

DETERMINING THE LEVELS OF CYBERBULLYING SENSITIVITY
AND INTERNET ADDICTION IN HIGH SCHOOL STUDENTS ⁽¹⁾LİSE ÖĞRENCİLERİNDE İNTERNET BAĞIMLILIĞI VE SİBER
ZORBALIĞA İLİŞKİN DUYARLILIK DÜZEYLERİNİN BELİRLENMESİSeda GÖGER¹, Ayşe ÇEVİRME²¹Sakarya University, Institute of Health Sciences, Sakarya / Turkey²Sakarya University, Faculty of Health Sciences, Sakarya / TurkeyORCID ID: 0000-0003-2066-7147¹, 0000-0001-7116-2523²

Abstract: Aim: This study aims to determine the levels of cyberbullying sensitivity and internet addiction among high school students. **Methods:** The sample of this descriptive study consists of 729 students. The study implemented data collection tools, such as "Introductory Features of Students Questionnaire Form," "Young's Internet Addiction Test," and "Cyberbullying Sensitivity Scale." The analysis of the data was completed by transferring the data to the IBM SPSS Statistics 23 program. **Results:** As a result of analysis, Young's Internet Addiction Test mean score was found to be 26.57 ± 8.85 , while the average score of Cyberbullying Sensitivity Scale was 31.00 ± 6.43 . According to some introductory features of students, a statistically significant difference was found between Young's Internet Addiction Test and Cyberbullying Sensitivity Scale ($p < 0.05$). **Conclusion:** While the internet addiction level of participants was found to be low, their sensitivity to cyberbullying was found to be high. In an effort to deal with cyberbullying, educational programs and counseling services on internet addiction and cyber sensitivity need to be organized in schools involving parents of school children.

Keywords: Adolescents, Internet Addiction, Cyber Bullying

Öz: Amaç: Bu çalışmada lise öğrencilerinde internet bağımlılığı ve siber zorbalığa ilişkin duyarlılık düzeylerinin belirlenmesi amaçlanmıştır. **Yöntem:** Tanımlayıcı türde olan çalışmanın örneklemini 729 öğrenci oluşturmaktadır. Araştırmada veri toplama aracı olarak öğrencilere ilişkin tanıtıcı özellikler anket formu, Young internet bağımlılığı testi ve siber zorbalığa ilişkin duyarlılık ölçeği kullanılmıştır. Veriler IBM SPSS Statistics 23 programına aktararak tamamlanmıştır. **Bulgular:** Yapılan analizler sonucunda, Young internet bağımlılığı testi puan ortalaması 26.57 ± 8.85 bulunurken siber zorbalığa ilişkin duyarlılık ölçeği puan ortalaması 31.00 ± 6.43 olarak tespit edilmiştir. Öğrencilerin bazı tanıtıcı özelliklerine göre internet bağımlılığı testi ve siber zorbalığa ilişkin duyarlılık ölçeği puan ortalamaları arasında istatistiksel açıdan anlamlı bir fark saptanmıştır ($p < 0.05$). **Sonuç:** Katılımcıların internet bağımlılığı düzeyi düşük tespit edilirken siber zorbalığa ilişkin duyarlılıkları yüksek saptanmıştır. Bu bağlamda okullarda öğrencilere ebeveynleri ile birlikte internet bağımlılığı ve siber duyarlılık hakkında eğitim programları ve danışmanlık hizmetleri düzenlenmesi önerilebilir.

Anahtar Kelimeler: Adölesanlar, İnternet Bağımlılığı, Siber Zorbalık

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INTRODUCTION

The internet is one of the most important technologies of our age, and it has become an integral part of human life. While people use the internet for education, academic activities, research, interpersonal communication, commerce, information retrieval, entertainment, and sharing purposes, the rapid increase in its widespread use has brought in some problems (Bozkurt et al., 2016: 235-247). Some people limit their internet usage while others experience problems due to excessive use of the internet in their businesses and social lives. As a result of its advantages and its nature, the prolonged use of internet leads to internet addiction (Jaiswal et al., 2020: 3609).

