

COMPUTER GAME ADDICTION: A FIELD STUDY ON ADOLESCENTS

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Abstract

This study carried out in order to analyze the characteristics of game addiction among the adolescents. The research was tackled within the frame of screening model and data was collected in accordance with it. The questionnaire used as a data collecting instrument was applied in a secondary school and a high school which are considered to have the capacity of representing the socio-economic and cultural structure of Selçuklu district of Konya province. After the analysis, it was determined that the average of the boys as for game addiction were higher than those of girls. Moreover, the boys were observed to spend more money on games. The socio-economic reasons such as educational status of parents, the number of siblings, having computers and having a private room weren't seen to be discriminative characteristics. However, a differentiation related to addiction was observed among genders and stages. The research suggests that it is necessary to activate the patterns of social communication networks such as friendly footing, taking more responsibilities, and highlighting social life to diminish game addiction.

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INTRODUCTION

Game which is considered to be equal to the history of humanity is an indispensable factor for human beings; because, game is one of the major instruments of leisure which is a component forming the society. In this sense, game provides the maintainability of social system and has significant functions for the society. When the functions of game which every living creature game are considered; the topics such as socialization, participation, learning, entertainment, relaxation, creativity, dreaming, imitating and recreation come into prominent.

While games are shaped in accordance with time and place, they make progress parallel with technique and technology of the period. For that reason, game instruments and game types continuously change and transform. On the other hand, games change their form and content characteristics in accordance the characteristics of the society. Furthermore, changes are not

only seen in the societies but also among the individuals that form the societies. Social accumulation of knowledge and personal characteristics of the individuals lies behind changes.

As well as every structure and function which is dynamic, interactive and continuous undergoes transformation; on the other hand, the contents, types, the individuals, groups and societies also undergo changes. Accordingly, the development of information technologies, computer, internet and mobile phones which is the new communication platform also changed perceptions and apprehension in the concept of game. As well as the capitalist system covers every field, it has established an industry considering the world of games within the structure of market and this industry found its place within the patterns of cultural industry. Thus, games are no longer just games and they have become supporters or transmitters of different ideologies.

With the development of technology and market economy; the welfare levels of the society increased and positive developments were experienced on one hand and negative results also occurred when technic and technology were used on the other hand. When it is considered from the point of mass communication, media is the most important source of information especially in the information societies. For that reason, the target group becomes highly dependent on media. While the individuals use media in order to understand the society they live in better and shape their lives while the contents which media presents become irrevocable. This situation which change according to the instruments, change the perception of time and place through computer and internet and maximizes the interaction.

This situation which emerges as dependency to technological tools also emerges at numerous points related to the content provided through technical devices. The processes executed through contents provided by communicative instruments, at the same time, heads off the real functions of the communication instrument and takes its place in the life of society and individual as a problem to be sorted out. One of those perceptions is the game. More than being a social instrument, games which are virtually played through technological instruments are considered as a source of problems at many points rather than their real functions. Those hitches from the point of games can be evaluated from biological, psychological and social aspects while the concept of addiction also draws attention. Basically, addiction is not being able to quit the thing the individual has become addicted, continuously pays attention to them and always think about them (Horzum, 2011: 58).

Within this period; computer, computer games, internet, internet addiction, internet games addiction, and mobile phone addiction are seriously considered in academic environments. Addiction is discussed from the point of different sciences and by the field of which is interested in, manner of approaches, methods and techniques differ. Foremost among these are health, education, sociology, politics and, more recently, communication. The data collecting instruments they employ also differ.

1. LITERATURE REVIEW

In the studies of addiction, there are numerous studies from television to internet, from computer to mobile phones or the contents of mass communication instruments. Those studies differ not only from subjects and content but also manners of approaching. Foremost of the changes is that it is not a concept of solely on communication field but also concerns other fields. When the researches related to the field are analyzed, publication activities are observed during late 80's and early 90's. Among the first researchers of the field, Shotton enabled the formation of new initiations in the fields of computer technologies and addiction in 1989. Thus, the addiction which forms with computer and computer activities is regarded as if it is like other types of addiction (drugs and narcotics) (King et al., 2010: 3).

