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# Analyzing The Risk Factors Predicting The Cyberbullying Status of Secondary School Students

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# Abstract

In this study, it was aimed to analyze the risk factors that predicts the cyberbullying status of secondary school students. Relational model was used in the study. The study was conducted on 400 secondary school student getting educated in different schools in Erzurum. Information form, Revised Cyberbullying Inventory, Positive and Negative Affection Scale, Social Media Attitude Questionnaire was used as data collection tools. The data analysis was done with multinominal logistik regression. In the study, it was determied that 17 % of the students experience cyberbullying, 10.5 % of the students bully others, and 35.2 % of them are bully/victim. As a result of the study, being unable to socialize is a risk factor to be a cyberbully, victim and victim/bully. It was seen that gender and internet usage time are factors to be cyberbully and cyberbully/victim, parental uncontrolling in child's internet use is a risk factor to be cyberbully, social attitude and negative affect are risk factors to be cyberbully/victim.

## Keywords

Cyberbullying Status Distinctive Factors Multinominal Logistic Regression Analysis

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# Introduction

As a result of today's needs, it can be seen that computer and cell phone usage and internet access is rapidly becoming widespread (Batmaz and Ayas, 2013). It is seen that especially the young use the internet to make friends, maintain their friendship and so they fulfill their social needs (Bingöl, 2013). Whether adolescents have a computer and a cell phone, the brand of the them, their technical specifications and the skill levels they have to use these technolohic tools can maintain their place in social groups (Soydaş, 2011). Beside information and communication technologies have become an important part of peer culture for adolescents, it is known that they have such functions as increasing communication increase the opportunity to reach information by facilitating to share information (Peker, 2013a).

Along with these means that the information and communication technologies has brought, it can be seen that excessive and uncontrolled use can cause several problems. These problems are dating with people having met online, decrease in academic success because of excessive use of information and communication technologies, preferring virtual friends to real life friends, sharing personal information in virtual environments, etc. (Eroğlu, 2014).

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As the information and communication tehnologies have been developed and have become widespread, bullying behaviors can now be seen on the internet. Especially after 2000s, cyberbullying has become a much more easy act with the introduction of social networks. Cyberbullying is defined as using internet or digital communication Technologies to harm others (Agaston, Kowalski and Limber, 2007; MacDonald and Roberts-Pittman, 2010; Strom and Strom, 2005; Willard, 2007; Ybarra, 2004). It is predicted that receiving anonymous, conlsultive, offensive messages, photos and videos in virtual environements indicates cyberbullying acts (Menesini, Nocentini and Calussi, 2011).

The conducted studies show that cyberbullying has become a common problem today. It was determined in a study conducted by Williams and Guerra (2007) that the rate of cyberbullying is 9 %. Raskauskas and Stoltz (2007) reported that almost 20 % of the students are cyberbully, 50 % of them are victims. Ayas (2011) reveled that 17 % of the students have been exposed to cyberbullying, 16 % of them involve in cyberbullying acts. Mishna et al. (2010) determined that 50 % of high school students are exposed to cyberbullying, and almost 34 % of them involve in damaging acts on online environments.

Li (2007) stated in his study that almos 15 % of the students do the cyberbullying acts, 25 % of them are exposed to it. Erdur-Baker and Kavşut (2007) determined that 28 % of the adolescents do the cyberbullying acts, and 30 % of them have experienced cyberbullying. Ybarra and Mitchell (2004) stated that 15 % of the students at the age of 10-17 do the cyberbullying acts. Peker (2013b) determined that 46 % of the secondary school students do the cyberbullying acts, and 65 % of them are exposed to cyberbullying. Wolak, Mitchell and Finkelhor (2007) discovered in their study conducted on students at the age of 13-17 that 43 % of the students have experienced cyberbullying. Ayas and Horzum (2012) determined that 12 % of the students are cyberbully and 19 % of them are cyber-victim.

In the conducted studies it is stated that various psychological problem can be seen in the individuals who have experienced cyberbullyig. It was emphasized that cybervictims experience feelings of anger, sadness and revenge (Beran and Li, 2005; Katzer, Fetchenhauer and Belschak, 2009; Yaman and Peker, 2012), depressive symptoms (Gamez-Guadix, Orue, Smith and Calvete, 2013; Raskauskas and Stoltz, 2007), problems in peer relations (Wolak et al., 2007), hostility (Palmer and Thakordas, 2005) and disappointment (Raskauskas and Stoltz, 2007). In addition, it was is stated that involving in cyberbullying causes to decrease academic success (Li, 2007; Willard, 2007), to be afraid of to go to school (Beran and Li, 2005), lower self-control (Jang, Song and Kim, 2014).

