Iran J Psychiatry 2022; 17: 4: 469-475

Original Article

Psychometric Characteristics of the Iranian Version of the Motives for Online Gaming Questionnaire (I-MOGQ)

Behnaz Dowran[1], Fatemeh Forouzesh Yekta[2]*, Elham Aghaie[3]

Abstract

Objective: The growing popularity of computer games has attracted the attention of researchers in this field. The underlying psychological motives of gamers are important to prevention of disorders related to online gaming. This study was aimed at evaluating the psychometric characteristics of the Iranian version of the Motives for Online Gaming Questionnaire (I-MOGQ) and its association with Internet Gaming Disorders (IGD).
Method: Four hundred and fifty-two Iranian adult gamers (mean age = 21.5 years, SD = 4.14) voluntarily responded to the anonymous survey online. All participants in this study were males. The questionnaires used in this study were MOGQ and IGD Scale. We performed confirmatory factor analysis (CFA) for MOGQ. Also, the correlation between MOGQ and IGD was evaluated.
Results: CFA supports the construct validity of the questionnaire (RMSEA < 0.08). Cronbach's alpha, as an indicator of internal consistency of the questionnaire, was 0.91 (Social = 0.85, Escape = 0.84, Competition = 0.83, Coping = 0.79, Skill Development = 0.89, Fantasy = 0.85 and Recreation = 0.83). Also, the scale displayed adequate convergent validity, as shown by significant positive correlations with IGD scores. The highest correlation was found with the Escape motive (0.57) and the lowest was found with Recreation (0.15).
Conclusion: This study showed that the Iranian version of the MOGQ is a valid and reliable scale for identifying the motives for online gaming among young adults.

Key words: *Game; Internet Gaming Disorder; Motivation; Psychometrics*

1. Behavioral Sciences Research Center, Life Style Institute, Baqiyatallah University of Medical Sciences, Tehran, Iran.
2. Department of Clinical Psychology, Faculty of Humanities, Shahed University, Tehran, Iran.
3. Department of Psychology, Islamic Azad University, Tehran Center Branch, Tehran, Iran.

***Corresponding Author:**
Address: Department of Psychology, Faculty of Humanities, Shahed University, Tehran, Iran, Postal Code: 3371794867.
Tel: 98-21 51215080, Fax: 98-21 51213564, Email: f.foruzesh@shahed.ac.ir

Article Information:
Received Date: 2021/06/02, Revised Date: 2021/12/07, Accepted Date: 2022/06/24

The computer game industry is developing so that the European digital game market reached €21.6bn in 2019, which was %3 more than in 2018 (1). As reported by the Entertainment Software Association, 70% of kids (under 18) and 64% of adults (18 and older) in the United States play video games (2). In Iran, the active installation of mobile games increased by 15% during 2019 (3) and the number of gamers in Iran reached 28 million (4).

The growing popularity of computer games has attracted the attention of researchers in this field. Most researchers are concerned about the negative consequences of these games such as aggression (5), loneliness (6) and addiction (7). In May 2013, Internet Gaming Disorder (IGD) was added into the 5th edition of the Diagnostic and statistical manual of mental disorders (DSM-5) as a type of behavioral addiction (8).

In recent years, researchers have tried to identify IGD predictors such as personality traits (9), impulsivity (10) and motivations (11, 12).

The popularity of online games is related to their potential to satisfy different psychological needs, which can be considered as motives for gaming (13). Different people do not play games for similar purposes; therefore, same games do not have same effects on or meanings for them (14). Bartle (15) categorized players, based on their motives, into four groups: achievers (set out to achieve game-related goals), explorers (try to find out about the game world), socializers (make contact with other gamers), and killers (try to impose on other gamers). Based on Bartle's player types and the information from players of massively multiplayer online role-playing games (MMORPG), YEE (14) created a model of gamer motivations that consists of 10 motivation subgroups, that have been placed into three main groups: social (relationship, socializing, teamwork), immersion (role-playing, customization, discovery, escapism), and achievement (mechanics, advancement, competition). From the perspective of uses and gratification, Kim Y & Ross SD (16) identified seven motivation dimensions via investigating motivational dimensions of sports video game playing: identification with sport, knowledge application, fantasy, entertainment, competition, diversion, and social interaction. Frostling-Henningsson (17), with a focus on World of Warcraft and Counter-Strike, found that motivations for online gaming include cooperation, sociality, communication, escapism, control, experience, flow, and as a hallucination of the real.

