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A Study on Primary School Students' Being Cyber Bullies and Victims According to Gender, Grade, and Socioeconomic Status

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Abstract

One of the most important students' problems is cyber bullying that occurs by using technological devices. Research on cyber bullying is mostly based on the types of technological devices used for cyber bullying and the gender difference. Although these variables come to the forefront in studies, there is less research based on variables, such as socioeconomic status and grades. This study analysed whether the level of being the cyber bully and victim differed in terms of the "gender", "grade", and "socioeconomic status" of the primary school students. It consisted of 760 students, attending sixth, seventh, and eighth grades. The age of the participants ranged from 11 to 15 years, with a mean of 12.3 years. The results indicated a significant effect on cyber bullying and cyber victim for gender and socio-economic status, and a significant two-way interaction effect on cyber bullying and victim for gender, socio-economic status, grade and socioeconomic status. For cyber bullying and cyber victimization, no significant three-way interactions between demographic variables (gender, grade and socioeconomic status) were found.

Key words: *cyber bullying; refusal cyber bullying; rumour cyber bullying; sexual cyber bullying.*

Introduction

Bullying is one of the important problems of today's education. To prevent bullying in schools, it should be investigated as a periodic and systematic phenomenon (de Wet, 2007). The poor support from school and community, as well as an inconsistent disciplinary style that teachers use in the classroom, are perceived as the main

contributing factors to the escalating violence in the school context (Bester & du Plessis, 2010). Research has generated an awareness of many aspects of bullying, showing a distinction between its various types (Swart & Bredekamp, 2009).

As a result of rapid developments in technology, students have been using numerous communication tools (computers, internet, and mobile phones) to carry out their bullying behaviour. Therefore, cyber bullying is being observed as another type of bullying in schools today. According to Belsey (2007), cyber bullying is causing harm to others intentionally and continuously via information and communication technologies.

Since there are too many dimensions of cyber bullying in the literature, three of them are generally identified (Ayas & Horzum, 2010). These are sexual bullying, spreading rumours, and embarrassing and inserting malicious contents in cyberspace. Shariff (2008) defines cyber bullying as threatening and humiliating others or sending them sexual photos and short messages (SMS) by using technology. In this definition, sexual dimension comes to the forefront. Sexual cyber bullying is sharing SMS with sexual contents, sending or receiving naked photos via SMS, and sharing them with others. The most common situation for sexual cyber bullying refers to sending text messages with sexual contents to the other individual because of revenge after an emotional relationship has broken down between a boy and a girl in order to exercise control over him or her.

One of the other dimensions of cyber bullying is spreading rumours. Vandebosch and Van Cleemput (2008) mention telephoning or winking at someone insistently, recording on personal voice band and forwarding it to someone, spreading rumours in cyberspace, creating a website that includes humiliating comments on someone, misdirecting people about someone via e-mail, and insulting other people in chat rooms. Cyber bullying is also embarrassing and inserting malicious contents in cyberspace, individual or group bullying, via various means of communication – intentionally, repetitively, and aggressively toward people who lack self-defensive tactics (Smith et al., 2005).

Generally, traditional bullying is observed in school or around school, and both the victim and the bully must be at the same place. Moreover, there is a physical imbalance between the victim and the bully, and the bully is known (Batsche & Knoff, 1994; Olweus, 1999). But cyber bullying enables the bully to hide his or her own identity, to easily say words in cyberspace that normally he or she could not say. As it is difficult to identify the bully, it is difficult to accuse him or her of being a bully. According to Mark (2009), as many as 52% of victims do not know their cyber bullies. Dehue, Bolman and Völlink (2008) show that 34.8% of victims do not know their cyber bullies.

One of the most important characteristics of the cyber bully is that he or she not only has no fear of being caught and punished, but also he or she just sits in front of the screen and is engaged in cyber bullying. One of the negative aspects of cyber bullying is making the cyber victim frightened anonymously. Cyber bullying does not

have a limited area. According to Li (2007), students are cyber bullied not only within the school but also out of the school by peers. It was found that 30% of students are exposed to cyber bullying at school and 70% at home (Smith et al., 2006).

In Turkey, cyber bullying research is fairly recent. One research study shows that the rate of cyber bullying is nearly 28% and 30% of the participants reported being the cyber victim (Erdur-Baker & Kavşut, 2007). According to the research conducted in Istanbul, 35.7% of students displayed cyber bullying behaviours, and only 5.9% of them were victims. There were more boys who displayed either cyber bully or cyber victim behaviours than girls. When they were faced with cyber bullying, 25% of students reported telling their peers and parents about the cyber bullying incident, and 30.6% of students reported finding active solutions such as blocking the harasser (Aricak et al., 2008).

In different countries, cyber bully and cyber victim rates differ. This should be taken as a serious problem. Victims exposed to cyber bullying have psychological problems, such as lack of self-confidence, distress, disappointment, fear of school, lack of academic achievement, loneliness, anxiety, depression, and suicide (Bargh & McKenna, 2004; Campbell, 2005; Ybarra & Mitchell, 2004). Due to the study analysis, it is better understood that victims are affected negatively.

Research shows that cyber bullying is prevalent throughout the primary education (Dehue, Bolman, & Völlink, 2008; Kowalski & Limber, 2007; Williams & Guerra, 2007). The ages of cyber bullies are between nine and fourteen (Martín, 2005). Also, victimization was analysed in the sixth, seventh, and eighth grades, and an increase was found parallel with the grade (Hinduja & Patchin, 2008b).

There are also studies on cyber bullying across different variables. Research regarding the difference between cyber bullying and gender has produced conflicting results. Some studies report that girls carry out cyber bullying more often than boys (Beale & Scott, 2001; Hinduja & Patchin, 2008b; Keith & Martin, 2005; Nelson, 2003), whereas in other studies boys are typically reported to be cyber bullies and girls are cyber victims (Arıcak et al., 2008; Erdur-Baker & Kavşut, 2007; Li, 2006; Li, 2007). Some studies determine no significant difference between gender and cyber bullying (Hinduja & Patchin, 2008a; Patchin & Hinduja, 2006; Slonje & Smith, 2008). Because of different results, it is necessary to do more research to comment on the issue of gender and cyber bullying clearly.

According to Stys (2004), the difficulty of access to communication tools (computers and mobile phones) was thought to decrease the probability of being a cyber-bully or a victim. Economic resources might be related to the increased rate of being a cyber-bully/cyber victim. However, the direct relationship between economic status as the main variable and cyber bullying has not been studied to date. Studies have been conducted on the population of primary and secondary school students with different socioeconomic status (SES). It was found that mothers with a high SES provide their children with better technological opportunities thus enabling them to carry out

cyber bullying (Kowalski, Limber, & Agatston, 2008). However, more research using this variable is needed.

In another research in Turkey, one of the unexpected results is that, although private school students (high SES) use communication tools more often than public school students (low-middle SES), public school students are more often cyber bullied and faced with a cyber bully. Findings with regard to a higher risk of cyber bullying and being cyber bullied, when using communication tools, are contradictory (Topçu, Erdur-Baker, & Capa-Aydin, 2008).

Cyber bullying could become a serious problem in the future with an increase in the Internet and mobile phone usage among young people in Turkey. Therefore, cyber bullying prevention strategies need to be researched. To conduct this kind of research, variables such as gender, grade, and SES need to be included. In this sense, the current study will be a pioneer study on the prevention strategies. In this respect, it is expected to show how primary school students become cyber bullies and victims. The following questions function as the study guidelines:

1. Are there significant effects of demographic variables (gender, grade, and SES difference) on primary school students' cyber bullying?
2. Are there significant effects of demographic variables (gender, grade, and SES difference) on primary school students' cyber victimization?

