

## Prediction of Instagram Social Network Addiction Based on the Personality, Alexithymia and Attachment Styles

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Received 17 December 2016; Accepted 16 April 2017

### *Abstract*

Instagram is the fastest growing social network site globally. Instagram is an online, mobile phone photo-sharing, video-sharing, and social network service that enables its users to take pictures and videos, and then share them on other platforms. The purpose of this study is to distinguish the student's Instagram social network addiction by personality, alexithymia and attachment styles in Tehran city. In this correlational study, a group of 100 high school students (50 Instagram social network addicted and 50 non-addicted) as multi stage sampling are selected. The data collected by the questionnaires of Costa and McCrae (1982) personality scale, Bagboy, Parker and Taylor's twenty-item Toronto alexithymia scale (1994), Collins and Read attachment styles scale (1990) and researcher made Instagram. The obtained data were analyzed by using the technique of discriminated analysis. The results of the discriminant analysis showed that variables of neuroticism, alexithymia, ambivalent and avoidant attachment style can help in predicting how students are involved in Instagram addiction. The study selected 81 percent of the students for their actual classification. The results of this study emphasized on relationship between neuroticism, alexithymia, ambivalent and avoidant attachment style with Instagram addiction. Thus, the prevention and treatment of dependence to Instagram mentioned variables are very important.

**Keywords:** Discriminant analysis, Instagram, Personality, Alexithymia, Attachment, Students.

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## 1. Introduction

Addiction to virtual social networks may lead to deviant and harmful behaviors in this cyberspace for users who are extremists and using it (Torel and Bachara, 2017). Virtual social networking has been widely deployed as one of the mainstream activities of the most people. Although the use of virtualized social networks is not problematic for many people, but there are few users who have been forced to use too much of this space. And the prevalence of virtual social networking in female students is higher than boys, as research has shown that girls are more likely to use extreme forms of virtual spaces than boys for their social interactions (Anrsen, Paulson and Griffiths, 2017).

Meanwhile, Instagram is one of the virtual social networking. The Instagram social network has been the fastest growing means in the world of virtual social networks. Instagram is an online and mobile-based network for sharing images, video and social networking services that allow users to take photos and videos and share with other people.

Individuals on the Instagram social network share negative and positive experiences of their lives (Rumcoma et al., 2017). Research has also shown that virtual social networks such as Instagram can relate to a lack of self-esteem (Stapleton, Lewis and Chateauin, 2017). Virtual social networking sites such as Facebook and Instagram have attracted millions of people. While Instagram social networking research is in its early stages, but Instagram social network has had a profound impact on Psychological characteristics of individuals (Holand and Tigman, 2017).

In the meantime, personal characteristics of individuals can be exploited by using virtual social networks such as Instagram. Researches with the growth of social networks such as Facebook, Twitter and Instagram, psychological and personality reasons have assumed that personality trait can be considered as an effective factor in the formation of dependence on virtual social networks (Martinez, 2017).

Personality characteristics are one of the predictors of the dependence on virtual social networks and mobile addiction which among the personality trait of impulsivity and neuroticism play a more important role in creating this dependence in individuals (Boronel and Kuthehr, 2016).

It has also been shown that there is a relationship between personality traits with the dependence on Facebook and Instagram, and this dependence is not limited to a specific culture and can depend on all the different cultures. There is a negative relationship between the social network affiliation with Facebook and Instagram with

emotional stability, conscientiousness and extroversion, and these features can have a deterrent role in affiliation with the Facebook social network (Blacchino et al., 2017).

In another study, emotional stability, conscientiousness and extroversion are considered as the main predictors of the dependence on virtual social networks (Marino et al., 2016). On the other hand, the results showed that alexithymia has a significant role in the dependence on virtual social networks in students. Alexithymia is a disability in the cognitive processing of emotional information and mood regulation (Basharat et al., 2013).

Alexithymia as a failure to understand, acceptance and describe emotions causes people to experience social anxiety, and those who are socially anxious, instead of being active in the community, are busy with their virtual world and are taking extreme and sickly use of it. Also, Alexithymia has a negative effect on the exacerbation of symptoms of various psychiatric disorders and have associated with high severity and signs of depression (Suzlow et al., 2016).

