

The Relationship Between Cybervictimization and Depression Among Women: The Mediating Roles of Rumination, Self-Esteem, and Social Support

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ABSTRACT

Objective: This study aimed to examine the relationship between cybervictimization and depression among women and to investigate the mediating roles of rumination, self-esteem, and perceived social support in explaining this association.

Methods and Materials: This cross-sectional correlational study was conducted among 612 adult women residing in Canada during 2025–2026. Participants were recruited through online platforms and community networks using voluntary participation procedures. Data were collected using the Cyber Victimization Scale, Beck Depression Inventory-II, Ruminative Responses Scale, Rosenberg Self-Esteem Scale, and Multidimensional Scale of Perceived Social Support. Descriptive statistics and Pearson correlation analyses were performed using SPSS version 29. Structural equation modeling was conducted using AMOS version 29 to test the hypothesized mediation model. Model fit was evaluated using χ^2/df , CFI, TLI, GFI, AGFI, RMSEA, and SRMR indices. Indirect effects were examined through bootstrap analysis with 5,000 resamples and 95% confidence intervals.

Findings: Cybervictimization demonstrated a significant positive association with depression ($r = .54, p < .001$) and rumination ($r = .49, p < .001$), while showing significant negative associations with self-esteem ($r = -.46, p < .001$) and social support ($r = -.41, p < .001$). The structural model exhibited excellent fit to the data ($\chi^2/df = 2.41, CFI = .957, TLI = .951, GFI = .931, AGFI = .914, RMSEA = .048, SRMR = .041$). Cybervictimization significantly predicted depression directly ($\beta = .24, p < .001$) and indirectly through rumination, self-esteem, and social support. Rumination emerged as the strongest mediator (indirect effect = .219, 95% CI [.167, .278]), followed by self-esteem (indirect effect = .128, 95% CI [.087, .176]) and social support (indirect effect = .068, 95% CI [.039, .103]). The total indirect effect was significant ($\beta = .415, 95% CI [.351, .489]$), indicating partial mediation.

Conclusion: The findings demonstrate that cybervictimization is a significant predictor of depressive symptoms among women and that this relationship operates

through multiple psychological pathways. Rumination, self-esteem, and social support each contribute significantly to explaining how online victimization affects mental health, with rumination representing the most influential mechanism. Interventions targeting maladaptive cognitive processing, self-worth, and interpersonal support may help reduce the psychological burden associated with cybervictimization and improve mental health outcomes among women.

Keywords: *Cybervictimization, Depression, Rumination, Self-Esteem, Social Support, Women.*

1. Introduction

Cybervictimization has emerged as one of the most pervasive psychosocial challenges associated with the rapid expansion of digital communication technologies. As social media platforms, online communities, messaging applications, and virtual networks have become integral components of daily life, opportunities for interpersonal connection have increased substantially; however, these technological advancements have simultaneously created new avenues for harassment, aggression, and victimization. Cybervictimization refers to experiences of being targeted by intentional harmful behaviors through electronic means, including online harassment, threats, humiliation, exclusion, dissemination of harmful content, and repeated hostile interactions. Unlike traditional forms of victimization, cybervictimization possesses distinctive characteristics such as anonymity, permanence of harmful content, unrestricted audience reach, and continuous accessibility, making its psychological consequences particularly profound. Recent evidence suggests that digital victimization has become a significant public health concern due to its detrimental effects on emotional well-being, psychological functioning, and mental health outcomes across various populations (Nesi et al., 2023; Nesin et al., 2025; Quintana-Orts et al., 2023).

Women may be particularly vulnerable to the adverse psychological consequences of cybervictimization because of gender-specific social expectations, interpersonal stressors, and patterns of online engagement. Research indicates that women are more likely to experience relational forms of online aggression, including social exclusion, reputation attacks, appearance-based criticism, and emotionally manipulative interactions. Such experiences often threaten core aspects of self-concept and interpersonal belonging, thereby increasing susceptibility to emotional distress and psychological maladjustment. As digital interactions increasingly influence social relationships and identity formation, understanding the mechanisms through which cybervictimization affects women's mental health has

become an important research priority (Lee et al., 2025; Nesi et al., 2023; Siah et al., 2022).

Among the various psychological outcomes associated with cybervictimization, depression has received substantial empirical attention. Depression is characterized by persistent sadness, loss of interest in pleasurable activities, feelings of hopelessness, diminished self-worth, cognitive impairments, and disruptions in social and occupational functioning. It represents one of the leading contributors to global disability and significantly affects quality of life, interpersonal relationships, and physical health. Contemporary biopsychosocial models emphasize that depressive symptoms emerge from complex interactions among environmental stressors, cognitive vulnerabilities, emotional processes, and social influences. Exposure to chronic interpersonal stress, including online victimization, has been consistently identified as a significant risk factor for depressive symptomatology (Tariq et al., 2025; Wang et al., 2024; Xiao et al., 2023).

