

Effect of Cyberbullying Exposure on Depression: Mediating Role of Self-Esteem

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ABSTRACT: This study investigates the relationship between cyberbullying exposure and depression and examines the mediating role of self-esteem among young social media users. The rapid growth of digital communication has increased online interactions but has also intensified risks such as harassment, exclusion, threats, and abusive messaging. Data were collected from 400 respondents aged 16–30 years using a quantitative cross-sectional research design. Structured questionnaires based on a 5-point Likert scale were employed to measure cyberbullying exposure, self-esteem, and depression. Data were analyzed using SPSS through descriptive statistics, reliability, correlation, regression, and mediation analyses. The findings revealed moderate levels of cyberbullying exposure ($M = 3.22$, $SD = 0.74$), self-esteem ($M = 2.96$, $SD = 0.68$), and depression ($M = 3.31$, $SD = 0.76$). Reliability coefficients demonstrated good internal consistency, with Cronbach's alpha values ranging from 0.81 to 0.88. Correlation analysis showed a significant positive relationship between cyberbullying exposure and depression ($r = .58$, $p < .01$) and significant negative relationships between cyberbullying exposure and self-esteem ($r = -.46$, $p < .01$) and between self-esteem and depression ($r = -.52$, $p < .01$). Regression analysis further confirmed that cyberbullying significantly predicted depression ($\beta = .58$, $p < .001$) and negatively predicted self-esteem ($\beta = -.46$, $p < .001$).

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Introduction

The digitalization of the world, social media networking sites, messaging applications, online gaming communities, and virtual learning environments have revolutionized how adolescents, university students, and young adults communicate. Online communication offers opportunities for social interaction, academic interaction, information sharing, and entertainment, but has also opened up new opportunities for negative interpersonal communication. Of these negative behaviors, cyberbullying is a psychological, educational, and social issue of concern. Exposure to cyberbullying is defined as a person's experience of being targeted by cyberbullying, for instance, when the person receives a threatening message, is humiliated online, personal information is shared without her consent, she is excluded from an online group, or she becomes the subject of rumors, insults, and other abusive comments.

Cyberbullying, as opposed to the traditional form of bullying, can happen at any time; it can be viewed by many people and remain for a long time, which can worsen the emotional damage inflicted on the target.

Recent research indicates that cyberbullying is significantly related to poor mental health in youth/adolescents. Cybervictimization has been frequently associated with depression, anxiety, stress, suicidal behavior, decreased self-esteem, and academic problems in a systematic review of university students (Arif et al., 2024). Likewise, Khadka et al. (2024) found that female adolescents who endured cyberbullying were more prone to exhibit indicators of depression, anxiety, and stress. The results suggest cyberbullying is not only a behavioral or disciplinary problem, but also a public mental health problem. The emotional impact of cyberbullying can potentially be more damaging during adolescence and early adulthood as they are trying to form an identity, establish peer relationships, regulate their emotions, and build their self-concept.

Depression is typically defined as a mental state of continuous sadness, loss of interest, hopelessness, lack of motivation, fatigue, sleep issues, difficulty concentrating, and negative thought patterns about self and future. Depression can arise because of victims facing social rejection, public embarrassment, fear, powerlessness, and emotional insecurity over and over, in the context of cyberbullying. Over time, adolescents who had been cyberbullied had an increased risk of developing depressive symptoms and suicidal thoughts (Maurya et al., 2022). Moreover, meta-analytic findings also support the significant associations between cyberbullying victimization and adolescent depression (Hu et al., 2021; Tran et al., 2023). Thus, a victim of online harassment can suffer constant psychological stress, causing harm to their emotional health.

Another psychological factor in this relationship that is important is self-esteem. It is concerned with a person's general assessment of their value, self-confidence, self-acceptance, and self-worth. People with high self-esteem see themselves as good, feel good, and can bounce back from criticism or rejection without thinking that something is wrong with them; people with low self-esteem may think that something is wrong with them if they experience rejection or criticism. Victims of cyberbullying are likely to be targeted by insults, public shaming, criticism of their appearance, social exclusion, and negative feedback from peers, which can have a direct impact on self-esteem. The children and youth students showed a significant relationship between self-esteem and cyberbullying, consistent with Lei et al. (2020) meta-analysis. This indicates that there is a close relationship between cyberbullying and self-esteem, and that self-esteem may mediate or buffer the relationship between cyberbullying and mental health outcomes.

Psychological vulnerability is a possible reason why there is a relationship between exposure to cyberbullying, self-esteem, and depression. If online aggression is perpetrated on a repeated basis, it can start to affect an individual's own self-concept. This can diminish their self-confidence and self-esteem. When one's self-esteem is low, the victim may be more prone to feelings of depression, hopelessness, isolation, and sadness. This pathway is based on research. Ho and Gu (2023) revealed self-esteem as a partial mediator between cyberbullying victimization and depression among college students in Vietnam. Lu et al. (2025) likewise discovered that cyberbullying victimization was related to increased depression and decreased self-esteem among adolescents in China. The results indicate that one psychological pathway from cyberbullying exposure to depression might be via self-esteem.

