Role of Computer Games on Depression of Boys Case Study (12 – 18 Years Old Youth in Tehran)

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Abstract
Studying then role of computer games on depression of boys, case study (12 – 18 years old youth in Tehran city) is the main objective of this research. The methodology of this study is survey approach. Questionnaire is data collection tool in this study which is provided by researcher. 12 – 18- year -old youth and young adult (boys), residing in Tehran, is the subject of the present study who are playing computer games at game nets. About 501,054 youth (ranging from 12 to 18 years old) participated in this study. Based on Cochrane Formula, the sample size equaled to 383 persons. The results obtained from this study indicated that the more computer games are played by children and young adults, the more depression will be observed among them. The said issue confirms and approves our main hypothesis. Meanwhile, mentioning this point seems necessary that job of their father and mother play a leading role on depression of youth but type of games, time of playing games, location of playing games, and situation of playing game do not have any role on depression of children and young adults.
Keywords: *Computer Games, Depression, Boys*

Introduction

Media is meant any devices transferring messages from sender or senders to receiver or receivers (addressed people) which include newspaper, book, radio and TV, satellite, modern technologies of communications and information as well as internet, etc. It should be noted that these devices have salient specifications such as unfamiliar receivers of message, high performance and reproduction of message. (Dadgaran, 2005: 6)

"Hybert" believes that mass media plays a very important role in presenting and forming ideas as well as familiarizing us with the world which its change to another type is impossible. Many have understood that media follow significant and overwhelming effects. Not only these effects are direct and observable immediately, but also they affect history of humanity deeply. (E'rabi, 1993: 22) "Hybert" believes that there are three general outlines at the researches done with regard to the effects of mass media at society as follows: 1- Impact of media on cognition of perception, 2- Impact of media on change of idea and value, 3- impact of media on change of behavior. He also believes that change of values depends on awareness and understanding of content of message. Most research evidences and documents confirm this theory that creating new ideas is much easier than changing available ideas. (E'rabi, 1993: 42)

Since computer and computer games have pierced and penetrated into human life in the contemporary world, these devices can be contemplated in two ways: **1-** Using computer for accelerating activities and contributing daily activities properly and suitably, **2-** Using computer for accelerating and performing activities incorrectly and unwisely. Generally speaking, computer should be used properly and suitable by all walks of life which can produce positive

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results in daily life. Sometimes, using computer for incorrect and wrong objective will have negative abnormalities. What will make youth fascinated can be related to the computer games.
It should be noted that computer games is regarded as major pastime among children and young adults in the contemporary world. These exciting and attractive games keep and tract children and young adults in front of monitor for hours and these games and take them from real world to the imaginary world. Moreover children and young adults, have almost been seen repeatedly that they sit vehemently in front of monitor and submerge in playing computer games. With playing computer games numerously, these children and young adults create a wide gap with their surrounding people. Those who play computer games will enter online and virtual world deeply, so that they will create a wide distance from their real life.
In the same direction, one can say that computer games can have the following positive aftereffects such as: Completing and perfecting personality and behavior, raising talents, creating creativity, boosting concentration and precision, increasing intelligence quotient (IQ), expanding and broadening worldwide view, improving artistic talent, training complicated concepts, transferring culture, etc. (Shayesteh Golrokhi, 1996)
With due observance to the aforementioned subjects, it should be noted that objectives of computer games have not been recognized accurately due to the following reasons: lack of accurate training to children and young adults, introducing computer games and its various types inaccurately, lack of familiarization of users to the computer language, etc.
Moreover, children and young adults are practically forced to go after those games with detrimental and harmful aftereffects. Experts and specialists have enumerated many detrimental and harmful aftereffects for computer games. For instance, "Afrouz" wrote: "It is observed collectivism spirit will be weakened swiftly if computer and electronic games are replaced with another games and will result in loosening family relationship, impatience, irritability, aggression and uneasiness of children and young adults. (Gholam – Ali Afrouz, 2001)
It should be noted that computer games are developing and expanding everyday. "Pool" (2007) spoke about ever increasing growth of computer games which Hollywood (U.S. professional cinema) has experienced it more. According to "Machin" and "Van Lion" (2007, Shuttle, 2008; King Sep, 2007), computer games have been turned into one of the important problems of world media productions which disseminate discourses such as war and aggression and violence. Other researchers have much spoken about intermingled and very complicated computer games and culture. (Kosari, 2008)
They have spoken about "Playing with Culture" due to the computer games and believe that computer games have made fun of culture of society actually. In recent decades, cultural and technological developments have caused emergence of various media such as TV, video games and also computer games in recent years in particular.
With the prevalence of these media among families and their audiences i.e. children and young adults, researchers made up their mind to study effects of these media on their audiences (children and young adults). Psychological effect of computer games is one of the aspects of effect of computer games on individuals especially youth. The origin of these effects, moreover contents of games, depends on the nature of its new media and also way and rate of using computer games. Generally speaking, psychological effects of computer games can be divided into two general groups: positive and negative effects. Positive effects of computer games are mainly focused on promotion of mental capabilities and also increase of mental skills. The negative effects of computer games, which their recognition is prerequisite for resisting and confronting with its effects, are related to the problems such as violence at games, fear and anxiety, depression, learning incorrect and wrong patterns mentally and psychologically.