Young is one of the scholars who first discovered the concept of internet addiction. Based on the criteria of gambling addiction in DSM IV, Young determined eight diagnostic criteria for internet addiction. They are (1) being overtly preoccupied with thoughts related to the internet, (2) using the internet more to regain satisfaction of internet use, (3) repeatedly unsuccessful attempts to control internet use, (4) countless unsuccessful attempts to limit internet use, (5) staying online longer than intended, (6) risking education, a career opportunity, or an important relationship due to excessive internet use, (7) lying to the therapist, family members, or anyone else to hide the duration that you are online, and (8)

use the internet to avoid negative emotions and problems. According to Young, if five of these criteria are met, internet addiction is mentionable (Young, 1998).

Using the internet, which is one of today's most advanced technologies, adversely and erroneously, has brought the concept that is one of the subtypes of cyber violence known as cyberbullying. Cyberbullying is the repetitive and deliberate occurrence of aggressive behaviors to harm someone in the digital environment by digital means. These harmful behaviors include harassment, deceit, ridicule, insult, intimidation, and even death threat (Kanbur and Kanbur, 2018: 237-240). The amount of violence increases with the transition from the physical world to the virtual world. While a victim has a chance to escape from bullying in a physical environment, there is no chance to escape in the virtual world (Uysal et al., 2014: 191-210).

As behaviors considered as cyberbullying can create a perception of threat for the exposed person, it is expected from these individuals who perceive cyberbullying as a threat to build sensitivity (Kanbul and Ozansoy, 2019: 1362). In this sense, cyberbullying sensitivity can be defined as "avoiding behaviors that may lead to bullying, being aware of the existence of such threats and taking precautions, and keeping a high level of attention to notice stimulus that may pose a threat during the use



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of cyber tools, such as the internet and mobile phones” (Tanrikulu et al., 2013: 38-47).

Adolescent high school students are the most prone to becoming addicted to the internet. High curiosity and easy access to all kinds of information can cause adolescents to use the internet extensively (Aslan, 2019: 945-949). In addition, young individuals who have difficulties in meeting people with common interests in real-life participate in virtual chat and virtual communities and try to connect with people who share similar ideas, feelings, and thoughts. This situation increases the risk of young people being cyberbullied (Yüksel and Yılmaz, 2016: 1039). Literature reveals that cyber victimization is a serious problem among young people (Armstrong et al., 2019; Williford, 2019: 557-570; Kanbul and Ozansoy, 2019: 1361-1364). Moreover, exposure to cyberbullying behavior is a serious problem to be solved that is accompanied by internet addiction. Therefore, determining the level of sensitivity and factors affecting internet addiction and cyberbullying in adolescents, who are a group at high risk, will be effective in preventing internet addiction and cyber victimization. It is also considered that this study will act as a guide for other studies to gain more information on this subject (Lin et al., 2020). Considering all the abovementioned points, this study aims to determine

internet addiction and levels of cyberbullying sensitivity among high school students.

METHODS

Participants

This descriptive type of research considers the population of a total 909 students in the range of 14–18 years from two different schools (vocational school for girls and boys vocational school) in Turkey, Bilecik attending the fall semester of the 2018–2019 academic year. The sample group was asked to include the whole population; however, this was not possible as 78 students were absent from school, 23 students did not want to participate in the study, and 108 students filled out forms incomplete or incorrect, and thus, they have not been included in the study. As a consequence, the remaining 729 students formed the sample of the study. Thus, 80.2% of the population has been covered.

Prior to data collection, written permissions were obtained from Sakarya University Ethical Board Committee (the ethics committee date: 2018 Decision no.71522473 / 050.01.04 / 29) and from institutions in which the study will be conducted. In addition, the consent of students and their parents was obtained and necessary information was given related to the study.



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Data Collection

Data was collected by using the simple random sampling method from two different schools located in the province of Bilecik in Turkey. The researcher collected the research data by visiting schools one-by-one. The purpose, importance, and expected benefits of the research were told to the participants, and the questionnaire form, test, and questions in the scale were explained.

