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Procedia - Social and Behavioral Sciences 116 (2014) 4241 – 4245

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**Procedia**  
Social and Behavioral Sciences

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5<sup>th</sup> World Conference on Educational Sciences - WCES 2013

# Cyberbullying: A new kind of peer bullying through online technology and its relationship with aggression and social anxiety

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Received date here; revised date here; accepted date here

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## Abstract

Cyberbullying is becoming a crucial problem that has been arisen with increased use of internet and other technological devices. According to recent research in Türkiye %56 of 1470 internet users with average age 23, has indicated they become victims of cyberbullying at least once in their lifetime. The results have shown that the issue of cyberbullying should be considered as a problem that should be investigated. In this study, cyberbullying scale had been given to the university students aged between 18-29. Also, Spielberger's Trait Anger & Anger Styles Scale and Liebowitz Social Anxiety Scale had been given to examine the relationship between cyberbullying and aggression and social anxiety. Social anxiety and avoidance scores were significantly different between genders. The correlations between 10 indexes of cyberbullying behaviors and social anxiety scores together with anger (trait anger, anger-in, anger-out and anger control) scores were analyzed. Correlations were found between sending rude, vulgar or threatening messages and anger-in scores, creating fake profile or web page statement and social anxiety, social avoidance, trait-anger and anger-out scores respectively, publishing photographs or videos of someone without consent and anger-in scores, sending online request for sexual relation statement and anger-out and anger control scores, hacking someone's web profile statement and anger-out and anger control scores, publishing fake statuses or check-in notifications and anger-in and anger-out scores.

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Selection and/or peer-review under responsibility of Academic World Education and Research Center.

*Keywords: Cyberbullying, Cybervictimization, Personality*

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## 1. Introduction

Nowadays internet has become the most popular communication channel especially among university students all over the world. Although online technologies have numerous benefits, on the other hand they have harmful effects those cannot be denied.

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It is known that traditional bullying is considered as a school based problem. But cyber bullying is moving this conversation to the realm of the electronic information (Mishna et al., 2009). UNICEF has made a research about the digital situation in Türkiye and the report had been published in 3 November 2011 as “Young Online Türkiye”. Following report had striking findings and it had been understood that cyberbullying had become a growing problem with increased use of internet and other technological devices. It had been stated that in Türkiye %56 of 1470 internet users with an average age of 23, indicated that they became victims of cyberbullying at least once in their lifetime. According to data from young people participated in UNICEF’s research; %13 of them had come up with sexual images on internet and %46 of them had indicated that they are annoyed with these content.

Even though cyberbullying occurs through online sources and other technological devices, the context of social relationships cannot be denied in this process. Previous studies have shown that %75 of cyberbullying occurs in the absence of witnesses (Mishna et al., 2012).

There is a growing literature about cyberbullying in recent years. Many of these studies mostly focus on the perception of cyberbullying. But according to Ybarra “internet harassment is an important public mental health issue affecting youth today” (Arıcak, 2009). And like all other mental health issues we need to investigate the possible reasons and contributor factors so we can prevent the harmful effects of cybervictimization.

In a study of Harman et al. (2005), it had been stated that children who are not using their real identities on the internet, are having less well-developed social skills, lower levels of self-esteem and higher levels of social anxiety and aggression (Arıcak, 2009). If we try to analyse these factors on the basis of gender literature, we see that female adolescents display aggression through indirect ways and so they prefer cyber bullying instead of face to face aggression (Li, 2006).

Social anxiety is also one of the factors that can be associated with cyberbullying. People who have social anxiety form negatively biased thoughts and images about their appearance in the presence of others and they solve this problem by staying off from social events or places (Erwin et al., 2004). E-mailing, chat rooms, instant messaging, etc. allow these people to avoid from social situations they fear because communicating on the internet is occurring through text-based messages.

In this study, we will try to find a relationship between aggression, social anxiety and cyberbullying.

