Comparison of Family Functioning, Personality Traits, and Attachment Styles in People with Internet Addiction and Healthy Controls

Ahmad Esmaili,[1] and Lili Amirsardari[2, *]

[1]Department of Humanistic Science, Maragheh University, East Azerbaijan Province, Iran
[2]Young Researchers and Elite Club, Central Tehran Branch, Islamic Azad University, Tehran, Iran

[*]*Corresponding author*: Lili Amirsardari, Young Researchers and Elite Club, Central Tehran Branch, Islamic Azad University, Tehran, Iran. Tel: +98-9373242931, E-mail: l.amirsardari@yahoo.com

Abstract

This study aimed to compare the function of family, personality traits and affection styles between normal people and those with internet addiction. It was conducted in 2016 in a population sample comprising of all high school students of Imam Khomeini High School in the city of Salmas, West Azerbaijan. 351 of the students were selected as the sample volume. Participants completed four forms which consisted of "assessing family function (FAD)", "measuring personality characteristics (NEO)", "assessing attachment styles" as well as "Young's internet Addiction Questionnaire". All the statistical methods used including "descriptive indicators", *t* - test, mutli - directional variance and data were analyzed using SPSS - 16 software application. The results showed that there is a significant relationship between internet addiction, on one hand, and family functions, personality characteristics and attachment styles, on the other hand.

Keywords: Family Functioning, Attachment Styles, Personality Characteristics, Internet Addiction

1. Background

In today's world internet is popular among teenagers and young people, and it is becoming more appealing for them (1). While most people use the internet without being aware of its negative effects, in some individuals the use has changed to abuses and has created a lot of problems in their lives (2). The terms internet and addiction can be seen in studies conducted by, for example, Kendall and Young (3). Despite all the benefits of internet for people, this new communication technology can be as a double - edged sword which may have many disadvantages for people, especially the younger generation (ibid). According to Yang (1998), in order to identify the internet addiction, at least four of the following symptoms should be taken into account; feeling mental preoccupation with the internet, feeling a need to use the internet, increasing the amount of time used to obtain happiness or having the ability to inhabit the use of the internet, having a sense of restlessness and irritability when attempting to cut down or stop using internet. Internet addiction disorder for drugs is described in the DSM as a dependency criterion and sometimes it is introduced with titles such as "behavioral dependency to the internet", "repulsive use of the internet", "Problematic use of the internet". The dependency to the internet is therefore introduced as the excessive, compulsive use of this tool, stopping which would make these people irritable and show behaviors associated with temper (4). Problems that arise in relation to internet addiction are myriad: not eating meals, lack of sleep, not allocating time to do other things, to name but a few. This matter can also affect the school homework, and friends and family relationships (5). According to Gibbs (2002), people who are dependent on the internet (those identified with A.P.A criteria) use internet 11 hours a week on average (6). There is also a study which suggests that 77% of students in Mashhad University were prone to internet addiction (ibid). However, the results also show that those students who use the internet have higher self - confidence, because the users can freely and easily enter the cyberspace with unknown identities and express their thoughts on the internet (ibid). Ozak (1999) defines internet addiction as a psychological problem which has two categories of mental - cognitive symptoms and physical symptoms. Also Yang (1996) found that internet addicts on average use it 38