Method

Research Model

The cross-sectional model served as one of the survey models in this study. Cross-sectional survey models collect the data from a sample that has been drawn from a predetermined population. The data is collected at just one point in time (Fraenkel & Wallen, 2006).

Participants

This study consisted of 760 students, attending sixth, seventh, and eighth grades in Osmaniye, Turkey. Of the total number, 279 students came from the sixth grade, 243 students attended the seventh grade, and 238 students were the eighth graders. The age of the participants ranged from 11 to 15 years, with a mean of 12.3 years. While selecting the participants, their SES was taken into consideration. They were chosen after the categorization of schools according to their low - middle - high SES with SES being defined according to the income of the families living in the area surrounding the schools. The high SES participants belonged to the high SES parents (mostly traders), whose monthly income was above Turkey's average. The middle SES participants were mostly chosen from government employees' families. According to Turkey's average income, government employees are considered as the representatives of middle SES citizens. The low SES participants came from families with low income. After the categorization, the sixth, seventh, and eighth grade students from the selected

schools were randomly selected (the numbers were equal for both genders). By this method, 760 students were included in the sample. 38 of them were excluded from the analysis because of their contradictory answers to the control question or for not filling out the scale. Therefore, the final number of the participants was 722. It is shown in Table 1 as "Range of data based on SES, grade, and gender".

Table 1

Range of data based on SES, grade, and gender

SES	Gender	6th Grade	7th Grade	8th Grade	Total
Low	Girls	46	49	48	143
	Boys	48	41	40	129
Middle	Girls	45	39	40	124
	Boys	41	39	40	120
High	Girls	31	36	34	101
	Boys	38	34	33	105
Total		249	238	235	722

Instrument

The "Cyber Bully/Victim Scale", developed by Ayas and Horzum (2010), was administered to the participants in this study. The initial form of the questionnaire consisted of 23 items. In the exploratory and confirmatory factor analysis, four items were dropped so the final version of the questionnaire was a three-factor model consisting of 19 items. There was no reverse item in the scale. It was a 5-degree Likert scale with the options from "never" to "every time". The participants could score a minimum of 19 points and a maximum of 95 points in both parts of the scale (cyber bully and cyber victim). An increase in the points of cyber bully and cyber victim proves the increased level of being cyber bully and cyber victim.

According to the scale, "I exposed someone" was designed to identify the level of cyber bullying; "I am exposed to" was designed for the victims of cyber bullying. The first factor named "sexual cyber bullying in cyberspace" consisted of seven items, and defined 24.4% of the total variance. The second factor named "embarrassing and inserting malicious contents in cyberspace" consisted of eight items, and defined 11.5% of the total variance. The third and the last factor of the questionnaire named "spreading rumours in cyberspace" consisted of four items, and defined 6.9% of the total variance. Considering all the items, they defined 44% of the total variance.

In Ayas and Horzum's (2010) study, the confirmatory factor analysis for the results (related to the bully part) indicated the following goodness of fit indices χ^2 =508.86 (df=146, p=.00), χ^2/df=3.47, RMSEA=0.074, GFI=0.89, AGFI=0.86, CFI=0.90, NFI=0.87 and NNFI=0.88. The coefficient of internal consistency of cyber bully was .81. The confirmatory factor analysis for the results (related to the victim part) showed the goodness of fit indices to be χ^2= 459.39 (df=149, p=.00), χ^2/df=3.08, RMSEA=0.068, GFI=0.90, AGFI=0.88, CFI=0.93, NFI=0.90 and NNFI=0.92. The goodness of fit

indices of the scale was found to be at an acceptable level. The coefficient of internal consistency of cyber victim was .81. In this study, the coefficient of internal consistency of cyber bully was .82 and that of cyber victim was .81.

Data Analysis

After the sample was defined, the scale was simultaneously delivered to three schools from different SES categories. It took 20 minutes to fill out the scale for each participant. All data were coded and entered through using SPSS 13. To assess the participants' cyber bullying and cyber victimization, means and standard deviations were determined with the aid of descriptive statistics. Two separate three-way analyses of variance (ANOVA) were conducted to check the effects of demographic variables (gender, grade, SES) on the participants' cyber bullying/victim. All statistical analyses were conducted at the 0.05 significance level.

Results

The Effect of Demographic Variables on Cyber Bullying

The differentiation of demographic variable of cyber bully level was analyzed by three-way analyses of variance. The analysis of descriptive statistics is shown in Table 2.

Table 2

Descriptive statistics on cyber bullying scale and subscales with respect to demographic variables

Independent Variables	*N*	Sexual		Refusal		Rumour		Cyber Bully	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Gender									
Girls	365	7.41	0.10	9.00	0.14	4.38	0.07	20.79	0.24
Boys	357	8.15	0.10	9.86	0.14	4.63	0.07	22.63	0.24
Grade									
6	249	7.64	0.12	9.04	0.17	4.31	0.09	20.99	0.29
7	238	7.71	0.12	9.59	0.17	4.67	0.09	21.96	0.29
8	235	7.99	0.12	9.66	0.18	4.53	0.09	22.18	0.29
SES									
Low	272	7.23	0.11	8.53	0.16	4.20	0.08	19.96	0.27
Middle	244	7.64	0.12	9.12	0.17	4.40	0.08	21.16	0.29
High	206	8.46	0.13	10.63	0.19	4.92	0.09	24.01	0.31
Total	722	7.73	1.98	9.33	2.86	4.47	1.36	21.54	4.92

As can be seen, the participants' cyber bullying scale mean score was 21.54. The boys (M=22.63, SD=0.24) had a higher mean score than the girls (M=20.79, SD=0.24), indicating that the boys were more likely to be cyber bullies. Besides, the results of the present study showed that, as the grade increased, the cyber bullying scale mean score increased. In parallel with an increase in the participants' SES, the cyber bullying scale mean score increased. In other words, the participants in higher grades and with higher SES had a higher tendency of cyber bullying behaviour.

Table 3
Three-way analysis of variance with cyber bullying

Independent Variable	*SS*	*df*	*MS*	*F*	*p-value*
Gender	598.98	1	598.98	29.95	.000**
Grade	188.83	2	94.42	4.72	.009**
SES	1948.35	2	974.18	48.71	.000**
Gender * Grade	59.69	2	29.84	1.49	.226
Gender * SES	281.23	2	140.62	7.03	.001**
Grade * SES	282.76	4	70.69	3.53	.007**
Gender * Grade * SES	118.34	4	29.58	1.48	.207

Note: **significance level $p < 0.05$.

The three-way ANOVA indicated a significant main effect on cyber bullying for Gender ($F_{(1, 704)} = 29.95, p<.05$), Grade ($F_{(2, 704)} = 4.72, p < .05$) and SES ($F_{(2, 704)} = 48.71, p < .05$). Again, the three-way ANOVA indicated a significant two-way interaction effect on cyber bullying for Gender*SES ($F_{(1, 704)} = 7.03, p < .05$) and Grade*SES ($F_{(2, 704)} = 3.53, p < .05$), but not for Gender*Grade ($F_{(2, 704)} = 1.49, p = .226$). For cyber bullying, no significant three-way interactions among demographic variables (gender, grade, and SES) were found. The boys scored significantly higher than the girls with a small effect size (Partial $\eta^2 = .041$). The small effect size indicated that only 4.1% of the variance with regard to the participants' cyber bullying could be explained by gender. Since ANOVA was significant for Grade, SES, Gender*SES and Grade*SES, a follow-up Bonferroni test was conducted to evaluate pair-wise differences.

The eighth grade students had a significantly higher cyber bullying score than the sixth grade students. Grade score had a small effect size (Partial $\eta^2=.013$) and indicated that only 1.3% of the variance could be explained by grade. The high SES participants were cyber bullies more than those from medium and low SES categories. Again, the medium SES participants were cyber bullies more than low SES participants. SES score had a small effect size (Partial $\eta^2=.122$). The small effect size indicated that only 12.2% of the variance could be explained by SES.

