



## The Correlation of Addiction to Online Games with Family Emotional Climate, Academic Longing, and Academic Adjustment in Students

Hajar Esrafil<sup>1</sup>, Sajjad Basharpour<sup>2</sup>

### Original Article

#### Abstract

**Introduction:** Nowadays, due to the extended use of the high speed Internet, online games have become one of the most common interests among adolescents. Therefore, determining the advantages and disadvantages of these games are basically valuable. The purpose of this study is to investigate the relationship between online game addiction and family emotional climate, academic achievement, and academic adjustment in students.

**Materials and Methods:** This was a descriptive correlational study with the statistical population consisting of all secondary school students in Ardabil City, Iran, who were studying at Ardabil schools during 2019. 216 individuals were selected through the convenience sampling method. Data were collected using the online game addiction questionnaire, family emotional climate questionnaire, academic craving questionnaire, and academic adjustment scale. The data collected were then analyzed using Pearson's correlation coefficient and regression models.

**Results:** There was a significant negative correlation between family emotional climate, academic achievement, and academic achievement with online game addiction ( $-0.27 \leq r \leq 0.54$ ,  $P \leq 0.001$ ). With beta values of respectively -0.638, -0.409, -0.332, these values directly predicted addiction to online games.

**Conclusion:** It seems that the family's emotional climate and adolescents' educational longing and adjustment may well predict addiction to online games. Therefore, it is recommended to consider these three factors to reduce the tendency of young people to play such games and to identify the damage caused as a result of excessive playing of these games.

**Keywords:** Online gaming addiction; Family emotional climate; Academic longing; Academic adjustment

**Citation:** Esrafil H, Basharpour S. **The Correlation of Addiction to Online Games with Family Emotional Climate, Academic Longing, and Academic Adjustment in Students.** J Res Rehabil Sci 2019; 15(4): 204-10.

Received: 18.07.2019

Accepted: 11.09.2019

Published: 07.10.2019

#### Introduction

Online game addiction is defined as the excessive and forced use of video games that lead to social and emotional problems, and given these problems, the user is not able to control his use of these games (1). The World Health Organization (WHO) has declared online gaming disorder as a disease; because experts agree on the risk of addiction to these games (2). According to WHO, the definition of this type of addiction is "a pattern of behavior related to digital games in a way that is characterized by a weakness in the will and autonomy and prioritizing the game over other activities, to the extent that playing is superior to other interests of the individual" (3).

Online games are a type of internet-based games that has become widespread due to the familiarity of young people with the Internet and its increasing speed (4). Addiction to these games is considered as an obsessive, extreme, uncontrollable, and physically and mentally destructive behavior (5). These individuals try to cover their social needs through online games so that they can interact with others remotely and superficially (6). The features of these games, such as being fun, interactive, and online, have made them one of the most popular applications on the Internet, which take a lot of time of the young people (7). Although online games are accompanied by some positive features such as being educational

1- Department of Psychology, School of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabili, Iran

2- Professor, Department of Psychology, School of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabili, Iran

**Corresponding Author:** Hajar Esrafil, Email: h.esrafil.psy@gmail.com

and filling the player's leisure time, they have many disadvantages as well (8). Online game addiction, like other addictions, has components such as tolerance, recurrence, behavior change, and the like (9). From this point of view, the game-addicted person becomes mentally obsessed and wants to play when he does not have access to the game (10). 75-90% of school-age children and adolescents use computer games, and the symptoms of offline game addiction can be seen in 2.7 to 11.9% of them (11).

