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İNTERNETİN GETİRDİĞİ BİR KOMPLİKASYON SİBER ZORBALIK: HEMŞİRELİK GRUBU ÖRNEĞİ

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ÖZET

Bu araştırmanın amacı hemşirelik öğrencilerinde siber zorbalık, siber mağduriyet, siber zorbalığa ilişkin duyarlılık ve bunları etkileyen değişkenleri saptamaktır. Örneklemi, Türkiye'deki bir üniversitenin hemşirelik bölümünde eğitim alan ve çalışmaya katılmayı gönüllü olarak kabul eden toplam 254 öğrenci oluşturmuştur. Araştırma tanımlayıcı kesitsel araştırma desenine uygun olarak gerçekleştirilmiştir. Veriler tanıtıcı özellikler formu, Siber Zorbalık ve Mağduriyet Ölçeği (SZÖ ve SMÖ), Siber Zorbalık Envanteri (SZE-SZÖ ve SZE-SMÖ) ve Siber Duyarlılık Ölçeği (SDÖ) ile toplanmıştır. Örneklemin %18,5'i siber zorbalığa maruz kaldığını; %11'si ise siber zorbalık uyguladığını belirtmiştir. Erkek öğrencilerin hem siber zorba hem de siber mağdur olma riskinin kız öğrencilere göre daha yüksek olduğu regresyon analizi ile saptanmıştır. Siber ortamlarda yaşanan mağduriyetin ve mağduriyet sayısının, siber zorbalık değişkenini pozitif yönde anlamlı bir şekilde yordadığı saptanmıştır. Erkek olmak siber zorbalık ve mağduriyeti artırırken, internette daha çok zaman geçiren ve sosyal medya, oyun ve sohbet sitelerini daha sık ziyaret eden öğrencilerin siber zorbalık yapma durumlarının daha fazla olduğu görülmüştür. Siber zorbalık davranışının oluşmasında, siber mağduriyet ve mağduriyet sayısının payı bulunmaktadır. Kız öğrencilerin ve siber zorbalık uygulamadığını belirtenlerin siber duyarlılıkları daha fazladır.

Anahtar Kelimeler: Siber, zorbalık, siber mağdur olma, duyarlılık, internet

CYBERBULLYING, A COMPLICATION BROUGHT ON BY THE INTERNET: THE CASE OF A NURSING GROUP

Abstract

Aim of this study was to determine cyberbullying, being a cyber victim, sensitivity to cyberbullying and the variables that affect them. Study sample consisted of 254 students who were studied in Nursing Department of a university in Turkey in 2018-2019 academic year and voluntarily accepted to participate to research. Descriptive and cross-sectional research design were used. Data were collected using descriptive information form, Cyberbullying and Victim Scale, Cyberbullying Inventory and Cyberbullying Sensitivity Scale. It was determined that 18.5% of sample had been subjected to and that 11% had committed cyberbullying. Regression analysis revealed that male students had a higher risk for being both perpetrators of cyberbullying and cyber victims than female students. Being a cyber victim in cyber environments and the frequency of being a victim positively and significantly predicted cyberbullying variable. While being a male increased risk of committing to cyberbullying and being a victim, it was found that students who spent more time on Internet and visited social media, game, and chat sites more often committed cyberbullying more. Being a cyber victim and its frequency had a share in the development of cyberbullying behaviors. Cyber sensitivity of female students and those who stated that they did not commit cyberbullying was higher.

Keywords: Cyber, bullying, being a victim, sensitivity, internet

1. INTRODUCTION

Today, as a result of the rapid advances in technology, the Internet is used in almost all areas of life. Some benefits of the Internet include increased communication, facilitated information sharing, and enhanced opportunities for researchers (1,2). However, the rapid spread of the Internet has also brought about some problems. Cyberbullying, which is a different form of bullying that occurs in the form of abuse of personal information or exposure to inappropriate content, is one of these problems (1,3,4). Cyberbullying is a type of deliberate, repeated, and hostile behavior intended by an individual or group to harass others using communication technologies and is particularly common in young people who use the Internet most intensively (1,5). Young people spend too much time on the Internet, they can hide their identities, and there are almost no control mechanisms in the Internet environment, all of which brought on these problems (2,6,7). Anonymous phone calls, malicious e-mails with insults and threats sent with fake IDs, and voices, images, and texts sent with messages are among cyberbullying acts (1,6,8). It has been stated that social networks and games, in particular, carry certain risks for university students (7,9). Relationships in social networks are more superficial and less intimate, and with the increased sharing, there are some deficiencies in terms of confidentiality (10). Studies on this topic have reported that social networks facilitate cyberbullying and that social network users are exposed to cyberbullying behaviors more than Internet users, who are not social network users (11,12,13). Online games, on the other hand, allow individuals to match online, interact, chat and communicate with each other, but in some cases, it can be seen that young people prefer online games to bully other individuals (14).

