ORIGINAL

The relationship between internet addition with social isolation and psychological well-being: a case study of female junior high school students of Rafsanjan, Iran

La relación entre la adición a Internet con el aislamiento social y el bienestar psicológico: un estudio de casos de las estudiantes de secundaria de Rafsanjan, Irán

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Abstract

Introduction: Internet use is developing, and it is considered an important part of people's lives; the internet has dominated all aspects of human's lives. Excessive use of the internet deprives people of beliefs and social communications; by eliminating social interactions and dominating people's lives, it can cause feelings of loneliness and social isolation and threaten the mental health and psychological well-being of individuals.

Methods: The present study is descriptive-correlational one, and it is an applied study in terms of purpose. The statistical population of this study was 5537 female students in the junior high schools of Rafsanjan. In order to select the sample, Morgan's sampling table was used. According to this table, a sample size of 360 people was selected. To select the samples, a two-stage cluster sampling method was used; in the first stage, four junior high schools were selected, and 3 classes were randomly selected in each high school. were chosen. The data collection tools in this study are the standard questionnaires including: 1. Young's Internet Addiction Test (1996) 2. Modaresi Yazdi's Social Isolation Questionnaire (2014) and 3. Ryff's Scales of Psychological Well-being (1989). The reliability and validity of all of these questionnaires have been reported to be good. Descriptive and inferential statistical methods were used to analyze the collected data. In order to organize and summarize the information, descriptive statistical methods such as mean, standard deviation, graph, skewness and kurtosis indices and normality test have been used. To test the hypothesis, statistical methods such as correlation coefficient and path analysis have been used.

Results: The results indicate that the relationship between internet addiction and social isolation (P <0.01, r = 0.344) is both positive and significant. However, the relationship between internet addition and psychological well-being (P <0.01, r = -0.374) is both negative and significant. The relationship between social isolation and psychological well-being (P <0.01, r = -0.708) is negative and significant.

Conclusion: Internet addiction affects students' social isolation in various ways and leads them to mental illnesses such as depression and threatens people's mental well-being.

Keywords: Internet addiction, Social isolation, Psychological well-being, Female students.

Resumen

Introducción: El uso de Internet se está desarrollando y se considera una parte importante de la vida de las personas; Internet ha dominado todos los aspectos de la vida de los seres humanos. El uso excesivo de Internet priva a las personas de creencias y comunicaciones sociales; al eliminar las interacciones sociales y dominar la vida de las personas, puede causar sentimientos de soledad y aislamiento social y amenazar la salud mental y el bienestar psicológico de los individuos.

Métodos: El presente estudio es descriptivo-correlacional, y es un estudio aplicado en cuanto a su finalidad. La población estadística de este estudio fue de 5537 alumnas de las escuelas secundarias de Rafsanjan. Para seleccionar la muestra se utilizó la tabla de muestreo de Morgan. Según esta tabla, se seleccionó una muestra de 360 personas. Para seleccionar las muestras, se utilizó un método de muestreo por conglomerados en dos etapas; en la primera etapa, se seleccionaron cuatro escuelas secundarias y se eligieron 3 clases al azar en cada escuela secundaria. Los instrumentos de recogida de datos en este estudio son los cuestionarios estándar, que incluyen 1. El test de adicción a Internet de Young (1996) 2. Cuestionario de aislamiento social de Modaresi Yazdi (2014) y 3. Las escalas de bienestar psicológico de Ryff (1989). La fiabilidad y la validez de todos estos cuestionarios han sido reportadas como buenas. Se utilizaron métodos estadísticos descriptivos e inferenciales para analizar los datos recogidos. Para organizar y resumir la información, se han utilizado métodos estadísticos descriptivos como la media, la desviación estándar, el gráfico, los índices de asimetría y curtosis y la prueba de normalidad. Para comprobar la hipótesis, se han utilizado métodos estadísticos como el coeficiente de correlación y el análisis de trayectorias.

Resultados: Los resultados indican que la relación entre la adicción a Internet y el aislamiento social (P <0,01, r = 0,344) es positiva y significativa. Sin embargo, la relación entre la adicción a Internet y el bienestar psicológico (P <0,01, r = -0,374) es negativa y significativa. La relación entre el aislamiento social y el bienestar psicológico (P <0,01, r = -0,708) es negativa y significativa.

Conclusiones: La adicción a Internet afecta al aislamiento social de los estudiantes de diversas maneras y les lleva a padecer enfermedades mentales como la depresión y amenaza el bienestar mental de las personas.