hours per week. There are at least five minor types of addiction to the internet: addiction to sexual issues, addiction to cyber friendships, social enforcing, data collection and addiction to computer (7). With the arrival of communication technology in families, the social values of families are affected, leading to changes in the behavior and discourse of the young generation. Easy access to the internet has facilitated the process (8). It, therefore, affects the family as a social group (9). Family as the smallest social unit is the base for forming a society and the existence of the social emotions and insufficiency in the functionality of a family has diverse effects on children (10). Many discordant and problematic people are from damaged families; the children from agonized families are more in danger of disharmonious behaviors because of the lack of mental tranquility, lack of concentration and agitation (11). The process of individual's perception of family function is very important. In this process an individual controls his/her perceptions and interpretations from the environment by receiving and interpreting incentives. This perception can be as early maladaptive schemas which are representative of the environment (12). The environmental pressures and hostile family environment paves the way for an individual to take refuge to internet in order to forget the pains in his surroundings in the virtual world (7). Li and Zhang (2004) studied the performance of parents in teenagers addicted to the internet, and results revealed that internet addicts had lower adaptability and solidarity than the control group and in the family of addicts, intervention, excessive punishment and willingness to disobey was abundantly clear (13). Liu and Kuo (2007) analyze internet addiction on the basis of Sullivan's "interpersonal theory" and the results shows that the quality of the parent - child relationship was positively correlated with the quality of the relationships between individual participants in the study (14). Khosravi et al. (2011) examined the personality characteristics of the adolescents who were addicted to the internet. Their sample was students with addiction to internet and non - addicts. The results indicated that individuals addicted to the internet had a lower level of peculiarity and a higher level of psychosis compared to the control group (2). Personality recognition and factors contributing to its formation satisfies curiosity and desire for seeking the truth, on one hand, and allows for conscious and appropriate attitudes in interacting with twitch the other, on the hand (6). Also, 77 percent of people participating in another study were at risk of internet addiction, and showed symptoms of anxiety, loneliness, depression and poor self - concept (14). Furthermore, internet addiction has direct relationship with the lack of self - confidence and self - concept (15). The excessive use of the internet has direct relationship with loneliness, feelings of isolation, in-

troversive character and mood variations (16). One of the factors influencing internet addiction is the style of affection (17, 18). The family is a coherent system in which people are connected according to their interest, and strong, sustainable and mutual emotional affection. Although it is possible that these affections vary over time but family existence will continue (19). There is a relationship and continuity between a person's childhood experiences with his/her parents and parents' behavior. According to affection theory, people tend to communicate with particular individuals (20). Affection can be defined as the concept of attachment, or as emotionally stable connection between any individual and families in a way that each party tries to maintain proximity to the affection issue and take action in a way that ensures the continuity of the relationship (21). In other definitions, affection is a model which is formed according to individual's initial relationships with parents or care - taker, and leads to interpersonal relationships in the future. This pattern can be secure, insecure, avoidant and ambivalent (22). In this context, some scholars have considered the relationship between internet addiction and affection. Addiction to the internet has a negative relationship with secure attachment style but has a positive relationship with insecure attachment styles (23). Moreover, the excessive use of the internet has an inverse relationship with the ability of teenagers in the context of family relations (24). According to the above, the purpose of this study is to compare family functions, attachment styles and personality characteristics in healthy individuals and individuals with internet addiction.

2. Methods

This research is a descriptive, correlation type and the statistical population of the study consists of all high school students of the city of Salmas, of whom 351 students were selected through cluster sampling. The statistical methods used consist of descriptive indicators, *t* - test, multi - directional variance and the collected data were analyzed using the SPSS - 16 software application.

2.1. Research Tools

2.1.1. Yang's Questionnaire for Internet Addiction

This test is designed for the diagnosis of pathological gambling and impulse control disorder, following the principles delineated in DSM - IV - TR (1). This test is one of the most reliable ones in measuring internet addiction and consists of 20 multiple - choice items (ranging from "Rarely" to "Always") which are designed according to Likert's method. The Cronbach's alpha factor in Nadi and Sajadian (2010) was calculated at 90% (25).

2.1.2. Personality Questionnaire (NEO)

Its shorter form consists of 60 questions which with 5 scales based on the Likert's model, ranging from 1 ("completely disagree") to 5 ("strongly agree"). The test measures five basic elements of personality: neuroticism, extraversion, sincerity according to experience, affability and dutifulness. McCrae and Costa (1983) applied Neo's 60 - question form to 208 students within three months and the reliability coefficient for each of the main elements turned out to be 0.79, 0.79, 0.75, 0.75 and 0.83 percent. In Asgari and Mrshyan (2010)'s study ([6]), the validity of the Neo's questionnaire drawn up by using 2 methods -the Cronbach's alpha factor and bisection- turned out to be 70% and 72%, respectively. In this study the short-form questionnaire of McCrae and Costa was used as well.

