

The mediating role of emotional competence in the association between self-esteem and cyberbullying victimization among adolescents

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Abstract

The transition phase experienced by adolescents is certainly not always smooth and it is common to experience bullying. With the development of technology, bullying that was originally only in schools and neighborhoods has become in cyberspace or can be called cyberbullying. someone can become a victim of cyberbullying because they have low self-esteem. Emotional competence, which includes the ability to recognize, respond, and manage one's own and others' emotions, is a key factor in overcoming the negative impact of cyberbullying and improving adolescents' self-esteem. This study aims to examine the important role of emotional competence as a mediator between self-esteem and cyberbullying victimization in adolescents. In this study, a sample of 115 adolescents who had experienced cyberbullying was involved. A significant indirect effect (-0.1022) of emotional competence was found through data analysis using mediation tests. The findings of this study provide strong evidence that adolescents with high self-esteem and good emotional competence are likely to experience lower impact when victimized by cyberbullying. The results of this study provide a deeper understanding of the importance of developing emotional competence in protecting adolescents from the risks and negative impacts of cyberbullying. Emotional competence can be learned by attending some training such as emotion regulation training, emotion identification, and others that are related to emotional competence. Self-esteem training also can be an option for adolescents to learn and increase the skill of emotional competence.

Keywords

Adolescents, cyberbullying victimization, emotional competence, mediation, self-esteem

Introduction

Bullying is an aggressive behavior that occurs in situations where a group persistently targets an individual, either physically or mentally (Wang et al., 2023). The effects on victims are long-lasting (Rivara & Le Menestrel, 2016; Wolke & Lereya, 2015), persisting into their mid-20s (Copeland et al., 2013) and even into their 40s (Takizawa et al., 2014). Other internal impacts include a tendency to suppress problems (Reijntjes et al., 2010), increased risk of self-harm during adolescence (Fisher et al., 2012), depression (Wang et al., 2023), loneliness (Wang et al., 2023), heightened anxiety (Reijntjes et al., 2010), reduced self-confidence (Brito & Oliveira, 2013), and post-traumatic stress disorder if not properly addressed (Nielsen et al., 2015).

Adolescents are in a phase of biological, psychological, and social changes (Jimenez et al., 2023), as well as evolving interests and behavior patterns, making them particularly vulnerable to bullying. (Liu et al, 2024). The advancement of technology and easy access to the internet have facilitated bullying not only in person but also online (Kowalski et al., 2014; Modecki et al., 2014), thus increasing the susceptibility of adolescents to cyberbullying.

Cyberbullying is defined as aggressive or harmful behavior directed at an individual or group through electronic technology (Belsey, 2006; Patchin & Hinduja, 2006). Forms of cyberbullying include hate speech, spreading rumors or threats, uploading private photos or videos without consent,

and excluding individuals from online social groups (Pawar & Raje, 2019). In 2018, it was reported that one in six teenagers experienced cyberbullying on social media or the internet. Data from U-Report in 2021 indicated that among 2,777 Indonesian adolescents aged 14-24, 45 percent had been victims of cyberbullying.

Research has linked cyberbullying victimization to various mental health issues such as eating behavior disorders, suicide attempts, aggression, and substance dependence excluding alcohol (Tozun, 2018). Additionally, adolescents who have been cyberbullying victims tend to develop negative emotions like anger, sadness, and fear, as well as obsessive-compulsive characteristics such as anxiety and nervousness, and depressive symptoms including feelings of helplessness and hopelessness (Bochkareva & Strenin, 2021). Victims of cyberbullying are also more likely to externalize their issues through aggressive behavior (Ong et al., 2021), which can lead them to become bullies themselves in the future due to the trauma experienced (Walters & Espelage, 2018). One characteristic of cyberbullying victims is their inability to

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positively or negatively evaluate themselves, also known as low self-esteem (Alsawalqa, 2021).

Self-esteem is defined as adolescents' evaluation of themselves, both positively and negatively (Rosenberg & Winch, 1965). Adolescents with low self-esteem tend to feel anxious and stressed in social situations because they fear rejection, which traps them in negative aspects and emotions (Wood & Forest, 2016). Persistent negative self-evaluation can lead to depression, substance abuse, and suicide (Jianhua Zhou et al., 2018). In contrast, adolescents with high self-esteem are likely to form quality relationships that affirm their sense of self. They are more receptive to praise and use it to enhance their positive self-view (Lee & Way, 2019).