A growing body of evidence has documented a robust relationship between cybervictimization and depression. Individuals who experience repeated online harassment often report heightened feelings of helplessness, social isolation, emotional dysregulation, and psychological distress. Longitudinal investigations have demonstrated that cybervictimization predicts subsequent increases in depressive symptoms, suggesting that online victimization is not merely correlated with depression but may actively contribute to its development over time. For example, studies have shown that exposure to cyberbullying victimization is associated with increased emotional vulnerability, reduced well-being, and elevated risk of depressive outcomes among adolescents and young adults (Yurong Lu et al., 2025; Schunk et al., 2022; Siah et al., 2022). Similarly, research has demonstrated that cybervictimization is associated with multiple forms of psychological maladjustment, including depressive symptoms, emotional difficulties, and impaired self-perceptions (Lee et al., 2025; Yurong Lu et al., 2025; Nesin et al., 2025).

Although the direct association between cybervictimization and depression has been well established, contemporary psychological theories suggest that this relationship is unlikely to operate through a simple causal pathway. Instead, victimization experiences are believed to influence mental health through intermediary cognitive and social mechanisms that shape individuals' interpretations of stressful events and their capacity to cope effectively. Psychological mediation frameworks propose that adverse experiences affect mental health by altering cognitive processing patterns, self-evaluations, and social resources. Understanding these mediating mechanisms is essential because they represent potentially modifiable intervention targets that may reduce the psychological burden associated with cybervictimization (Velez et al., 2023; Wang et al., 2024; Zelaya & DeBlaere, 2024).

One of the most important cognitive processes implicated in the development of depression is rumination. Rumination refers to repetitive and passive thinking about distressing experiences, negative emotions, and their possible causes and consequences. Rather than facilitating problem solving, rumination often prolongs emotional distress by maintaining attention on negative content and reinforcing maladaptive cognitive patterns. Extensive research has identified rumination as a central transdiagnostic vulnerability factor associated with depression, anxiety, and various forms of psychological dysfunction. Individuals exposed to stressful or traumatic experiences frequently engage in ruminative thinking as they attempt to understand and make sense of adverse events; however, this cognitive response often intensifies emotional suffering rather than alleviating it (Allaert et al., 2025; Liu et al., 2023; Qin et al., 2024).

Theoretical perspectives on cybervictimization suggest that online harassment may trigger persistent rumination due to the public nature of digital interactions, the permanence of online content, and the difficulty victims experience in escaping reminders of victimization. Victims may repeatedly revisit negative encounters, question their social standing, and anticipate future rejection, thereby creating conditions that promote chronic rumination. Emerging evidence supports this proposition, demonstrating significant associations among victimization experiences, ruminative thought processes, and psychological distress. Studies examining bullying and cyberbullying contexts have found that rumination functions as a key mechanism linking adverse interpersonal experiences to depressive symptoms and other negative outcomes (Yanping Lu et al., 2025; Qin et al., 2024; Zhao et al., 2023). Furthermore, research has

consistently shown that individuals with higher levels of rumination exhibit greater vulnerability to depression following stressful life events, supporting the inclusion of rumination as a potential mediator in the relationship between cybervictimization and depression (Allaert et al., 2025; Liu et al., 2023; Yang et al., 2024).

Another psychological factor that may explain the association between cybervictimization and depression is self-esteem. Self-esteem refers to an individual's overall evaluation of personal worth and value. It plays a critical role in emotional adjustment, resilience, and psychological well-being. Individuals with higher self-esteem generally demonstrate greater confidence, adaptive coping abilities, and resistance to stress, whereas those with lower self-esteem are more vulnerable to negative emotional outcomes. The self-esteem vulnerability model suggests that diminished self-worth increases susceptibility to depression because individuals become more likely to interpret adverse experiences as reflections of personal inadequacy and failure (Yang et al., 2024; Yin et al., 2024; Zhao et al., 2023).

Cybervictimization may undermine self-esteem by exposing individuals to repeated criticism, humiliation, rejection, and social devaluation. When harmful online interactions target personal characteristics, appearance, competence, or social identity, victims may internalize these negative messages and develop increasingly unfavorable self-perceptions. Empirical studies have consistently demonstrated negative associations between cybervictimization and self-esteem. Research further indicates that reductions in self-esteem often contribute to subsequent depressive symptoms, suggesting that self-esteem may function as an important psychological mediator between victimization experiences and mental health outcomes (Lee et al., 2025; Yurong Lu et al., 2025; Xu & Zheng, 2022). Additional evidence highlights the central role of self-esteem in mediating relationships between adverse experiences and emotional maladjustment, emphasizing its importance as a protective psychological resource (Yang et al., 2024; Yin et al., 2024; Zhao et al., 2023).

