

Facebook Addiction Among Turkish Students

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Abstract: *The purpose of this study is to examine how secondary school students' Facebook addiction levels were differentiated in terms of different variables. This study which was designed according to quantitative research method is a descriptive field research. Within the study group of the research, there are 330 female, 360 male students, among them 228 students are 6th graders, 230 students are 7th graders and 232 students are 8th graders and in total there are 690 students. Research data was obtained from seven state school students in Giresun city center in 2015-2016 academic year by means of "Facebook Addiction Scale" developed by Keçe (2016). According to the research findings, it was found out that the participants' Facebook addictions were determined as "sometimes" and "rarely" and their genders and socioeconomic income levels has no significance on their Facebook addictions. It was revealed that the 7th grade students have more addiction when relatively compared to the 6th and 8th grade students. It also was detected that the ones who relate Facebook with oral lessons have more addiction level to Facebook than the ones to relate Facebook with numerical lessons. It was understood that the students with parents' graduation levels of university degree and master's degree have more addiction levels, and the easy access to the Internet has a direct influence on Facebook addiction.*

Keywords: *Facebook addiction, gender, grad, internet, secondary school students*

I. Introduction

The introduction Social media that is indicated inevitable in today's world is a significant communication tool that provides communication, interaction and various event opportunities for people. The social innovation and changes in information communication technologies have significance on the expansion of boundaries of social networking sites. Especially with the scientific and technologic improvements during the last decade, internet connection is not only a specification to be used only on PCs but changed into such a state directing people to anywhere and through laptops, tablets and smart phones, which provides people with instant interactive communication.

Internet usage rates have increased in the world as well as in Turkey. More than 17.8 million people in Turkey above the age of 15 use internet either at home or at work. These people spent 32 hours a month on the internet and within this period of time they surf through 3044 web pages. Among the mostly visited websites in Turkey by internet users it is significant to note that a social network site (Facebook) stands on the third rank with a rate of 72% (ComScore, 2009; Eren et al. 2014). Furthermore, through mobile tools around the world that surf the internet, 32% of these are also a member of a social network (Nielsen.com 2010; Köseoğlu, 2012).

Social Networks as part of Social Network platforms generate the profiles of people (actions, hobbies, friend circles, past lives) and allow other members to be signed up in the system via displaying and reaching these pages through full or limited access. Also these are web sites that allow people to see their relationship lists within the system, show the inclinations of people among online societies where they share their activities and send each other messages, emails, discussion groups, videos, voice chats and file shares over network (Balci and Gölcü, 2013; Boyd and Ellison, 2007).

With internet becoming more accessible, today the number of internet users reached to 3 billion and half of them have active user status on social media (www.ntvmsnbc.com). The most popular social network among the social network platforms has been founded in 2004 by Mark Zuckerberg and his friends and while it was limited only for Harvard students in the initial stage, in time it became popular in different colleges, high schools and universities, and further it has become accessible at a global scale (Carlson, 2011). Facebook today has become a phenomenon that reached to more than 1 billion users. As a mass communication tool, Facebook is also very popular among the students. Students are using the so-called social network web site to fill in time, to make connection, sexual attraction, social comparison, to establish connections with former friends, to play games, entertainment, and to get relaxed etc. (Dhaha, 2013; Foregger, 2008; Kobak and Biçer, 2008; Koç and Karabatak, 2011). On the other hand, social networks reached such a broader scope that students have the opportunity to express their thoughts, ideas, discuss about them, and produce new thoughts every day (Vural and Bat, 2010; Downes, 2005). While Facebook obviously makes our lives more convenient (such as speeding up the communication and expanding the scope, supplying the sustainability of continuity of friendships and relations), extreme use of Facebook, which is a product of the improving technology, especially influences young people who step into maturity currently in a negative way. Among the social networks, Facebook is the

most widespread one and when it used out of its main purpose, it is considered to be a significant problem which may lead to addiction. On the other hand, individuals younger than 22 has much more addiction than the other people (Chao Lin et.al. 2012).