Meta-analyses indicate a relationship between self-esteem and cyberbullying victimization (Alsawalqa, 2021; Lei et al., 2020), highlighting the significant impact these variables have on adolescent development. Therefore, adolescents need intrinsic capabilities to navigate this developmental stage effectively. This includes emotional competence, defined as the ability to identify, respond to, and manage one's own and other's emotions

(Na et al., 2016). Individuals with high emotional competence can effectively express their feelings (Vibhor et al., 2020). If adolescents can understand and manage their negative emotions, they can transform these emotions into positive ones, thus mitigating the negative impacts of bullying such as anger and sadness. Emotional competence can also address issues in adolescents with low self-esteem. Adolescents who are trapped in negative emotions but possess good emotional competence can identify and manage their emotions effectively, enhancing their self-esteem. Consequently, this research posits that emotional competence can provide deeper insights and bridge the relationship between self-esteem and cyberbullying victimization.

In addition to the previously mentioned points, there is further evidence indicating an unexplained gap in the relationship between self-esteem and cyberbullying (Lei et al., 2020). Researchers believe that emotional competence is the appropriate variable to serve as a mediator that can provide deeper insights. This is supported by previous studies showing that self-esteem correlates with emotional competence (Onwubiko, 2020) and that emotional competence is closely related to cyberbullying victimization (Guerra-Bustamante et al., 2021; Marín-López et al., 2020). Based on this research evidence, it is plausible that emotional competence can mediate the relationship between self-esteem and cyberbullying victimization in adolescents. Therefore, this study aims to determine whether emotional competence can serve as a mediator influencing the relationship between self-esteem and the impact of being a cyberbullying victim.

Method

Participants

This study involved 115 respondents, selected using purposive sampling. Purposive sampling is a technique where the research sample is chosen based on predetermined criteria (Campbell et al., 2020). The criteria used were: 1) adolescents aged 16-19 years or currently attending high school or equivalent, and 2) having experienced cyberbullying in the

Table 1. Participants' Demography

Category	Frequency	%
Gender		
Male	34	30
Female	81	70
Age		
16	33	30
17	38	33
18	42	37

past six months. Detailed demographic data of the participants are presented in Table 1.

Research Instruments

Using several instruments in a quantitative method, this study employed three scales to measure each variable. The independent variable, self-esteem, was measured using the Rosenberg Self-Esteem Scale (RSES), which was adapted to Indonesian with a reliability of 0.753 (Septian, 2018). This scale has three aspects: physical self-esteem, social self-esteem, and performance self-esteem (Rosenberg & Winch, 1965). It is a Likert scale with response options ranging from 1-4 (1="strongly disagree", 2="disagree", 3="agree", and 4="strongly agree"). The scale consists of 34 items, with 31 favorable and 3 unfavorable items. A sample item from this scale is, "I feel that I am a person of worth, at least on an equal plane with others."

The dependent variable, cyberbullying victimization, was measured using the Cyberbullying Victimization Scale, translated into Indonesian by the researcher, with a reliability of 0.961 (Lee et al., 2016). This Likert scale has response options ranging from 1-5 (1=never, 2=rarely, 3=sometimes, 4=often, and 5=very often). The scale includes 27 items with three aspects: verbal/typing and visual/sexual, consisting of 9 favorable items such as "I receive offensive messages online repeatedly from someone" for the verbal/typing aspect, and "People make sexual jokes about me online to ruin my reputation" for the visual/sexual aspect, one unfavorable item, and Social Exclusion with 6 favorable and 1 unfavorable item. A sample item for Social Exclusion is "I am excluded from online group activities, making me feel left out."

The mediator variable, emotional competence, was measured using the Profile of Emotional Competence (PEC) (Brousseau et al., 2013), adapted to Indonesian with a reliability of 0.622 (Megawati & Wulandari, 2020). This scale consists of 50 items with two dimensions: interpersonal and intrapersonal, and five aspects: identification, compliance, expression, regulation, and utilization, with 10 items for each element. A sample item is, "I know how to motivate people."

The scales were administered using paper and pencil in two sessions. Respondents completed the CBV and RSES scales in the first session, totaling 61 items. In the next session, the same subjects were asked to complete the PEC scale, totaling 50 items.

Data Analysis Technique

Data analysis in this study utilized mediation testing and the Bootstrap method. The Bootstrap method supported hypothesis testing (MacKinnon et al., 2002). Both tests

Table 2. Data Categorization

Variable	M	SD	Category	F	%
Emotional Competence	155.69	9.95	Low	61	53
			High	54	47
Cyberbullying Victimization	67.32	25.54	Low	56	48.7
			High	59	51.3
Self-esteem	93.89	9.57	Low	57	49.6
			High	58	50.4

Table 3. The Mediation Test Result on The Relationship between Self-esteem and Cyberbullying Victimization, with Emotional Competence as The Mediator

Regression Form	β	Se	(p)
x-y (path c)	16.029	0.1971	0.00
x-m (path a)	0.1607	0.0967	0.09
m-y (path b)	-0.6358	0.1831	0.00
x-m-y (path c')	17.051	0.1904	0.00

were conducted using SPSS 22 with the PROCESS plugin by Andreas Hayes. PROCESS facilitated mediation and Bootstrap testing simultaneously (Hayes & Scharkow, 2013). Before data analysis, the researchers performed assumption tests for linearity and normality to ensure the data were linear and normally distributed. Following these assumption tests, mediation and Bootstrap tests were conducted to determine the alignment of the hypotheses with the research results.