Methodology

The methodology of this research is of survey type. Questionnaire is data collection tool in this study which was developed by researcher. All boy youth and young adults (with 12 to 18 years old) is subject of this study, residing in Tehran, who played computer games at game nets.
The subject of this study stood at 501,054 young adults (boys), the number of whom was obtained 383 persons according to the Cochrane formula.

Results and Discussions

Results in association with Hypothesis number one namely there is significant relationship between rate of using computer games and depression. Pearson Correlation Coefficient was used for testing this hypothesis. Pearson Correlation Coefficient is used when we are going to study statistical relationship between two variables with distance data.
Based on the results obtained in this respect, severity of correlation is weak and equals to 235% in direct relationship. That is to say; with the increased rate of fulfilling computer games, severity of depression is added as well. In other words, if computer games are intensified, degree of depression will be added as well. Since significance level equals to 0.000, hypothesis of significant relationship is confirmed between rate of using computer games and depression.

Table 1: Results of Pearson Correlation Test between Using Computer Games and Depression

Statistical Test	Rate of Using / Depression
Pearson Correlation Coefficient	235%
Significant Level	0.000
Reliable number	310

Results in association with the second hypothesis namely there is significant relationship between various types of computer games and depression. The results of using Chi-square test and V indicate that there is not significant relationship between two variables of type of game and depression.

(V= 0.082, S= 0.90)

Table 2: Results of V Crammer Test for Variable of Type of Game and Depression

Test	Test Amount	Significant Level
Chi-Square	0.141	0.90
V Crammer	0.082	0.90
QTY	310	

ANOVA

Table 3: Classification of Various Types of Game and Depression

Significant Level	F Test Value	Total Average	Degree of Freedom	Sum Squares	Type of Game and Depression
0.46	0.92	0.55	5	2.76	Inside group
		0.60	304	183.49	Outside group
			309	186.28	Total

Table 4: Relation between Type of Game and Depression

Relationship between type of game and depression		**Classification of Depression**					**Total**
		Very low	**Low**	**Average**	**High**	**Very high**	
Type of Game	Action	28	99	26	3	1	157
	Adventurism	15	47	11	5	1	79
	Sport – martial art	13	42	12	4	2	73
	All cases	0	1	0	0	0	1
	Total	56	189	49	12	4	310

Hypothesis No. 3: There is significant relationship between computer games and depression.
The results of using Chi – Square test and V crammer indicate that there is significant relationship between two variables of time of computer game and depression. (V = 0.001 & S= 0.216)
Also, the results show that the rate of depression is low among those who play computer games at evenings.

