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An Analysis of the Attitudes of Secondary School Students on Cyber Bullying Behaviors

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Abstract: The utilization of ICT in education has led to the widespread use of these technologies by students. Accordingly, traditional peer bullying has shifted from the school playgrounds to the virtual world and thus created an updated form of bullying called cyber bullying. The purpose of this study is to look into Cyber Bullying Behaviors of Secondary School Students in Northern Cyprus. The randomly selected sample consisted of a total 1206 students attending junior high school, high school and vocational high schools in the 2018-2019 academic year. A descriptive research method of the general survey model was applied in this research. The students were given a questionnaire form that included a 'Cyber bullying Scale' and a 'Personal Information Form' during the data collection process. The results determined that the students of secondary and vocational secondary education engaged in low level cyber bullying behaviors. It is believed that the results obtained will contribute to the prevention of cyber bullying behaviors and to future studies towards encouraging a boost in healthy internet usage.

Keywords: *cyber bullying, students, secondary school, education, Northern Cyprus.*

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Introduction

In the present era of technology, it is evident that Information and Communication Technologies (ICT) are widely used especially among young people. Both technology and bullying and cyberbullying cause huge problems among young people in the world. (Herrera-López et al., 2018). It's not right not to see these facts. This fact has led to an increase in cases of cyberbullying among students. It is a type of deliberate violence that cannot easily defend itself if the definition of traditional bullying is expressed, and which occurs repeatedly and over time against a bully (Olweus, 2013). This reality has led to the increase in the incidences of cyber bullying among students. A definition for cyberbullying can be given as follows; It is the deliberate and repeated harm of another person by one person or persons using computers, mobile phones and other electronic devices (Patchin & Hinduja, 2006). Eroğlu (2011) has established that cyber bullying behaviors have a negative impact on both the bullies and their victims with respect to their social interactions, their psychological states of mind and in their educational progress. Slonje et al. (2013) stated that cyberbullying is a tyranny through digital or electronic technologies. Many studies have expressed the huge negative consequences of both traditional bullying and cyber-bullying (Beckman et al., 2012; Campbell et al., 2012; Schneider et al., 2012).

Cyberbullying has emerged in the last 20 years due to the advancement and spread of technology. The concept of cyberbullying was first used by Canadian educator Bill Belsey (2007). Cyberbullying and victimization is a concept defined in different ways. Cyberbullying is also defined as embarrassing, harassing, intimidating and threatening the targeted individuals by using information technologies (Erden, 2017; Smith, 2012). When we look at the characteristics of cyberbullying, it is seen that it has characteristics such as persistence, repetition, harming, using computers, mobile phones and other electronic devices (Eroğlu et al., 2011; Tezer, 2017). It was stated that young people started to use the internet incorrectly and as a result of this misuse, deterioration in social relations, low school success, depression, and stress, mental health deterioration occurred. When

the studies on cyberbullying are examined, it is seen that the bullying behavior is carried out using digital technologies, it is repetitive, and it has common features such as the consequences that can affect the health and psychology of the victim in different dimensions (Semerci, 2017).

In addition to facilitating daily life, communication tools such as the Internet, mobile phone, and text message service turn into tools that harm other people in the hands of malicious users. Anonymous calls, spam e-mails sent with a secret identity, voices, images and texts that contain insults and threats, emails or text messages to defame a person or group, infected e-mails, all these malicious acts it was defined under the name of cyberbullying (Aricak, 2009). Researchers have stated cyberbullying as deliberately and repeatedly harming another person or group using the internet or other digital technologies (Agaston et al., 2007; Belsey, 2007; Patchin & Hinduja, 2006; Strom & Strom, 2005; Willard, 2007).

Hence, it has been stated that cyber bullying should be recognized as a serious problem which is becoming an epidemic and prevention can only be achieved by determining the factors causing it. The types of cyber bullying are presented in figure 1 (Willard, 2007).



