

## **EFFECT OF ELECTRONIC GAMES ON THE ACADEMIC LEVEL OF ADOLESCENTS**

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### **Abstract**

Electronic games have become increasingly popular with people of all ages, but particularly with children and adolescents [1–3]. Recent estimates have shown that one in three under-18-year-olds across the world uses the Internet, and 75% of adolescents play electronic games daily in developed countries [4–6]. This study examined the association of internet use, and electronic game- play with academic performance respectively It also assessed whether addiction tendency to internet and game-play is associated with academic performance, The study was analytical and descriptive. The sample in this study consisted of 111 participants and they agreed to participate in the study. The data collection process was used to collect data. Data were collected from March 10, 2022 to April 10, and the questionnaire consists of questions that include social and demographic information, either The other part of the questionnaire contains or ten questions about the time that players spend and do they enjoy their time and how to reduce the time they waste on such games and whether they spend money on these games and does it affect their professional performance and does it save them from their family problems, The results (86.5%) of the participants were female between (13.5%) (80.2%) under 18 years and (19.8%) over 18 years, (9 %) married, (66.7%) of student, (6.3%) Work and leave to study, (13.5%) working and studying A lot of them are player them self (55.9 %) and (5.4 %) player father there. are different kinds of game: (12.6%) Action, (8.1%) Fighting, (46.8%) Gas, (14.4%) Strategy games and (18.0%) Other. The time you spend playing also studied and find that (9.9%) of them Playing for hours on end, (76.6%) of them Play at different times.

There are a lot of games that have been played from, including: (7.2%) play (PUPG), (35.1%) play (LUDO), (27.9%) play (Candy Crush), (14.4%) play (Asphalt) and (15.3%) play others.

Some of them play on computers (2.7%), while others play on mobile phones (98.2%).

Some players prefer games that are played on the Internet (37.8%), and others prefer playing without the use of the Internet (54.1%).

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**Key word:** Electronic games, the academic level, adolescents

### **Introduction:**

Electronic games have become increasingly popular with people of all ages, but particularly with children and adolescents [1, 2]. Recent estimates have shown that one in three under-18-year-olds across the world uses the Internet, and 75% of adolescents play electronic games daily in developed countries [3, 4, 5, 6].

Today's world is one that is largely composed of technology. In a relatively short span of time we have been immersed in a world of high-definition television, Facebook, YouTube, internet radio, "green" cars, outrageous thrill rides, 3-D technology, etc. But no area of technology has become as prominent as that of video gaming. According to [7], the penetration of video games into the United States alone is huge, with at least 90% of homes having children that have played (rented or owned) video games. This is a record level that continues to increase. 55% of console players and 66% of online players are over 18 [8]. The college demographic seems to be the major group of gamers simply because they have a lack of parental supervision and they have more addiction physically impacts academic achievement because the student is too involved in the game to do homework or prepare academically [9].

There are also others that have found decreased academic performance in relation to involvement in playing video games. [10] Studied video games and aggression and suggested that not only does gaming have an impact on performance directly, but it also triggers a higher level of aggression, which is often linked to problems in school and decreased academic performance.

[11]Also found a negative correlation, although the relationship between GPA and academic performance in their study was not significant.

[12]Found that time spent playing games was a negative predictor of academic performance and that those who played video games more often had poorer grades than those who played less. A study conducted by [13] included open-ended questions that encouraged participants to report different feelings about playing video games. Some of the negative consequences indirectly related to school performance, in that participants reported often missing lectures, skipping homework, etc. They also found that these consequences were more likely to impact males,

because males play more often and were more likely to report losing track of the time while playing. In an experiment by [14], school performance increased after the participants dramatically decreased (limited time spent using technology to 30 minutes per day) their usage of all technology, including video games. Finally, [15] found that the excessive playing of video games (five hours or more per session) resulted in school grades that were below a 3.00 average, and that time spent playing was a predictor of academic performance.

They also suggested that video games indirectly lead to decreased performance through promoting violence. Finally, they noted that playing video games took time away from school activities, homework, social interaction, etc. Then there are those in the research field who have come up with neutral results. [16] studied the difference between playing massively multiplayer online role-playing games (MMORPG) and playing other types of video games and found that even though the MMORPG group reported greater interference in academic work (such as skipping homework, missing a class, etc) as opposed to the other groups, overall the groups did not differ in academic performance. [17] Used the Problem Video Game Playing survey to measure four different areas of life, including academic behavior, impacted by the playing of video games and suggested that there was not a significant correlation in any area.