Table 5: Results of V Crammer Test for Variable of Time of Play and Depression ‘

Test	**Test Value**	**Significant Level**
Chi – Square	0.306	0.001
V Crammer	0.216	0.001
QTY	227	

Table 6: Classification of Time of Playing Computer Games and Depression

Significant level	F test value	Total average	Degree of freedom	Sum of squares	Time of playing computer games and depression
0.0	3.47	2.54	3	6.12	Inside group
		0.589	306	180.159	Outside group
			309	186.28	Total

Table 7: Rate of Depression Based on Time for Playing Computer Games

Degree of depression based on time for playing computer games		Classification of Depression					Total
		Very low	Low	Average	High	Very high	
Scheduled time	Noon	6	39	7	8	1	61
	Evening	22	61	24	2	3	112
	Night	21	67	15	1	0	104
	Total	49	167	46	11	4	277

Hypothesis No. 4: There is significant relationship between location of playing computer games and depression.

The results of using Chi – square and V crammer test indicate that there is not significant relationship between two variables of location of playing computer games and depression.

(S = 0.14 and V = 0.135)

Table 8: Results of V Crammer Test for Variable of Time of Play and Depression

Test	Test Value	Significant Level
Chi – Square	0.234	0.14
V Crammer	0.135	0.14
QTY	310	

Table 9: Classification of Location of Playing Computer Games and Depression

Significant level	F test value	Total average	Degree of freedom	Sum of squares	
0.019	3.36	1.98	3	5.95	Inside group
		0.589	306	180.33	Outside group
			309	180.28	Total

Table 10: Location of Playing Computer Games and Depression

Location of Playing Computer Games and Depression	Classification of Depression					**Total**
	Very low	Low	Average	High	Very high	
Home	11	60	14	2	1	88
Game net	34	113	33	10	3	193
House of relatives	9	9	1	0	0	19
House of friends	2	7	1	0	0	10
Total	56	189	4	12	4	310

Hypothesis No. 5: There is significant relationship between situation of playing computer games and depression.

Given the significant level obtained in this test, which equals to 0.03, supposing existence of significant relationship between situation of playing computer games and depression of respondents, due to the results of using Chi – Square Test and V Crammer, indicate that there is significant relationship between two variables of situation or location of playing computer games and depression. (V = 0.155 & S = 0.03)

The results also showed that degree of depression is low among those who play with their friends.

Table 11: Results of V Crammer Test for Situation of Playing Computer Games and Depression

Test	Test Value	Significant Level
Chi – Square	0.268	0.03
V Crammer	0.155	0.03
QTY	310	

Table 12: Classification of Situation of Playing Computer Games and Depression

Significant level	F test value	Total average	Degree of freedom	Sum of squares	
0.001	5.517	3.18	3	9.55	Inside group
		0.578	306	176.72	Outside group
			309	186.28	Total

Table 13: Situation of Playing Computer Games and Depression

Situation of playing computer games and depression		Classification of Depression					Total
		Very low	Low	Average	High	Very high	
With Situation of playing game	Lonely	10	57	11	3	1	82
	Along with friends	31	91	30	7	2	161
	Along with strangers	0	5	4	1	1	11
	Along with family members	15	36	4	1	0	56
	Total	56	189	49	12	4	310

Correlation between Background Variables and Dependent Variable (Depression), in this part, aftereffect of background variables, including age, educational level, major, average, type of school, education of parents (father and mother), job of father and mother, will be discussed with depression.

Since measurement level of background variables (age and average) is variable and depression is placed in interval measurement level, Pearson Correlation Test was used. Since measurement level of background variables such as education of parents (father and mother) is of upbringing type, Spearman Test was used.

With regard to the background variables such as major, education, school type and job of parents (father and mother), one-way variance analysis (ANOVA)was used for measurement of the relation.

Hypothesis 6: There is significant relationship between age of respondent and depression.

Since each two variables of age and depression is placed in interval measurement, Pearson Correlation Coefficient was used for testing this hypothesis.

