Impact of Video Games Addiction on Academic Achievement among Secondary School Students at Sohag City

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Abstract

Background: Videogame addiction has become a serious public health issue with increased prevalence. **Aim**: to assess the prevalence and impact of video games addiction on academic achievement among secondary school students. **Design:** A descriptive research design was used to conduct this study. **Setting:** The study was conducted in four randomly selected public secondary schools at Sohag city. **Sample:** A stratified random sample used to collect (400) of secondary school students. **Tools:** Three tools were used for data collection. **Tool (1):** interview questionnaire include two parts; part I: Demographic data of secondary school students part II: Questions related to students playing video game. **Tool (2)**: Gaming Addiction Scale (GAS). **Tool (3)** Academic Performance Scale (APS). **Results:** There is a highly statistically significant strong negative correlation between score of video game addiction and score of academic performance r=0.121 p=0.015. **Conclusion:** Excessive video game playing negatively influences student academic performance. **Recommendation:** Further research is required for more depth assessment of the prevalence of video game addiction among younger generation and its effect on their academic achievement.

Key Words: Academic achievement, Game addiction, Prevalence & School students

Introduction

With the rapid expansion and development of the internet in the early 2000s, online gaming became more widely available. Recent research suggests that this growth rate might potentially be enormous .In 2014, 1.8 billion individuals played video games on computers on a regular basis. This number increased to 2 billion in a span of only six years. One of the most popular ways for relaxation is to play games, either by alone or with others (**Şalvarlı & Griffiths ,2022; Vuong et al., 2021**).

World Health Organization (WHO) recently added the term "gaming disorder" to the 11th International Classification of Diseases (ICD-11) (**WHO,2018**). According to the WHO defined it as lack of control over gaming behavior, prioritizing gaming over other activities to the point where it trumps interests and daily tasks, and increasing or continuing gaming time regardless face of unwanted outcomes (**Alhamoud et al ., 2022**).Adolescence is a special time in a person's life where adolescents grow quickly in all areas physical, cognitive, and psychological this has an impact on their thoughts, feelings, and decision-making processes, but most significantly it affects how they engage with the outside world (**WHO,2022**).

Academic achievement is the capacity of an individual to reach a goal in a school environment by skill, strength, or effort. It also refers to the ability of

successfully complete and eduational work (**Sideridis &Alamri,2023**).Academic success is significant since it is usually a requirement for admission to college or employment, making it a crucial component of students' future academic and professional careers (**Liu et al., 2020**). Playing active video games on a regular basis can improve both physical and mental well-being (**Santos et al., 2021**). Additionally it can enhance students' academic achievement, physical condition and cognitive development (**Ibáñez et al; 2020 Williams & Ayres 2020 ; Rojas et al., 2021**).

Academic, social, professional and functional impairment are possible manifestations of detrimental health effects related to video games as well as increased risk of mental health issues such as anxiety, sadness, irritability, aggression and sleep disturbances. In addition, neglecting oneself, eating poorly and a sedentary lifestyle (**King et al., 2020**).

The first respondent to mental health concerns and challenges relating to children's and adolescents' use of media are school nurses, pediatric nurses, licensed nurses and other health care providers (**Atia et al., 2020**).The nurses play important role in detecting , examination, preparing optimal educational programs, contact with mental health professionals and provide training. Additionally nurses play a crucial role in the multidisciplinary team that gaming problems among adolescents to sustain academic

achievement and welfare in affected adolescents**(Johnson& Edwards,2020)**.

Significance of the study

Video games players around world excessed two billion and the number in (2023) is likely to surpass three billion and 3-4% of them are considered addicted to video games .This indicates that there may be up to 60 million players suffer from gaming addiction **(Stevens et al., 2021)**. Excessive smartphone use and addiction to games negatively affected students basic skills and cognitive abilities needed for academic success **(Sunday et al.,2021)**. The prevalence of problematic gaming disorders among a sample of Egyptian adolescents was 61.3 % of them were gaming addiction **(Khalil et al., 2022).**

Aim of the study

The study aimed to assess the impact of video games addiction on academic achievement among secondary school students.

Research questions

- Dose there is increase in the prevalence of video gaming addiction among secondary school students at sohag city?
- Dose the video games addiction affect the secondary school students academic achievement ?

Subjects and Method
Research design

A descriptive research design was used in this study.

Setting

The study was conducted in randomly selected four public high secondary schools at Sohag city namely (Sohag secondary school for girls, Military Secondary School for boys, Asmaa bent abou baker School for girls and Elshaheed Tayyar Mohamed kamel secondary School for boys) .Sohag city contained 20 governmental general secondary schools .The researcher selected 20% of the total number of schools by simple random sample .

Subjects

A sample of (400) of secondary school students were selected randomly from the previous mentioned settings where a class was considered the last sampling unit .The inclusion criteria were (children enrolled in secondary school from, both sexes and their age (15 - 18 years).

Sampling technique: A Stratified sampling technique was used in the recruitment of this study subjects as follows:

From the educational administration of sohag city, the researchers randomly selected four of governmental general secondary schools (two boys and two girls schools)and from each selected secondary schools researchers taken 10% of total number of students and divided each school to grads (1-3) and select from each grade from four schools available students in the classes where consider the classes as last sampling unit.

