

Cybervictimization, Self-esteem and Perceived Social Support: Resilience Role as the Mediating Variable

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Abstract

Cyberbullying significantly impacts mental health, contributing to decreased self-esteem, self-harm, and suicide among adolescents. While previous research has established links between self-esteem, social support, and cyberbullying, the underlying mechanisms remain unclear, particularly the potential mediating role of resilience. This study aimed to address this gap by examining whether resilience mediates the relationship between perceived social support, self-esteem, and cyberbullying. A quantitative methodology was adopted, involving a sample of 994 middle-school students aged 12 to 17 years from urban regions in East Java, Jakarta, West Java, and Bali. Structural Equation Modeling (SEM) was employed to perform mediation analyses. Findings indicated that resilience does not mediate the relationships among self-esteem, perceived social support, and cyberbullying. Furthermore, self-esteem and perceived social support emerged as stronger direct predictors of cyberbullying in the absence of resilience as a mediator. Although self-esteem significantly predicts resilience, perceived social support exhibited only a limited predictive ability in relation to resilience. These findings highlight the need for further research to explore alternative pathways through which self-esteem and social support influence cyberbullying, as well as the contextual factors that may affect resilience in adolescent populations.

Keywords: *cybervictimization, resilience, self-esteem, perceived social support*

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Introduction

Bullying has become a significant global concern, particularly within educational settings. Research indicates that approximately one in ten adolescents engages in bullying behaviors (Seyhan Şahin & Ayaz-Alkaya, [2023](#)). Both victims and perpetrators experience detrimental effects, including low self-esteem, academic challenges, emotional distress, relational difficulties, and increased risk of depression (Bauman & Del Rio, [2005](#); Lund et al., [2009](#); Pollastri et al., [2010](#)).

With the rise of technology and social media, bullying has evolved into cybervictimization. Although cybervictimization occurs online, it profoundly impacts victims' offline lives, often resulting in severe mental health issues such as depression and suicide. Recent reports highlight an increase in social media-related suicide cases (AsykarulHaq, [2022](#)). Notable examples include the suicide of a private tutor and TikTok influencer, a teenage girl whose explicit images were circulated online (Rania, [2023](#)), a teenage boy who took his life after a video of him in an intimate encounter with another

male was spread by his roommate (Rania, [2023](#)), and a high school student who attempted suicide due to threats of widespread dissemination of his explicit video (AsykarulHaq, [2022](#)). Cybervictimization often remains undetected and challenging to identify unless reported by the victim or witnesses. Consequently, comprehensive preventive measures, alongside effective intervention and treatment strategies, are crucial to addressing cybervictimization.

Self-esteem and Cybervictimization

Self-esteem plays a crucial role in an individual's psychological resilience and social interactions, and research has shown a strong link between self-esteem and cybervictimization. Victims of cyberbullying often report lower self-esteem, which can make them more vulnerable to repeated online harassment. A study among German secondary school students found that self-esteem was a negative predictor of cybervictimization, particularly in cases of denigration and social exclusion (Lohbeck & Petermann, [2018](#)). Similarly, research on adolescents indicated that those with consistently high self-esteem were more protected against cyberbullying, while those with self-derogation were more susceptible (Palermi et al., [2022](#)).

In addition to being a risk factor, self-esteem also acts as a mediator in the relationship between cybervictimization and other variables, such as parenting styles. Research has found that adolescents raised in environments with low parental acceptance and high coercion tend to have lower self-esteem, making them more likely to be cybervictimized (Garaigordobil & Navarro, [2022](#)). Furthermore, cybervictimization is associated with negative psychological outcomes such as anxiety and impulsivity, which can further diminish self-esteem (Audrin & Blaya, [2020](#)). These findings suggest that strengthening self-esteem may help buffer against the psychological harm caused by cybervictimization.

Emotional coping strategies also play a role in this relationship, as individuals with high self-esteem and emotional self-efficacy are better equipped to handle cyberbullying. During the COVID-19 pandemic, a study found that cybervictims with low self-esteem engaged more in rumination, a maladaptive emotional regulation strategy that worsened their psychological distress (Schunk et al., [2021](#)). This highlights the importance of promoting self-esteem and emotional intelligence as a way to build resilience against cybervictimization. Additionally, university students are not exempt from this phenomenon, as research among Saudi female nursing students found that low self-esteem significantly increased their likelihood of becoming cybervictims (Albikawi, [2023](#)).

