



## RESEARCH ARTICLE

### THE RELATION OF CYBER BULLYING AND CYBERVICTIMIZATION ON LONELINESS AMONG UNIVERSITY STUDENTS

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#### ABSTRACT

**Objective:** The aim of this study is to evaluate the state of cyberbullying they performed and were exposed to and the state of loneliness.

**Methods:** This cross-sectional study carried out in Cumhuriyet University. Total number of the students in Cumhuriyet University were 34,212 and 2.244 of them composed the sampling of the study. In collecting data, personal information form including the socio-demographic characteristics and the state of cyberbully – victim and UCLA Loneliness Scale were used.

**Results:** This study showed that 22% of the respondents were cyberbullied while 64% were victims of cyberbullying. Students exposed to cyberbullying reported that they were affected by this situation in various ways. There was a negative significant correlation between the cyber bullying and loneliness scores ( $r = -0.19$ ,  $p = 0.00$ ) while there was a negative insignificant correlation between cyber victimization and loneliness scores ( $r = -0.01$ ,  $p = 0.72$ ). Students access the Internet at a higher rate increased frequency of cyber bullying are applied and they are exposed to increased loneliness scores were determined. Students cyber bullying was determined that as they make themselves feel less alone.

**Conclusion:** The findings of the study showed that cyber victims and loneliness were prevalent among university students. Also, students who were cyber bullied expressed more loneliness. It is suggested that for the control over the cyber environment, students must be provided by training and guidance services, and that must be increased by making legal regulations.

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## INTRODUCTION

Today, information and communication technologies have become an important part of young people's lives (Turan, Polat, Karapirli, Uysal and Turan, 2011; Şahin, 2012). The internet, as the online technology, has been the most popular communication tool among college students all over the world (Arıcak, 2009). Studies show that the use of mobile phones and the internet has become widespread not only in the most technologically advanced countries but also in Turkey. Information and communication technology, in addition to conveniences it has brought to daily life, hosts several harmful activities such as internet addiction, pornography, violence and cyber bullying since the opportunities created by information and communication technology are unlimited and uncontrolled and can be used with no restriction (Turan, Polat, Karapirli, Uysal and Turan, 2011; Arıcak, 2011).

Of these harmful activities, cyber bullying, due to its extensive and negative effects, is becoming not only a widespread mental problem but also a major public health problem (Arıcak, 2009). Cyber bullying is defined as the use of information and communication technologies by an individual or group in order to harm other individuals in a deliberate, repeated, and hostile manner (Belsey, 2012). Cyber bullying was first observed in Turkey after the 1980s with the onset of the internet and now is becoming increasingly common in the society (TUIK 2010; Tubitak- Middle East Technical University Bilten2000; Turan, Polat, Karapirli, Uysal and Turan, 2011). Cyber bullying actions can be achieved through bothersome SMS (short message service) texts, e-mails, videos and pictures taken with a mobile phone camera, mobile phone calls, instant messaging, chat rooms or websites (Smith, Mahdavi, Carvalho and Tippett 2006). Although there is no personal contact between the victim and the bully, people bullied suffer psychological harm, and develop such problems as depression, unhappiness, low self-esteem, anxiety and sleep disorders (Arıcak, 2009; Walker, Sockman, Koehn and 2011; Şahin, 2012). Another health

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problem caused by the extensive use of information and communication technologies in the society is the feeling of loneliness experienced by the young adult population. As a result of spending a lot of time in the virtual environment, people break away from the real world and create a world of their own (Timisi, 2000; Özen and Korukçu Sarıcı, 2010; Paul, Smith and Blumberg, 2012). Kraut *et al.* (1998) state that the Internet, a powerful communication tool, has replaced the social activities and strong ties of real life, and that people tend to virtual social activities and leave the real social life (Kraut, Patterson, Landmark, Kiesler, Mukophadhyay and Scherlis, 1998). High school and college youth prefer the Internet to establish social interaction with each other, which, in return, decreases their educational performance, prevents them from developing social skills, and causes them to experience communication problems in the later stages of their lives, to establish poor relationships with parents and friends, to lose their wellbeing and to become lonely (Sanders, Field, Diego and Kaplan, 2000; Çağır and Gurgan, 2010;). These individuals suffer a more intense feeling of loneliness when they cannot receive adequate social support, which, in return, prevents them from exhibiting healthy behaviors and thus affects public health (Özen and Korukçu Sarıcı, 2010). Evaluation of studies regarding cyber bullying and loneliness has revealed that there are very few studies conducted on the issue in Turkey and that cyber bullying and loneliness among university students have not been investigated. Therefore, the present study aims to evaluate the level of cyber bullying students commit and are exposed to and loneliness they suffer.

