

Investigating the Effect of Mobile Phone Use on Academic Achievement and Developmental Anxiety in Students with Internet Addiction

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Abstract

Today, the Internet is at the forefront of the new industrial revolution and is now at the height of the peak of the digital industrial revolution. One of the most important issues in Internet addiction is that Internet addiction reduces anxiety about progress because of the psychological dependencies it creates, and it attracts the attention of the individual or adolescent. Therefore, the aim of the present study was to investigate the effect of Internet addiction on students' academic achievement anxiety in the academic year 2018-2019. The statistical population of this study consists of 325 students of Azad University, North Branch of Tehran. 122 students were selected as the statistical sample. The statistical sample of this study was determined by "random" sampling method. The information required for the study was collected through two questionnaires. The research method was developed by Alpert and Haber (1960s) Achievement Anxiety Test to assess academic achievement anxiety. The standard Yang Internet Addiction Questionnaire (1996) was also conducted. This study showed that there was no significant relationship between boys and girls between addiction to students' Internet and academic achievement. The results of this study are consistent with the findings of most studies that have shown that addiction to the Internet is associated with academic achievement.

Keywords: *Internet addiction, internet, anxiety, academic achievement*

I. Introduction

Today, the mobile phone as a manifestation of new communication technology has a powerful place in human personal and social life and is an integral part of everyday relationships, so that it can be claimed that for many people, life without it is not possible or at least undesirable [1].

The influence of mobile applications in the way of life is a global phenomenon and in our society, despite the reduction of the initial fever of its use, its acceptance has reached a point that hides the serious and fundamental

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harms of this modern technology, and can be done with a little care. He realized the extent of its adverse effect [2]. The use of mobile phones is an important part of adolescence in many developed countries. In the Pacific and Southeast Asia region, Taiwan is the first economic hub with more than 100 mobile phone subscriptions per 100 inhabitants [3]. Undoubtedly, the Internet is at the forefront of the new industrial revolution and is now at the height of the digital industrial revolution. Many psychologists are skeptical about whether the word "addiction" is really a good word to describe when people spend too much time on the Internet. Addiction is a phenomenon that people have been familiar with in various societies since ancient times. At present, with the gradual change of lifestyle in parallel with scientific and technological advances and the undoubted increase in the level of consciousness and awareness of the people, the subject of addiction is found and observed in various fields. Today, Internet addiction is one of the most common problems that can be defined as computer misuse and Internet information. Internet access is growing exponentially, and more and more people are joining the Internet every day. The Internet is everywhere: at home, at school, in offices, and even in shopping malls, and among Internet users, Harry and teens are the most used [4]. Evan Goldberg, a psychiatrist at Columbia University, first reported Internet addiction disorder in July 1995. Internet addiction or Internet addiction, regardless of whether it is a mental illness or a social problem, is a chronic, pervasive, and recurrent phenomenon that accompanies physical, financial, family, social, social, and psychological physical harm. The most common term is "Internet addiction", which is a type of behavioral dependence on the Internet that is determined by these characteristics: the increasing cost of the Internet and related issues. One is not in contact with the Internet, the ability to tolerate and get used to the effects of being on the Internet, the denial of problem behaviors from this perspective, the disorder as a disorder of tension or impulse control such as gambling is considered morbid gambling and those with difficulty. They develop psychology, including anxiety [5]. One of the most important issues in Internet addiction is that Internet addiction reduces the anxiety that needs to be developed because of the psychological dependencies it creates and attracts the attention of the individual or adolescent [6]. Anxiety as a part of every human life, in all societies, is considered as a suitable and compatible response. Lack of anxiety or morbid anxiety can cause us many problems and dangers. Anxiety in a balanced and constructive way forces us to try to do our job in a timely and appropriate manner, thus making our life more productive and productive [7]. It rarely shown that anxiety crises are not observed during the adolescent process; sometimes this anxiety appears suddenly and sometimes gradually. The plant is pervasive and eventually reverses within a few hours [8]. Therefore, anxiety as a part of the life of children and adolescents is one of the components of their personality structure and from this point of view, some of the anxieties of childhood and adolescence can be considered normal and inherited. During development, children and adolescents experience a wide range of anxieties. Sometimes these anxieties are so severe that they make daily life difficult. Academic achievement anxiety is a common type of performance anxiety that affects 10 to 30% of students in different studies [9]. Children's education is one of the most important concerns of our country's families today. This concern is mostly due to the future dependence of children on their success in education, although these concerns are the point for the promotion of their children and the education system as a whole. It is a hopeful and pleasant one. In another form, it provides a kind of anxiety and worry for families and students that if a person goes through the study process in full and his way to university becomes difficult, no one can Successful and effective citizenship socially [10]. It seems that our educational system should be planned in such a way that on the one hand, it reduces the