The high SES girls had a significantly higher cyber bullying score than the medium and low SES girls. Concurrently, the high SES boys had a significantly higher cyber bullying score than the medium and low SES boys. Furthermore, the medium SES boys had a significantly higher cyber bullying score than the medium and low SES boys. Gender and SES interaction score had a small effect size (Partial $\eta^2=.020$). The small effect size indicated that only 2.0% of the variance could be explained by Gender and SES interaction.

The high SES sixth graders had a significantly higher cyber bullying score than the medium and low SES sixth graders. Concurrently, the high SES seventh graders had a significantly higher cyber bullying score than the medium and low SES seventh graders. Furthermore, the high SES eighth graders had a significantly higher cyber bullying

score than the medium and low SES eighth graders. The medium SES eighth graders had a significantly higher cyber bullying score than the low SES eighth graders. Grade and SES interaction score had a small effect size (Partial η^2=.020). The small effect size indicated that 2.0% of the variance could be explained by Grade and SES interaction.

Table 4

Multiple comparisons for cyber bullying among Grade, SES, Gender-SES and Grade-SES

Dependent Variable	Independent Variable 1	Independent Variable 2	Mean Difference	SE	p-value
Cyber Bullying	Eighth Grade	Sixth Grade	1.18(**)	0.41	0.012
	High SES	Medium SES	2.85(**)	0.42	0.000
	High SES	Low SES	4.05(**)	0.43	0.000
	Medium SES	Low SES	1.20(**)	0.40	0.007
	High SES Girl	Medium SES Girl	1.68(**)	0.59	0.000
	High SES Girl	Low SES Girl	2.53(**)	0.61	0.018
	High SES Boy	Medium SES Boy	4.02(**)	0.59	0.000
	High SES Boy	Low SES Boy	5.56(**)	0.60	0.000
	Medium SES Boy	Low SES Boy	1.55(**)	0.57	0.020
	High SES Sixth Grade	Medium SES Sixth Grade	1.78(**)	0.73	0.045
	High SES Sixth Grade	Low SES Sixth Grade	1.97(**)	0.72	0.019
	High SES Seventh Grade	Medium SES Seventh Grade	3.78(**)	0.74	0.000
	High SES Seventh Grade	Low SES Seventh Grade	4.92(**)	0.71	0.000
	Eighth Grade High SES	Eighth Grade Medium SES	2.98(**)	0.74	0.000
	Eighth Grade High SES	Eighth Grade Low SES	5.26(**)	0.73	0.000
	Eighth Grade Medium SES	Eighth Grade Low SES	2.29(**)	0.69	0.003

Note: **significance level p < 0.05.

The Effect of Demographic Variables on Cyber Victimization

The level of students (who took part in the study), being exposed to cyber bullying, were analysed according to the differentiation of demographic variables by three-way variance analyses. Its descriptive statistics is presented in Table 5.

Table 5

Descriptive statistics on cyber victim scale and subscales with respect to demographic variables

Independent Variables	N	Sexual		Refusal		Rumour		Total	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Gender									
Girls	365	8.09	0.13	9.51	0.14	4.51	0.08	22.10	0.28
Boys	357	8.97	0.13	10.04	0.14	4.73	0.08	23.75	0.28
Grade									
6	249	8.52	0.16	9.64	0.17	4.53	0.10	22.69	0.34
7	238	8.35	0.16	9.82	0.18	4.65	0.10	22.82	0.35
8	235	8.73	0.16	9.87	0.18	4.68	0.10	23.27	0.35
SES									
Low	272	7.98	0.15	9.10	0.16	4.36	0.10	21.44	0.32
Middle	244	8.57	0.16	9.95	0.17	4.62	0.10	23.14	0.34
High	206	9.04	0.17	10.27	0.19	4.88	0.11	24.20	0.37
Total									
Cyber Victim	722	8.49	2.57	9.72	2.76	4.60	1.52	22.81	5.53

As shown, the participants' cyber victim scale mean score was 22.81. The boys (M=23.75, SD=0.28) had a higher mean score than the girls (M=22.10, SD=0.28), indicating that the boys were likely to have a higher cyber victim score. The results of the present study showed that, as the participants' grade increased, the mean scores on the cyber victim scale increased. Concurrently, their SES increases revealed increased mean scores on the cyber victim scale. In other words, the higher grade and SES participants had a tendency of higher cyber victim score.

Table 6

Three-way analysis of variance with cyber victim variable

Independent Variable	SS	df	MS	F	p-value
Gender	475.78	1	475.78	16.85	0.000**
Grade	44.75	2	22.37	0.79	0.45
SES	921.06	2	460.53	16.31	0.000**
Gender * Grade	66.88	2	33.44	1.18	0.307
Gender * SES	264.07	2	132.03	4.68	0.010**
Grade * SES	300.21	4	75.05	2.66	0.032**
Gender * Grade * SES	159.37	4	39.84	1.41	0.229

Note: **significance level p < 0.05.

The results of the analysis with regard to primary school students as the victims of cyber bullying revealed a significant main effect of Gender ($F_{(1, 704)}$=16.85, p<.05) and SES ($F_{(2, 704)}$=16.31, p<.05), but not Grade ($F_{(2, 704)}$=0.79, p=.45). Again, the three-way ANOVA indicated a significant two-way interaction effect on cyber victim for Gender*SES ($F_{(1, 704)}$= 4.68, p<.05) and Grade*SES ($F_{(2, 704)}$=2.66, p<.05), but not Gender*Grade ($F_{(2, 704)}$=1.18, p=.307). For cyber victim, no significant three-way interactions among demographic variables (gender, grade, and SES) were found. The boys scored significantly higher than the girls with a small effect size (Partial η^2=.023). The small effect size indicated that only 2.3% of the variance regarding the participants' cyber victimisation could be explained by gender. Since ANOVA was significant for SES, Gender*SES, and Grade*SES, a follow-up Bonferroni test was conducted to evaluate pair-wise differences among SES, Gender*SES, and Grade*SES (Table 7).

The high and middle SES participants were exposed to cyber bullying more than the low SES ones. These scores had a small effect size (Partial η^2=.044). The small effect size indicated that only 4.4% of the variance could be explained by SES.

The medium SES girls had a significantly higher cyber victim score than the low SES girls. Concurrently, the high SES boys had a significantly higher cyber victim score than the medium and low SES boys. Gender and SES interaction score has a small effect size (Partial η^2=.013). The small effect size indicated that only 1.3% of the variance could be explained by Gender and SES interaction.

The high SES seventh graders had a significantly higher cyber victim score than the medium and low SES seventh graders. Furthermore, the high SES eighth graders

had a significantly higher cyber victim score than the medium and low SES eighth graders. Grade and SES interaction score had a small effect size (Partial η^2=.015). The small effect size indicated that only 1.5% of the variance could be explained by Grade and SES interaction.

Table 7

Multiple comparisons for cyber victim variable among SES, Gender-SES and Grade-SES

Dependent Variable	Independent Variable 1	Independent Variable 2	Mean Difference	*SE*	*p-value*
Cyber Victim	High SES	Medium SES	1.69(**)	0.47	0.001
	High SES	Low SES	2.75(**)	0.49	0.000
	Medium SES Girl	Low SES Girl	1.79(**)	0.65	0.019
	High SES Boy	Medium SES Boy	2.46(**)	0.71	0.002
	High SES Boy	Low SES Boy	4.05(**)	0.70	0.000
	High SES Seventh Grade	Medium SES Seventh Grade	2.46(**)	0.88	0.015
	High SES Seventh Grade	Low SES Seventh Grade	4.55(**)	0.85	0.000
	Medium SES Seventh Grade	Low SES Seventh Grade	2.09(**)	0.82	0.034
	High SES Eighth Grade	Low SES Eighth Grade	2.95(**)	0.86	0.002
	Medium SES Eighth Grade	Low SES Eighth Grade	2.17(**)	0.82	0.025

Note: **significance level p<0.05.