According to Çetinkaya (2013), addiction with its general definition is the unavoidable desire to a subject, person or to a creature; or getting under the provision of another will. When defined psychologically, individuals' own unavoidable state of desire towards repetition of an action despite harming their spiritual and physical health or social life. Tamar Gürol (2012) defines addiction as a sustainable, repetitive brain disease characterized by searching for substance usage and substance addiction in an obligatory way. According to this, all types of objects lead to addiction. It can be seen that addiction is evaluated as substance addiction and addiction to a sort of behaviour as two basic levels. Addiction to substances such as tea, coffee, cigarette, chocolate, drugs and alcohol is evaluated under the concept of substance addiction. Addiction is the exhibition of a proper behaviour in an extraordinary order and frequently, thus balance loss of an individual physically, publicly and functionally, disorder and not adopting the environment (Karaman and Kurtoğlu, 2009).

Addictions based on behaviour involve not only food & beverage, gambling, sex and so on but also technological addictions related to human-machine interaction. An individual can be passive or active within the frame of behavioural addictions of technological addictions. Features found in technological devices such as sound, vision etc. increase addiction tendency (Bilge, 2012; Young, 1998).

When personal disorders depending on the addiction are reviewed, violence symptoms, aggressive behaviour exhibition, inability to express himself, increasing of suspects, violence symptoms, losing the feelings, having difficulties in learning, having confusions between dream and reality, running away from realities and problems in life, psychomotor disorders, developmental disorders, antisocial personality development, inclination of argument with the closer environment, decrease of academic success, lack of harmony in interpersonal relations can be listed among behavioural disorders (Harzadın, 2012; Hauge and Gentile, 2003; Van and Chiou, 2006).

Andreassen (2012) from the University of Bergen (Norway) explains the six phases of Facebook addiction indications:

- Beginning level: Spending most of the time on thinking about Facebook and making plans on it.
- Promoting the soul state: Starting to use Facebook to get rid of individual problems
- Tolerance: Desiring to spend more time on Facebook at such a level that influences social life
- Regression: Increasing of the feeling of unrest and anxiety when not using the Facebook
- Disagreement: Facebook use reaches such a level to prevent business and education
- Falling into repetition: Being unsuccessful with the attempts to minimize Facebook use

II. Literature Review

When previous literature on research related to Facebook and internet addiction are examined, it can be seen that Dhaha (2013) worked on university students' Facebook addictions, Sofiah et.al (2011) researched on female university students' addiction to Facebook, Özsoy (2009) studied reasons of internet addiction, Balcı and Gölcü (2013) researched internet addiction among university students, Marcial (2013) worked on Facebook addictions of Phillippines University students (qualitative work), Andreassen (2012) examined Facebook addiction scale towards university students, Ayas et.al (2011) researched computer addiction levels of adolescent, Belin et a.l (2011) studied the high school students' purposes of using Facebook, and Yılmaz (2010) researched 6 and 7th grade students' addiction levels towards computer. Among the most comprehensive works regarding the this topic is Universal McCann's which was published in 2009 and researches that 81,5% of the social network users use Facebook to send messages to friends, 76,3% use it for taking pictures, 74,3% to find old friends, 56,4% to find new friends, 47,9% to join into a group, 35,3% to list/show favourite music, 33,5% to install applications, 33,1% to upload videos, 29,9% to have contacts with professional reasons (Köseoğlu, 2012). In a research on prospective teachers carried out by Özgür (2013), a positive relationship between social network addiction interaction worry and loneliness concept was found. On the other hand, social network addiction levels of users for a duration of 39 hours or more is more than others. In the study on development of high school students' characters through Facebook carried out by Ekşi (et.al 2013) it was concluded that Facebook has significance on the development of adolescent character. In a research on high school students, carried out by Tanrikulu, Öztürk and Yeşil (2015) there is a positive relationship between the lack of meeting basic needs and social network addiction. The research on Facebook addiction and internet addiction levels indicate that they were carried out mostly on university and partially high school students but there were no research on secondary school students' Facebook addictions in a broader scale.

III. Aim Of The Study

The aim of this study is to examine whether secondary school students' Facebook addiction levels indicate significance according to variables of gender, parents' education levels, grades, having internet connection at home, income levels of the family, the time spent on Facebook and subscription dates.