Tools for data collection

Tool I: Structured interview questionnaire: it includes two parts:

Part (1) Demographic data about secondary school students:

It was developed by researcher and includes (student's age gender, secondary grade, residence, parents' education and family income).

Part (2) Questions related to students they playing video games:

It was developed by **(Usman &Sayed,2017)** include(10)questions as (1) did you like to play video or computer games**?**(2) number of years playing video games? etc.

Tool II: Gaming Addiction Scale (GAS):

Gaming Addiction Scale (GAS) was developed by**(Lemmens et al., 2009)**. The Arabic version(**Asaad et al .,2019**) of the 21 items was used to asses video and computer games addiction among adolescence . The GAS consists of 21 items, each of which is assessed on a five-point Likert scale from 1 (never) to 5 (very often). Each item assesses a distinct domains of gaming addiction, such as salience, tolerance, mood alteration, relapse, withdrawal, conflict, and problems .

Scoring system

Gamers are divided into four categories by the GAS: (1) Addicted gamers (those whose score three or above on the final four items: conflict, withdrawal, relapse and issues) (2)Problem gamers (those whose score three or above on two or three of the four final items) (3) Engaged gamers (scoring three or more on the first three things (salience, tolerance and mood modifications) (4) Normal gamers (those not categorized as addicted, problem or engaged gamers). but who did not score three or above on more than one of the final four items).

Tool III: Academic Performance Scale(APS):

Academic performance scale (APS) was developed by **(McGregor et al., 2015)** consist of (8)items used to assess academic performance of students using the 5- point scale "strongly agree "is scored (5);"agree" is scored(4);"neutral is scored (3)" disagree" is scored(2) and "strongly disagree" is scored (1).

Scoring system

Students who scored (33-40)was considered excellent performance and those who scored (25-32)was considered good performance and those who scored (17-24)was considered moderate performance and those who scored (8-16)was considered poor performance.

Pilot study

A pilot study was carried out on (40 of secondary school students) to test the clarity of instructions, the format of questionnaire and relevance of the tool used and to estimate the exact time needed to complete the questionnaire. The students who were included in the pilot study were included in the sample .

Validity of tools

The content validity of the tools was tested its comprehensiveness, appropriateness, clarity and relevance were reviewed by five experts in pediatric nursing field .Modifications were made according to the expert's judgment.

Reliability of tools

Reliability of the study tools was tested using Cronbach Alpha coefficients. The study tools revealed reliability at Cronbach's alpha 0.883 to Academic performance and 0.928 to Game addiction level.

Administrative phase

An official letter of approval was obtained from the Dean of the Faculty of Nursing at Sohag University to the head of the of Central Agency for Public Mobilization and Statistics (CAPMAS), Sohag branch and Vice minister of the Ministry of Education in Sohag who they gave an official approval to the director of learning system at sohag city to conduct the study. The letter included a permission to carry out the study and demonstrate the purpose and the nature of the study.

Ethical considerations

Research proposal was approved by the Ethical Committee in the Faculty of Nursing, Sohag university and written permission obtained from directorate of education to conduct the study after explaining the nature and aim of the study .It also clarified that there is no risk for students during application of the research and have a right to participate or not in the study and withdraw from the study at any time without giving any reasons confidentiality and anonymity of students assured. Also privacy of students' information is considered during collection of data.

Fieldwork

Data collection for this study was carried out between November 2023 to January 2024 after an official agreement from the Vice Minister of the Ministry of Education at Sohag city to the director of learning. After taking the approval, the purpose of the study was clarified to the director and social workers of schools to gain their cooperation.

The researcher attended each school two days on sunday and monday from 8.00Am to 2.00 pm at school official time and data were collected from students during the school day and break .Most students attend school was from first and second grade while the third grade did not attend to school so the researcher contacted with them through the Private tuition .The approximate time to complete the questionnaire was (30 to 45min) the researcher clarify questions and how to answer the questionnaire to students during interview.

Statistical Design

The collected data were coded and entered into the Statistical Package for the Social Science (SPSS) version 22.0. Quantitative data were expressed as mean± standard deviation (SD). Data were expressed as number and percentage. The Chi-square ($X2$) test was used to compare between qualitative variables. Pearson correlation was done to measure correlation between quantitative variables .P-value was considered significant when (P-value was <0.05).

Results

Table 1: Shows that near half (45.8%) of studied students between age16-17 years while (31.8%) of them between 15-16 years and (22.5%) of them between 17-18 years.More than half (59.3%) of students were males compared to (40.8%) of them were females. More than one third (32.5 %) of students were from urban areas while more than half(67.5%) of them were from Rural one .Near half (49.0 %) of students in the first grade and (40.0%) of student's fathers had university education while ,(36.0%) of their mothers had secondary education. Family income to more than two thirds (71.0%) of students had enough family income compared to only (12.5%) of them had not enough family income.