Especially, the interest of health sector on the pattern of addiction occurs related to mass communication instruments among the types of other addictions accelerated the studies but separated from the paradigms of communication studies. As well as the studies of psychiatry and psychology, the studies of addiction on communication growingly continuing. Another point in the addiction studies, dense research are carried out in developed western and Far East geography related to those problems.

When prominent studies in the field are considered: In the study of Salguero and Moran (2002) which they executed on the video game addiction of the young between the ages of 13 and 18 in Spain; 97% of the participants were determined to play video games within a year, 57% of them regularly play video games. 73% of the subjects were discovered to play computer games, 37% of them played games using game consoles and 7% of them played internet games. According to the research, it was observed that the frequency of playing games and playing games regularly increased and men played more games than women.

In Taiwanese; Ko et al., (2005) who research the addiction of high school students for online games found that boys are more addicted than girls, girls spent more time than boys, boys played for will to succeed while girls play to make friends.

In Holland, Rooij et al., (2010) who studies the addiction of the secondary education students (13-16) found that the rate of children that can be determined as the addicts of online games was about %. This rate represents the 1,5% of the children in the same age group who live in Holland. Nevertheless, the users are discussed in two groups: the first group consists of severely addicted online game users while the second group contains severe but not addicted online game users. In the research, the effects of addiction to games on psycho-social health of children were determined to be comparatively less.

In a study which Desai et al., executed on 4028 adolescents who play computer games in high school or experience problems due to the computer games in the same year; half of the participants stated that they played computer games and boys played computers more than girls. About 5% of the participants are the problematic users of computer games. Playing games is generally more common among the boys while playing games is related to more reflexive behaviors and they have less internalization symptoms. The girls who state that they play games don't experience depression; on the contrary, they cut up rough and display a behavior up to bringing guns to school. On the other hand, there is a negative relationship between playing computer games and smoking regularly.

In a research carried out by Jeoung and Kim in 2011 on 600 subjects from secondary and high school students (ages 12-18) in South Korea; high school students were found to be more addicted than secondary school students while boys are more addicted than girls. In the study which the role of parents, friends and teachers were considered as variants; the relationships between adolescent and parents were determined to be more significant patterns from the point of addiction. The adolescents with positive relations with parents were observed to have negative addiction patterns.

In a research carried out by Festl et al., in 2012 on adolescents, young people and older ones in Germany; it was revealed that men spent more time playing games than women, there was a negative correlation from the point of ages, young people mostly preferred digital games while the adolescents had higher problematic playing games and addiction levels than the other groups.

When the results of the research carried on the Vietnam example about MMORPG; the people who play such games were determined to experience significantly higher levels of mental disorder than those who don't play. The strongest positive correlation was found between the scores of MMORPG scale and the scores of mental disorders scale. Accordingly, it is possible that young Vietnamese MMORPG players are likely to have mental disorders at higher levels due to their higher addiction scores (Son et al., 2012).

Bruss (2013) who performs qualitative researches on the computer games addiction of Danish young people from their own point of view; stated at the end of the study that the concept should be handled carefully although medical threat takes place in daily life as a psychological and psychiatric threat and the playing periods of young people have negative aspects. In some characteristics which were expressed to be negative, it was stated that the young people played roles in the formation of their identities.

1.1. The Studies Carried Out in Turkey

According to the data of Turkish Statistical Institute (TSE) for 2013; the age to start using computer in Turkey is 8, the age of using internet is 9, and the age of using mobile phone has been determined as 10 (www.tuik.gov.tr). This situation shows that, especially, the individuals in their childhood period are under the risk against using communication tools unconsciously. The researches executed all over Turkey support this reality.

