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RESEARCH ARTICLE

INTERNET ADDICTION AFFECTING FACTORS OF UNIVERSITY STUDENTS IN TURKEY.

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Key Words:-

internet addiction, facebook account, twitter account, internet access, university student.

Abstract:

The aim of the research is to reveal the affecting factors that the internet addiction of university students in Turkey. The sample of the research consists of 1203 students and 677 of them are female and 518 are male students and 8 of them missing. Two private two state university in Istanbul and Gaziantep. According to the findings of the first question of the research; the prevalence of internet addiction of university students in Turkey is medium level. Regarding the frequency of internet use, 61 (20.9%) students stated they use internet daily, 89 (30.5%) 2 or 3 days per week, 80 (27.7%) once a week, and 88 (30.1%) once a month. The students spent time as online 5.8 hours per week. Online activities of the students were checking e-mail 75.3%, playing online games 51.7%, chatting 51.7%, educational information searching 51.4%, purposeless web surfing 42.8%, and others 6.8%. Additionally, 30.5% of participants had more than 3 years of internet experience.

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Introduction:-

It can be said that the purpose of the internet is to increase communication, facilitate information sharing and provide new possibilities for research. With the widespread use of the internet in our daily lives, more and more people use the internet every day for various reasons. Education can be shown as one of these areas. In the beginning, the use of the Internet for academic purposes was only for research, but later on the internet; the lives of students have become indispensable (Soule, Shall & Kleen, 2003).

The definition of internet addiction was first used by Young in 1997. Internet addiction is generally the inability of the person to prevent excessive use of the internet. Losing the importance of the time passed without being connected to the internet, excessive nervousness and aggression, and can be defined as the gradual deterioration of one's work, social and family life (Yoo, Cho, Ha, Yune, Kim, Hwang, Chung, Sung & Lyoo, 2004). When literature on addiction is examined, there is little information about internet addiction until 2000. It was even controversial whether it was addictive or not. Today, definition of internet addiction is accepted and treatment methods are discussed (Beard, 2005).

Problematic use of the Internet has been a topic of discussion in the academic literatures since the beginning of 1990's. Internet use in Turkish adolescent and young adults had increased rapidly and has become a major part of daily life like similar to those in to the other societies. Recently, the number of adolescents using the internet has increased sharply (Babington, Christensen & Patsdaughter, 2000). One of the reasons for this is the use of the internet with personal computers can satisfy personal needs by providing the opportunity to access many web sites and communicate with a variety of peers (Yang, 2001). A main difference between Turkish and other societies,

however, is that the collective culture and the strong familial ties among Turkish may have left little room for socializing via the internet. Considering that the studies have shown that a major function of the internet among internet addicts is its social function, one may conclude that Turkish are less probable to develop internet addiction and suffer the accompanying psychosocial problems (Li & Chung, 2006). Affected adolescents and young adults usually suffer from problems associated with daily routine, school performance, family relationships, and mood (Young & Rogers, 1998; Lin & Tsai, 2002). Identifying the protective and risk factors for Internet addiction in adolescents and young adults in order to develop of a preventive strategy for Internet addiction has significant implications for mental health. Previous studies have indicated that internet accessibility is one of the most decisive factors for overuse by college students (Morahan & Schumacher, 2000; Anderson, 2001; Lin & Tsai, 2002). When access is free and easy, college students tend to be vulnerable to becoming addicted to the Internet (Kandell, 1998). University students have easy internet access, similar to other university students, due to the nationwide. It is described as uncontrollable and damaging use of the internet and is recognized as a compulsive-impulsive internet usage disorder, one of those in the spectrum of impulse-control disorders discussed in recent psychiatric literature (Stein, 1997; Shapira, Goldsmith & Keck, 2000). The present study aims of to identify the factors associated with intermittent addiction and addiction to the internet and to examine and compare the demographic factors of addiction to and internet-related factors. More specifically, the following research questions were examined: What are the associating factors on intermediate addiction and addiction to the internet among Turkish university students? What are the difference between big city universities versus small city universities associated with intermediate addiction and addiction to internet when the demographic. For more specific seeks to: (a) find the prevalence of internet addiction among Turkish university students and, (b) examine if Turkish Internet addicts, for what purpose do students use mostly internet.