Table (2): Demonstrates that the majority (93.2 %) of students play game compared to only (6.8%) of them don't play games and half (51.2 %) of students spend two hours every day playing compared to (48.8%) of them playing 4 hours and more per day. Frequently preferred types of video games were sporting games (36.5 %) followed by Adventure games ,(26.8%) while, only (17.0%) of them prefer

action games. Near the two thirds (69.%) of students buy video games before compared to (31.0%) of them did not buy videogames. More than half (58.3%) of students commonly reported feeling of comfort and relaxation to gaming compared to only (13.5%) of them like the graphics and near half (49.5%) of students playing video games between ages 10 to 12 years . Nearly half (47.5%) of studied students prefer playing on PC/ laptop and more than two thirds (68.8%) of students find time to play when they are busy compared to (32.2%) of them did not find time to play when busy .The majority (87.8%) of students sleep 6 hours and less compared to only(12. %) of them sleep 8 hours and more.

Figure (1): Clarifies that more than half (59.3%) of students were male while two fifths (40.75%) of them were female.

Figure (2): Shows that more than one third (36.5%) of studied students like sports games while, (19.8 %) of them like simulation games compared to only (17.0%) of them were like action games.

Figure (3): Shows that near the one third (29.3 %) of studied students considered addicted gamer compared to (42.0%) of them considered normal gamer.

Table (3): Shows the relationship between level of addiction and students' demographic data, which it clarifies that there were statistically significant relations between level of addiction and students demographic data in their school , gender, and family income(P-value = 0.010, 0.005 and 0.002) respectively. being a male , increases a family income and improve the socioeconomic statuses of students and being as a students in one of selected schools increase a chance and availability to have game addiction .While there were no statistically significant relation with their age, place of residence, school grad, fathers level education and mother's level of education (P-value = 0.831, 0.445, 0.567, 0.238 and 0.244) respectively.

Table (4): Illustrates that near one third (29.3%) of students had excellent performance compared to only(5.0%) of them had poor performance.

Figure (4): Shows that more than one third (32.9 %) of male had addicted to gaming compared to near quarter (23.9%) of females were addicted to video game.

Figure (5) : Demonstrates correlation between the score of addiction and score of academic performance which it reveals that there were a highly significant strong negative correlation between score of addiction and score of academic performance (r =0.121 & p = 0.015).

Results

Table (1): Demographic data of the studied secondary school students (n=400)

Items	No. (400)	%
School:		
Asmaa Bint Abou Bakr	75	18.8%
ElShaheed Tayyar Mohamed Kamel	117	29.3%
Girls secondary school	88	22.0%
Military secondary school	120	30.0%
Age: (years)		
15 - < 16	127	31.8%
16 - < 17	183	45.8%
17 – 18	90	22.5%
Mean ± SD	16.41 ± 0.92	
Residence:		
Urban	130	32.5%
Rural	270	67.5%
Secondary school grade:		
First	196	49.0%
Second	127	31.8%
Third	77	19.3%
Father's level of education:		
Illiterate	4	1.0%
Read and write	53	13.3%
Secondary	140	35.0%
University	162	40.5%
Postgraduate	41	10.3%
Mother's level of education:		
Illiterate	37	9.3%
Read and write	75	18.8%
Secondary	144	36.0%
University	118	29.5%
Postgraduate	26	6.5%
Family income:		
Not enough	50	12.5%
Enough	284	71.0%
Enough and save	66	16.5%

Table (2): Characteristic of studied students who playing video games

Items	No. (400)	%
Do you like to play video or computer games?		
Never played	27	6.8%
Sometimes	253	63.2%
Very much	120	30.0%
How much time do you spend at video games or computer games every day?		
2 hours	205	51.2%
4 hours	125	31.3%
6 hours	52	13.0%
8 hours or more	18	4.5%
Why do you play the games?		
I like the graphics	54	13.5%
Relaxation	233	58.3%
Escapism	113	28.2%
Have you ever purchased video games?		
Yes	124	31.0%
No	276	69.0%
At what age did you first start games?		
< 10 years	115	28.7%
10 - 12 years	198	49.5%
> 12 years	87	21.8%
Mean ± SD	10.60 ± 2.61	
Number of years playing video games?		
1 - < 2	70	17.5%
2 - < 5	143	35.8%
5 - < 7	108	27.0%
≥ 7	79	19.8%
Mean ± SD	4.44 ± 2.59	
Which platform do you prefer for gaming?		
Consoles	29	7.2%
PC/ laptop	190	47.5%
Portable/ handheld gaming system	181	45.3%
Do you still find time to play when you are busy?		
Yes	129	32.3%
No	271	67.8%
How many hours do you sleep at night?		
2 hours	21	5.3%
4 hours	56	14.0%
6 hours	274	68.5%
8 hours or more	49	12.3%