Furthermore, related mediating mechanisms have been investigated and showed that the impact of cyberbullying on mental health is warranted. In accordance with the above research, psychological security was found to be a mediator between cyberbullying victimization and adolescent depression (Niu et al., 2020), and avoidance coping was found to be a mediator between cyberbullying victimization and depression among middle school students (Han & Zhao, 2024). A study conducted by Song et al. (2024) also found that children's depression was predicted by cyberbullying victimization, which is mediated by social competence. These studies indicate that cyberbullying and

depression are directly linked and that this link may be through internal psychological and social processes. Of these processes, self-esteem is particularly noteworthy as it is the victim's personal sense of worth and might influence the emotional impact of online victimization.

Due to the negative impacts of cyberbullying on mental health, especially among adolescents, university students and young adults, there has been rising concern about the impact of cyberbullying exposure. The victims of cyberbullying suffer sadness, loneliness, fear, embarrassment, helplessness, social isolation, and decreased confidence. These emotional responses can slowly become depressive symptoms when victims don't feel they are able to end online harassment or get enough support from their family or friends, teachers, or institutions. The relationship between cyberbullying victimization and depression and other psychological issues has been consistently associated in earlier studies (e.g., Arif et al., 2024; Li et al., 2024; Siah et al., 2022).

While many studies have found a direct link between exposure to cyberbullying and depression, the psychological pathway linking the two is yet to be fully explored. It's not just that cyberbullying increases depression; it's important to also understand why and how. Online victimization could be a factor in self-esteem because it might be degrading the self-image of the individual, while low self-esteem might render the individual susceptible to depressive symptoms. Zhong et al. (2021) identified that children who suffered from bullying had lower self-esteem, and that self-esteem was the psychological mediator between bullying and depressive symptoms. Gu et al. (2024) also found that self-esteem was a significant psychological mediator between the relationship of bullying and depressive symptoms in adolescents. Thus, this study aims to determine if self-esteem is a mediator between being exposed to cyberbullying and depression.

The primary aim of this study is to investigate the impact of cyberbullying exposure on depression and to see if the connection between cyberbullying exposure and depression can be accounted for by self-esteem. In particular, the research intends to explore the direct relationship between being a victim of cyberbullying and depression in the respondents selected. It also seeks to evaluate the impact of being a victim of cyberbullying on self-esteem by examining whether victims of more cyberbullying say they feel less confident and have a lower self-worth. A secondary aim was to explore the relationship between self-esteem and depression and to determine if there was a correlation between lower self-esteem and increased depressive symptoms. Finally, the mediation model of the relationship between exposure to cyberbullying and depression through self-esteem is analyzed. The mediation objective is important because it can help to determine if the effect of cyberbullying on depression is direct or mediated by effects on self-esteem, or both.

The findings of this study are meaningful for educators, parents, counselors and psychologists, policy makers and digital safety professionals. The results could be used by schools to establish effective cyberbullying policies and reporting systems, awareness programs, and counseling services. The study could raise awareness for parents and teachers of the emotional impact of cyberbullying and emphasize the need to remain vigilant about teens' online activity while maintaining trust and communication. The study indicates that self-esteem is a significant target for interventions for counselors and mental health professionals. However, if self-esteem is identified as a mediating factor between exposure to cyberbullying and depression, then self-esteem-enhancing and strengthening programs that promote positive self-esteem, self-worth, coping, and emotional resilience could help to decrease depressive symptoms in victims.

The study also makes a contribution to academic literature as it builds upon the existing literature around cyberbullying and mental health. The current study focuses on self-esteem as a mediator between depression and coping, psychological security and social support, and social competence. Studies on depression, coping,

psychological security, and social support have been conducted, but none have specifically focused on self-esteem as a mediator. The findings of the current study corroborate those of Hellfeldt et al. (2020), who indicated that nurturing supportive social environments is crucial for mitigating psychological harm among young cyberbullying victims, while bolstering psychological resources is important. Thus, the results can contribute to the design of prevention and intervention programs that can involve external support systems and internal self-evaluative processes. The overall findings from this study are likely to offer significant information on the relationship of exposure to cyberbullying and depression, and on the potential role of self-esteem in this relationship.

Literature Review

Cyberbullying Exposure

Cyberbullying exposure is defined as when a person is a target of cyberbullying, is being harassed, threatened, humiliated, excluded, impersonated, and/or socially attacked through digital technologies. These can be social media, cell phones, messaging apps, online games communities, websites, e-mail, and other web-based communication technologies. Cyberbullying can be defined as the deliberate and persistent use of electronic media to cause harm or injury to others (Patchin & Hinduja, 2015). and as deliberate and serious aggression through electronic communication (Iqbal & Jami, 2022). In this research, having been targeted by cyberbullying is defined as exposure to cyberbullying, which includes being harmed by cyber messages, having been publicly ridiculed, having rumors circulated on the Internet about the person, and being socially excluded in online environments. Cyberbullying is not the same as face-to-face (F2F) bullying because cyberbullying may happen outside of school, college, or the workplace. The harasser can harass the victim at any time of the day, and damaging material can be quickly posted for many people online. This can make the victim feel constantly watched, judged, or unsafe, adding to the emotional impact of this victimization. The anonymity of the internet also makes cyberbullying more complicated, as it's hard for the victim to stand up for themselves or to get justice. Cyberbullying is a significant issue among adolescents, university students, and young adults, due to their extensive use of digital platforms (Arif et al., 2024; Khadka et al., 2024).

