Journal of Statistics Applications & Probability
An International Journal

http://dx.doi.org/10.18576/jsap/150321

Academic Procrastination among Jordanian University Students and its Relationship to Video Game Addiction

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Received: 22 Feb. 2026, Revised: 2 Apr. 2026, Accepted: 26 Apr. 2026
Published online: 1 May 2026.

Abstract: The study aimed to identify the level of academic procrastination and addiction to electronic games among a sample of Jordanian university students after the COVID-19 pandemic. The study applied a tool to a sample of (940) male and female students randomly selected. The results showed that the level of academic procrastination and addiction to electronic games among Jordanian university students was high. Furthermore, there was a positive correlation between procrastination and addiction to electronic games, and statistically significant differences were attributed to the effect of gender and specialization variables, in favor of males. However, there were no statistically significant differences attributed to the effect of gender and specialization variables on the level of addiction to electronic games among students.

Keywords: Academic procrastination, video game addiction, COVID-19 pandemic, Jordanian university students.

1. Introduction

The concept of academic procrastination and its effects on individuals is an important topic that has preoccupied scholars and researchers in the field of education and various humanities. This is due to the serious effects and consequences it has on the lives and futures of individuals, whether individuals or groups. The concept of academic procrastination is a common and widely used concept, which means delaying doing something that should be done because the individual does not want to do it at the present time [1].

Therefore, many people suffer from it in their lives by postponing their responsibilities or tasks required of them at a specific time, which affects the students' effectiveness and motivation to learn. One of the most important reasons for academic procrastination is a feeling of weak self-confidence and low self-esteem, which results in the generation of negative thoughts, feelings of helplessness, deficiency, excessive shyness and increased psychological pressure, which affect their academic achievement during the stage of preparation and preparing them as productive human energy [2].

The COVID-19 pandemic has exacerbated learning outcomes, having profound effects on the educational process as a result of the ongoing shift in educational policy. This has forced all educational institutions to change their pedagogical approach to education on the ground [3]. Most students spend long periods of time playing video games, which may be equal to the time they spend studying at school. These games cause health risks and effects, as their effects are reflected in brain cells and lead to psychological and nervous stress [4].

Electronic games may affect students in various social, healths, educational and other aspects, and cause them to develop various bad behavioral habits such as isolation from society, and other health problems such as neck, wrist and back diseases as a result of sitting for long hours on electronic devices due to their awareness of the time they spend [5]

Theoretical Framework: Academic procrastination is a modern concept in psychology that addresses the academic aspect of students' achievement. Numerous studies have examined procrastination behavior. These studies have addressed students' academic procrastination due to the academic tasks assigned to them, including completing homework, preparing projects, and preparing for tests or lectures [6].

The clear and significant impact of procrastination on the academic process, represented by the unnecessary postponement, delay, or neglect of certain tasks that must be completed, and the postponement of desired behavior to a later time, may be due to the spread of the phenomenon of video game addiction, especially among adolescents and young people [7].

Faisal and Saleh [8] provided examples of tasks that students procrastinate, such as postponing studying, completing homework, and exams, avoiding organizing study materials instead of starting them, avoiding participating in school and social activities, avoiding professional work, avoiding participating in classroom activities, and avoiding completing homework as a group.

Electronic games: The term video game addiction is the most widely used among researchers to describe excessive play. It is

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known as a technological commercial commodity, as it is a small part of the new world emerging from modern digital culture. Although it is fun and entertaining, it affects the individual and society in various ways. Video game addiction has become a scourge of the age that threatens the stability and future of young and old, as the obsession with it has destroyed the lives of many people due to their constant preoccupation with playing and neglecting their family and work duties [9].

Electronic game addiction is considered a recreational activity that is most commonly used in the field of various games, and the basic element in it is the feeling of the image produced and issued by the various devices of the automated media system used, through the use of the hand with the eye, i.e. visual and motor coordination [10].

The American Association for Psychiatric Disorders (AAPD) has published diagnostic criteria for Internet gaming disorder, which is defined as repetitive use of the Internet to engage in gaming, leading to significant impairment or distress and medical problems [11]. Despite the benefits that some electronic games may include, addiction to them causes many risks and negatives [12].

