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Investigation of the Association Between Loneliness, Social Skill Levels and Internet Addiction in Junior High School Students'

Ortaokul Öğrencilerinde Yalnızlık ve Sosyal Beceri Düzeyleri ile İnternet Bağımlılığı Arasındaki İlişkinin İncelenmesi

Ökkeş **KISA**[1] Ayşe Yasemin **KARAGEYİM KARŞIDAĞ**[2]

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ABSTRACT

Aim: This study was conducted to investigate the association between internet addiction(IA), and social skills and loneliness levels in junior high school students and to determine the factors affecting their IA levels. Method: The population of the study consisted of students attending junior high schools in Kirklareli, in the 2017-2018 academic year(N=10,682).After minimum sample size was calculated as 668, 693 students were reached. In the study, the Internet Addiction Scale(IAS), Matson Evaluation and Social Skills with Youngsters(MESSY) and Children's Loneliness Scale(CLS) were used to collect the study data. Results: Of the students, 13.5% were moderate, 1.5% were severe internet addicts. The results of the adjusted Multivariate Linear Regression analysis indicated that while there was a positive association between IAS scores and the scores for the NegativeMESSY(β:0.345, 95%CI:0.252;0.439,p<0.001) and CLS(β:0.169, 95%CI:0.050;0.288,p<0.01), there was no association between the IAS scores and PositiveMESSY scores(p>0.05).The risk of IA was high in the male gender, >12 years of age, those who perceive their academic success poorly, whose monthly household income was >3000₺/500$ and those who do not have parental control in internet use(p<0.05). Conclusion: The students' IA levels are affected by their socio-demographic and internet usage characteristics. Their levels of negative social skills and loneliness increase as their IA level increase.

Keywords: *internet addiction, addictive behavior, social skills, loneliness.*

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ÖZET

Amaç: Bu çalışma ortaokul öğrencilerinin internet bağımlılığı (İB) ile sosyal beceri ve yalnızlık düzeyleri arasındaki ilişkiyi araştırmak ve IB düzeylerini etkileyen faktörleri belirlemek amacıyla yapılmıştır. Yöntem: Araştırmanın evrenini 2017-2018 eğitim-öğretim yılında Kırklareli'nde ortaokullara devam eden öğrenciler oluşturmaktadır (N = 10.682). Minimum örneklem büyüklüğü 668 olarak hesaplanmış, 693 öğrenciye ulaşılmıştır. Veriler İnternet Bağımlılığı Ölçeği (İBÖ), Matson Çocuklarda Sosyal Becerileri Değerlendirme Ölçeği (MÇSBDÖ), Çocuklar için Yalnızlık Ölçeği (ÇYÖ) ile toplanmıştır. Bulgular: Öğrencilerin %13,5'i orta, %1,5'i ciddi düzeyde internet bağımlısıdır. Düzeltilmiş çok değişkenli doğrusal regresyon analizinde, İBÖ skorları ile olumsuz MÇSBDÖ (β: 0.345, 95% CI: 0.252; 0.439, p < 0.001) ve ÇYÖ (β: 0.169, 95% CI: 0.050; 0.288, p < 0.01) skorları arasında pozitif yönde istatistiksel olarak anlamlı bir ilişki saptanmıştır. İBÖ skorları ile olumlu MESSY skorları arasında bir ilişki bulunamamıştır (p > 0.05). Erkek cinsiyette, 12 yaşından büyüklerde, akademik başarısını kötü algılayanlarda, aylık hane geliri 3000₺/ 500$'nin üzerinde olanlarda ve internet kullanımında ebeveyn denetimi olmayanlarda internet bağımlılığı riski yüksektir (p<0.05). Sonuç: Öğrencilerin İB düzeyleri sosyo-demografik ve internet kullanım özelliklerinden etkilenmektedir. IB arttıkça öğrencilerin sosyal becerileri kötüleşmekte ve yalnızlık düzeyleri artmaktadır.

Anahtar kelimeler: *internet bağımlılığı, bağımlı davranışlar, sosyal beceri, yalnızlık*

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[1] PhD Student| Kirklareli University | Kirklareli | Turkey | ORCID: 0000-0003-4933-0943 | okkeskisa22@gmail.com
[2] Prof. Dr. | Kirklareli University | Health Sciences Institute | Public Health Department | Kirklareli | Turkey | ORCID: 0000-0003-2282-2788

INTRODUCTION

Internet addiction (IA) was first described by Young (1998) as the impulse-control disorder which does not involve an intoxicant. Internet addiction can be defined as the need to use the internet with increasing amount of time, uncontrolled desire to access and stay on the internet, feeling restless, moody, depressed or irritable in the absence of the internet and the negative reflection of this situation onto the social life (Young, 1998; Young & Rodgers, 1998). Internet addiction, which is also known as problematic, pathological, compulsive internet use, cyber addiction, social network addiction, internet gaming addiction, and is accompanied by behavioral problems, is of great importance for adolescent health because it has potential comorbidities and continues to increase gradually (Koo & Kwon, 2014; Kuss, Griffiths, Karila & Billieux, 2014; World Health Organization [WHO], 2014).