When the literature is examined, it is seen that there are limited studies on cyberbullying and being a victim of cyberbullying with university students compared to other age and education groups. (15). In their study carried out with university students, Wozencroft, Campbell, Orel, Kimpton, and Leong (2015) stated that 14.5% of the students were cyber victims and that 7.9% were cyberbullies (16). Khine et al. (2020) reported that 40.8% of 277 male students and 51.1% of 135 female students at a university in Myanmar had been subjected to cyberbullying in the last 12 months (17).

In Turkey, current conditions have paved the way for problematic Internet use and especially cyberbullying due to the high population of young people, the increased use of the Internet, and unemployment (2). University students could mostly experience many physiological and psychosocial crises simultaneously due to their age and often changes in

living conditions. Nursing students can be a group of students who start their education with some negative social learning towards the profession in the first stage. It is thought that the high levels of stress and anxiety, especially early years of education may push them spending more time in cyber environments for many reasons (18, 19). This can increase the likelihood of cyberbullying or victimization. And also as a result of the problematic use of social networking sites by nursing students, interpersonal communication problems and lack of attention may occur. There are concerns that such changes may adversely affect nursing education and patient care quality. (20, 21). In this context, it is important to increase Internet security, to determine the course of the issue among young people, and to raise awareness with training and practices so that cyberbullying can be prevented. Accordingly, this study aimed to determine cyberbullying, being a cyber victim, and sensitivity to cyberbullying in nursing students and the variables that affect them.

In this study, answers to the following questions were sought.

Research questions:

• What are the characteristics of Internet use among nursing students?

• What is the status of cyberbullying and being a cyber victim, and the incidence of being a cyber victim among nursing students?

• What is the level of cyberbullying, being a cyber victim, and sensitivity to cyberbullying among nursing students?

• Is there a relationship between cyberbullying, being a cyber victim, and sensitivity to cyberbullying among nursing students?

• What are the factors affecting cyberbullying, being a cyber victim, and sensitivity to cyberbullying among nursing students?

2. MATERILAS and METHODS

Type of the study

This descriptive cross-sectional study was conducted between December 2018 and May 2019 with students who were attending at a university School of Health Nursing Department in Turkey and voluntarily accepted to participate in the study.

Setting of the study

The study was carried out with nursing students of a university of Health School Nursing Department in Turkey after the ethics committee (Date: 06.02.2019 number: GO 2019/37) and institutional permissions has been obtained.

Universe and sample of the study

The universe of the study consisted of 390 students who studied at a university Health School in Turkey in the 2018-2019 academic year. The sample, on the other hand, consisted of a total of 254 students, who were studied in the same department and voluntarily accepted to participate in the study. In the OpenEpi program, the number of samples to be reached was determined as 194 according to the sample calculation of known universe at the 95% confidence interval. In this study 65% of the universe has been reached. The inclusion criteria of the study included students who were aged 18 or older and voluntarily accepted to participate in the study.

Data collection tools

The Descriptive Information Form

This form was designed to collect data about participants' sociodemographic characteristics (age, sex), characteristics of Internet use (total years of internet use, status of having IT devices, Internet access point, time spent on the Internet daily, most frequently visited websites), and cyberbullying characteristics (status of exposure to cyberbullying, number of exposures to cyberbullying, status of committing cyberbullying). It was developed by the researchers according to the literature (8, 22, 23). After the form was prepared, opinions were taken from 3 experts and the form was given its final shape after the suggested corrections were made.

The Cyber Victim and Bullying Scale (CVBS)

The Cyber Victim and Bullying Scale was developed by Cetin, Yaman, and Peker (2011), (24). It consists of two parallel forms that measure cyberbullying situations and cyberbullying experiences. The form consists of 22 questions separately. The scores that can be obtained from the scale ranges between 22 and 110. Participants respond to the questions by marking the "I did" option to show their cyberbullying experiences and the "It was done to me" option to show their experiences of being subjected to cyberbullying. The scale has a 5-point Likert-type structure. Increased scores on the cyber victim subscale indicate increased exposure

to cyberbullying, and increased scores on the cyberbullying subscale indicate increased cyberbullying behaviors. Getting a high score on the Cyber Victim Scale indicates a high level of exposure to cyberbullying, and a high score from the Cyberbullying Scale indicates a high level of cyberbullying behaviors (24). In this study, Cronbach's alpha coefficients were found as 90 for the cyberbullying subscale of the CVBS and 94 for the cyber victim subscale. To carry out the study, the permission of the scale owners was obtained via mail.