Social support represents another critical factor that may influence the relationship between cybervictimization and depression. Social support refers to the perception or experience of being cared for, valued, and assisted by significant others, including family members, friends, and broader social networks. Social support has long been recognized as one of the most powerful protective factors against psychological distress. According to stress-buffering

models, supportive relationships help individuals manage stressful experiences by providing emotional comfort, practical assistance, and opportunities for adaptive coping. Consequently, individuals who perceive greater social support generally exhibit lower levels of depression and better overall psychological functioning (Sparks et al., 2023; Velez et al., 2023; Zelaya & DeBlaere, 2024).

Experiences of cybervictimization may erode perceptions of social support in several ways. Victims often withdraw from social interactions, experience increased mistrust of others, and develop concerns about social acceptance. Online harassment may also disrupt interpersonal relationships and reduce feelings of belongingness. Consequently, diminished social support may contribute to the development of depressive symptoms by removing important emotional and interpersonal resources that typically facilitate resilience and recovery. Previous studies examining interpersonal stressors and mental health have repeatedly demonstrated that social support functions as a significant mediator and protective factor in psychological adjustment processes (Sparks et al., 2023; Velez et al., 2023; Wang et al., 2024).

The simultaneous examination of rumination, self-esteem, and social support is particularly important because these variables represent distinct yet interconnected pathways through which cybervictimization may influence depression. Rumination reflects maladaptive cognitive processing, self-esteem reflects intrapersonal self-evaluation, and social support reflects interpersonal resources. Together, these factors capture multiple dimensions of psychological functioning that are likely to be affected by online victimization experiences. Integrative psychological frameworks suggest that adverse social experiences often influence mental health through combinations of cognitive, emotional, and social mechanisms rather than through isolated processes. Consequently, evaluating these mediators within a single comprehensive model may provide a more nuanced understanding of the pathways linking cybervictimization to depression among women (Velez et al., 2023; Wang et al., 2024; Zelaya & DeBlaere, 2024).

Despite increasing scholarly attention to cybervictimization, several gaps remain in the literature. First, much of the existing research has focused on adolescents and university students, leaving relatively limited evidence regarding adult women. Second, many studies have examined individual mediators separately, preventing a comprehensive understanding of the relative

contributions of cognitive, self-evaluative, and social mechanisms. Third, although research has established independent associations among cybervictimization, rumination, self-esteem, social support, and depression, fewer studies have integrated these constructs within a unified mediation framework. Addressing these limitations is important for developing evidence-based interventions that target the most influential mechanisms underlying psychological distress among women exposed to online victimization (Lee et al., 2025; Nesin et al., 2025; Tariq et al., 2025).

Given the increasing prevalence of cybervictimization and its potential consequences for women's mental health, further investigation of the mechanisms linking online victimization to depression is warranted. A better understanding of these pathways may inform prevention programs, therapeutic interventions, and digital mental health initiatives designed to enhance resilience and reduce psychological harm in affected populations.

Therefore, the present study aimed to examine the relationship between cybervictimization and depression among women and to investigate the mediating roles of rumination, self-esteem, and perceived social support in this relationship.

2. Methods and Materials

2.1. Study design and Participant

This study employed a cross-sectional correlational design using structural equation modeling to investigate the direct and indirect relationships between cybervictimization and depression among women, with rumination, self-esteem, and perceived social support examined as mediating variables. The target population consisted of adult women residing in Canada during the 2025–2026 period. Participants were recruited through online advertisements distributed via social media platforms, community organizations, women's support networks, and university mailing lists across several Canadian provinces. Eligibility criteria included being female, at least 18 years of age, residing in Canada, possessing sufficient English language proficiency to complete the questionnaires, and having regular access to the internet. Women who reported severe cognitive impairment or who submitted incomplete survey responses exceeding 10% missing data were excluded from the study. A total of 612 women participated in the research. The sample size was determined based on recommendations for structural equation modeling, which suggest a large

sample to ensure adequate statistical power, stable parameter estimation, and robust model fit assessment. Prior to participation, all respondents provided informed consent electronically. Participation was voluntary and anonymous, and ethical principles regarding confidentiality, privacy, and the right to withdraw from the study at any time were strictly observed.

2.2. Measures

Data were collected using a demographic information form and four standardized psychological instruments. Cybervictimization was assessed using the Cyber Victimization Scale developed by Çetin et al. (2012). This instrument evaluates individuals' experiences of being targeted by harmful online behaviors such as harassment, threats, humiliation, exclusion, and other forms of digital aggression. The scale consists of 24 items rated on a five-point Likert continuum ranging from 1 (never) to 5 (always). Higher scores indicate greater exposure to cybervictimization experiences. Previous studies have demonstrated satisfactory psychometric properties, including strong internal consistency and construct validity across diverse populations.