People who have a high Alexithymia than other people, have unmatched feelings and these feelings remain with an arousal and will not be lost, and this disrupts the autonomic nervous system and immune system. Such arousal that accompanied with alexithymia, ultimately leads to the development of symptoms of physical illness, anxiety and depression, and ultimately dependence and addiction to virtual social networks to reduce the symptoms of physical illness and reduce anxiety and depression.

There is a relationship between depression and dependence on virtual social networks and interaction with each other. The research has shown that the severity of symptoms of depression is negatively associated with the extreme use of social networks that installed on smartphones, and if each one has a severity depression, this person has more dependent on smartphones (Allahi, Levine, Durak and Hall, 2017).

It has also been shown that there is a significant negative relationship between the degree of people Safety attachment and their presence in the social networking environment and there is a significant positive relationship between the degree of attachment of the two individual biases and their presence in social networks (Eid Khatibi and Ghaderi, 2015). In the process of preventing addiction to the Internet have been considered to the role of psychological factors such as insecure attachment styles and fear of negative evaluation (Tavakoli, Jamhari and Farokhi, 2014).

Teenagers who use the Internet more than others have less connection with their mothers and their friends, and have insecure style of attachment in relation to parents. In families that have confused attachment, there is a lot of conflict between a person

addicted to the Internet and the family, the treatment is progressing slowly, and, on the contrary, whether less conflict, and the attachment style and the performance of all family members with individual dependent on the Internet, treatment has a remarkable progression (Senmermany et al., 2013).

Internet addiction has an unsafe attachment style and disorder in personal and social relationships (Mangnizadeh and Wafaei Najjar, 2016).

In summary it can be said that Addiction and dependence on virtual social networks are of the serious problems in people, especially students. Social networks are provided as a set of Web-based services that allow public or private descriptions for individuals or allow them to communicate with other members of the network, share their resources with others, and use their descriptions and feedback to find new connections (Basharpour, Dashti and Atatokht, 2016).

According to the above, the present research seeks to answer the question of whether personality, alexithymia and attachment styles are associated with Instagram addiction or not? In other words, is it possible for a student to be included in the Instagram social network or in the non-addicted group with having information about personality, alexithymia and attachment styles?

## **2. Methodology**

This research was conducted using descriptive-correlational method. For this study, a sample of 100 people (50 addicted and 50 non-addicted) was selected from the community of secondary school students. Since the purpose of the present study is to examine the possibility of classifying the subjects into two groups of addicted and non-addicted to Instagram based on predictive variables, therefore, to analyze the statistical analysis research data of the audit method of (diagnostic function analysis), was used. The grouping of people was based on correlation matrices, using SPSS version 23.

The following questionnaires were used in this study: Personality questionnaire and Personality Standard Questionnaire by Kasta and McCarey (1992). The surveyed indicators include five neurological personality factors with questions 1, 6, 11, 16, 21, 26, 31, 36, 41, 46, 51, 56, extraversion with questions 2, 7, 12, 17, 22, 27, 32, 37, 42, 47, 52, 57, openness to experience (flexibility) with questions 3, 8, 13, 18, 23, 28, 33, 38, 43, 48, 53, 58, acceptability (agreement). With questions 4, 9, 14, 19, 24, 29, 34, 39, 44, 49, 54, 59, and dutifulness with questions 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60), and each of them is measured by 12 items.

All items in this questionnaire are answered in five options of the Likert spectrum, and each item assigns a score between 1 and 5. The reliability of the questionnaire by Cronbach's alpha coefficient in Costa and McCreey's Cronbach's alpha was 0.88 to 0.86 (Kasta & McCraey, 2002).

The internal consistency of the five-factor questionnaire using Cronbach's Alpha abroad was obtained for five components of the alpha coefficient ranging from 0.75 to 0.91, and indicating a desirable reliability of the questionnaire (Dietrich and Chibonal, 2016).

**The Alexithymia Questionnaire:** The Alexithymia Questionnaire was developed by Bagby, Parker and Taylor (1994) and a 20-item test, and three sub-scales of difficulty identifying feelings (questions 1, 3, 6, 7, 9, 13 and 14), difficulty in the description of feeling (questions 2, 4, 11, 12, 17) and objective thinking (questions 5, 8, 10, 15, 16, 18, 19, 20) on a five-point Likert scale in the form of "completely disagree" "Score 1, and the answer for" "totally agreed" is Score 5.

