

**A sociological study of Internet dependence due to peer communication  
(Case study of high school students in districts 2 and 3 in Mashhad)**

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Received 21 August 2022, Accepted 2 November 2022

**Abstract**

The spread of the Internet and their undeniable impact on society, as the main new means of communication, play an essential role in mass interactions. The purpose of this study is students' dependence on the Internet due to communication with peers. This research has been done with emphasis on the theory of Internet dependence and peer socialization approach. From the methodological point of view of the quantitative survey-based approach, 396 people have been selected as the sample size among the high school students in the 2nd and 3rd high schools of Mashhad, based on the Cochran's formula. Random multi-stage cluster sampling and standardized questionnaire were used. Findings were analyzed by SPSS software using statistical tests. The total alpha value is 0.863 and the convergence validity is 0.650.

The results showed that the average status of research variables was moderate and some of its dimensions were moderate. The results also show that there is no difference between Internet dependence and communication with peers with the gender variable. There was a significant difference between age groups and Internet dependence; In addition, a significant relationship with moderate intensity was found between the main hypothesis of communication with peers with internet dependence rate and a significant relationship with low intensity between sub-hypotheses with internet dependency variable. According to the regression beta, the components of relationship type and relationship quality at the error level less than 0.05 had a significant relationship with the dependent variable and the independent variable and its dimensions explained about 39.3% of the dependent variable changes. As a result, communication with peers, by emphasizing the type of relationships and its quality, can strengthen the dependence on the Internet, so it is necessary to evaluate and implement this issue through short and medium-term operational planning at the school level at all levels.

**Keywords:** Internet dependence, Peer communication, Students, Education, Mashhad.

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## **1. Introduction**

Today, the electronic revolution and the expansion of the information age have had a great impact on the structure of societies and different social groups, including students and teenagers. Based on this, today's teenagers spend their lives in the virtual world surrounded by all kinds of media, especially computers, mobile phones and the Internet (Saadipour, 2011: 176). The Internet or the global web network, mobile phone, digital TV and many other new information and communication technologies open a new avenue for the transformation of our life, work, learning and communication every day. So that due to the increasing growth of these technologies and the resulting works, constant change has become an undeniable reality in social life. Most forms of social interaction, for most of human history, have been face-to-face interactions. People have interacted with each other mainly through gathering and exchanging symbolic forms, or engaging in other types of action within a common physical location. But this process has changed over time and with the emergence and development of communication media, and the development of communication media has brought about new forms of action and interaction as well as new types of social relations (Mehdizadeh & Ibrahimi, 2013: 138).

The growth and expansion of new communication media in recent decades has led some researchers to name today's generation as the generation of advanced technologies. This means that the global use of the Internet and its applications has affected all aspects of human life, from business and education to social activities (Saadipour, 2011: 176). Many Internet users and its attractiveness have caused a phenomenon called "Internet addiction" to emerge in recent years (Sadati Baladhi & Taghipour Javan, 2017: 223). Because users can spend most of their life hours in this space and benefit from its various uses, and in this way communicate with others and spend their free time, despite the facilities of internet tools and other virtual networks. Spend in this way (Dehghan & Marut, 2018: 104). According to the information published in the Wikipedia database, quoted by the International Telecommunication Union (ITU), in 2017, China, India and the United States had the largest number of Internet users, and Iran has more than 49 million Internet users. It ranks 13th in the world.

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According to the statistics presented in 2017, only 18.2% of Iranian households had access to the Internet, but in 2016, this amount increased to 72.8%. Also, based on the presented statistics, it shows that 70.5% of people who use the Internet use it to participate in social networks, and other online activities are in the next categories of use; It is also mentioned in the reports of the Iranian Statistics Center that 59% of people in the age group of 15 years and under use the Internet (Report on the availability of households and the use of information and communication technology by individuals, 2016). The statistics presented above show that young people are the most users of virtual social networks. These emerging social networks by producing digital space, in addition to the opportunities they have created for mankind, have also caused harm and limitations to the family and social life of people (Saadipour, 2011: 177). On the other hand, the Internet has raised a generation of teenagers who have sophisticated skills in the field of information technology, these skills also offer values that support learning through experience and creating a kind of culture in the digital space. and has its own social preferences, and since young people and teenagers form an important part of the human capital of the society (Krimian & et.al, 2017: 172), paying attention to the amount of Internet use among teenagers and sociological effects And its behavior is important. Adolescence is a time when a person goes through many changes both biologically and psychologically and makes many changes, and a person gets involved in new issues and tries to gain new experiences. In such a situation, adolescents who have not yet acquired sufficient psychological maturity and are trying to adapt to the social environment, are more at risk of becoming addicted to the Internet than other age groups (Amirinia & Imani, 2017: 62). On the other hand, the emergence and expansion of social networks and the use of the Internet has become an integral part of the daily life of many students and affects many aspects of their daily life. Therefore, knowing and examining the effects of using the Internet and the degree of dependence on it among teenagers and students can be effective in knowing the effects of this dependence, including examining the quality of their relationship with their peers.