Depression was measured using the Beck Depression Inventory–II (BDI-II), developed by Beck, Steer, and Brown (1996). The BDI-II is one of the most widely used self-report instruments for assessing depressive symptomatology in clinical and non-clinical populations. The scale contains 21 items, each consisting of four statements reflecting increasing severity of depressive symptoms experienced during the previous two weeks. Items are scored from 0 to 3, resulting in total scores ranging from 0 to 63. Higher scores indicate more severe depressive symptoms. Extensive research has confirmed the reliability, validity, and clinical utility of the BDI-II across different demographic groups, including women.

Rumination was assessed using the Ruminative Responses Scale (RRS) developed by Nolen-Hoeksema and Morrow (1991) and later refined by Treynor et al. (2003). The scale measures the tendency to repetitively focus on negative emotions, distress, and the causes and consequences of adverse experiences. The RRS consists of 22 items scored on a four-point Likert scale ranging from 1 (almost never) to 4 (almost always). The instrument includes subdimensions commonly referred to as brooding and reflective pondering. Higher scores indicate greater levels of rumination. Previous studies have consistently reported

strong internal consistency, factorial validity, and predictive validity for depression and emotional distress.

Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES), developed by Rosenberg (1965). This widely used instrument evaluates global self-worth and overall positive or negative attitudes toward oneself. The scale comprises 10 items rated on a four-point Likert scale ranging from strongly disagree to strongly agree. Five items are reverse scored before calculating the total score. Higher scores reflect greater self-esteem and more positive self-evaluations. Numerous studies conducted in different cultural contexts have confirmed the reliability, validity, and unidimensional structure of the scale.

Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS) developed by Zimet et al. (1988). The MSPSS contains 12 items measuring perceived support from three primary sources: family, friends, and significant others. Responses are recorded on a seven-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). Subscale scores and a total social support score can be calculated, with higher scores indicating stronger perceived social support. The MSPSS has demonstrated excellent psychometric properties, including high internal consistency, test-retest reliability, and construct validity in community and clinical samples.

Data collection was conducted through a secure online survey platform. Participants first completed the demographic questionnaire, which gathered information regarding age, educational attainment, employment status, marital status, ethnicity, and frequency of internet use. Subsequently, participants completed the Cyber Victimization Scale, Beck Depression Inventory-II, Ruminative Responses Scale, Rosenberg Self-Esteem Scale, and Multidimensional Scale of Perceived Social Support. The average completion time was approximately 25 to 30 minutes. Data quality procedures included screening for duplicate entries, careless responding, and excessive missing values before statistical analyses were performed.

2.3. Data Analysis

Data analysis was conducted using IBM SPSS Statistics version 29 and AMOS version 29. Descriptive statistics, including means, standard deviations, skewness, and kurtosis values, were calculated to examine the distributional characteristics of the variables. Pearson correlation coefficients were computed to assess bivariate relationships

among cybervictimization, depression, rumination, self-esteem, and social support. Prior to structural equation modeling, assumptions of normality, linearity, multicollinearity, and absence of significant outliers were evaluated. Structural equation modeling was then employed to test the hypothesized mediation model. Model fit was evaluated using multiple goodness-of-fit indices, including the chi-square statistic, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Goodness-of-Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Indirect effects were examined using the bootstrap resampling method with 5,000 bootstrap samples and 95% bias-corrected confidence intervals. Statistical significance was established at $p < .05$ for all analyses.

3. Findings and Results

A total of 612 women participated in the study. Participants ranged in age from 18 to 59 years, with a mean

age of 33.84 years ($SD = 9.21$). Regarding educational attainment, 112 participants (18.3%) held a high school diploma or equivalent, 168 (27.5%) had completed college education, 251 (41.0%) possessed a bachelor's degree, and 81 (13.2%) had postgraduate qualifications. Concerning marital status, 297 women (48.5%) were single, 255 (41.7%) were married or cohabiting, and 60 (9.8%) were divorced, separated, or widowed. Employment data indicated that 371 participants (60.6%) were employed either full-time or part-time, 128 (20.9%) were students, and 113 (18.5%) were unemployed or engaged in household responsibilities. Participants reported extensive internet engagement, with 69.4% indicating daily online activity exceeding four hours. Approximately 57.8% of respondents reported experiencing at least one form of cybervictimization during the previous twelve months.