#### Positive and Negative Affection

Positive and negative affection form the emotional dimension of subjective well being (Chekola, 2007; Fave, Brdar, Freire, Vella-Brodrick and Wissing, 2011). Subjective well being is defined as subjectively evaluating the general life satisfaction and experiencing frequency of positive and negative emotions. Subjective well being is the life satisfaction as a result of cognitive evaluations of the individual about his/her life. In addition, subjective well being includes comprehending emotional experiences of the individual as a whole instead of the traditional internal problems such as stress and depression (Diener, Emmons and Larsen, 1999). It was stated that those whose subjective well being is high takes more part in the society, have more appropriate marriages and make friends (Lyubomirsky, King and Diener, 2005).

It was reported that those who have higher positive affectivity have higher energy, enthusiasm, and are satisfied with their lives and works but those with higher negative affectivity are not satisfied with their lives and works and are angry (Rey, Extremera, Duran and Ortiz-Tallo, 2013). In several studies, it was found that being positive is related to health (Pressman and Cohen, 2005), conformance (Ben-Zur, 2009), emotional functionality including various determinant of general life satisfaction (Myers and Diener, 1995); however, it was found that being negative is related to psychological disharmony symptoms such as depression and stress (Watson, Clark and Carey, 1988). Positive emotion indicates the individual's tendency to experience pleasant feelings like excitement

(Robinson, Solberg, Vargas and Tamir, 2003) while negative emotion includes feelings like sorrow, anxiety, fear, rage, guilt and disdain (Watson, 1988; Watson and Pennebaker, 1989).

#### Attitude Towards Social Media

Otrar and Argin (2013) describes social media as an internet based environment in which the individuals can communicate, interact with each other about the subjects they are interested in, share articles, pictures, videos without time and place limitation and create the content themselves. Boyd and Ellison (2007) defines social networks as web based applications which enables the individuals to create an open profile at his/her option, create a list of those with whom s/he communicates, monitor the interactions of those in his/her list with others in the network.

Facebook, Twitter, LinkedIn, Myspace, Skype are the network sites commonly used especially by the young. Facebook is a social media platform on which the users create a profile and enables the user to add others as a "friend". It is possible for the friends to communicate with "status updates" and private messages and to share videos, photos and links with each other. Users can also create groups. Similarly, Twitter is a network which enables the users to communicate with officials or people with "tweets". Instagram allows users to share photos or videos shorter than 15 seconds (Bahrani and Patel, 2015; Lin, Hoffman and Borengasser, 2013; Park and Kim, 2013).

Students can use social networks as new and independent learning environments and relating them with their courses, they can create groups related to their subject of study and collect data, initiate debates for learning, and they can express themselves comfortably by adding their teachers as a friend (Koç and Karabatak, 2011). Social media provides the opportunity to contact with the popular people and others among the students (Ivester, 2011). It is reported that social media can be used detrimentally in spite of its positive features. This harmful use is caused by communication tools like instant messaging, phones, chat rooms, e-mail, social network sites, blogs (web diaries), forums and web sites (Campfield, 2008; Li, 2005; Yaman, Eroğlu and Peker, 2011). However, chat rooms and social networks are indicated to be the environments where the cyberbullying is experienced the most (Ayas and Horzum, 2012).

#### The Purpose of the Study

Tools like internet technologies and smart phones spreading like wildfire have brought social life and communication into a different dimension. Social networks and social sharing platforms created on virtual environments are a new address for the young to make themselves accepted among the society. Being humiliated, insulted, excluded, etc. in the social networks deeply affect the individuals being mugged as it can reach right away more and more people than the real life (Usta, 2013). Aggressive behaviors done by using social networks, information and communication technologies are defined as cyberbullying. It is seen that researches about cyberbullying are generally focused on the relations of the cyberbully and/or victims with various variables. In addition, the fact that the cyberbullying among secondary school students have become widespread (Kowalski and Limber, 2007; Williams and Guarra, 2007) brought up school-based preventive studies.

In this study which is though to light the way of school-based studies, it is aimed to determine the risk factors that predict the cyberbullying status of secondary school students. For this reason, this study aims to determine the factors to distinguish cyberbully, victim from bully/victim, and from the individual who have never done and/or experienced anything related to bullying. Thus, it can be said that analyzing the factors distinguishing cyberbullying categories from each other and the individuals never done anything related to bullying can contribute to the academic knowledge and can guide to the researchers and implementors at the point of developing an anti-bullying program. It is though that this study will contribute to the school- based preventive studies with the obtained data in terms of determining the distinguishing factors of the cyberbullying behaviors of the secondary school students.

#### Method

#### Model of the Research

In the study, descriptive relational model was used to determine socio-demographip variables like gender, grade, perceived academic success, weekly internet use time, parental monitoring of child's internet use and to analyze the attitudes towars social media, the predictive relations between positive and negative affection.

