CYBER BULLYING, CYBER VICTIMIZATION AND PSYCHOLOGICAL SYMPTOMS: A STUDY IN ADOLESCENTS

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ABSTRACT

In this study, the relationship between cyber bullying, cyber victimization and psychological symptoms was investigated in adolescents. The sample of the study consisted of 300 high school student adolescents who attend different types of high schools in Trabzon in 2009-2010 academic years. In the study, demographic data form, The Scale of Cyber bullying and Brief Symptom Inventory were used as data collection instruments. Pearson's Correlation Coefficients, One-Way ANOVA and independent samples *t* test were conducted to analyze the data. The results of the study showed that there were significant relationships between cyber bullying, cyber victimization and some psychological symptoms. Furthermore, significant differences were found in cyber bullying and cyber victimization in terms of school type and gender variables. These results were discussed in light of relevant literature and some recommendations were made.

Keywords: Cyber bullying, psychological symptoms, adolescents.

INTRODUCTION

During the adolescence period, relationships among youngsters become more of an issue and these relationships have an important place in social and psychological development of youngsters (Espelage and Swearer, 2003). Positive relationships lead up to advance a successful identity of youngsters and to live in perfect harmony with society. At the same time, negative relations cause youngsters confront a host of problems during adolescence. An individual's exposure to bullying and aggression from his/her peers harms individual's emotional, social and psychological development.

In recent years, the effects of rapid developing technology has also effected schools as every institution of community and at an equal rate students has possessed new technological products such as computers, mobile phones. In parallel with this development, various problems have come into existence about the use of these products by youngsters. Research in this field demonstrate that today we face with cyber bullying behavior which is a new form of violence (Bendixen, Endresen and Olweus, 2003; Breivik and Olweus, 2006; Özen, 2006; Solberg, Olweus and Endresen 2007). Cyber bullying behavior, literally, is described as a kind of violence, including the usage of internet and mobile phones (Vandebsch and Cleemput, 2008). Similarly, Li (2007) described cyber bullying as a kind of bullying behavior involving the inclination as hacking personal websites and damaging information given through the use of information and communication technology such as email, mobile phone and sending

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messages . In a study which investigated the effects of cyber bullying on adolescents, cyber bullying behaviors was defined as deliberate bullying behaviors against a person or a group via internet and mobile phone (Williams and Guerra, 2007). Bullying has been increasing at online environments like others. Researchers imply that cyber bullying behaviors grew as a result of increasing online shared social life among modern youngsters and children (Campell, 2005; Dehue, Bolman and Vollink, 2008). There are some studies about intensity of cyber bullying behaviors and the using of this behavior by which type of gender and age groups. According to a study conducted on 1498 regular internet user ages between 10 and 17, 19% of participants have been exposed to aggression and aggressive behaviors as online, 84% of them have exposed to bullying by others, 31% of them performed bullying to others (Ybarra and Mitchell, 2004). A similar study shows that 23% of 177 secondary school students in Canada have been exposed to bullying via e-mail, 41 % of them via telephone message, 35 % of them via chat rooms, 32 % of them have been exposed by friends they know in school, 11 % of them have been exposed to it by students in school they do not know, 16% of them have been exposed by both people they know and people they do not know in the school (Shariff, 2005).

There are also other studies which investigates the relationships between being cyber victim and changes in psychological situations of individuals. It has been found that people who have not performed any bullying and not exposed to bullying show lower psychiatric symptoms than target victims and bullying victims. It was concluded that hostile feelings and psychological symptoms are two basic variables which predict cyber bullying meaningfully (Cappadocia, 2008; Tynes and Giang, 2009). In the light of this background, it is seen that the studies on cyber bullying have been intensifying in the related literature in the recent years. This study dwells on determination of emotions and views of students about performing cyber bullying, exposing to it and cyber bullying during their adolescence period as they try hard to gain personal identities.

Aim of The Study
It is known that technological developments affect individuals in many ways, so that reason it is likely that there is an interaction between some psychological characteristics of individuals and being cyber bully, cyber victim. Accordingly, the aim of this study is to answer following questions;

1. Is there a relationship between high school students' being cyber bully or cyber victim statues and various psychological symptoms such as interpersonal sensibility, anxiety disorder, hostility?

2. Is there a significant difference in high school students' being cyber bully or cyber victim statues in terms of gender?

3. Is there a significant difference in high school students' being cyber bully or cyber victim statues in terms of school type?

METHOD

The current study is a field survey within the descriptive method. Survey models are research approaches which aim to describe past or present situations as it is (Karasar, 2007).

Study Group
The sample of study determined through random sampling. The study group consists of 300 students who attend different types of high schools in Trabzon in 2009-2010 academic years.