Discussion

Cyber bullying as a widespread bullying form can be defined as causing damage to others, intentionally and continuously, with the aid of information and communication technologies. According to related research, cyber bullying is conducted via the Internet and mobile phones (Li, 2007; Patchin & Hinduja, 2006; Willard, 2005). Cyber bullying in Turkey is a newly released research subject (Aricak et al., 2008; Erdur-Baker & Kavşut, 2007).

The technological devices that are most widely used for cyber bullying, as well as "gender" as a variable, are studied. "SES" or "grade" are not frequently taken into consideration. In this study, the primary school students were analysed in relation to being a cyber bully and victim in terms of the variables of "gender", "grade", and "SES".

It showed that the boys both engaged in cyber bullying and were exposed to cyber bullying more than the girls. Although this result is consistent with the studies of Arıcak et al. (2008), Erdur-Baker (2010), Erdur-Baker and Kavşut (2007), Li (2006), and Li (2007), it is inconsistent with the results of Beale and Hall (2007), Hinduja and Patchin (2008a), Hinduja & Patchin (2008b), Keith and Martin (2005), Nelson (2003), Patchin and Hinduja (2006) and Vandebosch and van Cleemput (2009). It is possible

to say that the inconsistent results belong to the studies that were mostly carried out in economically developed countries. In parallel with the economic development, a difference cannot be observed between the genders to access to the technological resources.

SES was considered as a second variable in the study, and according to this, the high SES students cyber bullied and were exposed to cyber bullying more often than the low and middle SES students. This is consistent with Stys' (2004) results, but inconsistent with the results obtained by Erdur-Baker and Kavşut (2007). SES is shown to increase the likelihood of cyber bullying and being cyber bullied, as the high SES students have an increased access to technological devices such as computers, the Internet, and mobile phones, and consequently, display frequent use of such devices.

This study also looked at the grade as a variable, and a significant difference was not found between grades. This result is consistent with that presented by Smith et al. (2006). The result could be explained with the equal number of students, and the small difference in their age and maturation. Further, the current study pointed out a significant two-way interaction effect on the cyber-bully and cyber victim for Gender-SES and Grade-SES, but not for Gender-Grade. For the cyber bullying and cyber victim, no significant three-way interactions among demographic variables (gender, grade, and SES) were found.

Last but not least, the study revealed a difference with regard to being a cyber bully and/or victim in terms of SES. Moreover, future research should also be based on the variables, such as having technological devices, residence, and experiences (victim/bully) in other bullying forms. On the one hand, the reasons for cyber bullying with regard to the "gender" may be researched. On the other hand, via selected samples from other countries, comparative studies may also be done. Finally, another important study could be conducted on developing cyber bullying prevention and intervention programmes.

References

Arıcak, T., Siyahhan, S., Uzunhasanoglu, A., Saribeyoglu, S., Ciplak, S., Yilmaz, N., & Memmedov, C. (2008). Cyberbullying among Turkish adolescents. *Cyber Psychology & Behavior*, 11, 253-261. http://dx.doi.org/10.1089/cpb.2007.0016

Ayas, T., & Horzum, M.B. (2010). Sanal zorba/kurban ölçek geliştirme çalışması. *Akademik Bakış Dergisi*, 19, 1-17.

Bargh, J. A., & McKenna, K. Y. A. (2004). The internet and social life. *Annual Review of Psychology*, 55, 573-590. http://dx.doi.org/10.1146/annurev.psych.55.090902.141922

Batsche, G. M., & Knoff, H. M. (1994). Bullies and their victims: Understanding a pervasive problem in the schools. *School Psychology Review*, 23, 165-174.

Beale, A. V., & Hall, K. R. (2007). Cyberbullying: what school administrators (and parents) can do. *Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 81, 8-12. http://dx.doi.org/10.3200/TCHS.81.1.8-12

Beale, A. V., & Scott, P. C. (2001). "Bullybusters": Using drama to empower students to take a stand against bullying behavior. *Professional School Counseling*, 4, 300-305.

Belsey, B. (2007). Cyberbullying: A real and growing threat. *ATA Magazine*, 88, 14-21.

Bester, S., & du Plessis, A. (2010). Exploring a secondary school educator's experiences of school violence: A case study. *South African Journal of Education*, 30, 203-229.

Campbell, M. A. (2005). Cyber bullying: An old problem in a new guise? *Australian Journal of Guidance and Counselling*, 15, 68–76. http://dx.doi.org/10.1375/ajgc.15.1.68

Dehue, F., Bolman, C., & Völlink, T. (2008). Cyberbullying: Youngsters' experiences and parental perception. C*yberpsychology* & *Behavior*, 11, 217-223. http://dx.doi.org/10.1089/cpb.2007.0008

deWet, C. (2007). Educators' perceptions on bullying prevention strategies. *South African Journal of Education*, 27, 191-208.

Erdur-Baker, Ö. (2010). Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools. *New Media* & *Society*, 12, 109-125.

Erdur-Baker, Ö., & Kavşut, F. (2007). Akran zorbalığının yeni yüzü: Siber zorbalik. *Eğitim Araştırmaları*, 27,31-42. http://dx.doi.org/10.1177/1461444809341260

Fraenkel, J. R., & Wallen, N. E. (2006). *How to Design and evaluate research in education*, 6th ed. Boston: McGraw-Hill.

Hinduja, S., & Patchin, J. (2008a). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant Behavior*, 29, 129-156. http://dx.doi.org/10.1080/01639620701457816

Hinduja, S., & Patchin, J.W. (2008b). *Bullying Beyond the Schoolyard*. NY: Corwin Press.

Keith, S., & Martin, M. E. (2005). Cyber-Bullying: Creating a culture of respect in a cyber world. *Reclaiming Children and Youth: The Journal of Strength-based Interventions*, 13, 224-228.

Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *The Journal of adolescent health: Official Publication Of The Society for Adolescent Medicine*, 41, 22-30. http://dx.doi.org/10.1016/j.jadohealth.2007.08.017

Kowalski, M. R., Limber, P. S., & Agatston, W. P. (2008). *Cyber bullying in the digital age*. London: Blackwell publishing LTD. http://dx.doi.org/10.1002/9780470694176

Li, Q. (2006). Cyberbullying in schools: A research of gender differences. *School Psychology International*, 27, 157-170. http://dx.doi.org/10.1177/0143034306064547

Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. *Computers in Human Behavior*, 23, 1777-1791. http://dx.doi.org/10.1016/j.chb.2005.10.005

Mark, L.K. (2009). *Student, educator, and parent perceptions of cyber bullying in three Hawai'i middle schools*. (M.Ed dissertation). Honolulu: University of Hawai'i.

Martín, M. (2005). The causes and nature of bullying and social exclusion in schools. *Education Journal*, 86, 28-30.

Nelson, M. (2003). *School bullies going high tech* /online/. Retrieved on 3rd April 2011 from http://canoe.ca/NewsStand/LondonFreePress/2003/09/02/1744030.

Olweus, D. (1999). *Bullying prevention program*. Boulder, Co: Center for the study and prevention of violence, Institute of Behavioral Science, University of Colorado at Boulder.

Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard: A preliminary look at cyberbullying. *Youth Violence and Juvenile Justice*, 4, 148-169. http://dx.doi.org/10.1177/1541204006286288

Shariff, S. (2008). *Cyber-bullying: Issues and solutions for the school, the classroom, and the home*. Abington: Routledge.