The Cyberbullying Sensitivity Scale (CBSS)

The cyberbullying sensitivity scale was developed by Tanrıkulu, Kınay, and Arıcak (2013), (25). It consists of 13 items and a single factor. The items on the scale are scored with "no = 1", "sometimes = 2", and "yes = 3". High scores obtained from the scale indicate high sensitivity to cyberbullying. Cronbach's alpha coefficient was reported as 0.836 (25). In this study Cronbach's alpha coefficient was found as 0.78. The permission of the scale owners was obtained via mail.

The Cyberbullying Inventory (CBI)

The Cyberbullying Inventory Revised for University Students is a version of the Revised Cyber Bullying Inventory (26) for university students (27). The inventory, which consists of 12 items in total, measures participants' experiences of cyberbullying and exposure to cyberbullying in two parts. The first part measures cyberbullying and the second part measures the experiences of exposure to cyberbullying. Both parts of the inventory consist of the same items. Participants are asked to respond to the items that include cyberbullying behaviors as "I did" in the first part if they have been cyberbullying in the last six months, and "it was done to me" in the second part if they have been subjected to cyberbullying in the last six months. The items on the Cyberbullying Inventory are responded with a four-point scale (1 = never, 2 = once, 3 = two or three times, 4 = more than three times). Higher scores on the inventory indicate more frequent cyberbullying behaviors or exposure to cyberbullying more often. In the original study, the internal consistency coefficient was found 0.80 for the cyberbullying part of the inventory and 0.73 for the cyber victim section (27). In this study, the internal consistency coefficient was found as 0.81 for the cyberbullying part of the inventory and 0.78 for the cyber victim section.

Data Analysis

The SPSS 22 statistical software package was used to analyze the data. Descriptive data, characteristics of Internet use, and cyberbullying and beng a victim were presented as counts, percentage distributions, and frequencies. Scores obtained by the participants in the sample from the Cyberbullying and Victim Scale, Cyberbullying Inventory, and Cyberbullying Sensitivity Scale were presented as mean scores and standard deviations. Since the mean scores of the scales did not show a normal distribution, the analysis of variance between the two groups was done using the Man-Whitney U test, and the analysis of variance between three or more groups was conducted with the Kruskal Wallis analysis of variance. The correlations between the number of exposures to cyberbullying, he cyberbullying sensitivity scale, the cyberbullying and victim scale, and the cyberbullying inventory were analyzed using correlation analysis. The level by which being a cyber victim and the number of being a cyber victim predicted cyberbullying was determined by simple linear regression, while correlations between sex and cyberbullying and being a cyber victim were demonstrated by logistic regression analysis.

Limitations of the study

In the study, the bully and victim status of university students and the factors affecting them were measured using scales in a single session. This made up the first limitation of the study. A research method collecting data in multiple sessions and using more than one measurement method may make more contributions.

The variables analyzed in relation to cyberbullying and being a victim within the scope of the study show limitations. It is recommended to investigate the relationship of different factors in the life of university students and the wide range of variables in the literature (online social activities, and the like) with cyberbullying and being a cyber victim. This made up the second limitation of the study.

Another limitation of the study is that it was conducted in a single center. Especially, the inclusion of nursing students from universities in different regions will enrich the research findings.

3. RESULTS

The socio-demographic, Internet use, and cyberbullying characteristics of nursing students are shown in Table 1. As seen in the table, the mean age of the students in the study was 20.66 ± 1.75, and 66.5% of them were female. All students were found to have been using the Internet for an average of 7.96 ± 2.92 years, with minimum and maximum duration of use being 2 and 20 years, respectively. Regarding the IT devices, 39% of the students only had a smartphone, 37.8% had both a computer and a smartphone, and 23.2% had a computer, a smartphone, and a tablet. While the majority of the sample (51.2%) stated they accessed the Internet only through their mobile phones, 29.1% of them stated the access point as "home + school + mobile phone". While 50.4% of the sample stated they spent "3-4 hours a day" on the Internet, this was followed by 27.6% of the participants who spent "5-6 hours a day" online. While the most frequently visited web sites were "social media + homework + news + chat" (24.8%) and "social media + news + chat + game" (22.8%), those who reported them as "social media + homework + news + chat + game" made up 21.7% of the sample (Table 1).

It was found that 18.5% of the sample were victims of cyberbullying and that 11% stated they committed cyberbullying. The mean number of students' exposure to cyberbullying was 5.87 ± 5.63, and the minimum and the maximum number of being a victim of cyberbullying were one and fifteen, respectively. Also, 36 of the 47 students who were victims of cyberbullying were female students, and 18 of 28 students who committed cyberbullying were male (Table 1).