142 (47,3 %) of students were male; and 158 (52,7%) of students were female in the study group. Their age range changed between 15 and 19.

Instruments

The Scale of Cyberbullying (SCB): The scale developed by Topçu (2008) consists of two parallel forms in likert type which is made up of 26 items in order to determine the cyber bullies and cyber victims. Cronbach alpha reliability co-efficiency was calculated as .86. Analyses were made through total scores obtained from the scale.

Brief Symptom Inventory (KSE): This scale developed by Derogatis and Lazorus is made up of 53 items of which distinguishing the highest of 90 items of Symptom designation list. It provides reliable scan of various psychiatric signs. KSE is applied to the adolescents and matures and there is no time limit in application. In the inventory for each item there are choices as "a bit", "some", "normal", "much", "very". Marks between 0-4 are given to the answers and the points are between 0-212. The height of the total points taken from scale shows the frequency of the symptoms of the person (Savaşır and Şahin, 1997).

Data Analysis

The data gathered during the study were analyzed through Pearson's Correlation Coefficients, independent samples *t* test and One-Way ANOVA statistical methods.

RESULTS

The Relationship Between Being Cyber bully, Cyber victim and Psychological Symptoms

According to the results, it has been determined that there is a positive meaningful relationship between being cyber victim and the level of interpersonal sensitiveness of students ($r=0.142$, $n=299$, $p<0.01$). Also, it was found that that there is a positive meaningful relationship between the being cyber bully and cyber victim and the hostility scores of students ($r=0.258$, $n=299$, $p<0.05$; $r=0.293$, $n=299$, $p<0.05$). Finally, it was found that there is a positive meaningful relationship between being cyber victim and level of anxiety disorder of students.

Table 1. Correlation Matrix of the Study Variables

	1	2	3	4	5
1.Interpersonal Sensitiveness	1				
2.Hostility	.515(**)	1			
3.Anxiety	.473(**)	.546(**)	1		
4.Total bullies	.025	.258(**)	.061	1	
5.Total victims	.142(*)	.293(**)	.138(*)	.518(**)	1
Mean	3.973	5.933	1.545	.102	.137
Ss	3.374	4.558	.498	.229	.284

**p<0.01 *p<0.05

Examination of Being Cyber Bully and Cyber Victim in Terms of Gender Variable

Data analysis illustrated that male students perform more cyber bullying behaviors compare to females ($t=4.710$, $p<0.05$). In parallel to this, it was also determined that males students become cyber victims more than females ($t=2.228$, $p<0.05$).

Table 2. Independent Samples *t* test summary for Gender Differences

	Gender	N	$\overline{X}$	S	df	*t*	p
Cyber bullying	Male	141	.166	.298	297	4.710	.000*
	Female	158	.045	.118			
Cyber victimization	Male	141	.176	.306	297	2.228	.027*
	Female	158	.103	.259			

*p<0.05

Examination of Being Cyber bully and Cyber Victim in Terms of School Type Variable
According to results of data analysis, meaningful differences were found between being cyber bully and school type variable (F=5.826, p<0,05). In order to find out the source of these differences Tukey Post Hoc statistical method was utilized. According to the analysis, individuals who attend to general highs schools perform more cyber bullying behaviors compared to individuals who attend to Science High Schools.

Table 3. One -way ANOVA Summary for School Type

		ss	df	ms	F	p
Cyber bullying	Between groups	0.597	2	.298	5.826	.003*
	In groups	15.158	296	.051		
	Total	15.754	298			
Cyber victimization	Between groups	.367	2	.183	2.287	.103
	In groups	23.735	296	.080		
	Total	24.102	298			

*p<0.05

DISCUSSION

The results of the study illustrated that there is a meaningful relationship between being cyber bully and cyber victim and some psychological symptoms. It can be seen that there is a meaningful and positive relationship between being cyber bully and hostility. Hostility is seen high on bullies and victims than people who never experienced such situations (Ireland and Archer, 2004; Palmer and Thakordas, 2005). In addition in various studies it has been demonstrated that hostile sense is an important variable which can be used as a predictor for cyber bullying (Arıcak, 2009). Both performing cyber bullying behavior and being exposed to this behavior demonstrates that the individual is psychologically having important adjustment problems (Nansel, Overpeck, Pilla et al., 2001). Adjustment is both inner and environmental process and problems occurred throughout this process causes individuals to perceive social environment as a threat for him/herself and perform hostile and bullying behaviors. Individuals who exposed to bullying also develop hostile senses due to the need for self defense as a result of perceived threat and tension created by bullying behaviors.