Based on this, considering the increase in the amount of internet use by teenagers and the importance of paying attention to communication methods and the role of peers, the present research has been designed and implemented with the main objective of "the degree of dependence on the internet by students and investigating its relationship with communication with peers". Based on this, the main question of the research is to what extent the students of Mashhad city depend on the use of the Internet and to what extent does this have a relationship with their peers?

**2.Review of Literature**

According to the internal and external sources in the field of the studied subject, the following table briefly explains the results in order to enrich the scientific subject.

**Table 1. Background of domestic and foreign experimental literature**

Researchers name	Findings and results obtained
Yazdani (2017)	According to students, the use of modern communication media has beneficial and harmful educational effects, and its harmful effects are generally more than its beneficial effects. Its harmful educational effects are: creating moral confusion in students, isolation of students, academic failure, reduction in the use of local dialect, and less time for sports activities in students, etc.
Karimian & et al (2016)	The results showed that there was a direct and significant relationship between the educational levels, the socio-economic base of the student's parents, the amount of internet use, the duration of membership in social networks, the simplicity and ease of using social networks with the tendency towards virtual social networks.
Azizi & et al (2014)	They have found that among the personality dimensions, only extroversion, excitability and dissociability are correlated with internet addiction. It was also found that the personality dimensions of excitability and experientially are good predictors for Internet addiction and explain about 63% of the variance related to Internet addiction; So that the dimensions of excitability with a beta of 0.40 and experientially with a beta of -0.27 are effective in predicting the results.
Pour Akbaran (2014)	The rate of use of mobile phones, internet and satellite among young people of Torbat Haidarieh is significantly higher than the average of Iranian society, and also the rate of use of these means of communication is more in men than in women (P=0.000) and in 20-30 year olds more than others. Have been. Also, based on the results, it was found that anxiety scores were significantly higher in increasing use of mobile phones, anxiety and stress scores were significantly higher in cases of increased internet use, and depression and stress scores were significantly higher in increasing use of satellites.
Khanjani & Akbari (2012)	The results showed that there is a positive and significant relationship between excitement seeking and Internet addiction, and there is a negative relationship between the incident-seeking sub-criterion and Internet addiction, and there is a positive relationship between experience seeking, boredom, and disinhibit ion with Internet addiction. Also, the regression results showed that boredom and disinhibit ion are suitable predictors for Internet addiction.
Saadipour (2012)	It has come to the conclusion that the more a person uses social networks, the weaker his relationship and trust with his peers, and as a result, the quality and level of his relationships with them become weaker. The test of the theoretical model of the research showed that the