In the study carried out to determine the habits of using computers among the primary school students in Turkey and their position for computer games; the boys were determined to play games more than girls. The results of the research executed in the example of İzmir and Karabük revealed that girls generally preferred quizzes, catechetic, general knowledge, and action-adventure games while boys preferred action-adventure, fighting and sports games. It was observed that the strategic games which cognitive and mental abilities are employed more than action-adventure types. The reason for this has been evaluated as the age levels of the students. According to the research, possessing a computer has effects of the durations of playing games (İnal and Çağıltay, 2005).

In a Sakarya based research carried out by Horzum (2011) which levels of addiction level for computer games among primary school students according to various variants; a significant difference was observed between the girls and boys from the point of addiction. Namely, male students have higher addiction scores than the female students. Moreover, the students who are higher income earners are more addicted than the students with lower or medium income levels and the students of 4.th grade are more addicted than 3.rd and fourth grade. Besides, it was seen that the existence of computers in the homes of the students didn't cause a significant difference in the level of addiction.

In a study carried out in order to calculate the computer games addiction of primary school students in Adıyaman (Güllü et al., 2012); it was concluded that the addiction levels of the children for computer games was rather high. It was determined that the scores of addiction to computer games among the students significantly differed according to the variants such as gender, daily use of computer and the existence of computers at home; however, there was no difference according to the variants such as grades, the occupation of the parents and free time in and out of school.

When the results of another Kırşehir centered research executed on primary school students are analyzed, similarly, it is seen that a different situation exists. According to the study carried out by Şahin and Tuğrul (2012) the addiction levels of primary school students is very low. Nevertheless, the students of 4.th grade have less addiction scores than those of 5.th grade, girls are less addicted than boys and those who don't own have less addiction scores than those having computers at home. Another remarkable result that shows up in the research is related to the education level of the mother. Accordingly, the more the mother's education level raises the more addiction level for computer games increases. This situation makes the relationships between the education level and addiction questionable. In a study carried out by Ayas (2012) on high school students in Giresun; it was observed that boys were more addicted than girls and there was a positive relation between addiction and being ashamed.

In the study executed by Vollmer et al., (2014) in İstanbul on 741 adolescents related to the addiction to computer games, the individuals who study in different schools were talked face to face. Within the context of the study which a quantitative method is employed, the relationships between playing computer games and the changes in physical and personality aspects were examined and remarkable results were obtained. It was determined that accordingly, the computer games addiction had strong effects on the changes in the physical functions of human beings (hormone levels, body heat etc.) which are called 'chronotype'. A significant relationship was observed between the addiction of computer games and the duration of playing computer games and the 'chronotype'. The evening focused young and male students had higher scores of addiction for computer games than the morning focused older female students. The addiction levels of extraverted and obedient students for computer games were low. No significant relation was observed between addiction levels of the students for computer games and clarity, experiences and their personal convictions.

2. METHODS

Under this title, the information related to the research model, universe sampling, data collecting instruments and the analysis techniques employed in the study and the validity and reliability of the research.

2.1. The Research Design

The screening model was employed in the study. Using the screening model, it was aimed to reveal the current status of the phenomenon which was perceived as a problem. The research was tackled within the frame of screening model and data was collected in accordance with it. The questionnaire which was used as a data collecting instrument was applied in a secondary school and a high school with capacity of representing the socio-economic and cultural structure in Selçuklu district of Konya province. With reference to the data of Ministry of National Education (MEB) (<http://sgb.meb.gov.tr>), 384 students have the capacity to represent with the rates of 5% error and 95% confidence level. In the study, 425 questionnaires were applied and 393 questionnaires were found acceptable for data analysis. The time of data collection is in April 2014. The obtained data was analyzed through SPSS 20 package program. The statistical significance level of the study was accepted 0.05.