The correlations between the number of exposure to cyberbullying among nursing students, the cyberbullying sensitivity scale (CBSS), the cyberbullying and victim scale (CBS and CVS), and the cyberbullying inventory (CBI-CBS and CBI-CVS) are shown in Table 2. Pearson correlation analysis was used. Accordingly, it was observed that there were statistically significant positive correlations between the number of exposure to cyberbullying and the CBS (r=,466 p<0,01), CBI-CBS (r=,445 p<0,01) and CBI-CVS (r=,380 p<0,01) score. Significant negative correlations were found between CBSS, CBS (r=-,193 p<0,01) and CVS (r=-,171 p<0,01) score. There were also statistically significant positive correlations between the CBI-CBS and the CBI-CVS (r =, 657 p <0,001), CVS (r= ,368 p<0,001) and CBS (r= ,540 p<0,001) score. Statistically significant positive correlations were found between the CBI-CVS, CBS (r= ,479 p< 0,001) and the CVS score (r= ,559 p< 0,001). Also there were statistically significant

positive correlations were found between the CBS and the CVS score (r = ,556, p <0,001) (Table 2).

The comparison of the nursing students' scores from the cyberbullying sensitivity scale, cyberbullying and victim scale, and cyberbullying inventory according to their individual, Internet use, and cyberbullying characteristics is given in Table 3. Accordingly, there was a significant difference between CBSS (p =, 000), CBS (p =, 000), CVS (p =, 001), CBI-CBS (p =, 000), and CBI-CVS scores (p =, 000) by sex. The CBSS scores of female students were higher than those of male students, and male students' CBS, CVS, CBI-CBS, and CBI-CVS scores were higher than those of female students. Regarding the time spent on the Internet, only the CBI-CBS score (p =, 048) was found to be significantly different. The student group who spent seven hours or more on the Internet had the highest CBI-CBS scores, which was followed by the group spending five to six hours on the Internet. There was a significant difference between the most frequently visited websites in terms of the CBI-CBS (p=,018) scores. The CBI-CBS score of those who marked the "social media + game", "social media + chat", and "all" options were higher. Significant differences were found between the CBI-CVS (p =,013) and CVS scores (p = ,005) in terms of the status of exposure to cyberbullying and between the CBS (p = ,001), CVS (p = ,002), CBI-CBS (p = ,000), and CBI-CVS scores (p = ,000) in terms of the status of committing cyberbullying. It was observed that the CBI-CVS and CVS scores of those who stated that they were subjected to cyberbullying were higher, but that those who stated that they committed cyberbullying had higher CBI-CBS, CBI-CVS, and CBS and CVS scores (Table 3). Since there was no significant difference between other variables (school year, status of possessing IT devices, Internet access point) in terms of bullying, being a victim, and the sensitivity scale used in the study, these findings were not included in Table 3.

The examination of the R^2 values of cyberbullying variable indicated that according to the CBS, the variance in cyberbullying was explained as follows: 31% by the CVS cyber victim variable, 14% by the CBI-CVS, and 22% by the number of exposure to cyberbullying. Similarly, according to CBI-CBS, the variance in cyberbullying was explained as follows: 14% by CVS cyber victim variable, 43% by CBI-CVS, and 20% by the number of exposure to cyberbullying (Table 4). According to the F values in Table 4, it can be seen that being a cyber victim and the number of being subjected to cyberbullying are significant predictors of cyber bullying (F=112,577, p< 0,000; F=42,103, p<0, 000; F=12,512, p< 0,01; F=39,408, p<0,000; F=191,803, p<0,000; F=11,109, p< 0,01). In other words, being a cyber victim and the number

of being subjected to cyberbullying significantly and positively predict the cyberbullying variable (Table 4).

Logistic regression analysis was conducted to evaluate the cyberbully and cyber victim status in nursing students by gender. Accordingly, the risk of both cyberbullying and cyber-victimization of male students is higher than that of female students. A male student has a 0,086 times higher risk for cyberbullying compared to a female student based on CBS and a male student has 0,070 times higher risk for cyberbullying compared to a female student based on CBI-CBS. When evaluated in terms of being a cyber victim, a male student has a 0,061 times higher risk for being a cyber victim compared to a female student based on CVS and a male student has a 0,080 times higher risk for being a cyber victim compared to a female student based on CBI CVS. (Table 5).

4. DISCUSSION

Although there are not many studies on the status of cyberbullying among university students, it is stated in the current literature that the rates of being a cyberbully and victim vary according to gender (28, 29, 30, 31). In this study, 18.5% of the sample was subjected to cyberbullying, and 11% of them committed cyberbullying. While 36 of 47 students who were exposed to cyberbullying were females (76.6%), 18 of 28 students who committed cyberbullying were males (64.3%). In this study, it was found that the rate of being a cyber victim in girls and being a cyberbully in boys was higher (Table 1). In their study on 610 university students, Dursun, Gokce, and Aytac (2020) stated that 41.8% of the students were exposed to cyberbullying at least once in the last six months and that 46.2% of males and 39.8% of females were subjected to cyberbullying. They stated that this finding was probably because girls may have preferred to hide the fact that they became victims (32). In a study conducted with 318 students aged between 13 and 18 in Ireland, it was reported that 31 of the participants had been subjected to cyberbullying and that 29 of them were boys and 16 were girls (33). Here, it is possible to say that the different rates in various studies stem from the inadequacy of expressing being a cyber victim in boys and particularly girls due to social and family structure, humiliation and ridicule in the presence of friends, not being welcomed, and most importantly, looking weak and helpless.