Depression

Depression is a psychological state that manifests itself in a prolonged state of unhappiness, helplessness, lack of interest, decreased energy, difficulty focusing, loss of appetite, sense of failure, and loss of motivation. Depressive symptoms can impact an individual's emotional, cognitive, behavioral, and social functioning, according to the American Psychiatric Association (2022). In research, depression may be quantified by using self-report measures that rate sadness, loss of pleasure, negative thinking, fatigue, and emotional distress. According to the present study, depression is the extent of depressive symptoms that respondents experienced due to the psychological stressors in the study, which included cyberbullying exposure. Depression in adolescents and young people is of particular importance because it is during this age that they are in the process of forming their identity, comparing themselves with peers, experiencing school pressure, emotional development, and seeking peer acceptance. These developmental processes can be disrupted by cyberbullying, resulting in feelings of shame, rejection, fear, and helplessness. Victims may isolate themselves socially, feel lonely, lose confidence, and form negative beliefs about themselves. Numerous studies have established a significant relationship between cyberbullying victimization and depression or mental health issues (Tran et al., 2023; Li et al., 2024).

Self-Esteem

Self-esteem is how a person views himself/herself in terms of his/her worth, value, competence, and self-acceptance. Rosenberg's (1965) definition of self-esteem is the positive or negative attitude that a person has towards the self. People who have good self-esteem tend to think that they can do things, that they are useful and respected, while those with low self-esteem may feel that they are not capable, are not useful, do not deserve to be respected, etc. Monteiro et al. (2022) stated that global self-esteem comprises self-competence and self-acceptance, both of which are important factors influencing emotional well-being and psychological adjustment. Self-esteem is a key psychological factor in cyberbullying because when cyberbullying occurs, it can target an individual's identity, appearance, social image, personality or social status. Victims who hear negative comments, insults, and public humiliation over and over may internalize these negative messages. This can lower their self-esteem and put them at a greater risk for emotional vulnerability. Thus, exposure to cyberbullying could not just impact self-esteem, but also help to understand how cyberbullying contributes to depression. Cyberbullying has been found to be related to low self-esteem and depressive symptoms in previous studies (Ho & Gu, 2023; Lei et al., 2020; Lu et al., 2025).

H1: The more exposure to cyberbullying, the more likely they are to experience depression.

Exposure to cyberbullying has been linked to depression, and exposure to severe cyberbullying is a strong predictor of depression. The emotional trauma caused by cyberbullying can be repeated, public, anonymous, and hard to avoid, often causing emotional distress for the victim. Cyberbullying is different from conventional bullying as it can go on after school or university, reaching the victim via mobile phones and social media. Such a prolonged exposure can further add to the victim's sense of helplessness and stress. Victims may experience sadness, fear, self-shame, hopelessness, and social withdrawal, among other symptoms, which are common with depression. There are several recent studies that corroborate the positive link between cyberbullying exposure and depression. In a systematic review of university students, Arif et al. (2024) identified that the victims of cyberbullying were likely to experience a variety of negative mental health consequences such as depression, anxiety, stress, and suicidal behavior. Similarly, in Nepal, Khadka et al. (2024) showed that cyberbullying victimization was found to be significantly related with depression, anxiety and stress in female adolescents in Nepal. The results indicate that there are psychological impacts of cyberbullying in various cultural and educational settings.

This is also supported by evidence-based research (Meta-Analyses). Tran et al. (2023) carried out a systematic review and meta-analysis and found that cyber-victimization had a significant positive impact on depression among adolescents. Li et al. (2024) also noted that children and adolescents experience negative psychological consequences when involved in traditional bullying and cyberbullying. Furthermore, in a three-year cohort study in India, Maurya et al. (2022) determined that cyberbullying victimization was a risk factor for depression and suicidal thoughts for adolescents and young adults. These studies indicate that cyberbullying is more than an emotional issue in the short term and could also be a long-term psychological issue. Cyberbullying and depression can be linked by considering the stress and vulnerability approach to understanding relationships. Cyberbullying negatively impacts a victim's social security, social belonging, and self-image. It can be easy for the victim to feel helpless, as it can be easy to distribute damaging content online and keep it there for a long time. This can lead to ruminating thoughts, fear of being judged, and perceived social rejection. Han and Zhao (2024) concluded that middle school students' depression was linked to cyberbullying victimization, and the associated coping mechanisms accounted for this link. In the same way, Niu et al. (2020) revealed that the association between cyberbullying victimization and adolescent depression was mediated by psychological security. Hence, it is expected that exposure to cyberbullying leads to greater depression.

H2: The exposure to cyberbullying has a strong negative impact on self-esteem.