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	<p>variables of the individual's use of social networks and communication with peers can predict the changes in students' academic performance.</p> <p>The results of this study have shown that the overall prevalence of internet addiction was calculated as 10.8%, and the prevalence of moderate and severe internet addiction was 8% and 2.8%, respectively. Dependence on the Internet showed a significant relationship with gender, marital status, father's occupation, level of familiarity with the computer and the Internet, and academic semester, but it was not related to parents' education, place of residence, major, degree, and school of study.</p>
Mohammad Beigi and Mohammad Salehi (2009)	<p>The results of this study show that there was a negative and significant relationship between internet addiction and the dimension of social quality, and among the personality traits, extroversion, conscientiousness and agreeableness had a significant and negative relationship with internet addiction. The results indicated the relationship between personality traits and internet addiction and quality of life.</p>
Nadi & Sajjadian (2010)	<p>In general, the results of this research indicated the existence of a relationship between internet addiction and value system. Despite the absence of significant differences between boys and girls in the amount of Internet addiction, gender differences were observed in some subscales of the value system. Overall, the findings of the research provide a new perspective on the application and use of the Internet and the value changes of people. These results point out the need to be careful in programs and planning to prevent the negative consequences of Internet addiction.</p>
Karamati Moghadam, Shahidi & Mortazavi (2007)	<p>Achieved remarkable results in the field of social relations between users and non-users with various variables such as the number of friends, the amount of socializing with friends, the amount of participation in friendly parties, etc. The results of this survey showed that the number of close friends of Internet users is much higher than that of non-users. Users had an average of eight close friends and non-users had five close friends. The observed difference was also statistically significant, which can mean the determining role of Internet use in increasing the friendship circle of young people. Similar results were also observed in other investigated fields. For example, while only 4% of users stated that they meet their friends on a daily basis, this ratio is 24.6% among users.</p>
Paksresht and Norniya (2007)	<p>They found that there is a direct relationship between social isolation and depression of Internet users, there is also a significant relationship between the amount of Internet use and depression, but there is no difference between the amount of Internet use between male and female users.</p>
Sajjadian & Nadi (2006)	<p>He came to the conclusion that the phenomenon of addictive use of the Internet also exists in Iran; However, the use of the Internet by most teenagers and young people seems natural. Also, based on the results of this study, the addictive use of the Internet among some teenagers and young adults has a direct and inverse relationship with issues such as lack of social responsibility, social isolation, lack of social support, academic and work inefficiency, and a sense of self-worth.</p>
Moidfar & et al (2006)	<p>Most of the participants had an average internet use of 74.8% heavy internet use. The results showed that some psychiatric disorders such as depression and substance abuse. Smoking and alcohol use) are associated with more problematic Internet use among Lebanese adolescents.</p>
Haddad (2020)	<p>This study aimed to evaluate the prevalence of potential Internet addiction in a large sample of adolescents, to investigate the interactions between personality traits and the use of specific Internet applications as risk factors for Internet addiction. The results show that 3.7% of the sample people are classified as potential Internet addicts. The use of online games and social programs (online social networking sites and Twitter) increases the risk of Internet addiction, while extroversion and conscientiousness appear as protective factors in online games.</p>
Kuss & et al (2013)	<p>Among the samples, 1.6% were classified as internet addicts and 38% as possible internet addicts. The prevalence of Internet addiction was not related to gender. The level of depression and suicidal thoughts was the highest in the group of Internet addicts.</p>
Kim & et al. (2013)	

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A review of domestic and foreign experimental records shows that the phenomenon of Internet addiction, as observed in various countries, has left diverse and multiple consequences on human interactions. According to these consequences, it should be mentioned that communication with peers can play an effective role on internet addiction among teenagers and young people at the community level, and considering that in the society of Mashhad, less research has been done in this area in recent years. Therefore, the main issue of this research has been investigated by researchers as an innovative research.

In the continuation of this topic, in line with the theoretical considerations raised for the studied variables, we will briefly refer to the theoretical issues of the variables measured in this research in the following lines.

### **2.1. Dependence on the Internet**

Meerkerk, In the discussion of Internet addiction, he mentions four factors and declares, the absence of control means the inability to spend less time on using the Internet or using it excessively, mental preoccupation means thinking about the Internet even when a person is not online. and prefer using the Internet over other activities, coping or behavioral change means using the Internet to reduce or get rid of negative emotional states and conflict means disagreement or conflict with others due to using the Internet, as well as feelings of guilt and regret due to Internet use is the components that lead to people's dependence on the Internet. (Meerkerk, et al, 2009:3) The results of the factor analysis of Meerkerk and his colleagues have shown that among the four introduced factors, the first factor, mental occupation, has explained the largest percentage of the variance of 29.77% of forced use of the Internet. The second factor i.e. conflict 14.84%, the third factor i.e. confronting or changing behavior 10.86% and the fourth i.e. lack of control explained 54.7% of the variance of the forced use of the internet (Meerkerk, et al, 2006:102). . According to the set of surveys conducted regarding Internet addiction and its social effects, it seems.

### **2.2. Peer socialization**

Considering that communication with peers is important as one of the main factors of the process of socialization in relation to teenagers and students, it should be mentioned that socialization is a kind of social interaction process in

which the individual norms, values and other social and cultural elements And the politician in the group or the surrounding environment learns it, makes it internal and unique with his personality (Salimi & Davari, 2006: 144). Communication with peers is one of the main factors of the initial socialization process after the family, it is very important in the formation of socialization of a person, especially in the adolescent age groups. In this type of socialization occurs between the individual and the group that are in close and intimate contact with him and mostly happens in the early years of life. In such a process of socialization, adolescents are recognized, and they can learn to label and manage their emotional display, as well as revise their social norms. Continues. However, close friends are another area of socialization during adolescence. Parents and friends are involved in a wide range of social strategies, such as modeling the expression of feelings in response to teenagers' feelings and discussing feelings with teenagers. Find Peers provide opportunities for learning social skills, controlling behavior, and sharing similar problems and feelings. Being accepted by peers and having a few close friends is very important in a teenager's life. Close friends are usually of the same age and sex and have similar family backgrounds, values and goals, but there are exceptions (the attractiveness of people who have characteristics that are opposite to the characteristics of teenagers) (Qurbani & Jumania, 2017: 114).between social capital and students' academic achievement as a structural effect in the education organization.

