

Original Article

Cyberbullying and Well-being Among University Students: The Role of Resilience

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Abstract

Background: Cyberbullying or just bullying is a phenomenon which can be damaging for youths' mental health and academic achievement.

Objective: The purpose of the study is to investigate the role of resilience in mediating the relationships between cyberbullying and psychological well-being among university students.

Methodology: Participants were 455 undergraduate students of Karabuk University in Turkey. Self-report measures were used to assess cyberbullying, resilience and psychological well-being. **Results:** Students' ages ranged from 17 to 36 years, (M = 20,93; SD =2,05). In terms of gender distribution of the participants, while 76% (n = 346) were female, 24% (n = 109) were male. The results of regression analysis showed that resilience has a mediator role in the relationship between cyberbullying and psychological well-being. In another words, the psychological resilience of students ensures that they are less affected by being victim of cyberbullying and prevents the impairment of their psychological well-being.

Conclusions: The findings of the study have implication for designing intervention programs to increase awareness of cyberbullying and enhance resilience among young adults to enable them to manage bullying behaviors.

Keywords: Cyberbullying, resilience, psychological well-being

Introduction

University life is a stressful period for many reasons. In this period, students have to cope with life events such as intense curricula, separation from family, adapting to a new social environment, and emerging from adolescence into adulthood. Alongside this, another difficulty experienced by university students is their bullying behavior against each other. This type of behavior, which is usually seen in the form of physical bullying, has changed into a different type in recent years as technology advanced and smartphone/tablet use among students became widespread. This new type of bullying performed through the use of media communication devices is called cyberbullying (Del Rey, Elipe and Ortega-Ruiz, 2012; Zych, Ortega-Ruiz and Del Rey, 2015). Cyberbullying is defined as a person being knowingly insulted, threatened and scared through electronic media (Juvonen and Gross, 2008). It would not be incorrect to assume that all

of the aforementioned factors would negatively affect the psychological well-being of students. For these students to lead healthy lives and continue/increase their academic success by keeping away from stress, their psychological well-being is very important. When a negative situation such as being exposed to bullying is encountered, it is thought that individuals will be affected by this situation on different levels and that their healing will be affected by their individual characteristics. In this context, resilience, which is defined as a person's ability to bounce back to their normal state after being exposed to a specific stress experience or experiencing difficulty (Tugade and Fredrickson, 2004), may have a mediating role in the relationship between cyberbullying and psychological well-being. In other terms, people with higher resilience are thought to be less affected by cyberbullying psychologically compared to those with less resilience, and it is

thought that their psychological well-being will come to less harm.

When the literature was reviewed, cyberbullying was found to be studied mostly with elementary and high school students (Smith et al. 2008; Erdur-Baker 2010; Huang and Chou 2010; Nixon 2014) and with university students on a smaller scope (Celik, Atak and Erguzen, 2012; Faucher, Jackson and Cassidy, 2014; Myers and Cowie, 2017; Yubero et al. 2017). In a large majority of these studies, the focus was on the prevalence and definition of cyberbullying, and its relation to other variables such as suicide attempt, psychological problems, cope with was examined in a small number of studies (Bauman, Toomey and Walker, 2013; Orel et al. 2017; Huang and Mossige, 2018). In some of the studies mentioned above, cyberbullying was examined as a single variable with regard to prevalence, while in others, its relationship with a single other variable was examined. Being a victim of cyberbullying will inevitably have negative effects on psychological well-being. However, only one study examining the relationship between cyberbullying and psychological well-being could be found in the literature. In that study, the relationship between cyberbullying among elementary school students (age 10 to 12) and social support and psychological well-being was examined (Olenik-Shemesh and Heiman, 2014).

Everybody who is exposed to cyberbullying is not affected by this situation on the same level (Raskauskas and Huynhi, 2015). We believe that there is a personal characteristic or trait that buffers against stressors, such as bullying - that is, some youths who are targeted for certain types of harm are better able than others to cope and deal with it's associated stress. This indicates that these characteristics of the person being exposed to cyberbullying could mediate the reactions to cyberbullying. In this context, it is a very high possibility that psychological resilience, makes it easier to cope with cyberbullying and contributes to the psychological well-being of younger people. Based on this inadequacy, this study was planned to discuss the relationship between cyberbullying and psychological well-being and to examine the mediating role of psychological resilience in this relationship.

