

Does High Self-Efficacy in Adolescents Minimize Cyber Bullying Behaviour?

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ABSTRACT

Objective: This study aimed to explain the moderation role of self-efficacy in the relationship between cyber victimization and cyber bullying.

Methods: A total of 340 high school students participated in the study aged between 14 and 18 years. Research data was obtained by the Cyber Bullying and Internet Aggression Survey Scale, and the Self-Efficacy Scale. Correlation analysis was performed to determine the relationships between variables in the study. Hierarchical regression analysis based on the Hayes method was used to test the moderating effects in the study.

Results: As a result of the research, it was found that 42% of the participants were exposed to cyber bullying and 35% engaged in cyber bullying. The research revealed that there is a moderate, positive and significant relationship between cyber victimization and cyber bullying. As a result of moderating analysis, it was observed that self-efficacy affects the relationship between cyber victimization and cyber bullying.

Conclusion: The results indicate that a decrease in self-efficacy leads to increased cyber bullying behaviour, while an increase in self-efficacy decreases cyber bullying behaviour after cyber victimization. From this point of view, carrying out studies to increase the self-efficacy levels of students in schools will reduce cyber bullying.

Keywords: Cyber victimization, cyber bullying, self-efficacy, moderation

1. INTRODUCTION

The use of new technological tools such as computers, tablets, and smartphones is intensive in education, business and leisure. These tools have benefits such as allowing access to information, communication with other people, for initiating and conducting interpersonal relationships, and organizing leisure activities (1). Adolescents especially use these technological tools for academic activities, establishing friendships and accessing information. Therefore, adolescents may spend most of the day using technological tools. However, this intensive use may negatively affect the spiritual world of adolescents (2).

One of the negative consequences of new technologies is cyber bullying. Cyber bullying is the use of technological tools to harm others (3). The rapidly increasing use of electronic communication tools in the last decade has led to a new form of bullying (4).

Islam et al (5) determined that about 12% of adolescents are involved in cyber bullying. Lapiere and Dane (1) found that 7.4% of adolescents engaged in cyber bullying, while Modecki et al (6) found that about 17% of adolescents were cyber bullying. Hemphil et al (7) reported that 23% of adolescents

engage in cyber bullying. Jadambaa et al (8) reported cyber bullying behaviour in 5% of adolescents.

Studies revealed that cyber bullying has various adverse effects on victims, such as depressive mood, high level of loneliness, disappointment and grief, and difficulties with academic learning (9,10). Studies conducted in recent years reveal that people with mental health problems are more likely to engage in cyber bullying behaviour (11, 12). Cyber bullying and cyber victimization were found to be associated with concepts such as depression, anxiety, and self-esteem (13). Moreover, it is stated that cyber bullying affects social cohesion and well-being at school (14).

1.1. Relationship Between Cyber Victimization and Cyber Bullying

Recent research have shown that one of the strongest predictors of cyber bullying behaviour is for someone to experience cyberbullying (15). Numerous studies show strong correlations between cyber victimization and continuation ($r = .50$ to $.60$) (16, 17). Leung et al (18) revealed that there

is a significant relationship between cyber victimization and cyber bullying ($r = .65$), while Quintana-Orts and Rey (19) reached the same conclusion ($r = .57$). Hood and Duffy (20) also point to a significant relationship between cyber victimization and cyber bullying ($r = .55$). An analysis of studies conducted in Turkey show that the relationship between cyber victimization and cyber bullying varies between .27 and .70 (21, $r = .27$; 22, $r = .48$; 23, $r = .49$ for females, $r = .52$ for males; 24, $r = .46$; 25, $r = .70$).

1.2. Self-Efficacy and Cyber Bullying

Self-efficacy is an individual's belief in their capacity to organize actions, cognitive skills, and motivation required to fulfil an undertaking with success (26). According to Bandura (27), self-efficacy is related to a person's own perceptions, and their belief in their capability to organize a result they want, and achieve it with success. The more individuals believe they can treat others offensively, the more probable it is that they will act outrageously and brutally (28). In addition, Erath et al., (29) state that low self-efficacy may cause victimization of individuals. Trompeter et al. (30) revealed that coping self-sufficiency is related to cyber victimization. Bussey et al. (31) showed that cyber bullying, defined as an individual's belief in the competence to engage in cyber bullying, is associated with self-efficacy and cyber bullying. Heiman et al. (32) reported that students exposed to the cyber bullying had lower self-efficacy than students not exposed to cyber bullying.