Many studies have been conducted on the prevalence of academic procrastination among students and its impact on their academic achievement, and that procrastination behavior has a significant impact on academic achievement (Johnson, Green, and Clover [13]. Many researchers and interested parties have conducted studies on academic procrastination and addiction to electronic games, such as the study of Fadl [12] the results of which showed that there is a statistically significant negative relationship between academic procrastination and time management skills. The study also found a significant negative relationship between academic procrastination and satisfaction with study. The results of the study of Al-Nawab and Muhammad [14] also showed that the individuals in the research sample have study habits and use them when dealing with their study materials, and that the study habits of females are more than males. The results also proved the existence of statistically significant individual differences in academic achievement among the research sample according to the gender variable, and the absence of a difference between males and females in the degree of academic procrastination resulting from the existence of a significant negative correlation between study habits, motivation towards achievement and academic procrastination, which indicates that the more study habits are used, the less procrastination.

In the field of electronic games, Othman's [15] study found a statistically significant negative relationship between academic procrastination and time management skills. The study also found a significant negative relationship between academic procrastination and satisfaction with study.

Bahloul's [16] study found that the most commonly practiced type of games is combat, as they prefer them online via Face book. Among the motives for university students to use electronic games are entertainment and recreation, forgetting the pressures of study, in addition to the high quality of recently popular games. Among the potential negative effects on university students are their immersion in virtual reality and social isolation, in addition to their immersion as a clear effect on university students. Among the positive effects, we find that educational games led to an increase in their academic achievement, while negative effects led to a decrease in their concentration. As for Ahmed's [17] study the results concluded that electronic games have a prominent role in students' creativity in the field of developing thinking and analysis skills, which helped them to embrace learning

Video game addiction is a serious behavioral problem in itself, regardless of its other consequences, contrary to the prevailing belief that this type of addiction could be merely a symptom of depression, anxiety, social isolation, or various fears that cause poor academic achievement. Procrastination is defined as a behavior that involves postponement and delaying the completion of academic assignments in a way that leads to their accumulation and difficulty completing them later [18]. In light of this, we must shed light on a segment of society, namely university students. Therefore, the current study seeks to identify the phenomenon of academic procrastination and video game addiction and to clarify the relationship between them.

2. Study problem:

Students are exposed to a lot of pressure throughout their lives, and the effects of this pressure are reflected in their life events, especially the important stage for all students, which is the university study stage, as negative pressures in particular affect the physical condition of the person, and also affect his development and progress, and make him lose his sense of time, and the importance of completing academic tasks and procrastination in them, and this is what is called academic procrastination.

Studies and research have proven that academic procrastination in particular is increasingly prevalent among students, especially university students, who are fully responsible for completing academic tasks after completing previous academic stages, in which both parents and teachers share responsibility. They face constant pressure due to being asked to submit research and reports or study for exams. Therefore, some of them may resort to postponing these tasks until the last minute, which leads to an increase in the pressures placed on them, affecting their educational and even psychological aspects [19].

The problem of the current study crystallized from the reality that the entire world is experiencing due to the effects of the Corona virus on students, which left an impact on all aspects of daily life, especially the academic aspect, and on all segments

of society, from ordinary students to school or university students [20]. This pandemic also led to a change in several aspects related to education, such as not attending universities most days due to blended learning and staying at home for long periods. Consequently, students at all levels began to focus on electronic games to occupy their time, as the popularity of electronic games among students has become an interesting phenomenon at the present time. Due to the isolation that crystallized in light of the Corona pandemic, the phenomenon of the widespread use of electronic games emerged, which spread rapidly among society as a whole and students in particular [21].

Which had a great impact on students in postponing their schoolwork and the emergence of what is called academic procrastination as a result of this phenomenon. Therefore, the problem of the study is represented in identifying the reasons for academic procrastination among students and its relationship to electronic games. to identify the reasons for academic procrastination among students and its relationship to electronic games.

1. What is the level of academic procrastination among Jordanian university students from their point of View?
2. What is the level of addiction to video games among Jordanian university students, from their point of view?
3. Is there a relationship between the level of academic procrastination and addiction to video games among Jordanian university students?
4. Do the levels of academic procrastination and video game addiction differ according to gender and specialization?

Study objective: The current study aimed to identify the level of academic procrastination among Jordanian university students, identify the level of addiction to electronic games among students, investigate the relationship between academic procrastination and addiction to electronic games among Jordanian university students, and know the extent of variation in the level of academic procrastination and addiction to electronic games according to gender, specialization, academic year, and academic level.

3. Importance of the study:

The importance of the study lies in the following:

- **Theoretical importance**: The importance of the study stems from the importance of its topic and the group it targeted, and its treatment of a topic that serves those working in the educational field, including teachers and counselors. Therefore, we hope that the study will be a qualitative addition to the field of psychological research related to academic procrastination and its relationship to electronic games, which will help in providing a guidance service based on the results of the study. The results of this study can be considered a new addition to the Arab library in the field of specialization.
- **Practical importance**: The practical importance stems from the fact that it will provide some data and information that can be used by decision makers and policy-making specialists to help this group confront the problems they face, as well as the importance of the age group in which the researcher is conducting the research.

