

Analyzing The Relationship Between Cyberbullying Sensibility And Cyber Victimization Levels Of High School Students

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ABSTRACT

The purpose of this research is to analyze the relationship between cyberbullying sensibility and cyber victimization levels of Anatolian high school students. The correlational research model was used in this study. The population of the study consists of 2013-2014 education year and 1917 Anatolian high school students in Hendek, Sakarya and 439 students were selected via random sampling method. In the study "The scale of sensibility related to Cyberbullying" which has three parts and developed by Tanrikulu, Kınay and Arıcağ (2001) and "The scale of Cyber Victimization" which was developed by Arıcağ, Tanrikulu and Kınay (2012) were used to collect the data. The data of the research were analyzed by using SPSS for Windows 21.0 programme. For analyzing the data Kolmogorov-Smirnov, mean, frequency, percentage, standard deviation, Mann-Whitney U, Kruskal-Wallis and Spearman Rho correlation tests were used. When the values were analyzed, it was determined that there is low and negative relation between cyberbullying sensibility and cyber victimization levels. And also it was obtained that there was statistically meaningful difference in variables of the study.

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Keywords:

Cyberbullying sensibility, cyber victimization, high school student.

INTRODUCTION

Nowadays, it draws attention that although digital communication is intense and global, it has different effects on different societies. Furthermore, that internet which is an easy way of accessing information has different effects on various youth and child groups was studied in the light of sources with its positive and negative aspects (Tüzün, 2002). Computers and the internet which is a product of information and communication technologies provides plenty of freedom to the individual in sense of access to information and communication. (Odabaşı, Kabakçı ve Çoklar, 2007). Besides providing numerous advantages, information and communication technologies also cause experiencing some drawbacks. One of these drawbacks is that it adds a new dimension to the peer bullying which is defined as cyberbullying or electronic bullying that is already a problem at schools (Baker ve Kavşut, 2007). Although the internet offers the rich information and opportunities to the teens, there are potential risks and dangers (Mitchell, Ybarra ve Finkelhor, 2007).

Advantages that the internet provides in many areas like education in the first place are unquestionable. However, problems caused by the misuse of the technology emerges as it is experienced in any technological advancement. Besides facilitating daily life, communication tools like the internet, cell phones, text messaging services becomes means of harming others in the hands of malicious people. Harmful actions performed with this tools were defined as cyberbullying (Arıcağ, 2009; Özdemir ve Akar, 2011).

In the international literature, cyberbullying is defined as "deliberate and repeated actions that promotes hostile behaviour and include the use of information and communication technologies such as e-mail, cell phones, pagers, text messaging services, and web sites by an individual or a group of people in order to harm other people (Arıcağ, 2009). They point out that bullying affects the character and further social life of the students who bully, who are exposed to bullying (victim), and who witness it negatively (Şahin vd. , 2010). Considering the effects of cyberbullying, besides seeing that cyberbullying causes very serious psychological effects, these adverse effects that emerge reveal the necessity to investigate all aspects

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of cyberbullying (Bavlı ve Pamuk, 2013). To avoid the serious psychological effects of cyberbullying and minimize the problems it causes the victims must be sensitive to cyberbullying. Cyber victims who are classified as sensitive try to be extremely vigilant against the threatening situations and stimulus. These individuals are in a constant state of observing their environment to recognize potential threat and stimuli and respond to them in order prevent these from harming them (Bayezid, 2000).

In elimination, or with a more optimistic view, reduction of cyberbullying to a minimum knowledge and awareness levels of various stakeholders in the school context gains a great importance. Similarly related studies in the literature draws attention to awareness of teachers and they must be sensitive in dealing with cyberbullying (Agatston, Kowalski ve Limber, 2007; Akbulut ve Erişti, 2011; Baker ve Kavşut, 2007; Özdemir ve Akar, 2011; Şahin vd. 2010 akt. Gezgin ve Çuhadar, 2012).

Aim of the Study

In this context, the aim of this study is to investigate the relationship between the sensitivity to cyberbullying and victimization levels. For this purpose, answers to the following questions were searched.