In the questionnaire which was used as a data collecting instrument, the scales which were previously developed by Horzum, Ayas and Balta (2008) and used by Horzum (2011) were employed; some items were added to socio-demographic questions. Those are the number of siblings, the amount of money spent on games and educational status of the parents. The scale part of the questionnaire with 30 questions included 21 questions of likert scale with 5 options, and 9 questions related to socio-demographic patterns. The reliability co-efficient of the attitude scale is rather high.

The crosstabs technique was employed in the study in order to reveal the relationships between frequency analysis and variants for socio-demographic aspects. The factor analysis was used for sub-dimensions of the scale, between the sub-dimensions, the Mann-Whitney U was used for the data with two variants in the relationships between sub-dimensions and other variants and Kruskal-Wallis was used for variants with more than two.

		Frequency	Percent	Valid percent	Cumulative percent
Gender	Boys	212	53,9	53,9	53,9
	Girl	181	46,1	46,1	100,0
	Total	393	100,0	100,0	
Number of Siblings	1	11	2,8	2,8	2,8
	2	124	31,6	31,6	34,4
	3	186	47,3	47,3	81,7
	4	52	13,2	13,2	94,9
	Five and more	20	5,1	5,1	100,0
	Total	393	100,0	100,0	
Class	6	53	13,5	13,5	13,5
	7	52	13,2	13,2	26,7
	8	63	16,0	16,0	42,7
	9	56	14,2	14,2	57,0
	10	53	13,5	13,5	70,5
	11	64	16,3	16,3	86,8
	12	52	13,2	13,2	100,0
	Total	393	100,0	100,0	

Table1: Socio-demographic Characteristics of Adolescents

		Number of People	Percent	Valid Percent	Total Percent
Family Income	0-810 TL	19	4,8	4,8	4,8
	811-1.000 TL	34	8,7	8,7	13,5
	1.001-1.500 TL	90	22,9	22,9	36,4
	1.501-2.000 TL	54	13,7	13,7	50,1
	2.001-2.500 TL	53	13,5	13,5	63,6
	2.501-3.000 TL	81	20,6	20,6	84,2
	3.001 TL and more	62	15,8	15,8	100,0
	Total	393	100,0	100,0	
Mother education level	Literate	12	3,1	3,1	3,1
	Primary School	163	41,5	41,5	44,5
	Secondary School	100	25,4	25,4	70,0
	High School	80	20,4	20,4	90,3
	University	35	8,9	8,9	99,2
	Post Graduate+	3	,8	,8	100,0
	Total	393	100,0	100,0	
Father education level	Literate	3	,8	,8	,8
	Primary School	93	23,7	23,7	24,4
	Secondary School	64	16,3	16,3	40,7
	High School	110	28,0	28,0	68,7
	University	110	28,0	28,0	96,7
	Post Graduate+	13	3,3	3,3	100,0
	Total	393	100,0	100,0	

Table 2: Socio-economic and Socio-cultural Status of the Families

Socio-Demographic Characteristics

- Related to the amount of money spent for games, **no significant relationships were found** between the education status of the parents and the amount of money.
- **There is a significant differentiation** between the amount of money spent on games and the grades. While the students of secondary school who spend money on games spend less money, final year students of high schools spend much more on games.
- The adolescents having a personal room **show varieties** in spending money. Especially, there is a remarkable difference in the expenses at beginner top levels.
- **There is no significant differentiation** between the money spent on games and having a computer.
- **There is significant differentiation** between the money spent on games and gender. Male students spend more money than the female students.
- On the other hand, it was observed that the number of siblings and the income of the family **didn't constitute a significant difference** related to the money spent on games.
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		Frequency	Percent	Valid Percent	Cumulative Percent
Pc At Home	Yes	346	88,0	88,0	88,0
	No	47	12,0	12,0	100,0
	Total	393	100,0	100,0	
Having a Personal Room	Yes	306	77,9	77,9	77,9
	No	87	22,1	22,1	100,0
	Total	393	100,0	100,0	
Money Spent for Games	Spending Any Money	291	74,0	74,0	74,0
	10-30 TL	71	18,1	18,1	92,1
	31-50 TL	15	3,8	3,8	95,9
	51 TL and more	16	4,1	4,1	100,0
	Total	393	100,0	100,0	