Method:-

Model of Survey:-

The model of the research is random cluster sampling method.

Participants:-

This health survey was conducted in a four different university in Turkey. Two private two state university in Istanbul and Gaziantep. 677 (56.7%) of them are female and 518 (43.3%) are male students 0,7(n:8) system missing and average age of students are 20.22 (Sd: 2.17). Data were collected from January 2016 to June 2016 using a questionnaire that was presented by university teachers to 1203 university students. The sample size provided a power of 90% and an estimated precision limit of $1-50 \pm 5\%$.

Materials:-

Two questionnaires were administered: the Adolescent Demographic Questionnaire and the Internet Addiction Scale (IAS):

The Adolescent Demographic Questionnaire:-

The Adolescent Demographic Questionnaire records information about sex, age, parents' educational level, family financial status, social media usage, cell phone and computer usage and IAS Internet addiction was assessed by the Internet Addiction Test (IAT), also known as the Young's Internet Addiction Scale (YIAS) (Young, 1998). The IAT is a 20-item self-report scale based on the DSM-IV diagnostic criteria for pathological gambling. It includes questions that reflect typical behaviors of addiction.

The Internet Addiction Scale (IAS):-

The Internet Addiction Scale (IAS) consisted of a 20-item questionnaire on a 5-point scale, describing "1 = not at all" to "5 = always" (given a total score ranging from 20 to 100), with higher scores representing a greater tendency toward addiction. The severity of addiction was then classified according to the suggested cutoff scores: 20 to 49 points rated as normal, 50 to 79 points, moderate, and 80 to 100 points, severe (Young, 1998). The adaptation study of this scale to Turkish has been carried out by Bayraktar (2007) at Turkish Republic of Northern Cyprus and Cronbach alpha internal consistency coefficient was found as .91. Reliability findings for this study to internal consistency of the test. A Cronbach's alpha coefficient of .92 was obtained for the IAS on the first administration, which suggests that the internal validity of the Turkish version of the IAS is acceptable. Item-total correlations ranged from .17 to .75 ($p < .001$). Item was eliminated 2, 4, 16, and 17 as their correlations were lower than .50 (although statistically significant). This resulted in a revised version of the scale that consisted of 27 items

(Cronbach's alpha coefficient .94). A cutoff score was suggested of 81 (3-27 items) as indicative of possible internet addiction. According to this cutoff score, 11.6% of participants had possible internet addiction. Test-retest findings for the study was the IAS was administered a second time 1 week after the first administration' and the test-retest correlation measured by Spearman-Brown correlation coefficient was .98 ($p < .001$).

Procedure:-

The study was approved by the local ethics committee and conducted according to the principles outlined in the Declaration of Helsinki, and participants were assured of anonymity.

Analyses:-

The SPSS 19.0 package was used for the analysis of the data. After coding and data cleaning procedures, the data were analyzed by frequency, student's t test, analysis of variance (ANOVA), regression and multiple logistic regression analysis. Tukey's post hoc test with Bonferoni adjustment was used to differentiate between groups. Student's t test was used in making comparisons between the two groups. Multiple logistic regression analysis was performed to determine which variables affect intermittent Internet addiction (vs nonaddiction) and addiction (vs intermittent Internet addiction). The independent and dependent variables were treated as a dummy variable coded 0 and 1 (0 for non risk and 1 for risk). All significant variables that were confirmed by bivariate analysis were entered in step 1 in the multivariate binary logistic regression analysis. The odds ratios and corresponding 95% confidence intervals were calculated. The significance level was accepted as at $p < .05$ throughout the analyses.