Introductory Features of Students Questionnaire Form; The questionnaire form included a total of 9 questions that include introductory demographics of students, such as gender, level of education (in terms of grade), economic status of the family, time spent daily on the internet, tools used to access the internet, whether there are any restrictions in the family regarding the time spent on the internet, social networking sites used, and status of being exposed to cyberbullying before and means of cybers victimization.

Young's Internet Addiction Test; Developed by Young (1998) and adapted into short-form by Pawlikowski et al. (2013), Young's Internet Addiction Test short-form consists of 12 items. It is a five-point Likert (1 = Never, 5 = Always) type scale. The scale has no sub-dimensions. There are no items in the scale that need reverse scoring. The internal consistency reliability coefficient of the scale

was calculated as 0.85. The scores that can be obtained from the scale range from 12 to 60. Higher scores on the scale indicate higher levels of internet addiction.

Cyberbullying Sensitivity Scale; The scale was developed by Tanrikulu, Kınay, and Arıcak (2013) and consisted of 13 items in total. Each item had three options as an answer, in the form of "yes," "sometimes," and "no." Total scores from answers given (1 = No, 2 = Sometimes, 3 = Yes) can vary between 13 and 39. High scores represented high levels for cyberbullying sensitivity. Such result can be interpreted as students being aware of the existence of cyberbullying threats during the use of technological tools, such as the internet and mobile phones, and them being cautious and having a high concentration in noticing these threats. The total Cronbach alpha (α) value of the scale is 0.84.

Statistical Methods

The analysis of the data was completed by transferring the data to the IBM SPSS Statistics 23 program. In the process of data analysis, frequency distribution (number, percentage) was used for categorical variables and descriptive statistics (mean, standard deviation, minimum, and maximum) was used for numerical variables. Independent sample t-test was used to examine the difference between categorical variables with two groups,



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and to determine the difference between categorical variables with more than two groups, one-way analysis of variance (ANOVA) was performed. As a result of the analysis, the Levene's test was operated first for variance homogeneity. Later, multiple comparison test (Bonferonni or Tamhane's T2) was performed to determine major differences originated from group or groups. The Bonferonni test was used to examine the difference between groups in variables that provide variance homogeneity, and for the groups that do not provide variance homogeneity, Tamhane's T2 test was used to examine the difference between groups. In addition, Cronbach's Alpha value was used for scale reliability. The Cronbach alpha reliability coefficient of the Internet Addiction Test was found to be 0.85, while the Cronbach alpha coefficient of the Cyberbullying Sensitivity Scale was found to be 0.88.

RESULTS

Findings on Introductory Features of Students

52.4% of students participating in the study are male, 33.9% are studying in the third grade of high school, and 69.5% have a mod-

erate socioeconomic status. 29.6% of participants spend more than four hours daily on the internet; 95.2% have mobile phones, 59.3% have a computer, and 18.8% have a tablet to enable their access to the internet. 57.1% of students do not have any restrictions regarding the time spent on the internet by their families.

It was observed that 83.4% of participants use the Instagram social media network, followed by YouTube (47.3%), Facebook (29.8%), and Twitter (9.9%). 65.6% of students stated that they had heard of cyberbullying before and 39.8% reported that they learned about cyberbullying through mass media. While the rate of those who have been cyberbullied before was 23.3%, 32.9% of the participants stated that they were cyberbullied through mobile phones. This was followed by Instagram (22.9%), Facebook (20.6), computer games (20.0%), other (2.9%), and Twitter (0.6%), respectively.

Descriptive Statistics on Scales

In the study, Young's Internet Addiction Test mean score was 26.57 ± 8.85 and the mean score for Cyberbullying Sensitivity Scale was calculated as 31.00 ± 6.43 (Table 1).