Since prior studies evaluated only one or two types of games and could not cover all possible motivations for different games, Demetrovics *et al.* (18) designed the Motives for Online Gaming Questionnaire (MOGQ). It evaluates seven motivational factors: Social (building and coping with social relationships and keeping them), Escape (getting away from reality), Competition (competing with and challenging others), Coping (coping with distress and stress), Skill Development (such as coordination and attention), Fantasy (in-game experiences and identities), and Recreation (enjoyment and entertainment) (19).

Identifying gamers' motivations will be useful for both game designers and behavioral science researchers. The findings will be useful to understand usage patterns and clarify whether certain kinds of motivations are more related to problematic usage (14).

Research on Iranian gaming motives is few (12, 20-24) and they have methodological limitations and ambiguities in their scale validation. A valid questionnaire is necessary for conducting gaming research in Iran and making cross-cultural comparisons. Given that MOGQ contains the main gaming motives recognized in prior research (19) and has been validated in at least three languages (25), it can be considered as a suitable questionnaire.

Therefore, the present study aimed to evaluate the psychometric characteristics of the Iranian version of the Motives for Online Gaming Questionnaire (I-MOGQ). For this purpose, we tested the construct validity, convergent validity, and reliability of MOGQ among Iranian adult gamers. As far as we know, the questionnaire has not been evaluated in Iran so far.

Materials and Methods

Procedures and participants

To recruit gamers, after identifying some online gaming forums in Iran and obtaining the agreement of their admins, the questionnaire link was posted in them. Participants gave informed consent and then filled out the anonymous online survey package hosted on Google Forms. We restricted the sample to males who had gaming experience and were currently engaged in it. According to previous studies, the motivation to gaming in women is different from men (26, 27) and, on the other hand, gamers are mostly men (4). Therefore, due to ease of identification of and access to male gamers and in order to achieve integrated results, the present study was performed only on men. Finally, four hundred and fifty-two Iranian adult gamers, aged 18 years and older, voluntarily completed the questionnaires. Data gathering was done in the first half of 2020.

Measures

- **Demographics and playing variables**. Information relating to the participant's age, gender, experience of gaming, and current engagement in gaming was collected.
- **Motives for Online Gaming Questionnaire (MOGQ).** Originally, Demetrovics *et al.* (18) developed the MOGQ to measure online gaming motives. It is a 27 item self-report questionnaire that assesses seven motives (Escape, Social, Competition, Skill development, Coping, Recreation, and Fantasy) for on-line gaming. Measurement of items is based on a 5-point Likert scale, from 1 (almost never/never) to 5 (almost always/always) (18).

- **To use MOGQ in the Iranian society, the original questionnaire (18) was translated to Persian.** The face validity of the translated scale was then approved by three psychologists. Next, the approved version was jointly retranslated from Persian to English (reverse translation) by a psychologist and a specialist in English literature. The translated version was, afterwards, compared with the original scale in order to resolve any potential mismatches. As a preliminary study and to investigate the fluency of translation, the questionnaire was answered by five people; none of the items were omitted through this evaluation.
- **Persian nine-item Internet Gaming Disorder Scale.** Internet Gaming Disorder Scale – Short Form (IGDS-SF9) is a nine-item scale that was originally developed by Pontes HM & Griffiths MD (28) to assess severity of IGD according to the IGD criteria in DSM-5. This scale was translated to the Persian language and confirmed the validation by Wu T-Y *et al*. (29). It employs a 5-point Likert-type scale from never (1) to very often (5). The total score is calculated by summing the nine items (range: 9–45), and a higher score indicates a higher severity of IGD (29). Pontes HM & Griffiths MD suggested a cut-off of 36 (28).