Results:-

Participants of the study are totally 1203 students elected among university students who have joined the research voluntarily by random cluster sampling method. 677 (56.7%) of them are female and 518 (43.3%) are male students 0,7(n:8) system missing and average age of students are 20.22 (Sd: 2.17). Among the students who were asked how they connect to internet, 43.9% (n: 517) replied that they use their mobile phone, 43.5% (N: 513) laptop and 12.6 (N: 48). And among the students who were asked why they connect to internet, 2% (n: 24) replied that they connect to internet in order to check their e-mails, 27.6% (n: 324) to surf the web, 35.5% (n: 418) to make their assignments and 34.9% (n: 410) to participate in social media. The educational status of students were asked and results are as follows: 16.7% (n: 191) of mothers and 32.3 (n: 380) of fathers were graduated from university. According to the survey, 85.5% (n: 1011) have Facebook profile and 51.0% (n: 613) have twitter profile. Taking the socio-economical status of the parents of students into consideration, 43.8% (n: 469) of them are included in high socio-economical level and 5.7% (n: 65) of the same are included in low socio-economical level. 77.4% (n:931) of students have internet connection in their homes.

Regarding the frequency of internet use, 61 (20.9%) students stated they use internet daily, 89 (30.5%) 2 or 3 days per week, 80 (27.7%) once a week, and 88 (30.1%) once a month. The mean time spent online was 5.8 6.27 hours per week. Online activities of the students were checking e-mail (75.3%), playing online games (51.7%), chatting (51.7%), educational information searching (51.4%), purpose-less web surfing (42.8%), and others (6.8%). Additionally, 30.5% of participants had more than 3 years of internet experience.

Table 1:- Examining gender and according to some variables of internet addiction.

	N	Mean	SD	t	p
Gender					
Female	677	34,80	10,31	-8,640	,000
Male	518	40,71	13,34		
Have you got computer?					
Yes	1034	37,66	11,94	2,709	.007
No	105	34,35	11,73		
Where do you stay?					
Home	849	38,04	12,56	3,146	.002
Dorm	335	35,61	10,39		
Have you got facebook account?					
Yes	1011	38,12	11,91	5,129	.000
No	172	33,12	11,32		
Have you got Twitter account?					

Yes	613	40,04	12,25	8,151	.000
No	569	34,53	10,91		
Have you got internet access to your home?					
Yes	931	38,08	12,25	3,969	.000
No	230	34,59	10,61		

There was statistically significant difference between genders ($t = -8.64, p < .05$). The mean IAS score of boys (40.71 ± 13.34) was significantly higher than of girls (34.80 ± 10.31). The internet addiction score of the students who have internet connection at their home (37.66 ± 11.94) is higher than the score of students the who don't have internet connection at their home (34.35 ± 11.73) ($p < .05$). The internet addiction score of the students who stay at their own houses or student houses (38.04 ± 12.56) is higher than the score of the students who stay at dormitories (35.61 ± 11.73) ($p < .05$). Therefore, the internet addiction score of the students who have internet connection at their home (38.02 ± 12.25) is higher than the score of the students who don't have internet connection at their home or dormitories. The students were asked whether they have Twitter and Facebook accounts because it is thought that Twitter and Facebook incite internet addiction. Accordingly, the internet addiction scores of the students who have Facebook and Twitter profiles are higher than the score of the students who don't have the said profiles.