Examining adolescents' motivation to play can be the first step in understanding how using games can turn into addictive behavior (12). One of the influential factors that can play a role in the tendency to become addicted to online games is the emotional atmosphere of the family. Like other addiction types in which the role of a person's good relationship with parents has been proven, this issue has been considered in online game disorder as well. The most common causes of psychological conditions such as stress and the tendency to escape as well as desire to substance abuse in individuals are related to family and social life (13,14). The emotional atmosphere of the family, how family members treat and view each other, their feelings and interests in each other, their interference in the work of the family members, and their competition and cooperation with each other can affect the individuals' mental and behavioral health (15). In other words, the emotional atmosphere of the family refers to the relationships and mental and emotional communications present among its members (16). Parents' emotional relationships with their children play a very important role in the adjustment process. If love and unity prevail in the family environment, children will have the opportunity to express themselves without worry and fear of being punished and, when necessary, to defend their rights through adaptive behavior (17).

The results of studies have shown that the emotional atmosphere of the family has the greatest impact on the mental, physical, social, and emotional health of children (18). Academic longing is defined as active participation in homework and educational activities (19) and is implicitly used as a lasting characteristic or development of personal interests that is accompanied by strong positive feelings about that activity and is assumed to be a form of motivation that leads to learning, progress, and increased creativity (20). Longing can be defined as a strong desire to spend energy and time on activities that people like and consider important (21). These tasks are sharp self-defining tasks and reflect the central characteristics of an individual's identity (22).

Behaviors related to learning and progress are referred to as the construct of academic longing (23). Empirical studies have shown that a positive attitude toward academic achievement is associated with a set of psychological variables, including students' beliefs about their abilities and levels of control, their goals and values, social relationships, and their sense of belonging to school and university. The four components of longing include "persistent intention to engage in an activity, having activity-related goals, assimilation to activity, intense motivational tendencies with an emphasis on high emotional arousal, and desire to engage in activity" (24).

Coleman and Guo introduced passion for learners, which was defined as showing a focused interest in a particular field of study. This may be incompatible with the usual interests of peers and friends (25). In addition to academic passion, emotions also play a very important role in the school environment (25). It seems that the increasing tendency of students towards online games also affects their academic adjustment (26). Academic adjustment is one of the important factors that affect individuals' academic performance (27,28). Academic adjustment is a special branch of the general concept of adjustment that deals with the issue of the individual adaptation to the course, educational environment, and its requirements (29). This factor, on the one hand, is the ability of learners to adapt to academic conditions and requirements, and on the other hand, is the ability of learners to adapt to the roles that the educational environment as an educational factor poses them to (30). Academic adjustment not only emphasizes students' academic achievement, but it also has an expanded concept and includes learning motivation, memory process, and psychological factors such as anxiety and depression, which can negatively affect mental health, social skills, and personal, academic, and social adjustment (31).

Everyday human endeavor often revolves around adjustment. A person benefits from adjustment when he can establish a proper relationship between himself and his social environment. The social environment includes family, workplace, school, university, and the like (32). Academic adjustment is a multidimensional concept which refers to the ability of individuals to successfully respond to the diverse demands of the educational environment (4). Theoretically, conducting such a study specifies the context for identifying the factors involved in online game addiction and paves the way for conducting other studies. In addition, from an applied perspective, using various programs based on the results of studies conducted in this regard, the ground for reducing such addiction can be provided. Due to the

growing tendency of adolescents to play online games, it is necessary to examine the various dimensions of these games, especially in the psychological dimension. For this reason, the present study is conducted aiming to investigate the relationship between online game addiction and family emotional climate, academic passion, and academic adjustment in students.

### Materials and Methods

This was a descriptive correlational study with the statistical population including all high school students in Ardabil, Iran who were studying in high schools of Ardabil in the academic year of 2019-2020. 21 students were selected by convenience sampling method. The following tools were used to collect data, which have been given in detail in the following.

**Online game addiction scale:** In the present study, the Persian version of the online game addiction scale was used. This scale has been translated into Persian in Iran by Zandi Payam et al. and its psychometric properties have been studied (33). The questionnaire consists of 20 items scored in a five-point Likert scale. The range of scores is between 20 and 100, which indicates the individuals' desire to online games. Zandi Payam et al. reported the reliability of the online game addiction scale as 0.95 using Cronbach's alpha coefficient (33).