Table 3: Related to Economic Status of Adolescents

I PLAY COMPUTER GAMES...	Unable to quit Playing Computer Games	Negligence while playing	Associating with real life	To prefer to others	Mean	SD
I can't stop playing computer games.	,728				2,22	1,51
Quite often, I want to stop playing computer games but I can't quit.	,694				2,06	1,31
I look forward to playing computer games.	,689				2,14	1,48
I want to play again when I lose while I am playing computer games.	,668				2,75	1,55
When I start to play computer games, I play longer than the period I am given.	,657				2,27	1,49
I get furious when someone prevents me while I am playing computer games.	,651				2,76	1,46
I don't feel lonely when I play computer games.	,606				2,38	1,60
I delay eating in order to complete the game I play on computer.	,593				1,96	1,22
I get furious with my family since they don't allow me play computer games.	,553				1,65	1,19
I often find myself speaking aside while I am playing computer games.	,443				2,25	1,50
I am often late for school since I play computer games.		,704			1,17	,745
I delay doing my homework in order to play computer games.		,698			1,72	1,19
I give false information about the period of time I play computer games.		,607			1,45	1,03
I spend most of my time playing computer games when I am not at school.		,574			1,64	1,07
I play the computer games my friends play in order to be accepted by them.			,763		1,34	,92
In real life, I reflect the aspects of my characters in the games.			,674		1,44	1,02
I dream of playing computer games when I don't play on computer.			,564		1,70	1,24
After I finish computer games, I think about the mistakes I have made while I play computer games.			,536		1,87	1,29
I prefer playing computer games to spending time outside.				,814	2.05	1.38

Playing computer games is more entertaining than being with my friends.				,735	1.60	1.13
I prefer playing computer games to other activities (doing physical activities, watching TV etc.).				,685	1.95	1.36
Total Variance Explained	23.2	13.6	10.7	10.3		
Cronbach's Alpha (α)	,886	,766	,740	,731		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)	,922					
Sig.	000					
Barlett's Test of Sphericity: χ^2 ; df	3681.9				210	

Table 4: The Factors of the Scale for the Addiction of Adolescents to Computer Games

In the factor analysis carried out on the attitude questions in the scale, 4 factors were determined. The first of emerging sub-factors consists of 10 items with a definition that "I can't quit playing computer games", its cronbach's alpha is 0,886 and explains the 23,2% of total variance. In this factor, the top score is observed as "I can't help playing computer games" while the lowest score is "speaking aside" during games which reveals its psychological dimension. The second factor can be defined as "negligence while playing". In this factor, there are 4 items and they explain 13,6% of total variance. The third dimension which explains the 10,7% of the total variance can be expressed as "associating with real life" and the factor includes 3 items. The fourth sub-dimension is "to prefer computer plays to others". The cronbach's alpha (α) internal reliability coefficient of the factor which explains 10,3% of total variance is 0,731.

On the other hand, it was observed that the sub-dimensions of factors didn't have a normal distribution according to the test of normality and non-parametrical test techniques were decided to use. (First dimension **Kol. Sim. Z= 1.42, p=0.035**, second dimension **Kol. Sim. Z 3.14, p=0.00** third dimension, **Kol. Sim. Z 3.22, p=0.000**, fourth dimension **Kol. Sim. Z=3.15, p=000**).