However, there is also plenty of research to suggest that interactive video games can actually lead to increased academic performance [9]. Jackson et al (2008) found that the usage of games is causally related to an increase in visual-spatial skills, which often come in handy in the fields of science, mathematics, technology, and engineering. A study done with Kindergarteners [18] showed that students who played educational video games on the Sony Lightspan, which is a game system similar to the Sony Playstation One, made significant increases over the control group in the learning of spelling and reading; however, no significant gain was made over the control group in math. This suggests a facilitative role of playing

video games in developing verbal skills (2001). [16] Suggested that complex games may lead to academic success by engaging players in problem solving, critical thinking, and creativity. [19] Found that while game addiction leads to negative academic performance, moderate engagement in gaming can lead to improved performance in an academic setting. This is of great significance to adolescents, as using effective social interactions is essential for behavioral, emotional adaption and successful functioning. Children and adolescent socialization ability improve their communication skills and makes them more receptive to social influence, and grow better with good communication skills [31].

### **Electronic games**

Here is a possible definition: A videogame is a game which we play thanks to an audiovisual apparatus and which can be based on a story. This definition is short and simple, and I would like

to demonstrate that it really defines the term videogame. I will show that this definition is based on well-known thoughts about game, play, interactivity, and narrative [20].

### **Academic level**

Academic Performance - is measured by taking written and oral tests, performing presentations, turning in homework and participating in class activities and discussions. Teachers evaluate in the form of letter or number grades and side notes, to describe how well a student has done. Academic level is also known as academic standing. Academic level is based on the total number of units (credits) completed.

For this purpose, completed courses are defined as courses in which grades ranging from 0 to 100 have been received. A projected academic level is based on the total number of units completed, plus the total number of units currently in progress [21].

### **Adolescence**

Adolescence, transitional phase of growth and development between childhood and adulthood. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19. This age range falls within WHO's definition of young people, which refers to individuals between ages 10 and 24 [22].

### **Design of the Study:**

An analytical and descriptive study was designed about the disadvantages of playing electronic games and their impact on the academic level and even on the achievement of daily chores and the behavior of children and

### **Consent Arrangements:**

After the study project was approved by the College of Nursing, the formal letter group began. Prior to data collection, permissions were obtained to conduct the study. Further approval was obtained from the Basra Department of Education. Then permission was obtained from schools and citizens as well.

### **Preparation of the study:**

The study he conducted on many people from different primary and intermediate schools and non-students, males and females. The total number of people participating in the study reached (111) participants through a comfortable selection sample.

### **The study sample:**

A non-probability (purposeful) sample of (111) persons of different age groups in and outside primary and middle schools was selected.

### **The study instrument:**

The study instrument is the questionnaire that was created and designed for the purpose of the study after extensive reviews of the available literature and related studies. The study tool consists of two parts. The first part includes the demographic characteristics of the participants of the study sample, and the second part includes the games that each of them prefer and the means used to play.

### **The demographic characteristics of the participants of the study sample:**

This part related to the social and demographic characteristics of people consists of (6) paragraphs, age, gender, marital status, educational level, work, and the person's relationship with the practitioner.

This part includes (24) elements, the first six points talk about the types of games the player plays, the next four points talk about the time you spend playing, the next six points talk about the most played game, the next four points talk about the preferred device to play, and the last four Points talking about games that need internet and that can be played without internet.

### **Data collection:**

The data is collected through the use of a developed questionnaire (the Arabic version), and the researcher assumed full responsibility for interviewing the study sample after explaining and clarifying the objectives of the study, after taking the initial consent from each person to participate in the study.

The data collection process was carried out from March 10, 2022 to April 10, 2022.

Approximately (20-30) minutes are spent with each person to complete the interview and fill out the questionnaire.

### **Validity of the Study Instrument:**

The validity has been determined for the evaluation of the tool through a panel of ten experts, faculty members from College of Nursing / University of Basrah; who have necessary experience that qualify them to exam the content of the questionnaire. Those experts were request to review the instruments for content, clarity, relevancy, and competence; some items were accepted and others were added after a face-to-face discussion with each expert and subsequently the instrument was represent valid after getting all the comments and recommendations in consideration.

### **Statistical Data Analysis:**

The data of the present study were analyzed through the use of Statistical Package of Social Sciences (SPSS) version 20. The following statistical data analysis approaches were used in order to analyze and evaluate the results of the study:

### **Descriptive Data Analysis:**

- a- Statistical tables (Frequencies and percent).
- b- Arithmetic mean and standard deviation.