Overall, self-esteem is both a risk factor and a protective factor in the context of cybervictimization. Low self-esteem increases vulnerability to cyberbullying, while high self-esteem serves as a shield against its negative effects. Given the strong link between cybervictimization and psychological distress, interventions should focus on enhancing self-esteem through positive parenting, social support, and emotional regulation training. These efforts can help reduce cybervictimization rates and mitigate its harmful consequences on mental well-being.

Perceived Social Support and Cybervictimization

Perceived social support, derived from family, peers, educators, and other significant individuals, not only enhances individual resilience but also sustains the psychological well-being of both victims and perpetrators, thereby diminishing the incidence of bullying (Alvina & Dewi, [2017](#); Castaño-Pulgarín et al., [2022](#); Crisna et al., [2020](#); Seyhan Şahin & Ayaz-Alkaya, [2023](#)). Alongside social support (external factors), self-empowerment through self-esteem also aids in addressing bullying issues (Alvina & Dewi, [2017](#); Muvariz et al., [2020](#); Saaduddin et al., [2023](#)). Elevated self-esteem enables

individuals to surmount difficulties and cultivate resilience by perceiving challenges as opportunities for personal growth (Saaduddin et al., [2023](#)).

Perceived social support plays a crucial role in buffering individuals from the negative psychological effects of cybervictimization. Social support, particularly from family, peers, and teachers, has been shown to mitigate psychological distress among those experiencing online harassment. A study by Chen ([2020](#)) found that parental support, in particular, serves as a significant mediator between cybervictimization and psychological distress, suggesting that individuals with stronger social support systems are better equipped to cope with the adverse effects of online. This implies that fostering supportive relationships in adolescents' environments can help alleviate the emotional burden associated with cybervictimization.

Moreover, online social support has been found to influence how individuals cope with cybervictimization. A study by Fang et al. ([2020](#)) found that while high online social support can be beneficial, it may also reinforce rumination, exacerbating loneliness in some cases. This suggests that not all forms of perceived social support function equally as protective factors, and the quality and source of support are critical in determining their effectiveness. Support from offline sources, such as close friends and family, may be more reliable in mitigating the psychological impacts of cybervictimization than online interactions alone.

In addition to its direct effects, social support can moderate the relationship between cybervictimization and various adverse outcomes, such as problematic social media use and academic difficulties. Research by Borraccino et al. ([2022](#)) found that strong social support significantly reduces the risk of both problematic social media use and cyberbullying behaviors. Similarly, Wright and Wachs ([2021](#)) highlighted the protective role of parental social support in mitigating the negative academic consequences of cybervictimization, such as absenteeism and reduced academic performance. These findings reinforce the importance of fostering strong and positive relationships to build resilience against cybervictimization.

In conclusion, perceived social support is a critical factor in mitigating the negative effects of cybervictimization. While support from parents, peers, and teachers can help reduce distress and improve well-being, the effectiveness of online support remains complex and context-dependent. Strengthening offline support networks, particularly in family and educational settings, may provide the most effective protection against the psychological and academic consequences of cybervictimization. Future research should continue to explore the nuances of different types of support and their role in enhancing resilience among cybervictimization individuals.

Self-esteem, Perceived Social Support and Resilience as Mediator for Cybervictimization

Cybervictimization is a growing concern, particularly among adolescents and young adults, as it can lead to various negative psychological outcomes. Recent research suggests that self-esteem, perceived social support, and resilience play a crucial mediating role in mitigating the adverse effects of cybervictimization. Self-esteem, as a core psychological construct, helps individuals cope with negative online experiences by fostering a sense of self-worth and emotional stability (Reginasari et al., [2021](#)). Higher self-esteem has been linked to a lower likelihood of engaging in maladaptive responses to cybervictimization, thereby reducing its psychological impact (Schunk et al., [2021](#)).

Perceived social support is another critical mediator, as it provides emotional and psychological resources that buffer against the negative effects of cybervictimization. Studies have shown that

individuals with strong social support networks, including friends, family, and peers, experience less emotional distress following cyberbullying incidents (Dundar & Yildiz, [2023](#)). Perceived social support enhances well-being by fostering a sense of belonging and reducing feelings of isolation, which are common consequences of cybervictimization (Shi, [2022](#)). Additionally, individuals who perceive strong support from their environment are more likely to engage in proactive coping strategies rather than internalizing distress.