1. What are the sensitivity to cyberbullying and cyber victimization levels of the high school students?
2. Are there any differences in the views of high school students according to the independent variables (gender, class, internet user time, websites visited, economic status, emotion levels)?
3. Is there a relationship between their views about sensitivity to cyberbullying and cyber victimization levels?

METHOD

The model of this research is the relational scanning model. Relational scanning models are research patterns which aim to determine the presence or degree of covariance between two or more variables. Although the relational scanning model does not present a true cause and effect relationship, it allows to estimate the situation in a variable when the other is known (Karas, 2006) and aims to collect data to identify the characteristics of a group (Büyüköztürk, 2009).

Material

486 (%86.7) of the 560 questionnaire distributed to all schools returned, 12 (%1.14) were unfilled, 76 (13.57) were filled incorrectly. Unfilled and incorrectly filled ones were eliminated and 439 (%78,39) were used.

The cyberbullying sensitivity scale which was developed by Tanrikulu, Kınay ve Arıçak (2011) is a 14-item scale and it consists of one factor. The Cronbach's alpha coefficient of the scale in this study is $\alpha = .77$. Questions on the scale were scored as "yes" option 3 points, "sometimes" option is 2 points, "no" option is 1 point. The maximum score that can be obtained from the scale is 42, the lowest score is 14 (yes= 2.33 – 3.00, I'm hesitant= 1.67 – 2.32, no= 1.00 – 1.66).

Construct Validity of the "Cyber Victimization" scale developed by Arıçak, Tanrikulu and Kınay (2012) was examined by exploratory factor analysis and it was seen that scale exhibited a one-factor structure. The Cronbach's alpha coefficient of the scale was measured in this study is $\alpha = .86$. The scale consists of 24 items and answered on a binary scale (no,yes). "No" is calculated as 1 point and "yes" is calculated as 2 points. Thus, the lowest score that can be obtained from the scale is 24, and the highest score is 48. The rise of the points indicate the extent of the cyber victimization.

Data Analyses

Target population of this research is; 1917 students at Four High Schools in Adapazarı Hendek county in Sakarya Province in 2013-2014 Academic Year, as the sample is 439 students selected by random sampling method. The students in the sample were randomly selected and the study was limited to the Hendek Central District of Sakarya Province.

The research data was analysed using SPSS for Windows 21.0. According to the result of the Kolmogoroy Smirnoy Test which was applied in order to determine which tests will be applied to the obtained data, it was found that data did not show normal distribution ($p < .05$). Therefore, non-parametric test was applied to analyze the data. Frequency, percentage, standard deviation, Mann-Whitney and Kruskal-Wallis and Spearman Rho correlation test were used In the analysis of data.

FINDINGS

In this part of the study, teachers' answers to the "Sensitivity of High School Students to Cyberbullying" and "Cyber Victimization" scales were analysed and results were evaluated.

Table 1. Opinions of students regarding the relationship between sensitivity to cyberbullying and cyber victimization levels

Scale	N	\bar{x}	S.d.
Sensitivity to Cyberbullying Scale	439	2,3863	,42395
Cyber Victimization Scale	439	1,1377	,17234

Examining the Table I. it can be seen that the students perception regarding the sensitivity to cyber victimization scale is "yes" with $\bar{x} = 2.38$ average, and their perception regarding the cyber victimization scale is "no" with $\bar{x} = 1,13$ average. When these findings were reviewed it was concluded that high school students perceive themselves as sensitive to cyberbullying and they are not susceptible to cyber victimization.