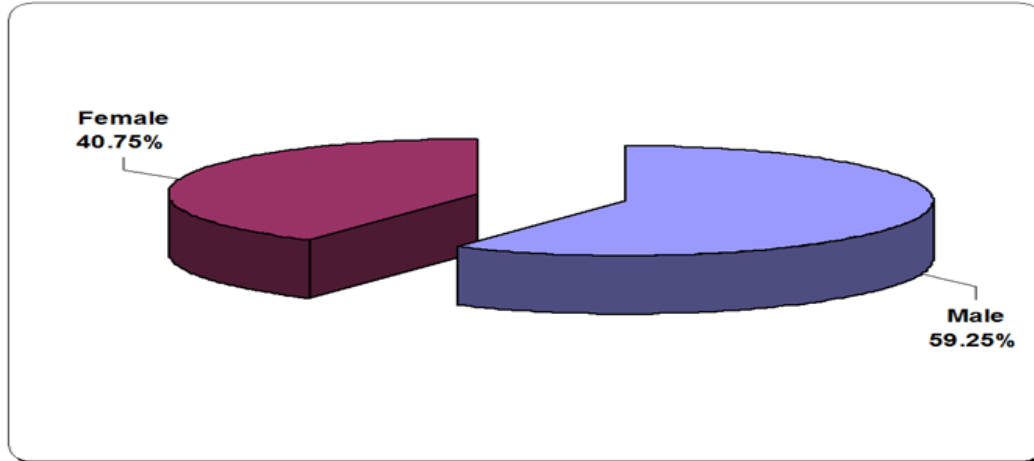**Figure (1): Percentage distribution of the studied students regarding their gender**
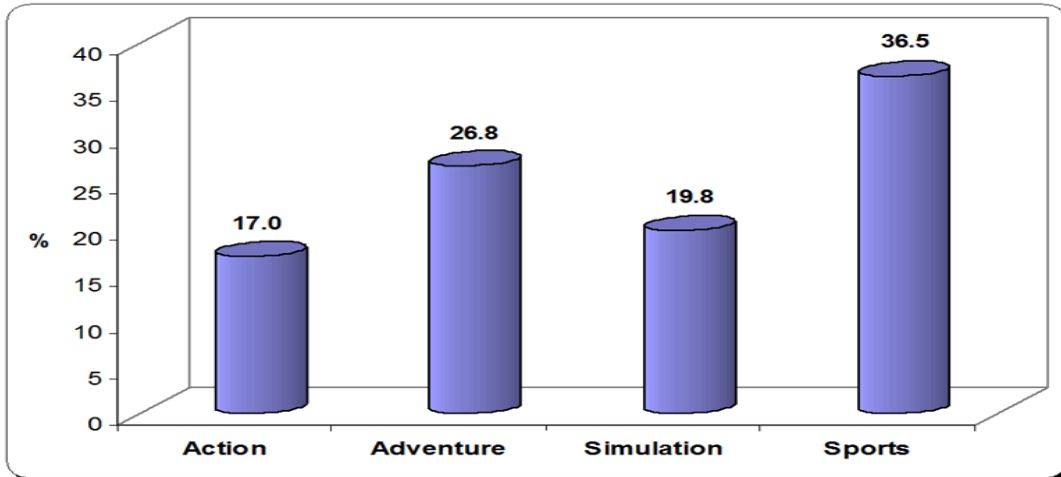

Figure (2): types of video games

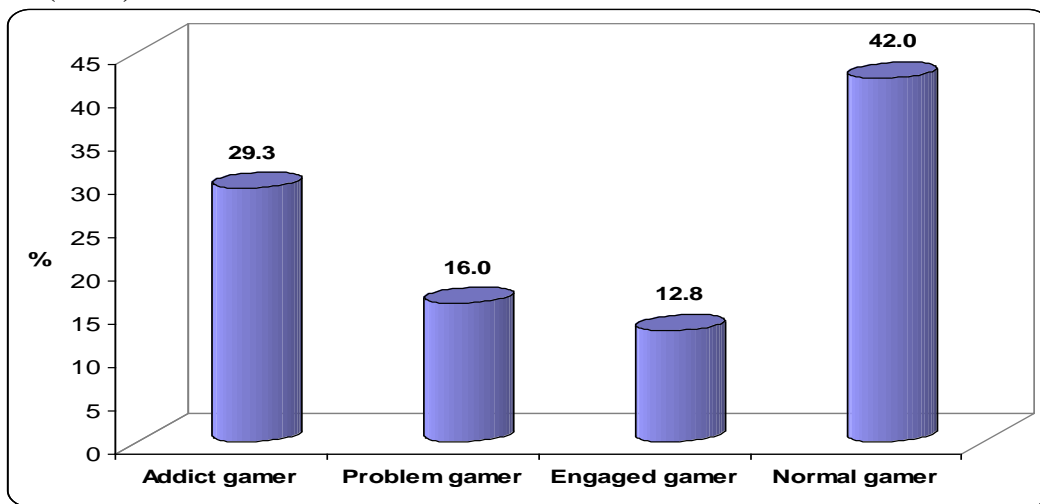**Figure (3):percentage distribution of levels of video game addiction among secondary school students (n.400)**

Table (3): Relation between studied students addiction level and their demographic data (n.400)

