction. That is, a reverse variation is created in the dependent variable for each variation in the independent variable. In other words, low agreeability in individuals leads to intensifying internet addiction. After agreeability, the variable of eager to new experiences (0192) has the most effect with positive and direct direction. That is, higher eager to new experiences leads to the increase of tendency and addiction to internet.

*Conclusion:*

The present study investigated the relation of personality traits, attachment styles and mental health with internet addition in university students. In this regards, 300 students of humanities, basic sciences and technical-engineering faculties of Babolsar University were selected using cluster random sampling method. To measure personality traits, public health and attachment styles, 60-item, 28-item and 18-item questionnaires were used, respectively.

*Findings:*

The research findings in two descriptive and referential sections are as following:

*Descriptive statistics:*

According to the data obtained from the questionnaires, the sample (n=100) includes 50 males and 50 females, and the most frequency of the respondents belongs to the age ranges of 20 to 30 and 50% of the sample study in bachelor degree and 50% studies master degree.

*Referential statistics:*

The first research hypothesis: there is a significant relation between personality traits and internet addiction. The correlation pertained to extrovertism, agreeability and deontology were negative, reverse and approximately average. In other words, the more people are extrovert, they will have higher adjustment with society, friends and conditions and they have higher feeling of deontology, and proportionally, a lower amount of internet addition.

The second research hypothesis: there is no relation between attachment styles, avoidance-closeness and anxiety.

The third research hypothesis: there I no relation between public health and internet addiction.

The fourth hypothesis: there is a reverse, negative and weak relation between age and internet addiction. In other words, the higher the age of individuals is, the lower their addiction to internet will be.

The fifth research hypothesis: there is a relation between major and internet addiction notably, the highest amount of internet addiction belongs to the students of technical-engineering and then humanities fields.

The sixth research hypothesis: there is no relation between gender and internet addiction.

The seventh research hypothesis: predicting internet addiction based on personality traits, attachment styles, and mental health. Considering the p-values (less than 0/05) obtained from all above relations, these factors influence internet addiction and can predict variance of the dependent variable. Moreover, for further study on the effect in dependent variable and its prediction based on each these factors, their Beta value should be considered.

Also, most of the variation and effect coefficient pertains to the variable f agreeability with negative and reverse direction. That is, a reverse variation is created in the dependent variable for each variation in the independent variable. In other words, low agreeability in individuals leads to intensifying internet addiction.

*Recommendations:*

- To avoid the prevalence of increasing addiction to internet, it is suggested that macro policy makers of the country to take some actions such as training the way of internet application through universities (e.g. providing educational brochures, holding conferences and workshops to inform student) and media (e.g. regular

displaying reklams (commercial breaks) regarding negative physical and mental consequences of internet addiction and informing to increase parents information to guide their children)

- Holding recreational, scientific and educational camps for students and fill their free times in dormitories in order to decrease the time allocated to internet by students
- Training students for time management methods regarding daily activities to organize daily responsibilities and performance and limiting extremist use of internet

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