Adult Affection Questionnaire: This questionnaire was designed by using materials in the Hazan and Shaver's (1987) affection test of and it was normalized for the students of Tehran University. One is a 15 - item test that measures three styles such as secure attachment, avoidant and ambivalent personality in Likert's 5 - degree scale (one = very low, two = low, three = medium, four = high, five = very much). Cronbach's alpha coefficients has been reported for the material under scales of secure, avoidant and ambivalent subjects to be 85%, 84% and 85%, respectively. The Cronbach's alpha in Khosroshahi et al. (2012) for the sub - scale of the secure affection, avoidant and ambivalent personality was 92%, 90% and 91%, respectively ([26]).

2.1.3. Family Functioning Inventory (FAD)

This questionnaire consists of 60 questions and was designed in 1983 by Epstein, Baldwin and Bishop on the basis of McMaster's model to assess family function. This questionnaire includes 7 scales which consists of problem - solving, relationships, roles, effective accountability, effective conflicts, controlled behavior, and general functioning and its scoring is based on Likert's spectrum from "completely agree" to "completely disagree". The reliability related to internal homology of six sub - scale items of this instrument is between 72% to 83% and the general functioning sub - scale is 92%.

3. Results

As seen in Table 1, Normal people show higher values in the scale of extraversion, flexibility, agreeableness, conscientiousness and secure affection than those addicted to internet.

The assumption of the equality of variances in the variables of the groups under investigation shows that there is a significant difference between the two groups. In other

Table 1. The Average and Standard Deviation of Variables in the Two Groups

Variables	Average	Standard Deviation	Standard Error
Neuroticism			
Internet addiction	20.04	3.15	0.22
Normal	35.31	4.58	0.29
Extraversion			
Internet addiction	21.44	2.29	0.14
Normal	35.96	3.17	0.20
Flexibility			
Internet addiction	21.33	2.45	0.15
Normal	36.19	3.54	0.22
Conscientiousness			
Internet addiction	21.34	2.33	0.14
Normal	35.90	3.49	0.22
Pleasantness			
Internet addiction	21.38	2.39	0.24
Normal	36.48	3.38	0.15
Personality traits			
Internet addiction	1.05	5.79	0.36
Normal	1.79	9.04	0.57
Secure attachment			
Internet addiction	8.39	10.15	0.07
Normal	12.73	1.40	0.08
Insecure attachment			
Internet addiction	12.92	1.68	0.10
Normal	8.34	1.16	0.73
Ambivalent attachment			
Internet addiction	8.35	1.27	0.80
Normal	11.42	1.45	0.09
Addict family			
Internet addiction	57.06	4.42	0.28
Normal	38.11	5.56	0.35

words, neuroticism in people with internet addiction is higher than it is in healthy people; also extraversion, pleasantness, flexibility, conscientiousness and secure affection in the healthy group is higher than those revealed the

group of internet addiction.

