



## The mediating role of Islamic quality of life in the relationship between basic psychological needs and addiction to online games in high school students

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**Background and Aim:** This research was conducted with the aim of investigating the mediating role of Islamic quality of life in the relationship between basic psychological needs and addiction to online games in high school students. **Methods:** It was a descriptive correlational research based on the structural equation modeling method. The statistical population of the research was made up of all 658 male students of the first secondary school of the ninth grade in 5 public schools of Babol city in the academic year of 2023. In this research, to determine the sample size according to the number of observed variables and assigning a coefficient of 30 (9 observed variables in the model), and taking into account the possibility of incomplete questionnaires, 300 people were selected as the sample size using the available method. The research tools included online game addiction questionnaire of Whang, & Chang (2002), basic psychological needs questionnaire of Deci & Ryan (2000) and quality of life questionnaire of Islaminejad Mohammadnamaghi et al.'s (2014). Data analysis was done by structural equation method based on regression equations. **Results:** The findings showed that there is a significant relationship between basic psychological needs and the quality of Islamic life with addiction to online games in first secondary school students, and the research model was confirmed, and in general, 41% of addiction to online games is caused by basic psychological needs. knowledge and quality of Islamic life in first secondary students. Also, the variables of basic psychological needs and quality of Islamic life have a significant direct effect on addiction to online games in first secondary school students, and the indirect path of basic psychological needs with the mediation of quality of Islamic life on addiction to online games in first secondary school students is confirmed. **Conclusion:** This research provides practical implications for psychologists and counselors regarding the role of cognitive and religious factors in students' tendency to become addicted to online games.



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## Introduction

Online games are one of the types of Internet games that have become popular due to the increasing familiarity of people, especially the young generation, with the Internet and the increase in Internet speed (Park et al., 2017). Addiction to online games has been considered as an obsessive, excessive, uncontrollable and physically and psychologically destructive behavior (Pen et al., 2018). Addiction to online games includes excessive and impulsive use of online games in a way that leads to social and emotional problems (Wang et al., 2021). From the point of view of the World Health Organization, the definition of this type of addiction is: The behavioral pattern related to digital or video games, which is characterized by the weakness of will and authority and giving high priority to the game in comparison with other activities, to the extent that the game takes precedence over the other interests of the person (Karaka et al., 2020). The characteristics of the online game, such as being entertaining, being interactive, and being online, have turned these games into one of the most popular applications on the Internet, which causes spending a lot of time to play these games, especially in the new world. It will be (Lee et al., 2019). Addiction to online games in DSM-5 is in the section of issues that need more research, which causes a serious disturbance in people's functioning and has destructive effects on their social relationships (American Psychological Association, 2013). The negative consequences of online game addiction can be divided into three general categories: physical problems (fatigue, physical pain, reduced sleep time, eating); personal life problems (conflicts with friends or family or low social participation); professional and academic problems (missing work or school and poor performance) (Van Rooij et al., 2011). Research shows that people addicted to online games are more introverted, more concerned about their identity, and more insecure in relation to peers than normal people (Zhou et al., 2012). These concerns about self and others, along with their internal characteristics, can lead these adolescents to avoid face-to-face activities (Liu Kim, 2017). The high attractiveness of these games makes people who are addicted to the game become so dependent on their roles in these games that they imagine that these roles continue in the real world as well, so that the

brain activity system of people gets confused between reality and virtual events. It can cause changes in the activity of the behavioral brain system of people (Lerner et al., 2018). In general, the evidence is that the excessive use of mobile phones and computers in this generation, especially playing computer games, can cause the loss of the opportunity to learn coping skills in facing difficult situations. Moreover, it can lead to problems in various tasks in life (Parsakia et al., 2023).