**Family Emotional Atmosphere Questionnaire:** This questionnaire was developed by Hill and Craft to measure the level of affection in child-parent interactions (34). The tool consists of 16 items and is scored based on a five-point Likert scale. The validity of this questionnaire was confirmed by Keramati in Iran, with a reliability coefficient obtained as 0.89. The higher and lower scores of this scale indicate a positive and a weak emotional atmosphere among family members, respectively. The Family Emotional Atmosphere Questionnaire is of a high validity and reliability (34).

**Academic longing questionnaire:** This questionnaire was designed by Fredricks et al. and includes 15 items to measure the three behavioral, emotional, and cognitive subscales (35). The questionnaire is scored on a

five-point Likert scale. The developers of this scale have reported a validity coefficient of 0.86 for it. The validity of this scale has been confirmed in the Iranian sample in a study by Abbasi et al. and its overall reliability coefficient was 0.66 (36).

**School Engagement Scale (SES):** In order to determine the degree of academic adjustment, the Baker and Siryk adjustment questionnaire subscale was used. The questionnaire has 67 items measuring four subscales of "academic, social, and personal-social adjustment, and attachment to university" which are scored in a five-point scale. In the present study, the items related to academic adjustment were used. The Cronbach's alpha for the academic adjustment subscale was reported to be higher than 0.80. Moreover, in the study by Michaeli Manee, the face and content validity of this questionnaire was obtained as 0.84 by Cronbach's alpha method (37).

Before completing the questionnaire, the participants were first explained about the objectives of the study and they were reassured that the questionnaire was provided to them only for one study. Additionally, all participants were asked to receive the questionnaires if they would like to participate in the study, and they were then given instructions on how to complete the questionnaire.

The normal distribution of the data was examined by Kolmogorov-Smirnov (K-S) test. Then, using Pearson correlation coefficient and regression, the research variables were predicted. Finally, the data were analyzed in SPSS software (version 16, SPSS Inc., Chicago, IL, USA).  $P < 0.05$  was considered as the significant level. In the present study, the correlation coefficients of 0.3, 0.3 to 0.7, and more than 0.7 indicated weak, moderate, and strong correlations, respectively.

### Results

Out of the 240 questionnaires distributed, 216 questionnaires had complete information and were used to analyze the results. The demographic characteristics of the subjects are given in table 1.

The Pearson correlation coefficient analysis results are presented in table 2.

**Table 1.** Demographic characteristics of the study samples

Variable		Value
Gender [n (%)]	Females	130 (61.1)
	Males	86 (39.8)
Education level [n (%)]	Tenth grade	80 (37.0)
	Eleventh grade	80 (37.0)
	Twelfth grade	56 (26.0)
Online game addiction questionnaire score (mean $\pm$ SD)		77.40 $\pm$ 33.94
Family emotional atmosphere questionnaire score (mean $\pm$ SD)		67.00 $\pm$ 11.61
Academic longing questionnaire score (mean $\pm$ SD)		38.91 $\pm$ 16.23
SES score (mean $\pm$ SD)		50.81 $\pm$ 15.20

SD: Standard deviation; SES: School Engagement Scale

**Table 2.** Correlation coefficient of study variables

Variable	Questionnaire					
	Online game addiction		Family emotional atmosphere		Academic longing	
	r	P	r	P	r	P
Family emotional atmosphere questionnaire score	-0.39	0.001*				
Academic longing questionnaire score	-0.54	0.001*	0.15	0.050*		
SES score	-0.27	0.001	0.54	0.001*	0.68	0.001*

\*P ≤ 0.050; SES: School Engagement Scale

There was a weak to moderate but significant correlation between the score of the family emotional atmosphere questionnaire and academic longing and adjustment. Furthermore, a moderate and significant correlation was observed between the academic adjustment and longing scores; while online game addiction showed a weak to moderate and inverse relationship with all three categories of family emotional atmosphere, academic passion, and academic adjustment.