4. Study methodology:

Study community and sample: The study population consisted of all students who are in university seats, and from various scientific and humanities specializations in Jordanian universities for the second semester of the academic year 2023-2024, where an electronic questionnaire on academic procrastination and addiction to electronic games was distributed to all Jordanian universities. The study sample consisted of (940), distributed among (535) male students and (405) female students from various specializations.

Study tools: To achieve the study objectives, an academic procrastination scale and an electronic game addiction scale were developed:

1- Academic procrastination scale: The academic procrastination scale was developed based on theoretical literature and previous studies. If we refer to the following scales as a study [12], a study [21] and [22] a study [23] and benefit from that in determining the paragraphs of the scale and its dimensions, the scale consists primarily of (33) paragraphs distributed over 3 dimensions, which are (the behavioral dimension, which consists of 13 paragraphs), (the cognitive dimension, which consists of 7 paragraphs), and (the emotional dimension, which consists of 12 paragraphs). The researcher verified validity and reliability through:

2- Video Game Addiction Scale: The scale was developed based on theoretical literature and previous studies, such as the Video Game Addiction Scale by Presta, el al [25] and the Video Game Addiction Scale by Ayed and Al-Assimi [21]. The scale consists of 22 items to measure the level of addiction to video games among a sample of Jordanian university

students:

Validity of the arbitrators: The scale was presented to a group of specialists in the field of psychological and educational counseling, where (10) arbitrators reviewed the scale, where they were asked to add, delete or modify any paragraph of the scale, and to provide a set of comments and observations on it. Some paragraphs were reformulated and based on what was agreed upon by more than 80% of the arbitrators, the academic procrastination scale in its final form consists of (33) paragraphs distributed over (3) dimensions, which are (the behavioral dimension consisting of 13 paragraphs), (the cognitive dimension consisting of 7 paragraphs), and (the emotional dimension consisting of 12 paragraphs). As for the electronic games addiction scale: The scale consists of 22 paragraphs.

Construct validity: The construct validity of the academic procrastination and game addiction scale was verified by distributing the scale to a survey sample consisting of (30) students from the study community and outside its sample. The Pearson correlation coefficient was calculated between each domain of the scale and the total score, where it ranged between (0.48-0.89) at the significance level (0.01). The construct validity of the electronic games addiction scale was also verified by distributing the scale to a survey sample consisting of (30) students from the study community and outside its sample. The Pearson correlation coefficient was calculated between each domain of the scale and the total score, where it ranged between (-0.51-0.82) at the significance level (0.01). This gives a high indication of high internal construction coefficients, and also indicates high and sufficient validity indicators that can be trusted in applying the current study.

Reliability by repetition: The reliability coefficient was calculated by repetition by applying it to the exploratory sample after two weeks, which numbered (30) students from outside the study sample and within its community, and reapplying it after two weeks to the same sample, and Table (1) shows that.

Reliability by repetition method Cranach's alpha coefficients Dimension Number Academic procrastination

Table 1: Cranach's alpha coefficient and reliability by the test-retest method for the scale of academic procrastination and addiction to electronic games

Number	Field	Cranach's alpha coefficients	Stability by repetition
Academic procrastination			
1	Behavioral	0.77	0.86**
2	Cognitive	0.83	0.89
3	Emotional	0.85	0.84**
Total score		0.87	0.92 **
Addiction to electronic games		0.83	0.83

** The correlation coefficient is statistically significant at the significance level (0.05).

Correction standard

A five-point Likert scale was adopted (5=strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree) and a classification plan was used based on the average computerized scores of the scale belonging to three categories: low (1-2.33), medium (2.34-3.67), high (3.68-5).

The scale was calculated using the following equation:

The upper limit of the scale (5) - The lower limit of the scale (1) divided by the required categories (5) 5 - 1 = 5 / 5 = 0.80/ Then, the answer (0.80) was added to the end of each category.