The examination of the difference between bullying and victim scales used in this study indicated that the CBS, CVS, CBI CBS and CBI CVS scores of male students were significantly higher than those of female students and that the CBSS scores of female students were

significantly higher than those of male students. (Table 3) Accordingly, it is possible to say that girls are in a better position than boys in terms of sensitivity to cyberbullying, while boys are more likely to commit cyberbullying and be cyber victims than girls. Balaban, Ergun Basak and Akca Basturk (2015) stated that there was no significant difference between students' scores for exposure to cyberbullying according to gender, but that the cyberbullying scores of male students were significantly higher than those of the girls (31). On the contrary, Eroglu, Aktepe, Akbaba, Isık, and Ozkorumak (2015) stated that cyberbullying scores differed in terms of gender and that the cyberbullying mean scores of girls were higher than those of boys (14). Dalmac, Polat, and Bayraktar (2016) stated that there was a significant difference between the gender of students and their status of being a cyber victim in favor of male students (34). Tastekin and Bayhan (2018) stated that there was a statistically significant difference between the genders in terms of the total cyberbullying and victim scores and that males committed cyberbullying and became cyber victims more compared to females (35).

In this research, the scores of the students for being a bully and victim that differed according to gender were also analyzed with regression analysis, and it is found that the risk of both cyberbullying and cyber-victimization of male students is higher than that of female students. Accordingly, in this study, it can be said that male students have a higher risk for being a cyberbully and a cyber victim compared to female students. Being a male student is a factor that increases the likelihood of being both a cyberbully and a victim. Baldry, Farrington, and Sorrentino (2016) stated that male students were 3.55 times more likely to be a cyberbully than female students, and there was no significant difference between male and female students in terms of being a cyber victim (36). Aboujaoude, Savage, Starcevic, and Salame (2015) stated in their meta-analysis that girls were at higher risk for cyberbullying and that boys were at higher risk for being a cyber victim (29). Both in this research and the literature, the diversity of being a cyberbully or a victim among male and female students can be explained by many variables; for example, males see bullying as a manifestation of bravery, strength, and emphasis on masculinity; the Internet use of females is controlled more than boys; females are more prone to relational bullying behaviors, such as gossiping or spreading rumors, than boys; females try to compensate for the pressure on them by cyberbullying; and females behave in a daring manner because online environment allows hiding the identity (7, 29, 31).

In this study, it was determined that there was a significant difference only between the CBI-CBS scores according to the time spent on the Internet. The first group who had the highest CBI-CBS score spent seven hours or more on the Internet, while the second group included

students who spent five to six hours on the Internet (Table 3). In this case, it can be said that students who spend more time on the Internet are more prone to committing cyberbullying. This finding is consistent with the literature. Eroglu, Aktepe, Akbaba, Isık, and Ozkorumak (14) stated that there was no difference in cyberbullying scores according to the time spent on the Internet weekly, but that the mean cyberbullying scores of adolescents who surfed social networking sites for three hours or more a day were higher than adolescents who surfed social networking sites for an hour a day at most. Gungor, Tingis, and Sarol (2020) stated that there was a significant difference between the mean cyberbullying scores of prospective social studies teachers and the time they spent on the Internet and that the level of cyberbullying increased as the time spent on the Internet increased. Also, they emphasized that the cyberbullying scores of prospective teachers who spent six hours or more on the Internet were significantly higher (37). Tastekin and Bayhan (2018) stated that adolescents who had a higher frequency of Internet access and spent more time on the Internet daily had higher cyberbullying and victim scores (35).

In this study, a significant difference was found between the most frequently visited websites in terms of CBI-CBS scores. The CBI-CBS score of those who marked the "social media + game", "social media + chat", and "all" options was higher (Table 3). Accordingly, it is possible to say that students who visit websites related to social media, games, and chat are more likely to commit cyberbullying. Semerci (2017) stated that there was no statistically significant difference between the cyberbully and cyber victim status of students and the websites they visited on the Internet (38). In their study with adolescents, Eroglu, Aktepe, Akbaba, Isık and Ozkorumak (2015) stated that using the Internet mostly to play online games significantly predicted cyberbullying and being a victim (14). Unver and Koc (2017) stated that the total cyberbullying score of students who used the Internet for doing homework was significantly lower than those who followed social media sites (39). As can be seen in this study findings in the light of the literature, websites, especially social media and game sites, which students visited, were an important factor affecting committing cyberbullying and being a victim in the young population.