Finally, from the following conceptual model, we will examine the analytical relationship of the concepts discussed in this research to evaluate and measure effective relationships

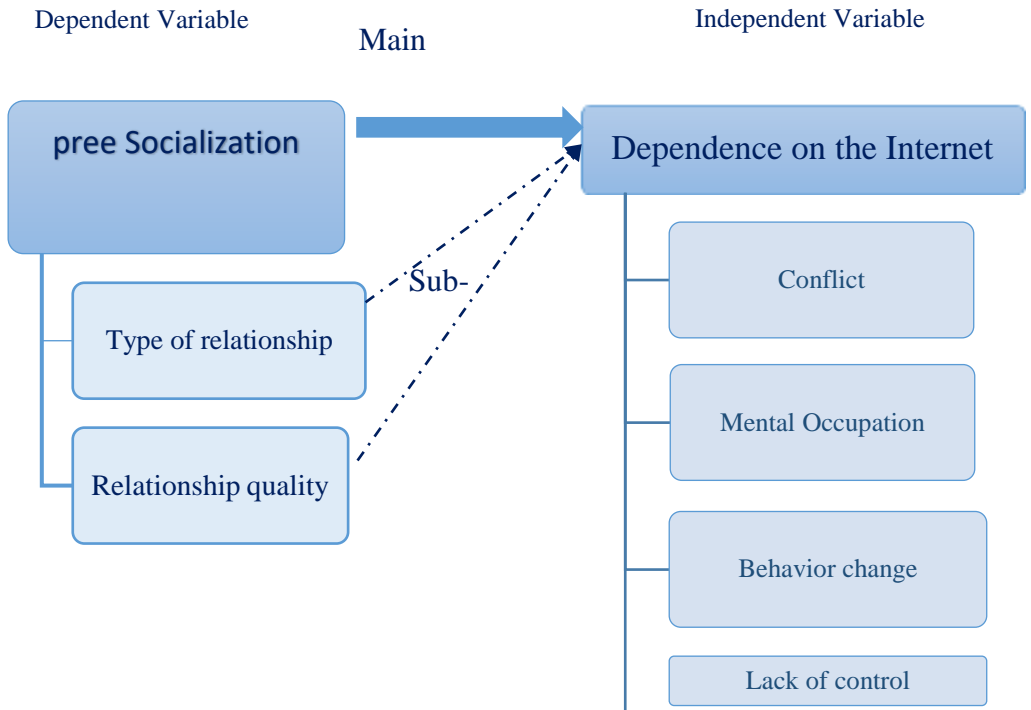
According to what was stated in the previous line and theoretical discussions and the development of a conceptual model, the hypotheses of this research are expressed as follows.

### **2.3. Hypothesis**

- There is a significant relationship between communication with peers and students' dependence on the Internet.

- There is a significant relationship between the type of relationship with peers and students' dependence on the Internet.

- There is a significant relationship between the dimension of peer relationship quality and students' internet addiction.



**Figure 1: Conceptual model of peer communication with Internet addiction**

### 3. Methodology

In this research, a quantitative approach, a survey type (description and correlation) and a standardized questionnaire tool were used to collect data. The purpose of this research was applied, cross-sectional, explanatory. In addition, in this research, the unit of observation and analysis was the students of the second level of high school in the 2nd and 3rd districts of Mashhad. The size of the studied population is based on the latest figures published in the statistical yearbook of Mashhad city in 2019, the number of students in the mentioned areas was equal to 224,311 people (Statistical Yearbook of Mashhad Municipality, 1400), and based on the Cochran formula, 396 people were selected for the sample size; This selection is based on random multi-stage cluster sampling and based on the Likert spectrum based on the domain range (1 to 5) (very low to very high) and based on the standardized



questionnaire of the collected information and descriptive and inferential statistics methods for analyzing the findings and Spss software is used. In this research, face validity (agreement of the judges) and convergent validity have been used to measure the correlation of a structure with its indicators, and if the validity value of the research is higher than (0.50), it means that the measurement tool has validity.

