

Social Support as a Mediator Between Cyberbullying Victimization and Psychological Distress in Adolescents

Zeynep. Acar¹, Zainab. Al-Taie^{2*}

¹ Department of General Psychology, Istanbul University, Istanbul, Turkiye

² Department of Health Psychology, University of Kufa, Najaf, Iraq

* Corresponding author email address: zainab.altaie@uokufa.edu.iq

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ABSTRACT

Objective: This study aimed to investigate the mediating role of social support in the relationship between cyberbullying victimization and psychological distress among adolescents in Iraq.

Methods and Materials: A descriptive correlational research design was employed with a sample of 395 adolescents selected based on the Krejcie and Morgan sampling table. Participants were recruited from various high schools in Iraq using stratified random sampling. Standardized tools were utilized to measure cyberbullying victimization (Cyberbullying and Online Aggression Survey Instrument), social support (Multidimensional Scale of Perceived Social Support), and psychological distress (Kessler Psychological Distress Scale, K10). Data were analyzed using SPSS version 27 and AMOS version 21. Pearson correlation coefficients were computed to examine bivariate relationships, and Structural Equation Modeling (SEM) was performed to test the mediation model and model fit.

Findings: Results showed that cyberbullying victimization was positively associated with psychological distress ($r = .53, p < .001$), while social support was negatively associated with both cyberbullying ($r = -.41, p < .001$) and psychological distress ($r = -.46, p < .001$). The SEM analysis revealed good model fit ($\chi^2/df = 2.08, CFI = 0.97, RMSEA = 0.052$) and supported partial mediation. Cyberbullying had a significant direct effect on psychological distress ($B = 0.43, \beta = 0.38, p < .001$), while social support significantly mediated this relationship (indirect effect = $-0.19, p < .001$).

Conclusion: These findings underscore the critical role of perceived social support in mitigating the psychological consequences of cyberbullying victimization among adolescents. Promoting supportive social environments within families, peer groups, and schools may serve as a protective factor against mental health issues in digitally active youth populations.

Keywords: Cyberbullying; Psychological Distress; Social Support; Adolescents; Structural Equation Modeling; Iraq.

1. Introduction

In the digital age, cyberbullying has emerged as a pervasive and distressing phenomenon that disproportionately affects adolescents, a group deeply embedded in online communication environments. Unlike traditional forms of bullying, cyberbullying transcends physical spaces and allows perpetrators to anonymously target victims at any time and place, thereby exacerbating the psychological impact on adolescents (Barlett, 2024; Ramadhani & Prastyanti, 2024). Defined as the use of electronic communication to intimidate, harass, or threaten others, cyberbullying manifests in diverse forms including spreading rumors, sharing private images, or direct verbal abuse through social media, messaging apps, and online games (Chen & Liu, 2024; Ferrer et al., 2024). The psychological and emotional consequences for victims can be severe, often resulting in elevated levels of stress, anxiety, depression, and even suicidal ideation (Perwitasari & Wuryaningsih, 2022; Zhang et al., 2021). These outcomes demand a closer examination of protective mechanisms that might buffer such harmful effects—one of which is perceived social support.

Research consistently demonstrates that cyberbullying victimization is significantly associated with psychological distress, particularly in adolescence when emotional regulation and identity formation are still developing (Hsieh et al., 2021; Lekatompessy et al., 2022). Adolescents who experience cyberbullying often exhibit higher levels of depressive symptoms, lowered self-worth, emotional dysregulation, and in extreme cases, suicidal ideation (Santre, 2022; Zhang et al., 2021). Psychological distress in this context encompasses a range of symptoms including anxiety, hopelessness, mood instability, and social withdrawal, which are often exacerbated by the chronic nature of cyberbullying and its exposure to a wide online audience (Hsieh et al., 2021; Widijowati, 2023). Victims frequently lack immediate emotional recourse, especially when the bullying is anonymous or occurs in virtual settings where adult supervision is minimal (Wang et al., 2021).

Given the psychological toll associated with cyberbullying, researchers have increasingly turned their attention to understanding the role of mediating and moderating variables that might explain or mitigate its effects. Among these, social support has gained considerable empirical validation as a crucial buffer. Defined as the perception or experience of being cared for, valued, and part of a supportive network, social support may originate from

peers, family members, teachers, or the broader community (Kim et al., 2023; Yang et al., 2023). Theoretical frameworks such as the stress-buffering hypothesis posit that social support can weaken the negative psychological impact of stressors like bullying by enhancing coping efficacy and emotional resilience (Aledeh et al., 2024). Empirical studies also show that adolescents who perceive higher levels of social support are less likely to internalize the negative effects of cyberbullying, thereby experiencing lower levels of psychological distress (Liang et al., 2022; Rahmaputri et al., 2022).