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology*, 49, 147-154. http://dx.doi.org/10.1111/j.1467-9450.2007.00611.x

Smith, P., Mahdavi, J., Carvalho, M., & Tippett, N. (2006). *An investigation into cyberbullying, its forms, awareness and impact, and the relationship between age and gender in cyberbullying-Brief* /online/. Retrieved on 3rd April 2011 from http://www.dcsf.gov.uk/research/data/uploadfiles/RBX03-06.pdf.

Stys, Y. (2004). *Beyond the schoolyard: Examining electronic bullying among Canadian youth*. (M.Ed dissertation). Ottawa: Carleton University.

Swart, E., & Bredekamp, J. (2009). Non-physical bullying: Exploring the perspectives of grade 5 girls. *South African Journal of Education*, 29, 405-425.

Topçu, C., Erdur-Baker, Ö., & Capa-Aydin, Y. (2008). Examination of cyberbullying experiences among Turkish students from different school types. *Cyberpsychology & Behavior*, 11, 644-648. http://dx.doi.org/10.1089/cpb.2007.0161

Vandebosch, H., & van Cleemput, K. (2008). Defining cyberbullying: a qualitative research into the perceptions of youngsters. *Cyberpsychology & Behaviour*, 11, 499-503. http://dx.doi.org/10.1089/cpb.2007.0042

Vandebosch, H., & van Cleemput, K. (2009). Cyberbullying among youngsters: Profiles of bullies and victims. *New Media & Society*, 11, 1349-1371. http://dx.doi.org/10.1177/1461444809341263

Willard, N. (2005). *Educator's guide to cyberbullying and cyberthreats*. Center for safe and responsible internet use /online/. Retrieved on 3rd April 2011 from http://www.cyberbully.org/cyberbully/ docs/cbcteducator.pdf.

Williams, K. R., & Guerra, N. G. (2007). Prevalence and predictors of internet bullying. *Journal of Adolescent Health*, 41, 14-21. http://dx.doi.org/10.1016/j.jadohealth.2007.08.018

Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: a comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 45, 1308-1316. http://dx.doi.org/10.1111/j.1469-7610.2004.00328.x

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Istraživanje virtualnog zlostavljanja učenika osnovne škole s pozicija zlostavljača i žrtve u odnosu na spol, razred i socioekonomski status

Sažetak

Jedan od važnih učeničkih problema predstavlja virtualno zlostavljanje s pomoću tehnoloških sredstava. Istraživanje virtualnog zlostavljanja temelji se uglavnom na vrstama tom prilikom upotrijebljenih tehnoloških sredstava i na spolnim razlikama. Upravo su te varijable u prvom planu, a manje je istraživanja u kojima se razmatraju varijable kao što su socioekonomski status i razred. U ovom se istraživanju analizira razlikuje li se razina virtualnog zlostavljanja učenika osnovne škole s pozicija zlostavljača i žrtve s obzirom na sljedeće varijable: spol, razred i socioekonomski status. U njemu je sudjelovalo ukupno 760 učenika šestog, sedmog i osmog razreda, u dobi između 11 i 15 godina (prosjek 12.3 godine). Rezultati su pokazali značajan učinak na virtualno zlostavljanje i njegove žrtve u odnosu na spol i socioekonomski status, kao i značajan učinak dvosmjerne interakcije s obzirom na spol i socioekonomski status, odnosno razred i socioekonomski status. Nije utvrđena nikakva trosmjerna interakcija među demografskim varijablama (spol, razred i socioekonomski status) ni za virtualnog zlostavljača ni za njegovu žrtvu.

Ključne riječi: *seksualno virtualno zlostavljanje; virtualno zlostavljanje; virtualno zlostavljanje odbijanjem; virtualno zlostavljanje širenjem glasina.*

Uvod

Zlostavljanje je jedan od važnih problema u današnjem obrazovanju. Da bi se spriječilo, potrebno ga je istraživati u školama kao periodičnu i sustavnu pojavu (de Wet, 2007). Slaba potpora koju pružaju škole i zajednice, zatim nedosljedno ponašanje učitelja u razredu prema zlostavljanju, smatraju se glavnim čimbenicima koji pridonose širenju nasilja u školama (Bester i du Plessis, 2010). Istraživanje zlostavljanja dovelo je do razvoja svjesnosti o mnogim njegovim aspektima: ukazalo je na razne vrsta zlostavljanja (Swart i Bredekamp, 2009).

Zahvaljujući brzom tehnološkom razvoju, učenici upotrebljavaju brojne komunikacijske alate (računala, internet, mobilni telefoni) da bi se zlostavljački ponašali, pa se virtualno zlostavljanje prepoznaje kao još jedan oblik zlostavljanja u današnjim školama. Prema Belsey (2007), virtualno zlostavljanje podrazumijeva namjerno i kontinuirano nanošenje štete drugima uz korištenje informacijsko-komunikacijskim tehnologijama.

Budući da se u literaturi navodi prevelik broj dimenzija virtualnog zlostavljanja, tri su identificirane (Ayas i Horzum, 2010). To su seksualno zlostavljanje, širenje glasina, zbunjivanje i postavljanje zlonamjernog sadržaja u virtualni prostor. Shariff (2008) definira virtualno zlostavljanje kao izražavanje prijetnji drugima i njihovo ponižavanje ili slanje fotografija i kratkih poruka (SMS) seksualnog sadržaja s pomoću tehnologije. U toj je definiciji seksualna dimenzija istaknuta na prvom mjestu. Seksualno zlostavljanje preko interneta znači razmjenu SMS poruka seksualnog sadržaja, slanje ili primanje golišavih fotografija putem SMS poruka, kao i njihovu razmjenu s drugim osobama. Najčešća situacija za virtualno zlostavljanje nastaje kada jedna individua šalje tekstne poruke seksualnog sadržaja drugoj individui radi osvete nakon prekida emocionalnog odnosa, kako bi joj pokazala nadzor nad njom.

Jedna od dimenzija virtualnog zlostavljanje jest širenje glasina. Vandebosch i Van Cleemput (2008) ga proširuju na neprekidno telefoniranje ili namigivanje nekome, snimanje svog glasa i njegovo prosljeđivanje nekome, kreiranje mrežne stranice s ponižavajućim komentarima o nekome, pogrešno usmjeravanje informacija o nekome putem elektroničke pošte i vrijeđanje drugih osoba u sobama za chatanje. Virtualno zlostavljanje podrazumijeva također samostalno ili grupno zbunjivanje nekoga i postavljanje zlonamjernog materijala u virtualni prostor, s pomoću komunikacijskih instrumenata koji se stalno koriste namjerno i agresivno prema osobama kojima nedostaju samoobrambene taktike (Smith i sur., 2005).

Općenito gledano, tradicionalno se zlostavljanje primjećuje u školi ili oko nje, a žrtva i zlostavljač moraju biti na istom mjestu. Štoviše, između žrtve i zlostavljača postoji fizička neravnoteža i zlostavljač je poznat (Batsche i Knoff, 1994; Olweus, 1999). No, virtualno zlostavljanje omogućuje zlostavljaču skrivanje osobnog identitet, lako izricanje riječi u virtualnom prostoru koje inače ne bi upotrijebio. S obzirom na to da je teško identificirati zlostavljača, teško je bilo koga optužiti kao takvog. Mark (2009) smatra da čak 52% žrtava ne poznaje svoje virtualne zlostavljače. Dehue, Bolman i Völlink (2008) u svom su istraživanju otkrili da njih 34.8% nije poznavalo one koji su ih zlostavljali.