Statistical analysis

Psychometric characteristics of the Iranian MOGQ were examined by Confirmatory Factor Analysis (CFA). Its convergent validity was tested by the Pearson correlation between Motives for Online Gaming and IGD, and its internal consistency was evaluated using Cronbach's α. We used SPSS 21 and Amos 26.0.0 for these Analyses.

Ethics

Participants first read the purpose of the research and their rights when taking part in it. Then, after declaring their informed consent to take part, they completed an anonymous online survey. This study received ethical approval from the Research Ethics Committee of Baqiyatallah University of Medical Sciences (code: IR.BMSU.REC.1400.098).

Results

Descriptive statistics

The mean age of the participants was 21.5 years (SD = 4.14). They had an average of 7.38 years of gaming experience (SD = 3.09) and, for at least the past 12 months, computer games have been their main entertainment. They also played an average of 5.43 days a week (SD = 1.87), for 4.34 hours (SD = 3.01) each day (24h). The participants' mean IGD score was 22.62 (SD = 7.00). Considering the cut-off of 36, 3.8% of people in the study group (n = 17) had the disorder.

Validity

Construct validity

We conducted CFA (figure 1) by employing the Maximum Likelihood Estimation (ML) method and Chi-square test. Since the difference between the observed and estimated matrices is measured by the Chi-square statistic, a significance level above 0.08 is assumed for the confirmation of the model and factor analysis. As you can see in Table 1, the goodness of fit indices is well within the agreeable area. Thus, construct validity of the scale is supported by CFA.

Reliability

The reliability of the scale was evaluated by Cronbach's alpha. Cronbach's alpha of the whole scale was 0.91 with the following factors: Social = 0.85, Escape = 0.84, Competition = 0.83, Coping = 0.79, Skill Development = 0.89, Fantasy = 0.85 and Recreation = 0.83. Thus, the questionnaire displayed strong uni-dimensionality and good reliability in the sample. Means and standard deviations of the factors of the questionnaire are shown in Table 2.

Convergent validity

To evaluate convergent validity, Pearson correlations were calculated between the Motives for Online Gaming and IGD. The highest correlation was with Escape (0.57) and the lowest was with Recreation (0.15). Results are shown in Table 3.

Table 1. Model Fit of the Measurement Models for Motives for Online Gaming Questionnaire Items

RMSEA	PGFI	X^2 / *df*	CFI	*df*	X^2
0.072	0.667	3.3	0.91	293	976.82
Less than 0.08	Up to 0.6	Less than 3	Up to 0.9		

Table2. Mean and Standard Deviation of Motives for Online Gaming Questionnaire Factors

	Social	Escape	Competition	Coping	Skill Development	Fantasy	Recreation
Mean	12.31	10.91	13.19	13.16	15.55	11.78	13.44
Std. Deviation	4.47	4.75	4.38	4.12	4.10	4.84	2.28

Table 3. Correlations between Motives for Online Gaming and Internet Game Disorder

Factors	Correlation	P-value
Social	0.21	0.001 >
Escape	0.57	0.001 >
Competition	0.31	0.001 >
Coping	0.47	0.001 >
Skill Development	0.20	0.001 >
Fantasy	0.53	0.001 >
Recreation	0.15	0.002