Figure 1. *Types of cyber bullying*

Source: (Source: Willard, 2007)

Should cyberbullying today be seen as a subcategory of general bullying? (Slonje et al., 2013) or a different type of bullying emerging in the new century? (Englander et al., 2017). There is a lot of discussion about this to answer these questions. Some researchers have stated that cyberbullying is not associated with emerging new victims, but only with the same victims who bully using new technological tools (Beltrán-Catalán et al., 2018). From this perspective, they stated that traditional bullying and cyberbullying constitute a power imbalance between bully and victim, as well as have commonalities such as behavior types or motivations (Wolke et al., 2017). The main source of cyberbullying is traditional bullying grievances (Espelage, 2014; Lazuras et al., 2017; Livingstone et al., 2011).

Willard (2007) listed the types of cyberbullying as follows; Online flaming (sending a humiliating or vulgar message directly to himself or to online groups); harassment (sending aggressive messages to the individual constantly); denigration (making rumors about the individual to harm the dignity); impersonation (sending messages that will distress the individual or make him look bad to others on behalf of that individual); Unauthorized use of someone else's information on the Internet (outing/trickery - to share their intimate secrets in a virtual environment, sending their photos and videos to others or provoking the individual to share personal information); cyberstalking (threatening or harassing the individual by using public areas such as message boxes, chat rooms) and exclusion (deliberate exclusion of the individual from the virtual environment).

Research shows that cyber victims use social media heavily, become more dependent on the internet, exhibit longer-term online skills and risky online behaviors, as well as chat more with older online friends as a result of long-term use in the online world (Dredge et al., 2013; Staksrud et al., 2013).

It is viable to classify any student who engages in any kind of cyber bullying activity as a bully. It appears that cyber bullying has become an important problem, especially in schools (Kavuket al., 2016; Tezer, 2017). A study conducted by Li (2007) found that students engaged in cyber bullying activities on school premises by means of connecting their smart phone devices to the internet. It has been determined that the most common places

that young people display cyber bullying behaviors are in schools and their surroundings. Young people of this century are totally consumed with technology and the internet and are observed to employ electronic communication as a tool for committing heinous acts such as ridicule, harassment and slander (Willard, 2007).

It is accepted that bullying is a serious trauma for students, its effects are not limited to the period of bullying, but it lasts for life and negatively affects public health (Kepenekci & Cinkir, 2006). In children exposed to peer bullying; Withdrawal problems such as psychosomatic symptoms and depression are increasing. Also, results such as increased aggression behavior, decreased coping skills, post-traumatic stress disorder and even suicidal tendency can be observed in these children (Karatas & Ozturk, 2011; Flannery et al., 2004). Children who bully other children; If left to themselves, they can continue to abuse their power over others, pose a threat to those around them, and be isolated from society and remain alone. Also, it is stated that psychological problems experienced by cyber victims also cause physiological disorders and diseases, and even lead to suicides of the victims (Horzum & Tuncay, 2014; Olweus & Breivik, 2014). In recent years, cyberbullying has manifested itself widely, especially in adolescence and pre-adolescence. Mishna et al., (2010) found that approximately 50% of the students were cyber victims and 34% were cyberbullies in their study on middle school and high school students. Akbulut et al. (2010) stated in a study they conducted that 56% of the participants were subjected to cyberbullying at least once.

Today, experts do not have a common idea of the singularity of online victimhood. From a scientific point of view, online and offline bullying has a common understanding of many risk factors, psychological consequences and frequency of victims suffering from both types of victimization (Gini et al., 2018). Studies and meta-analyses of victims of traditional bullying and cyberbullying have shown negative consequences of bullying (Beckman et al., 2013; Campbell et al., 2012; Schneider et al., 2012) and online and offline cyberbullying prevention factors. (Kowalski et al.,

2007; Zych et al., 2019; Zych et al., 2015). However, research on cyber victim profiles is still not enough.

When the EU Kids Online IV project in Europe is examined, It stands out that it aims to provide an understanding of online activities and risks. This project seems to have revised and developed children's experiences, a theoretical framework for research on children, online experiences, with a particular focus on 9-17 year olds. In addition, EU Kids Online members have launched new collaborative international projects on private issues, some of which are online use and cyberbullying (Zlamal et al., 2020). In their research, Machackova and Görzig (2015) stated that some young people are more vulnerable to online and offline bullying than others. Therefore, policy initiatives have added to their reports that they should focus on those most likely to be harmed. When the results of the research were examined, it was seen that girls, young children, and those with psychological and social problems were more at risk, thus suggesting that youth should increase their digital skills, coping and resilience, address socio-demographic groups differently, and offer online opportunities (Görzig and Machackova, 2015).