In recent years, it has been reported that the prevalence of IA varies between 2.38% and 36.89% in studies conducted with adolescents (Aktepe, Olgac-Dundar, Soyoz & Sonmez, 2013; Bhandari, Neupane, Rija, Thapa, Mishra & Poudyal, 2017; Gómez, Rial, Braña, Golpe & Varela, 2017; Jeon, Kim, Chon & Ha, 2018; Kilic, Avci & Uzuncakmak, 2016; Lee, Shin, Cho & Shin, 2014; Vadher et al., 2019). This prevalence of IA which varies from country to country throughout the world is affected by sociodemographic factors such as adolescent's age, gender and parents' education level (Bhandari et al., 2017; Hawi, Samaha & Griffiths, 2018; Koo & Kwon, 2014; Kuss et al., 2014; Lee et al., 2014; Potembska, Pawłowska & Szymańska, 2019; Vadher et al., 2019). Among the other determinants of the level of IA in adolescents determined in several studies are student's daily internet usage time, having his / her own phone, use of smart phones, and parental control on internet usage (Demirer & Bozoglan, 2016; Hawi et al., 2018; Tateno, Kim, Teo, Skokauskas, Guerrero & Kato, 2019; Vadher et al., 2019). This situation which affects students' social life skills and academic success can lead to attention problems, social anxiety or anxiety disorder, withdrawal, depression, obsessive-compulsive disorder, hypochondriac and phobic diseases (Kuss et al., 2014; Potembska et al., 2019; WHO, 2014). In the literature, it has been reported that adolescents with IA suffer from sleep problems, decreased sleep quality, low quality of life, inadequacy in social skills, emotional or behavioral problems, loneliness, communication problems with peers and other physical or psychosocial health problems (Bhandari et al., 2017; Chou, Huang, Chang, Chen, Hu & Yen, 2017; Klar et al., 2019; Lee et al., 2014; Vadher et al., 2019; WHO, 2014; Yayan, Suna Dag & Duken, 2019). The present study conducted to investigate the association between IA, social skills and loneliness levels in junior high school students and to determine the factors affecting their IA levels was aimed at contributing to educational planning for adolescents.

METHODS

Study Design

This was a cross-sectional study.

Sample

This study was conducted with students going to junior high schools in Kirklareli in the 2017-2018 academic year. The study population consisted of 10.682 students going to 66 public junior high schools affiliated to the Ministry of National Education in eight districts in Kirklareli. The minimum sample size to be reached in the study was calculated in the Epi Info 7.2 program using the following values: P = 0.50, α = 0.05, d = 0.05 and pattern effect = 1.8. In the study, 693 students from 10 different junior high schools in five different districts were reached using the stratified cluster sampling method. The districts to be included in the sample were divided into two clusters considering the development and population characteristics. The schools included in these clusters were determined by the ratio of sample size to the number of schools. After the junior high schools to be included in the study were determined by drawing lots considering the clusters, the number of the students to be selected was determined through the stratified cluster sampling method according to their grade levels. Due to absenteeism or missing data in the survey forms, the study was performed with 646 students.

Data Collection

Data collection tools used in the study was the Personal Information Form, Internet Addiction Scale (IAS), Matson Evaluation and Social Skills with Youngsters (MESSY) and Children's Loneliness Scale (CLS). After the researcher talked to the school authorities prior to the study, the Informed Consent Form was submitted to the parents of the participating students to obtain their permission. The researcher went to the schools included in the study after an appointment was scheduled with the school administration, and the students whose parental consent was received were included in the study. They were asked to fill in the forms used in the study by themselves during two class hours.

The Personal Information Form. This form was prepared by the researchers based on the literature and contained a total of 12 questions on the student's socio-demographic and internet usage characteristics such as gender, age, grade level, monthly household income level, mother' education level, father' education level, parental control on the internet use, perceived academic achievement level, having a computer at home, having his/her own mobile phone, joining social networking sites, daily internet usage time (Demirer & Bozoglan, 2016; Hawi et al., 2018; Jamir, Duggal, Nehra, Singh & Grover, 2019; Kilic et al., 2016; Kuss et al., 2014; Lee et al., 2014; Mellouli et al., 2018; Shek, Zhu & Dou, 2019; Vadher et al., 2019). In the questionnaire, daily internet usage time was asked as closed-ended "less than 1 hour, 1-2 hours, 3-5 hours, 5 hours and over", and different variables were created in the analyses.