Resilience, defined as an individual's ability to recover from adversity, serves as a protective factor against the psychological harm of cybervictimization. Research suggests that resilience enables individuals to reframe negative experiences, regulate emotions effectively, and maintain a positive outlook despite adverse online interactions (Surzykiewicz et al., [2022](#)). Furthermore, resilience has been found to mediate the relationship between social support and self-esteem, suggesting that resilient individuals are better equipped to utilize social support as a coping mechanism (Sevil-Gulen & Demir, [2020](#)). This interplay highlights the interconnected nature of self-esteem, social support, and resilience in reducing the negative consequences of cybervictimization.

Several study found that resilience serves as a significant protective factor against bullying (Bunnett, [2021](#); Gabrielli et al., [2021](#); Moore & Woodcock, [2017](#)). Elevated resilience diminishes the probability of an individual participating in violent conduct, encompassing bullying, whether as an aggressor or a target (Greco et al., [2019](#)). Individuals exhibiting low resilience are more vulnerable to stress (Moore & Woodcock, [2017](#)) and more prone to aggressive conduct. Resilience can be cultivated by offering robust social support (Agustin et al., [2022](#); Alvina & Dewi, [2017](#); Arató et al., [2022](#); Crisna et al., [2020](#); Nugrahini et al., [2021](#)) and enhancing self-esteem (Alvina & Dewi, [2017](#); Saaduddin et al., [2023](#)).

In conclusion, self-esteem, perceived social support, and resilience function as crucial mediators in mitigating the psychological impact of cybervictimization. Individuals with high self-esteem are less likely to internalize negative online experiences, while strong social support networks provide the emotional and psychological resources necessary for coping. Resilience further enhances an individual's ability to navigate cyberbullying experiences, fostering emotional regulation and psychological well-being. Interventions aimed at enhancing these mediators, such as self-esteem-building programs, peer support initiatives, and resilience training, could be effective in reducing the negative consequences of cybervictimization

The Gap of Study

Despite extensive research on the psychological effects of cybervictimization, significant gaps remain in understanding the intricate mechanisms through which self-esteem, perceived social support, and resilience interact as mediators. While existing studies confirm that cybervictimization negatively impacts mental health, the relative strength and interplay of these mediators remain unclear. For example, research has shown that perceived social support buffers against the negative consequences of cyberbullying (Shi, [2022](#)), but it is still uncertain whether social support acts as a direct protective factor or whether its impact is dependent on an individual's level of resilience and self-esteem.

Another critical gap is the lack of longitudinal studies examining how these mediators evolve over time in response to cybervictimization. Most existing research relies on cross-sectional designs, which fail to capture the dynamic nature of psychological adaptation (Dundar & Yildiz, [2023](#)). Without longitudinal data, it is difficult to determine whether interventions aimed at enhancing self-esteem and resilience lead to long-term improvements or whether their effects diminish over time.

Additionally, while self-esteem has been linked to emotional self-regulation in cybervictims (Schunk et al., [2021](#)), the bidirectional relationship between these factors remains underexplored.

Furthermore, cultural and contextual differences in how social support and resilience function in cybervictimization cases are not well understood. Most studies are conducted in Western contexts, overlooking potential differences in collectivist societies where family and peer support may play a stronger role in moderating distress (Sevil-Gulen & Demir, [2020](#)). The role of digital literacy and online coping strategies in enhancing resilience is also understudied, despite the increasing prevalence of digital interventions in bullying prevention programs. Therefore, the current study aims to investigate how resilience mediates the relationship between self-esteem, perceived social support, and cybervictimization.

Method

Participants and Procedure

This study utilized a cross-sectional design. A total of 1,077 responses were initially collected; however, 83 responses were excluded due to not meeting the inclusion criteria and/or containing missing data. The exclusion criteria included lack of parental informed consent (as the study involved junior high school students), ineligible age (<12 years old or >17 years old), and/or lack of access to social media. After applying these criteria, a final sample of 994 participants was retained, consisting of 551 junior high school students and 443 senior high school students. The sample included 393 boys (39.5%) and 601 girls (60.5%), with a mean age of 14.6 years ($SD = 1.5$). See table 1 for detail.