Demographic data	Level of addiction								P-value
	Addict gamer (n= 117)		Problem gamer (n= 64)		Engaged gamer (n= 51)		Normal gamer (n= 168)		
	No.	%	No.	%	No.	%	No.	%	
School:									
Asmaa Bint Abou Bakr	23	30.7	7	9.3	5	6.7	40	53.3	
Shaheed Tayyar Mohamed Kamel	39	33.3	18	15.4	19	16.2	41	35.0	0.010*
Girls secondary school	16	18.2	22	25.0	8	9.1	42	47.7	
Military secondary school	39	32.5	17	14.2	19	15.8	45	37.5	
Gender:									
Male	78	32.9	35	14.8	38	16.0	86	36.3	0.005*
Female	39	23.9	29	17.8	13	8.0	82	50.3	
Age: (years)									
15 - < 16	42	33.1	20	15.7	15	11.8	50	39.4	
16 - < 17	54	29.5	29	15.8	22	12.0	78	42.6	0.831
17 – 18	21	23.3	15	16.7	14	15.6	40	44.4	
Residence:									
Urban	37	28.5	25	19.2	19	14.6	49	37.7	0.445
Rural	80	29.6	39	14.4	32	11.9	119	44.1	
Secondary school grade:									
First	57	29.1	35	17.9	25	12.8	79	40.3	
Second	41	32.3	14	11.0	18	14.2	54	42.5	0.567
Third	19	24.7	15	19.5	8	10.4	35	45.5	
Father's level of education:									
Illiterate/ Read and write	12	21.1	10	17.5	6	10.5	29	50.9	
Secondary	37	26.4	27	19.3	15	10.7	61	43.6	0.238
University/ Postgraduate	68	33.5	27	13.3	30	14.8	78	38.4	
Mother's level of education:									
Illiterate/ Read and write	28	25.0	18	16.1	13	11.6	53	47.3	
Secondary	36	25.0	25	17.4	18	12.5	65	45.1	0.244
University/ Postgraduate	53	36.8	21	14.6	20	13.9	50	34.7	
Family income:									
Not enough	15	30.0	9	18.0	11	22.0	15	30.0	
Enough	92	32.4	47	16.5	25	8.8	120	42.3	0.002*
Enough and save	10	15.2	8	12.1	15	22.7	33	50.0	

Chi-square test   *Statistically significant
difference (P <0.05)

Table(4): Percentage distribution of secondary school students according to Academic performance Scale (n.400)

Items	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	No.	%	No.	%	No.	%	No.	%	No.	%
I made myself ready in all my subjects.	81	20.3	27	6.8	86	21.5	127	31.8	79	19.8
I pay attention and listen during every discussion.	22	5.5	60	15.0	82	20.5	146	36.5	90	22.5
I want to get good grades in every subject.	17	4.3	24	6.0	48	12.0	89	22.3	222	55.5
I actively participate in every discussion.	44	11.0	57	14.2	117	29.3	106	26.5	76	19.0
I start papers and projects as soon as they are assigned.	44	11.0	68	17.0	112	28.0	95	23.8	81	20.3
I enjoy homework and activities because they help me improve my skills in every subject.	43	10.8	52	13.0	88	22.0	114	28.5	103	25.8
I exert more effort when I do difficult assignments.	48	12.0	36	9.0	90	22.5	118	29.5	108	27.0
Solving problems is a useful hobby for me.	42	10.5	36	9.0	98	24.5	101	25.3	123	30.8