With due observance to the significant level of the test which equals to 0.74, hypothesis of existence significant relationship is rejected between age and depression.

Table 14: Results of Pearson Correlation Coefficient Test between Age of Individual and Depression

Statistical Test	Age of Individual / Depression
Pearson Correlation Coefficient	-0.18
Significant level	0.7
Reliable number	308

Hypothesis 7: There is significant relationship between educational level and depression.
The background variable of education is placed in nominal measurement level while depression variable is placed in interval measurement level. Therefore, one-way variance analysis test (ANOVA) is used for testing the abovementioned hypothesis. Given the value of test Sig = 0.18 and F = 1.62, the test value is not significant; therefore, the mentioned hypothesis is rejected.

Table No. 15: Classification of Education and Depression

Significant level	F Test Value	Total Average	Degree of Freedom	Sum of Squares	
0.184	1.62	0.96	3	2.90	Inside group
		0.59	304	181.36	Outside group
			307	184.26	Total

Table No. 16: Results of Variance Analysis Test (ANOVA) between Education and Depression

Degree of Depression Based on Educational Level	**QTY**	**Average**	**Standard Deviation**	**Standard Error**	**For 95% confidence**		**Minimum**	**Maximum**
					Minimum	Maximum		
Guidance school	90	2.08	0.94	0.099	1.89	2.28	1	5
High school	195	2.11	0.70	0.050	2.01	2.21	1	5
Pre-university	17	1.76	0.56	0.13	1.47	2.05	1	3
University	6	2.50	0.54	0.22	1.92	3.07	2	3
Total	308	2.09	0.77	0.44	2.07	2.18	1	5

Hypothesis 8: There is significant relationship between educational level of father and depression.

Since variable of educational level is placed in upbringing measurement level and also depression variable is placed in interval measurement level, Spearman Correlation Coefficient is used for testing this hypothesis. Since significant level equals to 0.18, supposition of significant relationship is rejected between educational level of father and depression.

Table No. 17: Results of Spearman Correlation Coefficient between Education of Father and Depression

Statistical Test	Education of Father / Depression
Spearman Correlation Coefficient	0.076
Significant level	0.18
Reliable number	380

Hypothesis 9: There is significant relationship between educational level of mother and depression.

Since variable of educational level is placed in upbringing measurement level and depression variable is placed in interval measurement level, Spearman Correlation Coefficient is used to test this hypothesis.

Since significant level equals to 0.84, therefore, hypothesis of significant relationship is rejected between educational level of mother and depression.

Table No. 18: Results of Spearman Correlation Test between Educational Level of mother and Depression

Statistical Test	Educational Level of mother / Depression
Spearman Correlation Coefficient	0.011
Significant level	0.84
Reliable number	379

Hypothesis 9: There is significant relationship between average and depression.

Since the two variables of average and depression is placed in interval measurement level, Pearson Correlation Coefficient is used to test this hypothesis.

Given the significant level of the test, which equals to 0.34, hypothesis of significant relationship is rejected between average and depression.

Table 19: Results of Pearson Correlation Coefficient Test between Average and Depression

Statistical Test	Average and Depression
Pearson Correlation Coefficient	0.055
Significant level	0.34
Reliable number	373

Hypothesis 10: There is significant relationship between job of father and depression.
Background variable of job situation is placed in nominal measurement level while relationship variable is placed in interval measurement level. So, one – way variance analysis test (ANOVA) test is used for testing the abovementioned hypothesis. The results of statistical studies between two variables of job of father and depression indicate that the average rate of depression equals to 1.92 among youth boys whose fathers have state – run or governmental job, the figure of which stands at 2.22 among youth boys whose fathers have self-employed job. The average level of depression among youth boys whose fathers have private job or are unemployed stands at 0.88 and 2.09 percent respectively.
This difference is significant in degree of depression due to the values of test (S = 0.03 and F = 2.94) Therefore, this hypothesis is confirmed.