## MATERIALS AND METHODS

### Participants

All the students studying at a university ( $n = 34212$ ) comprised the population of this cross-sectional study. When the prevalence of cyber bullying among university students was taken as 50% with a margin of error for a 95% confidence interval of  $\pm 2\%$ , the sample size was determined as 2244 students and the study was completed with 1812 students. The participation rate was 80.7%. Students who were studying at the faculties and vocational schools of University and selected by simple random sampling were included in the study.

### Process

The study was conducted between May 15, 2012 and July 15, 2012. In order to determine available days and hours to make appointments, talks were held with the directors of the departments where the study to be conducted. After the necessary information was given to the students prior to the application, they were told that the information to be collected would remain confidential, that their credentials were not required, and that the participation was based on volunteerism. Then, their verbal consents were obtained. Students were informed about how to fill out the forms before they started answering the questions. The forms were handed out, were filled out by the students under the supervision of the researchers and were collected by the same researchers. It took the students about 10-15 minutes to fill out the questionnaire. Of the students, 432 who filled out the questionnaire

incompletely or inaccurately, who were not in the classroom when the study was conducted or who did not accept to participate in the study were excluded from the study.

### Statistical Analysis

The data obtained were evaluated using the SPSS 14.0 (Statistical Package for the Social Sciences) program. For the evaluation of the data, the chi-square test, independent t test, ANOVA and analysis of Pearson correlation were used, and  $p < 0.05$  was considered significant.

### Data Collection

The data were collected with the "Socio-demographic Questionnaire" and "The Questionnaire on being a Cyber Bully or Cyber Victim" prepared by the researchers and the UCLA (University of California Los Angeles Loneliness Scale) Loneliness Scale.

### The Socio-Demographic Questionnaire

The questionnaire prepared by scanning the literature has 12 questions about the socio-demographic characteristics of the students such as age, sex, marital status, the place of residence, parents' education, employment status and annual income levels, and the use of the internet.

### The Questionnaire on being a Cyber Bully or Cyber Victim

The questionnaire prepared by the researcher through scanning the literature includes 18 questions. Of the questions, 13 were on being a Cyber Bully or Cyber Victim. The responses to the questions had three options. Whereas 1 point was given to each "I committed cyber bullying" or "I suffered Cyber Bullying" option, 0 points were given to the "I have never experienced Cyber Bullying" option. High scores obtained from the questionnaire meant that the participant either committed or was exposed to cyber bullying frequently. At the beginning of the study, 26 people were given a pre-implementation survey and the Cronbach's alpha coefficient for these 13 questions was determined as 0.87. The other five questions were on how the victims were affected by cyber bullying.

### UCLA Loneliness Scale

The scale was developed by Russell *et al.* (1980) in order to determine the degree of loneliness perceived by an individual. The Turkish validity and reliability study of the scale was conducted by Demir (1989) (Russell Peplau and Cutrona 1980; Demir 1989). The "general loneliness score" for each person is calculated by summing up the scores obtained by an individual for all the items. Since the scoring for each item ranges between 1 and 4, the highest possible score to be obtained from the scale is 80 whereas the lowest possible score is 20. Scores between 20 and 40 points indicate a low level of loneliness, between 41 and 60 a mid-level of loneliness, and between 61 and 80 a high level of loneliness. The high score obtained from the scale is considered as the indicator of a high level of loneliness. The internal consistency coefficient of the scale was determined as 0.96. In addition, by using the "repetition of the

test” technique, the correlation between the two applications conducted with an interval of five weeks was determined as 0.94 (Russell Peplau and Cutrona 1980; Demir 1989). In our study, the Cronbach's alpha coefficient was determined as 0.87.