Internet Addiction Scale (IAS). The IAS was developed by Young (1998) to determine the level of IA. It was adapted to Turkish by Bayraktar (2001). The scale has 20 items rated on a Likert-type scale. As the score obtained from the scale increases, so does the level of IA. According to the cut-off point, the IAS scores are

classified as no addiction (0-50), moderate addiction (50-79) and severe addiction (80-100) (Keser, Esgi, Kocadag & Bulu, 2013). In this study, IAS level has been used as a dependent variable.

Matson Evaluation and Social Skills with Youngsters (MESSY). MESSY was developed by Matson et al. (1983) to determine the level of social skills. It was adapted to Turkish by Bacanli and Erdogan (2003). The scale has two subscales and 47 items rated on a 5-point Likert scale. The higher the scores obtained from the positive social skills or negative social skills subscales is, the higher the level of social skills in the relevant dimension.

Children's Loneliness Scale (CLS). CLS was developed by Asher and Wheeler (1983) to determine loneliness levels, and it was adapted to Turkish by Kaya (2005). The scale has 23 items rated on a 5-point Likert scale. As the score obtained from the CLS increases, so does the level of sense of loneliness. In this study, variables included in the personal information form, MESSY level, and CLS level were used as independent variables.

Statistical analysis

In the study, descriptive statistics were used such as number (n), percentage (%), mean and standard deviation (SD). The conformity of the distribution to normality was tested with the Shapiro Wilk Test. Student's t Test and one-way ANOVA which is parametric tests were used to compare the rates in the independent groups. The relationship between continuous variables was tested with Pearson Correlation Analysis. Further analysis of variables was identified by using Multivariate Linear Regression Analysis (Enter strategy). Dummy variables were created for the variables with three or more categories included in the model. Of these variables, being in the age (≤ 12 years), grade level (< 7 years), monthly household income level (≤3000 ₺), mother' education levels (≤ 5 years), father' having education levels (≤ 5 years), perceived academic achievement level (poor), and daily internet usage time (< 3 hours) were used as the reference group (0) and compared with other categories (1). In table 4, Multivariate Linear Regression Analysis (Enter strategy) was used to analyze the association between IAS score and MESSY and CLS. In the univariate analysis, variables with a p-value < 0.20 were included in the model. The model's covariates were identified as age (≤ 12 years: 0, > 12 years: 1), gender, (female: 0, male: 1), mother' education levels (≤ 5 years: 0, > 5 years: 1), having his/her cell phone (no: 0, yes: 1) and daily internet usage time (< 3 hours 0, ≥3 hours: 1). The explanatory power of the model was evaluated according to Adjusted R-square (Adj. R2). For data analysis, the Statistical Package for the Social Sciences 22.0 software (SPSS, Inc., Chicago, IL, USA) was used.

Ethical consideration

The study was conducted according to ethical principles and was approved by The Ethics Committee of the Kirklareli University Institute of Health Sciences Ethics Committee in 2017 (Reference Number: February 10, 2017/PR30R00). The permission to use the data collection tools in the study was obtained from the authors of the scales, and the official permission to conduct the study was obtained from the Kirklareli Provincial

Directorate of National Education. In addition, informed consent form was sent to the parents of the students and written permissions were obtained before the research. Students whose parental consent was obtained were included in the study. These students were informed about the research and verbal consent was obtained.

RESULTS

The mean age of the participants was 12.84 ± 0.92 years (Median: 13, Min: 11, Max: 15). Of them, 54.2% were female, 37.5% were seventh graders, 63.6% had a monthly household income of 1251-3000 ₺ (equal to $200-500 at the current exchange rates), 69.8% had mothers who had five years of education, 83.4% had fathers who had five years of education, 87.2% had a home computer at home, 83.4% had their own cell phone, 55.0% used the internet under parental control, 88.9% were the members of social networking sites, and 18.2% used the internet for three or more hours daily. The level of IA was moderate (50-79) in 13.5% of them and severe (≥80) in 1.5% of them (Table 1).