Participants were recruited from 26 different schools across 12 cities in four Indonesian provinces: East Java (90%), the Greater Jakarta area (9.6%), West Java (0.2%), and Bali (0.2%). Data collection was conducted using an online survey, which was either supervised by researchers or teachers or completed independently by the participants. Parental informed consent was obtained for all junior high school students before their participation in the study, ensuring ethical compliance and safeguarding the rights and well-being of minors involved in the research.

Measures

Cybervictimization was assessed using a scale developed by the researchers, consisting of seven items rated on a five-point Likert scale. This scale measures the prevalence of cyberbullying experienced by participants within the six months prior to data collection. The items were written in Bahasa Indonesia, with examples including: "Through social media, I have been threatened to do something I do not want to do" and "My friends have spread false or negative information about me on social media to make others avoid me." The scale demonstrated good reliability ($\alpha = 0.860$), and validity testing via Confirmatory Factor Analysis (CFA) showed factor loadings ranging from 0.442 to 0.827. The goodness-of-fit indices indicated an acceptable model fit (CFI = 0.932, TLI = 0.881, SRMR = 0.0399, RMSEA = 0.129).

Resilience was measured using a 12-item scale developed by Mahardika ([2022](#)), utilizing a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) for favorable items, with reverse scoring applied to unfavorable items. Example items include: "I believe that every problem has a solution." and "The challenges I face are a test, and I just need to be patient in overcoming them." The scale exhibited sufficient reliability ($\alpha = 0.802$). Validity analysis using CFA yielded factor loadings ranging from 0.403 to 0.996, with goodness-of-fit indices indicating a well-fitting model (CFI = 0.999, TLI = 0.996, SRMR = 0.0097, RMSEA = 0.0158).

Tabel 1
Demographic information of research subjects

Demographic	Mean	Stdev
Age and School Level		
Total (N = 994)	14.6	1.5
Junior High (JH) (n= 551)	13.5	1.018
Male (n = 260)	13.5	.992
Female (n = 291)	13.5	1.041
Senior High (SH) (n = 443)	15.9	.739
Male (n = 133)	16.0	.696
Female (n = 310)	15.9	.756
Province		
East Java (n = 895)	14.7	1.513
Bali (n = 2)	13.0	1.414
West Java (n = 2)	13.5	2.121
The Greater Jakarta (n = 95)	13.6	0.768

Self-esteem was assessed using a 17-item scale developed by Saputri (2021), also based on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree for positive items, with reverse scoring for negative items). Example items include: "I believe there are many good things about me." and "I am capable of doing things just as well as others." The scale demonstrated adequate reliability ($\alpha = 0.841$), with CFA factor loadings ranging from 0.490 to 0.915. The model fit indices confirmed an appropriate measurement model (CFI = 0.939, TLI = 0.908, SRMR = 0.0051, RMSEA = 0.0793).

Perceived Social Support was measured using a 25-item scale developed by Raharja (2023), employing a five-point Likert scale (1 = strongly disagree to 5 = strongly agree for positive statements, with reverse scoring for negative statements). Example items include: "My family is always there for me when I need them." and "My family ignores me when I face difficulties." The scale demonstrated strong reliability ($\alpha = 0.911$), with CFA factor loadings ranging from 0.510 to 0.891. The goodness-of-fit indices indicated an acceptable measurement model (CFI = 0.911, TLI = 0.889, SRMR = 0.0480, RMSEA = 0.0911).

Data Analysis

The mediation model analysis was conducted using a two-step structural equation modeling (SEM) approach, following the recommendations of Anderson and Gerbing (1988). This approach involved evaluating both the measurement model and the structural model to ensure validity and reliability. Maximum likelihood estimation (MLE) was used for SEM testing. Model fit was assessed using multiple fit indices, including the root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), comparative fit index (CFI), normed fit index (NFI), Tucker-Lewis index (TLI), and goodness-of-fit index (GFI). The accepted threshold values for model fit were RMSEA \leq 0.08 and

SRMR, CFI, NFI, TLI, and GFI ≥ 0.90 , indicating sufficient model accuracy (Hu & Bentler, 1999; MacCallum et al., 1996). All data analyses were performed using IBM SPSS Statistics 22 and Jamovi 2.3.21.