1.3. Current Study

This study is consistent with the results of previous studies (33,34), leading to the expectation of a significant relationship between experiencing cyber bullying and cyber bullying behaviour. Furthermore, it is considered that self-efficacy will explain the relationship between cyber victimization and cyber bullying in this study. It is predicted that the positive relationship between cyber-victimization and cyber bullying is going to be weaker for those with high self-efficacy compared to those with low self-efficacy particularly. In line with this, the current research aims to examine the moderating role of self-efficacy in the association between cyber victimization and cyber bullying.

2. METHOD

2.1. Study Group

The sample group in the study consisted of 340 high school students attending four different state schools in Erzurum province, Turkey. Of the students, 45.9% ($n = 156$) were female, and 54.1% were male ($n = 184$). Students participating in the study were aged between 14 and 18 years, with the average age of 15.7 years. Among the students, 24.7% ($n = 84$) were in 9th grade, 32.9% ($n = 112$) were in 10th grade, 28.8% ($n = 98$) were in 11th grade, and 13.5% ($n = 46$) were in 12th grade.

According to the findings of the research, it was determined that 34.6% of the students exhibited cyberbullying behaviors and 42.1% experienced cyber victimization.

The study was conducted between 1-30 April 2020, after ethical approval (30 March 2020). Scales provided via an electronic link. Snowball sampling method was used to determine the participants to participate in the study. The scales prepared online were first given to a student and they were asked to communicate the scale to others using social networks.

2.2. Measures

2.2.1. Self-efficacy scale for children: The Self-Efficacy Scale for Children was developed by Muris (35). Çelikkaleli et al. (35) conducted the adaptation study of the scale into Turkish. The scale consists of 21 items, and 3 sub-dimensions: academic, social, and emotional self-efficacy. As a result of analysis of the scale's internal consistency reliability, the overall coefficient was determined as .86, while the coefficients for academic, social, and emotional self-efficacy were determined as .84, .64 and .78, respectively. Higher scores obtained from the scale signify high levels of self-efficacy in individuals. In this study, the scale was evaluated as the total score.

2.2.2. Cyber bullying and internet aggression survey scale (CIASS): In order to determine the cyber victimization and cyber bullying behaviour of students participating in the study, the scale developed by Hinduja and Patchin (36), and adapted to Turkish by Özdemir and Akar (37) was used. The scale consists of 8 items, and two separate forms: cyber victimization and cyber bullying. The internal consistency reliability coefficient was found to be .79 for cyber victimization, and .94 for cyber bullying. High scores obtained from the scale indicate high levels of cyber victimization and cyber bullying.

2.3. Data Collection Process

As there was no in-person education at schools due to COVID-19, data were collected online. Hence, the online data collection scales were prepared using Google Forms and sent to the participants. Moreover, informed consent was obtained from individuals who accepted participation in the study before they completed the scales. It was ensured that only volunteers were included in the study. Additionally, individuals were informed that they may stop completing the scales whenever they want, and that the results would be kept confidential. The online data collection process was completed within 30 days. The collected data online were analysed in a computer environment. As it is not possible to move to the next question without marking an answer during the online application, there was no incomplete data in the study. As a result, 350 people completed the scales.

2.4. Data Analysis

Before analysis of the data, the levels of discrepancy and normality were examined. In this data set, it was determined that data for 10 individuals violated the parametric conditions and hence these data were removed from the data cluster. In the final stage, Mardia’s skewness and kurtosis values were examined using Lisrel 9.0 software to test the multivariate normality of the data set. As a result, it was observed that Mardia’s assumptions of multivariate normality were confirmed ($p>.05$). After all these procedures, it was decided to conduct the analysis process based on data from 340 participants. Pearson correlation analysis was conducted to establish whether self-efficacy is related to cyber victimization and cyber bullying behaviour. Then, regression analysis was performed using the bootstrap method to test the moderating role of self-efficacy in the effect of cyber victimization on cyber bullying. Hayes’ (38) Process Macro program was utilized to perform the moderation analysis (Model-1).

