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The Analysis of Teachers' Cyber Bullying, Cyber Victimization and Cyber Bullying Sensitivity Based On Various Variables

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Abstract: In recent years, cyberbullying, which can be considered as a new form of bullying, has emerged as a result of developments in the field of technology and communication. Cyberbullying has become a social problem which has affected individuals' lives negatively. The key to success in the elimination of cyberbullying and its negative effects lies in cyberbullying sensitivity. The present study aims to analyze teachers' cyberbullying and cyber victimization experiences and levels of cyberbullying sensitivity based on some variables which are supposed to develop awareness regarding cyberbullying. Using survey as a research model, the present study focused on 346 teachers working at schools affiliated with Ministry of National Education in Tasova District located in Amasya (Turkey). "Personal Information Form", "The Revised Cyberbullying Inventory for University Students" and "Cyberbullying Sensitivity Scale" were used as data collection tools. SPSS package program was used for data analysis and frequency and percentage values of demographic variables. Independent T test was used for gender and marital status variables, and One-Way ANOVA test was used for age and level of education variables. The findings of the present study revealed that most of the participants used social media websites actively and spent at least 2 or 3 hours on these websites on a daily basis. Teachers usually have a Facebook and/or Instagram account, and benefit from social media for research purposes and playing games. It can be stated that teachers have a significantly high level of cyberbullying sensitivity. However, it was also indicated that even though participants worked as a teacher, they still did cyberbully and suffered from cyber victimization in the past. While a significant difference was observed only in the dimension of cyber sensitivity in terms of marital status, age and level of education, a significant difference wasn't observed in the dimensions of cyberbullying, cyber victimization and cyber sensitivity in terms of gender.

Keywords: *Cyberbullying, cyber victimization, cyberbullying sensitivity, teachers.*

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Introduction

Technological developments continue to shape today's world rapidly. Nowadays, young generations prefer rapid and user-friendly mass communication tools instead of conventional communication devices (Derks, Fischer & Bos, 2008). While developments in the field Information and Communication Technologies (ICT) facilitate interaction among individuals, it also brought about a number of changes in our social lives. These technologies offer a number of advantages making people's lives easier such as easy access to information and exchange of information, rapid economic and commercial transactions, new educational opportunities, meet friends, and a multiple forms of entertainment. Recent developments in the field of Internet and smart phone technology have paved new ways for young generations. In today's world, technological devices such as computers, Internet and smartphones became an indispensable part of people's lives, as manifested by that fact that these devices play a central role in making and maintaining friendships and setting social relationship norms (Yaman, Eroglu & Peker, 2011). We are social and Hootsuit prepared by the "Digital 2019 in Turkey" 72% of Turkey's population uses the internet, according to data. 65% of these users are in the 13-35 age range. According to the study conducted by Villanti et al. (2017), in the USA, 89% of young adults use at least one social media regularly in 2014, while this rate increased to 97.5% in 2016. According to Vaterlaus et al. (2015), it was observed that it was common for participants to publish pictures or situations related to exercise practices in social media during young adulthood.

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"There is no doubt that online environments have become an integral part of young individuals' education and social network" (Chadwick, 2014, p. 11). In addition, "these developing web technologies gave young individuals an unlimited platform to express themselves" (Betts, 2016, p. 34). When these platforms are used by Internet users for a positive goal, they may strengthen and enrich their lives (Taiwo, 2015). Unfortunately, internet also lead to its misuse and negative behaviors. Despite great online advantages of the Internet and social media websites such as social responsibility, communication, education, social interactive and personal development, they can also be used for negative behaviors such as spreading misleading, shameful and hostile information about an event or individual (O'Keeffe & Clarke-Pearson, 2011). According to Salmela-Aro et al. (2017), excessive internet use among adolescents may lead to a school depletion that may later spread to depressive symptoms.

Scaglione and Scaglione (2006) maintain that traditional bullying started to occur in the virtual environment due to some problems caused by information and communication technologies, which is called cyber bullying. The concept can be defined as an individual's or a group's recurring and malevolent activities which use information and communication technologies in order to harm other people or groups (Belsey, 2008). According to Baldry et al. (2017), cyberbullying has similar characteristics and also unique features. These similarities; the power difference is called repetition of behavior and intent to harm.