Table 2:-What you're connected to the Internet for most

What you're connected to the Internet for most	N	Mean	SD	F	p	Post-hoc
Email	24	30,50	8,47	15,842	.000	
Surfing	324	37,97	11,85			
Home work	418	34,92	11,05			
Social Media	410	40,03	12,70			
Socio-economic level						
0 - 750	65	35,80	11,399	,705	,549	-
750 - 1500	258	37,79	12,143			
1500 - 2500	314	37,20	11,978			
2500 and higher	496	37,87	11,997			

Internet addiction and the subjects that students show interest on internet were questioned. According to this study, there was a considerable difference between the reason for connecting to the internet and internet connection scores ($F_{15.842;fd=3,1172}; p < .05$). This difference was examined with post hoc test and the lowest score belongs to the students who check their e-mails while the highest score belongs to the ones who check social media. These differences are shown in the table below. As well as the said questions including the different purposes of connecting to internet, IAS reveals the statistical differences. As the number of purposes increases, IAS score increases, too.

Table 3:- Risk Factors for Internet Addiction According to the Severity of Addiction

Variables	Model I++		Model II++		Model III++	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Gender	,794*	2,212	,584*	1,793	,563*	1,756
Facebook	,803*	2,233	,538**	1,713	,583**	1,792
Twitter	,868*	2,383	,433*	1,541	,427*	1,533
Internet addiction	,427*	1,533	,448*	1,565	,459*	1,583
Internet access	,632*	1,881				
Internet usage			,885*	2,424		
Weekly usage					,110*	1,116
Constant	-2,888	,056	-4,464	,012	-4,032	,018
Over all Percentage	67,7		78,8		78,2	

* $p < 0.01$, ** $p < 0.05$
 +Oddsratios were calculate during a binary logistic regression analys is and all variables were entered in step 1
 ++ Subjects with nonaddiction constituted there for group.

Multiple logistic regression analyses were carried out to determine which variables were significantly associated with intermittent addiction vs nonaddicted. The demographic, face, twit, internet addiction, access at home to internet, internet usage and weekly usage of the internet that were confirmed by bivariate analyses were entered in step 1. As seen in the table above, 3 different models were established with the variables claimed to be effective on internet addiction. The explanatoriness percentages of these models are 67.7%, 78.2% and 78.8% respectively. Medium level internet connection was found according to data, the values below 39 were non addicted and were seen as over 40 internet addicts. Therefore, The logistic regression model (Model I) that tested the prediction of the intermittent addiction group as a dependent variable (coded as 0 = nonaddicted and 1 = addicted) was significant ($\chi^2 = 142.673$; $df = 5$; $p < .05$). The adjusted odds ratios for addiction were 2.21 for gender, 2.23 for facebook account, 2.38 for twitter account, 1.53 for internet addiction and 1.88 for access at home to internet.

The logistic regression model (Model II) that tested the prediction of the intermittent addiction group as a dependent variable was significant ($\chi^2 = 467.537$; $df = 5$; $p < .05$). The adjusted odds ratios for addiction were 1.79 for cins, 1.71 for face, 1.54 for twit, 1.57 for intbag and 2.42 for the period of internet use. The logistic regression model (Model III) that tested the prediction of the intermittent addiction group as a dependent variable was significant ($\chi^2 = 467.537$; $df = 5$; $p < .05$). The adjusted odds ratios for addiction were 1.76 for gender, 1.79 for facebook account, 1.53 for twitter account, 1.58 for internet addiction and 1.11 for internet use per week.

Table 4:- Regression models showing the effect of variables on internet addiction.

	B	Std
(Constant)	23,654	,958
Gender	3,37*	,563
Hours per week	3,16*	,136
Facebook account	1,98**	,801
Twitter account	1,56*	,591
Internet addiction	,995**	,559
Home access	-,079	,712
R	,638 ^a	
R2	,407	
Adj R2	,403	
F	129,825	
* $p < .01$, ** $p < .05$		

Multiple regression analyses with internet addiction as the dependent variable showed significant t values for gender, hours per week, facebook, twitter, internet addiction and internet access at home. The regression analyses are presented in Table 4. Correlation coefficient is .6382. The model was found statistically significant. The internet connection scores of males are 3.37 points higher than the score of females in the regression table. When the weekly internet usage increases one hour, internet addiction score increases 3.19 points, Facebook profile ownership increases internet addiction scores 1.98 points, Twitter profile ownership increases the same 1.56 points and the availability of internet connection increases the same .995 point.