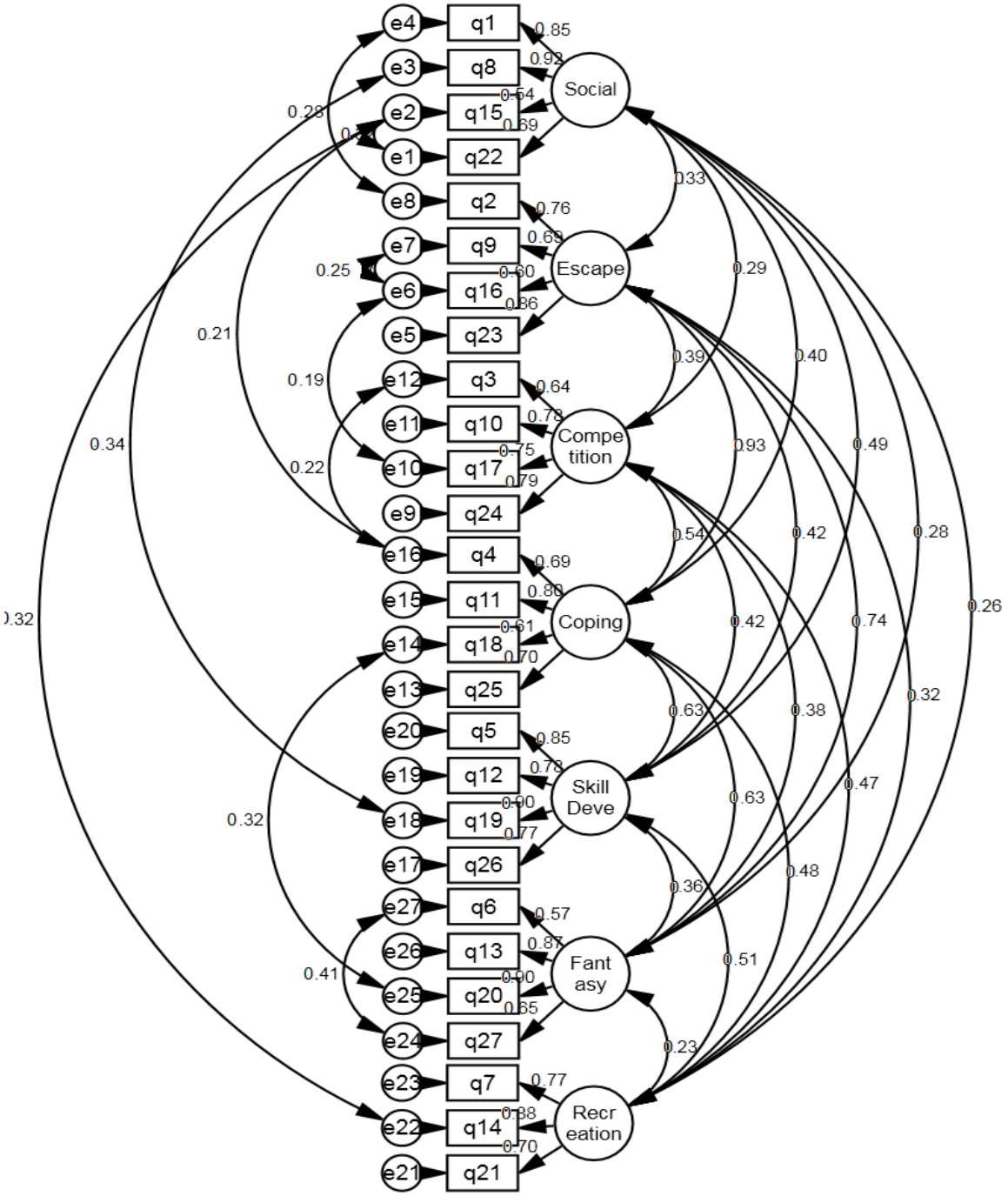

Figure1. Factor Model Fitted for Motives for Online Gaming Questionnaire

Discussion

The results of the current study showed that MOGQ had strong uni-dimensionality and good reliability in our sample. Also, a significant correlation was observed between Motives for Online Gaming and Internet Game Disorder. Construct validity of the scale was supported by CFA. Thus, it can be concluded that MOGQ has good reliability and validity in this Iranian sample.

The results of the CFA, obtained in the present study, confirmed the theoretical model proposed by Demetrovics *et al.* (18). The multifactorial nature of the MOGQ is consistent with theories related to different motivations such as Self-determination theory (30).