4. Discussion and Conclusion

The current study was carried out to investigate the functions of the family, personality characteristics and affection styles in people with internet addiction and normal individuals. The students of Imam Khomeini School in Salmas constituted the sample. The results showed that there were significant differences between internet addiction personality characteristics dimensions. As regards the dimensions of openness to experience, pleasantness, extroversion, conscientiousness and reliability, there is a significant negative relationship. In dimensions of personality characteristics, the neuroticism dimension has a significant positive relationship with internet addiction. In dimensions of personality characteristics, the neuroticism dimension has a meaningful positive relationship with internet addiction. This means that people with internet addiction had higher scores on neuroticism dimension. In explaining the reasons for the obtained results, it can be said that the neuroticism dimension of personality has an important role in forwarding and preparing the grounds for the addictive use of internet in person. People with internet addiction are usually bored with life and impatient; they typically do things hastily, have undue sadness, extreme loneliness, and these items affect the neuroticism dimension of the person and have an important role in pushing the person towards addictive use of internet. The results of the current research in the dimensions of personality characteristics dimension is consonant with the results of other studies. For example, the results of Asgari et al. ([6]) showed a person addicted to internet experiences changes in his/her body and mind which affects their life and personality styles because of specific conditions of the virtual world. As the results show, there is a negative relationship between extraversion, neuroticism and using the internet (ibid.). Asgari and Mrshyan ([6]) showed that there is a significant relationship between internet addiction and personal characteristics. Ahmadi and colleagues (2012) claimed that teenagers who were addicted to the internet scored higher in the components of neuroticism and openness to experience as compared to those who did not have internet addiction; they however achieved lower scores in the components of extraversion and conscientiousness ([7]). Asgari and colleagues (2009) ([6]) showed that 1) there is a significant positive relationship between traits of neuroticism, extraversion and internet addiction, 2) there is a negative relationship between characteristics of agreeableness, conscientiousness and internet addiction, 3) there is no significant relationship between characteristic of openness to experience and internet addiction.

As regards the dimensions of personality characteristics, the results were not consonant with the results of other studies. Sanei Dehkordi (2009) ([5]) claimed that people with internet addiction have serious problems in performing their school tasks and family relations. The use of term internet addiction is taken into account by Kandel (1998) and Young (1998), for example. In the dimensions of attachment styles, the results of the current research showed that there is a significant relationship between dimension of attachment styles and internet addiction. The relationship between internet addiction and secure affection is negative and the relationship between internet addiction and insecure avoidant, ambivalent affection styles is positive. The reason for this result may be that people with internet addiction who had insecure, ambivalent and avoidant affection styles and in their childhood also had the following characteristics: insecure - avoidant child (who don't complain even in the absence of or separation from his/her mother); when the parent returns, he/she cautiously walks around her/him and can't play freely. Insecure - ambivalent child protests and is not calm after the parent returns home, attaches to her/him, forcing his head to her skirt. People with insecure attachment have experienced rejection by parents, poor family support, and lower level of intimacy in the family. These people usually have low self - esteem and also individuals with avoidant attachment style usually have depression; thus, the dominant characteristics in their childhood can affect important factors in childhood and with a series of existing characteristics in adulthood, he takes refuge to the internet. The results of current research in the dimensions of attachment styles is consonant with the following studies. Khosroshahi et al. (2011) claimed that the relationship between internet addiction and a secure attachment style is negative and with insecure avoidant attachment styles, is significantly positive ([26]). Bowlby (1997) claimed that internet addiction with a variety of secure and non - secure styles have positive and negative relationship ([21]). Also, the result of present research in the areas of family practice showed that there are significant differences between internet addiction and function of the family. In explaining the reason for this phenomenon, it can be said that people with internet addiction usually have problems in family relations; the family of these people usually like to have a cold and logical atmosphere. So existing family conflicts and an individual relationships with family is an important factor influencing and causing the family member to develop internet addiction. The results of this study concerning the relationship between internet addiction and family functioning converges with other studies. From Young and