The increase in aggressive behaviors during the use of communication technologies amongst students makes it essential to investigate the causes of this aggression in the virtual environment and the ways in which these behaviors can be avoided (Tuna et al., 2017). "Internet and online technologies", which students use most frequently, continue to appeal to wider masses day by day (Cicioglu, 2014; Tekakpınar & Tezer, 2020). The unrestrained use of these technologies can have several undesirable effects on the development of individuals, particularly on young people in their development stage. The certainty that the internet offers far more convenience for engaging in the act of cyber bullying than in real life is indisputable. This is mainly due to the fact that in real life people may be deemed culpable or may have to face some physical consequences for their bullying; whereas, the internet provides them a safe environment to hide their identities which results in more intense attacks (Tezer, 2017). This suggests that there is a possibility that anyone can be exposed to cyber

bullying behaviors at any given time, or become a cyber bully themselves. A review of the research carried out in the international arena shows that scientific studies on cyber bullying behaviors have notably become precedent. Regrettably, this is not the case in North Cyprus. Based on this fact, the research question this study aims to find answers to is as follows: What are the attitudes of secondary school students in North Cyprus regarding cyber bullying behaviors.

Aim

The purpose aim of this research was to investigate the attitudes of students attending schools registered to Ministry of National Education (MEB) and the Secondary Education Department and Vocational Technical Secondary Office in Northern Cyprus regarding cyber bullying behaviors in terms of their demographic variables (gender, school type, grade, school district and weekly internet access duration).

For this purpose, the following sub-objectives related to the demographic variables of the students were determined:

1. What is the level of cyberbullying behaviors of secondary school students in Northern Cyprus?

2. Are the students' attitudes towards cyber bullying behaviors significantly different with respect to the gender, school type, grade, school district and weekly internet access duration in secondary education in Northern Cyprus?

Materials and methods

In this study general survey model was used. General survey model is the screening arrangements carried out on a group, sample group or a paradigm or the entire universe in order to draw a conclusion about the universe which is composed of numerous elements (Karasar, 1995).

Population and Sample

The population of this study comprised of 18,978 students who were enrolled during the 2018-2019 academic year in schools registered to the Ministry of National Education, Ministry of General Education and Vocational Technical Secondary Education Office. The figures on the number of students constituting the population were collected based on the information obtained from the statistics books of the Ministry of National Education, Ministry of General Education and Vocational Technical Secondary Education Office. The regions of Northern Cyprus were identified as the sub-strata. The sampling was determined from these sub-strata by means of simple random sampling method. From the population mentioned above,the randomly selected sample consisted of a total 1206 students attending junior high school, high school and vocational high schools. Figure 2 provides the detail of the study's population and the sample groups which have been determined.

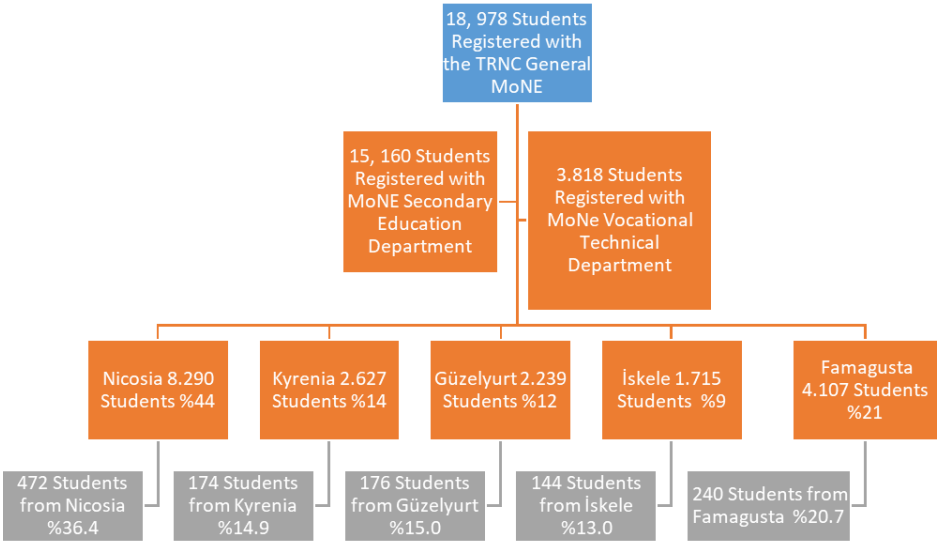


Figure 2. *The research population, sample group and regional population distribution ratios*