The mechanism through which social support exerts its buffering effect has been studied in both Western and non-Western contexts. In collectivist cultures such as Iraq, where this study is situated, social bonds and familial obligations are particularly salient and can influence adolescents' coping mechanisms with cyber aggression (Hidayati & Kumalasari, 2021; Kim, 2022). Family affective functioning and peer connectedness have been identified as key factors in adolescents' resilience to cyberbullying (Hidayati & Oktafianti, 2021). For instance, adolescents with strong emotional bonds to caregivers and peers may be more likely to disclose victimization experiences and receive emotional support, which in turn reduces psychological distress (Jung, 2023; Zhao et al., 2024). Conversely, a lack of perceived support may amplify feelings of isolation and helplessness, further increasing the risk of adverse mental health outcomes.

Another key dimension in the understanding of cyberbullying and psychological distress is gender. Several studies have identified gender-based differences in how cyberbullying is perpetrated, experienced, and processed emotionally (Wang et al., 2023; Zhang et al., 2024). While both boys and girls are vulnerable, girls are often more emotionally impacted by cyberbullying and are more likely to report psychological symptoms such as anxiety and depression (Rachmania et al., 2021; Yang et al., 2023). Furthermore, girls may derive greater protective benefit from social support, especially emotional support from close friends and family (Kim et al., 2023). Understanding these gender differences is essential for designing targeted interventions.

Recent research also emphasizes the influence of parental and peer behaviors on adolescents' involvement in cyberbullying, either as victims or perpetrators (Adam & Alwi, 2023; Barlett, 2024). Adolescents who witness or experience cyberbullying at home or within their peer group are more likely to normalize and replicate such behaviors,

thereby increasing the likelihood of becoming targets or aggressors themselves (Zhao et al., 2024). Conversely, parental warmth, positive parenting practices, and open communication channels have been associated with lower incidences of cyberbullying and reduced psychological distress among victims (Kim et al., 2023; Liang et al., 2022). This suggests that family dynamics may play a dual role—both as a risk factor when negative and as a protective factor when positive.

The cultural context in which cyberbullying occurs also plays a pivotal role in shaping adolescent experiences and coping mechanisms. Cross-cultural research indicates that cyberbullying is not only influenced by individual personality traits or peer dynamics, but also by societal norms, legal structures, and digital literacy (Chen & Liu, 2024; Widijowati, 2023). In countries like Iraq, where digital governance policies are still evolving, and where adolescents often engage in unsupervised internet use, the prevalence and consequences of cyberbullying may be more pronounced (Ramadhani & Prastyanti, 2024). Legal and school-based interventions remain inadequate or inconsistently enforced, leaving adolescents with few institutional resources to rely upon in the face of cyber aggression (Widijowati, 2023; Yurdakul & Ayhan, 2022).

Further complicating this picture are technological factors such as smartphone addiction, online disinhibition, and screen time, which may increase both the risk of victimization and its psychological impact (Kim et al., 2023; Wang et al., 2021). Adolescents who are constantly online are more exposed to potential cyber aggressors and less able to disconnect from toxic digital environments. The phenomenon of online disinhibition—where individuals say or do things online they would not in person—has been linked to both perpetration and victimization of cyberbullying, further escalating emotional consequences (Wang et al., 2021). Moreover, social comparison and fear of missing out (FoMO) on social media can intensify emotional vulnerability and undermine self-esteem among adolescents who are already coping with online harassment (Ferrer et al., 2024).

Despite increasing research on the negative outcomes of cyberbullying, there remains a paucity of studies exploring protective psychological mechanisms in non-Western adolescent populations, particularly in Middle Eastern countries like Iraq. This gap is significant, given the unique socio-cultural and political contexts that may shape adolescents' experience of cyberbullying and their access to social support (Aledah et al., 2024; Rahmaputri et al., 2022).

Most existing studies are either descriptive or focused solely on prevalence, with few using advanced statistical models to understand the structural relationships between victimization, mediators like social support, and outcomes such as psychological distress (Santre, 2022; Zhang et al., 2024).