Items 4, 5, 10, 18, and 19 have inverse scores (Basharat et al., 2013). The psychometric properties of Alexithymia Questionnaire have been reviewed and confirmed in several studies (Taylor and Bagby, 2000; Parker, Taylor and Bagby, 2001). In the research of Besharat and Ganji (2012), the coefficients of Cronbach's alpha were in sub-scales of difficult in identifying feelings, difficult in describing emotions and objective thinking, respectively 0.81, 0.77, 0.75 and 0.84.

**Attachment Styles Questionnaire:** This questionnaire was prepared by Collins and Reid (1990). The questionnaire consists of 18 questions and 3 subscales of anxiety style with questions 3, 4, 9, 10, 11, 15 that are consistent with ambivalent attachment style. The closeness style with questions 1, 6, 8, 13, 12, 17 which is consistent with the secure attachment style. The attachment style with questions 5, 2, 16, 14, 17, 18, which is almost vice versa of avoidance attachment. The questions of the questionnaire (Attachment Styles Questionnaire) by marking a 5-point Likert scale showing "completely disagree score of 0," "somewhat disagree with the score of 1," "neither disagree nor agree with score 2," "somewhat agree with score 3," and "completely agree to Score 4".

The retest reliability coefficient of this test was reported by Collins and Reed (1994) for each of the three subscales of proximity, dependence and anxiety respectively of 0.68, 0.71, and 0.52.

In Iran, the validity and reliability of the above questionnaire have been confirmed and the reliability of the test has been reported by Cronbach's alpha coefficient for the subscale of 0.68, dependence of 0.71 and anxiety 0.52 (Aghayoussefi et al., 2015).

Outside the country, the psychometric properties for the reliability of the test were compared with the Cronbach's alpha coefficient, the subscale of 0.71, the dependence 0.73 and the anxiety 0.80, and the total questionnaire 0.91 (Park, Kim, K, Han, Nah, Kim and Lee, 2015).

The Instagram Social Network Inventory: This is a questionnaire designed by the researcher to measure Instagram social network addiction. The questionnaire contains 20 questions and the reader should answer any questions on the 6-point on Likert scale shown does not include me, with score 0 "Rarely with score 1" "Sometimes with a score of 2" "Usually with a score of 3" "Often With a score of 4 "and" always with a score of 5 ". The scores range from zero to one hundred, of which more score represents more addiction to the Instagram and the more severe of the problems that result from the sharing of images and videos on Instagram for a person.

The questionnaire of people using the Instagram social network is divided into three categories: "user with score 0 to 39", " user at risk with score 40 to 69" and "addicted user with score 70 to 100".

### 3. Findings

**Table 1. Mean and standard deviation of research variables in two groups of addicted and non-addicted students of Instagram**

Research variables		Addicted to Instagram		Non-addicted to the Instagram		Normality	
		Mean	standard deviation	Mean	standard deviation	Mean	standard deviation
personality	neurosis	21/26	7/740	15/90	7/53	0/656	0/782
	Extroversion	28/04	6/770	29/42	5/956	0/790	0/561
	Openness to experience	28/20	5/824	29/08	4/552	1/301	0/068
	Acceptance	28/24	6/029	28/88	6/320	0/837	0/722
	dutifulness	32/12	7/689	32/88	7/350	0/693	
Alexithymia	Difficulty in identifying	21/5	7/856	17/40	6/824	0/745	0/638
	Difficulty in describing	16/98	4/302	12/40	5/218	0/819	0/513
	Objective thinking	21/38	7/508	16/76	6/962	0/775	0/585
Attachment	Ambivalent attachment	17/72	4/091	15/98	4/538	1/03	0/054
	Secure attachment	17/38	4/869	16/58	4/504	1/323	0/055
	Avoidance attachment	17/70	4/8127	15/04	4/768	1/249	0/053

Descriptive indexes including mean and standard deviation of the research variables in the two groups of addicted and non-addicted students of the social network of the Instagram are presented in Table 1.