In this research, the confirmatory factor analysis test has been used to measure the validity and adequacy of the sample size, which means whether the number of factors and variables that have been measured is based on the theory and theoretical model (Habib pour Getabi and Safar Shali, 2010: 307) Bartlett test (KMO) command is used for this test in spss software. Reliability (reliability) of a measurement tool is shown through the value of Cronbach's alpha. If this value is more than (0.70), it can be said that the tool has high accuracy (same source: 359). In total, Cronbach's alpha of 39 questions of the questionnaire was equal to (0.863) and for convergent validity it was equal to (0.650); Therefore, the alpha value obtained for Internet dependence is equal to (0.880) and for communication with peers is equal to (0.863), which indicates that it is reliable; And the convergent validity values of Internet dependence variable (0.696) and communication with peers (0.604) show that the dimensions of the research variables are reliable. The table below shows the reliability and validity values of the variables and its components.

**Table 2. The reliability coefficient of independent and dependent variables**

Component	Questions	Convergent validity	Cronbach's Alpha	KMO	Bartlett's test	D. f	Sig	The amount of explained variance
Lack of control	4	.705	.674					
Behavior change	3	.805	.818					
Mental Occupation	4	.804	.729	.897	2263.373	91	.000	54.430
Conflict	3	.754	.622					
Dependence on the Internet	14	.696	.880					
Type of relationship	12	.644	.852					
Relationship quality	13	.664	.819	.940	4484.915	300	.000	56.390
Communication with peers	25	.604	.863					

According to the results of the above table, the values of the KMO test are between zero and one. If the index value is close to one, the data in question are suitable for factor analysis. For the research variables, since the values are above 0.60, there is no obstacle to perform factor analysis. Finally, for the variable of Internet dependence, the value of the KMO test is equal to 0.879,

and the result of the Bartlett test is equal to 2263.373 at the error level of 0.000, which indicates that 2 factors out of 14 factors of internet dependence have been able to explain about 54.430% of the total amount of variance related to the mentioned variable in this research. For the variable of communication with peers, the value of the KMO test is equal to 0.940, and the value of the Bartlett test is equal to 4484.915 at the error level of 0.000. Finally, it should be stated that 4 factors out of 25 factors of communication with peers were able to explain about 56.390% of the total variance value of the relevant variable.

#### 4. Findings

In this research, the demographic variables of the studied society; Such as gender, age group, educational level, monthly income, owning personal computers and smartphones are considered as contextual variable components of students. According to the following results, male respondents were slightly more than female respondents in this research, the tenth grade respondents were more than other educational levels. Nearly 70% of the respondents were between the ages of 16 and 17. Nearly 80% of students have had personal computers and smartphones.

According to the collection of information from the respondents, the most important findings in terms of the relationship between the studied variables based on the statistics (descriptive and inferential) mentioned in the previous lines can be expressed as follows.

**Table 3. Frequency distribution by research variables**

Component	measure	Many	Medium	little	Average	Standard Deviation
Lack of Control	Frequency	60	144	192	1.2873	<b>.59291</b>
	Value percent	15.2	36.4	48.5		
Behavior Change	Frequency	90	134	172	1.5484	<b>1.14766</b>
	Value percent	22.7	33.3	43.9		
Mental Occupation	Frequency	82	143	171	1.6576	<b>1.06884</b>
	Value percent	20.7	36.1	43.2		
Conflict	Frequency	85	150	161	1.5194	<b>1.05698</b>
	Value percent	21.5	37.9	40.7		
<b>Dependence on the Internet</b>	Frequency	67	174	155	1.4977	<b>.84759</b>
	Value percent	16.9	44.1	39.2		
Type of relationship	Frequency	176	176	44	1.2102	<b>.79169</b>
	Value percent	44.4	44.4	11.1		
Relationship quality learning	Frequency	12	104	280	3.1277	<b>.85574</b>
	Value percent	3	26.3	70.7		
<b>Communication with peers</b>	Frequency	29	326	41	2.1294	<b>.35961</b>
	Value percent	7.3	82.3	10.4		

As can be seen from the results of the table, based on the Likert spectrum, the average value is 2.5, these values are lower than the average among the measured variables. Among the average status of the Internet addiction variable, after not having control, it has the lowest average value. Among the dimensions of relationship with peers, for the average respondents, the type of relationship with peers or friends had the lowest average value.