The results of various studies are in line with the factors obtained from the MOGQ. Based on the study by Frostling-Henningsson (17), social aspects of playing (communication and cooperation), as well as escaping (avoiding problems) and seeking experience, are among the most important motivations for playing. Social motivations and the desire to establish friendly relations were among the factors that have been introduced in various texts as motivations for people to play (17, 31-34). Also, Hsu and Lu (35) concluded that satisfaction of intrinsic motivations such as entertainment, curiosity, or the search for experience increases the commitment to play. Competition with others has been mentioned in some studies as the most important motivation for people to play (36). In the research by Király *et al.* (13), this motivation could be effective in the model of online game addiction. Some studies have also pointed to the importance of the motivation to work with others as well as daydreaming (18, 37, 38). In the study by Kuss *et al.* (39), motivations for progress, competition, communication with others, and socialization were significantly correlated with hours of play and gaming addiction.

Although the present study showed that the seven-factor structure of MOGQ is satisfactory for the Iranian version, a Turkish validation study showed that the six-factor structure of the MOGQ was satisfactory for the Turkish version (40). In the latter study, the Coping and Escape factors were combined to form a single factor. Validation of a Korean version of the MOGQ yielded a six-factor structure, with the disappearance of the coping factor from the initial structure (25). In the present study, similar to the study by Demetrovics *et al*. (18), the lowest mean in the males' group was obtained for the Escape component, with the strongest correlations with Coping and Fantasy. Therefore, the factor structure of the MOGQ seems to differ among cultures (25). Also, different results may be related to differences in the characteristics of the sample groups.

In addition, the present study showed that the MOGQ had a significant correlation with the IGD scale. The highest correlation was with Escape, and the lowest was with Recreation. A Chinese study (19) perceived that upper levels of General Motivation (along with upper levels of the Escape motive and lower levels of the Skill Development motive) were connected with higher IGD scores. Also, a Korean study (25) showed that the increase in the symptoms of IGD was significantly predictable using the Fantasy and Escape motives. Similarly, Király *et al.* (13) found that psychiatric symptoms were significantly associated with all gaming motives (strongly with Escape, Coping, and Fantasy), apart from Recreation. Also, their results showed that psychiatric symptoms are both directly and indirectly (through the Competition and Escape motives) connected with Problematic Online Gaming. Furthermore, Ballabio *et al*. (41) revealed the relation between the Escape and Eantasy motives and psychiatric symptoms. They also showed the predictability of problematic gaming using the Escape and Fantasy motives. It seems that Escape can be considered as an avoidance coping response to negative life situations (42) and gaming can be considered as a coping strategy to escape real-world difficulties, through which some gamers try to reduce their psychiatric distress. This behavior can contribute to the development and maintenance of problematic gaming (13).

Limitation

There are some limitations that restrict the generalizability of the findings. This was a cross-sectional study and did not allow causal conclusions. Moreover, evaluation of the gaming disorder and the motives for gaming was based on online and self-reported questionnaires. Furthermore, the sample group was limited to male gamers. Therefore, it is suggested that future studies employ longitudinal designs and diagnostic interviews, and recruit female participants.

Conclusion

This study revealed the reliability and validity of I-MOGQ for measuring motives for online gaming. In addition, the results showed that MOGQ had a significant correlation with IGD, with the highest correlation with Escape. However, further studies are required to investigate cultural diversity. It is also recommended that future intervention programs should seek to identify the problems that players face in their daily lives and try to improve their coping strategies in the face of these problems.

Acknowledgment

We would like to thank the participants who contributed to the survey.

Conflict of Interest

None.