IV. Method

This study designed as a quantitative survey research. The quantitative survey research models describe the past or present situations with their current situations as they are (Büyüköztürk et al. 2009; Karasar, 2012).

Study Group

This research was conducted in 2015–2016 academic year at state schools in Giresun city center (Bulancak, Teyyaredüzü, Cumhuriyet, Kayadibi, M. Akif Ersoy, Mustafa Kemal and Kanuni Secondary Schools) with the participation of 690 students of 6th, 7th and 8th grades. In selection of the study group, cluster sampling methods were used among the purposed sampling methods. In sampling method according to clusters, universe was divided into groups as clusters, and each cluster is defined as sampling unit. Clusters chosen as randomly gathered and sampling is generated (Çömlekçi, 2001). Demographic information of participants in the research is given in Table 1 and 2.

Table 1. Distribution of participants regarding independent variables

Grade	Gender		Home with internet		Room with internet		Mobile phones with internet		Total
	Female	Male	Yes	No	Yes	No	Yes	No	
6	124	104	161	67	113	115	127	101	228
7	99	131	188	42	128	102	148	82	230
8	107	125	177	55	127	105	171	61	232
Total	330	360	526	164	368	322	446	224	690

When Table 1 is reviewed, it can be seen that participants are consisted of 33% (228) of 6th grade students, 33,3% (230) of 7th grade students and 33,6% (232) of 8th grade students. With (47,8%) female students and with (57,2%) male students, the numbers are close to each other. In houses of participants (76,2%) internet, (53,3%) in rooms with computers and (53,3%) mobile phones with internet connections exist and the existence rates seem to have more addiction rates than the ones with no computer and internet connections.

Table 2. Distribution of participants regarding independent variables

Educational Level	Educational Level of Mothers (f)	Educational Level of Fathers (f)	Level of Income	Family Income Level (f)
Illiterate	9	1	Less than ₺ 900	65
Primary	154	97	₺ 901-1700	296
Secondary	157	146	₺ 1701-2700	143
High school	277	297	₺ 2701-4000	117
University	74	117	Over ₺ 4001	69
Master or PhD	19	32		

From Table 2 it can be seen that most of the participants' parents' educational levels are "high school" and for both groups, secondary most graduated educational level is secondary school graduation. On the other hand, it was detected that parents with university degrees are less than the other types of graduation. When the socioeconomic income levels of the participants are examined, intensively and mostly it is seen that (67,8%) belongs to "medium level".

Data Collection Tool

In this research, "Facebook Addiction Scale" which was developed by Keçe (2016) was used. Measuring tool that aims to determine the Facebook addiction levels of secondary schools students consists of 23 items under 5 factors and degreeing totals is prepared appropriately to scaling (Likert) model. Items in scale is scaled into 5 level system as (1) Never, (2) Rarely, (3) Sometimes, (4) Usually, (5) Always. While the reliability level is determined as .90 by the researcher regarding the measuring tool in general, in this research it was determined as .93. Reliability levels regarding scale factors (successively initially scale development results, secondly results reached from this research) for the first factor .83; .82, for the second factor .80; .83, for the third factor .72; .70, for the fourth factor .76; .70 and for the fifth factor .84; .73 values have been reached.

Data Analysis

In the research within the frame of analysis, in order to identify whether participants' Facebook addiction levels are significant from various variables normality of distribution and homogeneity of variances

Kolmogorov Smirnov and Levene F tests were done. On the cases that assumptions of distribution normality and homogeneity of variances as prerequisites of parametric tests (Baştürk, 2010; Büyüköztürk, 2011; Ural and Kılıç, 2011) are provided parametric tests were used, (for independent-samples *t*-test, one-way and two-way Anova); and on the cases that were not provided non-parametric tests were used (Mann-Whitney U and Kruskal-Wallis H).

V. Findings

In this chapter, findings and interpretations were reviewed with regard to whether Facebook addiction factor scores possess significances according to independent variables.