Within the above framework the hypotheses of the study were formulated as follows:

H1: There will be a correlation between cyberbullying and anger scores.

H2: There will be a correlation between cyberbullying and social anxiety and avoidance.

H3: There will be difference between females and males social anxiety scores.

H4: There will be difference between females and males social avoidance scores.

### 1.1. Sample group

A convenience sample of 136 students aged between 18-29 enrolled in different departments of Istanbul Kultur University participated in the study. Of the total sample % 39 was male and % 61 was female.

### 1.2. Instrumentation

In order to assess cyberbullying and cybervictimization of young participants, we used Cyber bully/Cyber victim Scale developed by Ayas and Horzum (2010). This scale assesses cyber bullying through components of bullying and victimization on a likert scale. A total of 19 questions including behaviors related with cyberbullying are asked both for being a victim or being a bully. There are three factors including “*being sexual bully/victim in cyber environment*”, “*prevention and endamagement in cyber environment*” and “*rumouring in cyber environment*”. The highest score is 95 and the lowest score is 19. The internal consistency was found .81 for cyberbullying and cybervictimization factors.

Spielberger’s Trait Anger&Anger Styles Inventory was used to assess anger scores of participants. This inventory’s standardization study in Turkey had been carried out by Özer, 1994. Inventory includes 34 questions of anger and it is answered by using a four point likert type scale. There are four anger factors; “*trait anger*”, “*anger-in*”, “*anger-out*” and “*anger control*”.

Liebowitz's Social Anxiety Scale had been used for assessing social anxiety and social avoidance. It is a four point likert type scale and had been standardized by Gümüş (1997) in Turkey. There are 24 statements concerning social anxiety and avoidance.

A scale was given to the sample group for assessing perceived levels of endamage of harmful behaviors defined as cyberbullying. This scale includes ten behaviors related with cyberbullying according to the definitions of "cyberbullying" in literature. The students were asked to rank cyberbullying behaviors on a four-point likert type scale; 1= most harmful, 4=harmless.

The cyberbullying behaviors were listed as below;

- Anonymous phone calls.
- Sending spam mails or viruses.
- Sending rude, vulgar or threatening messages.
- Rumouring about someone else.
- Creating fake profile or web page.
- Publishing photographs or videos of someone without his consent.
- Sending online request for sexual relation.
- Hacking someone's web profile.
- Harassing or threatening statements concerning the partner in a romantic relationship.
- Publishing fake statues or check-in notifications.

## 2. Analysis and findings

Data was analyzed with the Statistical Package for the Social Sciences, version 20 (SPSS) and inspected to ensure that normality assumptions were met.

Independent Samples Test was used to see if there is a difference between males' and females' scores on cyber bully/victim scale. Significant difference was found between male and female university students only in Cyberbullying Factor 3 that refers to "rumouring in cyber environment" ( $t(55)=2.14$ ,  $p<.05$ ; Levene=.000). No significant gender differences were found between other cyber bully/victim factors. Independent Samples Test was also used for to see gender differences between anger scores and social anxiety/avoidance. No difference was found between males and females' anger scores. But social anxiety and avoidance scores were significantly different between genders ( $t(127)=-2,8$ ,  $p<.01$ ; Levene=.075 for social anxiety;  $t(127)=-2,03$ ,  $p<.05$ ; Levene=.93 for social avoidance) (see Table 1).

Table 1. Descriptive Statistics of Cyberbullying and Cybervictimization According to Gender

Indexes	Males (n = 53)		Females (n = 83)		t	df
	M	SD	M	SD		
Cyber Bullying	22.45	11.47	19.51	1.62	1.86	53
CB1	8.32	5.40	7.18	0.63	1.53	53
CB2	9.23	3.82	8.21	0.84	1.92	55
CB3*	4.91	2.64	4.12	0.53	2.14	55
Cyber Victimization	24.13	9.78	22.37	4.95	1.39	134
CV1	9.08	4.04	8.37	2.02	1.34	134
CV2	10.08	4.04	9.64	2.52	0.78	134
CV3	4.98	2.27	4.36	1.17	1.83	70
Social Anxiety*	46,3	11,54	52,01	11.14	-2,8	127
Social Avoidance*	45,46	10,12	49,29	10,66	-2,03	127