Table 2. Mann-Whitney U Test Results on Sensitivity to Cyberbullying and Cyber Victimization Levels of High School Students According to Gender

Scale	Gender	N	Mean Ranks	Rank Sum	U	p
Sensitivity to Cyber Bullying	Female	223	237,47	52955,00	20189.000	.003
	Male	216	201,97	43625,00		
	Total	439				
Cyber Vicitimization	Female	223	216,71	48326,00	23350.000	.574
	Male	216	223,40	48254,00		
	Total	439				

Examining the Table 2 it can be seen that gender variable reveals a significant difference in the students opinions regarding the sensitivity to cyberbullying ($p < 0.05$). As the result of the conducted analysis comparing the scores mean rank it is understood that female students are more sensitive to cyberbullying than male students. This result may be due to the female students' social roles. Gender variable did not indicate a significant difference on the opinions of the students regarding the cyber victimization ($p > 0.05$). Female and male students have similar views. Due to this result, it can be seen that gender variable is not an effective variable in students opinions regarding the cyber victimization. The reason why cyber victimization is not differeantiated by gender may be that cyber bullies do not dicriminate gender.

Table 3. Kuruskal Wallis Test Results on Sensitivtiy to Cyberbullying and Cyber Victimization Levels of High Schools Students According to The Grade Variable

Scale And Dimensions	Grade	N	Mean Ranks	df	χ^2	p	Significance
Sensitivity To Cyber Bullying	9	112	244,01	3	7.943	.047	9-12
	10	107	215,66				
	11	110	223,09				
	12	110	196,69				

Cyber	9	112	206,11	3	7.664	.053	–
Victimization	10	107	201,35				
	11	110	239,59				
	12	110	232,70				

Examining the Table 3, it can be seen that grade variable predicts a significant difference in sensitivity to cyberbullying scale. Results of the Mann-Whitney U test which was applied in pairs in order to reveal the source of the difference showed that the difference is ($\chi^2(sd=3,n=439)= 7.943, p<.05$) in 9-12 groups. According to this result, it can be concluded that 12th grade students are more sensitive to the cyberbullying than 9th grade students. The reason of this result may be that 9th grade students behave sensitively because they are in the process of adaptation to school and recognition to environment. Grade variable does not predict a significant difference in the cyber victimization scale. This finding maybe resulting from the fact that cyberbullying and victimization do not change due to grade level.

Table 4. Kurukul Wallis Test Results on Sensitivity to Cyberbullying and Cyber Victimization Levels of High School According to the Internet Usage Time Variable

Scale and Dimensions	Grade	N	Mean Ranks	df	χ^2	p	Significance
Sensitivity to Cyber Bullying	I never use	4	164,13	4	2.993	.559	–
	rarely	95	209,18				
	1-3 a week	80	219,29				
	4-6 a week	59	240,30				
	everyday	201	220,55				
Cyber Victimization	I never use	4	247,13	4	15.342	.004	2-4
	rarely	95	180,17				2-5
	1-3 a week	80	211,63				
	4-6 a week	59	227,84				
	Everyday	201	239,31				

Examining the Table 4. it can be seen that internet usage variable does not predict a significant difference in sensitivity to cyberbullying scale, and internet usage predicts a significant difference in cyber victimization scale. Results of the Mann-Whitney U test which was applied in pairs in order to reveal the source of the difference showed that the difference is ($\chi^2 (sd=3,n=439)= 15.342, p<.05$) in 2-4 and 2-5 groups. According to this result, it can be concluded that students who use the internet rarely are less victimized than the ones who uses the internet 4-6 times and everyday. According to this result, it can be said that the level of cyber victimization decreases when the usage of internet decreases. Internet usage does not predict a significant difference in sensitivity to cyberbullying scale.

Table 5. Kurukul Wallis Test Results on Sensitivity to Cyberbullying and Cyber Victimization Levels of High School According to the Visited Sites Variable

Scale	Sites	N	Mean Ranks	df	χ^2	p	Significance
Sensitivity to Cyberbullying	Social Network	331	215,60	4	2.993	.559	–
	Education, Homework	78	221,95				
	Chat	5	256,00				
	Game	24	269,25				
	Forum	1	164,00				
Cyber Victimization	Social Network	331	224,41	4	7.960	.093	–
	Education, Homework	78	195,42				
	Chat	5	316,10				
	Game	24	225,35				

Forum	1	68,50
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Examining the Table 5. it can be seen that visited sites variable does not predict a significant difference neither in sensitivity to cyberbullying scale nor in cyber victimization scale

