

Assessment of Digital Game Addiction among Students of Kabul City, Afghanistan

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ABSTRACT

Background: Nowadays technology is an integral part of everything we do in our daily lives. However, in addition to its advantages, the overuse of digital devices have posed new challenges such as digital game addiction, especially in adolescent and adult populations. Although it is increasingly, common worldwide, little research has been done on digital game addiction in Afghanistan. We aimed to determine the degree of digital game addiction among students in Kabul, Afghanistan.

Methods: This descriptive cross-sectional study was carried out among 246 students in Kabul from Oct to Dec 2023. The information was collected by means of a structured survey composed of 15 standardized items (derived from established questionnaires) and demographic inquiries. Addiction of the participants was mild, moderate, or severe according to predetermined score standards.

Results: From 246 participants, 161 (65.4%) reported playing video games and 85 (34.6%) reported not playing video games. Regarding the degree of addiction among players, 144 (89.4%) were intermediate addicted, 15 (9.3%) were severely addicted and only 2 (1.2%) had mild addiction. One interesting result was the high relationship between addictiveness and the competitive element of games.

Conclusion: Moderate levels of addiction to digital games were the most prevalent among Kabul students and a significant number also suffered from severe addiction. The findings highlight the necessity for focused interventions on part of educators, parents, and policymakers to address digital game addiction in Afghanistan.

Key words: Digital games; Digital game addiction; Addiction; Students

Introduction

With advancements of knowledge, technologies, urbanization, and decreased physical activity, the current generation significantly turns to indoor activity, digital gaming, and utilizing phones, computers, tablets, television, and

online games. In contemporary universe, computers and internet which provides facilities in many aspects of human life, are also frequently used for entertainment and games among adolescents [1-3]. Gradually, the importance of the

internet, digital tools, and figurative environments becomes increased. Formerly, children who spent their time with friends on the street or other areas to play digital games now would rather pass their time on computers, electronic tools, and virtual environments. According to [6,7] the number of people who become addicted to digital games increased gradually in the world. Among the most serious problems, digital gaming addiction is seen as a dangerous habit for children and young people, which Digital Addiction (DA) can be modified as an addiction towards playing, listening, and watching for entertainment aims and using electronic tools. Currently is known as a danger and threat for middle-aged and older people as well. People feel uncomfortable and worried when they spend their time without using their phones, browsing daily emails, and being or sharing on social media [4-6].

On the other hand, some written digital games have some remarkable benefits, such as imagination, spatial ability, hand-eye coordination, high-level mathematical thinking with geometry and other analyzing and enigmatic questions, integrating space forms, and so on. On the other side, intense and serious use of digital games mostly affiliates to the subject of addiction. Internet and game addiction are directly correlated with newness seeking, depression, and gift and reward dependence. On the other hand, internet and game addiction negatively correlated with self-respect, endurance, cooperativeness, and self-transcendence [7, 8].

Concurrently, while the internet and digital tools such as computers and mobile phones made life more convenient in many aspects, these new devices are widely used as gaming and enjoyment tools by the increase of new technologies, and digital games have been replaced by digital software [9]. The fast-increasing use of digital games has not only supplied entertainment for users of digital tools but also increased motivation for game players [10]. The computer industry has brought a

newness that affects all people of all ages, especially the lives of children; this newness is the concept of “digital game.” Digital games can be modified as games that are played with electronic tools such as mobile phones, desktop and laptop computers, game consoles, and so on. All over the world, digital games have revealed themselves as a big market that absorbs millions of people, and players consume their moments [10].

Past studies [5, 6] have indicated that males between 10 and 19 yr of age have more desire to abuse digital games in contrast to females in this age group. The present generation of adolescents shows high and extreme interest in digital games, so these games are known as a central component of popular youth culture [9].

Digital games that are played in the cycle of virtual pages have the dignity of entertainment, and these kinds of games have their own rules and are the same as one another all over the world [11]. Therefore, in the virtual pages, these games are divided into computer games, console games, and online games. There are some different types, such as sports, simulation, adventure, action, strategy, and network that can be played by groups or singles [11].