Table 3. Descriptive statistics regarding Facebook addiction levels according to factor structures

Factors	N	\bar{X}	S	Min.	Max.
Insensitivity to surrounding and spending too much time	690	1,94	.88	1	5
Giving priority and importance	690	2,51	1,00	1	5
Desire to connect to Facebook	690	1,70	.81	1	5
Parent reaction and addiction	690	2,05	1,00	1	5
Antisocial personality development	690	2,09	1,02	1	5

On data on Table 3, Facebook addictions of the participants were focused on “giving priority and importance” factors and belonging to the “desire to connect to Facebook” factor arithmetic value score carries less importance compared to the others. Together with this, on the score interval of participants towards the items to them for their replies answers as rarely (2) and sometimes (3) choices were in majority. This state leads us to think that generally the Facebook addictions of students are not in a very high level.

Table 4. T-Test results of participants according to gender variations Facebook addiction levels

Factors	Gender	N	\bar{X}	S	df	t	p*
Insensitivity to surrounding and spending too much time	Female	330	2,02	0,92	688	2,106	.036
	Male	360	1,88	0,83			
Giving priority and importance	Female	330	2,57	1,03	688	1,615	.107
	Male	360	2,45	0,97			
Desire to connect to Facebook	Female	330	1,68	0,78	688	0,739	.460
	Male	360	1,73	0,83			
Parent reaction and addiction	Female	330	2,11	1,05	688	1,680	.093
	Male	360	1,98	0,95			
Antisocial personality development	Female	330	2,09	0,98	688	-0,140	.889
	Male	360	2,10	1,06			

p<.05

Binomial tests to be done for the detection of whether they show normal distribution regarding the gender variable of 47,8% of female students and 52,2% of male students inside the working group it was detected that there is no significance among the gender distributions (p>.05). Because of this in analysis of gender variables parametric tests have been benefited (for irrelated measures independent t-test). “Insensitivity to surrounding and spending too much time” dimension of gender variable ($t_{(688)}=2,106;p>.05$), for “giving priority and importance” dimension ($t_{(688)}=1,615;p>.05$), for “desire to connect to Facebook” ($t_{(688)}=0,739;p>.05$), for “parent reaction and addiction” dimension ($t_{(688)}=1,680;p>.05$) and as the fifth factor “antisocial personality development” dimension ($t_{(688)}=-0,140;p>.05$) do not possess significance. However when arithmetic averages are taken into consideration, it can be stated that female students are more addicted compared to male students.

Table 5. Kruskal-wallis test results for grade variations of participants Facebook addictions

Factors	Grade	N	Mean Rank.	df	X ²	p*
Insensitivity to surrounding and spending too much time	6th grade	228	358,88	2	9,710	.008
	7th grade	230	365,42			
	8th grade	232	312,60			
Giving priority and importance	6th grade	228	356,79	2	8,058	.018
	7th grade	230	364,47			
	8th grade	232	315,60			
Desire to connect to Facebook	6th grade	228	347,65	2	1,038	.595
	7th grade	230	353,58			
	8th grade	232	335,38			
Parent reaction and addiction	6th grade	228	364,38	2	9,109	.011
	7th grade	230	358,72			
	8th grade	232	313,84			

Antisocial personality development	6th grade	228	350,88	2	8,424	.015
	7th grade	230	369,21			
	8th grade	232	316,71			

*p<.05

In order to determine whether participants show normal distribution according to grades as a result of Kolmogorov-Smirnov test that is indicated the fact that there is significance between the groups [$D_{(690)}=0,224;p<.01$] requires to be benefited from non-parametric test techniques. According to Kruskal-Wallis test results that is done within this frame, it was detected that participant grades have no significance on “Insensitivity to surrounding and spending too much time” dimension ($\chi^2=9,710;p>.05$). When average scores are taken into consideration; 7th grade students seem to be more insensitive to environment when they are online on Facebook compared to other students and it can be stated that they stay for longer periods compared to the others. Again it can be seen that there is no significance between grades variable and “giving priority and importance” dimension ($\chi^2=8,058;p>.05$), “desire to connect to Facebook” dimension ($\chi^2=1,038;p>.05$), “parent reaction and addiction” dimension ($\chi^2=9,109;p>.05$) and “antisocial personality development” dimension ($\chi^2=8,424;p>.05$). On the other hand, it was detected that 6th grade students have higher order average scores and apart from the “parent reaction and addiction” dimension in all other dimensions 7th grade students seem to be on the front. Due to the fact that 8th grade students prepare themselves to the examination (TEOG – Transition Exam from Basic Education to Secondary School Education) their Facebook addictions are less than 6th and 7th grade students.