5. Presentation and discussion of results

1. What is the level of academic procrastination among Jordanian university students from their point of View?

To answer this question, the arithmetic means and standard deviations were extracted for each paragraph of the sample members' performance on each dimension and then on the study's performance as a whole. Table (2) shows the arithmetic means and standard deviations for the paragraphs and sub-dimensions of the scale**.**

Table 2: Arithmetic means and standard deviations for the scale of academic procrastination and addiction to electronic games

Field	Mean	SD	Rank	Degree
Behavioral	3.88	0.72	1	High
Emotional	3.80	0.61	2	High
Cognitive	3.65	0.65	3	Middle
Tootle	3.81	0.66	**High**	

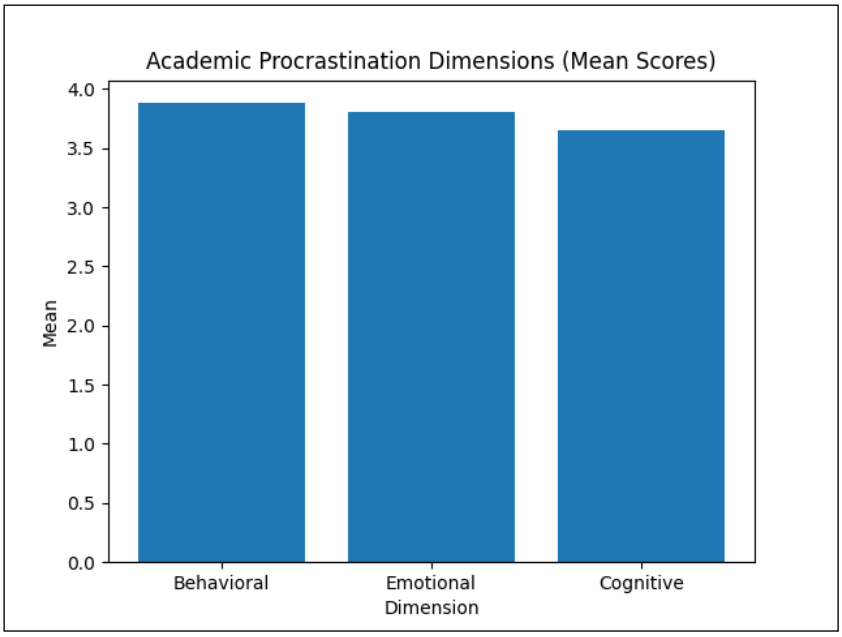

Fig. 1: Academic Procrastination (Bar Chart)

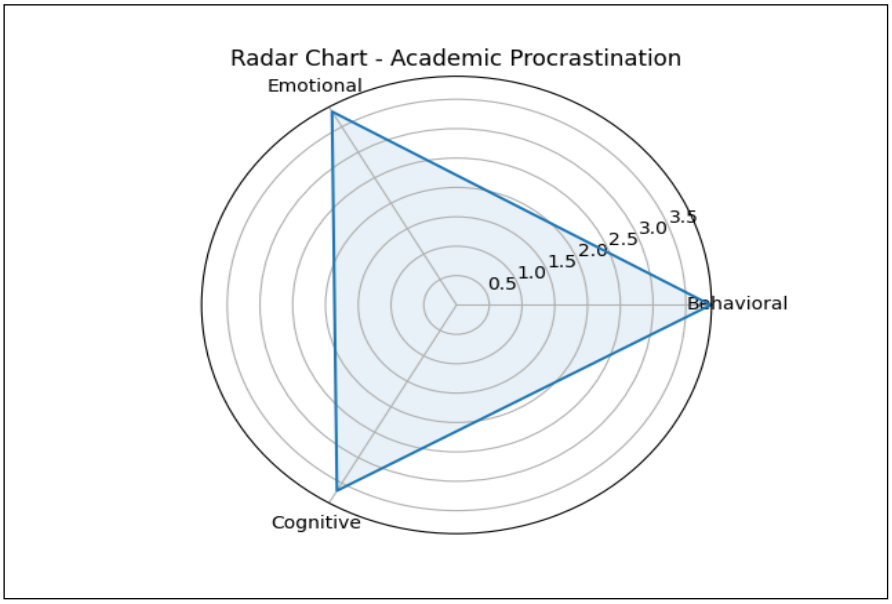

Fig. 2: Academic Procrastination (Radar Chart)

Table and Fig. (1,2) shows that the arithmetic means and standard deviations of academic procrastination were between (medium-high), ranging between (3.88-3.65) and a standard deviation between (0.61-0.72). The students' means after the Corona pandemic were high, which means that students practice academic procrastination, which refers to the voluntary postponement of completing academic tasks within the desired or expected time, despite the student's belief that postponing his completion of those tasks and duties on time is negatively affected by this postponement. This may be due to a low level of sense of responsibility, poor time management, fear of failure, weak ability to focus on tasks, and perfectionism. In addition, self-competence and self-organization show strong inverse relationships with academic procrastination, as this study agreed with the study [26], [12] and the study of [7],[25], who indicated in their results that academic procrastination came from what Medium to high.