Therefore, this study seeks to address this gap by investigating the mediating role of perceived social support in the relationship between cyberbullying victimization and psychological distress among adolescents in Iraq.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a descriptive correlational design to examine the mediating role of social support in the relationship between cyberbullying victimization and psychological distress among adolescents. The population included high school students aged 13–18 years from urban regions in Iraq. A total of 395 participants were selected using stratified random sampling, with the sample size determined according to Krejcie and Morgan's (1970) sample size table for a population exceeding 10,000 individuals. Inclusion criteria required participants to be enrolled in secondary education and to provide informed consent (with parental consent for minors). Exclusion criteria included incomplete questionnaires or evident random responding patterns.

2.2. Measures

2.2.1. Psychological Distress

To assess psychological distress in adolescents, the Kessler Psychological Distress Scale (K10) developed by Kessler et al. (2002) is used. The K10 is a 10-item self-report measure designed to screen for nonspecific psychological distress, including symptoms of anxiety and depression, experienced over the past four weeks. Respondents rate each item on a 5-point Likert scale ranging from 1 (none of the time) to 5 (all of the time), resulting in total scores ranging from 10 to 50, with higher scores indicating greater psychological distress. The K10 does not have subscales but provides a unidimensional assessment of general psychological distress. It has demonstrated excellent internal consistency (Cronbach's alpha typically above .90) and strong convergent validity with clinical diagnoses and other mental health indicators in adolescent and adult populations, as confirmed in numerous cross-cultural validation studies.

2.2.2. Cyberbullying Victimization

Cyberbullying victimization was measured using the Cyberbullying and Online Aggression Survey Instrument developed by Hinduja and Patchin (2007). This scale includes 9 items specifically focused on experiences of being targeted by harmful online behaviors such as threats, insults, rumors, or impersonation over digital platforms. Respondents indicate the frequency of these experiences over the past 30 days on a 5-point Likert scale from 0 (never) to 4 (daily), yielding a possible score range of 0 to 36. The scale is unidimensional but captures a variety of cyberbullying behaviors relevant to adolescents. The tool has been widely used in adolescent cyberbullying research and has shown high internal consistency (Cronbach's alpha $> .85$) and strong construct validity in studies conducted in both Western and non-Western contexts.

2.2.3. Social Support

Social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS) developed by Zimet, Dahlem, Zimet, and Farley (1988). The MSPSS consists of 12 items divided into three subscales measuring perceived support from Family, Friends, and Significant Others, with each subscale containing 4 items. Responses are recorded on a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree), allowing for both subscale scores and a total perceived social support score, where higher values reflect greater perceived support. The MSPSS has been extensively validated across different age groups and cultural backgrounds, including adolescents, and has demonstrated high reliability (Cronbach's alpha

ranging from .85 to .95 for subscales) and strong factorial and construct validity in multiple empirical studies.

2.3. Data Analysis

Data were analyzed using SPSS version 27 and AMOS version 21. Descriptive statistics were used to summarize demographic variables. To explore the bivariate relationships between variables, Pearson correlation coefficients were calculated to assess the associations between psychological distress (dependent variable) and cyberbullying victimization and social support (independent and mediating variables). Additionally, Structural Equation Modeling (SEM) was conducted to examine the hypothesized mediation model. SEM analysis included testing the direct and indirect effects, model fit indices (CFI, TLI, RMSEA, and χ^2/df), and bootstrapping for mediation confirmation. A significance level of $p < .05$ was used throughout all inferential tests.

3. Findings and Results

The sample consisted of 395 adolescents, including 212 females (53.7%) and 183 males (46.3%), with a mean age of 15.71 years ($SD = 1.23$). Regarding educational level, 113 students (28.6%) were in grade 10, 142 students (35.9%) in grade 11, and 140 students (35.4%) in grade 12. In terms of internet access, 362 participants (91.6%) reported having daily access to digital devices and social media platforms, while 33 participants (8.4%) reported limited or no access. Moreover, 278 adolescents (70.4%) reported experiencing at least one form of online aggression in the past month, indicating the relevance of cyberbullying as a contextual concern in this population.

Table 1

Descriptive Statistics for Study Variables (N = 395)

Variable	Mean (M)	Standard Deviation (SD)
Cyberbullying Victimization	18.42	5.67
Social Support	56.13	10.28
Psychological Distress	27.95	7.31

As shown in Table 1, the mean score for cyberbullying victimization was 18.42 ($SD = 5.67$), suggesting a moderate level of cyberbullying experiences among participants. Social support had a higher average score of 56.13 ($SD = 10.28$), indicating that most adolescents perceived themselves as moderately to highly supported by others. The mean for psychological distress was 27.95 ($SD = 7.31$),

reflecting moderate levels of distress symptoms in the sample.