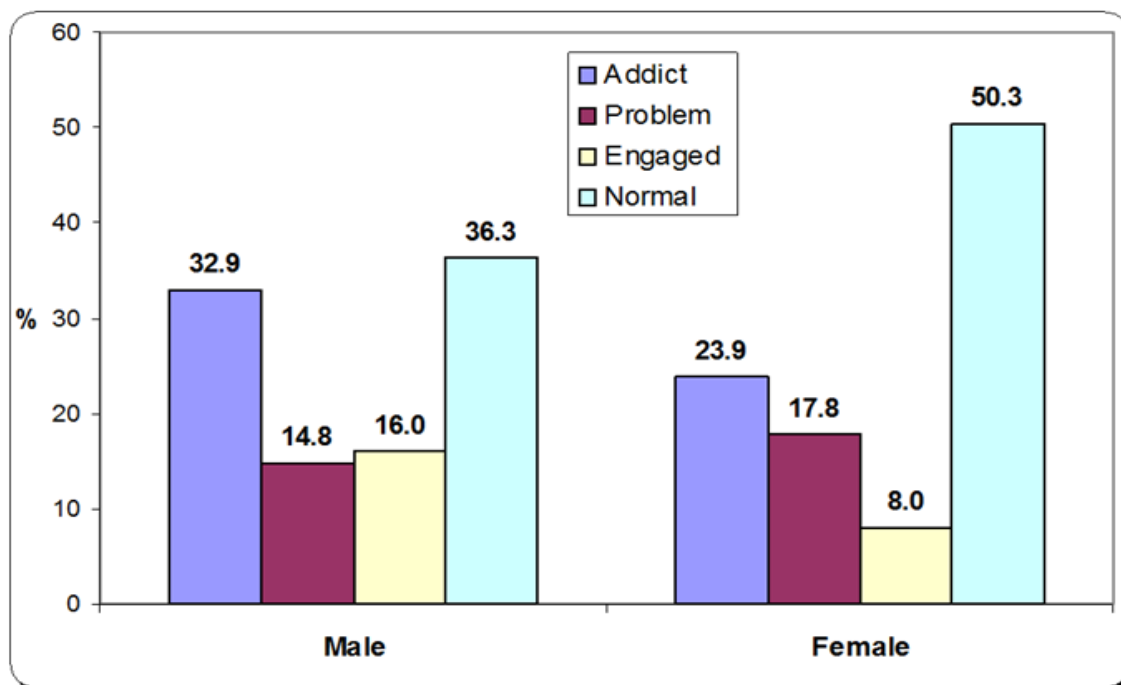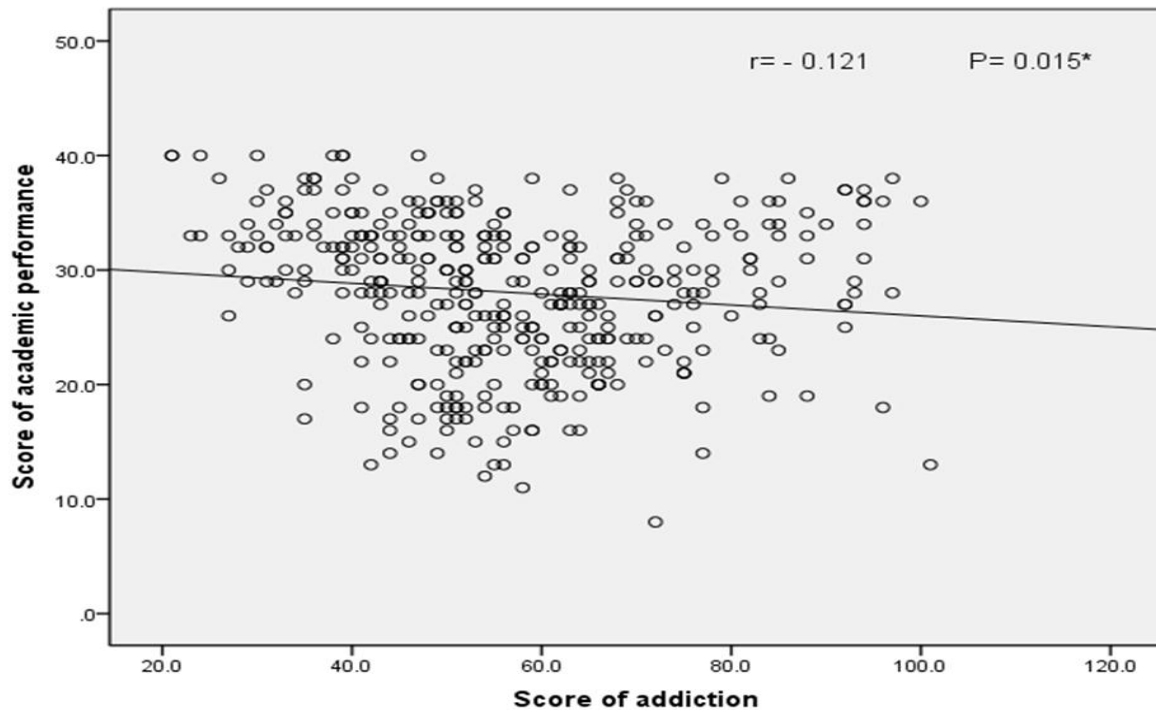**Figure (4): Addiction level of studied students regarding to their gender**

Figure (5): Correlation between score of addiction and score of academic performance among secondary school students

Discussion

The current study aimed to assess the impact of video games addiction on academic achievement among secondary school students.This study explored the correlation between video game addiction and academic achievement of secondary school students at sohag city .

Demographic data of studied secondary students.

Regarding to ages of students. the current study shows mean age of all students were16.41 ± 0.92.These findings in the same line with **(Rajab et al.,(2020)** who found that the mean ages were 16.1 (SD=1.6) years.On the other hand this results disagrees with **Bhandari et al., (2020)** who found that the mean age in study was 17.02 (± 0.77) years .Also **Awadalla et al ., (2017)** who found that the average age in their study was 17.2±1.03 years. On the other hand this result disagree with **Turan et al ., (2024)** who found the mean age of all students were 15.43 ± 0.79 years.

Regarding to level of students grade the current study shows that near half (49%) of students were in the first grade and more than half (51%) of them were in second and third grads. These findings were in line with **Awadalla et al ., (2017)** who found that the two fifths (40.0%) of students were in first grade and two thirds (60%) of them were in second and third grade .On other hand this result disagrees with **Alrahili et al.,(2023)** who found that only (11.7 %) of students were in first grade.

Regarding place of residence the current study shows the more than half (67.5%)of students from rural areas and more than one third (32.5%) from urban ones. This finding was in the same line with the result of **Atia et al .,(2020)** who found that half (53.3 %) of studied students were from rural areas .On the other hand this result disagree with **Oflu &Yalcin, (2019)** who found that the majority of students were from urban areas (80.8%) compared to only (19.2%)of them were from rural ones.