Table No. 20: Results of ANOVA Test between Job of Father and Depression

Father's Job	QTY	Average	Standard Deviation (SD)	Test
State – run or governmental	95	1.92	0.68	F = 2.94
Self – employed	141	2.22	0.88	
Private company	60	2.05	0.62	S = 0.03
Unemployed	11	2.09	0.70	

Table No. 21: Statistical Description of Depression Rate / Job of Father

Type of job	**QTY**	**Average**	**Standard Deviation**	**Standard Error**	**For 95% confidence**		**Minimum**	**Maximum**
					Minimum	Maximum		
State – run	95	1.92	0.68	0	1.786	2.066	1.00	5.00
Self – employed	141	2.22	0.88	0.07	2.080	2.37	1.00	5.00
Private	60	2.05	0.62	0.08	1.889	2.210	1.00	3.00
Unemployed	11	2.09	0.70	0.021	1.620	2.561	1.00	3.00
Total	307	2.09	0.78	0.44	2.006	2.182	1.00	5.00

Hypothesis 11: There is significant relationship between job of mother and depression.
The background variable of employment situation in measurement level is in nominal basis while variable of relation in measurement level is in interval form. Thus, one – way variance analysis (ANOVA) Test is used to test the abovementioned hypothesis.
The results of statistical studies between two variables of job of mother and depression indicate that the average rate of depression of youth boys with jobs of their mothers who work in state-run organizations stands at 1.83 percent, the figure of which is 2.29 percent for mothers with self-employment job. The degree of depression of youth boys whose their mothers work in private institution or are household stand at 2.22 and 2.15 percent respectively.
This difference is significant in rate of depression due to the value of test (S= 0.009 and F = 3.93). Therefore, the mentioned hypothesis is confirmed.

Table 22: Results of Variance Analysis Test (ANOVA) between mother's job and depression

Mother's job	QTY	Average	Standard deviation	Test
State – run	74	1.83	52%	F = 3.93
Self – employed	27	2.29	77%	S= 0.009
Private company	22	2.22	52%	
Household	185	2.15	86%	

Table No. 23: Statistical Description of Degree of Depression to the Mother's Job

Job Title	**QTY**	**Average**	**Standard Deviation**	**Standard Error**	**For 95% confidence**		**Minimum**	**Maximum**
					Minimum	Maximum		
State – run	74	1.83	0.52	0.06	1.71	1.95	1	3
Self – employed	27	2.29	0.77	0.14	1.98	2.60	1	4
Private	22	2.22	0.52	0.11	1.99	2.46	1	3
Household	185	2.15	0.86	0.63	2.02	2.27	1	5
Total	308	2.09	0.77	0.04	2	2.18	1	5

Conclusion

As a social phenomenon in tandem with other audiovisual media in the contemporary world, computer games have attracted the attention of many walks of life especially children and young adults due to the eye-catching and noticeable growth of communications technologies. Children and young adults are major customers of these computer games which have allocated a remarkable part to fill their leisure time of these strata. Instead of participating in the family circle and /or doing homework, children and young adults prefer to play computer games.

It should be noted that children and young adults have seriously been affected to the computer games in the contemporary world of today. Given the significance of social life of this age bracket, computer games have constituted major portion of life of children and young adults inevitably. Impact of computer games on the personality, characteristic, behavior and manner of children and young adults is the major concern which has been turned into a controversial issue followed with several disputes.

Since depression has been spread vastly in the today world, known as main disease (adult cold) of the century among mental and psychic diseases, aftereffects of computer games should be taken into serious consideration, because, this mental and psychic disease is increasing day by day in the human communities and has faced all countries with serious challenges.

It should be noted that this mental and psychic disease is increasing and developing among children and young adults. For this purpose, researchers believe that every youth can face with this disease in a section of his or her age.

With due observance to the significance of this subject, in this study, we decided to study role of these games in depression of children and youth due to the ever increasing inclination of youth to the computer games.