Result

Based on the calculation of the mean data, in table 2, the majority of adolescents exhibited high emotional competence and experienced significant impacts from cyberbullying yet maintained high self-esteem. Table 2 indicates that the majority had low emotional competence, with 61 participants or 53% of the total respondents. This suggests that most participants struggled to regulate, express, and utilize their own and others' emotions effectively. Of the 115 participants, 59 adolescents, or 51.3%, experienced cyberbullying more than three times and felt its significant impacts. Regarding self-esteem, the majority of respondents, 58 out of 115, or 50.4%, were able to evaluate themselves positively and negatively effectively.

The findings indicate no direct relationship between self-esteem and cyberbullying victimization ($p = 0.09 > 0.05$). However, a significant relationship was found between emotional competence and cyberbullying victimization ($p = 0.00 < 0.05$). Additionally, there was a positive relationship between self-esteem and cyberbullying victimization both through emotional competence ($p = 0.00 < 0.05$) and without it ($p = 0.00 < 0.05$). The coefficient of the relationship between emotional competence and cyberbullying victimization was negative ($B = -0.6358$), indicating that higher emotional competence is associated with lower impacts of cyberbullying. Further data in Table 3 shows a change in the significance coefficient before ($B = 1.6029$) and after ($B = 1.7051$) accounting for emotional competence.

The bootstrap test demonstrates the mediating role and the extent of mediation in a variable. Table 4 explains that the

unstandardized indirect effect value from the bootstrap is -0.10, with a 95% confidence interval (CI) ranging from -0.23 to -0.01. Since zero is not within the 95% confidence interval range, it confirms that there is a significant indirect effect of self-esteem on cyberbullying victimization through emotional competence.

Discussion

The findings indicate a significant positive relationship between self-esteem and cyberbullying victimization. This suggests that the higher the self-esteem of the respondents, the greater the tendency to experience cyberbullying. This research finding differs significantly from previous studies suggesting that individuals with low self-esteem are more likely to be victims (Alsawalqa, 2021; Patchin & Hinduja, 2006). This phenomenon can be explained by previous research indicating that individuals with high self-esteem who become victims of cyberbullying tend to respond with anger, which is what the perpetrators desire, leading to continuous cyberbullying (Balakrishnan & Fernandez, 2018). These two reasons explain why the respondents frequently experience cyberbullying. However, research on the influence of self-esteem on cyberbullying does yield varied results; some findings indicate a correlation, while others do not (Lei et al., 2020). This phenomenon warrants further investigation to provide additional insights and uncover facts related to the influence of self-esteem on cyberbullying victimization.

Moving on to path b, a significant negative influence was found between emotional competence and cyberbullying victimization. This implies that adolescents who can regulate, manage, and process their emotions effectively are less likely to experience cyberbullying. This is supported by previous research suggesting that emotional competence can serve as both a risk and protective factor against cyberbullying (Llorent et al., 2021; Marín-López et al., 2020).

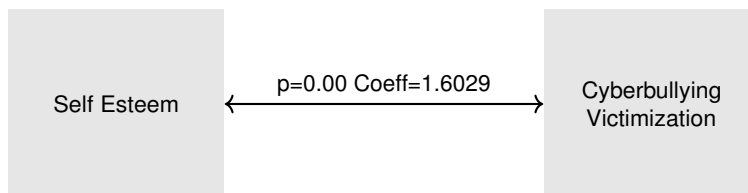
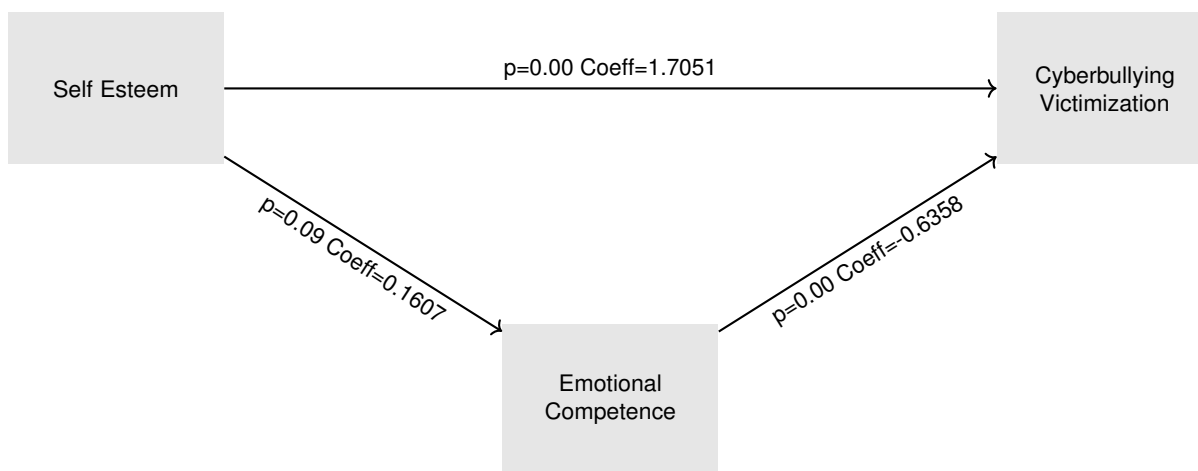
No significant effect was found in path a, which represents the influence of self-esteem on emotional competence. This suggests that adolescents with high self-esteem do not necessarily have high emotional competence. The reason for this could be the complexity of psychological changes experienced during adolescence (Alfinuha & Alfinuha, 2022). This finding differs from previous research suggesting that individuals with high self-esteem also have high emotional intelligence (Onwubiko, 2020).

