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The Effect of Using Virtual Social Networks on Depression, Anxiety, and Stress among Young Adults

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ABSTRACT

Background: Today, the use of virtual social networks is very common among young people. Despite the positive effects of social networks on communication there are also negative effects. Therefore, this study was done to identify the impact of virtual social networks on depression, anxiety, and stress in youth.

Methods: This was a correlation study and the population of the study included all young people in Yazd who were selected by convenience sampling method. Then, 120 young people (60 males and 60 females) were selected and answered the DASS-21 and Virtual Social Network Use questionnaire. Data were analyzed by using Pearson correlation coefficient and descriptive statistics by SPSS-22.

Results: The findings showed a relationship between the use of virtual social networks and stress in male users and there was a significant relationship between the use of virtual social networks and depression, anxiety, and stress in female users (P-value < 0/05).

Conclusion: As a result, virtual social networks can affect depression, anxiety, and stress among young people, which highlights the need for education of young people and families.

Keywords: Anxiety, Depression, Stress, Virtual Social Networks

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Introduction

Young people are in the most sensitive stage of personality formation, this stage plays a fundamental role in the quality of life.[1] Young people tend to be members of social networks because of their creativity, tendency to communicate with others, curiosity and the desire to have a different life.[2]Virtual social networking is a new generation of websites in which virtual users gather together and form online community.[3] Various people, especially young people participate in social networks, to exchange their views and thoughts and to meet their social life needs.[2] Today, social networks such as Linux, Telegram, and Facebook have become an integral part of users' lives.

Communicating is the main reason for using social networks; People can communicate widely with each other in a short time. In many cases, extreme use of these networks has been seen in teenagers and young people.[4] It limits real world communications, which can lead to anxiety, fear, and depression.[5] Symptoms of depression are included feeling of inadequacy, disappointment, loss of activity, and pessimism.[6] Depression as the 'Common Cold' of Mental Illness occurs so frequently within population, everyone may at some point be affected by depression.[7]

Studies about the use of social networks and depression are somewhat contradictory.An approach emphasizes the positive impact of social networks use on mental health, and believes that it increases social protection and life satisfaction while other studies show that the use of social networks increases depression.[8] Excessive Internet use has negative psychological consequences, such as depression, low self-esteem, and anxiety.[9]The relationship between social networks and anxiety has been shown in numerous studies. A Study indicated that 45% of British adults will be anxious if they cannot access the social network and email.[10] The American Psychiatric Association (2017) found that 43% of Americans constantly monitor their email and virtual networks, which is linked to stress in these people.[11] Barat Dastjerdiand Sayadi's (2013) study entitled “Relationship between Social Networks Use and Internet Addiction and Depression in Students at Payam Noor University of Isfahan” was conducted. The samples included 345 students. The results showed that there was no significant relationship between social networks use and internet addiction and depression.[4]Turi et al.'s (2014) study in Birjand showed that anxiety, stress and depression in Internet addict students were significantly higher than normalusers.[12]

Another research, entitled "Relationship between Internet Addiction and Mental Health of Students in Sari Azad University", showed that Internet addicted students are more depressed and anxious. They got fewer score in the social function index.[5]

Primack et al.'s (2017) study was conducted on 1787young people aged 19 - 32 indicated that there was a relationship between the use of virtual social networks, anxiety, and depression [13]Leodoro et al.'s (2014) study has shown that using Facebook causes depression, anxiety, and stress.[14]Furthermore, Yi Lin et al.'s (2016) study showed the relationship between the use of virtual social networks and depression.[8]The results of Jelenchick et al.'s (2013) study, entitled "Facebook Depression: Using Social Networking and Depression in Youth", revealed that there is no relationship between the use of virtual social networks and depression in young people.[15] Kirk Patrick and Steijn's study suggested that virtual social networks have a profound effect on depression and insomnia.[16]

Considering the high use of social networks among young people and the widespread influences on different personal, social and family backgrounds, this study was conducted to investigate the effect of using virtual social networks on depression, stress and anxiety in young adults.

Methods

This was a descriptive-correlational study and

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the population of the study included all young people in Yazd. Then, 120 young people (60 males and 60 females) were selected by the convenience sampling method.