An individual who continues their bullying behaviors by using technology is defined as a cyberbully, while people suffering from cyberbullies' behaviors are defined as cyber victims (Betts, 2015). Campfield (2008) states that people who have problems in their social relationships, low self-esteem and a low number of friends usually suffer from cyberbullying. In particular, long-term cyberbullying cases usually involve three different groups (Healey, 2011, p. 3): cyber victims, cyberbully and cyberbullying bystanders. Cyber bullying, which has a devastating effect on people, causes people to suspect their environment when the identity of the bullying person is hidden. People who are exposed to cyber bullying are often afraid to report events because they fear that technology will limit their use. They may feel lack of interest and motivation due to depression or anxiety and may move away from the safe environment (Hoff & Mitchell, 2009).

Various studies on cyberbullying demonstrate that cyberbullying and cyber victimization have countless serious and negative effects on individuals' academic and social lives. Aricak (2009) reported that the students of university who did not do cyberbullying and suffered from cyberbullying displayed less psychiatric symptoms compared to cyberbullies and cyber victims. Hinduja and Patchin (2009) found out that individuals could attempt to commit suicide when their cyber victimization was accompanied by stressful living conditions. Doane, Kelley, Chiang and Padilla (2013) revealed in a study on 538 university students that 96% of the participants suffered from cyberbullying in the past few years, while 84% of them took part in cyberbullying activities. Erdur-Baker and Kavut (2007) analyzed students' the prevalence and forms of cyberbullying and cyber victimization in a study on 228 high school students aged between 14 and 19, and indicated that male students displayed more cyberbullying behaviors and faced more cyberbullying compared to female students. Erdur-Baker (2010) stated that risky internet use was one of the most important variables associated with cyber bullying. Risky internet use involves sharing personal information (such as sending someone a photo on the Internet) with other people, communicating with someone unknown on the Internet, meeting someone face-to-face following meeting them on the Internet, visiting websites containing pornographic, suicide and drug use encouraging and hate speech materials, making impolite and offending comments on the Internet and shaming someone on the Internet deliberately (Dowell, Burgess and Cavanaugh, 2009; Valkenburg and Soeters, 2001). Erdur-Baker and Tanrikulu (2010) reported that risky Internet use led to cyberbullying and cyber victimization. According to the findings of Simsek et al. (2019), it was concluded that adolescents' internet addiction, cyber victimization and cyberbullying scores were low, but cyber victimization and cyberbullying were related to internet use characteristics and internet addiction. In his study of Linderholm (2019), investigates school staff member awareness and perceptions of social media use and cyberbullying across two districts in Belize. According to the results of the study, indicated that teachers were "neutral" to whether cyberbullying was a problem in their school and majority of participants indicated they had never encountered an instance of cyberbullying. Sam et al. (2018), tried to determine the extent of cyberbullying among students in Ghana, its consequences on victims, and the characteristics of the victims, and revealed that almost all participants had previously experienced some form of cyber bullying.

It can be understood from previous studies that individuals in all age groups may face or do cyberbullying from their early childhood to adulthood. Since existing studies on cyberbullying have often focused on children and students, the present study takes a different approach and deals with teachers' cyberbullying and cyber victimization experiences as well as their level of cyberbullying sensitivity in terms of various variables as they are socially supposed to develop awareness regarding cyberbullying.

The present study contributes to the existing literature because it leans on cyber bullying, cyber victimization and level of cyberbullying sensitivity from teachers' point of view. The findings of the present study are likely to pioneer future studies in terms of revealing the relationship among level of cyberbullying sensitivity, cyberbullying and cyber victimization and eliminating teachers' association with cyberbullying activities.

The research questions of the present study are as follows:

- What are teachers' experiences of cyberbullying, cyber victimization and levels of cyberbullying sensitivity?
- Do teachers' experiences of cyberbullying, cyber victimization and levels of cyberbullying sensitivity significantly differ in terms of gender?
- Do teachers' experiences of cyberbullying, cyber victimization and levels of cyberbullying sensitivity significantly differ in terms of age?
- Do teachers' experiences of cyberbullying, cyber victimization and levels of cyberbullying sensitivity significantly differ in terms of marital status?
- Do teachers' experiences of cyberbullying, cyber victimization and levels of cyberbullying sensitivity significantly differ in terms of level of education?