Hypothesis of the study: Resilience will mediate the relation between cyberbullying victimization and psychological well-being.

Background

Cyberbullying is a more contemporary subject compared to conventional bullying and continues to draw the attention of researchers. As a result, it can be seen that many researchers have different definitions of the term. It is bullying being performed in electronic environments such as instant messaging services, chat rooms, websites, and written messages (Kowalski and Limber, 2013). According to another similar definition, cyberbullying is using electronic media to insult, scare, hurt, or harm peers (Raskauskas and Stoltz, 2007). Cyberbullying encompasses all behavior types that include sending continuous aggressive messages using electronic media to hurt or disturb others individually or as a group (Tokunaga 2010).

One of the most important characteristics of cyberbullying is the bullying behavior not being limited to the physical boundaries of the school. Cyberbullying occurs at school, at home, day or night, when the school is open or during holidays and at every place and time when there is internet access (Atkinson, 2008). The identity of the bully being anonymous is another important characteristic of this type of bullying; and causes the bully to be more fearless in sharing hurtful content related to the victim (Slonje, Smith and Frisen, 2012). Another characteristic is the victim's inability to escape this situation and the shared content being spread across wide populations in a very fast manner (Beltrán-Catalá et al. 2018; Tokunaga, 2010). Being subjected to cyberbullying causes negative emotions in an individual such as shame, loneliness, or fear and negative effects (Spears et al. 2009; Tsitsika et al. 2015). The manner in which a cyberbullying victim copes with this situation has important effects on his/her psychosocial life (Bauman, Toomey and Walker, 2013). Study results have shown that those who subjected to cyber bullying experienced higher levels of anxiety, depression, and thoughts of suicide, and lowest levels of subjective well-being (van Geel, Vedder and Tanilon, 2014; Hellfeldt, López-Romero and Andershed, 2020). In another study, being exposed to cyberbullying was reported to have devastating effects on the psychological well-being of a victim (Hinduja and Patchin, 2013).

Psychological Well-being is a subjective state and is related to happiness (Diener, 2000).

On the other hand, it is more than the absence of illness or the person having positive subjective emotions about himself/herself (Ryff, 1989). It has demonstrated that bullying was a risk factor with regard to the psychological well-being of adolescents (Bowes et al. 2016). In this context, the possibility of online or cyber bullying being a similar risk factor for psychological well-being seems considerably high. It has been reported by various researchers that being exposed to bullying has many negative effects on a person such as low self-esteem, depression, self-destructiveness, and thoughts of suicide (Cook et al. 2010). Additionally, some researchers have posited that cyberbullying has more destructive effects on a victim compared to conventional bullying (Campbell et al. 2012; Bonanno and Hymel, 2013) because of reasons such as the bullying being seen by too many people, the anonymity of the bully and a lack of supervision (Sticca and Perren, 2013). It has been shown through studies that those who were exposed to cyberbullying experienced more anxiety, paranoia, and depression compared to those who were not (Schenk and Fremouw, 2012). In studies performed on face to face, or physical, bullying, peer bullying has been reported to have psychosomatic effects on the victim (Gini and Pozzoli, 2009). Children who were exposed to peer bullying were found to exhibit symptoms of depression in later years (Ttofi et al. 2011). Studies also shows that cyberbullying victims demonstrated more depression, total difficulties overall, emotional problems, conduct problems and less pro-social behavior (Foody, McGuire and O'Higgins, 2019).