People's addiction can occur as a result of cognitive dysfunction and the reduction of basic psychological needs such as belonging and competence (Yang et al., 2015). Basic psychological needs were proposed by Deci and Ryan in 2000 under the title of self-determination theory. According to this theory: three inherent psychological needs are autonomy, competence and communication ability (Baker et al., 2019). The basic psychological needs include the needs that provide the necessary conditions for the psychological growth, integration and well-being of the person and explain the broad basis of human behavior (Hong et al., 2019). The satisfaction of the three basic psychological needs largely depends on the environment in which the activity is carried out, and self-determination theory distinguishes between two types of interpersonal environments (Rook et al., 2018). An environment that is said to support self-determination is when others use a non-dominant language in an information exchange to encourage the individual to choose and participate in the decision-making process (Jiang et al., 2021). It can be said that a person has self-control when he determines his behavior, in other words, these people are not under control (Helwari et al., 2019). Competence refers to understanding how to achieve desired results and having self-efficacy in performing the necessary activities in a specific field (Vanstikisti et al., 2020). Basic psychological needs have many positive consequences such as well-being, improved performance and increased perseverance and self-efficacy, and prevent negative consequences such as frustration, lack of motivation, procrastination and feelings of helplessness (Tang et al., 2020). Students' perception of satisfying basic psychological needs can be a suitable criterion for predicting learners' interest in continuing learning

(Kachanov et al., 2020). The reason is that the satisfaction of motivational needs is associated with an increase in internal interest to perform the desired task (Liang et al., 2021). The conditions supporting motivational needs are guaranteed when people have space to choose, work independently, take initiative, show their abilities freely, without criticism and control feedback, to express thoughts and feelings (Rio & Lee, 2019).

The lack of proper satisfaction of basic psychological needs in educational conditions in different personal, social, cognitive and behavioral dimensions has caused a decrease in the quality of life (Pourhaider & Eskandari, 2022). It is one of the basic aspects of the quality of life regardless of the cognitive, economic, environmental, spiritual and Islamic dimensions. Javadi Amoli (2010) defines the quality of Islamic life in such a way that the environment for raising a person is in peace and health with his God, with his inner self, with his fellow humans and with the nature around him. He states that what is meant by good life is not a clean life in the afterlife, but in this natural world where people can interact with each other. One of the basic dimensions of the quality of life is the spiritual dimension (Nejad Mohammad Namghi et al., 2014). The environment for raising a person should be in peace and health with his God, with his inner self, with his fellow humans and with the nature around him, and what is meant by a good life is not a clean life in the afterlife, but in this natural world, where people can interact with each other. (Javadi Amoli, 2010) One of the most fundamental axes of this quality of life is the topic of spirituality and divine relationships (Nejad Mohammad Namghi et al., 2015). Quality of life considers the positive and negative facts of life together (Tribosinska and Sarasen, 2019) and its concept always includes 5 physical, psychological, social, and spiritual dimensions and symptoms related to illness or changes related to treatment. (Paro et al., 2014). In terms of individuality, quality of life includes various dimensions of health and psychological and social comfort of people's lives (Oslivan et al., 2017). The quality of life is influenced by the factors that give value to life and help create positive experiences and have different meanings for different people (Javadi et al., 2013). The quality of life is closely related to

the physical and psychological condition, personal beliefs, the level of self-reliance, social relations and the environment (Majid, 2018). Other factors that can affect different aspects of the quality of Islamic life include: Adaptability, social communication and cognitive performance are suitable (Muller et al., 2016) and the feeling of improving the quality of life is proportional to the positive self-image and the level of tolerance of a person's turmoil in stressful situations (Pourheyder & Eskandari, 2022).

In this regard, Jafari (2022) showed that there is a relationship between the quality of life and Internet addiction of female high school students. Yaqoubi et al. (2022) found that online game addiction plays a significant mediating role in the relationship between basic psychological needs and prosocial behavior. Branoy et al. (2020) and Nook et al. (2021) showed that there is a bidirectional and significant relationship between quality of life and online game addiction. Chamaro et al. (2020) and Wang et al. (2021) showed that there is a bidirectional and significant relationship between basic psychological needs and online game addiction. According to the presented materials and the need to investigate the addiction to online games in first secondary school students in a comprehensive way, it can provide an accurate identification of the current state of the effects of cognitive, behavioral, communication and even religious factors. Moreover, it seems that so far no research has been done to examine the model of addiction to online games in primary school students based on basic psychological needs and quality of Islamic life. Therefore, the current research is trying to answer the question whether the quality of Islamic life has a mediating role in the relationship between basic psychological needs and addiction to online games of first secondary school students.