Table 1

Descriptive Statistics and Correlations Among Study Variables

Variable	Mean	SD	1	2	3	4	5
Cybervictimization	52.43	14.82	—				
Depression	19.76	10.21	.54**	—			
Rumination	47.31	11.76	.49**	.67**	—		
Self-Esteem	27.42	5.88	-.46**	-.63**	-.58**	—	
Social Support	58.17	13.47	-.41**	-.56**	-.45**	.52**	—

Table 1 presents the descriptive statistics and Pearson correlation coefficients among the principal study variables. Cybervictimization demonstrated a strong positive association with depression ($r = .54, p < .01$), indicating that women reporting greater exposure to online victimization also experienced higher levels of depressive symptoms. Cybervictimization was also positively associated with rumination ($r = .49, p < .01$), suggesting that victimized individuals were more likely to engage in repetitive negative thinking. Conversely, cybervictimization was negatively

correlated with self-esteem ($r = -.46, p < .01$) and perceived social support ($r = -.41, p < .01$). Depression exhibited its strongest positive relationship with rumination ($r = .67, p < .01$) and substantial negative relationships with self-esteem ($r = -.63, p < .01$) and social support ($r = -.56, p < .01$). These findings provide preliminary evidence supporting the hypothesized mediation model and indicate that all study variables were significantly interrelated in theoretically expected directions.

Table 2

Measurement Model Fit Indices

Fit Index	Obtained Value	Recommended Value
χ^2/df	2.41	< 3.00
CFI	.957	> .90
TLI	.951	> .90
GFI	.931	> .90
AGFI	.914	> .90
RMSEA	.048	< .08
SRMR	.041	< .08

The measurement model demonstrated excellent fit to the observed data. The ratio of chi-square to degrees of freedom ($\chi^2/df = 2.41$) fell well below the recommended threshold of 3.00, indicating acceptable model parsimony. Incremental fit indices, including the Comparative Fit Index (CFI = .957) and Tucker-Lewis Index (TLI = .951), exceeded recommended standards and reflected strong correspondence between the hypothesized measurement structure and observed covariance matrix. Likewise, the

Goodness-of-Fit Index (GFI = .931) and Adjusted Goodness-of-Fit Index (AGFI = .914) indicated satisfactory fit. Error-based indices further supported model adequacy, with RMSEA (.048) and SRMR (.041) demonstrating low levels of residual error. Collectively, these results confirmed that the latent constructs of cybervictimization, rumination, self-esteem, social support, and depression were measured reliably and could be used in subsequent structural analyses.

Table 3

Standardized Direct Effects in the Structural Model

Structural Path	β	SE	CR	p
Cybervictimization → Depression	.24	.04	5.92	< .001
Cybervictimization → Rumination	.51	.05	10.84	< .001
Cybervictimization → Self-Esteem	-.44	.04	-9.67	< .001
Cybervictimization → Social Support	-.38	.05	-8.12	< .001
Rumination → Depression	.43	.04	9.74	< .001
Self-Esteem → Depression	-.29	.04	-6.87	< .001
Social Support → Depression	-.18	.03	-4.96	< .001

The structural model revealed that cybervictimization exerted a significant direct effect on depression ($\beta = .24, p < .001$), even after accounting for the mediating variables. Cybervictimization was strongly associated with increased rumination ($\beta = .51, p < .001$), reduced self-esteem ($\beta = -.44, p < .001$), and diminished perceived social support ($\beta = -.38, p < .001$). In turn, rumination emerged as the strongest predictor of depression ($\beta = .43, p < .001$), indicating that repetitive negative thinking substantially increased depressive symptoms among participants. Self-esteem

demonstrated a significant protective role against depression ($\beta = -.29, p < .001$), suggesting that women with more positive self-evaluations reported lower depressive symptomatology. Social support also negatively predicted depression ($\beta = -.18, p < .001$), although its effect size was somewhat smaller than those of rumination and self-esteem. These findings indicate that cybervictimization affects psychological well-being both directly and indirectly through multiple psychosocial mechanisms.

Table 4

Bootstrap Analysis of Indirect Effects

Indirect Path	Indirect Effect	95% CI Lower	95% CI Upper	Result
Cybervictimization → Rumination → Depression	.219	.167	.278	Significant
Cybervictimization → Self-Esteem → Depression	.128	.087	.176	Significant
Cybervictimization → Social Support → Depression	.068	.039	.103	Significant
Total Indirect Effect	.415	.351	.489	Significant
Total Effect	.655	.587	.723	Significant

Bootstrap analyses based on 5,000 resamples demonstrated that all indirect pathways were statistically significant because none of the confidence intervals included zero. The strongest mediating pathway involved rumination, with an indirect effect of .219, indicating that cybervictimization substantially increased depressive symptoms through heightened repetitive negative thinking. Self-esteem represented the second strongest mediator, with an indirect effect of .128, suggesting that reductions in self-worth partially explained the relationship between online victimization and depression. Social support also