Source: Author own conception

The target sampling frame of the students constituting the sample group is 6%. Büyüköztürk et al., (2017) indicate that this ratio is sufficient in order to reduce the sample error and increase the sample representation of the sample for researches implementing the general screening method. Table 1 gives the demographic information of the students participating in the survey.

Table 1. *Student distribution by demographic characteristics*

Source: Author own conception

Gender	**N**	**%**
Female	608	50.4
Male	598	49.6
Grade	**N**	**%**
Grade 6	177	14.7
Grade 7	176	14.6
Grade 8	176	14.6
Grade 9	169	14
Grade 10	169	14
Grade 11	169	14
Grade 12	170	14.1
School Type	**N**	**%**
Middle School	529	43.8
High school	389	32.3
Vocational high School	288	23.9
Total	**1206**	**100**

According to Table 1, the groups of students who were analyzed according to gender, grade and school type. 529 (43.8%) of the participants were in middle school, 389 (32.3%) were in high school and 288 (23.8%) were studying in vocational high schools.

Data Collection Tool and Application

Aricak et al. (2012) "Cyber Bullying Scale" was used to collect the data for this research as it was tried to determine the level of cyberbullying behaviors of students. The construct validity of the scale was examined by exploratory factor analysis, and it was stated that the scale had a single factor structure. The internal consistency reliability coefficient of the scale was

tested with Cronbach's alpha analysis, and the consistency of the scale over time was examined with the test-retest method. The The scale represents a single factor construct containing 24 items. Cronbach alpha coefficient calculated for the whole scale is .95; test-retest reliability coefficient was specified as .70. The Cronbach alpha coefficient calculated for the whole scale in this study is .92. This result verified that the internal consistency of the cyber bullying scale was very high and reliable. In this study, the questionnaire form is comprised of 2 sections. A 'Personal Information Form' prepared by the researcher was used to get the information about the demographic variables related to participants and included questions about gender, school type, grade, school district and weekly internet access duration in secondary education in the first section. Second section contains the items of "Cyber Bullying Scale". Before the questionnaire was applied to the students, the researchers obtained the necessary permissions from their university and the Ministry of National Education.

Analysis and Interpretation of Data

The data collected during the study was uploaded on to version 23.0 "Statistical Package for Social Science" (SPSS) program and was analyzed under the supervision of an authority of this field. In this study, firstly, frequency, mean and standard deviation were calculated as descriptive statistics for variables. In demographic variables and subgroups, parametric tests (Independent t-test, Variance Analysis- ANOVA, Tukey HSD tests) were used where scores of the scale were normally distributed ($p>.05$) and nonparametric tests (Mann Whitney U and Kruskal-Wallis) were used where they were not normally distributed ($p<.05$).

Results

This section focuses on the findings obtained from the statistical analysis of quantitative data about students' Attitudes on cyber bullying behaviors and comments related to the findings.

Descriptive Analysis Results of Students' Attitudes Regarding Cyber Bullying Behaviors

The results of the descriptive analysis of the data on the bullying behaviors of the students obtained within the scope of the research are given in Table 2.

Table 2. *Descriptive analysis results of students' attitudes on cyber bullying behaviors*
Source: Author own conception

	N	Mean(M)	Sd
Cyber Bullying	1206	1.22	.425

Table 2 displays that students have low level of bullying behaviors (M=1.22, Sd=.425).

Analysis of Students' Attitudes Regarding Cyber Bullying Behaviors According to Gender Variable

The results of the analysis of the data on the bullying behaviors of the students according to the gender of the students are given in Table 3.