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Table 1. Descriptive Statistics on Scales

| Scales | Number of Items | X ± SD | Min. Point | Max. Point |
|---------------------------------|-----------------|--------------|------------|------------|
| Young's Internet Addiction Test | 12 | 26.57 ± 8.85 | 12.0 | 60.0 |
| Cyberbullying Sensitivity Scale | 13 | 31.00 ± 6.43 | 13.0 | 39.0 |

Comparison of Young's Internet Addiction Test Scores According to the Introductory Features of Participants

When the average scores of Young's Internet Addiction Test were compared based on the introductory characteristics of students, it was observed that there was no significant difference between the averages with regard to the level of education, socioeconomic status of the family and means used for internet access ($p > 0.05$) (Table 2).

A statistically significant difference was found among Young's Internet Addiction Test mean scores and gender, time spent on the internet in a day, type of parental control to limit

internet access, social networking sites used, and exposure to cyberbullying ($p < 0.05$). As per statistics, female students compared to male students, those who spend more than four hours on the internet compared to ones who spend less, those who do not follow the family restriction on internet use compared to ones who have no restrictions and compared to ones who follow the restrictions, those who use Instagram and other social media compared to those who do not, and those who exposed to cyberbullying compared to ones who are not cyberbullied, have a higher mean score of Young's Internet Addiction Test and the difference between the averages was statistically significant ($p < 0.05$) (Table 2).

Table 2. Comparison of Young's Internet Addiction Test Scores According to the Introductory Features of Participants

| | | Mean | SD | F*/t** | p | Difference |
|--------|-----------------------|-------|-------|--------------------|-------|------------|
| Gender | Girl | 27.48 | 8,961 | 2.675 ^t | 0.008 | 1> 2 |
| | Male | 25.73 | 8,680 | | | |
| Grade | 1 st grade | 26.96 | 8.541 | 0.751 ^F | 0.522 | - |
| | 2 nd grade | 25.78 | 7.958 | | | |
| | 3 rd grade | 26.85 | 9.760 | | | |
| | 4 th grade | 26.40 | 8.878 | | | |



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| | | | | | | |
|------------------------------------|-------------------------|-------|--------|---------------------|-------|-----------------------|
| Socioeconomic Status of the Family | Bad | 30.19 | 11.496 | 2.290 ^F | 0.102 | - |
| | Middle | 26.77 | 8.890 | | | |
| | Good | 25.78 | 8.470 | | | |
| Time Spent on the Internet Daily | 30 minutes–1 hour | 20.77 | 6.140 | 55.928 ^F | 0.000 | 1,2,3 <4 ^b |
| | 1–2 hours | 24.89 | 7.910 | | | 1 <2,3 ^b |
| | 2–4 hours | 27.01 | 7.476 | | | |
| | More than 4 hours | 31.53 | 9.439 | | | |
| Tools Used for Internet Access | | | | | | |
| Mobile Phones | Have | 26.54 | 8.652 | -0.231 ^t | 0.819 | - |
| | Have not | 27.03 | 12.316 | | | |
| Laptop | Have | 27.38 | 9.578 | 1.652 ^t | 0.099 | - |
| | Have not | 26.17 | 8.464 | | | |
| Tablet | Have | 27.78 | 9.609 | 1.787 ^t | 0.074 | - |
| | Have not | 26.28 | 8.651 | | | |
| Desktop | Have | 27.27 | 9.575 | 1.305 ^t | 0.192 | - |
| | Have not | 26.31 | 8.565 | | | |
| Family Restriction on Internet Use | Have | 25.33 | 7.683 | 30.542 ^F | 0.000 | 1,2 <3 ^a |
| | Have not | 25.56 | 8.713 | | | |
| | Yes but I do not follow | 32.20 | 9.097 | | | |
| Social Media Sites Used | | | | | | |
| Facebook | Yes | 27.03 | 9.459 | 0.918 ^t | 0.359 | - |
| | No | 26.37 | 8.583 | | | |
| Twitter | Yes | 27.97 | 8.946 | 1.414 ^t | 0.158 | - |
| | No | 26.42 | 8.839 | | | |
| Instagram | Yes | 26.96 | 8.576 | 2.692 ^t | 0.007 | 1 > 2 |
| | No | 24.60 | 9.929 | | | |
| YouTube | Yes | 27.01 | 8.863 | 1.291 ^t | 0.197 | - |
| | No | 26.16 | 8.834 | | | |