Studies on the report of the European Mobile Game Market has found more than 2.5 billion video game players are in the globe; similarly, based on another research, the effect of computer games is so high at the ages of 11 to 14, and so on, the male players are more absorbed than female players [12, 13]. Most excessive game players suffer from these psychological problems: aggressive behavior, decreased emotions, antisocial behavior, character disorder, destructive behavior in society, etc. Being in a fixed position for a long time without other movement will cause neck pain and neck stiffness, and also looking for a long time will be the cause of the feeling of fatigue, burning, and itching in the eyes of the player game [10]. With the advancement of technology and the development of internet, video games have be-

come one of the main entertainment activities for children and adolescents [14].

In the contemporary years, after the development of technologies and experiencing more convenience of accessing technological devices such as computers, tablets, and phones, researchers have seen a great and significant obstacle for the students to have a proper education during the education process by growing the addiction to digital games (15). Extreme and incorrect use of computers and the internet by students during the school age can cause some disordered behavior in social relations and negative effects on personal and academic development [15].

There have been ten standard rules and symptoms to diagnose the game adductor that include: having full aspiration and desire to use the internet, being dissatisfied during the time of using the internet, forgetting all the worries and displeasures while using the internet, feeling uncomfortable and depressed at the moment of stopping, hiding frequent use of digital tools from relatives and friends, preferring the use of digital games or being online to studying, spending a high level of income or money for usage of the internet, stopping all other necessary work while using the internet and digital games, having interest again after stopping internet usage or playing digital games, and having a disappointed sensation when being without the internet and digital tools[15, 16].

According to all these researches, intervention and study in this field is a necessity especially in Afghanistan because, there have not found any formal research in this area. We aimed to investigate the status of digital game addiction among Students of Mohammad Asaf Mayele High School in Kabul city the capital of Afghanistan.

Materials and Methods

Study design: This study was conducted in the school of Mohammad Asaf Mayele High

School from Oct to Dec 2023, one of the most active and populous school in Kabul Province capital of Afghanistan. In this research we used cross-sectional descriptive study method; moreover, all students were selected randomly from the main list of school.

Participants and sample size: The school has 4,917 male and female students, of which 3,363 are female and 1,554 students are male. These students are studying in three classes and three levels of education, including primary, secondary, and high-level student's schools, but in this research consists male high-class students of school, due to changing of regime only male students participated; Moreover, the source population of the study consists of 700 students, and from these students, 248 of those were the study population, but after using the Charles Cochran formula according to the Morgan Table and accepting 2% non-response bias, with a 95% confidence interval and 5% standard error, the sample size was obtained as 260 students, moreover; out of 260 students whom initially selected, 246 agreed to participate in the study. Among them, only 161 students reported playing digital games, therefore; the final analysis was conducted on this subgroup. This research focuses specifically on students engaged in digital gaming and does not represent the overall student's population.

Data collection and data management

The present research was conducted by distributing the questionnaire among the high school students of Mohammad Asaf Mayele High School. In this research in addition of demographic information, the questionnaire evaluated by three Turkish experts, consisting of a field expert, a measurement and evaluation expert, and a linguist, which consists of 10 questions. In addition to these 10 questions, five other questions related to online game addiction, obtained from an Indonesian study, were also added to the questionnaire and were compiled and arranged by a professor at Kabul Uni-

versity of Medical Sciences. These collected game addiction's questionnaires has acceptable reliability ($\alpha=0.708$). As a result, the set of questions in this research is composed of 15 questions and five answers, and each question is based on a Likert scale from (1 = never), (2 = rarely), (3 = sometimes), (4 = often) and (5 = very often). The clinical cut-off estimate showed that the score of 21.07 and lower from this indicate mild game addiction, the score between 21.07 and 52.5 indicate moderate game addiction, and the score 52.5 and above indicate severe game addiction level.

Data analysis

After collecting and entering data into Excel software and analyzing that by SPSS version 25 (IBM Corp., Armonk, NY, USA), the raw data was analyzed and changed into usable information.

Ethical considerations

This study was conducted among school students in accordance with ethical principles for research involving minors. All procedures followed the ethical standards of the institutional research committee and the principles of the Declaration of Helsinki. Ethical considerations were strictly observed throughout the research, ensuring confidentiality and informed consent of all participating students. Before participation, the purpose of the study was clearly explained to all students. Written informed consent and verbal assent were obtained from participants. Participation was voluntary, and the confidentiality of all responses was strictly maintained.