### Method

According to its purpose, this research is of the type of fundamental research, and in terms of the method of collecting data cross-sectionally and analyzing them in a descriptive method, and of the type of correlational research based on the method of structural equation modeling. The statistical population of the research was made up of all 658 male students of the first secondary school of the ninth grade in 5 public

schools of Babol city in the academic year 2022-2023. In order to be consistent with the structural equation model, the number of samples, subject to obtaining more than 200 samples, should be based on a minimum factor of 15 and a maximum factor of 30 for the number of observed variables (Stevens, 1994, cited by Homan, 2014). In this research, to determine the sample size according to the number of observed variables and assigning a coefficient of 30 (9 variables observed in the model), and taking into account the possibility of incomplete questionnaires, 300 people were selected as the sample size using the available method.

### Materials

**1. Wang and Chang (2002) online game addiction questionnaire:** The online game addiction questionnaire was created by Wang and Chang (2002) with 20 questions. Each question is scored on a five-point Likert scale (often = 1, occasionally = 2, frequently = 3, often = 4, always = 5). A person's score in addiction to online games is obtained from the sum of the scores of all subjects. It shows the rotation of Varimax. Factor one: social and moral problems including questions: 3, 4, 9, 10, 12, 13, 15, 18, 19 and 20. Factor two: problems related to educational and work performance including questions: 1, 2, 5, 6, 7, 11, 8, 14, 16 and 17. The range of scores obtained from this questionnaire is between 20-100 and a higher score indicates a greater preference for online games. In general, a score above 53 indicates an addiction to online games. Wang and Chang (2002) confirmed the construct and content validity and reported Cronbach's alpha coefficient of 0.96 for this instrument. Construct and concurrent validity was confirmed by Zandi Payam et al. (2015) and reliability was obtained using Cronbach's alpha method of 0.95.

**2. Desi and Ryan basic psychological needs questionnaire (2000):** The psychological needs questionnaire was created by Desi and Ryan in 2000 in order to evaluate the satisfaction of psychological needs. This questionnaire contains 21 questions and 3 subtests. The subtests are: The need for competence has 6 terms (3-5-10-13-15-19); The need for belonging has 8 terms (2-6-7-9-12-16-18-21); The need for self-following includes 7 phrases

(1-4-8-11-14-17-20). Scoring is set on a 5-point Likert scale: very high=5, high=4, no opinion=3, low=2, very low=1. The higher the score, the better the situation. Construct and content validity was confirmed by the manufacturer, and the reliability of the questionnaire was 0.89 and between 0.80 and 0.86 for the subscales. In Iran, construct and concurrent validity were confirmed by Haji Tabar (2013) and reliability was obtained using Cronbach's alpha of 0.79.

**3. Islamic Quality of Life Questionnaire by Nejad Mohammad Namaghi et al. (2015):** This Islamic Quality of Life Questionnaire was created by Nejad Mohammad Namaghi et al. (2015) based on the books of Ayatollah Javadi Amoli until 2009 This questionnaire has 62 questions that are graded from 0 to 4 on a Likert scale from strongly agree to strongly disagree. A higher score indicates a higher quality of Islamic life. Questions 1 to 14 other factors — questions 15 to 26 God factors — questions 27 to 45 self factors — questions 46 to 62 nature factors. Content and construct validity were confirmed and to check the reliability for the entire questionnaire, Cronbach's alpha was 0.89, and it was equal to 0.63 using the bisect method.

### Implementation

First, preliminary explanations about the purpose of the research and how to cooperate and complete the tools were given to the first secondary students in the class, and after obtaining informed consent regarding the implementation of the project, the questionnaires were given to the students of the sample group. To analyze the data in descriptive statistics, mean and standard deviation were used, and in inferential statistics, structural equation modeling was used with SPSS 18 and Amos 23 software.

### Results

In terms of demographic variables, the findings showed that the ninth-grade students participating in this research were 15.44 (3.73) years old; Further, by examining the scale of the measurement tool, which is an interval, and the statistical assumptions, the normality of the data was confirmed by using tests of kurtosis and skewness, Kolmogorov-Smirnov.