Result

Structural Equation Modelling

The results of the SEM analysis indicate that the proposed model demonstrates a good fit with the data. Both the Standardized Root Mean Square Residual (SRMR) and the Root Mean Square Error of Approximation (RMSEA) fall within the acceptable thresholds for model accuracy. The SRMR value was 0.048, which meets the accepted threshold of ≤ 0.05 , while the RMSEA value was 0.070, remaining below the acceptable limit of ≤ 0.08 . These findings confirm that the model is well-aligned with the observed data.

The Comparative Fit Index (CFI) yielded a value of 0.990, surpassing the recommended threshold of 0.95, indicating a well-fitting model. Additionally, the Non-Normed Fit Index (NNFI) produced a value of 0.987, further supporting the model’s strong fit, as NNFI values above 0.95 signify excellent model fitness. Other fit indices, including the Relative Noncentrality Index (RNI = 0.990), Normed Fit Index (NFI = 0.987), Relative Fit Index (RFI = 0.983), and Incremental Fit Index (IFI = 0.990), all exceeded the 0.95 benchmark, reinforcing the robustness of the model.

Table 2
Summary of path coefficient of standardized direct effect

	Self-esteem	Sosial Support	Resilience	Cybervictimization
Resilience				-0.052**
Self-esteem			0.212*	-0.269*
Sosial Support			0.075**	-0.152*

* $p < 0.05$, ** $p > 0.05$

Figure 1 and Table 2 illustrate the pathways in the proposed model. The first pathway, resilience to cybervictimization, showed that resilience does not significantly predict cybervictimization, with an estimate value of -0.052, a standardized regression coefficient (β) of -0.041, and a z-score of -1.17. The significance value exceeded 0.05 ($p > 0.05$), indicating that resilience does not sufficiently mediate the relationship between self-esteem, perceived social support, and cybervictimization. In contrast, the second pathway, self-esteem to cybervictimization, demonstrated that self-esteem significantly predicts cybervictimization, with an estimate value of -0.269, a standardized regression coefficient (β) of -0.224, and a z-score of -4.33. The significance value was less than 0.01 ($p < 0.01$), suggesting that self-esteem has a stronger direct effect on cybervictimization than through resilience.

Similarly, the third pathway, perceived social support to cybervictimization, revealed that perceived social support significantly predicts cybervictimization, with an estimate value of -0.152, a standardized regression coefficient (β) of -0.142, and a z-score of -3.00. The significance value was less than 0.05 ($p < 0.05$), indicating that perceived social support is more effective in predicting cybervictimization directly rather than through resilience. The fourth pathway, self-esteem to resilience, showed a positive correlation between self-esteem and resilience, with an estimate value of 0.212, a standardized regression coefficient (β) of 0.224, and a z-score of 4.38. The significance

value was less than 0.01 ($p < 0.01$), meaning that an increase in self-esteem contributes to higher resilience.