The correlation coefficient of the family emotional atmosphere, academic longing, and academic adjustment was 0.748. Additionally, R squared, Adjusted R squared, and standard error were 0.559, 0.553, and 16.007, respectively. In other words, these three variables were able to significantly predict the changes in online game addiction in students.

The multivariate regression model used in the present study is shown in table 3.

**Table 3.** Simultaneous multivariate regression model of online game addiction based on family emotional climate, academic passion, and academic adjustment

Model	SS	df	MS	F	P
Regression	68942.17	3	22980.72	89.689	0.001
Residue	54319.78	212	256.22		
Total	123261.95	215	-		

SS: Sum of squares; df: Degree of freedom; MS: Mean squares

Given the data in table 3, the prediction of online game addiction based on family emotional climate, academic longing, and academic adjustment was significant with 99% confidence (F = 89.689, P ≤ 0.001) and the predictor variables (family emotional climate, academic longing, and academic adjustment) had the power to predict the criterion

variable (online game addiction). Therefore, it was possible to analyze the regression results presented in table 4. Accordingly, the family emotional climate, academic longing, and academic adjustment directly predicted online game addiction.

## Discussion

The current study was accomplished with the aim to investigate the relationship between online game addiction with family emotional climate, academic adjustment, and academic longing and the findings revealed that online game addiction has a negative and significant relationship with all three variables. This finding was consistent with the results of previous studies (4). In general, the more unfavorable the family emotional atmosphere, the higher the level of addiction to online games (4). Specific family factors related to Internet addiction include general parental dissatisfaction, parents-children conflicts, family stress, family organization, and lack of intimacy among family members (38,39). In a study, individuals with Internet addiction gained significantly lower scores in terms of adaptability and correlation in the family compared to the control group (40). In families where there is a low level of solidarity among the family members, due to the lack of emotional support from parents, adolescents feel worthless and incompetent, and hence turn to the Internet to escape the realities; Because the Internet is a world free of threats and challenges for adolescents (41). The quality of the parent-child relationship is positively related to the quality of the interpersonal relationships (42). Therefore, the family and the relationships that exist among its members play a very important role in online game addiction.

**Table 4.** Results of simultaneous multivariate regression coefficient of online game addiction based on family emotional climate, academic longing, and academic adjustment

Variable	Non-standard coefficients		Standard coefficients	T	P
	Beta	Standard error	Beta		
Fixed	39.340	6.740	-	5.83	0.001
Family emotional atmosphere	1.315	0.012	0.638	10.98	0.001
Academic longing	-0.604	0.098	-0.409	-6.13	0.001
Academic adjustment	-0.522	0.124	-0.332	-4.22	0.001

If the family members have a warm and intimate relationship with each other without conflicts, they will create a calm and suitable atmosphere for the children, and it is obvious that the teenagers will enjoy living and interacting in this family. However, if the family is full of conflicts and struggles and its members do not respect each other, the family environment becomes cold and repulsive, thus children will seek a safe environment to escape the conflicts. The warm, intimate, and positive relationships among family members are a factor that generally protects people from the harms of the virtual world. Additionally, trust between parents and children strengthens relationships, and in the absence of this trust, the adolescent distances himself from the family, and as a result, seeks an alternative to fill this gap, in which case he will be drawn to online games (43).

Another finding of the present study was the presence of a significant relationship between online game addiction and academic adjustment and academic passion. This study seems to be the first to investigate the relationship between academic motivation and academic adjustment with online game addiction. Nevertheless, the results of some studies (44,45) are implicitly consistent with the findings of the present study. Explaining this finding, it can be declared that individuals who are addicted to online games have less opportunity to do their homework and spend most of their time playing instead of studying, and as a result, they face successive academic failures, ultimately affecting their academic longing. Therefore, when a person is unable to do his/her homework properly due to obsession with the Internet and various games, they cannot perform well and is often blamed by other people and teachers for this poor performance. This leads to a decrease in academic motivation and adjustment. Since academic adjustment requires adaptation to the educational environment and its requirements, students who spend most of their time playing online have less time to fulfill their study requirements and, thus, face difficulties adapting to the school environment and homework.