**Table 1. Correlation matrix of subtests of basic psychological needs and Islamic quality of life with online game addiction**

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
<b>Merit</b>	13/25	1/75	1											
<b>belonging</b>	17/02	2/34	.77**	1										
<b>Self-following</b>	15/69	2/01	.72**	.69**	1									
<b>Basic psychological needs</b>	45/96	4/62	.83**	.86**	.81**	1								
<b>Others</b>	21/37	2/19	.21**	.19**	.21**	.23**	1							
<b>God self</b>	19/52	2/08	.22**	.20**	.16**	.25**	.74**	1						
<b>Nature</b>	28/79	3/20	.17**	.18**	.21**	.20**	.66**	.74**	1					
<b>Islamic quality of life</b>	25/16	2/88	.19**	.17**	.18**	.23**	.71**	.89**	.71**	1				
<b>Social and cultural</b>	94/84	9/36	.24**	.22**	.22**	.27**	.83**	.90**	.88**	.81**	1			
<b>Education and employment</b>	27/54	3/43	-.20**	-.18**	-.22**	-.27**	-.17**	-.19**	-.22**	-.18**	-.22**	1		
<b>Addiction to online games</b>	26/08	3/92	-.18**	-.16**	-.21**	-.25**	-.19**	-.21**	-.20**	-.21**	-.24**	.85**	1	
	53/62	6/53	-.21**	-.19**	-.24**	-.29**	-.20**	-.23**	-.25**	-.23**	-.26**	.89**	.90**	1

\*\* It is significant at the 0.01 level. \* It is significant at the 0.05 level.

The results listed in Table (1) show a significant correlation between the subscales of basic psychological needs and the quality of Islamic life with addiction to online games. A significant negative relationship is observed

between the basic psychological needs subscales and addiction to online games. A significant positive relationship is observed between the subscales of Islamic quality of life and addiction to online games.

**Table 2. Direct estimation of the model using the maximum likelihood (ML) method**

Variable	b	β	R <sup>2</sup>	t	P
<b>Basic psychological needs on addiction to online games</b>	-0/327	-0/261	0/085	3/114	0/01
<b>Islamic quality of life on addiction to online games</b>	-0/294	-0/230	0/067	2/923	0/01

According to table (2), all paths of basic psychological needs and Islamic quality of life

clearly explain -0.085 and -0.067 of the common variance of online game addiction.

**Table 3. Indirect estimation of the model using the bootstrap method**

Variable	β	R <sup>2</sup>	Lower bound	Upper bound	Sig
<b>Basic psychological needs on addiction to online games with the mediating role of Islamic quality of life</b>	0-/485	0/412	-0/579	-0/365	0/01

According to Table (3), the indirect path of basic psychological needs on addiction to online games is observed through the mediation of Islamic quality of life, and in general, the path can be separately predicted (R2=0.41) from the variable of addiction to online games have that

41 per cent of this endogenous variable can be explained by these variables, and 59 per cent of the variable of addiction to online games is explained by other variables outside the research.



Table 4. The fit indices obtained from the analysis of data and variables after a correction step			
Index		Acceptable value	Value
$\chi^2/df$	Relative chi-square	<3	2/511
RMSEA	The square root of the approximation error	<0/1	0/038
GFI	Adjusted fitness index	>0/9	0/999
NFI	Soft fit index	>0/9	0/999
CFI	Comparative fit index	>0/9	0/999
DF	228		

The value of RMSEA is equal to 0.038, so this value is less than 0.1, which indicates that the mean squared errors of the model are suitable and the model is acceptable. Also, the chi-square value of the degree of freedom (2.511) is

between 1 and 3, and the GFI, CFI, and NFI indices are almost equal and greater than 0.9, which shows that the model for measuring the research variables is appropriate.

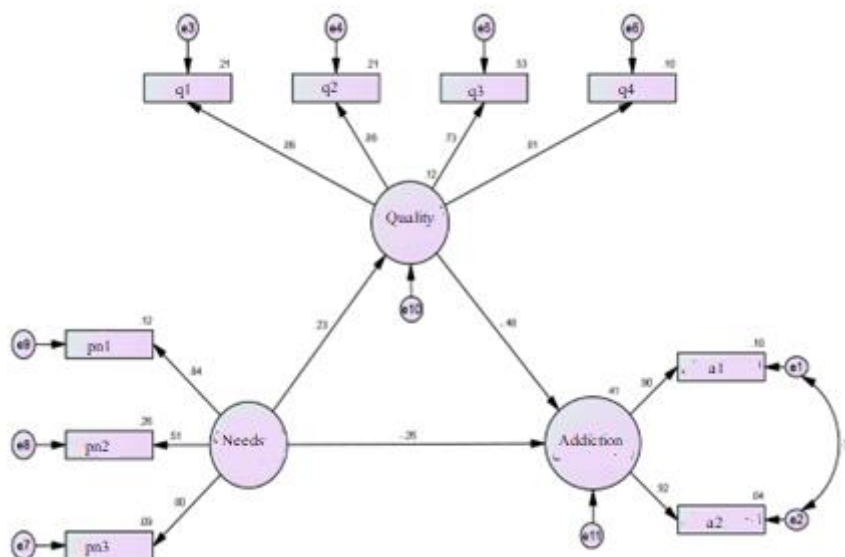


Figure 1: The final tested model along with the standardized prediction statistics