References

1. Interactive Software Federation of Europe. Key Facts [Internet]. 2020 [cited 2022 July 17]. Available from: https://www.isfe.eu/wp-content/uploads/2020/08/ISFE-final-1.pdf
2. Entertainment Software Industry. Essential Facts about the Video Game Industry [Internet]. 2020. [cited 2022 July 17]. Available from: https://www.theesa.com/wp-content/uploads/2021/03/Final-Edited-2020-ESA_Essential_facts.pdf
3. Bazaar. Analytical report on the growth of Iranian games [Internet]. 2019. [cited 2022 July 17]. Available from: https://direc.ircg.ir/wp-content/uploads/2020/07/Game-Growth-Analitical-Report.pdf
4. Digital Games Research Center. A closer look at the 2017 Console Platform: Amazing [Internet]. 2018. [cited 2022 July 17]. Available from: https://direc.ircg.ir/wp-content/uploads/2019/01/PersianConsoleCloseup139711.pdf
5. Shao R, Wang Y. The Relation of Violent Video Games to Adolescent Aggression: An Examination of Moderated Mediation Effect. Front Psychol. 2019;10:384.
6. Kowert R, Domahidi E, Festl R, Quandt T. Social gaming, lonely life? The impact of digital game play on adolescents' social circles. Comput Human Behav. 2014;36:385–90 .
7. D Griffiths M, J Kuss D, L King D. Video game addiction: Past, present and future. Curr Psychiatry Rev. 2012;8(4):308–18 .
8. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (DSM-5®). American Psychiatric Pub; 2013 .
9. Şalvarlı Şİ, Griffiths MD. Internet gaming disorder and its associated personality traits: A systematic review using PRISMA guidelines. Int J Ment Health Addict. 2021; 19(5):1420-42.(Published online: 2019).
10. Şalvarlı Şİ, Griffiths MD. The Association Between Internet Gaming Disorder and Impulsivity: A Systematic Review of Literature. Int J Ment Health Addict. 2022; 20(1):92-118. (Published online: 2019).
11. Šporčić B, Glavak-Tkalić R. The relationship between online gaming motivation, self-concept clarity and tendency toward problematic gaming. Cyberpsychology J Psychosoc Res Cybersp. 2018;12(1).
12. Aminimanesh S, Nazari AM, Farzad F, Khanzade M. The role of psychological motivations in online gaming addiction among adolescents. J Heal Care. 2017;19(3):147–57 .
13. Király O, Urbán R, Griffiths MD, Ágoston C, Nagygyörgy K, Kökönyei G, et al. The mediating effect of gaming motivation between psychiatric symptoms and problematic online gaming: an online survey. J Med Internet Res. 2015;17(4):e88.
14. Yee N. Motivations for play in online games. Cyberpsychol Behav. 2006;9(6):772-5 .
15. Bartle R. Hearts, clubs, diamonds, spades: Players who suit MUDs. J MUD Res. 1996;1(1):19 .
16. Kim Y, Ross SD. An exploration of motives in sport video gaming. Int J Sport Mark Spons. 2006;8(1): 28-40.
17. Frostling-Henningsson M. First-person shooter games as a way of connecting to people: "brothers in blood". Cyberpsychol Behav. 2009;12(5):557-62.
18. Demetrovics Z, Urbán R, Nagygyörgy K, Farkas J, Zilahy D, Mervó B, et al. Why do you play? The development of the motives for online gaming questionnaire (MOGQ). Behav Res Methods. 2011;43(3):814-25.
19. Wu AM, Lai MH, Yu S, Lau JT, Lei MW. Motives for online gaming questionnaire: Its psychometric properties and correlation with Internet gaming disorder symptoms among Chinese people. J Behav Addict. 2017;6(1):11-20.
20. Zare Shahabadi A, Nikahd M. An Evaluative Analysis of Factors Motivating the Use of Computer Games in Yazd. Glob Media Journal-Persian Ed. 2013;8(2):151–71 .
21. Forghani MM, Alizadeh A. An Inquiry about the Use Of Computer Games among the Youth. Quarterly J Soc Sci. 2008; (38-39):1–29 .
22. Yousefi B, Ashraf Khazaee A, Ghobadi Yeganeh A. Identify and ranking motivation factors in virtual soccer consumption (video games) among Iranian male adolescents. Commun Manag Sport Media. 2013;1(2):31–9 .
23. ParsaMehr M, Rasulinejad P, Mirzaeeian Mofrad H. Study of Psycho-social motivations and influencing the youth sports Cyber Games (Case Study: Yazd University students). J Soc Sci Islam Azad Univ Shushtar Branch. 2015;8(27):49–78 .
24. ParsaMehr M, Heddat E. The Examination of the Motivations Associated with Computer Sport Games in Students of Yazd University. *Journal of Sport Managemen*. 2013;5(3):99–115 .
25. Kim BN, Kang HS. Korean validation of the Motives for Online Gaming Questionnaire: Focusing on its factor structure and incremental validity. Addict Behav. 2021;122:107019.
26. Leonhardt M, Overå S. Are There Differences in Video Gaming and Use of Social Media among Boys and Girls?-A Mixed Methods Approach. Int J Environ Res Public Health. 2021;18(11):6085.
27. Hassouneh D, Brengman M. A motivation-based typology of social virtual world users. Comput Human Behav. 2014;33:330–8 .
28. Pontes HM, Griffiths MD. Measuring DSM-5 Internet gaming disorder: Development and validation of a short psychometric scale. Comput Human Behav. 2015;45:137–43 .
29. Wu TY, Lin CY, Årestedt K, Griffiths MD, Broström A, Pakpour AH. Psychometric validation of the Persian nine-item Internet Gaming Disorder Scale - Short Form: Does gender and hours spent online gaming affect the interpretations of item descriptions? J Behav Addict. 2017;6(2):256-63.