Resilience is a personal resource that changes and improves according to how a person copes with the difficulties he or she faces throughout his/her lifetime (Cohn et al. 2009). Connor and Davidson (2003) conceptualized psychological resilience as a stable personality characteristic such as being faithful, patient, tenacious, calm, optimistic, and self-confident. Another group of researchers defined psychological resilience as a basic characteristic that makes attaining psychological well-being easier as individuals face many negative experiences throughout their lives (Luthar, Cicchetti and Becker, 2000). Psychological resilience term coping with traumatic experiences and avoiding high risk situations (Fergus and Zimmerman, 2005). According to a group of researchers, there are a number of internal and external sources that

make a person psychologically resilient (Haskett et al. 2006). While factors such as self-value, self-efficacy and internal locus of control are included among internal sources (Ahlin and Antunes, 2015; Raskauskas and Huynh, 2015), factors such as being in a supportive environment, social support, and positive peer bonding are included among external sources (Day, 2006). Therefore, it is possible to say that psychological resilience is both a personality characteristic and a characteristic that is formed by environmental factors.

Studies have shown that psychological resilience plays an important role in overcoming daily difficulties and coping with traumatic events (Sołtys and Woźniewicz, 2016). The coping method used by a person exposed to cyberbullying and his/her psychological resilience determine how much he/she will be affected by cyberbullying (Raskauskas and Huynhi, 2015). When a person is exposed to an excessively negative experience such as bullying, the level to which this situation affects them will decrease with higher levels of psychological resilience. In a study by Hinduja and Patchin (2017), high levels of psychological resilience have been reported to be related to less exposure to cyberbullying, with psychological resilience acting as a form of buffer. In a study by Navarro, Yubero and Larrañaga (2018), resilience was shown to have a protective function against the negative effects of cyberbullying

Methodology

Sample: The total number of participants was initially 500 but in the end 45 of the questionnaire either was not completed or provided the same rating for the whole scale and it has not been included. Participants were 455 undergraduate students from different departments of Karabuk University in Turkey. The sample was determined as about 375 people based on potency value of 80% at 95% confidence level. The ultimate sample size (n= 455) exceeds the number of subjects required to have sufficiently acceptable statistical power. The criteria for participation required the individual to be a current university student and we included only data with no missing values. For sample selection, random sampling was carried out using different departments of the university. Participation was voluntary. Informed consent was obtained from all individual participants included in the study. All students

were attending social sciences and health sciences degrees. The scale used was the *Cyberbullying Scale* (CBS, Stewart et al., 2014), a 16-item self reported measure in which participants indicate how often they have been victims of different behaviors through electronic devices in the last couple of months. First two general questions asked respondents to indicate through which electronic mediums (e.g., via text message, social media website, etc.) they had been bullied and which mediums they had used to bully others. The other 14 items were to investigate how often in the past few months adolescents had experienced different forms of cybervictimization. Items score on a 5-point scale (0=never; 4=all the time). An example of an item is "You get text or online messages that make you afraid for your safety". Range of scores is between 0-64. Higher scores indicate higher degrees of cyberbullying. All items loaded strongly on one factor. Cronbach's alpha value for the scale was 0.94 (Stewart et al., 2014) for the Turkish sample was .86 (Kucuk, İnanıcı and Ziyalar 2017). In the present study, Cronbach's alpha reliability coefficient was .89.

The *Connor-Davidson Resilience Scale* (CD-RISC; Connor & Davidson, 2003) is a 25-item scale measuring the ability to cope with adversity. In the present study, 10-item CD-RISC by Campbell-Sills and Stein (2007) was used because this reduced version showed excellent psychometric properties. The scale items reflect the ability to tolerate experiences such as change, personal problems, illness, pressure, failure, and painful feelings. Items score on a 5-point scale (0=not true at all; 4=true nearly all the time) such as, "I can deal with whatever comes". Range of scores is between 0-100. Higher scores indicate higher degrees of resilience. It is recommended by the authors to use this instrument as a unifactorial scale. Cronbach's alpha value for the scale was .85 (Campbell-Sills and Stein 2007) and .92, for the Turkish sample (Karairmak 2010). In the present study, Cronbach's alpha reliability coefficient was .87.

The *Flourishing Scale* or *Psychological Well-being Scale* (Diener et al. 2010) is an 8-item self-report measure of flourishing (social-psychological prosperity). Respondents are required to respond to each item (e.g., "I lead a purposeful and meaningful life") using a 7-point Likert scale (1= strongly disagree; 7= strongly agree). Range of scores is between 8-56. Higher scores are representative of higher psychological

well-being. Cronbach's alpha value for the scale was .80 (Diener et al., 2010) and .80 for the Turkish sample (Telef 2013). In the present study, Cronbach's alpha reliability coefficient was .77.