2. What is the level of addiction to video games among Jordanian university students, from their point of view?

To answer this question, the arithmetic means and standard deviations were extracted for each paragraph of the scale, and Table (3) shows this.

Table 3: Arithmetic means and standard deviations of the electronic games addiction scale among Jordanian university students.

N	Paragraph	Mean	SD	Rank	Degree
13	I love video games.	4.42	0.74	1	High
1	It is better to play electronic games than traditional games.	4.31	0.82	2	High
19	I get upset when the internet goes down.	4.21	0.92	3	High
12	I am attracted to video games because of their pictures, colors, and sound effects.	4.18	0.89	4	High
16	Eager to play video games	4.17	0.90	5	High
15	I prefer video games because I have the means to play them.	4.06	0.69	6	High
2	I spend most of my time playing video games.	4.03	0.90	7	High
3	I find it hard to resist my urge to play video games.	3.97	0.86	8	High
18	Video games affect my academic achievement.	3.97	0.96	9	High
5	I tend to play traditional and group games on electronic games.	3.92	0.55	10	High
7	The best educational video games.	3.88	0.85	11	High
11	My family criticizes me because I am busy playing video games.	3.88	0.90	12	High
10	The best electronic games that develop intelligence.	3.76	0.96	13	High
4	I only play video games in my spare time.	3.67	0.82	14	High
21	I talk to my friends about video games.	3.66	0.96	15	Middle
17	I play video games anytime I want.	3.63	0.91	16	Middle
22	My friends criticize me for being addicted to video games.	3.56	0.77	17	Middle
14	I play video games because they introduce me to new friends.	3.55	0.95	18	Middle
20	I suffer from obesity due to not exercising	3.45	0.66	19	Middle
8	I play electronic fighting games	3.29	0.76	20	Middle
6	I don't stop playing video games if I get tired	3.27	0.81	21	Middle
9	The best electronic fighting games	2.65	0.82	22	Middle
Tootle		3.78	0.41		High

Table and Fig (3) shows that the arithmetic means and standard deviations of the level of addiction to electronic games were between (average - high), ranging between (3.27 - 4.41) and a standard deviation between (0.55 - 0.96). The results showed that students' practice of electronic games was high, and this can be attributed to the circumstances and effects left by the Corona pandemic, which forced everyone to stay at home, which contributed to many students resorting to preoccupying themselves with electronic games that kill time for them, and whose impact continued after the pandemic, as students became accustomed to taking electronic devices as an alternative friend, which reflected this on students' relationships inside and outside their homes, as it had a social, psychological and health impact. The results of this study are consistent with studies by [19] the study by [16] and the study by [15].

3. Is there a relationship between the level of academic procrastination and addiction to video games among Jordanian university students?

To answer the question, Pearson's correlation coefficient was calculated, and Table (4) shows that.

Table 4: Correlation between dimensions of academic procrastination and video game addiction

Academic procrastination	Video game addiction
Behavioral	0.347*
Emotional	0.305 **
Cognitive	0.565 **
Tootle	0.414