\*  $p < .05$

Pearson Correlation was used to assess the relation between cyber bully/victim scores and anger scores (trait anger, anger-in, anger-out, anger control) together with social anxiety and avoidance scores. Correlations were found between all anger factors and cyber bully/victim scores but there was no correlation for social anxiety. Correlations between trait anger and CB3 ( $r=.22$ ,  $p<.05$ ), anger-in and CB1( $r=.17$ ,  $p<.05$ ), anger-in and CB2 ( $r=.19$ ,  $p<.05$ ), anger-in and CV2 ( $r=.19$ ,  $p<.05$ ), anger-in and CB3 ( $r=.20$ ,  $p<.05$ ), anger-in and CV3( $r=.24$ ,  $p<.005$ ), anger-in and cyber victimization( $r=.19$ ,  $p<.05$ ), anger-out and CB1 ( $r=.28$ ,  $p<.005$ ), anger-out and CV1 ( $r=.29$ ,  $p=.000$ ), anger-out and CB2 ( $r=.31$ ,  $p=.000$ ), anger-out and CV2 ( $r=.29$ ,  $p<.005$ ), anger-out and CB3 ( $r=.28$ ,  $p<.005$ ), anger-

out and CV3 ( $r=.25$ ,  $p<.005$ ), anger-out and cyber victimization ( $r=.31$ ,  $p=.000$ ), anger-out and cyber bullying ( $r=.30$ ,  $p=.000$ ), anger control and CB1 ( $r=-.17$ ,  $p<.05$ ) were found (see Table 2).

Table 2. Correlational Relations Between Cyberbullying, Cybervictimization, Anger and Social Anxiety

Indexes		Cyber Bullying	CB1	CB2	CB3	Cyber Victimization	CV1	CV2	CV3
Trait Anger	R	.14	.106	.12	.22	.109	.07	.11	.12
	Sig. (2-tailed)	.09	.21	.15	.01*	.207	.38	.19	.16
	N	136	136	136	136	136	136	136	136
Anger-In	R	.19	.17	.19	.206	.21	.15	.19	.24
	Sig. (2-tailed)	.02*	.01*	.02*	.01*	.01*	.06	.02*	.004**
	N	135	135	135	135	135	135	135	135
Anger-Out	R	.307	.28	.31	.28	.31	.29	.29	.25
	Sig. (2-tailed)	.000***	.001**	.000***	.001**	.000***	.000***	.001**	.003**
	N	134	134	134	134	134	134	134	134
Anger Control	R	-.16	-.17	-.12	-.16	-.04	.01	-.04	-.14
	Sig. (2-tailed)	.05	.03*	.15	.05	.57	.84	.57	.09
	N	134	134	134	134	134	134	134	134
Social Anxiety	R	-.01	.001	-.02	-.04	.02	.02	.03	.003
	Sig. (2-tailed)	.85	.99	.81	.65	.78	.801	.71	.97
	N	129	129	129	129	129	129	129	129
Social Avoidance	R	.09	.104	.09	.07	.103	.09	.108	.06
	Sig. (2-tailed)	.26	.24	.26	.41	.24	.27	.22	.46
	N	129	129	129	129	129	129	129	129