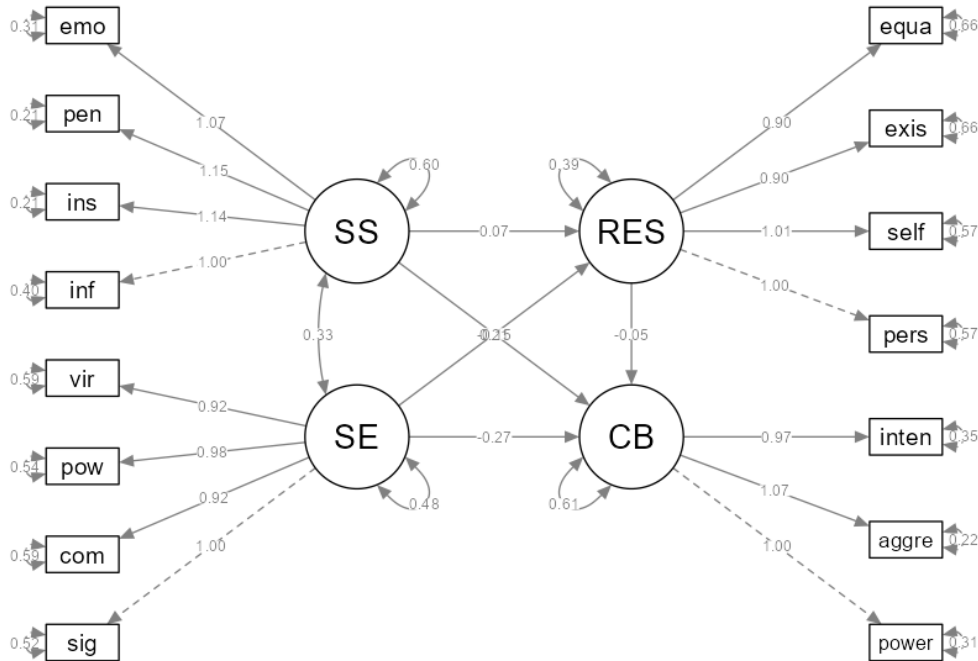


Figure 1. The result of the proposed model

Lastly, the fifth pathway, perceived social support to resilience, was not statistically significant, with an estimate value of 0.075, a standardized regression coefficient (β) of 0.089, and a z-score of 1.93. The significance value exceeded 0.05 ($p > 0.05$), indicating that an increase in perceived social support does not necessarily lead to higher resilience. These results suggest that while self-esteem and perceived social support directly influence cybervictimization, resilience does not play a significant mediating role in this relationship.

Table 3

Summary of path coefficient of standardized indirect effect

Variable	Estimate	SE	β	z	p
SE \Rightarrow RES \Rightarrow CB	-0.011	0.010	-0.009	-1.138	0.255
SS \Rightarrow RES \Rightarrow CB	-0.004	0.004	-0.004	-0.970	0.332

SE = Self-esteem, SS = Social Support, RES = Resilience, CB = Cybervictimization

Table 3 indicates that the estimate values for self-esteem and perceived social support are -0.011 and 0.004, respectively, with significance values of 0.255 and 0.332, both exceeding the 0.05 threshold. These results suggest that resilience, as a moderating variable, does not have a significant effect on the relationship between the independent variables (self-esteem and perceived social support) and cybervictimization. This implies that regardless of an individual's level of resilience, the impact of self-esteem and perceived social support on cybervictimization remains unchanged.

Discussion

The findings of this study indicate that resilience does not have a significant effect on cybervictimization, either as a direct predictor or as a moderating factor. This contrasts with previous studies that have identified a connection between resilience and cybervictimization (Bunnett, [2021](#); Gabrielli et al., [2021](#); Greco et al., [2019](#); Moore & Woodcock, [2017](#)). One possible explanation for this discrepancy is cultural differences. The majority of participants in this study were from East Java, where the Javanese community tends to adopt a more restrained and indirect approach to expressing emotions, in contrast to other ethnic groups such as the Batak or Indonesian Chinese (Suharnomo & Syahruramdhan, [2018](#)). Additionally, the effectiveness of social control measures and community power dynamics appears to be weakening (Albert et al., [2005](#)), which may impact the ability to prevent or address bullying. This suggests that resilience alone may not be sufficient in mitigating cybervictimization and that additional factors should be considered when evaluating its role. Furthermore, this finding challenges the assumption that resilience-building activities, such as Karate, can effectively reduce bullying through enhanced resilience, as suggested by Greco et al. ([2019](#)). It is also important to recognize that victims of cyberbullying may not share the same characteristics as those subjected to traditional bullying.

Although resilience is often considered a protective factor, it does not appear to significantly reduce the likelihood of experiencing bullying victimization. Victims of bullying frequently exhibit common characteristics such as emotional sensitivity, physical vulnerability, underdeveloped social skills, and a lack of strong friendships (Juvonen & Graham, [2001](#)). Additionally, bullying tends to be more prevalent among minority groups than among majority groups (Barlett, [2017](#)). These findings suggest that even individuals with high resilience may still become targets of bullying due to their physical traits and social interactions rather than their emotional strength alone.

While some studies indicate that resilience helps victims cope with bullying by alleviating its negative psychological effects in both the short and long term (Lin et al., [2020](#); Ying & Han, [2024](#)), a decline in resilience among victims has been associated with more severe psychological consequences (Hinduja, [2024](#); Lin et al., [2020](#); Patchin & Hinduja, [2015](#)). Reduced resilience has also been linked to increased vulnerability to stress (Moore & Woodcock, [2017](#)), making individuals more susceptible to emotional distress following victimization. However, there is little compelling evidence to suggest that strong resilience alone can prevent an individual from becoming a target of bullying or cybervictimization. Rather than acting as a protective barrier against interpersonal victimization, resilience primarily functions as an individual's ability to recover from setbacks and challenges. This distinction highlights the importance of examining additional psychological and social factors that may play a more direct role in preventing cybervictimization.