Depression-Anxiety and Stress Scale (DASS-21): Due to the overlapping of depression and anxiety this scale defines and measures the structures of anxiety and depression.This is a set of three self-evaluation scales designed to measure negative emotional states of depression, stress and anxiety.[17]The DASS-21 questionnaire has 21 questions that are divided into three subscales of 7 questions for the analysis of anxiety, stress and depression. This questionnaire based on Likert scale has four items including; not at all, a little, rather, and much, which the lowest score for each question is "zero" and the highest score is "3".Scores above 21 for depression, above 15 for anxiety, and above26 for stress are considered abnormal. In Iran, the reliability of this scale in a sample of 400 people has been reported 0.7 for depression, 0.66 for anxiety and 0.76 for stress. Also, the internal consistency of the scale through Cronbach's alpha for depression was 0.94, for anxiety was 0.92 and for stress was 0.89.[12] The Cronbach's alpha of the DASS-21 questionnaire in this study was 0.88.

Virtual Social Networks Questionnaire: In Biramvand's study, a questionnaire was used to investigate the use of virtual social networks (including Line, Instagram, Facebook, Telegram, etc.). First, a list of commonly used virtual networks was prepared the extent and severity of use was determined then as a pilot project, a sample of 60 young people answered the questioner. After calculating the internal consistency and validity, some questions were removed and corrected. The questionnaire consists of 19 questions which based on Likert scale had four items from strongly disagree to strongly agree, finally, the scores were in 3 categories including low (0 - 25), moderate (25 - 50), and high (50 - 75). Cronbach's alpha was 0.85.[18]

In order to observe ethical considerations, all information about individuals was confidential and the participation in this research was optional.

Results

The main purpose of this study was to investigate the effect of using virtual social networks on depression, anxiety and stress in young adults. 120 young people (60 men and 60 women) participated in this study, out of which 52.4% were20-25years old and47.6% were 25-30 years old.

The mean and standard deviation of depression, anxiety and stress in men and women were presented. Generally, depression mean was 6.08, for anxiety was 5.93 and for stress was 9.95.Subjects in the severity of symptoms of depression, anxiety and stress were normal (Table 1).

The mean and standard deviation of the use of virtual networks was shown. The average use of social networks by women was 41.28 and the standard deviation was 10.22.Furthermore, the average use of virtual social networks in men was 45.41 and the standard deviation was 10.37 (Table 2).

Independent t-test was used to examine the difference between the use of virtual social networks in men and women.The results showed that there is no significant difference between the use of virtual social networks in men and women (P-value < 0.05) (Table 3).

In order to investigate the effect of virtual social networking on depression, stress and anxiety in men and women, Pearson correlation coefficient was used.

The relationship between social networks and depression, anxiety and stress in men was revealed. There was a positive and significant relationship between network use and stress in men (P-value < 0/05). However, there was no significant relationship between the use of social networks and depression and anxiety in men (P-value > 0/05) (Table 4).

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Table1. Mean and standard deviation of depression, anxiety and stress in women and men

Gender	Index	Mean	SD
Female(60)	depression	36.3	3.18
	anxiety	3.06	2.83
	Stress	4.58	3.10
Male(60)	depression	2.71	2.57
	anxiety	2.86	2.73
	stress	4.40	2.38

Table2. Mean and standard deviation of the use of virtual social network

Index	Number	Mean	SD	Minimum	Maximumm	Skewness	Kurtosis
using virtual social network in men	60	41.45	10.37	19	67	-0.061	-0.300
using virtual social network in women	60	41.28	10.02	19	66	0.056	-0.407

Table3. Independent T-Test for using virtual networks in men and women

Index	T value	Degrees of freedom	Level of significance	Difference in means	Standard error difference	With confidence level of 95%	
						Minimum	Maximum
using virtual social networks	0.089	117.858	0.92	0.166	1.86	-3.52	.58

P-vale <0.05

Table4. The relationship between use of virtual social networks and depression, anxiety and stress in men