The questionnaires were administered to the participants in their classrooms. They were informed that participation was voluntary and that their individual responses would remain anonymous and confidential and would not be seen by their peers. All data collection procedures took place between March and June 2019.

Results

Students' ages ranged from 17 to 36 years, ($M = 20,93$; $SD = 2,05$). In terms of gender distribution of the participants, while 76% ($n = 346$) were female, 24% ($n = 109$) were male. Regarding their degree year, 39,3 % were in year 1, 33,4% were in year 2, 14,5% were in year 3 and 12,7 % were in year 4.

Correlations indicated that resilience and psychological well-being correlated negatively with cyberbullying victimization. Resilience was positively associated with psychological well-being. Age, positively correlated with resilience and psychological well-being, negatively correlated with cyberbullying. Gender, positively correlated with resilience and cyberbullying. Finally, education type positively correlated with resilience and psychological well-being. Second, Pearson correlations were performed between cyberbullying, resilience and psychological well-being. Table 1 includes the descriptive statistics of the examined variables. It was put forward that resilience would mediate the relationship between cyberbullying victimization and psychological well-being. To examine this argument, a hierarchical regression analysis was conducted.

As a result of the correlation analyses performed to determine the relationships between study variables and to meet the necessary conditions for a mediating variable analysis, the power of cyberbullying and psychological resilience to predict psychological well-being was examined using stepwise regression; while hierarchical regression analyses were performed to exhibit the mediating role of psychological resilience in the relationship between cyberbullying and psychological well-being.

While performing both the stepwise and hierarchical regression analyses, the variables of age, gender, and type of education (day or night school) were taken in the first block, and the variables of cyberbullying and psychological resilience were then respectively added to the regression equation. The results of the regression analysis performed to determine how much the variables of cyberbullying and psychological resilience predicted psychological well-being scores were given in Table 2.

A hierarchical regression analysis was performed to examine the mediating role of psychological resilience (See in figure 1). In our study, cyberbullying was taken as the predicting variable and psychological well-being was taken as the dependent variable. Before examining the mediating role of psychological resilience, the measures suggested by Baron and Kenny (1986) on mediating relationships were considered. Accordingly; (1) the predicting and dependent variables need to have a statistically significant correlation, (2) the mediating variable and the predicting variable need to have a statistically significant correlation, (3) There should be a statistically significant correlation between the mediating and dependent variables when both the mediating and predicting variables are entered into the regression analysis, and (4) when the mediating variable and predicting variable enter the regression analysis simultaneously, the significant relationship between the predicting and dependent variables should either not be statistically significant anymore or have decreased significance.

In this context, first correlation analyses were examined to see whether the first two measures suggested by Baron and Kenny were met. The results can be seen in Table 1. In further examination, we have made regression analyses to see if cyberbullying and psychological resilience are predicting psychological well-

being. Thus, the relationships between cyberbullying, psychological resilience, and psychological well-being were found to meet both criteria, indicating psychological resilience could have a mediating role. For the last two criteria, a hierarchical regression analysis was performed.

In the first step we controlled for the demographic variables age, gender and type of education. In the second step, cyberbullying was entered into the regression equation. Before psychological resilience was entered into the equation, psychological well-being had a statistically significant relationship to cyberbullying ($\beta = -.13$, $p < .01$). In the last step of the regression equation, after psychological resilience was entered into the equation, the relationship level between cyberbullying and psychological well-being decreased significantly.

The path coefficients between cyberbullying, psychological resilience, and psychological well-being were shown in Figure 1. Accordingly, cyberbullying predicted psychological resilience negatively ($\beta = -.11$, $p < .05$); psychological resilience predicted psychological well-being positively ($\beta = .36$, $p < .001$); and there was a negative relationship between cyberbullying and psychological well-being ($\beta = -.09$, $p < .05$). With the inclusion of psychological resilience, the beta value of the predicting variable cyberbullying decrease to -0.09 from -0.13 . According to the results of the Sobel (1982) test performed for this reason, the decrease in the beta value of cyberbullying was found to be significant ($z = 3.50$, $p < .001$). In other terms, psychological resilience was found to have a mediating role in the relationship between cyberbullying and psychological well-being. Consequently, the psychological resilience of students ensures that they are less affected by this situation and prevents the impairment of their psychological well-being.