The findings of this study suggest that self-esteem and perceived social support are stronger predictors of cybervictimization than resilience, particularly through their direct relationships rather than as moderated by resilience. This aligns with previous research demonstrating a significant link between self-esteem (Alvina & Dewi, [2017](#); Bunnett, [2021](#); Gabrielli et al., [2021](#); Moore & Woodcock, [2017](#); Saaduddin et al., [2023](#)) and perceived social support (Alvina & Dewi, [2017](#); Castaño-Pulgarín et al., [2022](#); Crisna et al., [2020](#); Seyhan Şahin & Ayaz-Alkaya, [2023](#)) in various forms of bullying, including both traditional and cyberbullying. These findings suggest that interventions focusing on enhancing self-esteem and strengthening social support networks may be more effective in reducing cybervictimization than those solely aimed at building resilience.

Self-esteem fosters resilience by promoting independence, perseverance, and self-confidence. A strong sense of self-worth reduces the likelihood of an individual becoming a target of bullying, as high self-esteem serves as a protective factor against its psychological effects (Sapouna & Wolke,

2013). Individuals with high self-esteem tend to exhibit greater openness and assertiveness in social interactions (Maheshwari & Gill, 2015; Sarkova et al., 2013), which helps them navigate and respond to bullying situations more effectively. Assertiveness, in particular, is a key skill that empowers individuals to address bullying behavior, reducing both the occurrence of bullying incidents and the emotional distress they cause (Amawidyati, 2013; Ayuwandari et al., 2023; Hikmat et al., 2024; Łosiak-Pilch et al., 2022; Siregar & Arjani, 2023; Yosep et al., 2024).

While internal factors such as self-esteem play a crucial role, perceived social support also provides significant protection against bullying. Social support acts as a buffer against cyberbullying and mitigates its negative effects (Barlett et al., 2024). A strong support system, particularly from family and peers, reduces the likelihood of individuals becoming involved in bullying, either as victims or perpetrators (Ayuwandari et al., 2023; Castaño-Pulgarín et al., 2022; Łosiak-Pilch et al., 2022). Conversely, the absence of perceived social support increases an individual's vulnerability to cyberbullying, particularly among marginalized groups who lack peer connections (Arató et al., 2022). Social support is frequently incorporated into bullying intervention programs (Koutsoulafti, 2023). It can come from family, friends, school, or other social environments and plays a critical role in both preventing bullying and protecting victims. In cases of cyberbullying, however, the role of bystanders can vary significantly. In some situations, individuals may unintentionally exacerbate the issue by sharing embarrassing content or disclosing private information without considering the consequences (Castaño-Pulgarín et al., 2022). This highlights the importance of educating individuals on the responsible use of digital platforms and the impact of their online behavior.

Both self-esteem and perceived social support not only predict cybervictimization but also contribute to resilience. However, self-esteem is a stronger predictor of resilience than social support. While external factors such as social support can influence resilience, internal factors—such as cognitive abilities, positive self-perception, self-regulation, and religiosity—play a more dominant role (Abate et al., 2024). Compared to social support, self-esteem is a more reliable protective factor in fostering resilience in the face of bullying (Sapouna & Wolke, 2013). As an individual's self-esteem strengthens, the need for external social support to build resilience decreases (Leiva et al., 2013). Additionally, social support alone, without an optimistic mindset, has limited effectiveness in developing resilience (Tusaie et al., 2007). This suggests that interventions should focus not only on strengthening social support networks but also on fostering internal resilience-building factors to provide comprehensive protection against bullying.

Practical Implication for Parents, Schools and Policymakers

To address cybervictimization effectively, this research highlights two key strategies: enhancing self-esteem and fostering a supportive environment. Initiatives to achieve these goals include promoting positive self-talk and constructive feedback, fostering a growth mindset, encouraging self-acceptance, and supporting participation, involvement, and collaboration. These initiatives should be implemented simultaneously across various settings, including the home, school, and broader community.

Parents play a crucial role in building their children's resilience against cybervictimization. Engaging in active listening and validating their children's emotions helps create an atmosphere of understanding and empathy. Encouraging children to view mistakes as learning opportunities rather than failures, while helping them set realistic and achievable goals, can significantly boost their self-esteem. Additionally, parents should initiate open conversations with their children about their strengths, weaknesses, emotions, and online activities. These discussions not only foster a sense of value and support but also help children navigate online interactions safely. Given the increasing prevalence of

digital platforms, parents must also educate their children on safe internet practices, including online privacy, security measures, and the potential legal consequences of online behavior.