Self-esteem is also significantly linked to being exposed to cyberbullying. Self-esteem is nurtured by personal experiences, social feedback, acceptance from peers, and perceptions of competence. Peer approval and social image are significant during the adolescent and young adult years. These are targeted in cyberbullying through insults, humiliation, exclusion, and negative comparison. The victim might start to think that others are not finding them attractive, not strong, unlovable, or inferior. These experiences can lead to low self-confidence and low self-worth over time. In a meta-analysis of children and youth students, the researchers (Lei et al., 2020) concluded that there was a significant relationship between self-esteem and cyberbullying. According to their results, low self-esteem is correlated with cyberbullying involvement, and cybervictimization can result in a less positive self-evaluation. Additionally, Palermi et al. (2022) found that students who had a consistently high self-esteem seemed to be less likely to be bullied, cyberbullied, be a victim of bullying, or be a cyber victim. This suggests that self-esteem can be seen as a potential protective factor in the cyberbullying experience, as well as a psychological outcome.

Longitudinal evidence is also available to support the negative impact of cyberbullying on self-esteem in recent studies. Lu et al. (2025) determined that cyberbullying victimization was associated with a decrease in adolescents' self-esteem over time in China. They found that cyberbullying had an impact on depression, as well as more general psychological issues like academic burnout and self-evaluation. In the same way, Ho and Gu (2023) also discovered that self-esteem was lower among the victims of cyberbullying among college students in Vietnam. The results indicate that experiencing victimization online could lead people to have a lower self-concept. The impact of cyberbullying on self-esteem can be attributed to social evaluation and identity threat. Online is a public place where people showcase themselves and are socially responded to. If this feedback is negative, demeaning, or rejecting, it can cause harm to the victim's social identity. Cyberbullying messages can get stuck in the victim's head and cause him or her to doubt self-worth and abilities. Thus, it is hypothesized that being exposed to cyberbullying negatively impacts self-esteem.

H3: Self-esteem is significantly related to depression in a negative way.

Self-esteem has been recognized as a key predictor of depression. People with low self-esteem tend to think less of themselves and their capabilities, of their relationships, and of their future. These self-judgments can make things more emotionally difficult and more challenging to handle stress. The vulnerability model suggests that low self-esteem is associated with the likelihood of depressive symptoms, as people with poor self-esteem are more likely to think of negative events as failure (Sowislo & Orth, 2013). The relationship between low self-esteem and depression is still consistent with the negative one that some recent studies have also found. Self-esteem was shown to predict depressive symptoms among adolescents, and hope and anxiety were shown to mediate this relationship (Gu et al., 2024). They found that the more self-esteem, the fewer depressive symptoms and the less emotional risk; the less self-esteem, the more depressive symptoms and the more emotional risk, which led them to believe that low self-esteem could lead to an increase in emotional risk. In a similar study, Lei et al. (2024) conducted a longitudinal study and investigated the relationship between self-esteem and depression in adolescents. The results indicate that self-esteem is an important aspect of adolescent mental health.

Depression can result from low self-esteem, as people with negative self-beliefs are more likely to feel hopeless, lonely, anxious, and socially isolated. They might also be less inclined to seek or request help, defend themselves, or employ healthy coping mechanisms when exposed to online victimization. On the other hand, people who have higher self-esteem might be more able to disregard the negative messages, be confident, and emotionally recover from stressful situations. Hellfeldt et al. (2020) also found that social support buffers the effects of emotional distress for young cyberbullying victims, indicating the crucial role of positive internal and external resources in mitigating

emotional effects. Self-esteem is especially important in cyberbullying situations because the negative aspects of the experience can impact the self-perception of the victim. Often, when a victim of cyberbullying has low self-esteem, he or she may feel that the cyberbullying behavior is a substantiation of their feeling of not being liked or of being unworthy. This may worsen depression. Hence, it is hypothesized that self-esteem has a significant negative impact on depression.

H4: There is a mediating role of self-esteem between the relationship of Cyberbullying Exposure and Depression.

This mediating effect of self-esteem implies that the experience of cyberbullying can contribute to depression in victims, partly via a decrease in their self-esteem. That is, cyberbullying could not only directly affect depression, but indirectly by harming self-esteem as well. The mediation process is important because it provides an explanation of the psychological process by which the online victimization experience impacts mental health. Ho and Gu (2023) directly investigated this mechanism in the context of cyberbullying victimization and depression among college students in Vietnam and discovered that self-esteem served as a partial mediator between cyberbullying victimization and depression. This indicates that cyberbullying exposure had a direct positive effect on depression, and an indirect effect of cyberbullying on depression through a decrease in self-esteem. Likewise, Zhong et al. (2021) discovered that self-esteem mediated the relationship between depression symptoms and bullying victimization among children, even cyberbullying victimization. The present results confirm the notion that self-esteem is one of the important psychological processes underlying the relationship between victimization experiences and depressive outcomes.

Cognitive and social psychological theories can be used to explain the mediating role of self-esteem. Negative social feedback (insults, rejection, ridicule, humiliation) is a negative side effect of cyberbullying. The victim might internalize these experiences and form negative beliefs about him/her self. When a person's self-esteem is low, their focus on themselves can turn into the attitude of "I am worthless," "I am not accepted," or "I cannot handle this situation." These negative thoughts can then lead to sadness, hopelessness, and emotional isolation. This indirect pathway is also supported by recent studies on related mediating factors. Cyberbullying victimization was found to be related to depression through psychological security in the study conducted by Niu et al. (2020). Siah et al. (2022) reported that coping strategies, especially avoidant coping, explained the relationship between cybervictimization and depression. Han and Zhao (2024) also found that the relationship between cyberbullying victimization and depression in middle school students could be explained by coping strategies. While there were variations in the focus of these studies, in general, they indicate that the internal psychological mechanisms of depression are impacted by cyberbullying. One of the most relevant internal processes is that of self-esteem, which is related to the self-assessment of the victims after the negative experience they have had online.