Table 1. Means, standard deviations, and correlations between cyberbullying, resilience and psychological well-being

	1	2	3	4	5	6
1.Age						
2.Gender	r* .19					
	p 0.00					

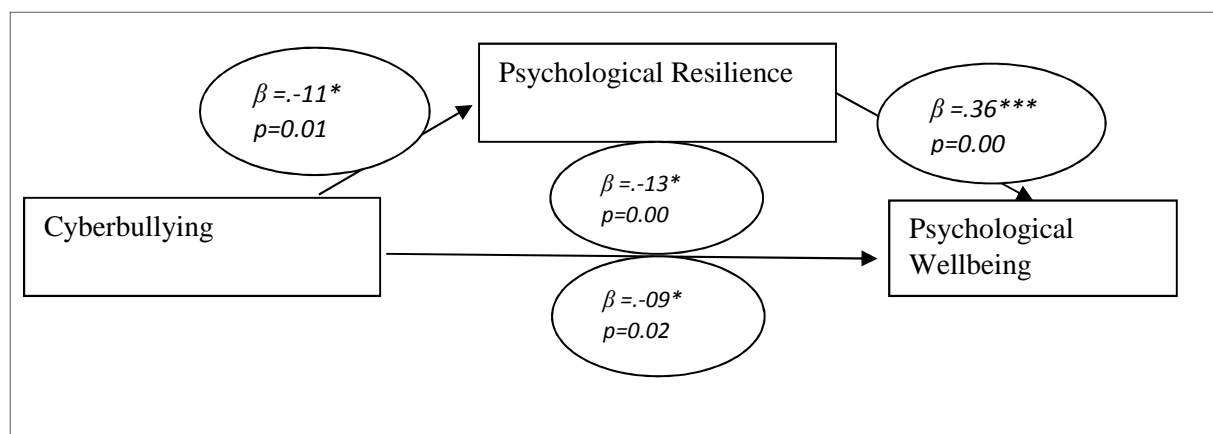
3. Education Type	r	.08	.18			
	p	0.075	0.00			
4. Well-Being	r*	.10	.04	.20	(.77)	
	p	0.03	0.34	0.00		
5. Resilience	r*	.16	.21	.14	.36	(.87)
	p	0.00	0.00	0.00	0.00	
6. Cyberbullying	r*	-.11	.14	.07	-.13	-.09 (.89)
	p	0.01	0.00	0.10	0.00	0.05
	<i>Means</i>	20.93	-	-	44.67	25.81 10.44
	<i>SD</i>	2.05	-	-	5.13	6.14 8.16
Female 1 (Means)		20.71	-	-	44.55	25.08 9.79
Male 2 (Means)		21.63	-	-	45.08	28.13 12.49
I. Education 1 (Means)		20.85	-	-	44.17	25.36 10.13
II. Education 2 (Means)		21.28	-	-	45.08	27.68 11.70

*Correlation Analyses Note: Cronbach alpha values in parentheses. Bold values are statistically significant

Table 2. Regression analyses for the psychological well-being

Variables	<i>B</i>	<i>SE</i>	<i>R-Squared</i>	β	<i>t</i>	<i>p</i>
Age	.21	.11	.01	.08	1.82	.00
Gender	.09	.56	.01	.00	.17	.86
Education Type	2.57	.60	.04	.19	4.23	.00
Cyberbullying	-.08	.02	.06	-.13	-2.80	.00
Resilience	.29	.03	.17	.35	8.17	.00

Figure 1. Mediating effects of psychological resilience on the relationship between cyberbullying and psychological well-being.



*p < .05, **p < .001, ***p < .000

Discussion

The aim of this study was to examine the mediating role of psychological resilience in the relationship between cyberbullying and psychological well-being. In the general evaluation, our findings indicate that university students exposed to cyberbullying exhibit higher levels of psychological well-being when their psychological resilience is higher. In other words, the hypothesis was supported in that the effects of cyberbullying on psychological well-being were mediated by psychological resilience.