Table 3. *t-Test analysis of the attitudes of students on cyber bullying behaviors according to gender variable*
Source: Author own conception

	Gender	N	M	Sd	t	p
Cyber Bullying	Female	608	1.19	.369	-1.790	.002
	Male	598	1.24	.474		

Table 3 indicates that the average (M= 1.24, Sd = .474) of male students engaging in cyber bullying was significantly higher than female students' cyber bullying average (M= 1.19, Sd = .369). Male students in secondary and vocational secondary levels who took part in the study engage in cyber bullying behaviors more than their counterparts.

Analysis of Students' Attitudes Regarding Cyber Bullying Behaviors According to School Variable

Descriptive statistics and variance analysis results according to school type variable of students' attitudes on bullying behaviors are presented in Table 4 and Table 5.

Table 4. *Mean and standard deviation values in relation to school type variable on attitudes of students on cyber bullying behaviors*

Source: Author own conception

School Type	N	M	Sd
Middle School	529	1.20	0.412
High school	389	1.23	0.405
Vocational high School	288	1.22	0.472
Total	1206	1.22	0.425

Table 5. *ANOVA analysis results according to school type variance of attitudes of students on cyber bullying behaviors*

Source: Author own conception

Source of Variance	Sums of Squares	Df	Means of Squares	F	p
Between-Group	.141	2	.070		
Within-Group	217.894	1203	.181	.388	.678
Total	218.035	1205			

p<.05

The results of variance analysis (ANOVA) of students' attitudes on bullying behaviors according to school type variable yielded no significant statistical difference [F(2-1203)=.388; p=.678>.05]. However, although there was no statistical discrepancy between the variables of middle school (M=1.20, Sd=.412), high school (M=1.23, Sd=.405) and vocational high school (M=1.22, Sd=.425), it was determined that the group mean was generally low.

Analysis of Students' Attitudes Regarding Cyber Bullying Behaviors According to Grade Variable

Descriptive statistics and variance analysis results of students' attitudes on bullying behaviors according to Grade variable are given in Table 6 and Table 7.

Table 6. *Mean and standard deviation values in relation to grade variable on attitudes of students on cyber bullying behaviors*

Source: Author own conception

Grade	N	M	Sd
6	177	1.17	.329
7	176	1.21	.427
8	176	1.24	.468
9	169	1.22	.405
10	169	1.22	.452
11	169	1.26	.449
12	170	1.19	.431
Total	1206	1.22	.425

Table 7. *ANOVA results according to the grade variable related to cyber bullying behaviors of students*

Source: Author own conception

Source of Variance	Sum of Squares	df	Means of Squares	F	p
Between-Group	1.018	6	.170		
Within-Group	217.016	1199	.181	.938	.467
Total	218.035	1205			

$p<.05$

No statistically significant difference was ascertained in the results of variance analysis (ANOVA) of students' attitudes on bullying behaviors according to grade variable ($p>.05$).

Analysis of Students' Attitudes Regarding Cyber Bullying Behaviors According to School District Variable

The Kruskal-Wallis test results on students' attitudes on cyber bullying behaviors according to the school district variable are presented in Table 8.

Table 8. *Kruskal-Wallis Test for School District Variable Related to Cyber Bullying Behaviors of Students*

Source: Author own conception

School District	N	Mean Rank	df	X^2	p
Nicosia	439	569.97			
Kyrenia	180	661.12			
Famagusta	250	564.54	4	31.930	.000
Güzelyurt	181	590.10			
İskele	156	709.34			

$p<.05$

The Kruskal Wallistest test result yielded statistically significant differences between the group averages according to the school district variable ($p=.000$; $p<.05$). According to the results of the Mann Whitney test that aimed at determining the differences between the regions, it was established that the students in İskele (709.34) had higher levels of Cyber Bullying behaviors than the students in the Nicosia (569.97), Kyrenia (661.12), Famagusta (564.54) and Güzelyurt (590.10) regions.

Analysis of Students' Attitudes Regarding Cyber Bullying Behaviors According to Weekly Internet Access Duration Variable

As a demographic question, the students were asked how long they used the internet in general (playing games, listening to music, doing homework, watching movies and other purposes) in a week and the data were obtained by asking them in line with their opinions. Descriptive statistics and variance analysis results of the attitudes of students on cyber

bullying behaviors according to the weekly internet usage period variable are presented in Tables 9 and 10.