30. Ryan RM, Deci EL. Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. Contemp Educ Psychol. 2000;25(1):54-67.
31. Fuster H, Oberst U, Griffiths M, Carbonell X, Chamarro A, Talarn A. Psychological motivation in online role-playing games: A study of Spanish World of Warcraft players. Anales de psicología. 2012;28(1):274-80.
32. Fuster H, Chamarro A, Carbonell X, Vallerand RJ. Relationship between passion and motivation for gaming in players of massively multiplayer online role-playing games. Cyberpsychol Behav Soc Netw. 2014;17(5):292-7.
33. Koo D-M. The moderating role of locus of control on the links between experiential motives and intention to play online games. Comput Human Behav. 2009;25(2):466–74 .
34. Hoon K, Park J, Yul K, Moon H, Chun H. E-lifestyle and motives to use online games. Iris Marketing Review. 2002;15(2):71-2.
35. Hsu C-L, Lu H-P. Consumer behavior in online game communities: A motivational factor perspective. Comput Human Behav. 2007;23(3):1642-59.
36. Olson CK, Kutner LA, Warner DE, Almerigi JB, Baer L, Nicholi AM, 2nd, et al. Factors correlated with violent video game use by adolescent boys and girls. J Adolesc Health. 2007;41(1):77-83.
37. Blinka L, Mikuška J. The role of social motivation and sociability of gamers in online game addiction. Cyberpsychology J Psychosoc Res Cybersp. 2014;8(2).
38. Novak J, Levy L. Play the game: the parent's guide to video games. Publisher: Course Technology PTR ; 1st edition ; 2007.
39. Kuss DJ, Griffiths MD. Adolescent online gaming addiction. Education and Health. 2012;30(1):15–7 .
40. Evren C, Evren B, Dalbudak E, Topçu M, Kutlu N. Psychometric validation of the Turkish motives for Online Gaming Questionnaire (MOGQ) across university students and video game players. Addicta: The Turkish Journal on Addictions, 2020; 7(2): 81-89.
41. Ballabio M, Griffiths MD, Urbán R, Quartiroli A, Demetrovics Z, Király O. Do gaming motives mediate between psychiatric symptoms and problematic gaming? An empirical survey study. Addict Res Theory. 2017;25(5):397–408 .
42. Meier A, Meltzer CE, Reinecke L. Coping with stress or losing control? Facebook-induced strains among emerging adults as a consequence of escapism versus procrastination. In book: Youth and Media: Current Perspectives on Media Use and Effects Publisher: Nomo; 2018. p. 167–85.