In this study, we also tried to study relationship between playing computer games and depression among boys in the best form possible. This study is stable on various psychological and sociological theories in the fields of games and depression including theory of using and satisfying, theory of databank in society, media approaches, simulation ideology, online depression power theory, and psychological theories on the depression (biological theory, dynamism theory and learning theory and finally, Back depression cognitive theory.

Among these theories, the theory of using and satisfying was selected in the field of communications while among psychological theories; Back depression theory was selected as the selected theory by the researcher.

This study was done among youth boys (ranging from 12 to 18 years old), based in Tehran, who went to the game nets in order to play computer games. This study is of survey type and questionnaire was the main data collection tool. Although there are numerous ways for doing scientific study, we did outmost effort in order to produce a positive result in this study.

By referring to the game nets across Tehran Province, questionnaires were distributed among youth boys and it was tried to fill out the questionnaires in the best form possible. In designing questions, comments and viewpoints of reader and advisor professors were used. For instance, Back depression-related questions were localized precisely, because, Back Test has been designed and performed by researchers overseas.

Although this test is used in Iran, it enjoys high and acceptable validity and reliability. In other words, results of Back test has executive guarantee and can be relied on it.

Fortunately, when questionnaires were filled out, reliability of these questions in Cronbach's Alpha Coefficient was obtained 93 percent (93%). The said issue indicates high accuracy and precision in designing questions.

But researcher of the study did not suffice to the obtained reliability merely and approved questions designed by senior psychologists and advisors. Fortunately, after studying or testing questions designed by senior experts, our localized questions also were confirmed by respective experts. The results of this study showed that majority of respondents had 16 – 18 years old, studying in high school. It should be noted that major field of study of all respondents were Mathematics and Physics with educational average ranging from 16 to 18.

Most respondents were studying in state – run schools and educational level of their father and mother was diploma degree. Job of father of majority of respondents was self – employed while

job of mother of majority of respondents was household. Regarding computer games, it can be said that maximum hour needed to play computer game stood between 1 to 4 hours in a day while the individuals in this study played computer games for one hour and 37 minutes averagely in a day.

Majority of individuals are between 1 to 5 years old who are interested in computer games. Majority of respondents played computer games at game net and referred to the game net up to five times per week.

Most individuals were playing computer games with their friends. Most individuals were playing computer games at evenings. Most respondents interested in playing action computer games.

Since it is tried to study the role of computer games in depression of youth particularly boys in this study, the findings of the research showed that there is significant relationship between degree of using computer games and depression.

That is to say that with the increased rate of playing computer games, the degree of depression is increased to a great extent. It should be noted that this study accords with the research activities made by Haratian (2010), Sediqeh Ahmadi (2010), Rostami (2007), Naser Ranjbar (2006), Amin Vazli (2002) and Etkins (2004). Also, the results show that the degree of depression is less among those youth who play computer games at evenings. Also, it became clear that there is not any significance difference between various types of computer games and depression.

Also, there is not any significant relationship between location of playing computer games and depression. Meanwhile, in the there is significant relationship between situation of playing computer games and depression. It should be noted that the degree of depression is less among those who play computer games with their friends, details of which confirms with the results obtained by Davaran (2001).

From among background variables, only job of father and mother has significant relationship with the degree of depression. However, it should be noted that the results of this study show that key role of computer games cannot be ignored. With due observance to the ever increasing interest of children and young adults of our country to these games and due to their vehement interest to spending more time for playing computer games, depression is very high among them. But, it should be kept in mind that various factors may have a leading role in their depression.

Consequently, these games play a leading and important role in their depression, for instance, as mentioned in above, even job of father and mother of youth play an important role in depression of children. Then, role of background variables of this study cannot be ignored.

All the above mentioned results can be regarded as an alarm for our society in a way that inattention to the needs of youth and young adults may jeopardize their future to a great extent.

The said issue also will face statesmen and politicians with serious problem, so that solving each of them will be more difficult if it is ignored.

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