### Limitations

One of the limitations of the present study was the use of questionnaires to collect data. Besides, due to financial and time constraints, it was not possible to include other factors involved in online game addiction in this study.

### Recommendations

It is recommended that the present study be conducted on a large scale of students and that other factors

associated with online game addiction be included in the study. Moreover, by designing programs appropriate to the results of this study and studies conducted in this regard, adolescents' tendency to addiction to online games can be prevented.

### Conclusion

It seems that the emotional atmosphere of the family, the academic longing, and the academic adjustment of the adolescent can well predict the addiction to online games. Therefore, these three factors should be regarded in planning to reduce the tendency of young people towards such games and to recognize the harms imposed by these games.

### Acknowledgments

The present study was approved based on a cross-sectional analysis of a research project performed at University of Mohaghegh Ardabili. The authors would like to appreciate the individuals who contributed to this study.

This article is among the articles submitted to the Secretariat of the Fifth International Conference on "Computer Games; Challenges and Opportunities" with a special focus on therapeutic games (February 2020, Isfahan, Iran), which was praised by the editorial board of the Journal of Research in Rehabilitation Sciences (JRRS). The authors would like to appreciate the Cyberspace Research Institute, National Cyberspace Center for supporting the publication of this article. The Entertainment Industry Innovation Center of University of Isfahan, which played an important role in collecting data and accomplishing this project is also appreciated.

### Authors' Contribution

Hajar Esrafilı: Study design and ideation, attracting financial resources for the study, supportive, executive, and scientific study services, providing study equipment and samples, data collection, analysis and interpretation of results, specialized evaluation of the manuscript in terms of scientific concepts, approval of the final manuscript to be submitted to the journal office, the responsibility of maintaining the integrity of the study process from the beginning to the publication, and responding to the referees' comments.

### Funding

The present study was approved based on a cross-sectional analysis of a research project at University of Mohaghegh Ardabili. All financial resources were provided by the author of the article. University of

Mohaghegh Ardabili has not commented on data collection, analysis, and reporting, manuscript preparation, and final approval of the article for publication. The review and publication of the present study in JRRS were performed with the financial support of the Cyberspace Research Institute of the National Cyberspace Center, sponsoring the Fifth

International Conference on Computer Games with a therapeutic approach. This research institute did not contribute to the designing, compiling, and reporting this study.

### Conflict of Interest

The author declares no conflict of interest.