Schools must prioritize the creation of an inclusive and supportive environment where students feel safe expressing their thoughts and embracing their identities. Establishing a culture of acceptance and respect contributes to a strong sense of belonging and support. Schools should also implement structured support systems for students experiencing bullying, ensuring protection for victims while providing education and corrective measures for those who engage in bullying behavior. Additionally, enhancing students' awareness of safe online practices is critical. Integrating digital citizenship topics—such as cybersecurity, digital well-being, and privacy—into the curriculum will equip students with the knowledge necessary to navigate the online world responsibly.

Collaboration between schools, parents, and the broader community is essential in preventing cyberbullying. By fostering active parental and community involvement, schools can strengthen the effectiveness of cyberbullying prevention programs. A holistic approach that includes education, open communication, and structured interventions will create a safer and more supportive environment for children and adolescents, ultimately reducing the prevalence and impact of cybervictimization.

Limitation of Study

When interpreting the findings of this study, it is essential to acknowledge several limitations that may have influenced the results. First, data collection was conducted within school settings using self-report measures that lacked anonymity. This may have led to response bias, as participants could have been influenced by social desirability. Additionally, at the time of data collection, there was heightened media coverage and public discussion about bullying across news outlets and social media. This external influence may have affected participants' responses, potentially shaping their perceptions or willingness to disclose their experiences.

Second, the study employed a cross-sectional design, which limits the ability to infer long-term causal relationships. While the analysis provides valuable insights into the associations among self-esteem, perceived social support, resilience, and cybervictimization, it does not establish causality or track changes over time. Future research employing longitudinal designs would be beneficial in addressing this limitation.

Third, although the sample size was sufficient for statistical analysis, the data was predominantly drawn from the East Java region. This limits the generalizability of the findings to broader cultural contexts. Since cultural differences can influence experiences of cybervictimization, resilience, and social support, future studies should include more diverse and representative samples to enhance external validity.

Despite these limitations, this study contributes to a deeper understanding of the psychological dynamics underlying self-esteem, perceived social support, resilience, and cybervictimization among adolescents. By identifying key protective factors and their interactions, these findings offer valuable insights for the development of intervention programs aimed at reducing cybervictimization and supporting adolescent well-being.

Conclusion

Current study found that resilience does not moderate the relationship between self-esteem and social support in the context of cybervictimization, nor does it significantly predict cybervictimization. While resilience does not act as a protective factor against the prevalence of cybervictimization, it plays a crucial role in mitigating the psychological effects associated with bullying. Self-esteem and social support are more effective predictors of cybervictimization through direct relationships rather than through resilience as a moderating variable. Additionally, both self-esteem and social support contribute to resilience, with self-esteem demonstrating a stronger predictive role.

The findings of this study emphasize the importance of integrating both internal and external factors into bullying prevention efforts. Since self-esteem and social support directly influence cybervictimization, interventions should focus on strengthening self-confidence and fostering a supportive environment. Promoting awareness among parents and educational institutions, as well as engaging in anti-bullying campaigns, can enhance the effectiveness of prevention programs. Targeted interventions, such as assertiveness and empathy training, can help reduce bullying incidents while also promoting resilience as a protective factor against mental health challenges. Furthermore, ensuring that victims receive appropriate support and care is essential in sustaining an effective bullying prevention strategy.

For future research and intervention development, qualitative studies should explore how individuals who have successfully navigated bullying not only cope but thrive. Investigating those who maintain mental well-being, exhibit pro-social behaviors, and do not become perpetrators can provide valuable insights into the psychological and social support mechanisms that contribute to their resilience. Understanding these factors can inform the design of more effective training and intervention programs aimed at fostering long-term psychological well-being and reducing the impact of cybervictimization.

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Conflict of Interest

The researchers declare that this paper has no conflicts of interest.

Author Contribution

All authors have contributed equally to the study's conceptualization, data interpretation, reviewing, and editing of the manuscript.

Data Availability

Data can be provided upon request to the authors.

Ethical Statement

The study adhered to the guidelines of the Psychology Code of Ethics.

Informed Consent Statement

Informed consent was obtained from all individuals involved in the study.

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