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| | | | | | | |
|------------------------------|-----|-------|-------|--------------------|-------|-------|
| Other | Yes | 27.97 | 8.808 | 2.741 [†] | 0.006 | 1 > 2 |
| | No | 26.00 | 8.814 | | | |
| Status of Being Cyberbullied | Yes | 30.44 | 9.835 | 6.091 [†] | 0.000 | 1 > 2 |
| | No | 25.39 | 8.183 | | | |

F*: One-way ANOVA test, *t*: Independent sample *t*-test, ^a*Bonferonni* test, ^b *Tamhane's T2* test

Comparison of the Averages of the Sensitivity Scale for Cyberbullying According to the Descriptive Characteristics of Participants

Table 3 demonstrates the comparison of mean scores of the Cyberbullying Sensitivity Scale and the mean scores of the Introductory Features of Students Questionnaire Form. Accordingly, regarding variables of the level of education grade-wise, daily time spent on the internet and status of being cyberbullied, there was no significant difference observed between these variables and cyberbullying sensitivity ($p > 0.05$) (Table 3).

A statistically significant difference was found between the mean scores of the Cyber-

bullying Sensitivity Scale related to variables, including gender, economic status of the family, tools used for internet access, restriction of internet use by the family, and social networking sites used. Based on the results of the analysis, female students compared to males, those with a poor socioeconomic status compared to the ones with moderate and good socioeconomic status, students who use mobile phones compared to students who do not, students who have restrictions on internet use by their families compared to ones who do not have any restrictions, and students who do not use Facebook, Twitter, Instagram, or YouTube compared to the ones who do, have a higher average score for Cyberbullying Sensitivity Scale and the difference between the averages was found to be statistically significant ($p < 0.05$) (Table 3).

Table 3. Comparison of the Averages of the Sensitivity Scale for Cyberbullying According to the Descriptive Characteristics of Participants

| | | Mean | SD | F*/t** | p | Difference |
|--------|------|-------|-------|---------------------|-------|------------|
| Gender | Girl | 33.64 | 5.395 | 11.465 [†] | 0.000 | 1 > 2 |
| | Male | 28.60 | 6.368 | | | |



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| | | | | | | |
|------------------------------------|-------------------------|-------|-------|---------------------|-------|--------|
| Grade | 1st grade | 31.37 | 5.828 | 0.923 ^F | 0.429 | - |
| | 2nd grade | 30.69 | 6.744 | | | |
| | 3rd grade | 30.70 | 6.649 | | | |
| | 4th grade | 31.83 | 6.712 | | | |
| Socioeconomic Status of the Family | Bad | 29.06 | 7.707 | 3.557 ^F | 0.029 | 2 > 3* |
| | Middle | 31.41 | 6.174 | | | |
| | Good | 30.15 | 6.866 | | | |
| Time Spent on the Internet Daily | 30 minutes–1 hour | 30.75 | 7.067 | 0.662 ^F | 0.576 | - |
| | 1–2 hours | 30.92 | 6.686 | | | |
| | 2–4 hours | 30.68 | 6.174 | | | |
| | More than 4 hours | 31.50 | 5.977 | | | |
| Tools Used for Internet Access | | | | | | |
| Mobile Phones | Have | 31.12 | 6.383 | 2.187 ^t | 0.029 | 1 > 2 |
| | Have not | 28.69 | 7.078 | | | |
| Laptop | Have | 30.62 | 6.419 | -1.095 ^t | 0.274 | - |
| | Have not | 31.18 | 6.440 | | | |
| Tablet | Have | 31.15 | 6.095 | 0.295 ^t | 0.768 | - |
| | Have not | 30.97 | 6.515 | | | |
| Desktop | Have | 30.74 | 6.065 | -0.649 ^t | 0.517 | - |
| | Have not | 31.09 | 6.568 | | | |
| Family Restriction on Internet Use | Have | 32.07 | 6.214 | 5.621 ^F | 0.004 | 1 > 2* |
| | Have not | 30.32 | 6.654 | | | |
| | Yes but I do not follow | 31.62 | 5.702 | | | |
| Social Sharing Sites Used | | | | | | |
| Facebook | Yes | 31.24 | 5.706 | 0.699 ^t | 0.485 | - |
| | No | 30.90 | 6.722 | | | |
| Twitter | Yes | 31.81 | 5.596 | 1.120 ^t | 0.263 | - |
| | No | 30.91 | 6.522 | | | |