2.5. Ethical Approval

The approval of the ethics committee of the study was obtained from the Ethics Committee of Atatürk University Educational Sciences Unit on 30.03.2020.

3. RESULTS

Relationship Between Self-Efficacy and Cyber Victimization and Cyber Bullying, and Descriptive Results

Pearson correlation analysis was conducted to reveal the level of correlation between self-efficacy, cyber victimization, and cyber bullying scores. In addition, descriptive statistical operations related to variables were completed. Both descriptive and correlation results for the variables are presented in Table 1.

Table 1. Descriptive and correlation results for cyber victimization, cyber bullying, and self-efficacy

Variables	M	SD	Self-Efficacy	Cyber Victimization	Cyber Bullying
Self-Efficacy	71.63	11.04	1		
Cyber Victimization	9.25	1.88	-.15*	1	
Cyber Bullying	8.77	1.29	-.12*	.55*	1

* $p<.001$

Examination of Table 1 shows low level, significant negative correlations between self-efficacy with cyber victimization ($r= -.15, p<.001$) and cyber bullying ($r=-.12, p<.001$). Further, medium and significant level of positive correlation was observed between cyber victimization and cyber bullying ($r=.55, p<.001$).

Moderating Role of Self-Efficacy

The effect of self-efficacy in the moderating role between cyber victimization and cyber bullying is shown in Table 2.

Table 2. Moderating role of self-efficacy

Variables	b	S.H.	t	LLCI	ULCI
Constant	8.74	.059	149.20	8.6	8.5
Cyber-Victimization (x)	.36	.031	11.62	.30	.43
Self-Efficacy (w)	-.005	.005	-.86	-.02	-.01
x.w	-.009	.003	-3.26	-.015	-.003

$R= .57, R^2 = .32,4; p<.01, .05, S.E.: Standard Error; b: unstandardized beta coefficient$

According to the results in Table 2, all predictor values included in the regression analysis explain approximately 32% ($R^2 = .32,4$) of the variation in cyber bullying. Cyber victimization was found to have significant positive effects ($b= .36, p<.01$) on cyber bullying, while self-efficacy was determined to have significant negative effects ($b= -.005, p<.01$) on cyber bullying. The cyber victimization and self-efficacy variables were found to have significant interactional effect (moderating effect) on cyber bullying ($b= -.009, p<.05$).

The effects of the moderation variable as a result of the slope analysis are shown in Figure 1. Details of the moderation effect show that when self-efficacy is low, cyber victimization has a greater effect on cyber bullying. When self-efficacy is high, the effect of cyber victimization on cyber bullying increases, yet this effect is not as strong.

As a result, in the case of low self-efficacy, cyber victimization will have a greater effect on cyber bullying. This finding signifies that the relationship between cyber victimization and cyber bullying is moderated by self-efficacy.

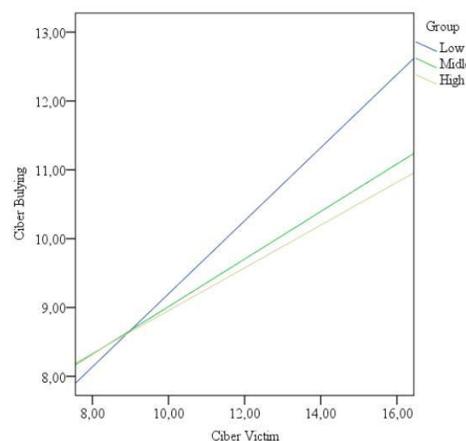


Figure 1. Graphical representation of the moderation effect of self-efficacy

4. DISCUSSION

This study examined the moderation role of self-efficacy between cyber victimization and cyber bullying. In the study, there was a linear relationship between cyber victimization and cyber bullying. It was found that there was a low-level, negative and significant relationship between self-efficacy with cyber victimization and cyber bullying. Another result of the study determined that self-efficacy has a moderation role in the relationship between cyber victimization and cyber bullying.