Results

The ages of most participants were between 15 and 20 yr old, numbered 93.9% (231). From 260 students were initially selected through the sampling process. Of those, 246 students completed and returned the questionnaires, and the rate of accommodating responses were approximately 94.6%. Among the respondents, 161 students reported engaging in digital gaming activities and were included in the final analysis. This subgroup was analyzed to assess patterns and levels of digital game addiction.

Information that has been received from types of digital tools for playing games contained mobile phones, computers, internet clubs, and tablets, with mobile phones having the most players and numbering 139 (86.3%) students. The second digital tool in view of players was the computer, which numbered 18 (11.2%). One of the knowable topics that emerged from digital games was about the features of that. Based the study "competitive feature" has known as a most lovable feature among others, so 84 (52.2%) participants have chosen this feature and the second feature which has known more lovable and enjoyable feature was "entertainment feature." In addition, "exciting feature" was known as the third lovable feature for students.

A Chi-Square test of independence was conducted to examine the relationship between addiction level and game features. The result showed no statistically significant association between the two variables ($P=0.173$). Participants' level of addiction is not significantly related to the type of game feature they prefer. The Figure 1 is illustrated the features of games.

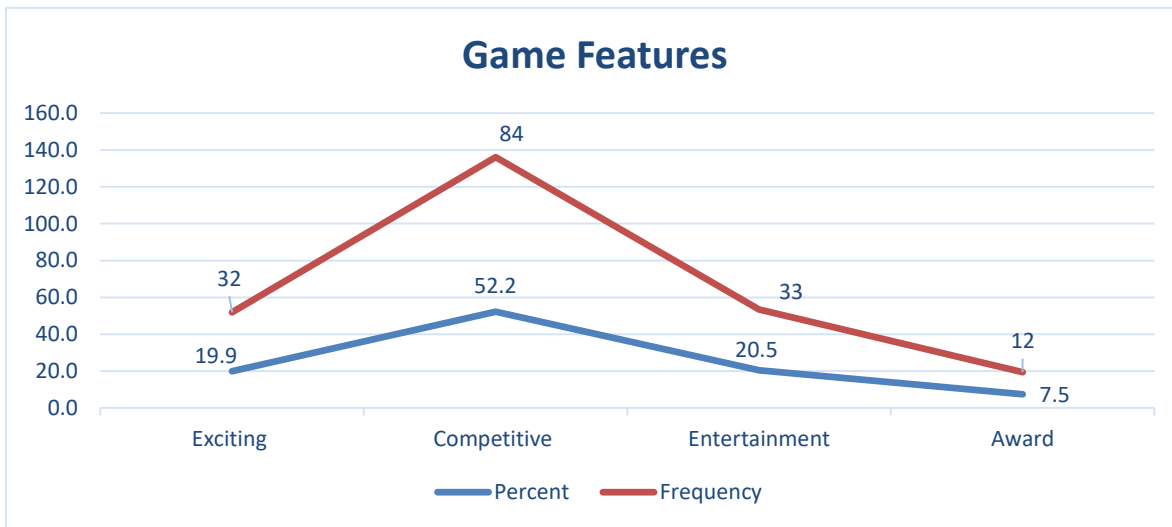


Figure 1: Game Features

An exciting subject that was received from this research was about the type of games; according to the study, the type of “violent game,” contained 68 (42.2%) players, had the most players, after that type of “sport game,” contained 54 (33.5%) players, had the second position in view of followers. Moreover, data that was gathered about the form of games have illustrated that most players played “offline

games, which contained 54% of them, and others played “online games”. The Figure 2 illustrated the types of game.

Standard Questions

Table 1 indicates the standard questions that have illustrated the numbers and percentages of students at the different measurements.