### References

1. Li H, Wang S. The role of cognitive distortion in online game addiction among Chinese adolescents. *Child Youth Serv Rev* 2013; 35(9): 1468-75.
2. Zandi Payam A, Mirzaeidoostan Z. Online game addiction relationship with cognitive distortion, parenting style, and narcissistic personality traits in students. *Iran J Psychiatry Clin Psychol* 2019; 25(1): 72-83. [In Persian].
3. World Health Organization. *Mental health: New understanding, new hope*. Geneva, Switzerland: WHO; 2001.
4. Zandi Payam A, Davoudi I, Mehrabizadeh M. Normalization and examining psychometric properties of Online Game Addiction Inventory-Persian version. *Iran J Psychiatry Clin Psychol* 2016; 21(4): 351-61. [In Persian].
5. Griffiths MD. The role of context in online gaming excess and addiction: Some case study evidence. *Int J Ment Health Ad* 2010; 8(1): 119-25.
6. Griffiths MD, Meredith A. Videogame addiction and its treatment. *J Contemp Psychother* 2009; 39(4): 247-53.
7. Kim EJ, Namkoong K, Ku T, Kim SJ. The relationship between online game addiction and aggression, self-control and narcissistic personality traits. *Eur Psychiatry* 2008; 23(3): 212-8.
8. Aminimanesh S, Nazari AM, Farzad V, Khanzadeh M. The role of psychological motivations in online gaming addiction among adolescents. *Journal of Health and Care* 2017; 19(3): 147-57. [In Persian].
9. Young KS, de Abreu CN. *Internet addiction: A handbook and guide to evaluation and treatment*. Hoboken, NJ: Wiley; 2010.
10. Griffiths M. Online computer gaming: Advice for parents and teachers. *Education and Health* 2009; 27(1): 3-6.
11. Wallenius M, Rimpela A, Punamaki RL, Lintonen T. Digital game playing motives among adolescents: Relations to parentchild communication, school performance, sleeping habits, and perceived health. *J Appl Dev Psychol* 2009; 30(4): 463-74.
12. Kuss D, Griffiths M. Adolescent online gaming addiction. *Education and Health* 2012; 30(1): 15-7.
13. Dysvik E, Natvig GK, Eikeland OJ, Lindstrom TC. Coping with chronic pain. *Int J Nurs Stud* 2005; 42(3): 297-305.
14. Holt MK, Espelage DL. Social support as a moderator between dating violence victimization and depression/anxiety among African American and Caucasian adolescents. *Sch Psychol Rev* 2005; 34(3): 309-28.
15. Shariatmadari A. *Educational psychology*. Tehran, Iran: Amir Kabir Publications; 2006. [In Persian].
16. Momeni K, Abbasi M, Pirani Z, Beyghiyan MJ. The role of emotionality and affective atmosphere of family in prediction of Students' Educational Engagement. *Journal of Cognitive Strategies in Learning* 2017; 5(8): 159-82. [In Persian].
17. Haghghi J, Shokrkon H, Mousavi Shoushtari M. A study of the parent-child relationships and the individual and social adjustment of the ninth grade girl students at Ahvaz schools. *Journal of Education and Psychology* 2003; 9(3-4): 79-108. [In Persian].
18. Silburn S, Zubrick S, Maio JA, Shepherd C, Griffin JA, Mitrou FG, et al. *The Western Australian Aboriginal Child Health Survey: Strengthening the capacity of aboriginal children, families and communities*. Perth, Australia: Curtin University of Technology and Telethon Institute for Child Health Research 2006.
19. Appleton JJ, Christenson SL, Kim D, Reschly AL. Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *J Sch Psychol* 2006; 44(5): 427-45.
20. Salehnajafi M, Hejazi E, Kadivar P, Gholamali Lavasani M. A relationship between Contextual, individual factors, academic passion with positive psychological variables: Structural model of adolescence academic passion. *Modern Psychological Research* 2019; 13(52): 121-43. [In Persian].
21. Safari H, Jenaabadi H, Salmabadi M, Abasi A. prediction of academic aspiration based on spiritual intelligence and tenacity. *Educational Strategies* 2016; 8(6): 7-12. [In Persian].
22. Vallerand RJ, Blanchard C, Mageau GA, Koestner R, Ratelle C, Leonard M, et al. Les Passions De L'ame: On obsessive and harmonious passion. *J Pers Soc Psychol* 2003; 85(4): 756-67.
23. Pietarinen J, Soini T, Pyhalto K. Students' emotional and cognitive engagement as the determinants of well-being and achievement in school. *Int J Edu. Res* 2014; 67: 40-51.
24. Moeller J. *Passion as concept of the psychology of motivation. Conceptualization, assessment, inter-individual variability and long-term stability [PhD Thesis]*. Erfurt, Germany: University of Erfurt; 2013.
25. Coleman LJ, Guo A. Exploring children's passion for learning in Six Domains. *J Educ Gift* 2013; 36(2): 155-75.
26. Lent RW, Taveira MdCu, Sheu HB, Singley D. Social cognitive predictors of academic adjustment and life satisfaction in Portuguese college students: A longitudinal analysis. *J Vocat Behav* 2009; 74(2): 190-8.
27. Chong A, Elias H, Mahyuddin R, Uli J. Adjustment amongst first year students in a Malaysian university. *Eur J Soc Sci* 2009;