Methodology

Research Goal

The present study takes a different approach and deals with teachers' cyberbullying and cyber victimization experiences as well as their level of cyberbullying sensitivity in terms of various variables as they are socially supposed to develop awareness regarding cyberbullying.

Sample and Data Collection

The data of the present study were collected from 346 teachers working in public schools in Tasova District located in Amasya province of Turkey during 2018-2019 school year. Random sampling method was used to select the research group due to its less time-consuming structure for the research process and allows researcher to select an easily accessible group. This sampling method is usually preferred when a researcher is not able to benefit from other sampling methods (Buyukozturk et al., 2012). Correlational survey model was used in the present study in order to describe levels of cyberbullying sensitivity more effectively. According to Karasar (2006) and Frankel and Wallen and Hyun (2011), this model aims at collecting information from a group of people when a small group's personal traits or views (competence, opinions, attitudes, beliefs and knowledge) as a part of a larger group are analyzed. Although correlational survey model does not provide a realistic cause and effect relationship, it enables the researcher to predict a variable based on another variable. The data in the present study were collected using the following instruments: "Personal Information Form", "The Revised Cyberbullying Inventory for University Students" developed by Tanrikulu (2015) and "Cyberbullying Sensitivity Scale" by Kinay and Aricak (2013). "Personal Information Form" prepared by the researcher contained teachers' demographic information such as gender, age, marital status and level of education as well as items addressing students' frequency of Internet use, social media website preferences and purposes of social media use. Participants data information and sociodemographic variables are shown in Table 1.

Cyber susceptibility can be defined as internet users being aware of the effects of cyber bullying activities and taking precautions against them in order to avoid or minimize the effects of cyber bullying actions (Kilinc and Gunduz, 2017). Cyberbullying Sensitivity Scale was developed by Tanrikulu, Kinay and Aricak in 2013. It is a single factor scale consisting of 13 items. The scale is scored as Never=1, Sometimes=2, Often= 3 and Always=4. A high scale score points to a higher level of cyberbullying sensitivity (Tanrikulu, Kinay and Aricak, 2013).

"The Revised Cyberbullying Inventory for University Students" (Tanrikulu, 2015) is a revised form of "The Revised Cyberbullying Inventory" (Topcu and Erdur-Baker, 2010) prepared for university students. It consists of 12 items to measure participants' cyberbullying experiences and cyber victimization in two different parts. While the first part measures whether participants did cyberbullying, the second part deals with their cyber victimization experiences. Both part of the inventory consist of the same items. Participants are asked to respond items involving cyberbullying behaviors in the first part if they did cyberbullying in the last six months, and they are asked to respond items in the second part if they suffered from cyberbullying in the last six months.

The frequency and percentage distributions depicting the personal characteristics of the group are shown in Table 1.

Table 1. Demographic characteristics of participants

Personel Details		f	%
Gender	Female	176	50,9
	Male	170	49,1
Age	21-30	116	33,5
	31-40	176	50,9
	41 and +	54	15,6
Marital Status	Married	222	64,2
	Single	124	35,8
Level of Education	Associate Degree	12	3,5
	Undergraduate Degree	296	85,5
	Postgraduate Degree	38	11,0
Daily Internet Usage	0-1 hour	54	15,6
	1-2 hour	150	43,4
	3-4 hour	120	34,7
	5 hour and +	22	6,4
Social Network	Have	324	93,6
	Don't Have	22	6,4
Social Networks Used (More than one option is marked)	Facebook	272	78,6
	Twitter	128	37,0
	Instagram	248	71,7
	Youtube	112	32,4
	Snapchat	40	11,6
	Google Plus	40	11,6
	Swarm	22	6,4
	Vine	8	2,3
	Linkedin	18	5,2
	Pinterest	84	24,3
Internet Usage Purpose (More than one option is marked)	Blog	10	2,9
	Making friends	52	15,0
	Social relations	188	54,3
	Communication	186	53,8
	Research/Education	264	76,3
	Game	194	56,1
	Passing Time	170	49,1

