The Major Symptoms that Determine Video Game Addiction Case Study: Jordanian Universities Students

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Abstract--**Video games playing is the most popular source of entertainment for people in all ages, but excess playing in this games causes negative consequences represented by video games addiction. Video games addiction is considered as one of the most important research field which received much attention nowadays and attracted many journalist and researchers to write about and study it in depth. Although many empirical studies had been inducted in this field in order to collect and analyze data related to that field, the problem is there is an absent of clear conclusions and results in this field. The main objective of this research is to develop a questionnaire that helping in measuring the degree of video games addiction for students in Jordanian universities. The questionnaire which used in this research aims to find the relationship between each of social problem, difficulties in time management, problems in prioritize life`s activities, and immoderate play with video games addiction.780 questionnaires were distributed to students from Jordanian universities students' society. The data collected from the respondents showed the following there is a significant relationship between each of the following of social problem, difficulties in time management, problems in prioritize life`s activities, and immoderate play with video games addiction. Finally the researcher suggests strategy for students for fighting video games addiction.**

Keyword-- **internet addiction, video games addiction, mobile addiction, video games addiction symptoms.**

i. INTRODUCTION

Popularity of video games is growing in rapid way, and some anecdotal reports shows that this kind of games are highly addictive, some video games players spending more than 50 hours weekly playing video games. Because of that there is an emergency need for researches that investigate individual characteristics which causes immoderate video games playing [1].Computer games become an important daily activity for most of young people especially the students ones. With the wide availability of internet services anywhere, video games become more attractive and more popular than before [2, 3]. This issue cased an emerging term for technology researchers represented by technology addiction

A. Technology Addiction

Addiction is defined as "a dependence, on an activity or behavior that a person has no power to stop doing it. This definition can be applied to any excessive behavior done by people [4]. In this research the researcher will highlight the addiction which related to the use of electronic device. There are different types of technology addiction, we will list some of them and give a brief description for each one.

1) Internet Addiction: In the new social environment, people`s daily lives and activities related to many electronic devices and filled with, like computers, mobile phones, and tablets. During the day, people use many forms of media activities, such as talking on cell phones, texting, playing games, watching videos, checking email, or surfing the Interne. The promises of media technologies in its new paradigm are to offer instantaneous nature, interconnectedness and ease of use in order to meet consumers` desires and needs. Some technology users rely on the media which provided by these technologies in excessive way.

Some researches shows that excessive media use and dependence may lead to many problems for individuals and social contexts [5].We can define the Problematic as excessive preoccupation with Internet use that results in psychosocial maladjustment, physical health problems, and academic difficulties for the individuals involved). Problematic Internet use notion can be linked to researches which investigate addictive behaviors, some research schools define addiction as development disorder that start in adolescence [6].

2) Media Addiction: We can define Media addiction with various terms, like: media dependence, unregulated media use, problematic media use, excessive media use and compulsive media use. Some scholars use the clinical term ''impulse control disorder'' to define media addiction and have specified that there is no involvement for intoxicant quality. While others define it as psychological media dependency or technological addiction and consider it as a subset of behavioral addiction [1, 4].

3) *Mobile Addiction:* The most popular device that most people use is mobile phones, which spreading and used by people especially young people. On one hand they use it for their social communication, entertainment, and expand their opportunities for making social relationships. But on the other hand mobile phone is also lead to variety of problems. For example, for students in their school if they use the mobile phones this will lead to reduce their concentration and will affect their performance, and for drivers if they use the mobile phones while driving it will lead to unsafe driving habits which cause a higher probability for accidents, the outcome of the excess use of mobile leads to mobile phone addiction, there is a strong relationship between mobile phones usage and mobile phones addiction [7, 8].

4) *Video games addiction:* Video game addiction is a consequence of excess in video games play, some video games have major impact on peoples` social and wellbeing by creating a virtual worlds for players. Although the American Psychological Association or American Medical Association do not consider video game addiction as a "real" disorder, and it is not classified as a clinical disorder due to lack of researches in this field. Video game addiction is a very important domain for researchers to investigate it in depth in order to find the actual reasons and consequences of this type of addiction and to give recommendations for people how to prevent themselves from it and how to fight it [1]. Many researches were done in this field and showed finding that present the relationship between video games addiction and academic performance for students, the ratio of female to male gamers who are addicted, the different types of video games and which types are the most addicted, the percentage of video games gamers who are addicted, the percentage of gamers who have video games addiction signs and symptoms, and finally the parenting styles which are associated with video games addiction. The main problem for researchers in this field that is till now video games addiction is not considered as a formal diagnosis and there is no standards for behaviors and symptoms that are used to define video games addiction, this problem may lead to conflict in findings and stats [1, 6, 13].

ii. SIGNS AND SYMPTOMS OF VIDEO GAME ADDICTION

Many studies were conducted to find the signs and symptoms of video games addiction, and they summarized them in four main categories as follow: relational signs and symptoms, behavioral signs and symptoms, physical signs and symptoms, and psychological signs and symptoms [9]. In this research we will present the main signs and symptoms for each category.