Prior to conducting inferential analyses, all statistical assumptions were tested. The assumption of normality was evaluated through skewness and kurtosis values, which ranged between -0.78 and $+0.91$, falling within the acceptable range of ± 2.00 . Linearity and homoscedasticity

were confirmed by inspecting scatterplots of standardized residuals, which showed no discernible patterns. Multicollinearity was assessed using Variance Inflation Factor (VIF) values, which were below 2.10 for all predictors, indicating no concerns. The Durbin-Watson statistic was 1.86, suggesting independence of residuals.

Furthermore, Mahalanobis distance was used to detect multivariate outliers, and none exceeded the critical chi-square value ($\chi^2(3) = 16.27$, $p < .001$). These findings confirmed that the data met the assumptions required for Pearson correlation and SEM analyses.

Table 2

Pearson Correlation Matrix Between Study Variables

Variable	1.	2.	3.
1. Cyberbullying Victimization	—		
2. Social Support	-.41** ($p < .001$)	—	
3. Psychological Distress	.53** ($p < .001$)	-.46** ($p < .001$)	—

Table 2 shows significant correlations between all variables. Cyberbullying victimization was positively correlated with psychological distress ($r = .53$, $p < .001$), indicating that adolescents who reported more cyberbullying experiences also reported higher levels of distress. Social

support was negatively correlated with both cyberbullying victimization ($r = -.41$, $p < .001$) and psychological distress ($r = -.46$, $p < .001$), suggesting that perceived support is inversely related to both cyberbullying and its psychological effects.

Table 3

Fit Indices for the Structural Equation Model

Fit Index	Value	Acceptable Threshold
χ^2	112.34	—
df	54	—
χ^2/df	2.08	< 3.00
GFI	0.95	≥ 0.90
AGFI	0.92	≥ 0.90
CFI	0.97	≥ 0.95
TLI	0.96	≥ 0.95
RMSEA	0.052	< 0.08

The structural model demonstrated a good fit with the observed data, as shown in Table 3. The chi-square value was 112.34 with 54 degrees of freedom, yielding a ratio of $\chi^2/df = 2.08$, which is within the acceptable range. Other fit

indices were also satisfactory: GFI = 0.95, AGFI = 0.92, CFI = 0.97, TLI = 0.96, and RMSEA = 0.052, all indicating that the model fits the data well.

Table 4

Direct, Indirect, and Total Effects in the Structural Model

Path	B	SE	β (Beta)	p
Cyberbullying → Psychological Distress	0.43	0.06	0.38	$< .001$
Cyberbullying → Social Support	-0.52	0.07	-0.41	$< .001$
Social Support → Psychological Distress	-0.37	0.05	-0.34	$< .001$
Indirect (CB → SS → PD)	-0.19	0.04	-0.14	$< .001$
Total Effect (CB → PD)	0.62	0.05	0.52	$< .001$

Table 4 summarizes the direct, indirect, and total effects between variables in the model. The direct effect of cyberbullying on psychological distress was significant ($B = 0.43$, $p < .001$), as was its negative effect on social support