### Inferential data analysis:

A - Chi-square - to test the differences between several categories of nominal scales

### Study Limits:

1. Lack of cooperation by some participants, and some feel ashamed to give more information.
2. The small number of samples per day, as the people were all from schools and had their obligations, and the sample collection coincided with the official working hours of the schools and some others at work

### Moral consideration:

Subject consent according to study criteria was obtained from the study sample.

### Results of the Study:

This chapter deals with analysis of the data through statistical procedure.

**Table (1)** Demographic data of study sample

Age			
	Valid	Frequency	Percent
1	Under 18	89	80.2
2	Over 18	22	19.8
Gender			
1	Male	15	13.5
2	Female	96	86.5
Social status			
1	Married	10	9.0
2	Unmarried	101	91.0
Are you			
1	Student	74	66.7
2	Work and leave to study	7	6.3
3	working and studying	15	13.5
4	Other	15	13.5
Are you			
1	Player	62	55.9
2	player's father	6	5.4
3	Other	43	38.7

**Table No. (1)** on social characteristics shows that 86.5% of the participants are males and 13.5 females, most of them are single, about 91.0%, and around the study, most of them study about

66.7% and who work and leave the study 6.3% and those who study and work 13.5%, most of them are players 55.9 % and other parents of these players accounted for 5.4%.

**Table (2)** The kind of electronic games do you play?

		Frequency	Percent
Valid	Action	14	12.6
	Fighting	9	8.1
	Gas	52	46.8
	Strategy games	16	14.4
	Other	20	18.0
	Total	111	100.0

Table No. (2) Shows that there are a lot of games that were played, including: (7.2%) played (PUPG), (35.1%) played (LUDO), (27.9%) played (Candy Crush), (14.4%) played (Asphalt) and (15.3%) play others.

**Table (3):** Time spent playing.

		Frequency	Percent
Valid	Playing for hours on end	11	9.9
	Play at different times	85	76.6
	Other	15	13.5
	Total	111	100.0

Table No. (3) Shows the times players spend in playing, some of them spend long times (9.9%) and others spend varying times (76.6%) and others spend different times (13.5%).

**Table (4)** Games there play

		Frequency	Percent
Valid	(PUPG)	8	7.2
	(LUDO)	39	35.1
	(Candy Crush )	31	27.9
	(Asphalt)	16	14.4
	Other	17	15.3



	Total	111	100.0
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Table No (4) Shows that there are a lot of games that have been played from,including: (7.%) play (PUPG), (35.1%) play (LUDO), (27.9%) play (CandyCrush), (14.4%) play (Asphalt) and (15.3%) play others.

**Table (5):** shows the devise use to play

		Frequency	Percent
Valid	computer	3	2.7
	mobilephones	103	92.8
	Other	5	4.5
	Total	111	100.0

Table No (5) Shows that some of them play on computers (2.7%), while others play on mobile phones.)%98.2(

**Table No (6):** Their prefer they play games on the internet (online) or without the internet (offline)

		Frequency	Percent
Valid	(Online)	42	37.8
	(Offline)	60	54.1
	Other	9	8.1
	Total	111	100.0

Table No (6) Shows if they prefer or do they play games on the Internet (online) or without the Internet (offline) and find that some players prefer games that are played on the Internet (37.8%), and others prefer playing without the use of the Internet.)%54.1(

**Table (7):** Questionnaire about the socio-demographic information ofvolunteers.

NO	Questionnaire	Yes		No		OTHER		MS	ASS
		F	%	F	%	F	%		
1	Do you spend a lot of time thinking about games when you're not playing them? Doyou find that you endup thinking aboutgames when you should be thinkingabout other things?	25	22.5	82	73.9	4	3.6	1.32	M



2	Do you feel irritable, moody, bored or frustrated when not playing or unable to play video games?	26	23.4	84	75.7	1	0.9	1.24	M
3	Do you find that even though you playgames for a good partof the time, you don't necessarily have fun?	44	39.6	64	57.7	3	2.7	1.05	M
4	Have you tried reducing your gamesor stopping your games, but it didn't work?	29	26.1	68	61.3	14	12.6	1.51	M
5	Do you find things that most people enjoy (social activities, books, or other forms of entertainment) unpleasant?	26	23.4	80	72.1	5	4.5	1.65	M

6	Do you think video games are causing problems in your life, but you still play them?	34	30.6	71	64.0	6	5.4	1.09	M
7	Do games create problems in your personal relationships? Haveyou ever lied abouthow much you play video games?	21	18.9	86	77.5	4	3.6	1.56	M
8	Do you spend part of	16	14.4	93	83.8	2	1.8	1.28	M

	your money to buy or participate in games?								
9	Do games help you avoid problems in real life? Are games a major way to deal with stress or anxiety?	55	49.5	52	46.8	4	3.6	1.39	M
10	Does gaming negatively affect your professional, financial or academic performance in a significant way?	40	36.0	66	59.5	5	4.5	1.41	M
Total								1.35	M

Table No (7) Shows the questionnaire consists of questions that include social and demographic information, either The other part of the questionnaire contains ten questions about the time that players spend and do they enjoy their time and how to reduce the time they waste on such games and whether they spend money on these games and does it affect their professional performance and does it save them from their family problems.