Variable	Statistical indicators	Parson's Correlation Coefficient	Number	P-value significance level
using virtual social networks	depression	0.245	60	0.059
	anxiety	0.022	60	0.869
	stress	0.274	60	0.034

P-value <0/05

Table5. The relationship between the use of virtual social networks and depression, anxiety and stress in women

Variable	Statistical indicators	Parson's Correlation Coefficient	Number	P-value significance level
using virtual social networks	depression	0.294	60	0.02
	anxiety	0.274	60	0.03
	stress	0.280	60	0.03

P-value <0/05

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The relationship between social networks and depression, anxiety and stress in women was indicated. There was a positive and significant relationship between using social network and depression, anxiety and stress in women (Table5).

In this study generalization of results is limited due to the convenience sampling method in a city. Use of virtual social networks has expanded in recent years; therefore, it is necessary to take action in order to increase mental health and reduce the symptoms of depression, stress and anxiety in all users' especially young people. It is suggested to do more studies in order to generalize the results.

Discussion

The main purpose of the study was to investigate the effect of using virtual social networks on depression, stress and anxiety among young people.According to the results, there was a relationship between using virtual social networks and stress in men. There was a significant relationship between using virtual social networks and stress, depression and anxiety in women which was consistent with the results. The result of Barat Dastjerdi, Sayadi (2013) and Jelenchick et al.'s (2013) study were inconsistent with the results of this study.[4, 15]

Virtual communication is full of emotions and nervous impulses that it is impossible to get some of these perceptions in real world. The constantly changing psychological environment of Internet affects the user's psychological balance and puts pressure on the person; these pressures are real, although the originator is virtual.[19]Excessive Internet use reduces mental health. People who spend a lot of time on the Internet spend less time with their family and relatives; experience more stress, and feel lonelier and more depressed.[17]It seems that depressed people tend to be more active in social networks because it does not require face-to-face interaction and they are more satisfied with this kind of interaction on the other hand, it is likely that depression is due to excessive Internet use.[13]Social network use reduces physical activity and increases the risk of depression.[20]

When users receive messages passively from social networks, they feel depression and loneliness; they feel that others have a better life.[8] Women who spend a lot of time on Facebook compare themselves with other users and their negative mood increases.[21]Most users usually try to show their life better than reality.[22]

Those users, who use social networks excessively, receive more negative feedback and comments from friends and relatives and it increases depression.[14]According to Sajjadianand Nadi's (2006) study, the rate of depression in women was higher than in men due to various factors such as biochemical, genetic, neuropath genic factors, environmental stress or negative attitudes.[19]

In explaining the relationship between the use of social networks and anxiety, it is likely that there is anxiety in users before they start using social networks and they feel better about this engagement. On the other hand, it is likely that anxiety is the result of excessive use of virtual networks.[13] People who use multiple networks are constantly checking messages and they feel anxious if they do not have access to the Internet.[10] According to Seabrook et al.'s (2016) results, there was no significant relationship between the use of virtual networks and anxiety and depression in men. Since using social networks lead them to positive interaction and social support; therefore, their anxiety and depression will be reduced.[23] Men who have a lot of online friends and social support through cyberspace have better mental health.[24]

Zhou's study, there was a relationship between the use of social networks and stress in women and men. Evidences suggest that the use of virtual social networks can create negative outcomes such as social overload and interruption of work patterns, and increasing stress in users.[25] In addition, Hampton et al. (2018) found that knowing stressful events in the lives of others plays an important role in assessing people's stress levels. People understand stressful events in their

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friends and relatives life through social networks and their stress levels increase. Women are more aware of stressful events and more likely to report them. Therefore, the stress level in women is higher than in man, which is also mentioned in this study.[26]

Conclusion

It is concluded that Internet networks create false emotions in users and meet their psychological and emotional needs. Therefore users replace virtual networks with direct interaction; the excessive use of these networks endangers the mental health of users.

Conflicts of Interest

The authors also have no conflicts of interest and have no involvement that might raise the question of bias in the results reported here.

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Authors' Contribution

Conceptualization, F.D.; Methodology, H.Z.M.; Investigation, F.D. and H.Z.M.; Review & Editing, H.Z.M.

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