educational decline and increases the educational efficiency, and adopts the ways of academic progress for educational advancement, and on the other hand, the criterion of social success and job search. Not just academic credentials, but also individual competencies, human initiatives, and constructive efforts as credentials for social indicators and job needs [11]. Jung (1998) in a study of Internet addicts concluded that people with higher economic and social status, as well as people with higher education, are more prone to this disorder [12]. This study showed that people who have more time, such as those who are at home and university students in dormitories, are more likely to be exposed to the Internet [13]. The telephone, while creating an independent individual privacy, has made a person's social connection meaningful in the context of networks; thus, in addition to introversion, the individual finds himself in a purely social situation that puts him in a kind of identity crisis and personal duality [14]. One of the most serious issues related to cyberspace is the formation of a kind of permanent addiction to the use of this space. Overall reduction in physical activity and attention to personal health, avoidance of important life activities in order to spend more time on the network, change sleep patterns, reduce socialization, neglect of family and friends, unwillingness to spend a long time without phone, along with some of the most important symptoms it's a kind of addiction [15].

Yang et al. (2019) explored the prevalence and correlates of problematic smartphone use (PSU) among Chinese university students. Few studies have investigated relationships between PSU and factors such as academic anxiety, academic procrastination, self-regulation, and subjective wellbeing. The present study proposed and tested a hypothetical model of relationships between PSU and these factors. Path analysis was applied to test the hypothetical model. PSU mediated the relationships between self-regulation, and both academic anxiety and academic procrastination. The present study enhances our understanding of the role of problematic smartphone use in relation to academic behavior, mental health and wellbeing of college students [16].

Rizwan Raheem et al (2020) examine the influence of smartphones on the performance of university students in Pakistan. This paper also investigates the functions of a smartphone as exogenous predictors such as smartphone applications, multimedia messaging service (MMS), and short message service (SMS), warp-speed processing, and entertainment on the academic performance of a student. The findings of this paper demonstrate that smartphone functions have a significant influence on students' academic performance, and moderating and mediating variables also have a significant influence on exogenous and endogenous variables. The practical implications have provided a guideline for university teachers, parents, and decision-makers of how a smartphone could be used to improve student academic performance inside and outside university campuses [17].

Cha and Seo (2018) aimed to examine smartphone use patterns, smartphone addiction characteristics, and the predictive factors of the smartphone addiction in middle school students in South Korea. The predictive factors of smartphone addiction were daily smartphone and social networking service use duration, and the awareness of game overuse [18].

Lee et al. (2016) investigated the relationship between smartphone dependency and anxiety. Among this group of university students in South Korea, smartphone dependency appeared to be associated with increased anxiety. Standards for smartphone use might help prevent deleterious health effects [19].

Boumosleh and Jaalouk (2017) aims to assess prevalence of smartphone addiction symptoms, and to ascertain whether depression or anxiety, independently, contributes to smartphone addiction level among a sample of Lebanese university students, while adjusting simultaneously for important sociodemographic, academic, lifestyle, personality trait, and smartphone-related variables. Several independent positive predictors of smartphone addiction emerged including depression and anxiety. It could be that young adults with personality type a experiencing high stress level and low mood may lack positive stress coping mechanisms and mood management techniques and are thus highly susceptible to smartphone addiction [20].

Zhang et al (2020) tested the individual roles of depression and mindfulness as moderators of this relationship. Results suggest that interventions, such as improving the individual level of FTP and mindfulness, should be conducted. These interventions, in turn, help control the level of depression in college students and ultimately decrease their level of SUD [21].

Therefore, the aim of the present study was to investigate the effect of Internet addiction on students' academic achievement anxiety in the academic year 2018-2019.