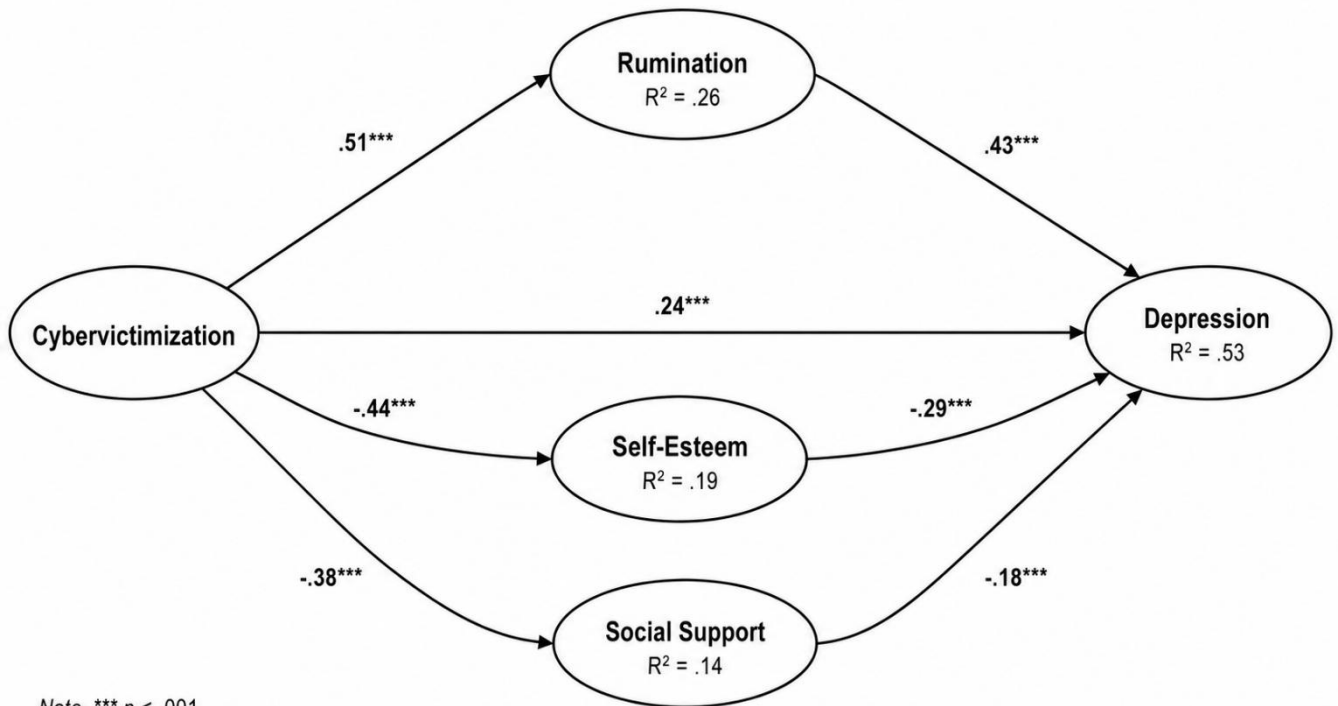
significantly mediated the association, although its indirect contribution was comparatively smaller ($\beta = .068$). The total indirect effect of cybervictimization on depression was .415, while the total effect reached .655, indicating that a substantial proportion of the relationship between cybervictimization and depression was transmitted through the three mediating variables. Because the direct effect remained significant after inclusion of the mediators, the findings support a model of partial mediation. Overall, the results suggest that women exposed to cybervictimization are more likely to experience depressive symptoms because

such experiences increase rumination, undermine self-esteem, and weaken perceptions of available social support. These mechanisms collectively account for a considerable

proportion of the psychological impact associated with online victimization and provide strong empirical support for the proposed theoretical framework.

Figure 1

Structural Model of the Relationships Between Cybervictimization, Rumination, Self-Esteem, Social Support, and Depression Among Women



Note. $^{***} p < .001$

4. Discussion

The present study examined the relationship between cybervictimization and depression among women and investigated the mediating roles of rumination, self-esteem, and perceived social support. The findings demonstrated that cybervictimization was positively associated with depression and that women who reported greater exposure to online victimization experienced significantly higher levels of depressive symptoms. Furthermore, cybervictimization was positively related to rumination and negatively related to both self-esteem and social support. The structural model revealed that rumination, self-esteem, and social support each significantly mediated the relationship between cybervictimization and depression, with rumination emerging as the strongest mediator. The persistence of a significant direct path from cybervictimization to depression alongside significant indirect pathways suggested a pattern of partial mediation. Overall, the results indicate that the psychological impact of

cybervictimization among women operates through multiple cognitive, emotional, and interpersonal mechanisms.