#### The Study Group

Convenience sampling was utilized for choosing participants. The data of the study was collected from 400 secondary school students in 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grade in Erzurum city center. 196 (49%) of the participants were female, 204 (51%) were male. 122 of the students (30.5%) were in the 6<sup>th</sup> grade, 148 of them (37%) in the 7<sup>th</sup> grade, and 130 of them (32.5%) were in the 8<sup>th</sup> grade.

#### The Data Collecting Tools

#### Personal Information Sheet

The personal information form is created by the researcher to collect data about the demographic variables including gender, parent's monitoring of the child's internet use, grade and students' internet usage time.

#### The Revised Cyber Bullying Inventory (RCBI)

RCBI consists of two form labelled cyber bullying and cyber victimization and 28 items. This inventory was selected as its masuring feature was appropriate for the students in secondary schools. RCBI was developed by Topçu and Erdur-Baker (2010). Participants indicated the degree to which they agree with each item on RCBI using a 4-point likert type scale ranging from 1(none) to 4 (more than three times). Confirmatory factor analysis showed that the model contained one factor was well fit for cyberbullying (GFI= .93, CFI=.93, AGFI= .89 and RMSEA = .06) and cybervictimazition (GFI = .93, CFI=.89, AGFI= .90 and RMSEA = .06). For criterion-related validity, relationship between cyber bullying and traditional bullying was calculated as .45. Similarly, relationship between cyber victimization and traditional victimization was found as .36. Cyber bullying and cyber victimization form of RCBI correlated each other. "e more individual's score in RCBI increase, the more cyber victimization experiences increase. The internal consistency of the items was tested by Cronbach alpha coefficient, and the alpha coefficient of the cyber bullying form was found as .82 in this study. In order to test the internal consistency of cyber victimization form, the Cronbach alpha coefficient was found as .75.

#### Positive and Negative Affection Scale (PANAS)

Positive and Negative Affection Scale was developed by Watson, Clark and Tellegens (1988). This scale was used for the students to self express which affection tendencies they experience. PANAS includes 10 positive and 10 negative mood adjectives on a 5 point Likert Scale (1=very slightly or not all, 5=extremely). Cronbach's alpha coefficients were .88 for the positive affect, and .85 for the negative affect subscales.

Its Turkish version was developed by Gençöz (2000) who calculated Cronbach alpha as .83 for positive affection, and as .86 for negative affection. Correlation between Positive Affection and Beck Depression Scale was found as .-48 and correlation between Positive Affection and Beck Anxiety Inventory was found as -.22. Correlation between Negative Affection and Beck Depression Scale was found as .51 and correlation between Negative Affection and Beck Anxiety Inventory was found as .47.

#### Social Media Attitude Questionnaire (SMAQ)

The scale has 47 items and consists of nine sub-scales (social attitudes, gratifications, openmindedness, social empowerment, addiction, problems concern, talkback, internalization, and effortless information). This scale was used to determine the social behaviors of the students towards social media. Each of the items presented a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The scale was developed by Düvenci (2012). In this study, It are used of the scale social attitudes, social empowerment, and dependency dimensions Cronbach's alpha coefficient for the whole scale was found to be .90. The internal consistency coefficients were .79, .75, and .79, for three subscales, respectively.

#### Data Analysis

Firstly, Erzurum Governorate and Provincial Directorate for National Education were applied to grand permission to conduct the scales in the study. As a result of the official permission, planning was done by negotiating with the school management to apply the scales and the application was done as a result of this planning. Voluntary basis was considered in the application of the scales and the students were informed about the aim of the study and how to fill the scales. In addition, the students were also informed that the data of the study will be kept confidential and used by only the researcher. The data collection tools were applied to the students in a single class period by the researcher. Multinomial Logistic Regression was utilized to anaylze the risk factors that predicts the cyberbullying status of secondary school students

In the analysis, gender, grade, perceived academic success, internet usage time, parental controlling in child's internet use were converted into a new dummy variable and added to the analysis. In creating dummy variable for gender, "males" was coded as reference variable; "8<sup>th</sup> grades" was coded as reference variable in creating dummy variable for grade; "successful at medium level" was coded for academic success; average weekly hour internet usage time "8 hours and more" was coded for internet usage time; "no" was coded for parental controlling in child's internet use. We used SPSS 22.00 to analyze the study data.