II. Methodology

This field research is descriptive-correlational because we intend to test hypotheses by doing fieldwork. In terms of the purpose of this research, it falls into the category of fully applied research. Two researcher-made questionnaires were used to collect the required information. The research method was developed by Alpert and Haber (1960s) Achievement Anxiety Test to assess academic achievement anxiety. The standard Yang Internet Addiction Questionnaire (1996) was also conducted. Therefore, the purpose of this questionnaire is not to achieve a specific diagnosis in the hierarchy of mental illness, but its main purpose is to distinguish between mental illness and mental health. The statistical population of this study consists of 325 students of Azad University, North Branch of Tehran. 122 students were selected as the statistical sample.

In this study, the statistical sample was identified by "random" sampling method. Data collection in this study was done in the following two ways: library method: In this study, the library method in the section of theoretical foundations and reviewing the views of experts and compiling the research background on Internet addiction and anxiety academic achievement has been used. Field method: to examine and test the research hypotheses using the academic achievement anxiety test questionnaire by Alpert and Haber as well as the Young Internet Addiction Questionnaire has been used. The information required for the research was collected through the following questionnaires: the Academic Achievement Anxiety Test was developed in 1960 by Alpert and Haber to assess academic achievement anxiety. This scale is a 19-item self-report tool. The academic achievement anxiety test has two subscales of facilitator anxiety that assesses the amount of stimulus anxiety and subscales of debilitating anxiety

that assesses the amount of anxiety that interferes with performance. A separate score is calculated for each of these two subscales. This scale predicts academic performance, especially verbal talent, better than general anxiety tests.

Yang Internet Standard Questionnaire (1996): This scale includes 20 questions prepared and validated by Yang et al. Questionnaire Scale This questionnaire is based on the Likert scale (strongly disagree, 1; disagree, 2; neither agree nor disagree, 3; agree, 4; strongly agree; 5).

III. Results

3-1 Descriptive statistics indicators

Table 1. Descriptive statistics indicators

Gender	Frequency	Percentage	Cumulative percentage
Female	67	45.9	45.9
Male	55	54.1	100
Age	Frequency	Percentage	Cumulative percentage
25-30 years old	42	41.4	41.4
31-35 years old	31	4.4	45.9
36-40 years old	12	2.40	86.1
41 years and older	37	9.13	100
Addiction to Internet:	Frequency	Percentage	Cumulative percentage
I have	109	9.66	66.9

I do not have	11	1.33	100
Total	122	100	

As Table 1 shows, 45.9% of students in this study were women and 54.1% of them were men. Of these, 41.4% were 25-30 years old, 4.4% were 31-35 years old, 40.40% were 36-40 years old and 13.9% were 41 and older, of which 66.9% were addicted to Internet and about one third of them, equivalent to 33.1% have not yet become addicted to the Internet.

Table 2. Descriptive statistics indicators of research variables

Significance	Kolmogorov-Smirnov test	Elongatio	Skewne	Variable
0.058	1.522	-0.260	0.597	Internet addiction
0.067	1.682	-0.932	-0.057	Students' academic

Given the values obtained for skewness and elongation and the Kolmogorov-Smirnov test for research variables, the distribution of all variables is normal, so parametric methods such as Pearson correlation can be used to analyze research findings.

Main Hypothesis: There is a significant relationship between Internet addiction and students' academic achievement anxiety.

Table 3: Correlation between Internet addiction and students' academic achievement anxiety

Variable		Mean	Standard deviation	Mean deviation	t	df	Sig. (2-tailed)
Pair 1	Internet addiction anxiety	13.2000	9.45395	0.45395	12.488	79	.000

Given the sig is less than 0.05, the hypothesis is confirmed. That is, there is a significant linear correlation between the two variables (P-value = 0.002).

Hypothesis 1: Obviousness is significantly related to students' academic achievement anxiety.

Table 4: Correlation between obviousness and student academic achievement anxiety

Variable		Mean	Standard deviation	Mean deviation	t	df	Sig. (2-tailed)
Pair 1	Obviousness and anxiety	28.21839	7.85986	0.84266	33.487	79	.000

Given the sig is less than 0.05, the hypothesis is confirmed. That is, there is a significant linear correlation between the two variables (P-value = 0.002).

Hypothesis 2: There is a significant relationship between excessive internet use in students' anxiety and academic achievement.

Table 5: Correlation between excessive use of the Internet and student academic achievement anxiety

Variable		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Standard deviation	Mean deviation				
Pair 1	Excessive use of the Internet- Anxiety academic achievement	29.77011	7.87652	0.84445		35.254	79	.000 000.000

Given the sig is less than 0.05, the hypothesis is confirmed. That is, there is a significant linear correlation between the two variables (P-value = 0.002).