Analyzing of Data

For the descriptive analysis of quantitative data, standard deviation (SD) and mean (M) were calculated using SPSS (Statistical Package for Social Science v17). Frequency and percentage values of participants' demographic features were analyzed. A normality test was used to analyze differences between participants' views and it was understood that the findings did not display a normal distribution. T test was used for gender and marital status variables. Parametric One-Way ANOVA test was used for the analysis of age and level of education variables. When a difference was found in the results of parametric One-Way ANOVA test, Tukey test, which is a multiple comparison test, was used in order to find the differences. Cronbach Alpha reliability coefficient of the cyberbullying sensitivity scale was calculated as ,88. In addition, Cronbach Alpha reliability coefficients of the cyberbullying scale and cyber victimization scale were calculated as ,83. From the original scales cited; the Cronbach Alpha coefficient of the cyber sensitivity scale was calculated to be ,86 and the Cronbach Alpha coefficient of the cyber bullying and cyber victimization scale was calculated to be ,82.

Findings / Results

The results regarding the main research problem of the present study, "What are teachers' experiences of cyberbullying, cyber victimization and levels of cyberbullying sensitivity?", are given in Table 2.

Table 2. Statistics on levels of cyber bullying, cyber victimization and cyberbullying sensitivity

Dependent Variable	N	\bar{x}	SD	min	max
Cyberbullying	346	12,59	1,95	12	31
Cyber Victimization	346	13,61	3,47	12	33
Cyberbullying Sensitivity	346	42,71	7,35	21	52

Teachers' mean cyberbullying and cyber victimization scores were calculated as $\bar{x}=12.59$ and $\bar{x}=13.61$, respectively. Given that minimum and maximum scores in the cyberbullying and cyber victimization variables were between 12 and 48, mean scale scores were relatively low. However, mean cyberbullying sensitivity score, which can be scored between 13 and 52, was calculated as $\bar{x}=42.71$. Therefore, it can be stated that participants' level of cyberbullying sensitivity was high.

Table 3. Independent T test analysis results by gender variable

Dependent Variable	Gender	N	M	SD	SE	Independent T test			
						t	df	F	p
Cyberbullying	Female	176	1,02	0,07	0,00	-2,670	344	23,880	,008*
	Male	170	1,07	0,21	0,01				
Cyber Victimization	Female	176	1,08	0,20	0,01	-3,322	344	26,737	,001**
	Male	170	1,18	0,35	0,02				
Cyberbullying Sensitivity	Female	176	3,17	0,54	0,04	-3,894	344	0,353	,000**
	Male	170	3,40	0,56	0,04				

* $p<,05$, ** $p<,01$

Independent T test results related to teachers' cyberbullying, cyber victimization and level of cyberbullying sensitivity in terms of gender variable are given in Table 3. It can be understood from Table 3 that a statistical difference was observed in T test results related to teachers' cyberbullying, cyber victimization and level of cyberbullying sensitivity in terms of gender variable ($p<.05$). Additionally, male teachers did and suffered from more cyberbullying compared to female teachers, and had a higher level of cyberbullying sensitivity.

Table 4. Independent samples t test analysis results by marital status variable

Dependent Variable	Marital Status	N	M	SD	SE	Independent T test			
						t	df	F	p
Cyberbullying	Married	222	1,05	0,19	0,01	1,486	344	6,001	,138
	Single	124	1,03	0,09	0,00				
Cyber Victimization	Married	222	1,11	0,27	0,01	-1,589	344	5,699	,113
	Single	124	1,16	0,31	0,02				
Cyberbullying Sensitivity	Married	222	3,34	0,53	0,03	2,458	344	2,286	,014*
	Single	124	3,18	0,60	0,05				

* $p<,05$

According to Table 4, no significant differences were observed in the dimensions of cyberbullying and cyber victimization as demonstrated by test results related to teachers' cyberbullying, cyber victimization and level of cyberbullying sensitivity in terms of marital status variable ($p>.05$), while a statistically significant difference was observed in cyber sensitivity ($p<.05$). It can be suggested that married teachers had a higher level of cyberbullying sensitivity.