**RESULTS**

The mean age of the students was 21.14 ± 2.0. Of them, 58.7% were female, 97.1% were single, and 29.7% were living with their families. Seventy-eight point three percent of the mothers and 51.6% of the fathers had less than a high school education, 10.4% of the mothers and 80.8% of the fathers had a paid job, 92.6% of the parents, lived together and 56.2% of the students’ families had an average annual income of less than 10,000 Turkish liras (approximately \$6,000) (Table 1).

**Table 1. Socio-demographic characteristics of university students**

Variables	n	%
Gender		
Female	1063	58.7
Male	749	41.3
Marital Status		
Married	52	2.9
Single	1760	97.1
HousingEnvironments		
Family	538	29.7
Friend	616	34.0
Dorm	658	36.3
Mother'sEducation		
Beforehigh school	1418	78.3
High schooland post	394	21.7
FatherEducation		
Beforehigh school	935	51.6
High schooland post	877	48.4
Mother'sEmployment Status*		
Working	189	10.4
Does not work	1623	89.6
FatherEmploymentStatus*		
Working	1464	80.8
Does not work	348	19.2
ParentsPartnershipStatus		
He lives with	1678	92.6
Separated	20	1.1
One of the parentsthe right	114	6.3
Averageannualfamilyincome		
Less than TRY** 10,000	1018	56.2
FromTRY**10,000 to 20,000	593	32.7
More than TRY**20,000	201	11.1
Total	1812	100.0

\*Work status of a revenue job  
 \*\*Approximately 1TRY=2.03\$

Forty point seven percent of the students stated that they were using the internet every day. They used the Internet to do research, to communicate and to pass the time (respectively 70.5%, 63.6%, and 54.0%) (Table 2). It was found that 22.2% of the respondents committed cyber bullying while 63.9% of them were the victims of cyber bullying. Hiding their identity in the virtual environment was the most common cyber bullying method they used (22.2%), while the most common cyber bullying action they were exposed to was hearing unusual sounds on the cell phone with the number hidden (30.5%) (Table 3). Of the students exposed to cyber victimization, 63.2% stated that they were somehow affected by that: 21.8% were seized with unnecessary fears, 17.8%

**Table 2. University students using the properties of the Internet**

Using the properties of the Internet(n:1812)	n	%
<b>The frequency ofInternetuse</b>		
Every day	737	40.7
Several days a week	620	34.2
Once a weekor less	455	25.1
<b>The purpose of using the internet *</b>		
to do research	1277	70.5
to communicate	1153	63.6
to spend time	978	54.0
to play game	413	22.8
to follow the news	73	4.0

\*Studentsare markedmore than one option.

**Table 3. University Students application of cyber bullying and the status of being a cyber victim**

Status of being cyber bully- cyber victim	n	%
Cyberbullies	402	22.2
Cyber victims	1158	63.9
Have never metbefore	252	13.9
Total	1812	100.0

**Table 4. The mean scores of students with different variables of loneliness**

Variables	X ±Sd	p *
Gender		
Female	64.9±10.7	0.000
Male	62.9±11.5	
ParentsPartnershipStatus		
He lives with	64.4±10.9	0.000
Separated	60.5±12.3	
Entering the Internet for researchpurposes		
Yes	64.9±10.8	0.000
No	62.1±11.4	
Enteringthe Internet for communicate purposes		
Yes	64.9±10.7	0.000
No	62.6±11.5	