Table 9. *Mean and standard deviation values of weekly internet access duration variable related to cyber bullying behaviors*

Source: Author own conception

Weekly Internet Usage	N	M	Sd
Less Than 4 Hours	295	1.15	.248
4 to 12 Hours	376	1.13	.235
13 to 27 Hours	251	1.16	.281
More Than 28 Hours	284	1.40	.665

Table 10. *ANOVA Analysis Results According to Weekly Internet Access Duration Variable Regarding Cyber Bullying Behaviors*

Source: Author own conception

Source of Variance	Sums of Squares	df	Means of Squares	F	p
Between-Groups	15.506	3	5.169		
Within-groups	202.529	1202	.168	30.675	.000
Total	218.035	1205			

p<.05

The variance analysis (ANOVA) on the attitudes of the students regarding cyber bullying behaviors according to the Weekly Internet Access Duration variable showed statistically significant difference between the group averages [F(3-1202)=30.657; p<.05]. According to the results of the Tukey HSD test to establish which groups yielded different results, the students' whose weekly access duration to the internet was more than 28 hours (M=1.40, Sd=.665) had significantly higher levels of cyber bullying than those who accessed the internet between 13 to 27 hours (M=1.16, Sd=.281), 4 to 12 hours (M=1.13, Sd=.235) and less than 4 hours (M=1.15, Sd=.248).

Discussion and Conclusion

The result of the study determined that the students participating in the study overall had low levels of cyber bullying behaviors. However, it was observed that male students had significantly higher cyber bullying behaviors than female students. The study found that one of the main reasons for this is that the male students who are educated in schools registered to the Ministry of National Education in Northern Cyprus spend more time on the internet than girls. When examined, the literature review shows that the results obtained are consistent with similar studies. Serin (2012) stated that male students' bullying behaviors and cyber victim statuses were significantly higher than female students. Similarly et al., (2012) conducted a survey in Spain with 1431 students between the ages of 12 to 17 and it revealed that male students had higher levels of cyber bullying behaviors than their counterparts and that 44.1% had engaged in the act of cyber bullying at least once. On the contrary, in some European countries, female students are more exposed to cyberbullying. However, it has been stated that the teachers at their schools give more homework to the female students studying in these countries (Zlamal et al., 2020).

In another study, Chi et al., (2020) showed a significant increase in school-age cyberbullying, with 45.1% of students participating in the study falling victim to at least one type of online bullying in the past year. This rate is higher than some previous studies that reported 11% (Kowalski and Limber, 2007) and 21% prevalence (Patchin & Hinduja, 2010) in terms of prevalence from other previous studies. In addition, many recent systematic reviews of the prevalence of cyberbullying vary greatly in studies due to two important reasons, such as the prevalence of cyberbullying victimization, inconsistency in measuring cyberbullying, and variability over time. The first is the methods and techniques used by the researchers, and the other is the time period in the reporting process. This study used cyberbullying measurement from Patchin and Hinduja and showed that the prevalence of cyber victims can range from 4.3% to 4.6%.

The study also showed that the results did not show any significant difference according to the school type variable and that the cyber bullying behaviors were at a low level. In a study conducted in different secondary schools and on students attending different (Baker & Kavsut, 2007) found that there was no significant relationship between the school type variable and cyber bullying and victimization. However, different results have been obtained from other studies. Horzum and Ayas (2011) stated that the students who are studying in Anatolian high schools and private high schools display higher levels of engaging in cyber bullying than the students attending other high schools.

Villora et al., (2020) have all found results that support these findings. They stated that there is a negative relationship between subjective well-being and different forms of victimization. Once the acceptance of cyber-dating violence is checked, the university student aims to examine the welfare differences between cyber dating harassment and bullying moguls. The sample of the study found 1,657 university students studying in Spain, who reported low victimization of bullying and low acceptance of dating violence, and reported higher emotional, social and psychological well-being, although the relationship between bullying and well-being was poor. In the same study, there was no corral between the victimization of cyber dating abuse and the dimensions of well-being examined.