**Table 2. A summary of the analysis of the distinction between two classes of students and addicted and non-addicted students of Instagram**

Research variables		Variable equality		Standard coefficient	Structure coefficient
		F statistic	Lambda wick	F statistic	F statistic
personality	neurosis	12/826*	0/888	0/530	0/550
	Extroversion	1/171	0/988	0/041	0/03
		0/670	0/993	0/016	0/367
	Acceptance dutifulness	0/268	0/997	0/124	0/343
Alexithymia	Difficulty in identifying Difficulty in describing Objective thinking	0/255	0/996	0/004	0/326
		8/068*	0/924	0/398	0/231
		22/933*	0/810	0/435	-0/124
	Objective thinking	10/180*	0/906	0/250	-0/098
Attachment	Ambivalent attachment Secure attachment Avoidance attachment	4/055*	0/960	0/672	-0/094
		0/727	0/993	0/231	-0/060
		8/897*	0/917	0/395	-0/058

\*The values of F statistics at  $P < 0.01$  level are meaningful. The standard coefficients in Table 2 show the contribution of each of the significant predictive variables to the Power of distinction between the classes of students.

These coefficients indicate that the ambivalent attachment recognition function (standard coefficient = 0/675) has the highest share in the differentiation of addicted and non-addicted students to the social network of the Instagram.

Also, according to Table 2, considering the values of structural coefficients, it can be concluded that the two-sided attachment has the highest correlation with the detection function.

**Table 3. A summary of the focal point analysis of students and addicted and non-addicted students of Instagram**

Special value	Focal correlation	Lambda wicks	Chi2	Degrees of freedom	Significant
0/773	0/660	0/564	52/973	11	0/001

According to Table 3, the special value of the detection function showed that this function can well distinguish between weighted classes (0.77). On the other hand, testing the null hypothesis for the diagnostic function showed that the diagnostic function is not the same for students of two classes of students and addicted and non-addicted students in Instagram.

**Table 4. Student classification results based on predictor variables**

Classes	Predicted group membership		Total
Instagram addict	Instagram addict	Non-addicted to the Instagram	50
	41	9	
Non-addicted to the Instagram	10	40	50

Table 4 shows the results of the classification of the subjects in the groups of addicted and non-addicted students.

Instagram based on predictor variables show that the results of the analysis based on the scores of neuroticism, Alexithymia (difficulty in identifying feelings), difficulty in describing emotions and objective thinking) and two-way attachment style and avoidant attachment style classify students as addicted and non-addicted of Instagram, and 89 students (74.2%) we will put them in their classes.

#### 4. Discussion

The results of the analysis showed that with the help of variables such as neuroticism, Alexithymia and avoidant and ambivalent attachment style, could predict addiction to Instagram social networks. The audit analysis was able to classify the students' correct prediction of 81% of the addicted and non-addicted groups in terms of the social network of the Instagram.

This result is consistent with research of Eidi Khatibi and Qaderi (2016), Ogaji, Okuihoo, Vanjiko, Osiro and Oguto (2017), Bashpour, Dashti and Atadokht (2016), Naiami and Nuri Samarin (2016), Tang and Kuh (2017), Rostami, Ardalani, Ahmadian and Mehdi Abadi (2016), Martinez (2017), Bornel and Kothehr (2016), Belacciano, Perpupierque, Senell-Douark, Duroc and Schrestieu (2017), Marino, Venus, Pasteurre, Alberti, Fringe and Spada (2016), Norie Samarin and Nargesi (2013), Matouk, Summing and Bala (2015) have shown that personality traits, emotions, and individual factors play an important role in creating a dependency on virtual space.



It can be argued that any behavior that a person shows is influenced by personality traits. The meaning of the personality is in fact the characteristics of a personality that can predispose a person to a series of behaviors. Therefore, personality factors are one of the most important factors that can help in understanding the complexities of human behavior in different situations (Ku, Yen, Chen, Chen, Ho, Yen, 2006). Neuroticism means a person's readiness to experience negative emotional experience, feelings of dissatisfaction and chronic discontent (Costa and McCraey, 2002).