\*t test

**Table 5. The relationship between being cyber bully cyber victim scores and loneliness scores among students**

Variables	Loneliness Scores
Being cyberbully	r= - 0.185 p= 0.000
Being cybervictim	r= - 0.008 p= 0.727

suffered stress and became depressed, 12.4% had trouble sleeping, 7% felt worthless and 4.2% felt unwell. In the present study, a statistically significant difference (p <0.05) was determined between genders in terms of cyber bullying. Male students committed or became the victims of cyber bullying more but there is no statistically significant difference between income groups (p> 0.05). The students' mean score on the loneliness scale was 64.1 ± 11. Of the students, 31.6% suffered low-to-moderate level of loneliness (20-60 points) whereas 68.4% suffered high level of loneliness (61-80 points).In the present study, it was determined that the more frequently the students used the Internet, the more frequently they committed cyber bullying or became the victims of cyber bullying and the more frequently they experienced loneliness (p <0.05). It was also determined that there was a positive correlation between committing cyber bullying and being a victim of cyber bullying (r = 0.13, p = 0.000). The study revealed a statistically

significant difference between the students' mean loneliness scores in terms of their gender, parents' togetherness and access to the Internet for research or communication purposes ( $p < 0.05$ ). Female students, students whose parents were not separated and students who accessed the Internet for research or communication purposes had higher loneliness scores (Table 4). A negative correlation was determined between the university students' loneliness scores and scores for committing cyber bullying and being a victim of cyber bullying. While the relationship between being a cyber bully and loneliness was statistically significant ( $r = -0.19, p = 0.00$ ), the relationship between being a victim of cyber bullying and loneliness was not statistically significant ( $r = -0.01, p = 0.72$ ) (Table 5).

## RESULTS AND DISCUSSION

It was determined that 22.2% of the university students committed cyber bullying whereas 63.9% of them became the victims of cyber bullying. Similar findings were observed in other studies conducted with university students (Turan, Polat, Karapirli, Uysal and Turan, 2011; Arıcak 2009). The rates indicate that university students commit or become the victim of cyber bullying as much as primary and high school students do (Petermann 2012; Arıcak, Siyahhan, Uzunhasanoglu, Sarıbeyoglu, Cıplak, Yılmaz and Memmedov 2008). When the studies conducted on cyber bullying in Turkey were investigated, it was found that males committed or became the victims of cyber bullying in the majority of these studies (Arıcak 2009; Akbulut, Şahin and Erişti 2010; Baker and Kavrut 2007), which was similar to the findings of our study ( $p < 0.05$ ).

The difference between the genders in terms of committing or being the victim of cyber bullying may have stemmed from the genders' different attitudes towards violence resulting from the differences between their upbringing and socialization processes (Eroğlu 2011). The present study revealed that most of the students used the Internet to do research, to communicate, to pass time and to play games, which is consistent with the results of other studies conducted with university students (Turan, Polat, Karapirli, Uysal and Turan, 2011; Özen and Korukçu Sarıcı 2010; Özcan and Buzlu 2005). Baker and Tanrikulu (2010) conducted a survey and reported that the most risky internet behaviors exhibited by university students in Turkey were meeting someone acquainted with on the internet, accessing inappropriate web sites and sharing the user names and passwords with others used to access personal accounts in various virtual environments such as MSN, Facebook and YouTube. In this study agreeing with researches of Vandebosch and VanCleemput (2009) and Patch and Hinduja (2006), the most common cyber bullying actions the students were exposed to were as follows: hearing unusual sounds on the cell phone with the number hidden (30.5%), bully's posing as someone else in a virtual environment (24.3%), receiving messages or emails with sexual content (22.5%), bully's hiding his/her identity in the virtual environment (21.0%) and receiving e-mails intentionally infected with viruses or spyware (20.0%). Consistent with the findings of other studies conducted with university students, the findings of this study determined that the more frequently

the students accessed the internet, the more frequently they committed or were exposed to cyber bullying, and the more their loneliness (Turan, Polat, Karapirli, Uysal and Turan, 2011; Arıcak, Siyahhan, Uzunhasanoglu, Sarıbeyoglu, Cıplak, Yılmaz and Memmedov (2008). ( $r = 0.13, p < 0.05$ ). In this study, as the students' cyber bullying scores increased, their loneliness scores decreased ( $p < 0.05$ ). There is a positive correlation between committing cyber bullying and being a cyber-victim ( $r = 0.13, p = 0.000$ ). Individuals who are unable to communicate with parents and friends effectively see the virtual world as an escape from the real world, try to look for an emotional-social support on the internet in order to get rid of feelings of loneliness through virtual friendships and thus they commit bullying and / or become the victims of cyber bullying more (Şahin 2012; Eroğlu 2011).