However, the nonsignificant finding in path a does not affect the mediation analysis conducted. Overall, emotional competence still qualifies as a mediating variable in this study. This is evidenced by the significant paths b and c', indicating that self-esteem as the independent and dependent variables pass through the mediator variable line (Baron &

Table 4. Bootstrap test results on the relationship between self-esteem and cyberbullying victimization with emotional competence as the mediator

	Indirect Effect	Boot LLCI	Boot ULCI	Description
Emotional competence as the mediator between SE and Cyberbullying Victimization	-.1022	-.2327	-.0075	Significant

LLCI : Lower Level for Confidence Interval. ULCI : Upper Level for Confidence Interval.

**Figure 1.** The mediation test results on the relationship between self-esteem**Figure 2.** Cyberbullying victimization with emotional competence as the mediator.

Kenny, 1986). Another reason is the change in coefficient values before and after passing through emotional competence, which also indicates that emotional competence still qualifies as a mediating variable (MacKinnon et al., 2002). This is further supported by the significant indirect effect values tested with Bootstrap, showing a negative effect which is a criterion for determining a mediating variable (Hayes & Scharkow, 2013).

The results of this study indicate that emotional competence caPeers could take another step clarifies the relationship between self-esteem and cyberbullying victimization, even though self-esteem is not related to the emotional competence they possess. Adolescents with high self-esteem experience greater impacts when they become victims of cyberbullying, even though their self-esteem is not related to their emotional competence. However, having high emotional competence and self-esteem can reduce the impacts experienced by individuals when they become victims of cyberbullying (Lei et al., 2020).

The emotional competence and self-esteem of adolescents need support from relevant stakeholders in their surroundings (Azpiazu et al., 2023). Parents and teachers, as the closest circle to adolescents, can help by involving adolescents in training sessions on emotions and self-esteem. Another step could be taken by peers to encourage self-awareness and

understanding of oneself and others, enabling adolescents to develop good self-esteem and emotional competence.

However, this study has limitations. One limitation is related to using research instruments with a relatively large number of items when totalled across all three variables studied. This could decrease motivation, boredom, or fatigue during the scale-filling process. Another limitation is related to the translation process of the scales used. A more scientific method, such as back translation, could have been employed, especially for the Cyberbullying Victimization Scale, which the researcher translated through a sworn translator with only one translation process from English to Indonesian.

Conclusion and Implications

Based on the research findings and discussion, it is concluded that the variable of emotional competence can mediate the relationship between self-esteem and cyberbullying victimization in adolescents. However, self-esteem does not have a relationship with emotional competence. Adolescents with high self-esteem and good emotional competence can reduce the impacts experienced when facing cyberbullying.

The implications of this research suggest that adolescents should have high self-esteem and good emotional competence to avoid or reduce the impact of cyberbullying. Adolescents should be able to assess themselves objectively and

understand, identify, regulate, and express their own and others' emotions. Parents and teachers, as the closest circle to adolescents, can help by involving adolescents in training sessions on emotions and self-esteem. Peers can also play a role in encouraging self-awareness and understanding among adolescents to have good self-esteem and emotional competence.

For future research, it is recommended to consider using research instruments with fewer items to reduce the possibility of decreased motivation or fatigue during the data collection. Additionally, mediator variables can be varied by incorporating other variables such as resilience, social media usage intensity, and other components within social media platforms such as likes, comments, views, and other aspects related to the online world and social media.

Declaration

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Author contributions

MIM prepared this research manuscript under the supervision of SSF as a requirement for obtaining a Bachelor's degree in Psychology. All authors have read and approved the final version of this manuscript.

Conflict of interest


The authors declare no conflict of interest in the research, writing of the research results, and/or publication of this study.

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