Table 1 *IAS score averages according to the descriptive characteristics of the participants (n = 646).*

Variables	All groups n (%)	Mean ± SD	Test Value(t or F)	*p*-value
Gender				
Female	350 (54.2)	26.73 ± 17.76	-5.117	< 0.001***
Male	296 (45.8)	34.03 ± 18.44		
Age (*years*)				
≤ 12	236 (36.5)	26.56 ± 17.24	-3.716	< 0.001***
> 12	410 (63.5)	32.10 ± 18.80		
Grade level (*years*)				
6	178 (27.6)	26.56 ± 17.90	6.032	0.003**
7	242 (37.5)	30.01 ± 17.37		
8	226 (35.0)	32.92 ± 19.50		
Monthly household income level (*₺ / $*)				
≤ 1250 / ≤ 200	82 (14.6)	25.23 ± 14.58	4.775	0.009**
1251-3000 / 200-500	358 (63.6)	30.99 ± 18.59		
> 3000 / > 500	123 (21.8)	32.98 ± 18.59		
Mother' education level (*years*)				
≤ 5	195 (30.2)	27.62 ± 17.29	-2.233	0.026*
> 5	451 (69.8)	31.14 ± 18.81		
Father' education level (*years*)				
≤ 5	107 (16.6)	26.62 ± 17.72	-2.131	0.033*
> 5	539 (83.4)	30.76 ± 18.50		
Parental control on the internet use				
Yes	355 (55.0)	27.54 ± 17.42	-3.908	< 0.001***
No	291 (45.0)	33.17 ± 19.16		
Perceived academic achievement level				
Poor	24 (3.7)	34.75 ± 19.54	19.900	< 0.001***
Moderate	169 (26.2)	37.15 ± 19.39		
Good	453 (70.1)	27.19 ± 17.23		
Having a computer at home				
No	83 (12.8)	27.67 ± 17.54	-1.326	0.188
Yes	563 (87.2)	30.43 ± 18.54		
Having his/her own mobile phone				
No	107 (16.6)	23.06 ± 16.39	-4.743	< 0.001***
Yes	539 (83.4)	31.47 ± 18.50		
Joining social networking sites				
No	72 (11.1)	19.81 ± 15.71	-5.766	< 0.001***
Yes	574 (88.9)	31.36 ± 18.35		
Daily internet usage time (*hours*)				
< 1	222 (34.4)	21.20 ± 15.73	92.310	< 0.001***
1-2	273 (42.3)	28.63 ± 14.88		
3-5	92 (14.2)	38.96 ± 15.08		
> 5	59 (9.1)	56.34 ± 17.33		

*p< 0.05, **p< 0.01,***p< 0.001.

Table 2 presents the mean scores of the scales used in the study and their correlation analysis. The mean scores the participating students obtained were as follows: 30.08 ± 18.43 (Min: 0, Max: 93) for the IAS, 41.00 ± 13.96 for the Negative MESSY, 104.94 ± 15.25 for the Positive MESSY and 26.11 ± 10.58 for the CLS. While there was a statistically significant positive correlation between the IAS scores and the scores for the Negative MESSY (r: 0.390, p = 0.000, p < 0.001) and CLS (r: 0.196, p = 0.000, p < 0.001), there was a statistically significant negative correlation between the IAS scores and the scores for the Positive MESSY (r: –0.231, p = 0.000, p < 0.001) (Table 2).

Table 2

The mean scores the participants obtained from the data collection tools and the relationship between the IAS scores and the scores for the MESSY and CLS

	n	**Mean ± SD**	**Min – Max**	**r**	***p*-value**
IAS	646	30.08 ± 18.43	0 - 93		
Negative MESSY	646	41.00 ± 13.96	21 - 103	0.390	< 0.001***
Positive MESSY	646	104.94 ± 15.25	41 - 130	-0.231	< 0.001***
CLS	646	26.11 ± 10.58	14 - 67	0.196	< 0.001***

*p< 0.05, **p< 0.01,***p< 0.001. r: Pearson Correlation coefficient

Table 3 shows the multivariate linear regression analysis of the participants' IA levels according to their descriptive characteristics using the enter method. The explanatory power (Adj. R^2) of the models was 14.7% for Model 1 and 33.5% for Model 2. According to Model 1, IAS scores were statistically significantly higher in male gender (β: 5.840, 95% CI: 3.009 to 8.671), those aged >12 years (β: 4.168, 95% CI: 1.245 to 7.091), those whose monthly household income was >3000₺ (equal to $500) (β: 3.092, 95% CI: 0.661 to 5.522), those no using the internet under parental control (β: 5.778, 95% CI: 2.964 to 8.591), those whose perceived academic achievement was moderate and good (β: -6.448, 95% CI: -9.077 to -3.819), those who were the members of social networking sites (β: 7.903, 95% CI: 3.265 to 12.540). According to Model 2, IAS scores were statistically significantly higher in male gender (β: 4.327, 95% CI: 1.821 to 6.834), those with moderate and good academic achievement (β: -5.024, 95% CI: -7.355 to -2.694), those who had their own cell phones (β: 5.108, 95% CI: 1.658 to 8.558) and those whose daily internet use was ≥ 3 hours (β: 9.175, 95% CI: 7.765 to 10.585) (Table 3).