#### Results

Table 1 presents the distribution of cyberbullying categories by gender and grade

Cycharthy Ilying Catagorias		Gender			Grade			
Cyberbullying Categories	<b>Overall</b> %	Females %	Males %	6 grades %	7 grades %	8 grades %		
Not involved	37.3	23.75	13.5	9.5	16.75	11		
Cyber victims	17	9	8	2.25	8.5	6.25		
Cyber bullies	10.5	3.25	7.25	1.75	6.25	2.5		
Cyer/bully-victims	35.2	13	22.25	5.25	15.25	14.75		

**Table 1.** Frequency of Cyber-Bullying Categories by Gender and Grade

In the study one quarter of the students (17%) reported being victimized, 10.5% reported cyber bullying others, and one in three students (35.2%) reported having been involved in cyber bullying as both bully and victim. Boys reported bullying others more than girls, whereas girls reported being victimized and both bullying and victimizing. 7 grades have been shown more cyber bullying behavior than 6 and 8 grades.

#### Multinomial Logistic Regression

Multinomial logistic regression analysis was done to determine the risk factors related to being a cyberbully, victim and bully/victim. In other words, it was aimed to distinguish cyberbully, victim, bully/victim and from the ones who have never done and/or experienced cyberbullying. Within this period gender, grade, weekly internet usage time, perceived academic success, the place where internet connection is enabled, parental controlling in the child's internet use, attitude towards social media, positive and negative affection were taken as independent variables.

The results of simple logistic regression analysis of the possible variables considered to be related with cyberbullying categories (cyberbully, cyber-victim, cyber-bully/victim) which are dependent variables are indicated in Table 2. In multinomial logistic regression analysis, the group "neither cyber bully nor victim" was taken as reference variable. In the process of testing multinomial logistic regression analysis, model was estimated, the evidence related to estimated model's fit is indicated in Table 2.

Model Fit Information					Pseudo R <sup>2</sup>		
Model	-2 Log Likelihood	χ2	sd	р	Cox and Snell	.31	
Intercept Only	1.01				Nagelkerke	.34	
Final	870.76	147.87	45	.00			

Table 2. Model Fit Information, Goodness of Fit and Pseudo R<sup>2</sup>

On analyzing Table 2, it can be seen that the model is statistically significant. Nagelkerke R<sup>2</sup> statistic was found as 34 %. This statistic show that there is a 34 % relationship between dependent variable and independent variables. In logistic regression analysis, likelihood ratio test is used to test an independent variable's significance in the model. The results related to the likelihood ratio test are indicated in Table 3.

Table 3. Likelihood Ratio	Tests related to	o the Estimated Model
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Effect	-2Log Likelihood	χ2	sd	р
Intercept	871.28	,520	3	.915
Social attitude	879.35	8.598	3	.035
Difficulty in socialization	887.70	16.945	3	.001
Addiction	873.72	2.965	3	.397
Positive affect	874.03	3.273	3	.351
Negative affect	881.61	10.857	3	.013
Gender	892.31	21.553	3	.000
6 <sup>th</sup> Grade <sup>1</sup>	875.37	4.616	3	.202
7 <sup>th</sup> Grade <sup>2</sup>	876.59	5.832	3	.120
Success	873.89	3.135	3	.371
Internet usage time	883.88	13.127	3	.004
Always monitoring internet use <sup>3</sup>	873.55	2.798	3	.424
Sometimes monitoring the internet use <sup>4</sup>	880.14	9.382	3	.025

<sup>1</sup> In this analysis, 6<sup>th</sup> grades were coded as 1; 7<sup>th</sup> and 8<sup>th</sup> grades were coded as 0

 $^2$  In this analysis, 7th grades were coded as 1; 6th and 8th grades were coded as 0

<sup>3</sup> In this analysis, constantly monitoring the internet use was coded as yes=1, no and sometimes=0

<sup>4</sup> In this analysis, sometimes parental monitoring in child's internet use was coded as sometimes=1, no and yes=0

As a result of likelihood raito test, it was determined that attitude towards social media of social attitude and difficulty in socialization dimension, negative affection, gender, weekly internet usage time, parental controlling of child's internet use variables are statistically significant. In the process of testing multinominal logistic regression analysis set up with the variables determined to be statistically significant, the model was estimated, and the fit information of the firstly estimated model is indicated in Table 4.