In this study, students who stated that they were exposed to cyberbullying had higher CBI-CVS and CVS scores, while those who stated that they committed cyberbullying had higher CBI-CBS, CBI-CVS, and CBS and CVS scores. Also, students who stated that they did not commit cyberbullying were found to have higher CBSS scores (Table 3). It was determined that all of the score differences were statistically significant. Significantly higher scores of those

who stated that they were cyber victims from the cyber victim scale and those who stated that they did not commit cyberbullying from the cyber sensitivity scale supported these research findings. Significantly higher cyberbullying and victim scores of the group that stated they committed cyberbullying, though surprised us, were consistent with the literature. It has been shown that bullies can turn into victims and victims can turn into bullies in time especially in the electronic platform (25). Individuals exposed to negative behaviors by cyberbullies start to have problems in showing positive social behaviors and start showing cyberbullying behaviors over time (36). In the literature, the rates reported for both being a cyber victim and a bully are considerably high (14, 37, 38). Serin (2012) reported that students who had been a cyber victim before exhibited cyberbullying behaviors more frequently and easily than those who had never been a cyber victim (40).

According to the results of the correlation in this research, as the number of students' exposure to cyberbullying increased, the cyberbullying scale scores increased, as well. In addition, as the cyberbullying scale scores increased, the cyber victim scale scores increased, too. Conversely, as exposure to cyberbullying increased, cyberbullying scale scores also increased. On the other hand, it was found that as cyber sensitivity increased, committing cyberbullying and exposure to cyberbullying decreased (Table 2). Here, as Aboujaoude, Savage, Starcevic, and Salame, 2015, Serin (2012) and Summak, 2019 stated, it is possible to say that cyberbullying and being a victim were intermingled and even went together (29, 40, 41). Kucukkaya, Sut, and Aslan (2019) stated that there was a statistically significant and positive relationship between "cyberbullying" and "being a cyber victim" among nursing students (42). Bayram and Ozkamalı (2019) stated in their study on high school students that there was a positive, strong, and significant correlation between cyberbullying and being a victim (43). According to the simple linear regression analysis results in this research, being a cyber victim and the number of exposure to cyberbullying positively and significantly predicted the cyberbullying variable.

It was determined that the variance in cyberbullying scores obtained with two different cyberbullying scales (CBS, CBI-CBS) was explained at different percentages by being a cyber victim and the frequency of exposure to cyberbullying (CBS: CVS-31%; CBS-CVS-14%, frequency of exposure to cyberbullying-22%; CBI-CVS: CVS-14%; CBI-CVS-43%; frequency of exposure to cyberbullying -20%) (Table 4). These results show the share of being a victim in the occurrence of bullying behavior. Accordingly, it is understood that cyberbullying and being a victim should not be considered independently from each other. Violent behavior is a

learned behavior. Therefore, the probability of cyberbullying increases for someone who has experienced cyber victimization. Since the person who is a cyber victim has been harmed before, he/she may be inclined to transfer this damage to someone else. If the personality pattern with other social variables is suitable for cyberbullying, it can be seen that those who exposed to cybervictimization, experience cyberbullying behavior. In other words, it can be said that young people who engage in cyberbullying are also victims of cyberbullying. According to the theory developed by (2018) in explaining cyberbullying, they evaluated past cyber-victimization as an provocative force for cyberbullying (45). In their study with 4000 adolescents living in Korea in 2017, according to the logistic regression analysis results, Lee and Shin stated that being a cyber victim strongly increased the likelihood of being a cyberbully and that offline bullying experiences contributed to an increase in the likelihood of being a cyberbully (41). Altan and Eldeleklioglu (2019) stated that being a cyber victim significantly predicted cyberbullying along with several other variables in high school students and that the variables of being a cyber victim and interpersonal relationships were variables that predicted cyberbullying most strongly (46).

5. CONCLUSION AND RECOMMENDATIONS

In this study, significant inter and intra-correlations were found between sex and cyberbullying and being a cyber victim, between cyberbullying and time spent on the Internet and most visited websites, and cyberbullying and being a victim. While being a male increased the likelihood of cyberbullying and being a victim, it was observed that students who spent more time on the Internet and visited social media, game, and chat sites more often committed cyberbullying more. Being a cyber victim and its frequency had a share in the formation of cyberbullying behaviors. Besides, the cyber sensitivity of female students and those who stated that they did not commit cyberbullying was higher.