Table 2. Assumption of Homogeneity of Variance for the Scales in the Groups

Variables	Variance Test		Comparison of Average Values					CI (0.95)	
	F	Significant Level	t	df	2 Directional Significance Level of Test	Average Difference	SE	Low	High
Neuroticism									
Assumption of equal variances	23.71	0.00	41.75	498	0.00	15.26	0.36	14.54	15.98
Assumption of unequal variances	-	-	41.75	466.64	0.00	15.26	0.36	14.54	15.98
Extraversion									
Assumption of equal variances	22.92	0.00	58.54	498	0.00	14.52	0.24	14.03	15.00
Assumption of unequal variances	-	-	58.54	453.60	0.00	14.52	0.24	14.03	15.00
Flexibility									
Assumption of equal variances	23.71	0.00	54.43	498	0.00	14.86	0.27	14.32	15.40
Assumption of unequal variances	-	-	54.43	443.31	0.00	14.86	0.27	14.32	15.40
Conscientiousness									
Assumption of equal variances	28.72	0.00	54.76	498	0.00	14.56	0.26	14.03	15.08
Assumption of unequal variances	-	-	54.76	434.22	0.00	14.56	0.26	14.03	15.08
Pleasantness									
Assumption of equal variances	49.89	0.00	52.80	498	0.00	14.56	0.26	14.54	15.66
Assumption of unequal variances	-	-	52.80	434.95	0.00	14.56	0.26	14.54	15.66
Personality traits									
Assumption of equal variances	38.83	0.00	109.5	498	0.00	74.36	0.67	73.02	75.69
Assumption of unequal variances	-	-	109.5	423.95	0.00	74.36	0.67	73.02	75.69
Secure attachment									
Assumption of equal variances	10.28	0.001	37.66	498	0.00	4.34	0.11	4.11	4.56
Assumption of unequal variances	-	-	37.66	480.13	0.00	4.34	0.11	4.11	4.56
Insecure attachment									
Assumption of equal variances	21.96	0.00	-35.25	498	0.00	-4.57	0.12	-4.83	-4.32
Assumption of unequal variances	-	-	-35.25	443.41	0.00	-4.57	0.12	-4.83	-4.32
Ambivalent attachment									
Assumption of equal variances	0.25	0.61	23.69	498	0.00	-2.89	-0.12	-2.62	03.13
Assumption of unequal variances	-	-	23.69	489.41	0.00	-2.89	-0.12	-2.62	03.13
Family function									
Assumption of equal variances	18.87	0.00	42.13	498	0.00	18.94	0.44	18.06	19.82
Assumption of unequal variances	-	-	42.13	478.16	0.00	18.94	0.44	18.06	19.82

Abbreviations: CI, Confidence Interval; df, Degree of Freedom; SE, Standard Error.

Nam's point of view people with internet addictions have family conflicts, because people with internet addiction do not enjoy mental health. Internet addiction is related to family functioning and the family is one of its predictors. In fact, the lack of strong emotional parental support can lead to the feeling of incompetence, lack of value and es-

caping from the real world of family to the internet world (2). Tendency for disobeying is more common in the family of addicts (ibid). Sanei Dehkordi (5) claimed that people with internet addiction in educational practices and family relations are in trouble. The results obtained by Khosravi et al. (2011) showed that there was a significant negative correlation between internet addiction with some sub - levels of family function such as assertiveness, tasteful attitudes and religious emphases (2). Also, there was a significant positive correlation between the discontinuity of the sub - levels of family, high conflict, authoritarian family style and internet addiction.

References

1. Alavi S, Maracy M, Jannatifard F, Eslami M, Haghighi M. [A Survey of Relationship between psychiatric symptoms and internet addiction in students of Isfahan universities]. *Avicenna J Clin Med*. 2010;**17**(2). Persian.

2. Khosravi Z, Alizadeh Sahraie M, Hany S. [Explore the relationship between Internet addiction and mental health and family functioning in children]. *Q J Educ Psychol Stud*. 2011;**8**(14):59–80. Persian.

3. Jaafari N, Fatehizadeh M. [The relationship between Internet addiction and depression, anxiety, mental stress and social phobia Studying University]. *Sci J Kurdistan Univ Med Sci*. 2012;**17**(2):210–25. Persian.

4. Zarbakhsh Bahri M, Rashed S, Khademi M. [Loneliness and internet addiction]. *Health Promot Manage J*. 2010;**2**(1):32–8. Persian.

5. Sanei Dehkordi S. *Simple and multiple relationship between social anxiety and feeling alone with assertiveness, the rate of Internet use in Islamic Azad University of Ahvaz students*. Islamic Azad University of Ahvaz; 2009.