Palabras clave: Adicción a Internet, Aislamiento social, Bienestar psicológico, Mujeres estudiantes.

Introduction

The use of the Internet has grown increasingly in recent decades[1]. The present age is at the height of the digital industrial revolution. Each revolution will undoubtedly bring about different changes, either good or bad. The tensions resulting from these changes are not always harmful, but the way of dealing with these changes can determine whether they are harmful or beneficial[2].

The unique features of the internet, such as being easily accessible, the possibility of 24-hour internet communication, low cost, anonymity of users, and ease of use have all led to its widespread use worldwide[3]. The widespread use of the internet in science and technology and its absorbing applications have led to the emergence of the phenomenon of Internet addiction in recent years[4]. Internet addiction is a behavioral dependence that is associated with indicators such as increasing costs for Internet users, suffering from unpleasant emotions, such as anxiety, depression, etc. when a person is not connected to the Internet, increasing users' tolerance and dependence against the bad effects of using the internet, and denying problematic behaviors by the users. The consequences of internet addiction include changing one's lifestyle in order to spend more time on the internet, ignoring one's health, avoiding important life activities, reducing social relationships, ignoring family and friends, suffering from financial problems due to the internet usage costs, and educational problems. People with this disorder suffer from a variety of psychological, social, and occupational problems[5].

Unfortunately, this addiction is not for a specific group or category; it affects everyone. But this addiction is more commonly observed in teenagers and young people compared to other groups. As we know, adolescence is one of the most important periods of human life and the lack of adaptation to the changes and stresses of this period of life can cause many physical and mental harms. One of the components of mental health is psychological well-being. According to Ryff, psychological well-being is what a person needs for well-being and includes feeling good about one and one's life[6]. Ryff expresses her views in the theoretical dimensions of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance[7].

In the scientific researches of Brener (1997)[8] and Caplan (2002)[9], concluded that students with Internet addiction have lower psychological and social well-being than students without Internet addiction. Uncontrolled use of the Internet endangers the physical, social, and mental development of users. The results of numerous studies on high school and college students indicate that the incidence and prevalence rates of the internet addiction are increasing among these people. Internet addiction in students leads to problems such as reduced interpersonal communication, damage to various components of mental health, and difficulties in social interactions[10]. On the other hand, people differ, biologically and individually, in the degree of vulnerability to mental illness. However, the extent of these differences is influenced by social factors, and a large proportion of different forms of mental illness are strongly associated with social models. Social isolation is one of the social factors affecting health. Social isolation has two dimensions: mental and objective that are close, in terms of concept, to social involvement, social cohesion and social capital, of alienation, loneliness and withdrawal. The internet, as a new communication technology, accelerates and facilitates the possibility of communication and interaction between people, but it can reduce these interactions and increase the social isolation of people[11]. Social isolation refers to either lack or weakness of an individual in establishing connections with others, groups, and society. Undoubtedly, social isolation deprives individuals of informal and formal participation in society, reduces social exchange and social attachment, prevents the constant exchange of thoughts and feelings from an individual to the whole and from the whole to the individual, weakens or disrupts warm relations and exchanges as well as verbal relations, and deprives individuals of the opportunity to live together, work together, experience events together, and be together. Ultimately, social isolation makes the creation of lasting, deep relationships impossible. The abovementioned problems are likely to lead to various consequences such as loneliness, helplessness, social despair and decreased social tolerance[12].

Given the unfortunate increase in the rate of internet addiction and the risk of young people being involved and roaming in cyberspace, the poor performance of measures taken in the field of cyberspace control by governments, the lack increasing public awareness on the correct use of the internet, as well as risk including social isolation, feeling of loneliness, reduced interpersonal relationships and lowered level of health and well-being of individuals, and ultimately the destruction of social capital of the country, especially girls owing to mental sensitivities and their future role as mothers, managers, and life managers, it is required to conduct studies to determine factors influencing this emerging phenomenon. It is also essential to consider these factors in designing preventive and intervention programs[13].

According to the high importance of issue, the present study was performed to assess the relationship between internet addition with social isolation and psychological well-being (a case study: female junior high school students of Rafsanjan, Iran).