Lu et al. (2025) also found that cyberbullying victimization predicted depression and self-esteem over time for adolescents. Their results add to the evidence of the impact cyberbullying has on emotional symptoms as well as on the evaluative process. Both the literature as well as the findings from Ho and Gu (2023) support the testing of self-esteem as a mediator between cyberbullying exposure and depression. Based on this, this study aims to suggest that being exposed to cyberbullying is detrimental to self-esteem, and a decrease in self-esteem is detrimental to depression. This mediation model is important because it indicates that there is a possibility to intervene in self-esteem. If self-esteem is found to be a mediating variable, then it is important to consider how counseling programs, school-based interventions, and mental health support services can aim to help restore victims' self-esteem, self-worth, and emotional resilience as well as prevent cyberbullying.

The literature reviewed indicates that cyberbullying victimization is a psychological burden and can raise depression scores and lower self-esteem. The research has found that depressive symptoms are linked to cyberbullying

victimization, as it causes the victim to feel incompetent, fear rejection or humiliation, and feel shame. As well, literature indicates that youth's experiences of cyberbullying have a negative impact on their self-esteem, as victimization online directly impacts the youth's identity, social image, and personal worth. Self-esteem also has a negative relationship with depression, such that people with higher self-esteem have fewer depressive symptoms. Lastly, empirical evidence confirmed the role of self-esteem as a mediator in the relationship between cyberbullying exposure and depression, where exposure to cyberbullying could cause depression through affecting the victim's self-esteem. Based on this literature, the current study investigates cyberbullying exposure as an independent variable, depression as a dependent variable, and self-esteem as a mediating variable.

Methodology

This research is a quantitative and cross-sectional research design to analyze the effect of cyberbullying exposure on depression with the mediation of self-esteem. The quantitative approach is appropriate because the study involves quantification of relationships between variables and statistical analysis. A cross-sectional design can be used to gather data from the respondents at one point in time. A structured questionnaire is used to collect data from the selected participants. The study uses the population of university students, college students, adolescents, and young adults who are active in the use of social media and digital communication platforms. As young people often communicate online and are more likely to suffer from cyberbullying in the online environment, this population is suitable. This study is limited to users of social media, messaging services, internet groups, and other internet communication methods.

The number of respondents is proposed to be 400. This sample size can be used for descriptive statistics, reliability analysis, correlation analysis, regression analysis, and mediation analysis. Convenience sampling is employed since those involved in the study are those who are readily available, accessible, and willing to participate. Inclusion criteria include respondents being active users of social media or digital communication platforms, and their age range from 16 to 30 years. Data were gathered using an online survey questionnaire. Respondents were informed of the study's purpose and the nature of their participation prior to participation. There is no obligation to participate, and respondents can withdraw at any time. Anonymity and confidentiality are ensured to facilitate participants' responses and ensure their privacy.

The cyberbullying exposure is assessed using items associated with exposure to cyberbullying in the form of online harassment, threats, humiliation, exclusion, abusive messages, and negative comments. Items for depression include sadness, hopelessness, loss of interest, sleep disturbance, lack of motivation, and emotional distress. Items assessing self-esteem are based on self-worth, self-confidence, self-acceptance, personal value, and positive self-evaluation. The research instrument used is the structured questionnaire, which contains two parts. The first part consists of demographic details like age, gender, level of education, and social media usage. The second section includes items for cyberbullying exposure, depression, and self-esteem. The ratings range from 1 = strongly disagree to 5 = strongly agree, with 1 being the lowest and 5 the highest level of satisfaction. The data are analyzed descriptively in SPSS with reliability analysis, correlation analysis, regression analysis, and mediation analysis.

Data Analysis

The collected data are presented in a statistical analysis in this section. The data are analyzed with SPSS to investigate the demographic characteristics, descriptive statistics, reliability, correlation, regression, and mediation analysis. The overall sample of the study is 400 people.

Demographic Analysis

Frequencies and percentages are used for the demographic profile of respondents. The factors are gender, age, level of education, academic level, and the daily usage of social media.

Table 1

Demographic profile of the respondents.

Demographic Variable	Category	Frequency	Percentage
Gender	Male	176	44.0%
	Female	224	56.0%
Age	16–20 years	118	29.5%
	21–25 years	196	49.0%
	26–30 years	86	21.5%
Education Level	Intermediate/College	92	23.0%
	Undergraduate	218	54.5%
	Postgraduate	90	22.5%
Academic Level	First year	76	19.0%
	Second year	104	26.0%
	Third year	98	24.5%
	Fourth year or above	122	30.5%
Daily Social Media Usage	Less than 2 hours	74	18.5%
	2–4 hours	156	39.0%
	5–6 hours	112	28.0%
	More than 6 hours	58	14.5%

Table 1 indicates that the majority of respondents (56.0%) were female and 44.0% of the respondents were male. The majority of respondents are in the age range 21-25 years, suggesting that young adults make up the largest proportion of the sample. The majority of the respondents are undergraduates (54.5%). The highest percentage uses social media 2-4 hours a day, in terms of use of social media. This indicates that respondents are active users of digital platforms, and they are appropriate to examine cyberbullying exposure.