**Table 4. Frequency and average comparison test of the research variables among the educational areas of the studied community**

<b>Confirm or Reject</b>	<b>Means test</b>			<b>Leven test</b>			<b>Variables</b>
	Difference of means	Sig. (2-tailed)	df	t	Sig	Test F	
<b>Rejection</b>	-.30048	0.000	394	-3.580	.507	.442	<b>Dependence on the Internet</b>
<b>Standard Deviation: .84646</b>		Average: 1.3475		Number:198		District 2	<b>Education areas</b>
<b>Standard Deviation: .82376</b>		Average: 1.6480		Number:198		District 3	
<b>Confirm or Reject</b>	Difference of means	Sig. (2-tailed)	df	t	Sig	Test F	<b>Variables</b>
<b>Rejection</b>	.00429	.906	394	.119	.524	.407	<b>Communication with peers</b>
<b>Standard Deviation: .34936</b>	.00429	.906	392.653	.119			<b>Education areas</b>
<b>Standard Deviation: .37045</b>		Average: 2.1316		Number:198		District 2	
		Average: 2.1273		Number:198		District 3	

According to the significance level of Lon's test in the values of F test (0.442) for internet dependence, the error level (Sig) is equal to (0.507) which is greater than 0.05, the assumption of equality of variances for areas 2 and 3 of education and The cultivation of the city of Mashhad is accepted; And the second level is used to interpret the results. Therefore, the result of the t-test (-3.580) shows that the average of District 2 (1.3475) and District 3 (1.6480) of the studied society is confirmed and these two groups have a confidence level of 95% in the average benefit of their students from Dependence on the Internet and its dimensions do not differ, in other words, for the students of districts 2 and 3 of Mashhad city, the dependence on the Internet is the same and equal, no difference is observed. It should also be mentioned that according to the significance level of Lon's test in the values of F test (0.407) for communication with peers, the level of error (Sig) is equal to (0.906) which is greater than 0.05, the assumption of equality of variances for the areas 2 and

3 Mashhad city education is accepted; And the second level is used to interpret the results. Therefore, the result of the t-test (0.119) shows that the average of District 2 (2.1316) and District 3 (2.1273) of the studied community is confirmed and these two groups have a confidence level of 95% in the average benefit of their students from communication. They do not differ from their peers and its dimensions, in other words, for the students of the 2nd and 3rd districts of Mashhad, the relationship with their peers is the same and equal.

**Table 5. Frequency and average comparison test of the research variables among the gender of the students of the studied community**

Confirm or Reject	Means test			Leven test			Variables
	Difference of means	Sig. (2-tailed)	df	t	Sig	Test F	
Rejection	-.00006 -.00006	.999 .999	393 378.100	-0.001 -0.001	.116	5.872	<b>Communication with peers</b>
	Standard Deviation: .78497	Average: 1.5015		Number:203		Boy	<b>Gender</b>
	Standard Deviation: .90679	Average: 1.5015		Number:192		Girl	
Confirm or Reject	Difference of means	Sig. (2-tailed)	df	t	Sig	Test F	<b>Variables</b>
Rejection	.2211 .2211	.542 .542	394 392.653	.610 .612	.162	1.962	<b>Dependence on the Internet</b>
	Standard Deviation: .37791	Average: 2.1393		Number:203		Boy	<b>Education areas</b>
	Standard Deviation: .33985	Average: 2.1172		Number:192		Girl	

According to the significance level of Lon's test in the values of F test (5.872) for internet dependence, the error level (Sig) is equal to (0.116) which is greater than 0.05. The assumption of equality of variances for the gender of Mashhad students is accepted. and the second level is used to interpret the results. Therefore, the result of the t test (-0.001) shows that the average of boys (1.5015) and girls (1.5015) of the studied community is confirmed and these two groups with a confidence level of 95% in the average benefit of girls and boys from dependence There is no difference to the Internet and its dimensions, in other words, the dependence on the Internet is the same and equal for male and female students of the 2nd and 3rd education districts of Mashhad, no difference is observed. It should also be mentioned that according to the significance level of Lon's test in the values of F test (1.962) for communication with peers, the level of error (Sig) is equal to (0.162) which is

greater than 0.05, the assumption of equality of variances for gender Mashhad city education is accepted; And the second level is used to interpret the results. Therefore, the result of the t test (0.612) shows that the average of boys (2.1393) and girls (2.1172) of the studied society is confirmed and these two groups with a confidence level of 95% in the benefit of boys and girls Communication with peers and its dimensions are not different.