Table 6. Kruskal-wallis test results for the variation of participants Facebook addictions regarding family income levels

Factors	Socio-economic Status	N	Mean Rank	df	X ²	p*
Insensitivity to surrounding and spending too much time	Lower	260	343,26	2	0,441	.802
	Middle	361	351,27			
	Upper	69	335,48			
Giving priority and importance	Lower	260	343,47	2	0,690	.953
	Middle	361	346,99			
	Upper	69	350,49			
Desire to connect to Facebook	Lower	260	347,75	2	0,411	.814
	Middle	361	339,92			
	Upper	69	354,72			
Parent reaction and addiction	Lower	260	343,96	2	4,190	.123
	Middle	361	358,59			
	Upper	69	304,25			
Antisocial personality development	Lower	260	339,73	2	0,655	.721
	Middle	361	351,38			
	Upper	69	353,57			

*p<.05

As a result of the Kolmogorov-Smirnov test to identify whether the participants show normal distribution regarding socioeconomic levels, it has been determined that there is a significance among the groups [$D_{(690)}=0,346;p<.01$]. According to this result Kruskal-Wallis test has been applied to examine the relationship between the participants’ socioeconomic levels and Facebook addictions. As a result of the analysis it was found out that there is no significance between participants’ “insensitivity to surrounding and spending too much time” factor order average score and socio-economic levels ($\chi^2=0,441;p>.05$). When order average scores examined, it was observed that the values between the groups were quite close to each other. Again it was detected among the sub dimensions of socio-economic levels of Facebook addictions as “giving priority and importance” factor ($\chi^2=0,690;p>.05$), “desire to connect to Facebook” factor ($\chi^2=0,411;p>.05$), “family reactions and addiction” factor ($\chi^2=4,190;p>.05$) and “antisocial personality development” factor ($\chi^2=0,655;p>.05$) had no significance. This result indicates that factors generating measurement tool are in close relationship with one another. Also the fact that scale dimensions carry close numerical values of sub order average scores, it can be interpreted that statistically there is no significance of socioeconomic levels over students’ Facebook addictions. In other words, the fact that participants are independent from their socioeconomic levels they are in close “addiction levels” or “same level users”. On the other hand in the order of average scores entire 5 factors in scale participants on mid and high level socioeconomic levels have more Facebook addictions than sub socio-economic level students relatively.

In order to determine the influence of parents’ educational levels on student Facebook addictions over the entire scores taken from 23 items scale a Kruskal-Wallis test was applied. Analysis results are shown on Table 7 and Table 8.

Table 7. Kruskal-wallis test results for educational differences of mothers regarding participants' Facebook addictions

Mother's Educational Level	N	Mean Rank	df	X ²	p [*]
Primary	153	296,03	4	13,447	.009
Secondary	145	348,25			
High school	262	314,30			
University	71	350,31			
Master or PhD	18	386,47			

* p<.05

According to the Kruskal-Wallis test made on the fact that participants have no average distribution regarding mother educational levels [$D_{(690)}=0,232;p<.05$] there is no significance of mother educational level statistically on the Facebook addictions of the participants ($x^2=13,447;p>.05$). When an assessment taking into consideration the average scores are made, students' mother educational levels and Facebook addiction levels are parallel; in other words, the more mothers' educational levels increase, the more Facebook addiction levels of participants are. This finding can be interpreted in such a way that mothers with university degree and master degree have less time to take care of their children and the children remain free and out of control and they spend more time on internet.