Materials and methods

The present study is descriptive-correlational one. In terms of purpose, it is an applied one. The statistical

population of this study was 5537 female students studying in junior high schools of Rafsanjan, Iran. In order to select the sample, Morgan sampling table was used; according to this table, a sample size of 360 people was selected. To select the sample, two-stage cluster sampling method was used; in the first stage, 4 junior high schools were selected, and 3 classes were randomly chosen in each high school. The data collection tools in this research are standard questionnaires. They include Young's Internet Addiction Test (1996). This scale consists of 20 questions. The validity of the questionnaire has been evaluated and confirmed as "good" by using the opinions of supervisor and the reader. The reliability of this questionnaire was measured to be %78 using Cronbach's alpha test. The reliability of the questionnaire was measured to be %95 in this study by applying Cronbach's alpha. The next questionnaire is Modaresi Yazdi's Social Isolation Questionnaire (2014). This questionnaire includes 18 questions and its components (loneliness (1 to 6), helplessness (7 to 9), social despair (10 to 14), reduced social tolerance (15 to 18)). In order to measure the reliability of each of the dimensions of this questionnaire, Cronbach's alpha method was used; according to the results of each component of the questionnaire, an acceptable reliability has been reported. Cronbach's alpha coefficient has been reported to be 79% for loneliness, 85% for hopelessness, 73% for social despair, and 78% for reduced social tolerance. The reliability of the questionnaire in this study was measured to be 82% with Cronbach's alpha. Also, the validity of the questionnaire was conducted by using face validity. The next questionnaire is Ryff's Scale of Psychological Well-being (1989). Ryff's Scale of Psychological well-being (short form) has 18 questions that aim to evaluate and investigate psychological well-being has 6 dimensions (Autonomy: questions 12-9-18; environmental mastery: questions 1- 4-6, personal growth: questions 17-15-7, positive relations with others: questions 3-13-11; purpose in life: questions 16-14-5; and self-acceptance questions 10-8-2). The reliability of the questionnaire in this study was measured to be 72% with Cronbach's

alpha. Descriptive and inferential statistical methods were used to analyze the collected data. In order to organize and summarize the information, descriptive statistical methods such as mean, standard deviation, graph, skewness and kurtosis indices and normality test have been used. To test the hypothesis, statistical methods such as correlation coefficient and path analysis have been used.

Results

Descriptive indicators of research variables
Table I shows the descriptive indicators of mean, standard deviation, minimum and maximum scores of the present study's participants in terms of research variables. The results reported the mean and standard deviation of internet addiction (SD = 1.21, M = 69.20), social isolation (SD = 0.62, M = 59.20), and psychological well-being (SD = 0.5, M = 33.40).

The distribution of the research variables
Table II shows how the studied variables are distributed in terms of normality. The results showed that the variables of internet addiction (ku = -0.8, sk = 0.5, p <0.05, KS (357) = 0.111), social isolation (ku = -0.05, 0.35 sk =, p< 0.05, KS (357) = 0.054) and psychological well-being (ku = -0.06, sk = 0.39, p< 0.05, KS (357) = 0.067) are not normal in terms of Kolmogorov-Smirnov index. However, since this index is significant in large samples, the condition of being normal is accepted if the two indices of skewness and kurtosis are between ±2. In this study, for all of the investigated variables, the skewness and kurtosis were between ±2.

Testing the research hypotheses

The correlation matrix between the research variables
The main Hypothesis: There is a significant relationship between internet addiction with social isolation and psychological well-being.

Table I: Descriptive indicators of the participants' scores in terms of the research variables.

Variable	Number	Mean	Standard deviation	Minimum score	Maximum score
Internet addition	357	69.2	1.21	1	6.5
Social isolation	357	59.2	0.62	17.1	72.4
Psychological well-being	357	33.4	0.5	78.2	56.5

Table II: The indictors of the distribution status of the research variables.

Component	Skewness	Kurtosis	Kolmogorov-Smirnov index	Degree of freedom	Significance level
Internet addiction	0.5	-0.8	0.111	357	0.000
Social isolation	0.35	-0.05	0.054	357	0.013
Psychological well-being	-0.39	-0.06	0.067	357	0.001

Table III: The relationship between the research variables.

Component	Internet addiction	Social isolation	Psychological well-being
Internet addiction	1		
Social isolation	0.344**	1	
Psychological well-being	-374**	-0.708**	1

Table III shows the results of the correlation between the research variables. The results indicated that the relationship between internet addiction and social isolation (P <0.01, r = 0.344) was positive and significant, but the relationship between internet addiction and psychological well-being (P <0.01, r = -0.374) was negative and significant. Finally, the relationship between social isolation and psychological well-being (P <0.01, r = -0.708) is negative and significant.