One of the other important finding of the study is that there is a positive relationship between being cyber victim and interpersonal sensitivity. Interpersonal sensitivity is defined as the adequacy of an individual in knowing other individuals (Hall and Bernieri, 2001). It can be stated that the people who are sensitive in their relations become more able in knowing others. If this situation is evaluated from the perspective of becoming a victim, it is expected that the people whose level of interpersonal sensitivity is high can perceives and knows about others easily and avoid of the people whose level of bullying potential is high. Even though an

individual is sensitive in his/her relationships in daily life, the communication style in cyber environments is different from daily life. Not having a face to face or close communication and interaction may cause people, who are sensitive in their relations, not be able to realize the cyber bully in a short time and to be a cyber victim. In this research, the result which showed the positive relationship between the interpersonal sensitivity and becoming a cyber victim is linked as a parallel idea to the argument made above.

Being cyber victim may cause the person to have psychological function deficiency and some problematic situations, such as depressive symptoms, anxiety disorder, and to be unsocial (Cappadocia, 2008; Mitchel, Ybarra and Finkelhor, 2007; Tynes and Giang, 2009). The positive relation between becoming a cyber victim and anxiety in this study is a finding which support the findings in related literature. Unsocial people and the people who experience anxiety escape from social relations and use cyber environments and express themselves in this way. This may cause them to be a candidate of cyber victim. Also, being exposed to cyber bully may cause an increase in nonfunctional behaviors and the level of depressive symptoms and anxiety.

In the study it is found that there are meaningful differences between being cyber bully and cyber victim on the basis of gender variable. Findings of the study show that boys are exposed to both cyber bullying and perform cyber bullying more than girls. When traditional bullying, cyber bullying and gender relationships are investigated, it can be seen that boys seem to be more cyber bullies and cyber victims than girls (Borg, 1999; Delfabbro, Winefield, Trainor at al. , 2006; Li, 2006; Nansel, Overpeck, Pilla et al. , 2001). In terms of this perspective it can be said that findings of the study support the previous studies' findings. It is thought that the males are more interested in the internet and computers and this can be seen an important factor at this point. Intensive internet usage and lengthy time spent in cyber environments may cause males to be under risk of being cyber bullies and cyber victims.

When changes in being cyber bully and cyber victim investigated in terms of school type, it is found that there is a meaningful difference in cyber bullying in terms of attended school type. The results of the study show that the students who get education in general high schools have more cyber bullying behaviors than the students who get education in science high schools. Schools could show difference in terms of ratio of bullying when gender and age characteristics not taken into account. The school factor may affect ratio of being exposed to cyber bullying (Rigby 2007). In the related literature no study has been found about the relationship between attended school type and bullying. In this research, ratio of cyber bullying behaviors of general high school students was found higher than students who attend to science high schools. The reason of this difference can be related to the difference between the sizes of the school (number of the students) and academic interest and achievements of the students in both types of schools. It is thought that the general high schools are more crowded and it is more difficult to monitor students' activities in cyber environments. In other ways, it is difficult to realize students who perform cyber bullying or exposed to it due to high number of students in the school. Academic interests and achievements of general high school students are lower than science high schools. When relevant literature is take into account, traditional bullying and cyber bullying can be seen as a factor related with low academic success (Li, 2007; Nansel, Overpack, Pilla et al, 2001). In this sense, it is thought that the reason of high cyber bullying level in general high school than in science high schools can be related to the low level of academic success in general high schools.

If technology is not used suitably, it causes various cyber bullying behaviors to emerge. Such behaviors cause some behaviors to emerge starting from nonfunctioning behaviors to the level

of clinical symptoms in both cyber bully and cyber victims. Such situations may cause problems for the students in their social lives, school successes and school attendance. Some psychological problems which are related to being cyber bully and cyber victim can show up itself with some symptoms. Especially parents and teachers should be sensitive to changes in students. It is also thought that parents and teachers should be knowledgeable about cyber bullying and types of it. This is very important in terms of both developing prevention services and intervention programs. The schools which are crowded and have low academic success are seen as risk factor for cyber bullying. In crowded schools, the cyber bullying events and the its effects on students and the emerged symptoms may not be realized. In these schools and as elsewhere, especially in technology lessons, problems which can be faced in cyber environments can be made a part of the lesson and students can be informed. Educators should discuss problems arising from the misuse of technology with their students and find ways on how to overcome these problems. In addition to this, as males' cyber bullying behaviors and exposure to cyber bullying is higher than females, then this information should be taken into account and in educational activities males should be informed more carefully about proper and profitable use of technology.

In the future, studies could examine changes in psychological symptoms of cyber bullies and cyber victims in terms of gender variable. In addition, demographic factors which affect being cyber bully/cyber victim of both male and female students could be examined widely. The school can be seen as a related factor being cyber bully, cyber victim and multiple comparisons between different schools can be conducted on the basis of academic achievement, number of students and socio-economical background variables.

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