Descriptive Statistics

Descriptive statistics are provided to explore the range and characteristics of the primary study variables, including means, standard deviation, minimum, and maximum.

Table 2

Description of the Variables

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Cyberbullying Exposure	400	1.20	4.85	3.22	0.74
Self-Esteem	400	1.10	4.70	2.96	0.68
Depression	400	1.25	4.90	3.31	0.76

As per Table 2, the mean score of cyberbullying exposure is 3.22, revealing that the respondents are exposed to a moderate level of cyberbullying. The mean score of self-esteem is 2.96, which is a moderate level of self-esteem. Respondents have moderate depressive symptoms with a mean score of 3.31. Values of the standard deviation indicate that the responses are reasonably clustered around the mean.

Reliability Analysis

The internal consistency of the questionnaire items is tested by the reliability analysis that is carried out using Cronbach's Alpha. Cronbach's Alpha values greater than 0.70 are acceptable.

Table 3

Reliability Analysis

Variable	Number of Items	Cronbach's Alpha	Reliability Status
Cyberbullying Exposure	8	0.86	Good
Self-Esteem	10	0.81	Good
Depression	9	0.88	Good
Overall Scale	27	0.90	Excellent

All the variables recorded Cronbach's Alpha score > 0.70 (Table 3). The values of alpha are 0.86 for cyberbullying exposure, 0.81 for self-esteem, and 0.88 for depression. The values are found to be reliable and internally consistent of the items of the questionnaire. There is good overall scale reliability, 0.90.

Correlation Analysis

Pearson correlation analysis is used to look at the relationship between cyberbullying exposure, self-esteem, and depression.

Table 4

Correlation Analysis

Variable	Cyberbullying Exposure	Self-Esteem	Depression
Cyberbullying Exposure	1		
Self-Esteem	-0.46**	1	
Depression	0.58**	-0.52**	1

Note: $p < .01$

As indicated in Table 4, the correlation coefficient $r = 0.58$ and $p < .01$ suggest a significant positive correlation between depression and exposure to cyberbullying. The more cyberbullied participants were, the more depressive symptoms they had. The correlation value between cyberbullying exposure and self-esteem is $r = -0.46$, $p < .01$, indicating that cyberbullying exposure has a strong negative relationship with self-esteem. This means that the more students are exposed to cyberbullying, the lower their self-esteem is. Self-esteem is also negatively correlated with depression, with $r = -0.52$ and $p < .01$. This indicates that people who have high self-esteem are less likely to be depressed.

Regression Analysis

A direct test of the relationship between the study variables is carried out by regression analysis.

Table 5

Regression Analysis of Cyberbullying Exposure on Depression

Predictor	B	SE	Beta	t-value	p-value
Constant	1.39	0.14	—	9.93	.000
Cyberbullying Exposure	0.60	0.04	0.58	14.25	.000

Model Summary: $R = 0.58$, $R^2 = 0.34$, $F = 203.06$, $p < .001$

Table 5 shows that cyberbullying exposure has a significant positive effect on depression. The beta value is 0.58, and the p-value is $< .001$. The more a child is exposed to cyberbullying, the more likely he or she feels depressed. So, H1 is upheld.

Table 6

Regression Analysis of Cyberbullying Exposure on Self-Esteem

Predictor	B	SE	Beta	t-value	p-value
Constant	4.31	0.13	—	33.15	.000
Cyberbullying Exposure	-0.42	0.04	-0.46	-10.37	.000

Model Summary: $R = 0.46$, $R^2 = 0.21$, $F = 107.54$, $p < .001$

According to Table 6, cyberbullying exposure was significantly related to a decrease in self-esteem. The beta value is -0.46, and the p-value is $< .001$. This means that increased exposure to cyberbullying is associated with a decrease in self-esteem. Thus, H2 is favored.

Table 7

Regression Analysis of the Effects of Self-esteem on Depression

Predictor	B	SE	Beta	t-value	p-value
Constant	5.03	0.15	—	33.53	.000
Self-Esteem	-0.58	0.05	-0.52	-12.15	.000

Model Summary: $R = 0.52$, $R^2 = 0.27$, $F = 147.62$, $p < .001$

As can be seen in Table 7, there is a significant negative correlation between depression and self-esteem. The beta value is negative, -0.52, and the p-value is below .001. This implies that the more one has self-esteem, the less the symptoms of depression. Thus, it is established that H3 is supported.

Mediation Analysis

The mediation analysis is performed by the PROCESS Macro Model 4 in SPSS, which checks if there is a mediation between cyberbullying exposure and depression. The analysis uses 5,000 samples to test the significance of the indirect effect through bootstrapping.