Table 8. Kruskal-wallis test results for educational differences of fathers regarding participants' Facebook addictions

Educational Level of Father	N	Mean Rank	df	X ²	p [*]
Primary	92	350,40	4	18,434	.001
Secondary	133	358,98			
High school	280	303,49			
University	115	296,27			
Master or PhD	29	410,17			

* p<.05

According to Kolmogorov-Smirnov test, educational levels of participants' fathers do not have average distribution [$D_{(690)}=0,235;p<.05$] was detected the Kruskal-Wallis test that was conducted. It can be stated that there is a significant relationship ϕ with the participants' father educational levels and Facebook addictions ($x^2=18,434;p=.01$). Within this frame in order to determine which groups have significances, Mann Whitney U test was used and thus when the ones that their fathers have secondary school education the ones that their fathers have bachelor degrees it was detected that the situation is at the favor of the fathers who have secondary school education ($U=6068,00;p\le.05$); and when the ones that their fathers have high school education and the ones that their fathers have master degrees the situation is at the favor of fathers who have masters degrees. ($U=2788,50; p\le.05$). On the other hand, when an assessment is made considering the average scores of the educational levels of participants' fathers and Facebook addictions it can not be stated that there is a linear or opposite relationship but similarly to the one on Table 7 and 8, there is a similar situation. This is to say, the students who have fathers with master degree have higher tendency to Facebook addiction than other students.

Table 9. Mann whitney u test results for the participants that possess internet connection at home regarding Facebook addiction

Factors	Internet Connection	N	Mean Rank	Sum of Ranks	U	p [*]
Insensitivity to surrounding and spending too much time	Yes	526	347,23	182642,50	422,50	.682
	No	164	339,95	55752,50		
Giving priority and importance	Yes	526	347,93	183011,50	418,50	.566
	No	164	337,70	55383,50		
Desire to connect to Facebook	Yes	526	351,24	184753,00	401,00	.168
	No	164	327,09	53642,00		
Parent reaction and addiction	Yes	526	347,92	183004,00	418,00	.564
	No	164	337,75	55391,00		
Antisocial personality development	Yes	526	357,41	187997,50	368,50	.005
	No	164	307,30	50397,50		

* p<.05

Among the participants who have internet connection at home are distributed as the ones of (76,2%) and as the ones who do not have of (23,8%). To identify that there is a average distribution for this condition a binomial test was made and as a result it was detected that groups do not have average distribution ($p<.05$). Within this frame the Mann Whitney U Test results the condition that students have internet connections at home have no significances regarding "insensitivity to surrounding and spending too much time" ($U=422,50; p>.05$), "giving priority and importance" ($U=418,50; p>.05$) "desire to connect to Facebook" ($U=401,00; p>.05$)

“parents reactions and addiction” ($U=418,00$; $p>.05$). On the other hand, the case that there is internet connection at home has significance on “antisocial personality development” ($U=368,50,50$; $p\leq.05$). When average scores are examined, it is possible to suggest that there is a parallel relationship between internet connection at home and Facebook addiction.

Although this finding is the expected result, not observing a result indicating a statistical significance between students that have internet connections at home and others that have no internet tell us that students may connect to Facebook in other places (cafe, etc.) even if they do not have internet at home.

Table 10. T-Test results for the variable that there is a computer in the bedroom regarding Facebook addiction

Factors	Having Computer	N	\bar{X}	S	df	t	p^*
Insensitivity to surrounding and spending too much time	Yes	368	1,94	,90	688	-,063	.950
	No	322	1,94	,85			
Giving priority and importance	Yes	368	2,57	1,04	688	1,747	.079
	No	322	2,44	,94			
Desire to connect to Facebook	Yes	368	1,76	,84	688	1,805	.069
	No	322	1,64	,77			
Parent reaction and addiction	Yes	368	2,01	1,02	688	-,925	.353
	No	322	2,09	,97			
Antisocial personality development	Yes	368	2,13	1,09	688	1,124	.257
	No	322	2,04	,94			

* $p<.05$

It was found out that the groups have a normal distribution ($p>.05$) as a result of the binomial test applied to determine whether there is a normal distribution among the students that have computers in their rooms (53,3%) and the ones that do not have (46,7%). For this reason, parametric test techniques were used for the necessary analysis (independent samples *t-test*). “Having computer in the bedroom” has no significance among “insensitivity to surrounding and spending too much time” dimension ($t_{(688)}=-0,063$; $p>.05$), “giving priority and importance” dimension ($t_{(688)}=1,747$; $p>.05$), “desire to connect to Facebook” dimension ($t_{(688)}=1,805$; $p>.05$), “parent reaction and addiction” dimension ($t_{(688)}=-0,925$; $p>.05$) and “antisocial personality development” dimension ($t_{(688)}=1,124$; $p>.05$). But it can be stated that factors “giving priority and importance” and “antisocial personality development” where arithmetic scores differences are at most have influence. Thus, it is understood that the students that having computers in their bedrooms have more tendency to antisocial personality formation and they are giving more priority and importance to connect internet and Facebook.