**Table 6. Variance analysis test of age group with research variables**

Confirm or Reject	Sig	F	Average of Squares	DF	Sum of Squares	Source of Change	Age Category
Confirm	.018	3.109	2.102	4	8.409	Between Groups	<b>Dependence on the Internet</b>
			.696	389	270.861	Within Groups	
			-	393	279.270	Total	
Rejection	.364	1.084	.140	4	.561	Between Groups	<b>Communication with peers</b>
			.129	389	50.343	Within Groups	
			-	393	50.904	Total	

According to the results of the table, it is clear that based on the value of the F test, because the significance level for the variable of Internet dependence is less than 0.05, therefore, the assumption of the difference in the averages of the age groups is confirmed. Therefore, from the perspective of the age groups of the respondents (15 to 19 years old), dependence on the Internet along with its dimensions has been significant and the difference is observed.

**Table 7. Variance analysis test of secondary school education bases with variables**

Confirm or Reject	Sig	F	Average of Squares	DF	Sum of Squares	Source of Change	Educational bases of the second secondary
Rejection	.516	.848	.607	5	3.035	Between Groups	<b>Dependence on the Internet</b>
			.716	389	278.486	Within Groups	
			-	394	281.521	Total	
Confirm	.024	2.630	.333	5	1.667	Between Groups	<b>Communication with peers</b>
			.127	389	49.291	Within Groups	
			-	394	50.958	Total	

In this connection, it should be mentioned that the results of the variance analysis test conducted between the age groups with the variable of communication with peers showed that the values of the F test in the

mentioned variable, its significance level was higher than 0.05, and this indicates that It has been found that there is no difference between the age groups with the variable of communication with peers.

According to the results of the table, it is clear that based on the value of the F test, because the significance level for the variable of dependence on the Internet is more than 0.05, therefore, the assumption of the difference in the averages of the students' educational levels is not confirmed. Therefore, from the point of view of educational levels, dependence on the Internet along with its dimensions is not significant and no difference is observed. In this connection, it should be mentioned that the results of the analysis of variance analysis of students' educational levels with the variable of communication with peers showed that the values of the F test in the mentioned variable, its significance level was less than 0.05, and this indicated that It is observed that there is a difference between the educational levels of the students in the variable of communication with peers. According to the hypotheses presented in the following table, this inferential test is examined.

**Table 8. Pearson's correlation coefficient between the main and secondary variables**

<b>Significance level</b>	<b>The intensity of the relationship</b>	<b>The correlation coefficient</b>	<b>Dependent variable and dimensions</b>	<b>Independent variable and dimensions</b>
0.000	medium	0.469	Dependence on the Internet	<b>Relationship quality learning</b>
0.000	medium	0.467		<b>Type of Relationship</b>
0.000	medium	0.484	Lack of Control Mental Occupation Behavior Change Conflict	<b>Communication with peers</b>
0.000	medium	0.469		<b>Communication with peers</b>
0.000	medium	0.495		
0.000	medium	0.445		

The above table shows the correlation coefficient of the relationship between the main and secondary variables based on the Pearson test. In all cases, research hypotheses have a significant relationship with 0.95 confidence and an error level smaller than 0.05. According to the results of the table above, the correlation range of communication with peers and its components with the dependent variable of Internet addiction has a relatively moderate relationship intensity between (0.40 to 0.60); In addition to this, the correlation of the independent variable with the components of the dependent variable (Internet addiction) has also had moderate results. Finally, it should be noted

that the intensity of the relationship between the independent variable and its components with the Internet addiction variable is moderate and the direct relationship and a positivity has been obtained between this variable and its components with the dependent variable. Therefore, it can be mentioned that communication with peers has had a moderate impact on internet addiction among students in districts 2 and 3 of Mashhad.

**Table 9. Multivariate linear regression of independent and dependent variables**

Independent variables		B	Standard error	Beta	T	Sig
Constant		.629	.258	-	2.436	.015
Relationship quality learning		1.312	1.081	1.325	1.214	.022
Type of Relationship		1.436	1.174	1.436	1.310	.019
Communication with peers		2.394	2.242	1.016	1.068	.028
Durbin Watson	Sig	F	Std. Error of Estimate	Adjusted R Square	R Square	R
1.818	.000	6.395	0.83074	0.393	0.407	0.416

The results of the above table indicate that the unstandardized regression coefficients that include the estimation coefficients of the regression model are obtained as follows:  $5.244 = (2.394 + 1.538 + 1.312) =$  Internet dependence

The standardized coefficients (Beta) show the relative contribution of each independent variable in explaining changes in the dependent variable, which respectively in this model, the dimensions of type of relationship with peers and quality of relationship with peers, show that a change of one standard deviation in these dimensions causes a change in the variable. becomes dependent According to this regression model, there is a significance of the variable dimensions of communication with peers at an error level of less than 0.05 that these dimensions have an effect on the dependence on the Internet from the perspective of students in Districts 2 and 3 of Mashhad city.