6. Asgari P, Mrshyan F. [Relationship between personality traits and computer anxiety in college students with Internet addiction]. *Islamic Azad University of Ahvaz*. 2010. Persian.

7. Sadat Ahmadi S, Mohammadi F, Begay M, Sohrabi F. [The prevalence of Internet addiction and its relationship with demographic characteristics among students of AllamehTabatabai University]. *Q J Educ Psychol*. 2012;**8**(25):20–30. Persian.

8. Slevin JM. *Internet and society*. gel gory A, translator. Tehran, Iran: The librarian; 2010.

9. Kafashi M. [The impact of the Internet on family values]. *J Soc Sci*. 2009;**2**(3):12–24. Persian.

10. Sarookhani B. *[Introduction to sociology of the family]*. Tehran: Soroush Research; 2000. Persian.

11. Zare Moghaddam A. *Effectiveness of cognitive - behavioral self-esteem and social adjustment of middle school students in Neishaboor*. University Branch Released Torbatejam; 2006.

12. Khanjani G, Akbari S. [Internet addiction of adolescents and their relation to personality characteristics]. *New Find Psychol*. 2011;**5**(19):20–31. Persian.

13. Li T, Zhang L. How college students Internet addiction are related to parental rearing patterns. *Psychol Sci China*. 2004;**27**(3):662–3.

14. Liu CY, Kuo FY. A study of Internet addiction through the lens of the interpersonal theory. *Cyberpsychol Behav*. 2007;**10**(6):799–804. doi: 10.1089/cpb.2007.9951. [PubMed: 18085967].

15. Nadimi F, Rezvani K. *The use of the Internet and its social and psychological consequences, psychology*. University Branch Ahvaz; 2006.

16. Armstrong L. How to beat addiction to cyberspace. *Vibrant Life*. 2001;**17**(14):23–40.

17. Ghassemzadeh L, Shahraray M, Moradi A. Prevalence of Internet Addiction and Comparison of Internet Addicts and Non-Addicts in Iranian High Schools. *CyberPsychol Behav*. 2008;**11**(6):731–3. doi: 10.1089/cpb.2007.0243.

18. Collins NL, Feeney BC. Working models of attachment shape perceptions of social support: evidence from experimental and observational studies. *J Pers Soc Psychol*. 2004;**87**(3):363–83. doi: 10.1037/0022-3514.87.3.363. [PubMed: 15382986].

19. Mikulincer M, Shaver PR. The attachment behavioral system in adulthood : Activation, psychodynamics, and interpersonal processe. In: Zanna MP, editor. *Advances in experimental social psychology*. **35**. NewYork: Academic Press; 2003. p. 53–152.

20. Emami H. Children's Cyber Risk. *J Rehab Train Dept of Prison Security Corrective Measures*. 2007;**10**(3):12–23.

21. Bowlby J. *The making and breaking of affectional books*. **13**. tavistock publications Limited; 1977.

22. Fogle A. *Infancy: family and society Minneapolis*. West Publications; 1997.

23. Hamidian P. *[Addiction to the Internet and mobile phones, to investigate the effects of dependence on the internet, mobile phones and computer games, Chapavl]*. Tehran: Gatre; 2009. Persian.

24. Sanders CE, Field TM, Miguel D, Kaplan M. The relationship of Internet use to depression and social isolation among adolescents. *Adolesc Paris*. 2000;**35**(138):237.

25. Nadi MA, Sajjadian I. [Path analysis of relationship between personality traits and internet addiction with quality of life of internet users in Isfahan city]. *J Behav Sci Res*. 2010;**8**(1). Persian.

26. Khosroshahi JB, Hashemi Nosrat Abad T. [The relationships of attachment styles, coping strategies, and mental health to internet addiction]. *J Behav Sci Res*. 2012 Winter;**8**(30). Persian.