Regarding to students' parent education the current study revealed that two fifths (40.5%) of student's fathers had university level of education compared to only (1.0%) of them were illiterate and more than one third (36.0%) of their mothers had secondary level compared to only (9.3 %) of them were illiterate. This finding was in the same line with the result of **Atia et al ., (2020)** who found that more than two fifths (45.5%) of student's fathers had university education compared to only (10.5%) of them were illiterate and more than one third (31.65%) of their mothers had secondary level of education compared to only (12.9 %) of them were illiterate .On the other hand, this result disagree with **Alrahili et al., (2023)** who found that more than half (67.3%) of student's fathers had university education and (15.2%) of their mothers had secondary education.

Regarding to family income more than half (71.0%) of studied students had enough family income compared to only (12.5%) of them had not enough family income .This finding was in the same line with the result of **Ahmadi et al .,(2014)** who found that more than two thirds(79.1%) of students had enough family income compared to only (13.7 %) of them had not enough family income .On the other hand this result disagree with **Awadalla et al ., (2017)** who found that nearly to one third (28.9%)of students had enough family income compared to nearly one quarter (24.1%) of them had not enough family income .

Regarding to characteristic of students Playing video games.

As present in this study the majority (93. 2%) of students likes play video games compared to only (6.8 %) of them don't like play video games. This finding was in the same line with the result of **Forsyth & Malone, (2016)** who found that the majority (90 %) of studied students reported as video game players.On the other hand this result disagree\ with **Navaneetham & Chandran,(2018)** who found that more than half (55.5%) of studied students reported as video game players compared to (44.5%) of them did not report as video game players.

As present in this study more than half (51.2%) of students play two hours per day and nearly to half (48. 8%) of them play four hours and more per day. This finding was in the same line with the result of **Ahmed et al.,(2022)** who found that more than half (56.7 %) of students play one to two hours per day and (43.2 %) of them play more than four hours per day. On the other hand this finding disagree with the result of **Alrahili et al., (2023)** who found that (16.3%) of students play two hours per day and near two fifths (38.7%) of them play more than four hours per day. Also **Salih et al., (2020)** who found that (20.1%) of gamers played four hours or more per day.

As present in this study more than half (58.3%) of students play video games to report feeling of relaxation compared to (28.2%) of them play to relive and escapism from stress and difficult situation .This finding disagree with the result of **Awadalla et al ., (2017)** who found that more than two thirds (75.5 %) of students gaming for promoting fun and excitement and (47.9 %) of students gaming to relieve stress and anxiety. Also the results disagree with **Javorcik &Durian, (2021)** who found that the main reason why students play video games is to escape from reality and the second reason were feeling of boredom.

As present in this study more than two thirds (71.3 %) of students began the video games after 10years of age compared to nearly third (28.7%) of them began before 10 years of age . This finding was in the same line with the result of **Jeong et al., (2021)** who found the majority(86.6 %) of students began the video games after elementary school compared to only (14.4 %) of them began before 10 years of age. On the other hand this finding disagree with the result of **Awadalla et al ., (2017)** who found that (35.11 %) of students start game before 10 years and more than half (45.53 %) of them start games ≥10. Also this results disagree **Bumozah et al .,(2023)** who found that more than two thirds (71%) of the students started playing video games between the ages of 7and 15 years.

As present in this study more than two thirds (69.%) of students purchased video games before compared to (31.0%) of them did not buy videogames. This finding was in the same line with the result of **Li et al.,(2019)** who found that near half (44.%) of the participants spend money to purchases video games This finding disagrees with the result of **Oflu &Yalcin, (2019)** who found that majority (93.1%) of students buy video games compared to only (6.9%)of them did not buy videogames before.

As present in this study near half (47.5%) of students prefer playing on PC/ laptop compared to only(7.2 %) of them prefer consoles. This finding was in the same line with the result of **Columb et al.,(2020)** who found that the half (50.9 %) of students prefer PC/ compared to only(19%) of them prefer consoles .On the other hand this results disagrees with **Alrahili et al., (2023)** who found that the common gaming platform used among students was the phone in about (74%) compared to (23.9%)of them prefer personal computer.

As present in this study more than two thirds (68.8%)of students find time to play when they are busy compared to(32.2%) of them did not find time to play when busy. This results disagree with the result of **Oflu &Yalcin ,(2019)** who foundthat one quarter (25.3%) of students delayed the daily needs to play games compared to three thirds (74.9%) of them did not delay daily needs.

As present in this study the majority (87.8%) of students sleep 6 hours and less compared to only(12. 2%) of them sleep 8 hours and more . This finding in the same line with the result of **Severo et al.,(2020)** who reported a very high proportion of students (60%) suffering from a poor sleep quality. On the other hand this finding disagree with the result of **Yabe et al., (2018)** who found the (32.9%) of students sleep less than8 hours compared to more than two thirds (67.9%) of them sleep more than 8hours.

Regarding to gender of students. the study revealed that more than half (59.3%) of studied students were male and two fifths (40.8%) of them were female **(figure 1)**.These findings were in the same line with

Alrahili et al., (2023) who found that more than half (58.3%) of students were male and two fifths (41.7%) were female . On the other hand, this result disagree with **Ouertani et al ., (2022)** who found that more than one third (36.8 %) of students were male while more than half (63.2%) of them were female.