Jedna od najvažnijih karakteristika virtualnih zlostavljača jest ta da oni ne samo što ne strahuju da će biti uhvaćeni i kažnjeni već jednostavno sjede ispred ekrana i sudjeluju u virtualnom zlostavljanju. Jedna od negativnosti virtualnog zlostavljanja jest anonimno plašenje žrtve. Virtualno zlostavljanje nije ograničeno na neki određeni prostor. Prema Li (2007), učenike ne zlostavljaju vršnjaci samo u školi već i izvan škole. Utvrđeno je da je 30% učenika izloženo je virtualnom zlostavljanju u školi, a njih 70% kod kuće (Smith i sur., 2006).

U Turskoj se u novije vrijeme istražuje virtualno zlostavljanje. Jedno istraživanje pokazuje da stopa virtualnog zlostavljanja iznosi gotovo 28% (pozicija zlostavljača), odnosno 30% (pozicija žrtve) (Erdur-Baker i Kavşut, 2007). Slijedom jednog istraživanja, provedenog u Istambulu, 35.7% učenika pokazuje oblike ponašanja virtualnog zlostavljanja, a samo 5.9% učenika su žrtve. Više je dječaka nego djevojčica čije ponašanje odgovara profilu virtualnog zlostavljača ili žrtve. Pri suočavanju s virtualnim zlostavljanjem, 25% učenika obavijestilo je o tome vršnjake i roditelje, a njih je 30.6% potražilo aktivna rješenja, poput zaustavljanja zlostavljača (Aricak i sur. 2008).

U različitim se zemljama primjećuju različite stope koje se odnose na virtualne zlostavljače i žrtve. Riječ je o problemu koji treba ozbiljno razmotriti. Osobe izložene virtualnom zlostavljanju imaju psihičke probleme, koji ukazuju na: nedostatak samopoštovanja, tjeskobu, razočaranje, strah od škole, neuspjeh u školi, usamljenost, uznemirenost, depresiju i sklonost samoubojstvu (Bargh i McKenna, 2004; Campbell, 2005; Ybarra i Mitchell, 2004). Analiza istraživanja omogućuje nam da bolje razumijemo kako virtualno zlostavljanje negativno utječe na žrtve.

Istraživanja pokazuju da virtualno zlostavljanje prevladava u razdoblju primarnog obrazovanja (Dehue, Bolman, & Völlink, 2008; Kowalski & Limber, 2007; Williams i Guerra, 2007). Zlostavljači su u dobi između devet i četrnaest godina (Martín, 2005). U istraživanjima virtualnog zlostavljanja analizirane su žrtve u šestom, sedmom i osmom razredu, a uočeno je da ono raste prijelazom u viši razred (Hinduja i Patchin, 2008b).

Postoje također istraživanja virtualnog zlostavljanja u odnosu na različite varijable. Ono koje se bavi spolom kao varijablom dalo je zbunjujuće rezultate jer po nekim autorima djevojčice češće pribjegavaju zlostavljačkom ponašanju preko interneta (Beale i Scott, 2001; Hinduja i Patchin, 2008b; Keith i Martin, 2005; Nelson, 2003), a drugima su dječaci tipično zlostavljači, a djevojčice žrtve virtualnog zlostavljanja (Arıcak i sur., 2008; Erdur-Baker i Kavşut, 2007; Li, 2006; Li, 2007). Neka istraživanja uopće ne ukazuju na značajnu razliku među njima (Patchin i Hinduja, 2006; Hinduja i Patchin, 2008a; Slonje i Smith, 2008). S obzirom na različite rezultate istraživanja u kojima je virtualno zlostavljanje analizirano po spolu ispitanika potrebno je provesti više istraživanja da bi se to pitanje jasnije komentiralo. Stys (2004) tvrdi kako se smatralo da teža dostupnost komunikacijskih alata (računala i mobilni telefoni) smanjuje mogućnost virtualnog zlostavljanja, bez obzira na poziciju (zlostavljač ili žrtva). Ekonomski bi se uvjeti mogli povezati s povećanjem stope virtualnog zlostavljanja u oba slučaja. Međutim, do danas nije istraživana izravna povezanost između ekonomskog statusa kao glavne varijable i virtualnog zlostavljanja. U istraživanjima na uzorku učenika osnovnih i srednjih škola testirani su učenici različitog socioekonomskog statusa (SES). Majke učenika većeg SES-a pružale su djeci bolje tehnološke uvjete, a tim i mogućnost za virtualno zlostavljanje (Kowalski, Limber, i Agatston, 2008). Nužno je provesti intenzivnija istraživanja usmjerena upravo na tu varijablu.

U jednom drugom turskom istraživanju dio neočekivanih rezultata ukazao je na to da učenici u privatnim školama (viši SES), unatoč češćoj upotrebi komunikacijskih

alata u usporedbi s učenicima iz državnih škola (niži-srednji SES), rjeđe sudjeluju u virtualnom zlostavljanju i rjeđe su suočeni s virtualnim zlostavljačem. Istraživanja čiji je cilj odgovoriti na pitanje nosi li uporaba komunikacijskih alata veći rizik od virtualnog zlostavljanja (pozicija zlostavljanoga) kontradiktorna su (Topçu, Erdur-Baker i Capa-Aydin, 2008).

Virtualno bi zlostavljanje moglo postati ozbiljan problem u Turskoj u budućnosti zbog sve veće upotrebe interneta i mobilnog telefona među mladima. Nužno je istraživati strategije njegove prevencije, za što se potrebno osvrnuti na varijable kao što su spol, razred i SES. U tom će smislu ovo istraživanje predstavljati pionirski pothvat te bi trebalo razjasniti kako učenici osnovne škole postaju virtualni zlostavljači i virtualne žrtve. Sljedeća su pitanja poslužila kao okvir istraživanja:

1. Postoje li značajni učinci demografskih varijabli (razlike po spolu, razredu i SES-u) na virtualno zlostavljanje među učenicima osnovne škole (pozicija zlostavljača)?
2. Postoje li značajni učinci demografskih varijabli (razlike po spolu, razredu i SES-u) na virtualno zlostavljanje među učenicima osnovne škole (pozicija žrtve)?

Metoda

Model istraživanja

Presječni model poslužio je kao jedan od modela u ovom istraživanju. S pomoću njega se prikupljaju podaci od ispitanika, odabranih iz unaprijed određene populacijske skupine, a primjenjuje se samo jednom u određenom trenutku (Fraenkel i Wallen, 2006).

Ispitanici

U istraživanju je sudjelovalo ukupno 760 učenika šestih, sedmih i osmih razreda iz turskog grada Osmaniyea. 279 učenika pohađalo je šesti razred, njih 243 bili su učenici sedmog razreda, a 238 učenika bilo je u osmom razredu. Imali su između 11 i 15 godina, prosječno 12,3 godine. Pri odabiru ispitanika uzet je u obzir njihov SES, nakon što su škole kategorizirane prema njemu (nizak – srednji – visok). SES se određuje prema obiteljskim prihodima za život izvan škole. Učenici s visokim SES-om odabrani su iz obitelji s visokim SES-om, njihovi su mjesečni prihodi viši od turskog prosjeka i uglavnom su po zanimanju trgovci. Srednji SES uglavnom imaju djeca čiji su roditelji državni službenici, koji se – prema prosječnim primanjima u Turskoj – smatraju predstavnicima srednjeg SE staleža. Učenici s niskim SES-om potječu od roditelja čija su primanja niska. Nakon što je provedena spomenuta kategorizacija, nasumce su odabrani učenici šestih, sedmih i osmih razreda iz odgovarajućih škola (jednak broj za oba spola). S pomoću te metode došlo se do uzorka od 760 ispitanika, ali je njih 38 isključeno iz analize zbog davanja kontradiktornih odgovora na kontrolno pitanje ili nepopunjavanja skale. Dakle, provedeni se postupak temelji na 722 podatka, što se vidi u tablici 1 (Raspon podataka prema varijablama SES, razred i spol).