Table 3

Multivariate linear regression analysis of the IA levels of the participants in terms of their descriptive characteristics (n = 646).

Predictors	**Univariate β (95% CI)**	**Model 1 β (95% CI)**	**Model 2 β (95% CI)**
Gender (*male*)	7.305 (4.502;10.109)***	5.840 (3.009; 8.671)***	4.327 (1.821;6.834)**
Age (*>12*)	5.541 (2.613;8.469)***	4.168 (1.245; 7.091)**	—
Grade level (*≥7 years*)	3.170 (1.377;4.963)**	—	0.801 (-0.798;2.399)
Monthly household income level (*>3000 ₺*)	3.633 (1.135;6.130)**	3.092 (0.661; 5.522)*	1.491 (-0.646;3.628)
Mother' education level (*>5 year*)	3.517 (0.425;6.609)*	3.067 (-0.053; 6.187)	—
Father' education level (*>5 year*)	4.146 (0.326;7.965)*	—	1.298 (-2.160;4.755)
Parental control in internet use (*no*)	5.634 (2.803;8.464)***	5.778 (2.964; 8.591)***	1.703 (-0.853;4.260)
Perceived academic achievement level (*Moderate&Good*)	-7.395 (-9.944; -4.845)***	-6.448 (-9.077;-3.819)***	-5.024 (-7.355; -2.694)***
Having a computer at home (*yes*)	2.755 (-1.498;7.008)	1.349 (-2.991; 5.688)	—
Having his/her own mobile phone (*yes*)	8.413 (4.636;12.191)***	—	5.108 (1.658;8.558)**
Joining social networking sites (*yes*)	11.559 (7.120; 15.997)***	7.903 (3.265; 12.540)**	—
Daily internet usage time (*≥ 3 hour*)	10.708 (9.404;12.011)***	—	9.175 (7.765;10.585)***
Adj.R²		*0.147*	*0.335*
F		*13.079****	*36.397****

*p< 0.05, **p< 0.01,***p< 0.001. Notes: CI, Confidence Interval, Adj.R²: Adjusted R square.

In Table 4, the association between the participants' IA levels and their social skill and loneliness levels was presented through the Multivariate Linear Regression analysis. In the models created using the Enter method, after adjustments for age, gender, mother's education levels, having his/her own mobile phone, daily internet usage time, the model explained 40.8% of the variance (Adj. R2). While there was a statistically significant association between the participants' IA levels and their Negative MESSY (β: 0.345, 95% CI: 0.252 to 0.439, $p < 0.001$) and CLS (β: 0.169, 95% CI: 0.050 to 0.288, $p < 0.01$), there was no statistically significant association between their IA levels and positive social skill levels ($p > 0.05$).

Table 4

Multivariate linear regression analysis of the association between the participants' IAS and MESSY and CLS.

Predictors	**Unadjusted β (95% CI)**	**†Adjusted β (95% CI)**
Negative MESSY	0.472 (0.362; 0.582)***	0.345 (0.252; 0.439)***
Positive MESSY	-0.029 (-0.136; 0.077)	-0.006 (-0.097; 0.084)
CLS	0.101 (-0.041; 0.242)	0.169 (0.050; 0.288)**
Adj.R²		*0.408*
F		*56.588****

*p < 0.05, **p < 0.01, ***p < 0.001. Notes: CI, Confidence Interval, Adj.R²: Adjusted R square.
†Adjusted for age, gender, mother' education level, having his/her own mobile phone, daily internet usage time.

DISCUSSION

In the present study conducted to investigate the association between junior high school students' IA and their loneliness and social skill levels, IA prevalence of the participants was determined to be lower than that of adolescents living in Nepal (35.4%) and China (27.46%) (Bhandari et al., 2017; Xin, Xing, Pengfei, Houru, Mengcheng & Hong, 2018), and similar to that of the adolescents living in different cities in Turkey (between 14.4% and 18.2%) (Aktepe et al., 2013; Kilic et al., 2016). In studies conducted in Germany, Spain, Korea, India, Lebanon, the prevalence of IA ranged between 2.38% and 36.89%, and the differences stemmed from the differences between the scales used (Gómez et al., 2017; Hawi et al., 2018; Jeon et al., 2018; Klar et al., 2019; Lee et al., 2014; Vadher et al., 2019). The results of the present study were consistent with those of the studies conducted in Turkey (Aktepe et al., 2013; Kilic et al., 2016;).