As present in this study more than one third (36.5%) of students prefer sporting games compared to only (17%) of them prefer action games **(figure 2).** This result disagree with **Awadalla et al ., (2017)** who found that(55.4%)%) of students prefer sporting games while(51. %) of students prefer action games. Also this result disagree with **Alrahili et al., (2023)** who found that (15.8%) of students prefer sporting games compared to only (8.1%) of students prefer action games.

As present in this study the prevalence of gaming addiction among students were nearly to one third (29.3%) compared to two fifths (42.0%) of them were considered normal gamer**(figure 3)**.. This is in the same line with the results of **Alfaifi et al.,(2022)** who found the prevalence of IGD were (29.3%) .On the other hand this result disagrees with studies around the world demonstrated that the prevalence of gaming addiction is lower as1.2% in Germany,5% in Saudi, 7.7% in Spain, 8% in the USA,9.4% in the Netherlands and 14.6% in the United Kingdom **(Rajab et al.,(2020; Rehbein et al., 2015; Lopez-Fernandez et al., 2014&Lemmens et al., 2009).** And highly as in Indian study the prevalence of Internet gaming disorders(IGD) **Bhandari et al., (2020)** was (44.2 %)and (62.1%)in Saudi Arabia study **Alrahili et al.,(2023)**.

Regarding relationship between level of addiction and students demographic data. The current study found that there were statistically significant differences between level of addiction and students demographic data in gender being a male increase availability to be adicted as present in this study and this consistent with **Ouertani et al ., (2022)** who found the prevalence of gaming addiction between male and female (66.2% ,33.8%) respectively. **From the investigator point of view** being a male increase their tendency to be addicted due to increase availability of their free time compared to females those did not have time to play related to (traditional and culture of governator) and adolescents especially males in this stage are competitive and influenced by peer pressure to try new challenges .

Regarding to Academic performance of secondary school students .

As present in this study nearly one third (29.3%) of studied students have excellent performance compared to only (5.0%) of them have poor performance .This finding disagree with **Bumozah et al .,(2023)** who found that more than two thirds(79%)

of the students had excellent scores compared to only(1%) of them had acceptable scores. Significant association was observed between gaming addiction and academic performance those who were addicted to gaming were likely to have poor performance also those who were not addicted to gaming were more likely to be have poor performance **.From the researchers' point of view** this return to other reasons away from video game may be return to lack of interest and motivation to study, family problems and adolescence problems(fluctuation of feelings, hormone changes).

As present in our study revealed more than one third (32.9%) of males had addicted to video game compared to near the quarter (23.9%) of females addicted to video game **(figure4)** .This result in same line with **Alfaifi et al.,(2022)** who found that video game addiction rate was (38.1%) for males compare to (20.7%) to females**.** Which is contrary with the findings of **Oflu &Yalcin(2019)** who found video game addiction rate was (3.1%) for males and no addiction between females.

Regarding the correlation between the score of addiction and score of academic performance.

the present study revealed that there were a highly significant strong negative correlation between score of addiction and score of academic performance (r =0.121 & p = 0.015) **(figure 5).**This finding was consistent with **Anand, (2007)** who found a negative relationship between students' GPA results and the amount of time they spent playing video games. In other words, as playing time increased, GPA ratings declined. There are other studies that have discovered a negative correlation between video game playing and academic achievement . In the study of **Anderson &Dill, (2007)** which examine the relationship between aggression and video games and concluded that, in addition to directly affecting performance, gaming also increases aggression levels, which are frequently connected to behavioral issues at school and poor academic achievement. Also Similarly to **Mahmud et al.,(2023)** who found that playing video games online might negatively affect students' academic performance, especially if they play regularly and miss class as a result of their gaming habits .

on the other hand there are many of researches suggest that interactive video games can actually lead to increased academic performance **Anand, (2007) 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. Also **Smyth ,(2007)** suggested that complex games may lead to academic success by engaging players in problem solving, critical thinking, and creativity.

Conclusion

Based on the results it can be concluded that:-

The prevalence of game disorders(GD) in this sample was relatively highly as compared to previous studies the study reveals that nearly third (29.3%) of the respondents were highly addicted to online game addiction where (42.0%) were recognized as normal. Playing video game was negatively associated with poor school achievement . Online game addiction is developing as emerging problem in sohag city and the rates of gaming addiction varied by different factors such as age, gender, school policy and rules suggesting these factors should be considered when designing and implementing interventions.

Recommendations

Based on the results, it can be recommended that:-

1. The present study recommended that the authorities should consider gaming addiction as serious problem for the young population.
2. Future researches should aim to acquire a more comprehensive picture of common mental health problems related to gaming addiction among adolescents and different age groups.
3. Future studies should examine the risk factors such as age, gender, school policy and rules when designing and implementing suitable interventions.
4. The important of family's role in order to help develop suiting tools to facing the negative outcomes of gaming addiction. Some of solutions to control the problem include school awareness campaigns, parental education, directing and enact better legal restrictions and limitations especially on games that encourage harmful acts.

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