The mean total IAS score of the total sample was 54.3 +- 1.9. The mean IAS score of boys (56.5 +-19.6) was significantly higher than of girls (51.8 +- 19.4) ($p < .05$). The total IAS score was correlated positively with time spent online ($p < .001$) and negatively with age ($p < .001$). There was a statistically significant difference between the mean SAS score of boys (32.96 +- 8.11) and that of girls (30.05 +- 7.90) ($p < .05$). The mean BDI score of the students was 11.09 +- 8.18, and there was no statistically significant difference was between genders.

Conclusion:-

According to the findings of the first question of the research; the prevalence of internet addiction of university students in Turkey is moderate. In addition to this, the level of internet addiction of students using social media accounts like facebook, twitter was higher than others. In the United States, a study was conducted to investigate the effect of social media on children, adolescents and families. This research has found that social media has increased internet addiction (O'Keeffe & Pearson, 2011). In this direction, two studies went parallel to each other.

According to findings of the second question of the research; whether Turkish students are internet addicted or not is examined. According to the result, it will be correct to say that Turkish students are moderately internet addicted. Also according to result, students use the internet most to make their assignments and they have used to internet for participate in social media. Then they have surfed the web and finally they have checked their e-mails. The response rate of the students to the two questions is almost the same. These questions are “make their assignments” and “use internet for participate in social media”. It may have been high because it contains many elements to make their assignments. When the literature is examined in our country, it is seen that similar responses are obtained in similar studies. In a study on Gazi Osmanpaşa University students, students stated that they use internet most to make their assignments (Dursun, 2004). It is observed that students use the internet mostly for social media when the world's literature is examined (Frangos, Fraglos & Kiohos, 2010).

The number of students participating in the research is sufficient for the variables to be measured. The number of girls and boys is kept close to each other. The rate of internet use of male students was significantly higher than girls. This result supports other studies carried out in Turkey and abroad. In the study, named of “Adolescent’ Friends Attachment and Internet Addiction According to Gender, Perception Parents Attitudes and Parents Educational Levels” is examined to internet addiction and as a result, male students were found to be significantly more internet addicted than girls (Çevik & Çelikkaleli, 2010). It was found that male students are more addicted than girls, internet addiction level of male and female students is examined in a survey conducted abroad named of internet addiction and family relations (Lee & Chae, 2007).

It was found that the difference in the level of internet addiction among the male and female students in the light of the information obtained after the literature search was not a cultural difference. When the source of the difference is examined, it shows that girls are more social than male students and that communication skills are higher, so they spend less time on the internet (Bardwick & Douvan, 1971; Wasserman & Richmond-Abbott, 2005).

The internet addiction score of the students who stay at their own houses or student houses is significantly higher than the students who stay at dormitories. The reason for this difference is that students can not easily access the internet at dormitories. There is no internet connection in many dormitories, especially in state dormitories. The students staying at their houses can easily access to the internet unlike the students staying in the dormitories so they spend more time on the internet. North America is the most widely used internet country in the world. Internet usage rate in Turkey is 45% compared to the whole population. There are similar differences between the western countries like North America. (Global Digital Statistics, 2014). As a result, it is not wrong to say that the students who live in the western countries dormitories access easier than the Turkish students who live in dormitories.

According to the findings, students with high socio-economic level and low socio-economic level reach to the internet in similar proportions. This is proof that the use of internet is spreading in our country.

As a proposal for research, it is possible to investigate which part of the students use more internet in the future. Furthermore, the application of the research in all regions will increase its reliability.

As another suggestion students may be asked questions about their daily social activities so that they can determine whether internet addiction negatively affects social skills.

It can be said that as a limitation of the research, the data are formed in the intention of completely personal answers of the students.

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