Table 11. Mann whitney u test results for having internet connection in mobile phone variable regarding Facebook addiction

Factors	Internet Connection	N	Mean Rank	Sum of Rank	U	p^*
Insensitivity to surrounding and spending too much time	Yes	446	348,14	155270,50	532,50	.637
	No	224	340,67	83124,50		
Giving priority and importance	Yes	446	365,43	162982,50	455,50	.000
	No	224	309,07	75412,50		
Desire to connect to Facebook	Yes	446	357,10	159268,00	492,00	.035
	No	224	324,29	79127,00		
Parent reaction and addiction	Yes	446	348,12	155261,00	532,00	.637
	No	224	340,71	83134,00		
Antisocial personality development	Yes	446	344,76	153764,00	540,00	.894
	No	224	346,85	84631,00		

* $p<.05$

According to the analysis results, it can be stated that there is no significant relationship between the participants that have internet connection on their phones and “insensitivity to surrounding and spending too much time” factor score averages ($U=532,50$; $p>.05$). Despite the fact that this finding shall not be interpreted as the one who have mobile phone internet connections have more Facebook addictions, as far as order average scores are considered it can be stated that the ones who have internet on their mobile phones are relatively more tend to use Facebook. However this so called independent variable has significance on connection to Facebook over “giving priority and importance” factor ($U=455,50$; $p<.01$). The finding found out here is in such a quality to validate the measurement tool factor structure. Because it is an expected situation that the students have internet on their mobile phones to sign in Facebook and this result was approved through the scale. On the other hand, it can be stated that there is no significance between participants having internet on their mobile phones with “parent reaction and addiction” ($U=532,00$; $p>.05$) and “antisocial personality development” dimensions ($U=540,00$; $p>.05$). The fact that order average scores are close to each other indicates that on two factors independent variable does not generate a considerable difference. On the other hand it was determined that

“desire to connect to Facebook” factor was not differentiated according to the fact that the student has a mobile phone with internet ($U=492,00$; $p>.05$). But the ones that have mobile phones with internet and the order average scores have significance on the direction of the ones who have mobile phones with internet was considered to be led the thought of Facebook usage.

Table 12. Kruskal-wallis test results for the lesson that has mostly shared variable by Facebook regarding Facebook addiction

Lessons	N	Mean Rank	df	X ²	p*
Mathematics	103	248,34	3	24,459	.000
Social studies	296	351,51			
Turkish	194	332,49			
Primary science education	56	299,93			

* $p<.05$

The finding that the students share lessons over Facebook is whether numerical or oral was to be detected to understand whether there was significance on Facebook addiction. According to the Kruskal-Wallis test applied there is significance ($x^2=24,459$; $p<.01$) among the groups. According to the results of the Mann Whitney U test made within this frame between the students that share information about social studies and the students that share information about mathematics for the benefit of first group ($U=10319,50$; $p<.01$); and between mathematics and Turkish lessons the groups that share Turkish have benefits ($U=7466,50$; $p<.01$) and there was significance within these findings. This finding indicates more tendency to Facebook addictions in a higher level of the students who benefit from Facebook of oral skills related lessons compared to the students with a mathematical background. Thus in various educational levels (secondary school, high school, university) if oral lessons are more or the students who have more tendency to oral lessons have relatively higher Facebook addiction levels.

The crosstab related to identify the relationship between grades of the participants and the lesson that shared more in Facebook and whether there was a significant relationship and the results of the analysis were presented on Table 13.