In our study, age, gender, and type of education (day or night school) were the control variables. When regression analysis results were examined, it was seen that psychological resilience and well-being scores increased with age while cyberbullying scores decreased. This can be interpreted as the students learning to more successfully cope with stressful situations and to not let such situations affect their psychological well-being through the emotional and moral maturity that comes with age. Similarly, this maturity may have decreased their hurtful cyberbullying behavior. It was seen that the students who went to night school were exposed to more cyberbullying and that they had higher levels psychological resilience and psychological well-being. Even though the students who went to night school were exposed to more cyberbullying, they were seen to cope with this situation more successfully.

With regard to findings about gender, male students were found to have higher mean values compared to the female students. While male students were exposed to more cyberbullying compared to female students, they also had higher levels of resilience and psychological well-being. The reason behind male students having higher levels of resilience and psychological well-being while being exposed to more bullying might be the male students generally having more tolerance to pranks because of their communication styles or behavior perceived as disturbing for females being accepted as normal by males. On the other hand, males being exposed to more cyberbullying can be explained as exhibiting aggressive behavior because of a desire to more popular among males, and being less affected by more cyberbullying can be explained as the males exhibiting a more traditional masculine gender role. In the literature, findings on the effect of

gender in cyberbullying behavior can be seen to be inconsistent. In a manner contrary to our findings, while no gender difference could be found with regard to being a victim of cyberbullying in certain studies (MacDonald and Roberts-Pittman, 2010), certain studies have reported female students becoming victims of cyberbullying in higher rates compared to male students (Foody, McGuire and O'Higgins, 2019).

Our findings showed that students who attended night school had higher resilience and psychological well-being mean values compared to students who attended day school. This unexpected finding is very difficult to interpret. Being busy during the day (school, work) and resting at night in a manner appropriate to the biological rhythm of the body usually leads to more positive health outcomes. However, in our study, attending night school seems to somehow increase the resilience and psychological well-being of students. These students may be removing the negative effects of their day life at home or work by going to the university through the friendships they build there.

When the relationships between study variables were examined, our findings were found to be consistent with previous studies with regard to the negative effects of cyberbullying on psychological well-being. Findings from the studies of various researchers have shown the psychological well-being of students exposed to cyberbullying to be lower than those who were not (Spears et al. 2015; Przybylski and Bowes 2017; Foody, McGuire and O'Higgins, 2019; Hellfeldt, López-Romero and Andershed, 2020).

The findings of our study support the findings of previous studies showing psychological resilience to decrease the negative effects of cyberbullying on a person. In compliance with literature, psychological resilience, which is defined as coping with difficulties in daily life and being able to adapt to difficulties, was seen to help university students cope with problems such as cyberbullying (Hinduja and Patchin 2017; Zhou et al. 2017; Cénat et al. 2019). It was seen that beside psychological resilience, which helps a person cope with cyberbullying as a personal characteristic, other personal characteristics also helped decrease the effects of such difficulty. Other personal resources such as having an internal locus of control and high self-esteem strengthen a person's psychological resilience and help him/her cope with difficulties.

On the other hand, the social support received by these students from their friends and family might be increasing their resilience in situations that necessitate struggle. Strong family relations and spending time with one's family were suggested to increase the resilience of university students against the effects of online bullying (Fanti, Demetriou and Hawa, 2012; Papatraianou, Levine and West, 2014).

In this study, the focus was on whether the participants practiced or were exposed to cyberbullying. However, a more comprehensive picture can be attained in future studies by including the bullying behavior of each gender within their own groups and against the other sex. Additionally, while a child can receive help from his/her family or an adult in cases of physical or cyber bullying in high school or elementary school environments by reporting the bullying to his/her family or school staff, university students have to cope with these situations alone since they are not children and avoid asking for help. This may make them feel lonelier and their psychological well-being to be affected more. In this context, providing awareness training on cyberbullying at universities and forming support groups in such settings would ensure that students know where to refer to and how to get help in those situations.

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