Tablica 1.

Instrument

U istraživanju je korištena skala pod nazivom Skala za virtualnog zlostavljača/žrtvu, čiji su autori Ayas i Horzum (2010). Početna je inačica sadržavala upitnik s 23 pitanja, ali su četiri pitanja isključena nakon eksplorativne i konfirmatorne faktorske analize. Upitnik je predstavljao trofaktorski model, a sadržavao je 19 pitanja i nijedno nije bilo obrnuto pitanje. Skala s 19 pitanja pripadala je Likertovu tipu s 5 stupnjeva, od „nikad" do „uvijek". Minimalni rezultat bio je 19 bodova, a maksimalni 95 bodova (oba dijela – za zlostavljača i za žrtvu). Veći broj bodova za oba dijela ukazivao je na veću razinu virtualnog zlostavljanja s obje pozicije – zlostavljača i žrtve.

„Izložio sam nekoga" treba identificirati razinu virtualnog zlostavljanja; „Izložen sam" služi identifikaciji žrtve. Skala se nalazi u prilogu rada. Prvi faktor pod nazivom „seksualno zlostavljanje u virtualnom prostoru" obuhvaća sedam pitanja, a definira ga 24,4% ukupne varijance. Na drugi se faktor nazvan „zbunjivanje i postavljanje zlonamjernog sadržaja u virtualni prostor" odnosi osam pitanja, a definira ga 11,5% ukupne varijance. Treći, posljednji faktor, poznat kao „širenje glasina u virtualnom prostoru", sadrži četiri pitanja i definira 6,9% ukupne varijance. S obzirom na svih 19 pitanja, riječ je o 44% totalne varijance.

U istraživanju Ayas i Horzum (2010) konfirmatorna faktorska analiza za rezultate (s obzirom na dio zlostavljača), GFI (indeks slaganja) iznosio je $\chi^2 = 508{,}86$ (df = 146, p = ,00), $\chi^2/df = 3{,}47$, RMSEA = 0,074, GFI = 0,89, AGFI = 0,86, CFI = 0,90, NFI = 0,87 i NNFI = 0,88. Koeficijent unutarnje konzistencije za zlostavljača bio je ,81. Konfirmatorna faktorska analiza za rezultate (s obzirom na dio za žrtvu) GFI iznosio je $\chi^2 = 459{,}39$ (df = 149, p = ,00), $\chi^2/df = 3{,}08$ RMSEA = 0,068, GFI = 0,90, AGFI = 0,88, CFI = 0,93, NFI = 0,90 i NNFI= 0,92. GFI za skalu bio je na prihvatljivoj razini. Koeficijent unutarnje konzistencije za žrtvu iznosio je ,81. U ovom je istraživanju taj koeficijent za zlostavljača ,82, odnosno za žrtvu ,81.

Analiza podataka

Nakon što je određen uzorak, skale su istodobno dostavljene trima školama s različitim SES-om. Svakom je učeniku bilo potrebno 20 minuta da odgovori na pitanja unutar skale. Svi su podaci kodirani i zabilježeni s pomoću programa SPSS 13. Da bi se odredilo virtualno zlostavljanje učenika s pozicije zlostavljača i žrtve, deskriptivnom su statistikom utvrđene srednje vrijednosti i standardne devijacije. Provedene su dvije odvojene trosmjerne analize varijance (ANOVA) da bi se provjerili učinci demografskih varijabli (spol, razred i SES) na virtualno zlostavljanje učenika s obiju pozicija. Sve statističke obrade ukazale su na razinu značajnosti od 0,05.

Rezultati

Provedene su dvije odvojene trosmjerne analize varijance (ANOVA) da bi se provjerili učinci demografskih varijabli (spol, razred i SES) na virtualno zlostavljanje učenika s obiju pozicija.

Učinak demografskih varijabli na zlostavljača

Diferencijacija demografske varijable razina virtualnog zlostavljanja učenika utvrđena je s pomoću trosmjerne analize varijance. Analiza deskriptivne statistike prikazana je u tablici 2.

Tablica 2.

Kada se pogledaju rezultati za skalu virtualnog zlostavljanja, vidi se da je srednja vrijednost 21,54, da je veća kod dječaka (M = 22,63, SD = 0,24) nego kod djevojčica (M = 20,79, SD = 0,24), što ukazuje na to da će zlostavljači biti prije dječaci. Rezultati ovog istraživanja pokazali su, štoviše, da se srednja vrijednost povećava iz nižeg u viši razred. S povećanjem učeničkog SES-a veće su i srednje vrijednosti. Drugim riječima, učenici u višem razredu i s većim SES-om pokazuju tendenciju da budu veći zlostavljači.

Tablica 3.

Trosmjerna ANOVA rezultirala je značajnim srednjim učinkom na virtualno zlostavljanje prema spolu ($F_{(1, 704)}$ = 29,95, p<,05), razredu ($F_{(2, 704)}$= 4,72, p < ,05) i SES-u ($F_{(2,704)}$ = 48,71, p < ,05). Ponovno je trosmjerna ANOVA rezultirala značajnim učinkom dvosmjerne interakcije na virtualno zlostavljanje u odnosu na Spol*SES ($F_{(1, 704)}$ = 7,03, p < ,05) i Razred*SES ($F_{(2, 704)}$ = 3,53, p < ,05), ali ne Spol*Razred ($F_{(2, 704)}$ = 1,49, p =,226). Nije otkrivena značajna trosmjerna interakcija među demografskim varijablama (spol, razred i SES) kada je virtualno zlostavljanje u pitanju. Dječaci su postigli značajno veći rezultat nego djevojčice čija je veličina učinka mala (Partial η^2 =,041). Mala veličina učinka pokazuje da se samo 4,1% varijance učeničkog virtualnog zlostavljanja može objasniti spolom. Budući da je ANOVA bila značajna za razred, SES, Spol*SES i Spol*SES, dodatno je proveden Bonferronijev test da bi se odredile udvojene razlike.

Tablica 4.

Učenici osmog razreda imali su značajno veći rezultat od učenika šestog razreda. Rezultat s obzirom na razred ima malu veličinu učinka (Partial η^2=,013) i pokazuje da se samo 1,3% varijance učeničkog virtualnog zlostavljanja može objasniti varijablom razred. Učenici s većim SES-om češće su zlostavljači od učenika čiji je SES srednji ili nizak. Nadalje, učenici sa srednjim SES-om češći su zlostavljači od učenika čiji je SES nizak. Rezultat koji se odnosi na SES ima malu veličinu učinka (Partial η^2 =,122). Mala veličina učinka pokazuje da se samo 12,2% varijance učeničkog virtualnog zlostavljanja može objasniti SES-om.

Djevojčice čiji je SES visok imaju značajno veći rezultat u odnosu na djevojčice iz kategorije srednjeg i niskog SES-a. Isto vrijedi i za dječake. Dječaci čiji je SES srednji imaju značajno bolji rezultat od onih iz kategorije srednji i nizak SES. Rezultat koji se odnosi na interakciju između spola i SES-a ima malu veličinu učinka (Partial η^2 =,020). Mala veličina učinka pokazuje da se tek 2,0% varijance učeničkog virtualnog zlostavljanja može objasniti interakcijom između Spola i SES-a.

Učenici šestog razreda čiji je SES visok imaju značajnu veći rezultat nego učenici šestog razreda čiji je SES srednji ili nizak. Isto vrijedi za učenike sedmog razreda. Osim toga, učenici osmog razreda s visokim SES-om imaju značajno veći rezultat od svojih vršnjaka čiji je SES srednji ili nizak. Učenici osmog razreda čiji je SES srednji imaju značajno veći rezultat u usporedbi s učenicima osmog razreda čiji je SES nizak. Rezultat za interakciju između razreda i SES-a ima malu veličinu učinka (Partial η^2 =,020). Mala veličina učinka ukazuje na to da se 2,0% varijance učeničkog virtualnog zlostavljanja može objasniti interakcijom između Razreda i SES-a.