Table 6. Kurukal Wallis Test Results on Sensitivity to Cyberbullying and Cyber Victimization Levels of High School According to Economic Status Variable

Scale	Economis Status	N	Mean Ranks	df	χ^2	p	Significance
Sensitivity to Cyberbullying	Low	23	200.43	2	.736	.692	_
	Medium	372	221.93				
	High	44	213.92				
Cyber Victimization	Low	23	236.65	2	7.174	.028	2-3
	Medium	372	213.63				
	High	44	265.16				

Examining the Table 6. it can be seen that economic status does not predict a significant difference in sensitivity to cyberbullying scale but does so in cyber victimization scale. Results of the Mann-Whitney U test which was applied in pairs in order to reveal the source of the difference showed that the difference is (χ^2 (sd=2,n=439)= 7.174, $p<.05$) in 2-3. According to this result, it can be concluded that children who comes from high income families are exposed to cyberbullying more than the children who comes from medium income families.

Table 7. Kurukal Wallis Test Results on Sensitivity to Cyberbullying and Cyber Victimization Levels of High School According Emotion Variable

Scale	Emotion	N	Mean Ranks	df	χ^2	p	Significance
Sensitivity to Cyberbullying	happiness	279	215.42	3	1.290	.731	_
	sorrow	87	232.91				
	anger	65	221.84				
	fear	8	224.25				
Cyber Victimization	happiness	279	200.48	3	18.920	.000	1-2
	sorrow	87	256.53				
	anger	65	252.00				
	fear	8	243.31				

Examining the Table 6. it can be seen that economic emotion variable doesn't predict a significant difference in sensitivity to cyberbullying scale but does so in cyber victimization scale. Results of the Mann-Whitney U test which was applied in pairs in order to reveal the source of the difference showed that the difference is (χ^2 (χ^2 (sd=3,n=439)= 18.920, $p<.05$) in 2-3 groups. This means, students who feel sad and angry during the day are more exposed to cyber victimization than the ones who feel happy.

Table 8. Distiribution of Relationships Between High School Students' Opinions Regarding Sensitivity to Cyberbullying and Cyber Vicitmization

Scale		1	2
1. Sensitivity to Cyberbullying	r	1	
2. Cyber Victimization	r	-,079	1

$p>.05$

Examining the Table 8. it can be seen that there is a very weak negative relationship between "Sensitivity to Cyberbullying" and "Cyber Victimization" scales ($r = -.079$) but this relationship does not predict a significant difference. This means, high school students stated that the relationship between sensitivity to cyberbullying and cyber victimization is too weak to be significant. Evaluation of this results indicates that students' sensitivity to cyberbullying level does not predict their cyber victimization rates. It can be said that students cannot avoid cyber victimization no matter how sensitive they are to cyberbullying. Or may be the students at the school where this research was conducted did not think that they were cyber victims. Thus no relationship was found between sensitivity to cyberbullying and cyber victimization scales. This study may produce better results if conducted in schools where cyber victimization was experienced.

RESULT, DISCUSSION, AND SUGGESTIONS

In this context, the aim of this study is to investigate the relationship between the sensitivity to cyberbullying and victimization levels. Results obtained for this purpose are : When the findings were evaluated it can be seen that students perception to the sensitivity to cyberbullying scale is at "yes" level with $\bar{x} = 2,38$ average, and their perception to the cyber victimization scale is at "no" level with $\bar{x} = 1$. This result means that the high school students who participated in this research feels that they are sensitive to cyberbullying and they are not cyber victims. Gezgin ve Çuhadar (2012) points out that Computer Education and Instructional Technology students have a high level of sensitivity to cyberbullying in their study. As the opinions of high school students about individual variables it can be seen that gender variable predicts a significant difference in their views of sensitivity to cyberbullying. Analyse results point out that female students are more sensitive to cyberbullying than male students. This finding may result from the situation that female students have a belief that they must protect themselves more in social environments. Eroğlu and Peker (2011) stated that female students took precaution to protect themselves from negative behaviours since they knew cyberbullying is a result of communication and information technologies. Gender variable did not predict a significant difference in the students opinions regarding cyber victimization scale. Girls and boys have the similar views. According to this result it can be seen that gender is not a significant variable on students' opinions regarding cyber victimization. Erdur-Baker and Kavşut (2007) stated that male students are exposed to more cyberbullying. Ozdemir and Akar (2011) and Topçu (2008) also pointed out that there is no relationship between cyber victimization and gender.