- 8(3): 496-505.
28. Tozandeh Jani H, Abharzanjani F. Investigating the mediating role of family affective atmosphere in the relationship between mood characteristics and self-destruction of adolescent female students with substance use disorders. *Journal of New Advances in Psychology, Training and Education* 2019; 2(18): 127-34. [In Persian].
  29. Yousefi B, Hasani Z, Tahmasebi R. Investigating factors related to academic adaptation level of physical education students in Iran. *Research in Sport Science* 2010; 5(26): 13-26. [In Persian].
  30. Bart O, Hajami D, Bar-Haim Y. Predicting school adjustment from motor abilities in kindergarten. *Infant Child Dev* 2007; 16(6): 597-615.
  31. Sepehrian Azar F, Fatahy O. Efficacy of enneagram personality types teaching on educational adjustment of students. *Clinical Psychology and Personality* 2014; 2(10): 29-40. [In Persian].
  32. Eini B, Karimi B. Relationship between attachment styles and emotional creativity with academic adaptation in students of the master's degree. *Journal of Sociology of Education* 2018; 10(10): 13-30. [In Persian].
  33. Rashidi AR, Mohseni Z, Golmohammadian M. On the role of family emotional atmosphere, perception of parenting styles, family communication patterns and perceived social support in predicting the abuse of industrial psychoactive substances in students. *Research on Addiction* 2017; 11(41): 103-23.
  34. Hill NE, Craft SA. Parent-school involvement and school performance: Mediated pathways among socioeconomically comparable African American and Euro-American families. *J Educ Psychol* 2003; 95(1): 74-83.
  35. Fredricks JA, Blumenfeld PC, Paris AH. School engagement: Potential of the concept, state of the evidence. *Rev Educ Res* 2004; 74(1): 59-109.
  36. Abbasi M, Dargahi S, Pirani Z, Bonyadi F. Role of procrastination and motivational self-regulation in predicting students' academic engagement. *Iran J Med Educ* 2015; 15: 160-9. [In Persian].
  37. Michaeli Manee F. Relationship of identity styles, identity commitment and gender with students' adaptation with college. *Psychological Studies* 2010; 6(2): 51-73. [In Persian].
  38. Li W, Garland EL, Howard MO. Family factors in internet addiction among Chinese youth: A review of English- and Chinese-language studies. *Comput Hum Behav* 2014; 31: 393-411.
  39. Zhang ZH, Yang LS, Hao JH, Huang F, Zhang XJ, Sun YH. Relationship of childhood physical abuse and internet addiction disorder in adolescence: The mediating role of self-esteem. *Zhonghua Liu Xing Bing Xue Za Zhi* 2012; 33(1): 50-3. [In Chinese].
  40. Xie YB, Zhou P, Xu LP, Peng ZW. Prevalence of internet addiction and the related factors in middle school students in Guangzhou. *Nan Fang Yi Ke Da Xue Xue Bao* 2010; 30(8): 1801-4. [In Chinese].
  41. Ling-Yan L, Deng-Hua T, Ran T. Family function of the adolescents with excessive 4 usage. *Chin Ment Health J* 2007; (12): 837-40.
  42. Liu CY, Kuo FY. A study of Internet addiction through the lens of the interpersonal theory. *Cyberpsychol Behav* 2007; 10(6): 799-804.
  43. Eimani M, Shirali Nia K. The role of family functions and process on internet addiction among teenagers. *Family Counseling and Psychotherapy* 2015; 5(2): 143-64. [In Persian].
  44. Madaiah M, Seshaiyengar CT, Suresh P, Munipapanna S, Sonnappa SD. Study to assess the effects of social networking sites on medical college students. *International J Community Med Public Health* 2017; 3(5): 1204-8.
  45. Myrgel A, Mohseni S, Alisufi AN, Sheikh Wasi H. The relationship between computer game addiction and academic outcome in Zahedan high school students. *Journal of New Advances in Behavioral Sciences* 2019; 4 (30): 1-12. [In Persian].