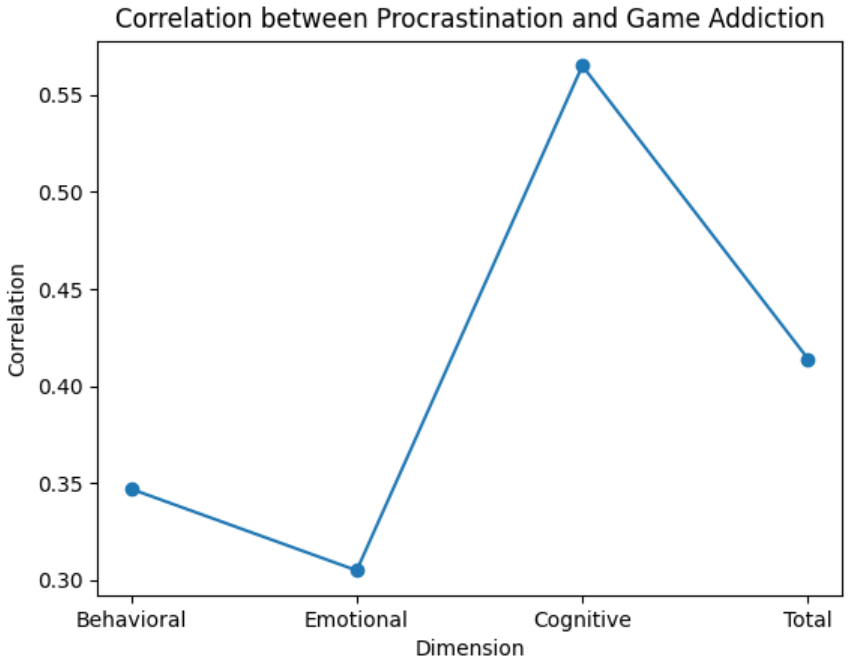

Fig. 3: Correlation between procrastination and Games Addiction

Table No. (4) Shows that there is a direct/positive correlation between academic procrastination and addiction to electronic games among Jordanian university students, as all correlations are statistically significant, meaning that the more academic procrastination increases, the more addiction to electronic games increases. This can be attributed to the student voluntarily postponing tasks and duties that are required to be implemented within a specific time, knowing the negative consequences of procrastination, as a result of his lack of sense of responsibility and not managing time properly, which leads to his feeling of failure and weak motivation to achieve due to preoccupation with distractions that waste his time and cause him to be preoccupied with them, such as electronic games. Procrastination leads to the spread of some negative habits and phenomena in society, such as laziness, apathy and lack of commitment. In light of the elements of suspense and attraction that electronic games provide, this pushes students to practice them and may reach the point of addiction to them. In return, you find him practicing academic procrastination in order to play electronic games. The results of this study are consistent with the results of the study by Bahloul [16] and the study by Othman [15]. Which showed a statistically significant relationship between video game addiction and procrastination among students.

4. Do the levels of academic procrastination and video game addiction differ according to gender and specialization?

To answer this question, it has been divided into the following sections:

A. Are there statistically significant differences at the significance level (α≥0.05) in academic procrastination attributed to the gender variable (males - females)?

To answer this question, the (t) test was used to examine the differences between the performance averages on the statistical significance of academic procrastination among students in Jordanian universities according to the social variable, and Table (5) shows that.

Table 5: Results of the (t) test for averages according to the gender variable

Field	Type	Number	Mean	SD	DF	Value (t)	Significance level
Behavioral	Males	535	3.83	0.75	940	**0.93**	0.35
	Females	405	3.79	0.87			
Emotional	Males	535	3.41	0.53	940	**3.31**	0.00
	Females	405	3.55	0.37			
Cognitive	Males	535	3.80	0.46	940	**1.67**	0.09
	Females	405	3.76	0.69			
Total Score	Males	535	3.69	0.67	940	0.78	0.49
	Females	405	3.70	0.73			

Table (5) shows that academic procrastination among Jordanian university students does not differ in the behavioral and emotional field and the total score according to gender between males and females, as the t-values reached (0.93, 1.68, 0.68), which is not statistically significant. However, academic procrastination differs in the cognitive field, as the t-value reached (3.31), which indicates that females suffer from academic procrastination in the cognitive field more than males, and this may be due to their expressing feelings of regret for academic matters, and also their intention to postpone assignments, and they set high standards for achievement, and they belittle the tasks assigned to them, and they find it difficult to make decisions in performing the tasks assigned to them.

B- Are there statistically significant differences at the significance level (α≥ 0.05) in academic procrastination attributed to the specialization variable (humanities - scientific)?

To answer this question, the (t) test was used to examine the differences between the performance averages on the statistical significance of academic procrastination, among Jordanian university students according to the specialization variable, and Table (6) shows that.

Table 6: T-test results for the average performance of academic procrastination among students according to the specialization variable

Field	Type	Number	Mean	SD	DF	Value (t)	Significance level
Behavioral	Humanitarian	510	4.00	0.62	940	**6.99**	0.00
	Scientific	430	3.84	0.86			
Emotional	Humanitarian	510	3.52	0.52	940	**1.67**	0.049
	Scientific	430	3.45	0.30			
Cognitive	Humanitarian	510	3.79	0.78	940	-2.37	0.019
	Scientific	430	3.30	0.83			
Total Score	Humanitarian	510	3.77	0.38	940	5.30	0.00
	Scientific	430	3.40	0.44			

It is clear from Table (6) that academic procrastination among Jordanian university students differs in all dimensions and the total score according to the specialization between the humanities and scientific specializations, and in favor of the humanities specialization to a large degree, as the t-value reached (5.30) in total academic procrastination, as well as in the behavioral and cognitive field in favor of students in the humanities specializations, as the t-value reached (6.99, 1.67) respectively, while the differences were in favor of the scientific colleges in the emotional field, as the t-value reached (2.37), which indicates that students in the emotional aspect in the scientific specializations are more procrastinating, and perhaps the students in the humanities colleges are less academically procrastinating because they study humanities specializations, which is reflected in their emotional side, while the students of the scientific colleges are more apprehensive about postponing tasks, which increases their anxiety, and they have more interest in completing academic tasks on time, and this is because the scientific specializations do not require postponing study in them because most of them are laboratory-based and require study, concentration, and not postponing them. This study agrees with the study of [25].