2.2. Relationships between variables

Subscales	$\bar{X} \pm s$ (Median)		p*
	Gender		
	Boy (n = 212)	Girl (n = 181)	
Unable to quit computer games	2.44 \pm 1.1 (2.20)	2.02 \pm 0,86 (1.80)	0,035
Negligence while playing	1.83 \pm 0,92 (1.50)	1.31 \pm 0,67 (1,25)	0,000
Associating with real life	1.66 \pm 0,90 (1,25)	1.30 \pm 0,59 (1,25)	0,000
To prefer computer plays to others	2,00 \pm 1,1 (1,66)	1.72 \pm , 95 (1,33)	0,000

Table 5: The Distribution of Addiction Scale Sub-dimensions According to Gender * Mann-Whitney U Test

A statistically significant differentiation was observed between the gender and factor sub-dimensions from the point of "being unable to quit computer games", "negligence while playing", "associating with real life", and "to prefer computer plays to others".

Subscales	$\bar{X} \pm s$ (Median)		p*
	Pc at home		
	Yes (n = 346)	No (n = 47)	
Unable to quit computer games	2.30 \pm 0.99 (2.10)	1.94 \pm 1.1 (1.60)	0,020
Negligence while playing	1.61 \pm 0,83 (1.25)	1.48 \pm 0,96 (1.0)	0,063
Associating with real life	1.52 \pm 0,78 (1,25)	1.32 \pm 0,80 (1,0)	0,008
To prefer computer plays to others	1.880 \pm 1,02 (1,66)	1.78 \pm ,1.18 (1,33)	0,263

Table 6: Addiction scale sub-dimensions according to computer ownership * Mann-Whitney U Test

When the statistically significant relationship between the existence of computer at homes of the subject and sub-dimensions of the factor was analyzed; the first and the third sub-dimensions, namely, those who have computers at home are seen to **differ from the others** from the point of being unable to quit computer games and associating with real life. No statistically difference occurred between the other factors.

$\bar{X} \pm s$ (Median)			
Subscales	Own Room		p^*
	Yes (n = 306)	No (n = 87)	
Unable to quit computer games	2.21±0.96 (2.0)	2.38±1.16 (2.20)	0,319
Negligence while playing	1.50±0,78 (1.25)	1.92±1,01 (1.50)	0,000
Associating with real life	1.50±0,76 (1,25)	1.50±0,88 (1,25)	0,726
To prefer computer plays to others	1.82±1,01 (1,66)	2.03±,1.01 (1,66)	0,118

Table 7: The Distribution of Scale Sub-dimensions According to the Subjects Possessing Own Room * Mann-Whitney U Test

There are statistically significant differentiation between the students' possessing their own rooms and factor sub-dimensions from the point of negligence while playing; there is no differentiation between the other sub-dimensions. The averages of those who don't have own rooms are higher than those having a private room and they are observed to be more problematic about negligence.

Subscales	School Level		p^*
	Secondary School (n = 168)	High School (n = 225)	
Unable to quit computer games	2.26±1.05 (2.1)	2.23±0.98 (2.00)	0,816
Negligence while playing	1.73±0,97 (1.25)	1.49±0,73 (1.25)	0,012
Associating with real life	1.54±0,78 (1,25)	1.54±0,80 (1,25)	0,193
To prefer computer plays to others	2.05±1,04 (2,00)	1.73±,1.03 (1,33)	0,000

Table 8: The Distribution of Scale Sub-dimensions According to the Education Levels $\bar{X} \pm s$ (Median)

• Mann-Whitney U Test

When the relationships between the sub-dimensions and education level are considered from the point of significance; it is seen that there is differentiation in the sub-dimensions of "negligence while playing" and "to prefer computer plays to others". As the negligence status of the young adolescents due to being hooked on games and their ages grow up; the adolescents are seen to give importance to extraversion and they give priority to the relationships with opponent sex and friends.