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| | | | | | | |
|------------------------------|-----|-------|-------|---------------------|-------|------|
| Instagram | Yes | 31.03 | 6.211 | 0.232 ^t | 0.817 | - |
| | No | 30.86 | 7.485 | | | |
| YouTube | Yes | 30.97 | 6.210 | -0.127 ^t | 0.899 | - |
| | No | 31.03 | 6.637 | | | |
| Other | Yes | 32.17 | 6.089 | 3.146 ^t | 0.002 | 1> 2 |
| | No | 30.53 | 6.515 | | | |
| Status of Being Cyberbullied | Yes | 31.19 | 6.663 | 0.449 ^t | 0.654 | - |
| | No | 30.94 | 6.368 | | | |

*F: One-way ANOVA test, ** t: Independent sample t-test, ^aBonferonni test

DISCUSSION

In this study, levels of cyberbullying sensitivity and internet addiction, along with affecting factors, were examined among high school students, who are under risk in terms of internet use. The internet addiction levels of students were found to be low in the study. The result of this study provoked thoughts related to the possibility that some measures were taken by teachers and parents to prevent excessive internet use by students at school and home. Similar to the results of the research in literature, studies conducted using Young's Internet Addiction Test revealed that internet addiction levels of participants were found to be low (Khan et al., 2017: 191-194; Virk et al., 2020: 35-48; Najafi and Rayani, 2020: 196-202).

With a score of 31.00 ± 6.43 in the study, it was observed that students' sensitivity to

cyberbullying was high. According to this result, it can be stated that students have a high awareness of cybersecurity measures while utilizing technology. While Uysal et al. (2014: 191-210) study involving university students deduced that the average score of participants' Cyberbullying Sensitivity Scale was 32.37 ± 4.78 , Kozan and Özek's (2019: 107-120) study found that the score of participants' Cyberbullying Sensitivity Scale was 34.18 ± 3.94 . Aktürk (2015: 44-61), on the other hand, found a high level of cyberbullying sensitivity for high school students, with an average of 34.95 ± 3.65 for females and 31.98 ± 5.17 for males. With these results, the study findings support the literature.

In the study, no significant difference was observed in the internet addiction levels for participants based on their socioeconomic status. Following this, it can be argued that the socioeconomic status alone cannot be a determining factor on internet addiction levels. In a study conducted with high school and



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college students, it was determined that there was no statistically significant difference between Young's Internet Addiction Test mean scores and monthly income of participants (Akboğa and Gürkan 2019: 443-465). The study conducted by Ertekin et al. (2016:72-76) deduced that the level of internet addiction was observed to be significantly higher in children of families with high-income levels than children of families with low-income levels. In another study, it was found that students with moderate socioeconomic status have higher Young's Internet Addiction Test mean scores than individuals with a better or worse income than average, and the difference between these groups was significant (Fariz and Bulut, 2019: 1977-1990). The reason for the difference between the results of these studies may lead to the conclusion that the perception of socioeconomic status or the income level may vary across participants with regard to their living conditions.