C- Are there statistically significant differences at the significance level (α≥ 0.05) in addiction to electronic games attributed to the variable of gender and specialization (Males, Females)?

To answer this question, the (t) test was used to examine the differences between the performance averages on the statistical significance of addiction to electronic games, among Jordanian university students according to the gender variable, and Table (7) shows that.

Table 7: Results of the (t) test for the average performance of addiction to electronic games among students according to the variable of gender and specialization

Variable	Type	Number	Mean	SD
Gender	Males	535	3.71	0.41
	Females	405	3.65	0.41
Specialization	Males	535	3.67	0.44
	Females	405	3.54	0.36

Table (7) shows the presence of apparent differences in the arithmetic means and standard deviations in the level of addiction to electronic games among Jordanian university students for the variable (gender and specialization). To show the significance of the statistical differences between the means, the two-way variance analysis was used as shown in Table (8).

Table 8: multiple variance analysis of the effect of the variables (gender and specialization) on the level of addiction to electronic games among Jordanian university students.

Source of Variance	MS	DF	Mean Squares	F	Statistical Significance
Gender	0.192	1	0.192	1.111	0.293
Specialization	0.167	3	0.056	0.325	0.807
Error	25.862	150	0.172		
Tootle	2014.77	155			
Corrected	26.217	154			

Results related to the gender variable: Table (8) indicates that there are no statistically significant differences at the level (α≥0.05) attributed to the effect of the gender variable on the level of addiction to electronic games among Jordanian university students.

Results related to the specialization variable: The results shown in Table (8) indicate that there are no statistically significant differences at the significance level (α≥0.05) attributed to the effect of the specialization variable on the level of addiction to electronic games.

Discussion of the results related to the gender and specialization variables, as the results showed the absence of statistically significant differences at the significance level (α≥0.05) attributed to the effect of the variables (gender and specialization) on the level of addiction to electronic games among Jordanian university students. This result can be attributed to the fact that university students, males and females, from different specializations, may have similar circumstances and gender, which contributed to the absence of statistically significant differences attributed to the variables (gender and academic specialization).

Recommendations:

In light of the results, the study recommends the following:

- Holding seminars and conferences to educate students about the dangers of academic procrastination and video game addiction, given the risks they pose to both the students themselves and the surrounding community.
- Using preventive and therapeutic guidance programs to combat academic procrastination and video game addiction to ensure students maintain their motivation to study.
- Directing the media to warn against the excessive use of video games and highlighting their negative effects on students' personalities.
- Incorporating awareness-raising activities into the curriculum to highlight the dangers of video game addiction and its harmful effects on students and their academic future.

References:

[1] Hood, M. and Saini ,A.(2016) . Academic procrastination : A critical issue for consideration , *Indian Journal of Applied*

Research , 6 (8) ,98-99 .

[2] Al-Ahmad, A and Yassin, F (2018). Academic procrastination and its relationship to psychological confidence among a sample of students in the Psychology Department at the Faculty of Education at Damascus University, J*ournal of the Association of Arab Universities for Education and Psychology*, 016 (1), 245-263.

[3] Al-Hadlaq, A (2013). The positives and negatives of electronic games and the motives for practicing them from the point of view of higher education students in Riyadh, *Ain Shams University - Faculty of Education - Egyptian Reading and Knowledge Association*, (2) 155-212.

[4] Brodin, J (1998). Implementation of new technology for persons with mental retardation and the importance of staff education, *International Journal of Rehabilitation Research,* 21(2):p 155-168, June 1998.

[5] Spinkes ,N.(2016). Problematic Internet use and Psychosocial well-being among MMO players, *Computers in Human behavior*, 25(6), 1312-1391.

[6] Ferrari , J & Scher ,S.(2010). Toward an Understanding of Academic and Nonacademic Tasks Procrastinated by Students: The Use of Daily Logs, *Psychology in the school*, 37 (4). P359-366.

[7] Sawalha, A (2018). Academic procrastination and its relationship to the concept of academic self among a sample of students at Irbid National University, *Al-Quds Open University Journal for Educational and Psychological Research and Studies*, 9 (26), 161-175.