The finding that cybervictimization was significantly associated with higher levels of depression is consistent with a substantial body of contemporary literature demonstrating the harmful psychological consequences of online victimization. Exposure to cyberaggression creates a persistent source of stress that can undermine emotional stability, increase feelings of helplessness, and contribute to the development of depressive symptomatology. Unlike traditional forms of victimization, cybervictimization often extends beyond physical environments and can occur continuously through digital platforms, increasing both the frequency and duration of exposure to negative social experiences. This chronic exposure may heighten emotional vulnerability and reduce opportunities for psychological recovery. The present findings align with previous studies reporting strong associations between cybervictimization and depression among adolescents and young adults (Yurong Lu et al., 2025; Schunk et al., 2022; Siah et al., 2022). Similarly, recent investigations have demonstrated

that experiences of online victimization contribute to broader emotional difficulties, diminished well-being, and increased risk for depressive outcomes (Lee et al., 2025; Nesin et al., 2025; Tariq et al., 2025). The results therefore extend previous evidence by demonstrating that these relationships are also evident among adult women and remain significant when multiple mediating mechanisms are considered simultaneously.

One of the most important findings of the study was the significant mediating role of rumination. Women who experienced greater cybervictimization reported higher levels of ruminative thinking, which in turn predicted elevated depressive symptoms. This result supports cognitive vulnerability models suggesting that stressful interpersonal experiences increase psychological distress by altering patterns of information processing. Victims of cybervictimization often replay negative interactions mentally, repeatedly analyze hostile online encounters, and become preoccupied with the causes and consequences of their experiences. Rather than facilitating adaptive coping, such repetitive thinking intensifies negative emotions and prolongs psychological suffering. The public and persistent nature of online victimization may further amplify rumination because harmful content can remain accessible long after the original event and can be repeatedly revisited by victims. These findings are highly consistent with previous research demonstrating that rumination serves as a key mechanism linking adverse experiences to depression (Liu et al., 2023; Qin et al., 2024; Zhao et al., 2023). Recent evidence has also highlighted the role of various forms of rumination in explaining the emotional consequences of bullying and cyberbullying experiences (Allaert et al., 2025; Yanping Lu et al., 2025). The present results reinforce the view that rumination is one of the most powerful cognitive pathways through which victimization experiences are translated into depressive symptoms.

The strong mediating effect of rumination may also be explained by contemporary neurocognitive perspectives on emotional regulation. Victims of cybervictimization often experience repeated activation of threat-related cognitive schemas, heightened self-focused attention, and impaired emotional regulation capacities. These processes can create a cycle in which negative experiences generate ruminative thoughts, which subsequently intensify emotional distress and further reinforce negative interpretations of social interactions. Such mechanisms have been increasingly recognized as central contributors to depressive symptom development following interpersonal stressors (Nesin et al.,

2025; Tariq et al., 2025). Consequently, interventions aimed at reducing rumination may represent particularly effective strategies for mitigating the psychological consequences of cybervictimization among women.

The findings also demonstrated that self-esteem significantly mediated the relationship between cybervictimization and depression. Women who reported greater exposure to online victimization exhibited lower self-esteem, and reduced self-esteem was associated with higher levels of depressive symptoms. This finding is consistent with theoretical models emphasizing the importance of self-worth in psychological adjustment. Cybervictimization often involves direct attacks on personal characteristics, appearance, competence, or social identity. Repeated exposure to such negative evaluations may lead victims to internalize hostile messages and develop increasingly negative self-perceptions. As self-esteem declines, individuals become more vulnerable to feelings of inadequacy, hopelessness, and self-criticism, thereby increasing the likelihood of depression. The observed mediation effect supports previous research showing that self-esteem functions as a critical psychological resource that protects against emotional maladjustment (Yang et al., 2024; Yin et al., 2024; Zhao et al., 2023).

The present results are also consistent with studies demonstrating negative associations between cybervictimization and self-esteem. For example, research has shown that online victimization contributes to diminished self-worth and increased psychological vulnerability, whereas stronger self-esteem serves as a protective factor against adverse mental health outcomes (Lee et al., 2025; Yurong Lu et al., 2025). Similar mechanisms have been observed in studies examining problematic online behaviors and cyberbullying-related outcomes, where self-esteem frequently emerges as a significant mediator linking stressful experiences to emotional difficulties (Xu & Zheng, 2022). The current findings therefore suggest that self-esteem constitutes an important intrapersonal mechanism through which cybervictimization influences depression among women.