In the study, internet addiction levels of female students and those who spend more than four hours on the internet on a daily basis were found to be higher than male students and those who spend less time on the internet. In the Turkish culture, as in many cultures, boys spend more time outdoors and participate in sports activities, while girls spend most of their time at home (Zorbaz and Dost, 2014: 298-310). This situation may cause girls to

spend more time on the internet, and consequently, develop internet addiction. In a study conducted on this subject, it was found that the participants' mean score for internet addiction did not differ based on gender. In the same study, it was determined that individuals who spend more than four hours on the internet in a day have higher levels of internet addiction compared to individuals who spend less time (Yılmazsoy and Kahraman, 2017: 9-29). In another study conducted by Sevinç and Taş (2020: 527-536), male students were found to have significantly higher levels of internet addiction than female students, yet Zhao et al. (2017: 30-38) argued the opposite. It can be said that the reason for the emergence of these gender-related inconsistencies in internet addiction levels of high school students may be caused by the differences in gender roles in the societies where studies were conducted. In addition, it is thought that prolonged time spent on the internet on a daily basis poses a risk for developing internet addiction (Yüksel et al., 2020: 19-28).

In the study, no significant difference was found in cyberbullying sensitivity levels of participants for variables of grade-level education, daily time spent on the internet, and status of being cyberbullied. The results of the study conducted by Gezgin and Çuhadar (Gezgin and Çuhadar, 2012: 93-104) are similar to these results. In another study, no sig-



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nificant difference was found in cyberbullying sensitivity levels for variables of average daily internet use duration and status of being cyberbullied (Dikmen and Çağlar 2017: 261-277). Consequent of the results of this study, the reason why there is no significant difference in cyberbullying levels of students may be explained by the fact that there are similar age groups at different grade levels and students who are exposed to cyberbullying could not notice this situation.

As a result of the research, the sensitivity levels of male students regarding cyberbullying are significantly higher than female students. In general, men showing more cyberbullying behaviors (Barlett and Coyne, 2014: 474-488; Öztürk, 2019: 76-90) may have caused them to be more cautious against cyber threats in this study. In a study conducted with high school students, it was found that female students have a higher level of cyberbullying sensitivity than male students (Kılınç and Gündüz, 2017: 76-90). Similar results were obtained in other studies in the literature (Dikmen and Çağlar, 2017: 261-277; Nartgun et al., 2016: 1-8). Different findings in the literature may be due to the fact that the cyberbullying sensitivity is more about family restriction of internet use and frequently used social media sites rather than gender variable.

In the study, students who use mobile phones compared to students who do not use mobile

phones and students who have family restrictions on internet use than students without restrictions have higher and significant levels of cyberbullying sensitivity. In a study conducted by Bridge and Duman (Bridge and Duman, 2019: 158-165), students whose internet access were controlled and those who had personal mobile phones were the ones with higher cyberbullying sensitivity and the difference between the mean scores on the scale was statistically significant compared to those who did not have family restriction on internet use or owned personal mobile phones. In other studies, no significant difference was observed between participants' levels of cyberbullying sensitivity and means used to access the internet (Kozan and Özek, 2019: 107-120; Orhan et al., 2017: 27-41). One of the most important factors affecting the cyberbullying sensitivity level of an individual is the purpose of using the technology, regardless of the means used to access the internet. While cyber sensitivity is expected to be high in the use of the internet for purposes such as education and obtaining information, the sensitivity is expected to be low when the internet is used for purposes such as playing games, entertainment, and finding friends (Süslü and Oktay, 2018: 1877-1895).

CONCLUSION

The internet addiction level of participants was found to be low, while the cyberbullying



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sensitivity level was found to be high. In addition, statistical differences were observed between the means of Young's Internet Addiction Test and Cyberbullying Sensitivity Scale regarding some introductory features of students. In this context, sensitivity for cyberbullying in adolescents who can easily adapt to new technologies can be witnessed as an important step in reducing cyberbullying and preventing possible victims who might be exposed to cyberbullying behaviors. Therefore, organizing training programs and providing consultancy services to students as well as their parents about internet addiction and cyber sensitivity at schools will increase social awareness on the subject.

The first limitation of the study is that the research is conducted in one particular region, which limits the generalization of results. The second limitation is that students may have tended to underestimate or exaggerate events that happened in the cyber environment while answering questions.

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