Table 13. Chi-square table of participants’ grades and lessons that were shared through Facebook

Grade	Count	Lessons				Total
		Mathematics	Social studies	Turkish	Primary science education	
6th grade	N	41	109	57	21	228
	%	36,3	102,8	69,4	19,5	228,0
7th grade	N	31	123	56	20	230
	%	36,7	103,7	70,0	19,7	230,0
8th grade	N	38	79	97	18	232
	%	37,0	104,6	70,6	19,8	232,0
Total	N	110	311	210	59	690
	%	110,0	311,0	210,0	59,0	690,0

On the crosstab of grade and lesson type benefited from Facebook the expected and observed values were rather close to each other in mathematics and primary science education lessons on the 6th, 7th and 8th grade, especially the students on the 8th grade have rather distances expected and observed values of students in social studies and Turkish lessons. According to this there was a significant relationship between the grade and the lesson type to be benefited from Facebook ($x^2_{(6)}=26,903$; $p<.05$). When an interpretation was to be made over observed and expected values, it can be stated that 6th and 7th grade students relate their activities in Facebook with social studies lessons and 8th grade students relate their activities in Facebook mostly with Turkish lessons.

VI. Conclusion And Discussion

In this study that Facebook addiction levels of secondary school students were examined in terms of various variables, it was seen that Facebook addictions of participants remain generally in the scale of “Rarely” (2) and “Sometimes” (3) score interval and students’ Facebook addictions were focused on “giving priority and importance” factor. As a result of the research carried out by Yılmaz (2010) regarding 6th and 7th grade students’ computer addictions it was determined that the students’ addiction levels were focused on “Sometimes” scale. The fact that relating to each other getting the results in the similar direction generally shows that the addiction levels of students were not extreme and the ones to be called extreme can be controlled. Also, it was detected that arithmetic average scores regarding the factors were close to each other. In the research conducted by Eren et.al (2014) metaphors developed by students, Facebook was perceived as a material to be addicted that’s why it can be stated that the students behave consciously about spending time on Facebook and hence their addiction levels were not significantly high.

Within the frame of the study, “gender” variable has no statistical significance on the students’ Facebook addictions but it can be expressed that female students had much tendency to parent reactions and addiction, desire to connect to Facebook and insensitivity to surrounding factors relatively. Until the research conducted in the recent years while males have much tendency to internet in terms of interest, attitude and addiction than females (Willough, 2008; Yellowlees and Marks, 2007) but recently the tendency of females is seems to be higher within the frame of research findings (Durak Batıgün and Hasta, 2010; Sofiah et.al, 2011; Subrahmanyam and Lin, 2007). It was stated in the previous research that the reason why the males are more interested in internet and computer was to spend more time with the primitive forms of computer technology and video games (Subrahmanyam and Lin, 2007). Also with the increasing capacity to access to internet, the students have also internet at home and this facility increases the access of females to internet who have less opportunity to get to the internet access points freely.

Regarding the grade, 7th grade students have higher levels of Facebook addictions compared to the others. The reason why 8th grade students get prepared for examinations TEOG, and the 6th grade students do not step into adolescence. It can be said that the relationship between socioeconomic status and Facebook addiction is not significance. According to this, it was emphasized that attitude of the family (negligent, indulgent, authoritative) is more influent than family income on Facebook addiction (Ayas and Horzum, 2013). It can be stated that there is a significance of students’ mother and father’s educational levels on Facebook addiction (educational level is positively towards university and master degree). This result shows that the students who have mothers and fathers with university and master degrees live in a more free way and parent authority is relatively limited.

Students who have free access to technology and technologic tools have higher levels of Facebook addictions. It can be seen that there is a linear relationship between Facebook addiction levels and the facilities as students’ internet access with mobile phones and at home. The results reached are parallel to the findings of the researches by Boyd and Ellison (2007), Özsoy (2009), Bilge (2012), Balcı and Gölcü (2013), Marcial (2013). Within the frame of the study, one of the important findings is the answer to the question: “Within the frame of which lesson can you benefit from Facebook more?” and the answer is oral lessons as social studies and Turkish is more effective on Facebook than primary science education and mathematics. It is thought that this result is supposed to be true for various levels of secondary school education and university level education. Within this frame, students that study oral skills related fields and interested in these fields have more expressive skills to be more active inside social media and it can be stated that they are more addicted to Facebook in conclusion.

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