Grade level seems to predict a significant difference in sensitivity to cyberbullying scale. According to this result, 9th grade students can be said to be more sensitive to cyberbullying than 12th grade students. As this finding evaluated it can be stated that 9th grade students are experiencing a adaptation to school process and thus they show a protectionist attitude compared to 12th grade students. Grade variable does not predict a significant difference in cyber victimization scale. Ozdemir and Akar's (2011) research found that grade level does not have any differentiating effects on cyber victimization.

Internet usage variable does not predict a significant difference in sensitivity to cyberbullying but does so in cyber victimization scale. According to these results high school students who use the internet rarely can be said to be less exposed to cyberbullying than the ones who uses the internet 4-6 times a week and everyday. Reviewing this finding it can be stated that the more the students use the internet the more they are exposed to cyberbullying. In the sensitivity to cyberbullying scale internet usage variable does not predict a significant difference. On the contrary, in their research Ozdemir and Akar (2011) pointed out that there is no relationship between the time they spent on the internet and exposure to cyberbullying.

Visited sites variable does not predict neither in sensitivity to bullying scale nor in cyber victimization scale. As the visited sites variable in this research reviewed it is found that %75.3 of the students use social networking sites. In another research, when the students' frequency of using social networking sites was reviewed and it is found that %57.3 visits special networking sites everyday once or more (Otrar ve Ökte, 2014).

Economic status variable does not predict a significant difference in sensitivity to cyberbullying scale but it predicts a significant difference in cyber victimization scale. According to this result it can be stated that children coming from families with high income are exposed to cyberbullying more than the children

with families with average income. The result of this finding maybe that the children from higher economical levels have better access to the internet.

Finally, it can be seen that emotion variable does not predict a significant difference in sensitivity to cyberbullying scale but predicts a significant difference in cyber victimization scale. This means students who feel sad and angry during the day are more vulnerable to cyberbullying. Or it can be said that students who are exposed to cyberbullying feels more sorrow and anger than the students who are not. Research from the field supports this result. When students are exposed to cyberbullying their anger, sorrow and vengeance increases (Yaman ve Peker, 2012). Sahin et al., (2010) stated that students feel anger, sorrow, hatred and vengeance when they are exposed to cyberbullying.

When the relations between the scales were reviewed it can be seen that there is a very weak negative relationship ($r = -.079$) between "Sensitivity to Cyberbullying" and "Cyber Victimization" scales but this relationship does not predict a significant difference. This means high school students expressed that the relationship between sensitivity cyberbullying scale and cyber victimization scale is too weak to be significant.

A system which does not ignore the pshychological states of the students is necessary for succeeding the targeted educational attainments. To achieve a good student physcologic state their level of exposure to cyberbullying must be minimized. Supplying the students information about cyberbullying we can promote a sensitivity to cyberbullying.

Although this research found a very weak relationsho between sensitivity to cyberbullying and cyber victimization, it can give better results if conducted in a school where more cyber victimization was experienced.

The following suggestions were developed in the light of the findings of the study:

Considering that there is a positive relationship between the rates of internet usage and cyber victimization, students' sensitivity to cyberbullying can be promoted by means of providing training on information technology. Because the students who are exposed to cyberbullying feel more sorrow and anger during the day counselors at school can consider their situation and help them. No relationships were found between sensitivity to cyberbullying scale and cyber victimization scales. This may be because the students at the schools where this research was conducted did not think they were cyber victims. If this study is conducted at a school where cyber victimization was conducted, it can provide better results.

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