Variable -	Cyber Bully			Cyber Victim			Cyber Bully/Victim		
	β	Wald	Exp (β)	β	Wald	Exp (β)	β	Wald	Exp (β)
Gender <sup>1</sup>	-1.33	.070	.27**	38	1.34	.68	-1.17	15.87	.31**
Internet usage time <sup>2</sup>	-1.75	5.61	.17**	-1.37	3.67	.25	-1.95	9.06	.14**
Sometimes monitoring internet use <sup>3</sup>	-1.41	6.19	.25**	15	.116	.86	.179	.21	1.20
Social attitude	054	1.15	.95	065	2.43	.94	11	8.11	.90**
Difficulty in socialization	.15	4.51	1.16**	.17	8.40	1.19**	.198	14.07	1.22**
Negative affect	.03	.88	1.03	004	.019	1.0	.064	7.96	1.07**

#### Table 4. Results of the Multinomial Logistic Regression Analysis \*

\* The reference group in this analysis was students who were not involved in any cyber bullying

\*\* p.<.05

<sup>1</sup> In this analysis, males were taken as reference variable in terms of gender

<sup>2</sup> Those who use internet for 8 hours a week were taken as reference variable in this analysis

<sup>3</sup> Parental uncontrolling in child's internet use was taken as reference variable in this analysis

On analyzing Table 4, it can be seen that being male, using internet for 8 hours or more a week, parental uncontrolling in child's internet use and having difficulty in socialization improve the possibility to be a cyberbully. It was determined that the variable which improves to be a cyber-victim is having difficulty in socialization. It was stated that being male, using internet for 8 hours and more a week, difficulty in socialization and negative affection improve being a cyberbully/victim.

#### **Discussion, Conclusion and Suggestions**

#### Cyberbullying Status and Gender

The results obtained through the study show that cyberbully and cyberbully/victim differ from the cyber-victim and from the individual who have never done and/or experienced bullying in terms of gender. In other words, it can be said that males are at higher risk to become cyberbully and cyberbully/victim compared to females. The results of some of the researches (Arıcak et al., 2008; Eroğlu, 2014; Erdur-Baker and Kavşut, 2007; Katzer et al., 2009; Peker, Eroğlu and Ada, 2012; Vandebosch and VanCleemput, 2009; Williams and Guerra, 2007) are parallel with this study. However, there are some other researches showing that females do cyberbullying more than males (Eroğlu, Aktepe, Akbaba, Işık and Özkorumak, 2015; Hinduja and Patchin, 2010; Pornari and Wood, 2010; Wolak et al., 2007) or there is no difference between males and females in terms of cyberbullying (Hinduja and Patchin, 2008; Smith et al., 2008; Topçu, Erdur-Baker, Çapa-Aydın, 2008).

According to Akbulut and Erişti (2011), it is more expected that girls should obey the rules rather than boys in the process of socialization and the hostile behaviors of boys are approved. In the conducted studies (Balkıs, Duru and Buluş, 2005; Özcebe et al., 2006; Pişkin, 2006), finding out that the hostile behaviors of school boys are approved compared to those of school girls indirectly support this interpretation. In a study done by Peker, Eroğlu and Çitemel (2012), finding out that obeying males do more cyberbullying can be interpreted that the aggression expectations of those males are not met in real life so they are in the pursuit of behaviors to meet this need.

Besides, it was reported that girls with higher empathy levels involve less in cyberbullying acts while boys with lower empathy levels involve more in cyberbullying acts (Topçu, 2008). While boys in their socializing efforts are goal-oriented and display autonomous behaviors, girls tend to display behaviors to make empathic contact which encourage them positively. This point in the behaviors of the boys and the girls in their real lives mediate to display aggressive behaviors (Letendre, 2007).

The fact that the girls expeience fear of losing their relations they value in case of conflict or disaggrement threaten their self-respect. Social norms can limit the girls to display aggressive reactions. Therefore, girls need to manage their anger, rage and disappointments in a different way. They indirectly reflect this in their relations in virtual environments (Letendre, 2007). It can be said that girls can involve in relational bullying acts (rumoring, exluding peers, etc.) and boys can involve direct bullying acts (threatening, nicknaming, damaging, etc.) as cyberbullying includes both the relational and direct bullying factors (Wade and Beran, 2011). Thus, the fact that indirect and physical bullying scores predict significantly the cyberbullying (Peker, 2015) correspondes with this result.

The reason why which bullying acts are displayed in virtual environments according to gender differences could not be determined is the fact that the cyberbullying inventory used in this study is single-dimension. In addition, information and communication technologies provide the opportunity to maintain the communication with others independently from the worry of how the physical apprearance is perceived and evaluated. This can cause the boys to get in contact with others and maintain their relations in virtual environments.

#### Cyberbullying Status and Internet Usage Time

In this study, it was seen that weekly internet usage time significanltly distinguishes cyberbully and bully/victim from cyber/victims and from those who have never done cyberbullying. In other words, as the weekly internet usage time increases, the possibility to be a cyberbully and bully/victim increases. This result is parallel with the result of the study done by Ybarra and Mitchell (2004a) in which they determined that bully/victim uses the internet more than 3 hours a day and they are mostly occupied with bullying act on the internet. Didden et al. (2009) stated that adolescents who spend more time on the internet become expert about technology and as they spend too much time on the internet their possibility to be a bully is higher.