It is thought that this study will guide the literature, especially studies in which interventions are planned, in that it includes university students from the first to the last year and shows the point where differences in the relationships, which was determined by conducting regression analyses, stem from.

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Conflicts of Interest

All authors have contributed significantly and all authors are in agreement with the content of the manuscript. Authors declare no financial support or relationships that lead to a conflict of interest.

Ethics of the study

Written institutional permissions from a university in Turkey Non-Invasive Clinical Research Ethics Committee (Date: 06.02.2019, issue: GO 2019/37) and from the same university's health school were obtained to conduct the study. The permission of the authors of the scales was obtained via e-mail. During the data collection stage, the topic, purpose, and benefits of the research were explained to the students included in the study, and an informed consent form was obtained from the students who voluntarily accepted to participate in the study. While collecting the research data, the students were kindly asked to carefully fill out the descriptive information form, The Cyber Victim and Bullying Scale, The Cyberbullying Sensitivity Scale and The Cyberbullying Inventory. The research was conducted under the 2008 Declaration of Helsinki principles as it involves human participants. Also, publication ethics were followed in the research.

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Tables

Table 1. Socio-demographic, Internet use, and cyberbullying characteristics of nursing students (n = 254)

					Mean ± SD	Min.-max.
Age (year)					20,66 ± 1,75	17-31
Mean Internet use time (year)					7,96 ± 2,92	2-20
Mean number of being a cyber victim					5,87 ± 5,63	1-15
		n	**%**		**n**	**%**
Status of exposure to cyberbullying	Yes	47	18,5	Female	36	76,6
				Male	11	23,4
	No	207	81,5			
Status of being a perpetrator of cyberbullying	Yes	28	11	Female	10	35,7
				Male	18	64,3
	No	226	89			
School year	1st year				61	24
	2nd year				65	25,6
	3rd year				63	24,8
	4th year				65	25,6
Sex	Female				169	66,5
	Male				85	33,5
Status of having IT devices	Computer + mobile phone				96	37,8
	Mobile phone				99	39
	Computer + mobile phone + tablet				59	23,2
Internet access point	Home				50	19,7
	Mobile phone				130	51,2
	Home + school + mobile phone				74	29,1
Time spent on the Internet (hours)	0-2				33	13
	3-4				128	50,4
	5-6				70	27,6
	≥7				23	9,1
The most frequently visited websites	Social media + chat				39	15,4
	Social media + game				39	15,4
	Social media + homework + news + chat				63	24,8
	Social media + news + chat + game				58	22,8
	All				55	21,7

Table 2. Correlations between nursing students' characteristics of cyberbullying and the cyberbullying sensitivity scale, cyberbullying and victim scale, and cyberbullying inventory (n = 254)

	Number of exposure to CB	**CBSS**	**CBI-CBS**	**CBI-CVS**	**CBS**	**CVS**
Number of exposure to CB	-	,053	**,445****	**,380****	**,466****	,268
CBSS	,053	-	-,064	-,009	**-,193****	**-,171****
CBI-CBS	**,445****	-,064	-	,657***	**,540*****	**,368****
CBI-CVS	**,380****	-,009	**,657*****	-	**,479*****	**,559*****
CBS	**,466****	**-,193****	**,540*****	,479***	-	,556***
CVS	,268	**-,171****	**,368*****	,559***	**,556*****	-

Not: CB= Cyberbullying, CBSS = Cyberbullying Sensitivity Scale, CBI-CBS = Cyber Bullying Inventory-Cyberbullying Scale, CBI-CVS = Cyber Bullying Inventory-Cyber Victim Scale
Pearson correlation analysis was used.
* p<0,001*** , p<0,01**, p<0,05*

Table 3. Comparison of the nursing students scores from the cyberbullying sensitivity scale, the cyberbullying and victim scale, and the cyberbullying inventory according to their personal, Internet use, and cyberbullying characteristics (n = 254)