In a study conducted by Ybarra and Mitchell (2004), it was determined that 44% of the cyber victims had inadequate emotional ties with their parents, which prompted them to commit cyber bullying three times more. In his study of adolescents, Şahin (2012) determined that not committing cyber bullying but becoming a cyber-victim was an important factor in loneliness prediction. In Arıcak *et al.*'s (2009) study of university students, they found that interpersonal sensitivity, hostile feelings and psychotic symptoms were the main variables which predict cyber bullying significantly. Similarly, in this study individuals can commit cyber bullying and do not feel lonely as they commit cyber bullying, and they commit cyber bullying more if they are exposed to cyber bullying. Individuals can easily commit cyber bullying due to factors such as aiming at building a control over others, an attempt to gain prestige among friends, taking their revenge in a virtual environment on people who abuse them because these people believe that they do not feel lonely due to feelings and communications they have while conducting the above mentioned activities (Kowalski, Limber and Agatston 2008).

In a study by Turan *et al.* (2011), found that 54.4% of the victims of cyber bullying are affected by this and felt anger, fear, anxiety, shame, self-blame, etc. and in this present study similar results were obtained: 63.2% of the students who were exposed to cyber bullying were affected one way or another and suffered from fear, stress, depression, sleeping problems, feeling ill, feeling worthless and so on. In their study (2011), Turan *et al.* determined that girls who were exposed to cyber-bullying felt scared or ashamed more than did boys. Similarly, in our study, the female students were affected and thus were seized by fear or had difficulty sleeping more than male students (Turan, Polat, Karapirli, Uysal and Turan, 2011). In a meta-analytic research, Mahon *et al.* (1998) stated that there were no differences between genders in terms of experiencing loneliness. However, in this present study, levels of loneliness were determined to be higher in girls than in boys. Factors such as participating in social and sporting activities less, being exposed to various social pressures, not being able to share the feelings openly, and experiencing troubles in establishing communications may have been effective in girls' feeling lonely. In their theoretical descriptions associated with loneliness, Peplau and Perlman (1982) emphasize that a person can feel lonely in a crowd whereas he/she does not feel lonely when he/she is alone. Therefore, it is noted that not the number

of individuals a relationship is established with, the frequency of the relationship or the type of relationship but the quality of relationship plays a more important role in feeling lonely (Duru 2008; Peplau and Perlman 1982). In studies conducted on loneliness, it is reported that loneliness decreases as the support from the family, friends and people special for them increases (Duru 2008; Peplau and Perlman 1982; Eker, Arkar and Yaldız2001; Karaoğlu and Aşaroğlu 2009). In our study, loneliness of the students living with their parents were found to be higher than were those of the others. We think that students living with their parents could not provide adequate social support for their families.

## Conclusion

In this study conducted to evaluate the cyber bullying the students committed or was exposed to and their loneliness status, the prevalence of being a cyber-victim and loneliness among university students was determined to be high. Based on these results:

Young people's and Internet users' awareness should be raised, and they should be provided education and guidance on this issue. The time spent on the internet by children should be limited by their parents from the very first day they start using the computer, and they should not be allowed to become asocial, alienated from real life in front of the computer, and thus increasingly lonely. In order to strengthen the communication between the students and their parents, necessary precautions should be taken, and thus family support which has an important place in a person's life should be strengthened. Steps necessary to increase social support young people receive should be taken, they should be helped to acquire positive habits by encouraging them to engage in activities such as music, dance, sports at a very young age, and, as a result, the time spent with the computer should be reduced. When an internet user is exposed to cyber bullying, he/she should be able to take measures such as preventing the bully from bullying, denouncing him/her to the authorities or changing the IP. Legal arrangements should be made to prevent cyber bullying and projects which help increase controls in the virtual environment should be developed.

## Limitations

In our study the findings cannot be generalized beyond the study sample because the study was undertaken only among students in one university.

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