Table 8

Mediation Analysis of Self-Esteem as a Mediator

Effect	B	SE	t-value	p-value	LLCI	ULCI
Total Effect of Cyberbullying Exposure on Depression	0.60	0.04	14.25	.000	0.52	0.68
Direct Effect of Cyberbullying Exposure on Depression	0.45	0.04	11.25	.000	0.37	0.53
Effect of Cyberbullying Exposure on Self-Esteem	-0.42	0.04	-10.37	.000	-0.50	-0.34
Effect of Self-Esteem on Depression	-0.36	0.05	-7.20	.000	-0.46	-0.26

Table 9

Bootstrapping Result for Indirect Effect

Indirect Path	Effect	Boot SE	Boot LLCI	Boot ULCI	Result
Cyberbullying Exposure → Self-Esteem → Depression	0.15	0.03	0.09	0.22	Significant

As seen in Table 4.8 and Table 4.9, the indirect effect of cyberbullying exposure on depression through self-esteem is significant, as the confidence interval does not contain zero. The indirect effect value is 0.15, Boot LLCI = 0.09,

and Boot ULCI = 0.22. This validates that the link between cyberbullying exposure and depression is mediated by self-esteem. There is also a direct effect that is still important, suggesting that there is some mediation. Thus, it can be concluded that H4 is accepted. Overall, there are significant relationships between exposure to cyberbullying and depression and cyberbullying and self-esteem. Self-esteem is a factor that significantly decreases depression and helps mediate the effect of cyberbullying exposure on depression. The results from these findings uphold all four hypotheses of the study.

Discussion of Findings

Results of this research show that cyberbullying exposure is significantly related to depression. Higher levels of online harassment, humiliation, threats, exclusion, and abusive digital communication are associated with higher depressive symptoms among respondents who experience them. This is in line with the latest empirical and review evidence, which suggests that there are strong associations between being involved in cyberbullying victimization and negative mental health outcomes. Arif et al. (2024) revealed that depression, anxiety, stress, and suicidal behavior were correlated with cyberbullying among University Students. Likewise, a systematic review and meta-analysis by Tran et al. (2023) found that cyber-victimization is a significant factor in depression in adolescents. The present finding is also consistent with previous research conducted by Li et al. (2024) that cyberbullying is linked to negative psychological consequences among children and adolescents, as well as traditional bullying. Hence, the findings indicated that cyberbullying not only poses a social or discipline issue, but a serious psychological risk factor as well.

This positive association between cyberbullying exposure and depression could be due to the repeated and stressful experiences of being a victim of cyberbullying. Bullying is different from cyberbullying in that it is not necessarily conducted during the school day, and it can be viewed by a larger audience via a social media tool. The means by which damaging messages and images or rumors can be repeated and remain visible online can leave victims feeling helpless. This constant exposure can lead to feelings of sadness, fear, shame, social withdrawal, and hopelessness. Khadka et al. (2024) concluded that depression, anxiety, and stress were significantly correlated with cyberbullying victimization among female adolescents. Maurya et al. (2022) also demonstrated that over time, cyberbullying victimization was associated with depression and suicidal ideation among adolescents and young adults. The present finding of an association between depressive symptoms and cyberbullying exposure is supported by these studies.

The second finding reveals that cyberbullying exposure has a significant negative impact on self-esteem. This translates into lower levels of self-worth, self-confidence, and self-acceptance for those who experience more cyberbullying. The findings are similar to those obtained by Lei et al. (2020), who found a significant relationship between cyberbullying and self-esteem among children and youth students. It also supports Palermiti et al.'s (2022) finding that adolescents who had consistently high self-esteem were more protected from bullying, cyberbullying, victimization, and cybervictimization. There are several areas cyberbullying typically focuses on, such as personal identity, appearance, social status, and peer acceptance. This can leave a victim feeling unworthy, disliked, or weak, and thus begin to believe the negative messages they received online.

A negative effect on self-esteem is significant because adolescents and young adults are extremely concerned with the acceptance from peers and feedback from the Internet. Digital spaces frequently become places for people to display their identity and to try to gain social acceptance for this identity. These spaces can become hostile and compromise the victim's self-image. Lu et al. (2025) observed that adolescents' self-esteem and depression scores were negatively associated with cyberbullying victimization in China. This corroborates the present finding that repeated victimization in the online world can lower a victim's positive self-assessment.

The third finding indicates that depression has a significant relationship with self-esteem, and that the relationship is negative. The respondents who had higher self-esteem had lower depression, while the respondents who had lower self-esteem had higher depression. This finding is confirmed by Gu et al. (2024), who identified that self-esteem had a significant influence on depression symptoms among adolescents. They found evidence in their study that hope and anxiety are part of the link between depression and self-esteem. In addition, Zhong et al. (2021) reported that low self-esteem was a significant mediator in the relationship between victimization and depressive symptoms for victimized children. The results indicated that self-esteem is a psychological catalyst that safeguards people against emotional distress.

Low self-esteem can also lead to depression, as a person who does not feel good about him/herself more likely to feel that negative experiences are due to his or her own failure or rejection. Victims of cyberbullying may have low self-esteem, making it hard for them to refuse to accept online negative messages. Rather, they might believe that these messages are true and feel helpless and worthless. It can make them feel more depressed, sad, and lonely. Hellfeldt et al. (2020) noted that protective social assets are vital in minimizing the psychological damage that cyberbullying causes to cyberbullying victims. The present results, however, indicate that the importance of internal resources, such as self-esteem, is comparable.