Table 5. One-Way Anova test analysis results by age variable

Dependent Variable	Age	N	\bar{x}	SD	Groups	Sum of Squares	df	Mean Squares	F	p
Cyberbullying	21-30	116	1,04	0,11	Between	0,05	2	0,02	0,995	,371
	31-40	176	1,05	0,20	Within	9,10	343	0,02		
	41 and +	54	1,02	0,07	Total	9,16	345			
	Total	346	1,04	0,16						
Cyber Victimization	21-30	116	1,15	0,27	Between	0,11	2	0,05	0,671	,512
	31-40	176	1,13	0,32	Within	28,89	343	0,08		
	41 and +	54	1,09	0,17	Total	29,01	345			
	Total	346	1,13	0,28						
Cyberbullying Sensitivity	21-30	116	3,18	0,50	Between	6,83	2	3,41	11,30	,000**
	31-40	176	3,25	0,61	Within	103,69	343	0,30		
	41 and +	54	3,60	0,42	Total	110,52	345			
	Total	346	3,28	0,56						

**p<,01

Table 5 indicates analysis results regarding teachers' cyberbullying, cyber victimization and level of cyberbullying sensitivity in terms of age variable. No significant differences were observed in the dimensions of cyberbullying and cyber victimization ($p>.05$), whereas a statistically significant difference was observed in the dimension of cyberbullying sensitivity ($p<.05$). A Tukey test was used to find out the significant difference among groups, and a significant difference was found between 21-30 and 41 and over age groups in favor of those aged over 41, and between 31-40 and 41 and over age groups in favor of those aged over 41. It can be thus concluded that teachers aged 41 and over had a higher level of cyberbullying sensitivity compared to teachers in other age groups.

Table 6. One-Way Anova test analysis results by level of education variable

Dependent Variable	Level of Education	N	\bar{x}	SD	Groups	Sum of Squares	df	Mean Squares	F	p
Cyberbullying	Associate	12	1,04	0,06	Between	0,01	2	0,00	0,191	,826
	Undergraduate	296	1,05	0,17	Within	9,15	343	0,02		
	Postgraduate	38	1,03	0,08	Total	9,16	345			
	Total	346	1,04	0,16						
Cyber Victimization	Associate	12	1,08	0,07	Between	0,32	2	0,16	1,945	,145
	Undergraduate	296	1,12	0,26	Within	28,68	343	0,84		
	Postgraduate	38	1,21	0,45	Total	29,01	345			
	Total	346	1,13	0,28						
Cyberbullying Sensitivity	Associate	12	3,73	0,17	Between	2,67	2	1,33	4,260	,015*
	Undergraduate	296	3,26	0,58	Within	107,84	343	0,31		
	Postgraduate	38	3,34	0,46	Total	110,527	345			
	Total	346	3,28	0,40						

*p<,05

Table 6 presents analysis results regarding teachers' cyberbullying, cyber victimization and level of cyberbullying sensitivity in terms of level of education variable. No significant differences were observed in the dimensions of cyberbullying and cyber victimization ($p>.05$), while a statistically significant difference was observed in the dimension of cyberbullying sensitivity ($p<.05$). A Tukey test was used to find out the significant difference among groups and a significant difference was found between participants who had an associate degree and undergraduate degree in favor of those having an undergraduate degrees. Thus, it can be concluded that teachers having an undergraduate degree had a higher level of cyberbullying sensitivity.

Discussion and Conclusion

The present study try to analyze teachers' cyberbullying and cyber victimization experiences and levels of cyberbullying sensitivity based on some sociodemographic variables which has been expected associated with cyberbullying. Our data reveal that most of the participants used social media websites actively and spent nearly 2 or 3 hours on a daily basis. Teachers usually have a Facebook and/or Instagram account and use social media for research purposes and playing games. The findings also demonstrated that teachers' level of cyberbullying sensitivity was remarkably high. Although all participants were teachers, it was also revealed that a small portion of them did cyberbullying and suffered from cyber victimization in the past. It was observed that male teachers' cyberbullying, cyber victimization and level of cyberbullying sensitivity significantly differed in terms of gender variables. As for marital status variable, while teachers' level of cyberbullying sensitivity significantly differed in favor of married teachers, no statistically significant variables were observed in terms of cyberbullying and cyber victimization. When it

comes to age variable, it was observed that teachers aged 41 and over had a higher level of cyberbullying sensitivity compared to other age groups. Finally, it was found out that teachers who had an undergraduate degree had a higher level of cyberbullying sensitivity, whereas no statistically significant differences were observed in the dimensions of cyberbullying and cyber victimization.