### Conclusion

The present study investigated the mediating role of Islamic quality of life in the relationship between basic psychological needs and addiction to online games in high school students. The results showed that basic psychological needs have a significant direct effect on addiction to online games, and basic psychological needs have an indirect effect on online game addiction with the mediating role of Islamic quality of life. The research model was confirmed and in general 41% of addiction to online games can be explained by basic psychological needs and Islamic quality of life. These results are in line with the findings of

Jafari (2022), Yaqoubi et al. (2022), Branoy et al. (2020), Nook et al. In the cause of alignment in the obtained results, it is possible to point out the common points of cognitive symptoms in suffering from addiction to online games, according to the cognitive and spiritual theoretical foundations, it is an important factor in the occurrence of common symptoms of addiction to online games. Therefore, although there are differences in the tools used in the past studies compared to the present study, and the time and place, but according to the logic of the cognitive and spiritual bases in the studied variables, the alignment obtained can be confirmed.

In explaining these results, it can be stated that basic psychological needs, such as the need for social communication, autonomy and competence, are very important for every person and have a strong relationship with quality of life (Rook et al., 2018). These psychological needs may be affected in a person who is addicted to online games. As a religion based on faith and common beliefs, Islam gives a person a sense of connection with God and society (Hong et al., 2019). This sense of connection can satisfy the need for social connections in a person and help reduce addiction to online games (Tang et al., 2020). In Islam, the quality of life is the main goal of trying to achieve wisdom and knowledge in the path of God (Javadi et al., 2013). Therefore, the mediating role of Islamic quality of life in the relationship between psychological needs and addiction to online games is very important. As a religion based on worship and piety, Islam allows a person to take responsibility for himself and take measures to control addiction to online games (Majid, 2018). As a religion that cares about physical and mental health, Islam emphasizes a healthy lifestyle. As a religion based on wisdom and rationality, Islam teaches a person to respect himself by knowing about the world and its creator (Javadi et al., 2013). This self-esteem may satisfy the individual's need for self-expression and help reduce online gaming addiction. Basic psychological needs, such as the need for self-confidence, social communication, self-expression and self-esteem, are very important for every individual (Mueller et al., 2016). If these needs are not met, a person looking for solutions such as online games may become addicted to online games to fill these needs. If these needs are not met, a person looking for solutions such as online games may become addicted to online games to fill these needs. As a religion based on faith and common beliefs, Islam gives a person a sense of connection with God and society. This connection can help satisfy the need for social connections and self-esteem, and thus lead to a reduction in online game addiction (Rio and Lee, 2019). As a religion based on wisdom and rationality, Islam teaches a person to respect himself by knowing about the world and its creator. This self-respect can satisfy the need for self-expression (Nejad Mohammad Namghi et al., 2014) and thus help to reduce

addiction to online games. Therefore, it can be said that the quality of Islamic life, as a mediating factor, can help reduce addiction to online games and provide basic psychological needs. Finally, the mediating role of Islamic quality of life in the relationship between basic psychological needs and addiction to online games can be used as an effective model to reduce addiction to online games in a person and provide basic psychological needs and quality of life.

One of the limitations of the current research is that the measurement tool is limited to a questionnaire and not using other tools. The results obtained in this research were able to explain a part of the variance; Therefore, in order to explain the remaining variance, it is suggested to conduct research focusing on other effective individual and social factors in this field and other variables. It is suggested to use other methods such as interviews in future similar researches and to carry out this research on people and age groups in different locations so that the results can be more generalizable. It is suggested that in order to reduce the addiction to online games in the educational process, school counselors and psychologists should pay special attention to the role of cognitive factors such as the basic psychological needs of people and the use of religious beliefs as a control factor to improve the quality of Islamic life. In other words, by making changes in the basic psychological needs of students, we can see a change in the quality of life experienced by them in their educational process, and finally, it can lead to changes in the level of addiction to online games.

#### Conflict of Interest

According to the authors, this article has no financial sponsor or conflict of interest.

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