The value of the correlation coefficient (R) between the variables was 0.416, which shows that there was an average correlation between the set of independent and dependent variable dimensions at the time of the research. The coefficient of determination (R<sup>2</sup>) is equal to 0.407, which is close to the coefficient of 1, and the result shows that the independent variables have been able to explain the average variance of the dependent variable. Also, the adjusted coefficient of determination is equal to 0.393, which indicates that the

dimensions of communication with peers have been able to explain about 39.3% of the changes in the dependent variable (Internet addiction). The value of the F statistic (6.395) which is significant at the error level of less than 0.05, it can be concluded that the regression model of the research composed of independent variable components has moderate power to explain and is able to moderate to low the amount of changes and variance. Explain the dependent variable. It should also be mentioned that considering that Watson's camera score is between 0 and 4. If there is no serial correlation between residuals, the value of this statistic should be close to 2. If it is close to zero, it indicates a positive correlation, and if it is close to 4, it indicates a negative correlation. In general, if this statistic is between 1.5 and 2.5, there is no need to worry (Habibi, 2017). Therefore, because the value of the mentioned test in this research is equal to (1.818), the concept of independence of the variable of this research has been proven. It means that the observation results did not affect other observations.

## **5. Conclusion**

This research was compiled with the aim of investigating the level of internet dependence caused by communication with peers among the second high school students of Mashhad city. In the present study, the descriptive average status of the main variables of the research has been obtained in the medium to high range and the average status of some components of these variables has been in the low range, in addition, the relationship between male and female students with peer groups and No difference has been observed in their dependence on the Internet. The obtained results show that there is a direct relationship with moderate intensity between the quality of relationships with peers and the type of relationships teenagers have with peers and the level of internet addiction in this age group. In this sense, increasing or decreasing the amount of communication with peer groups in the amount of internet use or dependence on it can make significant changes in the student's life. This result can be found in the results of studies carried out in the previous pages such as Saadipour (2011), Mehdizadeh & Ibrahim (2013), Karimian & et al. (2016), Haddad (2020) and Kuss & et al. (2013) that the effects of They evaluate the Internet to an average level in order to increase social communication.



In another part of the results obtained from this research, it can be pointed out that there is a relationship between communication with peers and components such as not having control over the amount of internet use, mental preoccupation with the internet, changing behavior and creating conflict in the social interactions of teenagers. There has been a not very strong medium intensity, which indicates that communication with peers as one of the effective factors of signs of Internet addiction in adolescent age groups, along with other environmental factors, can be important and capable. Have a review.

Finally, communication with peers as one of the important factors in the process of socialization of teenagers after the family monitors the mutual interactions they have with each other, affects their ways of living and even their education, and this influence is formed on an equal or unequal level. . It is at such a level of life that the students of our society, as teenagers exposed to the age of puberty, with the desire to have intimate and close relationships with each other, in addition to displaying the management of their emotions and feelings, revise their life norms and social behaviors. do and share, in such modeling a wide range of collective strategies, including dependence on the Internet, in the psychological and social development of students in the current conditions of the society can enjoy the attractiveness and values of adolescence and communication with peers. According to the results that have been obtained, in order to reduce the dependence on the Internet in the lifestyle of teenagers and students, in the following lines, some general solutions can be mentioned that can reduce the dependence on the Internet.

- Families should try to increase family fun and even link leisure-oriented relationships among the families of relatives, peers and friends of students.
- To try to implement, follow-up and monitor the process of retraining the skills of implementing the rules of student internet use and awareness about internet addiction behaviors separately for students and their parents in the school with the supervision and cooperation of the association of parents and teachers of the school. To be.
- At school and at home, according to the tastes and talents of the students, try to create suitable entertainment.

- Provide students with individual skills related to the use of the Internet in order to determine the duration of Internet use, the extent of the necessity of this activity, the creation of situational limitations by the student, etc., continuous training in the form of different ways of conducting literacy courses. Internet in school.
- Try to make the effective presence of students mandatory in family gatherings and real atmosphere.
- The effective presence of expert and experienced staff of counselors and educational psychologists in the school and as colleagues of the school counseling center to monitor and follow up the problems of students' dependence on the Internet can be considered effective in controlling and reducing the behaviors of students' Internet addiction.

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