In the present study, consistent with the literature, the IA scores of the male students were higher than were those of the female students (Jamir et al., 2019; Kuss et al., 2014; Lau, Gross, Wu, Cheng & Lau, 2017; Lee et al., 2014; Xin et al., 2018; Vadher et al., 2019). This result was related to the fact that boys are fonder of technology which makes them more vulnerable. However, in some studies, IA was higher in female students, which was explained by the positive association between the addiction level and online communication (Ang, 2017; Tateno et al., 2019). It has been reported that adolescents who start to use the Internet at an early age are at an increased risk for IA and that their IA will be higher at later ages (Beard, Haas, Wickham & Stavropoulos, 2019; Bhandari et al., 2017; Lee et al., 2014; Xin et al., 2018). This situation, which also explains the rationale behind the association between grade level and IA, was compatible with the results of other studies conducted on the issue (Kilic et al., 2016; Koo & Kwon, 2014; Li, Zhang, Lu, Zhang & Wang, 2014;

Mellouli et al., 2018; Xin et al., 2018). Consistent with the literature, a negative association was determined between IA and academic achievement, which was explained by the fact that successful students used the parentally controlled or curriculum-related internet (Bhandari et al., 2017; Demirer & Bozoglan, 2016; Hawi et al., 2018; Jamir et al., 2019; Kilic et al., 2016; Xin et al., 2018).

As the number of smartphone users increased, the problems associated with the use of smartphones have become more serious (Tateno et al., 2019). In studies in which a positive association was determined between IA and smartphone addiction, the risk of IA was higher among those who had their own cell phones or smartphones (Ayar et al., 2017; Jamir et al., 2019; Tateno et al., 2019). The results of the present study were compatible with the results of the aforementioned studies. In the present study, it was observed that the mean IA scores of the students who used the internet more than three hours a day were significantly higher. This result, which is consistent with the results of studies indicating a positive association between IA and internet usage time, supports the literature (Demirer & Bozoglan, 2016; Hawi et al., 2018; Li et al., 2014; Vadher et al., 2019). The relationship observed between having a mobile phone on its own, and duration to be on the internet and membership in social networks and internet addiction requires careful interpretation in terms of cause and effect association. Because those who have their own mobile phone can access social networks more frequently via internet and this can affect the time of being on the internet.

It has been reported that parental control and parent-child associated the determinants of IA levels among children and that IA levels were lower among adolescents who had better relationships with their parents (Jamir et al., 2019; Khurana, Bleakley, Jordan & Romer, 2015; Kilic et al., 2016; Koo & Kwon, 2014; Shek et al., 2019; Xin et al., 2018;). The result of the present study indicating that the level of IA was higher among the participating students who used the internet without parental control was consistent with the literature. In several studies, children with low educated mothers and fathers have been reported to have higher levels of IA (Lau et al., 2017; Mellouli et al., 2018). On the other hand, in a study, the IA scores were determined to increase as the father's education level increased (Kilic et al., 2016). In the present study, although no association was determined between parental education level and IA, the participants whose parents' education levels were high obtained higher mean IA scores. This is probably due to the fact that families with higher education had higher income levels and thus their children were more likely to have smart phones or to use the internet. In the present study, consistent with the literature, the IA level was higher among the participants who had families with high monthly income levels (Demirer & Bozoglan, 2016; Kilic et al., 2016; Kuss et al., 2014).

In the present study, independently of the other factors, the increased level of IA increased the negative social skill levels but did not affect the positive social skill levels. In several studies conducted on the issue, it was reported that adolescents who had a problematic internet use or who used internet excessively and thus had high levels of IA had more negative social skills and that there was a positive association between the variables (Chou et al., 2017; Jeon et al., 2018; Zegarra Zamalloa & Cuba Fuentes, 2017). This finding was explained by the fact that adolescents with problematic internet use or with risky online communication had a

common gap in their personal and social skills (Gómez et al., 2017). Adolescents who were shy and had low social relations and low life satisfactions try to cover up their deficiency by using the internet or a mobile phone (Costa, Patrão & Machado, 2018; Kilic et al., 2016; Kuss et al., 2014; Yayan et al., 2019). In the literature, it was reported that loneliness mediated the association between shyness and problematic internet use and that shy young people may become an internet addict to avoid feeling lonely (Ang, Chan & Lee, 2018; Huan, Ang, Chong & Chye, 2014). In the present study, in line with the literature, it was found that as the level of IA increased so did the level of loneliness (Balhara, Mahapatra, Sharma & Bhargava, 2018; Costa et al., 2018; Parashkouh, Mirhadian, EmamiSigaroudi, Leili & Karimi, 2018; Yayan et al., 2019).

Limitations

Due to its cross-sectional design, the lack of sequentiality in causality was the limitation of this study. The other limitation of the study was that the data relied on the self-report of the participants.