A. *Relational signs and symptoms*

These symptoms related to the player relations with other some of these symptoms: lying to other if they ask about the actual time which is spent with the video games,

rejecting social invitations in order continue video games playing, decreasing the time which is spent with friends and family, blaming others if they disturbing the gamers, relationship or marital difficulties caused by the excessive play, and finally losing of real world friends while increasing the number of friends in the virtual world [10].

B. *Behavioral signs and symptoms*

These symptoms related the player behavior and the changes that happened to his behavior in life like; decreasing in academic performance, decreasing the time which is allocated for studying and doing home works, spending more time playing video games, decreasing in work performance, inability to quit playing, staying up too late night in order to play, neglecting the important responsibilities while playing, aggression toward people who try to limit or prevent access to the video games, spending more than 10 hours playing continuously, spending large amounts of money on having new games, playing the video games at the first available time , and skipping meals while playing or eating it at the same time of playing [9,10].

C. *physical signs and symptoms*

These signs and symptoms related to the players body problems like; difficulties and changes in sleeping patterns, decreasing in personal hygiene, irregular or poor eating habits, headaches, red or dryness in eyes, sore neck or fingers or back, Carpal tunnel syndrome, and weight gain or poor health [11].

D. *psychological signs and symptoms*

we will list some psychological signs and symptoms which appear on the video games addictive people such as: Feeling anxious or depressed when not playing video games, Feelings of frustration and anger when not allowed to play the video games, dreaming about video games, decreasing interests in school achievement, justifying excessive playing, losing personal control while playing video games, when not online for paying just thinking about the next session for gaming, experiencing peacefulness, calmness, or euphoria while playing video games, losing of interests in old enjoyed activities, and downplaying and justifying the impact of the excessive habits in playing [12,14].

iii. RESEARCH OBJECTIVES STATEMENT

The main objective of this research is to develop a questionnaire that helping in measuring the degree of video games addiction for students in Jordanian universities. The questionnaire which used in this research aims to find the relationship between each of social problem, difficulties in time management, problems in prioritize life`s activities, and immoderate play with video games addiction.

iv. RESEARCH HYPOTHESES

The Main Hypothesis:
Ho: there is no significant relationship between each of Social problems, Difficulties in time management,

problems in prioritize life`s activities, and immoderate play and video games addiction.

The sub-hypothesis

Ho1: there is no significant relationship between the Social problems and video games addiction.

Ho2: there is no significant relationship between the Difficulties in time management and video games addiction.

Ho3: there is no significant relationship between the problems in prioritize life`s activities and video games addiction.

Ho4: there is no significant relationship between the immoderate play and video games addiction.

v. THE PROPOSED RESEARCH MODEL TO MEASURE VIDEO GAME ADDICTION FOR STUDENTS IN JORDANIAN UNIVERSITIES

The proposed model which represented in figure 1 shows that we have one dependent variable which is the video game addiction and 4 independent variable which we can call them the dimensions , these dimensions determine if we have video game addiction or not. For each dimension the researcher will suggest number of questions to measure it .we can list the dimensions as follow: social problems, difficulties in time management, immoderate play and problems in prioritize life`s activities. Figure 1 represents the independent and dependent variables of the research.
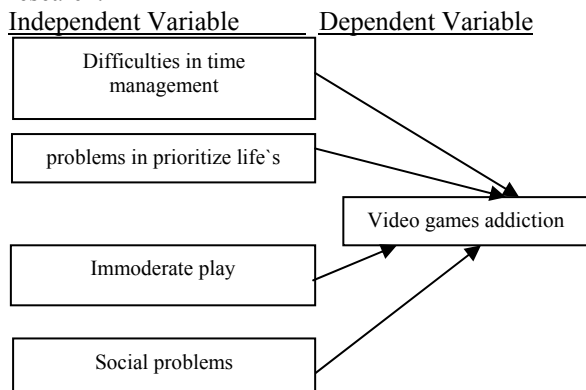