In the study conducted by Li (2005), it was determined that there is a relationship between the internet use frequency and cyberbullying but there is not a relationship between the internet use frequency and being cyber-victim, which shows parallelism with the result of this study. Finding out that those who use internet encounter bullying more than those who do not use internet supports the result of this study (Serin, 2012). In a similar study, determining that the internet addiction of school boys explains the possibility of them to be a cyberbully/victim support this evidence (Peker and Eroğlu, 2010).

That the cyberbully and cybervictim levels of the students who use internet everyday are higher compared to those who use internet less (Eroğlu, 2014; Ybarra and Mitchell, 2004b); using the information and communication technologies more often predicts cyberbullying experience (Topçu, 2008) correspond with this evidence. The fact that the students who connect to the social network sites more than 3 hours a day display cyberbullying acts is parallel with the result of this study (Eroğlu et al., 2015). In a similar study, it was revelaed that Facebook is on the top of the social network sites in which cyberbullying acts are displayed (Özdemir and Akar, 2011), which support this interpretation. Therefore, it can be said that social networks provides an environment for the cyberbullying acts.

Those who spend more time in social networks follow the posts more, are informed of all kinds of posts, and are even informed of formerly shared and then deleted posts and continue to talk about the deleted posts. Similarly, they can bring cyberbullying to the school by continuing to talk about the posts s/he has seen on the social network sites in the school in the following days (Ökte, 2014). Mesch (2009) emphasizes that the fact that the social networks provides the opportunity to hide the identity of the individual is the reason why cyberbullying acts are displayed. Accordingly, it can be said that tendency to violence is observed in the students who spend more time in social networks and these students do not hesitate to bully their friends in virtual environments.

#### Cyberbullying Status and Parental Monitoring of Internet Use

The evidence obtained through this study shows that parents' sometimes controlling internet use distinguishes the cyberbully from cyber-victim, cyberbully/victim and from those who never done bullying. In another words, it can be said that the fact that the parents sometimes control the internet use can reduce the possibility to do cyberbullying. The research results indicating that parental control is effective to prevent cyberbullying and victimhood support the results of this study (Aoyama, Utsumi and Hasegawa, 2012; Wade and Beran, 2011; Wang, Ianotti and Nansel, 2009).

The result of this study is parallel with the studies in which it is determined that inadequate parental control increases the cyberbullying acts (Ybarrra, Espelage and Mitchell, 2007; Ybarra and Mitchell, 2004b). In an another research about parental control (Mesch, 2009), it was determined that less parental control decreases cyberbullying, however excessive control of the parents does not prevent cyberbullying. Akbaba and Eroğlu (2013) stated that increased parental control decreases the cyberbullying acts of elementary school students. Rosen (2007) stated that even though many parents establish rules about internet for their children, cyberbullying cannot be prevented as these restrictions cannot make an effective controlling. So, Wade and Beran (2011) stated that an effective parental control includes talking to the children about internet and controlling the websites that the children visit.

Besides the supervision of the parents, their attitudes towards their children can also affect the their cyberbullying status. In the studies aimed to determine which methods they use in terms of safe internet use, the researches found that positive parenting style is more encouraging for safe internet use. This result show that the parent's observing their children and having positive attitudes towards their children plays an important role in decreasing the possibility to be an online bully (Ybarra and Mitchell, 2004b).

The fact that the parents mention about the possible risks that awaits the young charmed by the virtual environments can decrease the risk of being exposed to cyberbullying. The use of the social networks can be considered safe by the parents. However, the young can involve in acts which can damage themselves or other by hiding their identities. The fact that the parents have started using filtering softwares is showed among the precautions (İnan, 2014; Mesch, 2009; Mitchell, Finkelhor and Wolak, 2005). It was reported that among other precautions are placing the computer in the living room, determining the sites and web pages that the children can connect, determining a time span for internet use, checking regularly the sites that the children visit (Dehue, Bolman and Völlink, 2008; Mesch, 2009).

As it was reported that the young can encounter cyberbullying in library, school and other places apart from home, neither the softwares nor the the rules of the parents about the internet use are inadequate in preventing these harmful acts. The requests of the youngs for more privacy and independency can also increase the possibility to encounter acts including the harmful acts of the internet (Ybarra and Mitchell, 2004b). In this direction, parental supervision plays an important role with the precautions and their attitudes towards children. The quality of the relation of the parents with their children can shape the behaviors of the children use the information and communication technologies consciously can decrease the possibility to involve in these cyberbullying acts. Thus, not only the parents but also the young should take responsibility to maintain online safety.