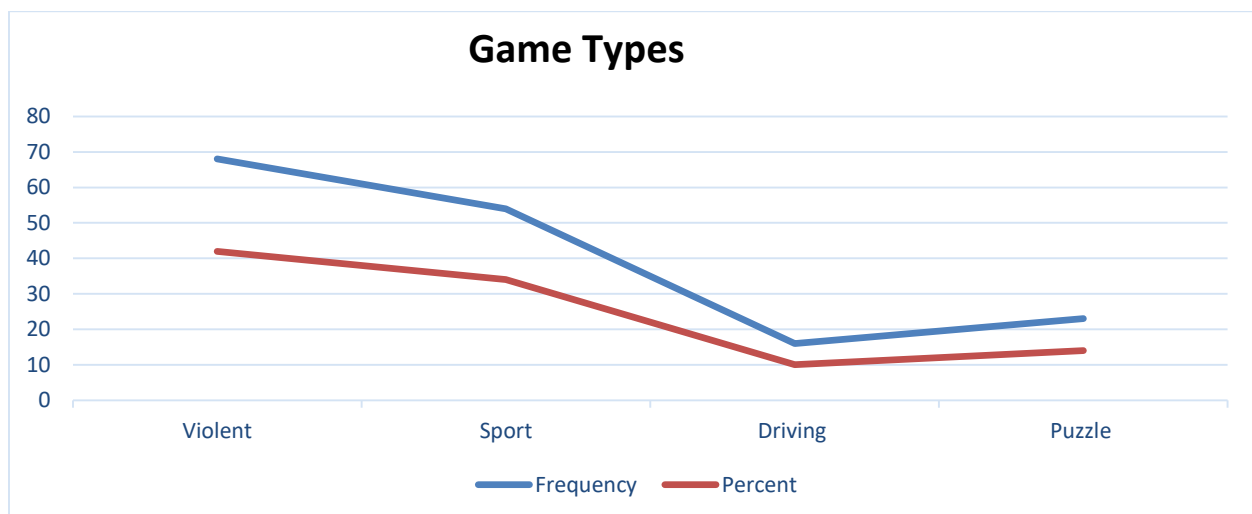


Figure 2: Game Types

Table 1 : The standard questions with its number

<i>Numbers</i>	<i>Questions</i>	<i>Never</i>		<i>Rarely</i>		<i>Sometime</i>		<i>Often</i>		<i>Mostly</i>	
		No	%	No	%	No	%	No	%	No	%
1	Thinking about playing game	48	29.8	26	16.1	59	36.6	16	9.9	12	7.5
2	Having pleasure during playing game	5	3.1	22	13.7	49	30.4	29	18.0	56	34.8
3	Being enough of playing game for specific time	20	12.4	20	12.4	48	29.8	32	19.9	41	25.5
4	Having more desire to play game	31	19.3	23	14.3	52	32.3	26	16.1	29	18.0
5	Feeling unhappy while stopping game	80	49.7	25	15.5	27	16.8	13	8.1	16	9.9
6	Arguing for not stopping game	64	39.8	35	21.7	29	18.0	11	6.8	22	13.7
7	Stopping game for doing other tasks	17	10.6	15	9.3	46	28.6	20	12.4	63	39.1
8	Having desire to play game while seeing digital tools	29	18.0	45	28.0	37	23.0	19	11.8	31	19.3
9	Delaying eating, sleeping while playing game	74	46.0	22	13.7	38	23.6	12	7.5	15	9.3
10	Delaying necessary works while playing games	93	57.8	20	12.4	25	15.5	10	6.2	13	8.1
11	Thinking about online games	92	57.1	31	19.3	22	13.7	8	5.0	8	5.0
12	Doing online game to be far from problems	31	19.3	30	18.6	53	32.9	19	11.8	28	17.4
13	Destroying the relations for cause of playing online game	110	68.3	25	15.5	11	6.8	6	3.7	9	5.6
14	Reducing time of online game because someone else want	29	18.0	30	18.6	47	29.2	24	14.9	31	19.3
15	Increasing playing time of online game after every play.	43	26.7	29	18.0	52	32.3	16	9.9	21	13.0

To conclude, after analyzing all of the gathered data from questionnaires, the below result was received, and most of the participants and game players were in “moderate addiction,” and the “severe addiction” has ranked as a second position. Therefore; among the 161 students who

reported playing digital games, 2 (1.24%) were classified as having mild addiction, 144 (89.44%) had moderate addiction, and 15 (9.32%) were found to have severe addiction. The Figure 3 is showed addictions level.