Conclusions

Junior high school students' IA levels are affected by their socio-demographic and internet-related characteristics. The risk of IA was high in the male gender, over 12 years of age, those who perceive their academic success poorly, whose monthly household income was over 3000₺/ 500$ and those who do not have parental control in internet use. Opportunities such as students' having their own mobile phones and being members of social networking sites that facilitate access to the internet affect their daily internet usage time and increase the level of IA. The lack of parental control further exacerbates this situation. Adolescents whose IA is high have higher negative social skill levels and loneliness levels.

It is necessary to develop and implement trainings and awareness-raising activities aimed at encouraging the correct and useful use of the Internet, and to develop and implement protective and preventive programs for students at risk of IA. In schools, activities aimed at strengthening students' social skills and peer communication should be increased, and policies to reduce IA should be developed. Parents' and teachers' awareness should be raised, and environment should be created at home or at school to establish positive communication between adolescents and their parents and teachers.

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GENİŞLETİLMİŞ ÖZET

Giriş.

Literatürde internet bağımlılığı ve sosyal beceri üzerine birçok çalışma bulunmaktadır fakat internet bağımlılığı, yalnız ve sosyal beceri arasındaki ilişkiyi inceleyen çalışmaların sınırlı olduğu bulunmuştur. Bu düşünceden hareketle bu çalışmada ortaokul öğrencilerinin yalnızlık ve sosyal beceri düzeyleri ile internet bağımlılığı arasındaki ilişkinin incelenmesi amaçlanmıştır.

Yöntem.

Araştırma nicel araştırma yöntemlerinden ilişkisel tarama yöntemi ile modellenmiştir. Çalışmada veri toplama aracı olarak araştırmacı tarafından hazırlanan demografik bilgi formu, Young (1998) tarafından geliştirilen Türkçe uyarlaması Bayraktar (2001) tarafından İnternet Bağımlılığı Ölçeği (İBÖ), Matson & diğ. (1983) tarafından geliştirilen Türkçe uyarlaması Bacanlı & Erdoğan (2003) tarafından yapılan Matson Çocuklarda Sosyal Becerileri Değerlendirme Ölçeği (MÇSBDÖ) ve Asher & Wheeler (1985) tarafından geliştirilen Türkçe uyarlaması Kaya (2005) tarafından yapılan Çocuklar için Yalnızlık Ölçeği (ÇYÖ) kullanılmıştır. Araştırma verileri Kırklareli il Merkez ve ilçelerinde bulunan Millî Eğitim Bakanlığına bağlı resmi 66 ortaokulda öğrenim gören toplam 693 ortaokul öğrencisinden (%54,2'si kız ve %45,8'i erkek, %7,6'sı altıncı sınıf, %37,5'i yedinci sınıf ve %35'i sekizinci sınıf) toplanmıştır. Yapılan analizlerde verilerin normalitesinin sağlanıp sağlanmaması amacıyla çarpıklık ve basıklık değerlerine bakılmış ve dağılımın normal olduğu belirlenmiştir (-1,96 +1,96). Bu nedenle verilerin analizinde parametrik analiz teknikleri kullanılmıştır. Araştırmada Bağımsız t testi, ANOVA ve Pearson Korelasyon analizinden yararlanılmıştır. Ayrıca anlamlılık düzeyi $p<0,05$ olarak kabul edilmiştir.

Bulgular.

Araştırmaya dahil edilen erkekler, kızlara göre; 12 yaş üstü olanlar, 12 yaş ve 12 yaşın altı olanlara göre; sekizinci sınıflar, altı ve yedinci sınıflara göre; aylık hane geliri 3000₺'sının üzerinde olanlar, diğer gelir gruplarına göre; ebeveyn kontrolü olmayanlar, ebeveyn kontrolü olanlara göre; internet kullananlar, kullanmayanlara göre; akademik seviyesi orta olanlar, kötü ve iyi olanlara göre; evinde bilgisayar olanlar, olmayanlara göre; mobil telefonu ve sosyal paylaşım sitelerine üyeliği olanlar, mobil telefonu olmayan ve sosyal paylaşım sitelerine üyeliği olmayanlara göre, günlük internet kullanımı beş saat ve üzeri olanlar, diğer kullanım sürelerine göre internet bağımlılık düzeyi arasında anlamlı düzeyde farklılık saptanmıştır. Bununla beraber araştırmada ortaokul öğrencilerin %13,5'i orta, %1,5'i ciddi düzeyde internet bağımlısı olduğu tespit edilmiştir.