#### Cyberbullying Status and Social Attitude

As a result of the study, the social attitude towards social media distinguishes cyberbully/victim from cyberbully, cyber-victim and from those who is never involved in any cyberbullying acts. This evidence obtained through the study can be interpreted that the students whose social attitude score towars social media decreases are at the risk of being cyberbully/victim. As the social networks have features such as they provide a platform for the young to express themselves and they feel comfortable on this platform (Hieftje, 2009), social networks host attractive environments, easy access and sharing, etc. (Johnson, 2001), this can cause a change in the behaviors of individuals. Besides, as information and communication technologies help the individuals to make contact with others and create positive relationships with their friends, this can change the behaviors of the individual using these technologic tools.

As a result of the development in information and communication technologies, it is stated that the internet provides individuals a different place to socialize, to discuss their daily life problems online and seek solutions to these problems (Düvenci, 2012). Thus, the negative attitudes of the adolescents who use excessively these technologic tools towards virtual environment can affect their behaviors. While individuals try to solve their problem in virtual environment, the problem s/he have with the other party cause the individual to use technologic tools negatively to solve these problems and to do cyberbullying or experience cyberbullying.

Virtual environments which have started to affect the social life make the globalizing world smaller by creating their own realities. In a sense, the internet has appealed the individuals into a second world –a virtual life- within the social life by forming them with its offers and attractiveness. While the things experienced within the social life are formed depending upon the norms, values and time, virtual environments come individuals' way in a different way from what society has. Virtual experiences come into prominenece according to the needs (Johnson, 2001). It is reported that as information and communication technologies can be reached anywhere and provides the opportunity to hide identity, it causes the individual to feel himself/herself independent in the virtual

environments and display aggressive acts up to the mark without considering the social norms (Patchin and Hinduja, 2006). It is reported that aggressive behaviors can be displayed in virtual environments as they have no social norms (Peker, 2015).

The fact that the individuals think they can meet their needs such as understand themselves better, cope with their personal problems, get information in virtual environments can lead them to develop positive attitudes towards information and communication technologies. Even an individual can feel himself/herself more independent in the virtual environments. After all, the individual can encounter a number of problems in using the information and communication technologies, which causes the individual to have conflicts with others. Not knowing how to cope with this new situation causes the individual to display aggressive behaviors more in virtual environments while using these technologic tools.

As particularly the social sharing sites have been used more as a planning tool and organizer in the daily lives of the individuals, it creates a change in the their traditional lives. This change occurring in the lives of the individuals causes to experience adaptation problems between traditional society rules and virtual environment rules. It can be said that the individual can involve in more aggressive and harmful acts in this process.

#### Cyberbullying Status and Difficulty in Socialization

As an another result of the study, it was determined that difficulty in socialization significantly distinguishes cyberbully/victim from cyberbully, cyber-victim and from those who is never involved in any cyberbullying acts. In other words, as the difficulty in socialization increases, the possibility to be a cyberbully, cyber-victim and cyberbully/victim increases.

As the virtual environments provide the individual opportunities such as to make contact with other people by creating social networks and maintain current connections (Ellison, Steinfield and Lampe, 2007; Joinson, 2008), share information (Chana and Dicianno, 2011), etc., they help the individuals to socialize in virtual environments. In addition to this, that the individuals report that they are lack of making social connections in daily life, which cannot satisfy their social needs in real life and they try to satisfy them on the internet indicates that they run for virtual environments (Sayar, 2006). Besides, it supports the evidence of this study that individual having cognitive twists about relations cannot maintain healthy relations in virtual environments (Çetin, Peker, Eroğlu and Çitemel, 2011).

However, as there are not any norms in virtual environments like in real life, virtual environments allow users to create fake profiles, this can cause the individuals to behave in harmful way or to be exposed to these behaviors while using information and communication technologies. It was reported that those whose social relations is inadequate/less are under the risk of involving in cyberbullying acts (Calvete, Orue, Estévez, Villardón and Padilla, 2010), which is parallel with the result of this study. In addition, it is stated that the breakoff phenomenon is an important risk factor to be a cybervictim (Didden et al., 2009). Besides the breakoff phenomenon, peer-rejection, a depressive emotional state and lack of social support have been found to be related to involving in cyberbullying (Olenik-Shemesh, Heiman and Eden, 2012; Patchin and Hinduja, 2010; Schoffstall and Cohen, 2011; Wright and Li, 2013).

The researchers have predicted that involving in cyberbullying acts affects particularly the social lives of the students, makes it difficult to adapt into the social circle, and causes problems in friendship relations (Hinduja and Patchin, 2008; Willard, 2007). As the information and communication technologies provide a space for the individual to socialize-a space they cannot achive in their real lives, to gain them status, to express themselves comfortably, the opportunity to do things they cannot do in their daily lives, direct their lives, etc., these technological tools are used more and more. However, that the individuals spend more time in the virtual environments to meet these expectations can cause to encounter various problems.