Fig. 1. Proposed research model

vi. QUESTIONNAIRE DESIGNING AND RESEARCH METHODOLOGY

The tool which used in this research was a self-administrated questionnaire. There was two main sections in the questionnaire, the first one covering the sample demographic information, and the second one designed to collect the information related to measuring video games addiction for students in Jordanian universities. The questionnaire used closed questions. The questionnaire were distributed in Arabic language to 780 individuals from Jordanian universities students' society with suitable covering letter. The individual basis were used for the purpose of distributing the questionnaire to the student's sample. Likert system was the base of the questioner to have a high degree of reliability. The researcher distributed the questionnaires and collected them back. The number of questionnaires which were collected back was seven

hundreds which represent 89.7% as the response rate of the sample. The scale of answers which used in the questionnaire encompassed five options as follows; very high, high, neutron, low, and very low. SPSS was used as a software package for analyzing the information which was collected from the questionnaires by entering the questionnaires responses to that package. The researcher has chosen SPSS because it guarantees an accurate analysis for the collected information and can give clear and strong interpretation of the results which produced by the questionnaire information.

VII. ANALYSIS AND DISCUSSION

In this section the researcher will show the collected data analysis results, the research questionnaire was addressed to number of Jordanian universities. The main objective of the questionnaire is collecting information that helps in measuring video game addiction for students in Jordanian universities.

A. Demographic Data analysis

700 completed questionnaires were run on SPSS for the statistical analysis process, some respondents did not answer number of questions in the analyzed 700 instruments. The gender of sample consists of 36% females and the remaining 64%was males. Moreover, 62% are bachelor program students, 31% are master program students and the remaining 7% are doctorate program students. 58% of the respondents were less than 25 years old, 26% were between 25-40 years old, and 16% were more than 40 years. And 67 % of the respondents were single and the remaining 33% were married, Regarding to income of the respondent`s families 5% were less 200 JD, 17% were 200-400 JD, 44% were 400-700 JD and 34% were more than 700 JD , while the respondent's faculties were as follows 32% were from information technology faculty, 13% were from law faculty , 15% were from engineering faculty, 7% were from pharmacy faculty , 9% were from art faculty engineering and 24% were from finance and banking faculty.76% of respondents believe that the Social problems is a clear symptom of video game addiction whereas 24% think it is not, while 74% believe that Difficulties in time management is another symptom of video game addiction and 26% do not think so, while 78% believe that the SW piracy is a legal crime and 22 do not believe that. In addition 81% of the respondents agree that the problems in prioritize life`s activities is a symptom of video games addiction while 19% are not agree, finally most of the sample 95% believe that the immoderate play is the most obvious symptom of video games addiction but 5% of the respondent don't believe in that.

B. Hypothesis Test

The research hypothesis were tested by F-test and T-test, F-test was used to test main hypothesis and the sub hypothesis were tested by T-test as follows:

The Main Hypothesis test:

Ho: there is no significant relationship between each of Social problems, Difficulties in time management, problems in prioritize life`s activities, and immoderate play and video games addiction.

TABLE1
F- TEST OF MAIN HYPOTHESIS

F calculated	F tabulated	F Sig.	Result of Ho
6.360	2.310	0.002	Reject

The result in table 1 shows that the value of Sig.F is not more than 0.05 and the tabulated F is less than calculated F. and depending on the predefined decision rule in statics which says: H0 is accepted if the value of Sig.F is more than 0.05 and rejected if the value of Sig.F is less than 0.05.That means we will reject H0 and accept H1, in different words the result is : there is significant relationship between each of Social problems, Difficulties in time management, problems in prioritize life`s activities, and immoderate play and video games addiction.

The sub Hypothesis test:

Ho1: there is no significant relationship between the Social problems and video games addiction.

TABLE2
T- TEST OF HYPOTHESIS 1

T calculated	T tabulated	T Sig.	Result of Ho1
3.845	1.9842	0.001	Reject

The result in table2 shows that the value of Sig.T is not more than 0.05 and the tabulated T is less than calculated T. and depending on the predefined decision rule in statics which says: H0 is accepted if the value of Sig.T is more than 0.05 and rejected if the value of Sig.T is less than 0.05.That means we will reject H0 and accept H1, this means that there is significant relationship between the Social problems and video games addiction

Ho2: there is no significant relationship between the Difficulties in time management and video games addiction.

TABLE3
T- TEST OF HYPOTHESIS 2

The result in table3 shows that the value of Sig.T is not more than 0.05 and the tabulated T is less than calculated

T calculated	T tabulated	T Sig.	Result of Ho2
1.765	1.9842	0.101	Reject

T. and depending on the predefined decision rule in statics which says: H0 is accepted if the value of Sig.T is more than 0.05 and rejected if the value of Sig.T is less than 0.05.That means we will reject H0 and accept H1, this means that there is significant relationship between the Difficulties in time management and video games addiction

Ho3: there is no significant relationship between the problems in prioritize life`s activities and video games addiction.