Self-esteem has been found to partially mediate the relationship between exposure to cyberbullying and depression, as revealed by the mediation analysis. Thus, direct exposure to cyberbullying is associated with depression, as well as indirectly through a decrease in self-esteem. That is, cyberbullying harms the victim's self-esteem, and this compromised self-esteem leads to depressive symptoms. This result confirms the study conducted by Ho and Gu (2023), which revealed that self-esteem served as a mediator between cyberbullying victimization and depression among college students in Vietnam. This finding is similar to that of Zhong et al. (2021), who found that depressive symptoms were mediated by self-esteem between experiences of bullying victimization.

Self-esteem serves as a mediator in the relationship between cyberbullying and depression since this psychological mechanism brings about the relationship. Cyberbullying puts people at risk of rejection, humiliation, criticism, and social threat. These experiences can diminish self-confidence and self-acceptance. With a loss of self-esteem, victims are more susceptible to depression. Other indirect routes have been mentioned in the recent literature. Niu et al. (2020) concluded that psychological security was a mediator between cyberbullying victimization and adolescent depression. Avoidant coping was the mediator between cybervictimization and depression, as reported by Siah et al. (2022). Han and Zhao (2024) also reported that coping strategies explained the relationship between cyberbullying victimization and depression. These studies are evidence of the internal psychological processes that cyberbullying might affect depression.

The overall results of the study affirm all the hypotheses. Depression is caused by exposure to cyberbullying, and self-esteem is associated with a decrease in depression. The mediation analysis result accords with self-esteem being a significant psychological pathway between exposure to cyberbullying and symptoms of depression. These results have implications for practice. Schools should not just be concerned with preventing cyberbullying, but also offer counseling to support the healing process for those affected to restore confidence, self-esteem, and emotional strength. The following elements should be incorporated into anti-cyberbullying programs: Awareness educational sessions, reporting systems, peer support, digital safety education, and self-esteem-building activities. Increasing self-esteem can lessen the emotional harm of being cyberbullied and benefit victims' recovery.

Conclusion

This research reveals that exposure to cyberbullying is a critical psychological and social problem and has a considerable impact on the mental health of youth. In this age of growing social media, messaging apps, online

learning platforms, and digital communication, the Internet has become a significant part of life. While the platforms offer opportunities for communication, learning, entertainment, and social connection, they also give rise to the opportunity for negative behaviors like online harassment, threats, humiliation, exclusion, and abusive comments. This study reveals that people would have more depressive symptoms if they are exposed to cyberbullying. The study establishes that cyberbullying is not only an online behavioral issue, but also a mental health issue too.

It is also found that being exposed to cyberbullying has a negative impact on self-esteem. Cyberbullying can impact a victim's identity, appearance, social image, and personal value. Such negative online experiences can lead to a sense of not being good enough, inferiority, low confidence, helplessness, and shame. Because of this, they have a lowered sense of self-esteem. This discovery underscores the fact that cyberbullying can have a negative impact on an individual's self-image as well as emotional health. As victims start to internalize the negative messages they receive online, their self-esteem also decreases and they become more susceptible to psychological upset.

The other significant finding of this study is that there is a negative association between self-esteem and depression. People who have a higher level of self-confidence tend to maintain their self-confidence, emotional strength, and positive sense of self in the face of challenging situations. Conversely, those who have low self-esteem tend to think of themselves as worthless, hopeless, socially rejected, and emotionally weak. Thus, low self-esteem enhances the risk of depression symptoms. This indicates that a sense of self-esteem is a protective factor in mental health and is beneficial in dealing with negative life events.

The mediation analysis results show that there is a mediation effect between cyberbullying exposure and depression by self-esteem. Depression is the result of cyberbullying in two ways: directly and indirectly, through the effects of decreased self-esteem. Cyberbullying is detrimental to self-esteem, and a decrease in self-esteem is another risk factor for depressive symptoms. This finding contributes to the knowledge about the impact of cyberbullying on mental health. It describes that the impact of cyberbullying is not just the result of the bullying itself, but also the result of cyberbullying affecting the victim's self-esteem and confidence.

The results of this study have implications in practice. Educational anti-cyberbullying policies, reporting systems, awareness campaigns, and counseling services should be implemented in educational institutions. It is the responsibility of teachers, parents, counselors, and administrators to collaborate and look out for cyberbullying victims and offer timely assistance. Programs to combat cyberbullying should be geared toward more than just fighting the cyberbullying—they should aim to help the victims regain their self-esteem. Steps toward confidence building, emotional resilience, peer support, positive self-image, and coping skills may be helpful in mitigating the psychological impact of cyberbullying.

The results of this study emphasize responsible use of digital media. Adolescents and young adults need to be aware of the implications of cyberbullying and the importance of online respect. There should be a safe space for victims to report harmful behavior in social media, which should be promoted, and in education settings. But some limitations to the study have to be noted. The study is also a cross-sectional study; therefore, it is not possible to fully determine causal relationships. Responses given to self-reported information may also have a response bias. Longitudinal research designs, more data, and various age groups would be useful for future research on the impacts of cyberbullying. Other potential mediators or moderators like social support, anxiety, loneliness, coping, and emotional regulation can also be explored in future research. The overall conclusion of the study is that the reduction of cyberbullying and enhancement of self-esteem is important to protect young people from depression and improve their psychological well-being.

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