With increasing neuroticism in person, the probability of a tendency towards Instagram social networking will increase. In explaining the results, it can be said that the Neuroticism has a degree of poorer alignment with others and is emotionally unstable and the cause of Instagram's dependence in many of them is to suppress anxiety and tensions in life (Asgari and Marashian, 2008). Psychosis or neuroticism has some distinctive features, including fear, sadness, anger, guilty feelings, and persistent and incongruous feelings, with less degree of alignment with others and emotionally are unstable. These features can make people prefer to switch to virtual networks like Instagram instead of directly interacting with others. In social networks, people are able to hide their negative personality traits and show themselves as they like.

As a result, instead of interacting directly with others, they prefer to engage themselves with the Instagram social network because of the existence of some of these features and the inability to engage and challenge the problems effectively and actively, and change their direction and to escape from this series of unpleasant features (Hassanzadeh et al., 2012).

Therefore, it is logical that addiction to the Instagram social network will be greater in people with a personality trait of neuroticism than normal people.

The results showed that there is a relationship between addiction to the Instagram social network. And a teenager gets a higher score in Instagram addiction to social network. It can be said that Alexithymia is a risk factor for psychological and physical disorders. There is a relationship between Alexithymia and interpersonal problems (Manganak, Vanhall and Das, 2008). Previous studies have shown the relationship between Alexithymia and avoidant personality traits (Vanhall et al., 2007).

Therefore, it is possible to conclude that those who are emotionally disturbed and have avoidance and interpersonal problems and interpersonal communication styles, rather than interacting directly with others, prefer to be in their own world and get involved with the virtual world and social networks like Instagram. As for the

association of Alexithymia with Instagram Social Network Addiction, it can be argued that Instagram social dependence is used to avoid negative emotions and helps the person to avoid negative excitement.

People with Alexithymia disorder may respond in an attempt to escape their negative emotions through actions such as spending their time on social networks. Because the people of Alexithymia often have unpleasant feeling in social situations, they often avoid attending in social situations, and with increasing Alexithymia, personal problems will increase (Besharat, 2009) and avoid direct relationships with others. They use social networks like Instagram in an addictive way. Therefore, it's logical that the Instagram social network addiction is higher in people with Alexithymia disorder than normal people. The results showed that avoiding and ambivalent attachment style can predict the addiction to social networks of the Instagram. In explaining these findings, according to attachment theory, one can explain that individuals with insecure attachment to interpersonal relationships have fear, distrust and insecurity feeling.

People with insecure attachment are worried about exclusion and being released by others. They do not regard themselves as worthy of attention and kindness, and have little satisfaction in social relations. As a result, for these people, the Internet and social networks such as Instagram can be a way to escape real life. This person, by appealing to the social aspects of the Internet, reduces their psychological needs and fear of rejection through the availability of the Internet and the ease of interaction with others.

They may feel more likely to be of interest to other people via Internet, and because of their presence, they are also present. However, the Internet does not completely relieve the feelings of extreme security and insecurity of these individuals. So the Internet can become another source of disturbance in the way of communication for these people. People with aberrant and ambivalent insecure attachment are more likely to be afraid of intimacy and attachment; so they have a negative mental pattern than others.

Internet provides distance communication for interacting with others rather than face-to-face interactions which is consistent with interpersonal priorities and passive strategies (Tavakoli, Jmhari, Farrokhi, 2014), as it is said, it seems logical that individuals with anxiety and ambivalent attachment style is more likely to be addicted to Instagram social network.

Considering the use of self-assessment questionnaires in this research, the result of the research depends on the accuracy and integrity of the subjects in responding to the

test materials. In this study, although the questionnaires had proper validity and reliability, the subjects may try to be better than their own, and the results of the research are influenced by their responses.

Since this study was conducted in Tehran and in secondary school students, it is not possible to generalize the results to other cities and other societies and other age groups, and the generalization of the results should be cautious. It is suggested that other research tools such as observation and interviewing be used in future research to increase the accuracy of the research result.

Similar research is also performed in other cities and with different age groups, such as children and youth and middle aged, and the result of this study is compared with the results of the present study. Researchers who are interested in the topic of addiction to the Instagram social network are recommended to study the relationship between the addiction to the social network of the Instagram and variables such as depression, stress, adaptability, mental health, source control, and self-efficacy.

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