Another result obtained from the study is that besides not displaying any significant difference according to the Grade variable, the students had low levels of cyber bullying behaviors regardless of grade. Similarly, a study carried out on 336 students by Özdemir and Akar (2011) found that there wasn't any significant difference in the students' bullying behaviors according to the Grade variable. However, different results have been obtained from other studies. Firat and Ayran (2016) found that the results of the research conducted on 6,625 students showed that the students had significant differences in bullying behaviors according to the Grade variable. It was noted that the frequency of cyber bullying behaviors increased as the levels of Grades became higher. In their study Charalampous et al., (2020) students in early high school classes showed a greater change in all types of

bullying. In this study, despite a lower prevalence for high school students in all types of bullying, he stated that fluctuations in education level were more intense compared to primary school classes. On the other hand, primary school students have shown that traditional bullying has a higher negative effect on the victim. This result is also similar to other studies (Lebrun-Harris et al., 2019). In their research on Korean students in 2020, Kim et al., (2020) have identified various risk groups that transcend offline and online areas, confirming that incidents of bullying and victimization co-existed, as suggested by general and routine activity theories. In the findings of the study, he stated that it contributes to the emergence of victims of bullying for both offline and online reasons, and that special anti-bullying programs for the function of anti-social peer cohesion in virtual bullying are required by offering recommendations for prevention and interventions related to these roles. The result of the study's findings is similar to another study. In the study conducted by Toraman and Usta (2018), 2% of secondary school students stated that they were cyberbullies and that their total scores on the scale of cyberbullying were not very high. A similar study, Bolat and Korkmaz (2021), found that students in secondary school had low levels of social media addiction and social media disorders in their cyberbullying behaviors. Similar studies by Lindfors et al., (2012) and Aktepe (2013) have shown that cyberbullying behaviors are lower, especially in the early stages of puberty, but are increasing towards the middle of puberty. In addition, Bányai et al., (2017) stated that the social media addictions of adolescents were moderate. Another study conducted by Toraman and Usta (2018) concluded that the majority of students know about the concept of cyberbullying. These results support the relevant finding.

The study also concluded that bullying behaviors of students were significantly different in relation to the school district variable. It was observed that the students who were educated in schools in İskele had significantly higher cyber bullying levels than other students in the other districts (Nicosia, Kyrenia, Famagusta, Guzelyurt). It is believed that the inadequacy of social activity facilities in the region force students to search for new means of entertainment thus triggering the need to engage in cyber

bullying. When examined, the literature review shows that there haven't been any studies carried out to investigate the effect of the school district variable on cyber bullying levels.

Lastly, it was established that as the weekly access duration to the internet study increased, the increase in cyber bullying behavior levels were statistically significant. Findings consistent to this finding are present in the literature review. In a research conducted with 400 secondary school students, Peker (2015) found that cyber bullying behaviors increased as the duration of internet access increased. Similarly, in reference to the result conducted on 269 students, Aricak et al., (2008) indicated that the duration spent accessing the internet significantly factors in to the onset of cyber bullying behaviors. However, different results have been obtained from other studies. The results of a study conducted by Calisgan (2013), showed that the Weekly Internet Access Duration variable was found not to be a significant predictor of cyber bullying behaviors. Therefore, the study found that the cyber bullying behaviors displayed by students did not show any significant difference with respect to the weekly internet usage hours.

Recommendations

In light of the results obtained from the study, the following recommendations have been made;

• Seminars to increase the awareness on cyber bullying behaviors could be organized for students in secondary schools and vocational secondary schools.

• Studies could be conducted to identify students at risk of engaging in cyber bullying behaviors could be conducted. Once identified, these students can receive group guidance and individual interviews to help deal with their problem.

• Awareness activities, especially aimed at male students, could be organized aimed at increasing understanding about what stage and level of cyber bullying students are at.

• Incorporating content that emphasizes the importance of qualified and purposeful internet usage behaviors into the rudimentary computer courses in schools may help prevent cyber bullying behaviors.

• As the literature review proves that there is little data on other variables; this research, in which the demographic variables have been analyzed, may contribute to the development of new researches which analyze other variables.

• The data used in the survey was collected from students attending secondary, high school and vocational high schools. Further research on students attending primary school and universities could be carried out.

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