Testing the model

The results of **table IV** show the fit indices of the analyzed model. The results indicated that the values of SRMR = 0.047, RSMEA = 0.08, p = 0.000, df = 29, X^2 = 95.45 indicates the optimal fit of the model in the population. Moreover, to determine the suitability of the fit of the model with data, fitness indicators were used. The results showed that the normed fit index is (NFI) = 0.909, and the comparative fit index is = 0.941 (CFI); this indicates the acceptable fit of the model with the data, especially the CFI value which according to Muller (1999) should be above 0.9 and from the point of view of Weston & Gore Jr (2006), it should be above 0.95 in order to have a good fit model with the data, since it is not affected by the sample size. Also, if the root mean square error of approximation (RMSEA ≤ 0.05) is very good i.e. between 0.05 and 0.08, the fit is acceptable, and if it is higher than 0.08, the fit is poor, and the standardized root mean square residual (SRMR ≤ 0.08) indicates optimal and undesirable fit. In this study, RMSEA was between 0.05 and 0.08 and SRMR was below 0.08; this indicates acceptable fit.

Testing the secondary hypotheses of the research

Table V shows the results of the study of the direct effects of the investigated variables on each other in the general model.

First sub-hypothesis: The direct effect of internet addiction on the psychological well-being of high school students is significant.

The results showed that the direct effect of internet addiction on the psychological well-being of high school students is not significant (p > 0.05, t = -1.76, β =

-0.079). As a result, the null hypothesis is accepted and hypothesis 1 is rejected.

Second sub-hypothesis: The direct effect of internet addiction on social isolation of high school students is significant.

The results showed that the direct effect of internet addiction on social isolation of high school students is positive and significant (p < 0.01, t = 5.28, β = 0.191). As a result, null hypothesis is rejected and hypothesis one is accepted.

Third sub-hypothesis: The direct effect of social isolation on the psychological well-being of high school students is significant.

The results indicated that the direct effect of social isolation on the psychological well-being of high school students is negative and significant (p < 0.01, t = -3.17, β = -0.205). Therefore, the null hypothesis is rejected and hypothesis one is accepted.

Discussion

The rapid internet expansion and proliferation have provided better communication, information, and social interaction opportunities. However, the excessive undisciplined use by some individuals has led to the emergence of the concept of internet addiction. Younger internet users (i.e., between 18 and 24 years old) were more at risk of becoming internet addicts than older users. Psychological and environmental factors in the lives of college students may leave them disproportionately vulnerable to internet addiction. Possible reasons for this are (a) students have huge blocks of unstructured time, (b) schools and universities provide free and unlimited access to the internet, (c) students from the ages of 18-22 years are for the first time away from parental control without anyone monitoring or censoring what they say or do online, (d) young students experience new problems of adapting to university life and finding new friends, and often end up seeking a companionship using different applications of the internet, (e) students receive full

Table IV: The fit indicators of the model.

Fit indicators	X2	df	df/x2	Sig	RMSEA	SRMR	NFI	CFI
The indicator value	95.45	29	3.29	0.000	0.08	0.047	0.909	0.941

Table V: Direct effects of the investigated variables on each other in the general model.

Endogenous and exogenous variables	Direct effects				
	Non-standardized coefficient	Standardized coefficient	Standard error	t value	R²
On psychological well-being From internet addiction From social isolation	-0.008 -0.039	-0.079 -0.205	0.045 0.065	-1.76 -3.17**	0.759
On social isolation From internet addiction	0.099	0.191	0.036	5.28**	0.558

encouragement from faculty and administrators in using the different internet applications, (f) adolescents are more trained to use the different applications of technological inventions and especially the internet, (g) students desire to escape university sources of stress resulting from their obligations to pass examinations, compose essays, and complete their degrees in the prescribed time with reasonable marks, and finally (h) students feel that university life is alienated from social activities, and when they finish their studies, the job market with all its uncertainties is a field where they must participate and succeed in finding employment[14].