		CBSS		CBI-CBS		CBI-CVS		CBS		CVS	
		X ± SD	**Significance**	**X ± SD**	**Significance**	**X ± SD**	**Significance**	**X ± SD**	**Significance**	**X ± SD**	**Significance**
Sex	Female (n=169)	33,60±4,35	t= 5,203	14,04±4,00	t= 3,801	15,07±3,95	t= 4,042	26,27±5,74	t= 4,185	27,98±4,49	t= 3,518
	Male (n=85)	30,57±4,44	**p= ,000**	16,37±3,65	**p= ,000**	17,63±4,07	**p= ,000**	30,96±5,13	**p= ,000**	32,97±6,96	**p= ,001**
Time spent on the Internet (hour)	0-2 (n=33)	32,09±4,73		13,63±2,98		15,15±3,92		28,06±4,22		31,36±5,07	
	3-4 (n=128)	32,59±4,75	F= ,325	14,50±4,49	F= 2,678	15,69±3,09	F= ,963	26,81±4,97	F= 1,679	28,62±4,00	F= ,896
	5-6 (n=70)	32,95±4,55	p= ,807	15,25±2,33	**p= ,048**	16,34±4,83	p= ,411	28,67±5,79	p= ,172	30,13±5,18	p= ,444
	≥7 (n=23)	32,21±3,84		16,95±3,59		17,08±4,39		30,73±5,35		31,39±5,05	
The most frequently visited websites	social media + chat (n=39)	33,10±5,05		15,00±4,46		16,28±4,74		28,23±4,26		31,51±6,86	
	social media + game (n=39)	32,07±4,73		15,51±4,73		16,43±4,81		29,79±4,19		31,25±5,25	
	Social media + homework + news + chat (n=63)	32,37±4,73	F= ,348	13,17±2,10	F= 3,048	14,95±3,87	F= 1,722	25,65±5,71	F= 1,867	28,01±4,52	F= 1,375
	Social media + news + chat + game (n=58)	32,51±4,40	p= ,845	14,93±2,67	**p= ,018**	15,34±3,97	p= ,146	27,43±4,11	p= ,117	27,96±4,21	p= ,243
	All (n=55)	32,92±4,33		15,98±3,51		17,05±3,63		29,12±5,92		30,83±5,60	
Status of exposure to CB	Yes (n=47)	32,74±4,52		15,19±3,29		17,53±4,09		29,51±5,12		33,61±5,93	t= 2,818
	No (n=207)	32,56±4,63	t= ,247	14,73±3,61	t= ,590	15,56±4,54	t= 2,503	27,46±4,03	t= 1,459	28,73±4,14	**p= ,005**
Status of being a perpetrator of CB	Yes (n=28)	30,00±5,87	t= 1,274	22,60±4,47	t=3,802	23,80±6,49	t=3,708	41,00±6,62	t= 3,489	44,60±6,10	t= 3,166
	No(n=226)	32,64±4,57	p= ,204	14,66±3,49	**p= ,000**	15,77±4,64	**p= ,000**	27,57±6,21	**p= ,001**	29,34±4,50	**p= ,002**

Not: CB= Cyberbullying; CBSS = Cyberbullying Sensitivity Scale; CBI-CBS = Cyberbullying Inventory-Cyberbullying Scale; CBI-CVS = Cyberbullying Inventory-Cyber Victim Scale.

Table 4. Results of simple linear regression analysis for the prediction of cyberbullying by being a cyber victim and the number of being subjected to cyberbullying (n = 254)

	The Cyberbullying Scale							
	ß	**Standard error**	**R**	**R^2**	**Standardized ß**	**t**	**F**	**p**
Cyber victim (CVS)	,447	,042	,556	,310	,556	10,610	112,577	,000
Cyber victim (CBI- CVS)	,852	,131	,378	,143	,378	6,489	42,103	,000
Number of being subjected to cyberbullying	,920	,260	,466	,218	,466	3,537	12,512	,001
	The Cyberbullying Inventory - The Cyberbullying Scale							
Cyber victim (CVS)	,161	,026	,368	,136	,368	6,278	39,408	,000
Cyber victim (CBI-CVS)	,634	,046	,657	,432	,657	13,849	191,803	,000
Number of being subjected to cyberbullying	,418	,125	,445	,198	,445	3,333	11,109	,002

Not: CVS= Cyber Victim Scale, CBI-CVS= Cyberbullying Inventory- Cyber Victim Scale

Table 5. Correlations between sex and cyberbullying and being a cyber victim in nursing students (Logistic Regression Analysis) (n = 254)

Variables							**95%Cl**	
	B	**SE**	**Wald**	**Df**	**Sig**	**Exp (B)**	**Lower**	**Upper**
				The Cyberbullying Scale				
Sex	,065	,018	13,071	1	,000	1,067	1,030	1,105
-2Log likelihood	307,606							
CoxandSnell R Square	,062							
Nagelkerke R Square	,086							
				The Cyberbullying Inventory - The Cyberbullying Scale				
Sex	,102	,030	11,635	1	,001	1,108	1,045	1,175
-2Log likelihood	310,609							
CoxandSnell R Square	,051							
Nagelkerke R Square	,070							
				The Cyberbullying Victim Scale				
Sex	,041	,012	10,939	1	,001	1,041	1,017	1,067
-2Log likelihood	310,238							
CoxandSnell R Square	,044							
Nagelkerke R Square	,061							
				The Cyberbullying Inventory - The Cyberbullying Victim Scale				
Sex	,106	,029	13,597	1	,000	1,112	1,051	1,177
-2Log likelihood	308,756							
CoxandSnell R Square	,058							
Nagelkerke R Square	,080							