Another important contribution of the study was the identification of perceived social support as a significant mediator. Women who experienced greater cybervictimization reported lower levels of perceived support from family, friends, and significant others, and reduced social support was associated with higher depressive symptoms. This finding is consistent with stress-buffering theories suggesting that supportive interpersonal

relationships protect individuals from the psychological consequences of stressful experiences. Victims of cybervictimization may withdraw from social interactions due to embarrassment, fear of judgment, or concerns regarding future victimization. Such withdrawal can reduce opportunities for emotional support and increase feelings of isolation. Furthermore, cybervictimization may directly undermine perceptions of belongingness and interpersonal trust, thereby weakening the protective influence of social relationships.

The mediating role of social support aligns with broader research demonstrating that interpersonal resources play a crucial role in psychological resilience. Previous studies have consistently shown that social support mitigates the effects of stress and reduces vulnerability to depression (Sparks et al., 2023; Velez et al., 2023). Psychological mediation frameworks similarly emphasize that adverse social experiences influence mental health partly by disrupting access to supportive relationships and social resources (Velez et al., 2023; Zelaya & DeBlaere, 2024). The present findings support these perspectives and suggest that strengthening social support networks may help reduce the emotional impact of cybervictimization among women.

An additional noteworthy finding concerns the relative magnitude of the mediation effects. Rumination emerged as the strongest mediator, followed by self-esteem and social support. This pattern suggests that cognitive processes may play a particularly central role in explaining how cybervictimization influences depression. Although social resources and self-evaluative processes remain important, the manner in which individuals cognitively process victimization experiences appears especially influential. This finding is consistent with contemporary psychological models proposing that stressful experiences exert their effects primarily through subjective interpretations and cognitive responses rather than through objective exposure alone (Allaert et al., 2025; Liu et al., 2023; Wang et al., 2024). The results therefore highlight the importance of addressing maladaptive thought patterns when designing interventions for victims of cybervictimization.

5. Conclusion

The significance of all three mediators simultaneously also supports multidimensional conceptualizations of depression. Depression does not emerge solely from environmental adversity but rather from the interaction of cognitive vulnerabilities, self-related beliefs, and social

experiences. Cybervictimization appears capable of influencing each of these domains. Victims may engage in repetitive negative thinking, develop unfavorable self-evaluations, and perceive diminished social support, creating a constellation of risk factors that increase susceptibility to depressive symptoms. Such findings are consistent with integrative mediation models suggesting that adverse experiences affect mental health through multiple interconnected pathways (Velez et al., 2023; Wang et al., 2024; Zelaya & DeBlaere, 2024). The present study contributes to this literature by demonstrating the simultaneous operation of cognitive, intrapersonal, and interpersonal mechanisms in explaining the relationship between cybervictimization and depression among women.

6. Limitations and Suggestions

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional design precludes definitive conclusions regarding causality and temporal ordering among the variables. Although the proposed model is theoretically supported, longitudinal studies are necessary to establish causal relationships. Second, all variables were assessed using self-report measures, which may have increased the possibility of common method bias, social desirability effects, and subjective reporting inaccuracies. Third, the sample consisted exclusively of women residing in Canada, which may limit the generalizability of the findings to men or individuals from different cultural contexts. Fourth, other potentially relevant variables, such as personality traits, coping strategies, resilience, emotion regulation abilities, and previous mental health conditions, were not included in the model. Finally, cybervictimization was examined as a general construct, and distinctions among different forms of online victimization were not investigated.

Future research should employ longitudinal and prospective designs to clarify the temporal relationships among cybervictimization, rumination, self-esteem, social support, and depression. Researchers may also examine whether these relationships differ across developmental stages, cultural contexts, and demographic groups. Additional studies could investigate alternative mediators and moderators, including emotional regulation, resilience, mindfulness, loneliness, psychological flexibility, and perceived stress. Comparative studies involving both women and men would provide insight into possible gender differences in the psychological consequences of

cybervictimization. Furthermore, future investigations may benefit from utilizing mixed-method approaches that combine quantitative analyses with qualitative exploration of victims' lived experiences. Experimental and intervention-based studies would also be valuable for identifying effective strategies to reduce rumination, strengthen self-esteem, and enhance social support among individuals exposed to cybervictimization.

The findings suggest several practical implications for mental health professionals, educators, community organizations, and policymakers. Prevention programs should focus on increasing awareness of the psychological consequences of cybervictimization and promoting safe digital behaviors. Mental health interventions for victims should incorporate cognitive techniques aimed at reducing rumination and challenging maladaptive thought patterns. Programs designed to strengthen self-esteem may help individuals develop more resilient self-concepts and reduce vulnerability to depression following online victimization. Social support enhancement initiatives, including peer-support groups, community engagement programs, and family-based interventions, may further protect psychological well-being. Educational institutions and online platforms should establish clear anti-cyberbullying policies and provide accessible reporting mechanisms for victims. Finally, integrated intervention programs that simultaneously address cognitive, emotional, and social dimensions of functioning are likely to be most effective in reducing the psychological burden associated with cybervictimization among women.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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