The present survey was performed to assess the relationship between internet addition with social isolation and psychological well-being (a case study: female junior high school students of Rafsanjan, Iran). Findings showed that relationship between internet addiction and social isolation (P <0.01, r = 0.344) was positive and significant. the direct effect of internet addiction on the psychological well-being of high school students is not significant. The direct effect of internet addiction on the social isolation of high school students is significant. Additionally, the direct effect of internet addiction on the social isolation of high school students is positive and significant. The direct effect of social isolation on the psychological well-being of high school students is negative and significant. Similar reports have been recorded in this field. Kraut et al. (1998)[15] found that excessive internet usage presents a negative effect on face-to-face interactions by reducing time spent with friends and family members, which leads to increased loneliness and depression, thus decreasing psychological well-being (PWB). Liu reported that internet use increased the degree of loneliness in college students[16]. The previous studies observed the negative effect of internet on their daily lives and a break in the PWB of young adults. These studies defined well-being in the concept of mental illness and distress such as loneliness and depression[17], behavioral difficulties[18], impulsivity, sensation and novelty-seeking, and social isolation[19].

Various studies conducted by Ko et al (2008) (20) and Rashidiyan et al. (2017)[21] have indicated that the rate of depression is higher among the users addicted to the internet in comparison to the normal users of the internet. Çardak (2013)[22] reported that students with higher levels of Internet addiction are more likely to be low in psychological well-being. The results indicated that psychological well-being was affected by Internet addiction negatively; and provided a better understanding on the relationship between psychological well-being and Internet addiction. A Chinese survey showed the relationships between social support, loneliness, and internet addiction in postsecondary students[23].

Similar to our findings, the results of Alqahtani et al. (2020)[24] showed that most of the participants were nonaddicted to internet, had a moderate level of feeling of loneliness that were highly satisfied about their life. Based on this result it was conclude that there is no relationship between internet addiction, loneliness and life satisfaction (p>0.01). It is recommended to broad the population for increasing the generalizability of the results to all Saudi population. Previous survey in Iran[25] showed that there was a significant positive correlation between Internet addiction and test anxiety. There is also an inverse correlation between social adjustment and test anxiety. The results of step-by-step regression analysis showed that among the variables under study, the Internet addiction variable predicts 0.32 and along with the social adjustment variable 0.37 variance of test anxiety.

Conclusion

In explaining the results of the present study, it can be stated that in general, overusing the internet results in physical laziness, increased inactivity, reduced relationship with the others in the real world, and mental problems. In addition, being too much involved with the virtual not only harms the individual's physical health (due to inactivity) but also involves one's mind with issues in an unreal world and causes tiredness and depression as well. Therefore, the excessive use of the internet can be a major problem for one's psychological well-being. In the present study, the lack of a relationship between internet addiction and psychological well-being can be explained as such that owing to adolescence and high energy, teenagers are likely to be unaware of the physical and especially mental damages caused by excessive use of the internet; they are less likely to give due attention to the complications and harms caused by the internet addiction.

In explaining the direct and positive effect of internet addiction and social isolation, it can be stated that a when a person is socially isolated or generally does not have the ability to establish relationships with others in the real world, or his interpersonal relationships have been damaged for various reasons such as negative expectations and predictions, he or she turns to the internet and cyberspace communications where communication with others is much easier than that of the real world, so that he/she will compensate the abovementioned problems. Many people also turn to the internet to manage and avoid the unwanted emotions such as stress, loneliness, depression, anxiety and worry. The Internet is the easiest way to get out of these feelings when a person has been through an ordeal and is looking for a solution to escape their problems or immediate relief. Over time, being involved with the internet isolates the individual and makes him/her a lonely one. The present study has confirmed these findings.

In explaining this part of the research, it can be stated that social isolation deprives people of formal and informal participation in society, reduces exchange and social

attachment, and weakens or disrupts warm exchanges and discourse relations. Thus, the individual will be isolated, and his/her health will be at risk. The results of this study and the negative relationship between social isolation and psychological well-being indicate this issue. In general, the reasons behind people's psychological well-being can be found when their mental needs and high-level needs to achieve self-fulfillment are met. The isolated person suffers from some kind of mental damage, and his/her needs are at very low levels; this can confirm the negative relationship between psychological well-being and isolation.

Based on the results of the present study, the following practices are recommended to be conducted:

• Doing group work and advising families to hold party and family meetings to strengthen social support and more hope among their children;

• Teaching the correct ways of using new technology by holding training courses and workshops at schools;
• Holding courses to make parents familiar with the internet addiction, social isolation and its dangers and complications, and the risks posed to the psychological health of their children and ways to prevent them.

Other researchers are also recommended to study the effects of gender differences on the relationship between variables. One of the limitations of the present study is the lack of control over nuisance variables such as level of culture, economic status, and social status of female students.

Interests conflict
The researchers declare that they have no conflict of interest.

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