[8] Faisal, S and Saleh, A (2020). Procrastination patterns and their relationship to perceived self-efficacy among academically failing students, *Amarbak Journal*, 7 (22), 151-174.

[9] Al- Qahtani, R (2020). The impact of playing electronic games on primary school children from the mothers' point of view, *Journal of Young Researchers in Educational Sciences*, (6), 778-819.

[10] Aqoun, H and Baka, A (2023). *Video games and their impact on the level of academic achievement and some sports activities among students and adolescents, 15-18 years old*, unpublished master's thesis, University of Kasdi Meriah, Ouargla, Algeria

[11] Aqib, B, and Al-Razi, F (2019). *The impact of electronic games on adolescents: A field study on a sample of Al-Kindi Secondary School students*, Master's thesis, University of Mohamed Seddik Ben Yahia, Jijel, Algeria.

[12] Fadl, T (2019). Academic procrastination and its relationship to time management skills and study satisfaction among a sample of university students, *Arab Studies in Education and Psychology*, 15, 330-287.

[13] Jonson ,E, Gren ,K & Kluver ,R (2010).Psychometrics of the revised procrastination in ventory research, *higher education*, 141(2), 269-279.

[14] Al-Nawab, N and Muhammad, A (2022). Study habits, motivation towards achievement, and its relationship to academic procrastination among university students, *Journal of the University of Diyala*, 60 (10), 303-326.

[15] Othman, A. (2018). The impact of electronic games on the behavior of upper preparatory school students, *Journal of the Faculty of Education*, Assiut University, 34 01, 126-160.

[16] Bahlol, S (2021). The Effect of Electronic Games on Academic Achievement, *Journal of Humanities and Social Sciences, University of Arab, Tebessa: Algeri*a, 2 (2), 34-44.

[17] Ahmed, R (2020). The relationship between adaptive cognitive schemas in individual service and electronic game addiction among a sample of female university students: A predictive study, Faculty of Social Service - Assiut University, *Journal of Studies in Social Service and Humanities* 51 (1) 342-365.

[18] Faisal, S and Saleh, A (2020). Procrastination patterns and their relationship to perceived self-efficacy among academically failing students, *Amarbak Journal*, 7 (22), 151-174.

[19] Ahmed, Z.(2023) *The Educational Impact of Electronic Games, International Virtual Conference: The Cultural and Cognitive Impact of Electronic Games on Student Behavior*, University of Ghardaia, Tunisia

[20] Al- Qahtani, R (2020). The impact of playing electronic games on primary school children from the mothers' point of view, *Journal of Young Researchers in Educational Sciences*, (6), 778-819.

[21] Ayed, S, and Al-Assimi, M. (2013). *Internet addiction and its relationship to psychosocial adjustment among high school students in Riyadh*, unpublished master's thesis, Naif Arab University for Security Sciences, Riyadh, Saudi Arabia.

[22] Alrashdan, H., Darawsheh, N., Almheiri, A., Aljanabi, Y., Al-Khataybeh, M., & Al-Quran, N. (2025). The Effect of Administrative Bullying on the Quality of Education. *Educational Process: International Journal*, 18, e2025515. https://doi.org/10.22521/edupij.2025.18.515

[23] Ahmed, A (2008). *Academic procrastination and its relationship to achievement motivation and study satisfaction among students of Khalid University in the Kingdom of Saudi Arabia*, Zagazig University, Egypt.

[24] Presta, V; Guarnieri, A.; Laurenti, F.; Mazzei, S; Arcari, M.L.; Mirandola, P.; Vitale, M.; Chia, M.Y.H.; Condello, G.; Gobbi, G.(2024) The Impact of Digital Devices on Children's Health: A Systematic Literature Review. *J. Funct. Morphol. Kinesiol.* , *9*, 236. https://doi.org/10.3390/jfmk9040236

[25] Darawsheh, N, Alrashdan, H, Alzawaideh, M, Ajouly, T,Almheiri,A, Aldarmaki, I (2024). Cyber Attacks and its Implication to National Security: The Need for International Law Enforcement, *Pakistan Journal of Criminology*, 16(3), 851–864

[26] Darawsheh, N , Alrashdan, H , Al-Khataybeh,M , Al Ajmi, H , almheiri, A , Shaglof,A , Aldarmaki, I , BaniYounes, Z and Aidi,R .(2026). The Degree of Impact of Organizational Intelligence Obstacles in the Digital Age, Journal of Statistics Applications & Probability, *An International Journal*, 14(6), 985-995