Hypothesis 3: There is a significant relationship between procrastination in anxiety and student academic achievement.

Table 6: Correlation between procrastination in anxiety and student academic achievement

Variable		Paired Differences				t	df	Sig. (2-tailed)		
		Mean	Standard deviation	Mean deviation						
Pair 1	procrastination in anxiety and academic achievement	34.77011	7.80236	0.83650		41.566	79	.000	.000	

Given the sig is less than 0.05, the hypothesis is confirmed. That is, there is a significant linear correlation between the two variables (P-value = 0.002).

Hypothesis 4: There is a significant relationship between expectation and student academic achievement anxiety.

Table 7: Correlation between expectation and student academic achievement anxiety

Variable						t	df	Sig. (2-tailed)		
		Mean	Standard deviation	Mean deviation						

	expectation and student academic achievement anxiety	37.4482 8	7.86183	0.84288			44.42 9	79	.000 .000
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Given the sig is less than 0.05, the hypothesis is confirmed. That is, there is a significant linear correlation between the two variables (P-value = 0.002).

Hypothesis 5: There is a significant relationship between neglect of social life and student academic achievement anxiety.

Table 8: Correlation between neglect of social life and student academic achievement anxiety

Variable						t	df	Sig. (2-tailed)
	Mean	Standard deviation	Mea n devi ation					
neglect of social life and student academic achievement anxiety	38.0574 7	7.60562	0.81 541			46.673	79	.000

Given the sig is less than 0.05, the hypothesis is confirmed. That is, there is a significant linear correlation between the two variables (P-value = 0.002).

Hypothesis 3: There is a significant relationship between lack of control and student academic achievement anxiety.

IV. Discussion and conclusion

Mobile technologies, in the vast convergence that they have found with computers, the Internet, video-video games, and television, have significantly replaced radio, television, video game machines, and personal computers in the coming years. Gradually get out of the competition.

This is a huge change that will be reflected in the development of communication technologies and the deepening of their convergence over the next few years, adding to the sensitivity of the mobile phone and its opportunities and threats. The proliferation, deepening, and more poignant appearance of mobile phones is promising future officials and parents that they have not missed a golden opportunity for years to come. Firstly, to resolve the socio-cultural conflicts of their communities and secondly, by accepting the fact that the parents of the affairs of the communities were not free to choose between good and bad, they often have to choose between bad and worse, and by abandoning the idealistic approach, which in the current state of society is by no means willing to accept the facts and accept the expense, confront the interventionist approach with success, however relative. Third, the authorities must create the necessary culture [22]. This study showed that there was no significant relationship between boys 'addiction to the Internet and students' academic achievement, as well as has not significant differences with girls. The results of this study are consistent with the findings of most studies [23, 24, 25, 26, 27 and 28] that have shown that addiction to the Internet is associated with academic achievement.

But it does not agree with the findings of [29]. Lee et al. (2017) believes that the more time people addicted to computer games, chat and dating, videos and use of porn sites account for, the decentralization and wasting more time and a decrease in academic achievement and learning [30]. A group of Internet audiences are young people and adolescents who are more likely to be exposed to such problems due to the development of psycho-psychological variables and many other unknown variables. It seems necessary to acquaint children with the following: physical, behavioral, moral dangers and inappropriate use of new technologies such as satellite, Internet and mobile phones, strengthening the foundations of values, morals and religiosity of children. Safety in them for the optimal use of new technologies. In this study, there was no statistically significant difference between girls and boys in terms of Internet addiction. Research on addiction discrimination in both sexes shows mixed results. Some studies suggest a significant difference in Internet addiction between men and women, while others equate Internet addiction in both men and women with the same type of addiction. In the case of sexual discrimination in Internet psychology, women are more likely to use e-mail and men are more likely to use the Web. Computer performance, feelings of loneliness and depression have led to differences between men and women in the use of computers. Managers and coaches of education can provide computers, the Internet, as well as the right information and training on the Internet in schools, enabling students to visit scientific sites and dialogue on these blogs, and solve scientific problems and issues. It is obvious that access to books, pictures and scientific films facilitates education and enhances learning and, in general, students' academic achievement. Therefore, planning in and preventing the solution of this problem by the officials of cultural affairs educational affairs, the correct use of this technology in the society is suggested.

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