In the first finding of the study, it was determined that experiencing cyber victimization has a strong relationship in showing cyber bullying behaviors. Exposure to cyber bullying adversely affects social and emotional adaptation of adolescents (39). Individuals who experienced cyber bullying reported feelings of shyness, anger, sadness, disappointment, guilt and helplessness (40). Experiencing such negative emotions leads to an increased desire for revenge (41). The negative emotions experienced may drive the cyber victim to resort to bullying in order to take revenge (42). Patching and Hinduja (34) stated that cyber victims turn into cyber bullies due to their failure to effectively solve social problems and because they process social information in a hostile manner as a result of experiencing negative emotions such as anger. Therefore, it can be thought that experiencing cyber victimization can lead to cyberbullying behaviors.

This study revealed that self-efficacy plays a protective role in preventing cyber victims from becoming cyber bullies. This study found the interaction of cyber victimization with self-efficacy is a significant predictor of cyber bullying. More specifically, individuals with low self-efficacy display more cyber bullying behaviour in comparison to those with high self-efficacy. In other words, adolescents with low self-efficacy who have experienced cyber bullying, are more likely to display cyber bullying behaviour.

These results are compatible with Bandura's (26) social cognitive theory. Social cognitive theory states that self-efficacy beliefs are the basis of individuals' actions. The self-efficacy beliefs affect the behaviour pattern they choose and skills they develop. Self-efficacy levels can lead to healthier behaviour (27). As a result, individuals with high levels of self-efficacy about coping with cyber bullying effectively choose professional behaviour to cope with cyber bullying (43).

In this context, development of self-efficacy among cyber victims protects them from the adverse effects of victimization, and thus, reduces their aggression and prevents them from experiencing feelings of revenge. Bingöl (44) emphasized that having high self-efficacy will decrease cyber bullying. In a study conducted by Nikel (45), individuals with high self-efficacy reported they were able to solve social conflicts without feeling the need to resort to aggression, which supports this conviction. Individuals with high self-efficacy are able to deal with stressful social situations and prefer trusting behaviour as a social strategy (46, 47). Self-efficacy prevents negative peer relationships (29), and

provides the opportunity for the individual to follow their personal norms in order to regulate their behaviour when faced with peer pressure (48). Furthermore, the finding that individuals with high social self-efficacy receive greater support from their friends when they experience cyber bullying reveals the protective role of self-efficacy (28, 10).

5. CONCLUSIONS

The results of this study reveal that when their self-efficacy levels are low, adolescents exhibit more cyber bullying behaviour. When the self-efficacy levels of adolescents are high, the effect of cyber victimization on cyber bullying was observed to be a little less strong. This result means that the relationship between cyber victimization and cyber bullying is moderated by self-efficacy.

Limitations and Recommendations

Despite revealing crucial results, this study has various limitations. First of all, the findings obtained from this study were collected using self-report measuring tools reliant on the participants' perceptions. Therefore, it is recommended that new studies employing different data collection methods be completed. Another limitation of the study is the use of the relational model. Therefore, causal inferences cannot be drawn from this study. Conducting new studies using experimental or longitudinal design will ensure the elimination of this limitation.

Various suggestions can be made in the context of this study. First of all, it was observed that self-efficacy plays a protective role against cyber victims becoming cyber bullies. In this context, psycho-education programs to be applied to cyber victims need to focus on boosting self-efficacy. Secondly, self-efficacy was measured integrally in this study. Later research focusing on the sub-dimensions of self-efficacy, and revealing their role in the relationship between cyber victimization and cyber bullying will be beneficial.

The findings of this research include vital results for school psychological counsellors. This research shows that adolescents exposed to cyber bullying are at risk of becoming cyber bullies. Therefore, school counsellors should take various precautions to prevent them from responding with cyber bullying after they are exposed to cyber bullying.

One of these precautions is to increase the self-efficacy of students. This research shows that individuals with high levels of self-efficacy can easily cope with the negative results of being exposed to cyber bullying. Therefore, school counsellors should develop programmes to increase the self-efficacy of students exposed to cyber bullying and should play a role during the implementation period.

Conflict of interest

The authors do not have any conflict of interest to disclose

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