Most of the existing studies on cyberbullying and cyber victimization in the literature were conducted on students. The findings of the present study which focused on teachers' level of cyberbullying sensitivity demonstrated that teachers had a high level of cyberbullying sensitivity. Similar findings were reported by Ayas and Horzum (2011) in a study on teachers' perception of cyberbullying and by Yilmaz (2010) and Gezgin and Cuhadar (2012) in two different studies on teacher candidates. In this respect, it can be argued that teachers are aware of cyberbullying activities that can occur in online environments and they tend to take necessary precautions to ensure their own safety against such cyberbullying activities.

In the present study, teachers' level of cyberbullying sensitivity was analyzed in terms of gender variable, and it was observed that female and male teachers' level of cyberbullying sensitivity significantly differed. While this finding contradicts some similar studies such as Ayas and Horzum (2011) and Beringer (2011), it overlaps Gezgin and Cuhadar (2012) and Yilmaz (2010) who conducted studies on teachers' having a high level of cyberbullying sensitivity. When previous studies on university students' cyberbullying experiences are analyzed (Akbulut and Eristi, 2011; Akcan and Ozturk, 2017; Aricak, 2009; Dalmaz, 2014; Dilmac, 2009; Kokkinos, Antoniadou and Markos, 2014), it can be observed that their findings overlap the present study. In other words, men did more cyberbullying compared to women. However, some studies (Marcum et al., 2012; Schenk, Fremouw and Keelan, 2013) reported that women did more cyberbullying compared to men. Another study reporting that men did more cyberbullying compared to women associated this significant difference with men's lack of empathy compared to women (Topcu and Erdur-Baker, 2012). In other words, it can be suggested that empathy is a significant factor which affects cyberbullying. In addition, it is also noteworthy that women and men with a low level of empathy may have high cyberbullying scores (Ang and Goh, 2010). As a teacher, it is necessary to provide strong models for appropriate digital communication and open learning practices to reduce cyber bullying in schools. Teacher training programs are needed to address and respond to the dynamics of a contemporary digital world where cyber bullying has an increasing impact. These programs can be classified as: awareness of cyber bullying, understanding how to manage cyber bullying, and cyber prevention strategies and programs in both university settings and school placements. According to Redmond et al. (2017), teacher candidates need to be prepared to address and respond to the dynamics of a contemporary digital world where cyber bullying has an increasing impact. According to Linderholm (2019), results indicated that teachers were "neutral" to whether cyberbullying was a problem in their school and majority of participants indicated they had never encountered an instance of cyberbullying. Almost all participants had never received training regarding handling cyberbullying, but many participants indicated they thought school districts should train staff in recognizing and treating instances of cyberbullying.

In the present study, teachers' level of cyberbullying sensitivity was analyzed in terms of age variable, and it was observed that teachers aged 41 and over had a higher level of cyberbullying sensitivity compared to other age groups. No significant differences were observed among teachers' level of cyberbullying sensitivity in terms of age variable. Therefore, this finding contradicts Pepler et al. (2006), while it overlaps Ozdemir and Akar (2011) who reported that high school students' age groups did not have any significant effect on their cyberbullying behaviors. Therefore, it can be stated that further studies are needed in order to problematize the relationship between cyberbullying and age variable.

Suggestions

A study on the prevalence of cyber bullying and victimization is not known cyber victimization rate. The extent to which cyber bullying and victimization is at all ages from primary school to university groups and will be carried out by the state. For this purpose, Higher Education Institution, universities, Ministry of National Education, educational institutions, voluntary organizations can cooperate on this issue. A training program can be prepared for teachers. With this program, teachers' cyber sensitivity will be increased and students will be taught better.

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