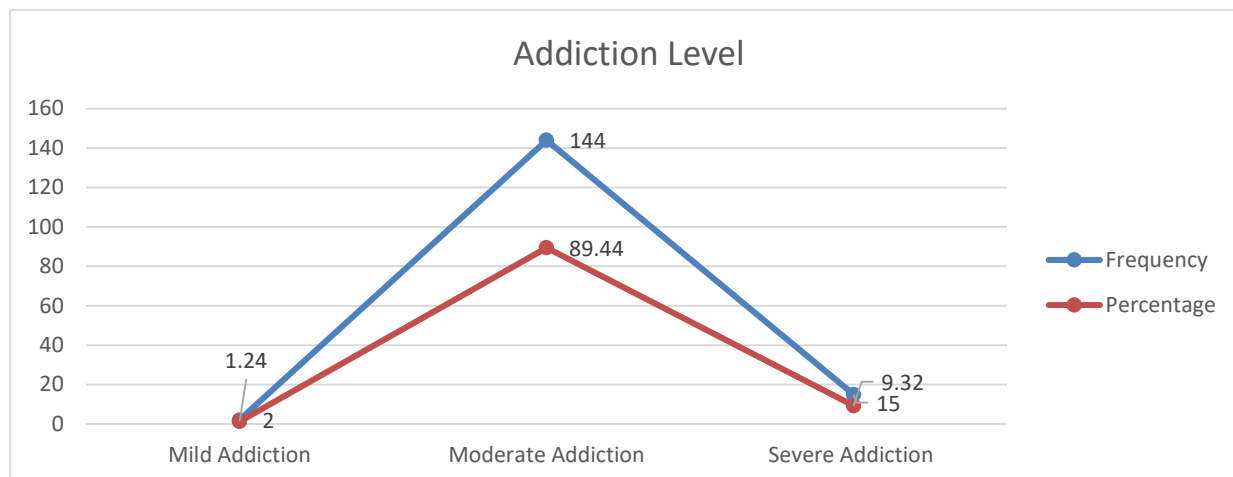


Figure 3: The Addiction Level

Discussion

The findings of this study reveal a concerning prevalence of digital game addiction among students in Kabul, Afghanistan, with the majority of gamers falling into the moderate addiction category and a notable proportion experiencing severe addiction [17].

These results align with global trends indicating that digital gaming, while a popular form of entertainment, can lead to problematic usage patterns, particularly among adolescents and young adults. One of the most striking observations in this study was the strong association between game addiction and the competitive nature of digital games [18]. This supports existing literature suggesting that competitive elements—such as leaderboards, multiplayer rankings, and reward systems—can significantly enhance the addictive potential of games by stimulating the brain’s reward circuitry and reinforcing repetitive behavior patterns [19, 20]. The high rate of moderate to severe addiction in this population may be attributed to several contextual factors [21]. In Afghanistan, limited recreational alternatives, prolonged screen exposure due to urbanization, and a lack of digital literacy among parents and educators may contribute to excessive gaming. Moreover, the absence of structured awareness programs and

mental health support systems exacerbates the issue, leaving many students vulnerable to the psychological and social consequences of gaming addiction [22, 23]. Given the novelty of this research in the Afghan context, the study serves as a foundational step toward understanding and addressing digital game addiction in the region. It underscores the urgent need for multi-sectoral interventions involving schools, families, and policymakers. Preventive strategies could include integrating digital wellness education into school curricula, promoting extracurricular activities, and providing training for parents and teachers to recognize early signs of addiction [24, 25]. Future research should explore the psychological, cultural, and socioeconomic determinants of gaming behavior in Afghanistan through longitudinal and qualitative methodologies. Additionally, comparative studies with other countries in the region could offer valuable insights into culturally tailored intervention models [26].

This study, however, has certain limitations. Its cross-sectional design limits the ability to infer causality, and the use of self-reported data may have introduced bias. Despite these limitations, the study’s strengths include its relatively large sample size and the use of standardized tools. These aspects provide a strong foundation for fu-

ture longitudinal research and policy planning in Afghanistan.

Conclusion

The highest level of dependence of students was at the intermediate level, which indicates the importance of the problem and the need for the authorities to intervene in this field. Moreover, a basic feature that most of the students accepted as an enjoyable feature was being competitive in games, and so on. The other significant point that had a direct effect on becoming addicted was the accessibility of mobiles and other digital tools.

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Conflict of interest

The authors declare that there is no conflict of interests.

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