TABLE 4
T- TEST OF HYPOTHESIS 3

T calculated	T tabulated	T Sig.	Result of Ho3
2.65	1.9842	0.007	Reject

The result in table4 shows that the value of Sig.T is not more than 0.05 and the tabulated T is less than calculated T. and depending on the predefined decision rule in statics which says: H0 is accepted if the value of Sig.T is more

than 0.05 and rejected if the value of Sig.T is less than 0.05.That means we will reject H0 and accept H1, this means that there is significant relationship between the problems in prioritize life`s activities and video games addiction.

Ho4: there is no significant relationship between the immoderate play and video games addiction.

TABLE5
T- TEST OF HYPOTHESIS 4

T calculated	T tabulated	T Sig.	Result of Ho4
2.542	1.9842	0.017	Reject

The result in table5 shows that the value of Sig.T is not more than 0.05 and the tabulated T is less than calculated T. and depending on the predefined decision rule in statics which says: H0 is accepted if the value of Sig.T is more than 0.05 and rejected if the value of Sig.T is less than 0.05.That means we will reject H0 and accept H1, this means that there is significant relationship between the immoderate play and video games addiction

viii. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusion

In this paper the researcher has presented an overview of internet addiction, media addiction, mobiles addiction and video games addiction. Then the researcher had presented a proposed model to help researchers in Jordan to measure the video games addiction for students in Jordanian universities and the finding was as follow: There is significant relationship between the immoderate play and video games addiction.

There is significant relationship between the problems in prioritize life`s activities and video games addiction.

There is significant relationship between the Difficulties in time management and video games addiction.

There is significant relationship between the Social problems and video games addiction.

There is significant relationship between each of Social problems, Difficulties in time management, problems in prioritize life`s activities, and immoderate play and video games addiction.

B. Recommendations

Finally the research recommends the following strategy for students in order to fight video games addiction. In the student's life it's very important to allocate some time for fun, however, the variety of activities which students do for fun may become more important than any other life activity, and then become as an addiction activity. These addiction activities may interfere with school, university or work (the things which people need to do in order to make money and success in the life). For example it is seem fun to spend all the night playing a game and leveling up in it. But each level in some games needs money, these spent money the student could put it on college application or on a job. In this point when the student prefers to spend his money on the games instead of any other activity we can say that the gaming activities and habits become an addiction. So there is a need to stop and taking a step back and recognize what you are making to yourself and to

which point you have reached. Here are some plan steps the students can use in order to fight the video games addiction, first the student must write down all the negative effects which came in his life because of video game addition some of these negative effects can be suffering in the grades, changes in personality dimensioning mental and physical skills, body physical pain, poor physical activities which lead to gain unhealthy weight and losing the productive time in playing games instead of spend it on earning money or on school. Second make a list of your priorities in this time when you write the list make sure that you are writing your actual priorities not how they should be, this step is done to make a focus on your video game addiction, to make it easy for you to decide how much priority for something and how it has changed just compare how was you acting in doing your activities in past and how you acting for doing the same activities for now, for example if you have a chore to do , did you use to get up and make it or you wait until you play and reach some levels in video games, if your friends asking you to out with them did you use to go out with them or you used to refusing and stay at home playing video games, and if you has a homework did you use to do it immediately or you play video games and leave the homework till the last moment. After that you must write down a new priority list for your activities and how should the priorities be taking in your account that you can just play video games on your free time, so it's important to determine your free time. You can also write down the activities which you can make for fun instead of video games and how you will feel while you doing them. You must realize the negative effects of video games addiction in order to commit your self for making changes in your life for the better, this realizing gives you a reason and advantage to change your life's activates. You must set a future starting point for starting the change in your life and you must commit to it and prepare your self for the changing. Set the allowed daily hours for playing video games. One important thing you must make is changing the computer place to a place that you are not frequently in, for example don't put it in the bedroom or in living room in order to make it far away from you. Every day and before playing video games you must do all your responsibilities and chores start with the top priorities activities, which mean for you as a student you must study and do your homework directly when you come home from your university. Try to go to sleep earlier than usual, most of addicted students to computer video games stay up too late. You must replace the video games time which you are cutting on different productive activities which simulates your brain like doing exercises and reading don't forget that walking is so important for health. Try to increase the time which you spend with your friends and family, they are very important in life, they will support and help you, they will give the advices you need, and you can get job later from their relationships. You must use these steps till you reach a point that you feel you don't want to play in an immoderate way.

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