$\bar{X} \pm s$ (Median)						
Subscales	Siblings					p^*
	1 (n = 11)	2 (n = 124)	3 (n = 186)	4 (n = 52)	5 and more (n = 20)	
Unable to quit computer games	2.33±0,95 (2.20)	2.34±0,98 (2.10)	2.23±1,02 (2.00)	2,05±0,86 (1,80)	2,20±1,41 (1,80)	0,477
Negligence while playing	1,70±0,90 (1,50)	1,60±0,80 (1,25)	1,58±0,78 (1,25)	1,54±0,78 (1,25)	1,83±1,20 (1,25)	0,961
Associating with real life	1,45±0,43 (1,25)	1,51±0,64 (1,25)	1,51±0,84 (1,25)	1,29±0,54 (1,25)	1,86±0,60 (2,00)	0,650
To prefer computer plays to others	1,81±0,60 (2,00)	1,77±0,90 (1,66)	2,02±1,15 (1,66)	1,63±0,90 (1,16)	1,70±1,20 (1,00)	0,053

Table 9: Scale distribution of sub-dimensions by the number of siblings *Kruskal-Wallis H Test

There is a statistically significant differentiation between the number of siblings and the factor sub-dimensions of the addiction for computer games. However, the significance level of the fourth sub-dimension is on the border.

<i>Subscales</i>	<i>Money spend for games</i>				<i>p*</i>
	No spend (n = 291)	10-30 TL (n = 71)	31-50 TL (n = 15)	51 TL and more (n = 16)	
Unable to quit computer games	2,07±0,92 (1,90)	2,70±0,99 (2,80)	3,02±1,15 (3,10)	2,75±1,38 (2,50)	0,000
Negligence while playing	1,48±0,82 (1,25)	1,70±0,70 (1,50)	2,53±1,06 (2,75)	2,12±1,05 (2,00)	0,000
Associating with real life	1,40±0,70 (1,25)	1,67±0,80 (1,50)	1,93±1,14 (1,25)	2,03±1,34 (1,37)	0,000
To prefer computer plays to others	1,68±0,95 (1,33)	2,28±0,97 (2,00)	2,55±1,41 (2,66)	2,87±1,41 (2,66)	0,000

Table 10: Scale distribution of sub-dimensions by the money spend for games * Kruskal-Wallis H Test

When spending money on computer game and factor sub-dimensions are considered from the point of statistical significance, the four dimensions were seen to differ significantly. Especially, serious differentiation is seen among the other expense types which the amount of spending money increased in the group of TL 31-50 and over TL 50. The money spent on games may be regarded as a process on the behalf of addiction. On the other hand, no statistically significant differentiation was observed between the income of the family and factor sub-dimensions.

CONCLUSION

In the study carried out in the example of Konya in order to analyze the relationships between the characteristics of game addiction among the adolescents and variants; it was determined that the average of the boys were higher than those of girls when the whole addiction scale was considered. Moreover, the boys are observed to spend more money on games. This situation corresponds to the results of previously executed studies. When the demographic variants are analyzed; the socio-economic reasons such as educational status of parents, the number of siblings, possessing computers and possessing a private room aren't seen to be discriminative characteristics. However, a differentiation is observed gender and stages related to addiction.

From the point of scale sub-dimension, it was observed that the boys which gender differed had a more problematic structure. As for the relationships between possessing a computer at home and factor sub-dimension; a differentiation was observed from the point of not being able to quit game and associating it with real life. Accessibility may cause not being able to quit games and associating it with real life. Another variant is that those who don't own a private room differentiate at the sub-dimension of negligence. This situation may be defined as choosing different places for games, spending more time in distant places away from the observation of parents and others and as a result of this, the things to be done remain in the background.

From the point of the level of secondary and high schools which the adolescents study, the students of secondary school were found to be more problematic from the point of negligence and preferring other games. The number of siblings of the adolescents and economic status of the family didn't differ in the sub-dimensions. However, the money spent on games showed that the adolescents differ in all sub-dimensions. The use of money is the indicator of addiction pattern.

The research reveals that it was necessary to activate the patterns of social communication networks to resolve the sub-dimensions of adolescents which are explained as the pattern of addiction, friendly footing, taking more responsibilities, and highlighting social life. At the same time this study should be supported by other disciplines, different regions and, especially, by adolescents.

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