### Discussion of the Results :

Discussion of the Socio-Demographic Characteristics for the Study Sample:

A total of 111 participants returned completed surveys indicating the age of the players.

Was [80.2] (under 18) and [19.8] (over 18) in this study:

The results of a national survey "by gender 13.5% of boys, 86.5% of girls. We also studied the effect of the sample's marital status and found that 9 percent of the married and the rest were unmarried. Also, it was necessary to know the educational status of the sample under study, and it was found that 66.7 percent of them are from Students and 6.3 of those who leave their work and go to study directly, and 13.5 of those who are students who practice work in addition to their studies and the rest of the categories are

13.5 percent. Through the questionnaire, we found that most of them are from young age groups less than 18 years, and most of them are unmarried, and the predominant among them are students. In Table No. (2) The types of games that have been played were discussed, Table No. (3) Inquired about the time players spend playing and Table No.

(4) Was asked about the most games played by players, and the other table was about how to play using a computer or a mobile phone And finally about the preference of playing games that need the Internet or not.

In Table No. 2, it was found that most of them play GAS games with a percentage of 46.8 percent, followed by strategy games with a percentage of 14.4 and some prefer action-combat games with a percentage of 12.6 and other isolated games that reach 18 percent.

With regard to Table No. 3, a questionnaire was conducted about the time players spend on video games, and it is one of the parameters that must be studied, because the greater the time spent playing, the lower the educational level, so there is no time needed to study. Through the table, it was noted that the vast majority plays with sporadic times, that is, they squawk most of their time with a percentage of 76.6, and some play with endless time with a percentage of 9.9 and others with a percentage of 13.5 percent. We also studied the type of games that were played through Table No. 4, and it was found that 35.1 percent prefer Ludo, 27.9 percent prefer Sandy Crash, 14.4 percent prefer asphalt, 7.2 prefer PUBG and the rest to other games.

It was also necessary whether they used a mobile phone or a computer. Through Table No. 5, it turned out that the vast majority, with a very high percentage, amounted to 92.8 percent of them, prefer the mobile phone, and a very small percentage prefer the computer by 2.7 percent, and the others prefer other devices.

One of the most common things at the present time is the games that need an Internet connection to play, and it was studied in Table No. 6, and it was found that 54.1 of them prefer playing without the need for a constant connection, and 37.8 percent prefer games that need the Internet, and the rest are 8.1 percent.

Shown Table No (7) Shows the questionnaire consists of questions that include social and demographic information, either The other part of the questionnaire contains or ten questions about the time that players spend and do they enjoy their time and how to reduce the time they waste on such games and whether they spend money on these games and does it affect their professional performance and does it save them from their family problems.

### **Conclusions:**

Based on the result obtained from the data analysis, we notices

1. The growing popularity of video games has instigated a debate among parents, researchers, video game producers and policymakers concerning their harmful and helpful effects.
2. Video games are very effective teachers that affect players in multiple domains.
3. Some of these effects can be harmful (eg, effects of violent video games on aggression).
4. Other video game effects can be beneficial (eg, effects of action games on visual-spatialskills).
5. Video game effects are complex and would be better understood as multiple dimensions rather than a simplistic “good-bad” dichotomy

### **Recommendation:**

1. Effects of violent video games on aggression-related variables as well as effects on attention deficits, school performance, and gaming addiction.

2. Positive effects of video games are described, including effects of action games on visual-spatial skills, and effects of educational video games, exergames, and proso-cial video games. high amounts of time on screen media are associated with poorer school performance.
3. High amounts of time onscreen media are associated with poorer school performance.
4. It is important that people understand that there are both potential benefits and harms to be derived from game play
5. Some conclusions and guidelines are offered with the goal of helping pediatricians, parents, and other caregivers protect children from negative effects while maximizing the positive effects of video games.
6. Parents should be aware of the effects of on line games on the academic performances of their children and that proper guidance and supervision on their extra-curricular activities must be monitored.
7. Students must find others activities where they can engaged in other than on line games
8. A similar study can be conducted where an in-depth analysis can be done

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