#### Cyberbullying Status and Negative Affection

In this study, it was determined that negative affection significantly distinguishes cyberbully/victim from cyberbully, cyber-victim and from those who is never involved in any cyberbullying acts. This evidence can be interpreted that as the negative affection increases, the possibility to be a cyberbully, cyber-victim and cyberbully/victim increases. This finding is parallel with the results of the studies that there is a significant relation between anger levels and levels of being victim and bully (Usta, 2013); cyberbully/victims show more psychiatric symptoms compared to those who are not cyberbully/victims (Arıcak, 2009); cyberbully and cybervictims experience sixfold more emotional stress than those who are only victims (Ybarra and Mitchell, 2004b) while it is different from the results of the studies determined that anger distinguishes cyberbullies from cybervictims, bully/victims and from those who have never involved in cyberbullying acts (Eroğlu, 2014).

It is stated that cyberbully/victims are among the risk group in terms of emotional problems like displaying problematic behaviors, peer victimization and depression compared to bullies and victims (Dilmaç, 2009; Flaspohler et al., 2009; Laftman, Modin and Ostberg, 2013, Sourander et al., 2010). People are affected in many ways because of the social changes that the technologic developments have caused, modernized life styles and the complexity of interpersonal relations. Those who are particularly affected emotionally can experience negative emotions, especially rage.

Grigg (2010) stated that cyberbullying acts negatively affect people psychologically, people who are exposed to cyberbullying can develop negative emotions like anxiety and depression, cyberbullies do things that they cannot do in real life, face to face interactions anonymously in virtual environments, in one sense immature social communication skills are effective in cyberbullying acts. Thus, it supports this evidence that determining the reasons why cyberbullying is done are circle of friends, boredom, responding to a behavior that has been done to him/her before (Raskauskas ve Stoltz, 2007; Yaman and Peker, 2012), and individuals who show cyberbullying acts have intense anger and hostility feelings (Palmer and Thakordas, 2005; Pornari and Wood, 2010).

In several studies, it can be seen that negative emotions such as fear, anxiety, sadness, worry, stress and depression which affects the mental health of those involving in cyberbullying have been analyzed. None the less, the number of the studies analyzing the distinguishing features of negative emotions in terms of cyberbullying status is limited. In this context, it can be said that focusing on cyberbully, cybervictim, cyberbully/victim and those who have never involved in cyberbullying can provide to obtaine more thorough results in the studies related to cyberbullying. Conducting such studies related to cyberbullying will provide a better understanding of the negative emotions in distinguishing cyberbully, cybervictim and bully/victim.

On evaluating the results of the study generally, it can be said that there are factors that distinguish cyberbullying status from each other and from those who have never involved in any cyberbullying acts. According to this result, having difficulty in socialization is a risk factor for being cyberbully, victim and bully/victim. Gender and internet usage time are risk factors for being cyberbully and cyberbully/victim; parental uncontrolling in child's internet use is for being cyberbully; social attitude and negative affection are for cyberbully/victim.

The fact that the parents observe their children while using the information and communication technologies and their democratic attitudes towards their children is an important factor in decreasing the cyberbullying acts. In addition, informing the children about the problems they can encounter while using information and communication technologies will provide them to raise awaraness. Besides, parents should organize social activities in which the children can be happy apart from using social networks. The children need not to accept the behaviors in the virtual

environments as jokes or amusement. It will provide a safer use of information and communication technologies if the students do not open the emails from the strangers, do not share their passwords of social networks and e-school, do not communicate with strangers, and do not surf on the internet sites they do not trust.

When it is considered that the students spend most of their time on social media, seminars should be given to the students about the secure and effective use of social media sites. Information and communication technologies teachers and school counselors can do some informative studies for the parents and the students about the good and correct use of the ICT to reduce the cyberbullying acts of the students. In addition, seminars about what to do when facing negative circumstances while using ICT can be given to them.

This study which presents particular clues to determine the risk factors predicting the cyberbullying status of the secondary school students has some limitations. The variables of attitudes towards social media, positive and negative affection were used in the study to determine the cyberbullying status of the students. In the further studies, re-conducting the study by dealing with different variables will strengthen the results of the study. The cyberbullying inventory used in the study has a single-dimension feature. Using a scale with sub-dimensions related to cyberbullying can provide more distinguishing results. Another limitation is that the study has been conducted on the secondary school students. Further studies should be conducted on the students from different grades. Thirdly, even though the attitude towards social media is a more comprehensive term, it is limited to social attitude, difficulty in socialization and addiction in this study and evaluated as this. In the further studies, independent effects of other factors on the status related to cyberbullying can be analyzed. The results of the study should be interpreted within these limitations.

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