\*  $p < .05$     \*\* $p < .005$     \*\*\* $p < .001$

The correlations between 10 indexes of cyberbullying behaviors and social anxiety scores together with anger (trait anger, anger-in, anger-out and anger control) scores were analyzed with Pearson correlation. Correlations were found between sending rude, vulgar or threatening messages and anger-in scores ( $r=.19$ ,  $p<.05$ ), creating fake profile or web page statement and social anxiety, social avoidance, trait-anger and anger-out scores respectively ( $r=.18$ ,  $p<.05$ ;  $r=.19$ ,  $p<.05$ ;  $r=.23$ ,  $p<.05$ ;  $r=.31$ ,  $p<.01$ ), publishing photographs or videos of someone without consent and anger-in scores ( $r=.25$ ,  $p<.01$ ), sending online request for sexual relation statement and anger-out and anger control scores ( $r=.23$ ,  $p<.01$ ;  $r=-.19$ ,  $p<.05$ ), hacking someone's web profile statement and anger-out and anger control scores ( $r=.24$ ,  $p<.01$ ;  $r=-.18$ ,  $p<.05$ ), publishing fake statuses or check-in notifications and anger-in and anger-out scores ( $r=.23$ ,  $p<.01$ ;  $r=.22$ ,  $p<.01$ ) (see Table 3).

Table 3. Correlations Between Perceived Levels of Endamagament of Cyberbullying and Anger with Social Anxiety

Indexes		Social Anxiety	Social Avoidance	Trait-Anger	Anger-In	Anger-Out	Anger Control
Anonymous phone calls.	R	.06	.05	.09	.08	.203	-.09
	Sig. (2-tailed)	.48	.55	.27	.32	.01	.26
	N	129	129	136	135	134	134
Sending spam mails or viruses.	R	-.03	.005	-.01	.108	.02	.16
	Sig. (2-tailed)	.71	.95	.87	.21	.78	.05
	N	129	129	136	135	134	134
Sending rude, vulgar or threatening messages	R	-.04	-.04	.01	.19	.09	-.04
	Sig. (2-tailed)	.63	.65	.904	.02*	.26	.57
	N	129	129	136	135	134	134
Rumouring about someone else.	R	.11	.11	.07	.107	.107	-.21
	Sig. (2-tailed)	.18	.21	.39	.21	.21	.01*
	N	129	129	136	135	134	134
Creating fake profile or web page.	R	.18	.19	.23	.16	.31	-.15
	Sig. (2-tailed)	.03*	.02*	.006**	.05	.000**	.06
	N	129	129	136	135	134	134
Publishing photographs or videos of someone without his consent.	R	.002	.03	.05	.25	.12	.05
	Sig. (2-tailed)	.98	.66	.53	.003**	.16	.53

	N	129	129	136	135	134	134
Sending online request for sexual relation.	R	.11	.11	.07	.15	.23	-.19
	Sig. (2-tailed)	.19	.18	.402	.07	.007**	.02*
	N	129	129	136	135	134	134
Hacking someone's web profile.	R	-.05	.04	.101	.14	.24	-.18
	Sig. (2-tailed)	.54	.59	.24	.103	.004**	.03*
	N	129	129	136	135	134	134
Harassing or threatening statements concerning the partner in a romantic relationship.	R	.02	.06	.08	.08	.14	-.01
	Sig. (2-tailed)	.78	.44	.34	.304	.08	.82
	N	129	129	136	135	134	134
Publishing fake statuses or check-in notifications.	R	.09	.07	.15	.23	.22	-.04
	Sig. (2-tailed)	.29	.41	.06	.007**	.008**	.58
	N	129	129	136	135	134	134

\*p < .05      \*\* p < .01

### 3. Results and discussion

In this study, we examined the factors which are thought to be related with cyberbullying and cybervictimization. Our results show that female participants had significantly higher social anxiety and avoidance scores as compared to male participants. This finding can be explained with both gender differences and cultural factors. Expressing the thoughts and emotions through aggressive behaviors are more likely acceptable between males than females, because of the socio-cultural factors. Also we have shown that, all of the anger factors are related to cyberbullying behaviors. We can say that as technological communication tools are developed, cyberbullying has become one of the anger expression styles. And it has become one of the ways that can help you showing yourself but without using your real identity. Because social anxiety scores are correlated with creating fake profiles, new questions are appearing for examining being a bully in a cyber environment. Social acceptability, social fears, social appreciation and self-esteem terms can be examined within cyberbullying framework.

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