Araştırmada enter metodu kullanılarak araştırma grubunun internet bağımlılık düzeyinin tanımlayıcı özelliklerine göre multivariate linear regression analizi yapılmıştır. Oluşturulan modellerin açıklayıcı gücü (Adjusted R square) Model 1'de %14,7'si, Model 2'de %33,5'i bulunmuştur. Model 1'de erkek cinsiyette, >12 yaş olanlarda, aylık hane geliri >3000 TL olanlarda, ebeveyn kontrolüyle internet kullananlarda, akademik başarısı kötü olanlarda, sosyal paylaşım sitelerine üyeliği olanlarda istatistiksel olarak anlamlı düzeyde yüksek

belirlenmiştir. Model 2'ye göre erkek cinsiyette, akademik başarısı kötü olanlarda, kendine ait cep telefonu olanlarda, günlük ≥3 saat internet kullananlarda anlamlı düzeyde yüksek belirlenmiştir. Öğrencilerin internet bağımlılık düzeyi ile olumsuz sosyal beceri ve yalnızlık düzeyleri arasında pozitif yönde, olumlu sosyal beceri düzeyleri ile arasında ise negatif yönde anlamlı ilişki belirlenmiştir. Ayrıca İnternet bağımlılığı düzeyinin sosyal beceri ve yalnızlık düzeyi ile arasındaki ilişki Multivariate Linear Regression analizi ile incelenmiştir. Enter metodu kullanılarak oluşturulan modellerde yaş, cinsiyet, anne eğitim düzeyi, kendine ait cep telefonu varlığı, günlük internet kullanım süresine göre yapılan düzeltmelerden sonra (Adjusted R square) modelin %40.8'i açıklanabilmiştir. İnternet bağımlılık düzeyi ile olumsuz sosyal beceri düzeyi ve yalnızlık düzeyi arasında pozitif yönde istatistiksel olarak anlamlı ilişki saptanmıştır. İnternet bağımlılığı düzeyi ile olumlu sosyal beceri düzeyi arasında istatistiksel olarak anlamlı bir ilişki belirlenememiştir.

Tartışma ve Sonuç.

Araştırmada erkek öğrencilerin internet bağımlılık skorları kız öğrencilere göre literatürle tutarlı olarak daha yüksek bulunmuştur. Literatürde bazı çalışmalarda ise internet bağımlılığı düzeylerinin kız öğrencilerde daha yüksek bulunmuştur. Çalışmada küçük yaşlarda internet kullanmaya başlayan adölesanların internet bağımlılığı riski taşıdığı ve literatürle uyumlu olarak ilerleyen yaşlarda internet bağımlılığının daha yüksek olduğu bulunmuştur. Çalışmada Sınıf düzeyi ile internet bağımlılığı arasındaki ilişki olduğu tespit edilmiştir. Çalışmada gelir seviyesi arttıkça internet bağımlılığı skorlarının arttığı tespit edilmiştir. Çalışmada ebeveyn kontrolü olmayan öğrencilerde internet bağımlılığı skorları daha yüksek bulunmuştur. Literatür ile uyumlu olarak ebeveyn denetimi olmayan öğrencilerin internet bağımlığı düzeyi daha yüksek belirlenmiştir. Çalışmada internet bağımlılığı ile akademik başarı arasında negatif yönlü ilişki belirlenmiştir. Bu sonuç başarılı öğrencilerin daha kontrollü ve dersleri ile ilgili interneti daha fazla kullanması ile açıklanmıştır. Çalışmada cep telefonu olan ve sosyal medya üyeliği olan öğrencilerin internet bağımlılık skorları yüksek bulunmuştur. Çalışmada beş saatten fazla internet kullanan öğrencilerin internet bağımlılığı ortalamalarının önemli derecede yüksek olduğu bulunmuştur. Literatürde İnternet bağımlılığı ile internet kullanım süresi arasında pozitif ilişki gösteren çalışmalar ile uyumlu olduğu tespit edilmiştir. Çalışmada literatürle uyumlu olarak internet bağımlılığı arttıkça olumsuz sosyal beceri düzeyinin arttığı, olumlu sosyal becerinin etkilenmediği tespit edilmiştir. Çalışmada internet bağımlılığı düzeyi arttıkça yalnızlık düzeyinin arttığı bulunmuştur.

Öğrencilerin interneti doğru ve yararlı kullanımına yönelik eğitim ve farkındalık çalışmalarının artırılması, internet bağımlılığı açısından riskli davranışı olan öğrencilere yönelik koruyucu ve önleyici programların geliştirilmesi ve uygulanması gereklidir. Okullarda öğrencilerin sosyal becerileri ve akran iletişimini güçlendirmeye yönelik faaliyetler artırılmalı ve okullarda internet bağımlılığını azaltmaya yönelik politikalar geliştirilmelidir. Ebeveyn ve öğretmenlerin farkındalıkları arttırılmalı, evde veya okulda ebeveynler ve öğretmenler ile adölesanlar arasında olumlu iletişimi sağlayacak ortamlar yaratılmalıdır.