Učinak demografskih varijabli na žrtvu

Razina na kojoj su učenici (koji su sudjelovali u istraživanju) izloženi virtualnom zlostavljanju analizirana je, prema razlikama u demografskim varijablama, trosmjernom analizom varijance. Deskriptivna statistika koja se odnosi na tu analizu nalazi se u tablici 5.

Tablica 5.

Pogled na rezultate skale za žrtvu virtualnog zlostavljanja pokazuje srednju vrijednost od 22,81. Dječaci (M = 23,75, SD = 0,28) imaju veću srednju vrijednost od djevojčica (M = 22,10, SD = 0,28), što pokazuje da će dječaci u tom pogledu vjerojatno imati veći rezultat. Rezultati su ovog istraživanja, štoviše, pokazali bolji srednji rezultat u višim u odnosu na niže razrede. Isto se događa i s povećanjem SES-a. Drugim riječima, učenici viših razreda čiji je SES veći imali su tendenciju postizanja većih rezultata na skali za žrtvu.

Tablica 6.

Rezultati analize učenika osnovne škole u poziciji žrtve virtualnog zlostavljanja otkrili su značajan učinak spola ($F_{(1, 704)}$ = 16,85, p < ,05) i SES-a ($F_{(2, 704)}$ =16,31, p < ,05), ali ne i razreda ($F_{(2, 704)}$ =0,79, p =,45). Ponovno je trosmjerna ANOVA dovela do značajnog učinka dvosmjerne interakcije za varijable Spol*SES ($F_{(1, 704)}$ =4,68, p<,05) i Razred*SES ($F_{(2, 704)}$ =2,66, p<,05), ali ne za Spol*Razred ($F_{(2, 704)}$ =1,18, p =,307). U slučaju žrtava nisu otkrivene značajne trosmjerne interakcije između demografskih varijabli (spol, razred i SES). Dječaci imaju značajno veći rezultat od djevojčica, čija je veličina učinka mala (Partial η^2=,023). Mala veličina učinka pokazuje da se samo 2,3% varijance može objasniti spolom. S obzirom na to da je ANOVA bila značajna za SES, Spol*SES, i Razred*SES, dodatno je proveden Bonferronijev test da bi se odredile udvojene razlike između SES-a, Spola*SES-a, i Razreda*SES-a (tablica 7).

Tablica 7.

Učenici čiji je SES visok ili srednji više su izloženi virtualnom zlostavljanju od onih čiji je SES nizak. Ti rezultati imaju malu veličinu učinka (Partial η^2 =,044). Mala veličina učinka pokazuje da se samo 4,4% varijance za žrtve zlostavljanja može objasniti SES-om.

Djevojčice čiji je SES srednji imaju značajno veći rezultat od djevojčica čiji je SES nizak. Dječaci čiji je SES visok imaju značajno veći rezultat od dječaka čiji je SES srednji i nizak. Rezultat s obzirom na interakciju između Spola i SES-a ima malu veličinu učinka (Partial η^2 =,013). Mala veličina učinka pokazuje da se tek 1,3% varijance za žrtve može objasniti interakcijom između tih dviju varijabli.

Učenici sedmog razreda čiji je SES visok imaju značajno veće rezultate od vršnjaka čiji je SES srednji i nizak, kao što učenici osmog razreda čiji je SES visok imaju značajno veće rezultate od svojih vršnjaka sa srednjim i niskim SES-om. Interakcija između Razreda i SES-a ima malu veličinu uzorka (Partial η^2 =,015), koja pokazuje da se tek 1,5% varijance može objasniti tom interakcijom.

Rasprava

Virtualno zlostavljanje kao široko rasprostranjen oblik zlostavljanja može se definirati kao namjerno i kontinuirano nanošenje štete drugima s pomoću informacijsko-komunikacijskih sredstava. Analiza relevantnog istraživanja pokazuje da se virtualno zlostavljanje provodi putem interneta i mobilnih telefona (Li, 2007; Patchin i Hinduja, 2006; Willard, 2005). Istraživanje virtualnog zlostavljanja u Turskoj je tek započelo (Aricak et al., 2008; Erdur-Baker & Kavşut, 2007).

U istraživanjima virtualnog zlostavljanja proučavaju se tehnološka sredstva koja se najčešće koriste za takvo zlostavljanje i „spol" kao varijabla. Varijable kao što su „SES" ili „razred" nisu tako česte u istraživanjima. U ovom su istraživanju analizirani učenici osnovne škole s obzirom na to jesu li virtualni zlostavljači ili žrtve kada ih se razmotri po spolu, razredu i SES-u.

Istraživanje je pokazalo da dječaci više sudjeluju u virtualnom zlostavljanju i više su mu izloženi od djevojčica. Iako navedeni rezultat odgovara onom iz istraživanja Arıcak i sur. (2008), Erdur-Baker (2010), Erdur-Baker i Kavşut (2007), Li (2006), i Li (2007), ne podudara se s rezultatom istraživanja što su ih proveli Beale i Hall (2007), Hinduja i Patchin (2008a), Hinduja i Patchin (2008b), Keith i Martin (2005), Nelson (2003), Patchin i Hinduja (2006), Vandebosch i van Cleemput (2009). Može se reći da nekonzistentni rezultati pripadaju istraživanjima koja su provedena uglavnom u ekonomski razvijenim zemljama. Kako ekonomski razvoj napreduje, nije moguće uočiti razliku u dostupnosti tehnoloških resursa među spolovima.

SES se istražuje kao druga varijabla u istraživanju, a prema njoj učenici s visokim SES-om su zlostavljači i izloženi zlostavljanju češće od učenika čiji je SES nizak ili srednji. Taj se rezultat podudara s rezultatima Stys (2004), ali ne i s rezultatima Erdur-Baker i Kavşut (2007). Pokazuje se da će SES povećati vjerojatnost angažiranja u virtualnom zlostavljanju i zadobivanja statusa njegove žrtve jer učenici čiji je SES visok imaju povećan pristup tehnološkim sredstvima, kao što su računala, internet i mobilni telefoni, pa se njima često služe.

U ovom je istraživanju također razmotren razred kao varijabla i u vezi s tim nisu utvrđene značajne razlike, što se podudara s istraživanjem Smith i sur. (2006). Takav

bi se rezultat mogao objasniti jednakim brojem učenika, kao i malom razlikom u njihovoj dobi i zrelosti. Istraživanje je, štoviše, pokazalo učinak dvosmjerne interakcije na angažman u virtualnom zlostavljanju i zadobivanju statusa njegove žrtve kada su u pitanju Spol-SES i Razred-SES, ali ne i Spol-Razred. Nisu otkrivene nikakve značajne trosmjerne interakcije između demografskih varijabli (spol, razred i SES), bez obzira na poziciju u virtualnom zlostavljanju.

Posljednje, ali ne najmanje važno, jest da istraživanje otkriva razliku između onoga tko zlostavlja i onoga tko je žrtva u smislu SES-a. Štoviše, buduće bi se istraživanje trebalo ponovno temeljiti na varijablama kao što su: pristup tehnološkim sredstvima, stanovanje i iskustva (žrtva/zlostavljač) u drugim oblicima zlostavljanja. S druge strane, moguće je istraživati virtualno zlostavljanje s obzirom na varijablu „spol". Moguća su također usporedna istraživanja na uzorku ispitanika iz drugih zemalja. Na kraju, moglo bi se provesti još jedno važno istraživanje o razvoju prevencije virtualnog zlostavljanja i intervencijskih programa.