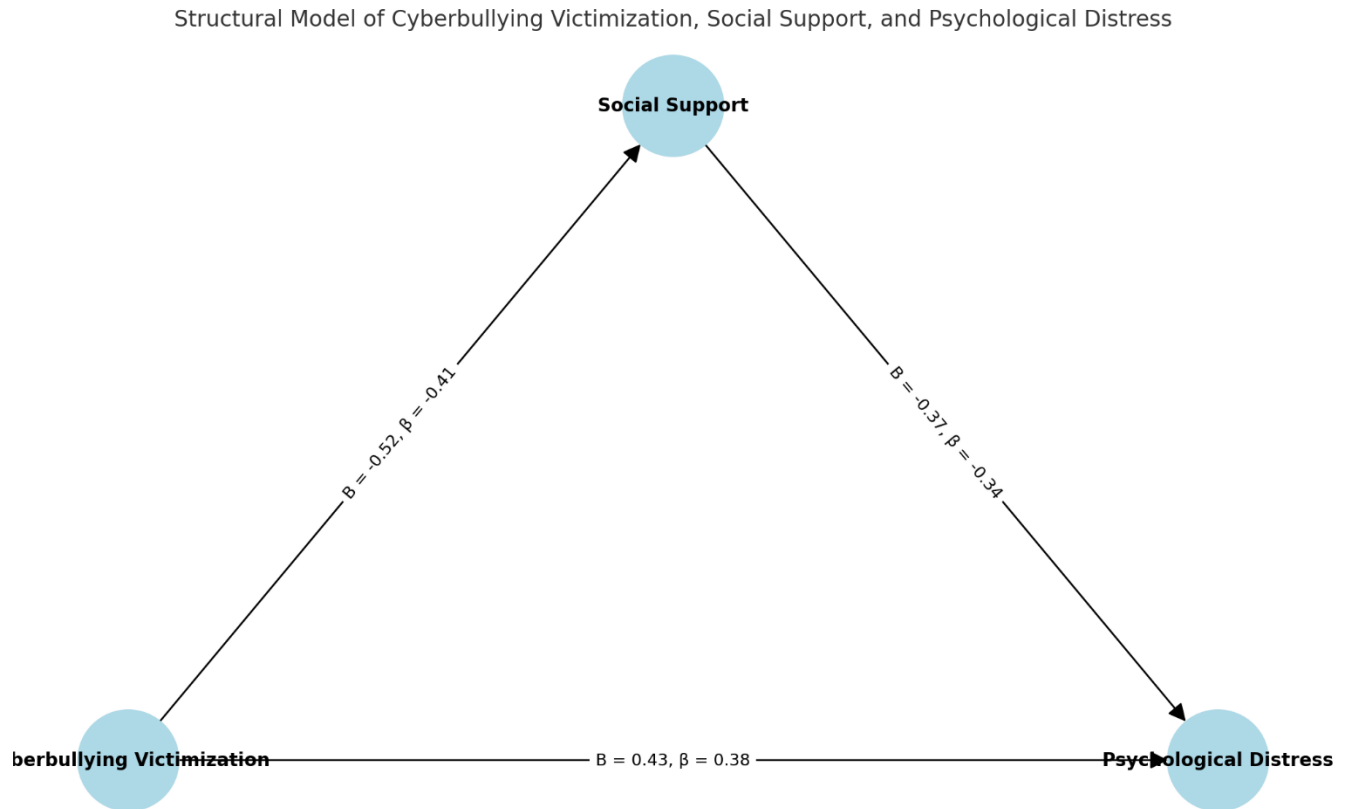
($B = -0.52$, $p < .001$). Additionally, social support significantly predicted lower psychological distress ($B = -0.37$, $p < .001$). The indirect effect of cyberbullying on distress through social support was -0.19 ($p < .001$),

indicating a partial mediation. The total effect of cyberbullying on psychological distress, combining both

direct and indirect paths, was 0.62 ($p < .001$), supporting the model's hypothesized structure.

Figure 1

Structural Model of The Study



4. Discussion and Conclusion

The present study aimed to examine the mediating role of social support in the relationship between cyberbullying victimization and psychological distress among adolescents in Iraq. Results from Pearson correlation analyses revealed significant positive associations between cyberbullying victimization and psychological distress, and a significant negative correlation between social support and psychological distress. Structural Equation Modeling (SEM) further indicated that social support partially mediated the relationship between cyberbullying victimization and psychological distress, suggesting that while cyberbullying directly contributes to psychological harm, the presence of perceived support can buffer or reduce this negative effect.

The finding that cyberbullying victimization is positively associated with psychological distress aligns with extensive empirical literature indicating that adolescents exposed to online aggression are at greater risk for mental health

problems, including depression, anxiety, loneliness, and suicidality (Perwitasari & Wuryaningsih, 2022; Zhang et al., 2021). This association is particularly critical in adolescence—a developmental period marked by heightened emotional sensitivity and a growing need for peer acceptance (Hsieh et al., 2021). Victimized adolescents may internalize online attacks, leading to diminished self-esteem and increased emotional vulnerability. This is consistent with findings from Adam and Alwi (2023), who observed a significant relationship between diminished self-worth and the experience of cyberbullying among high school students (Adam & Alwi, 2023). The current study confirms these observations in a Middle Eastern context, adding cross-cultural validity to existing models of psychological distress linked to cyber victimization.

Moreover, the SEM results demonstrated that social support serves as a significant mediating variable. Specifically, higher levels of perceived support from peers, family, or significant others were associated with lower

levels of psychological distress among those who experienced cyberbullying. This finding corroborates previous studies emphasizing the protective function of social support in adolescent mental health. For instance, Liang et al. (2022) found that adolescents with strong family and peer connections were less likely to experience depressive symptoms following cyberbullying incidents (Liang et al., 2022). Similarly, Rahmaputri et al. (2022) highlighted that parental psychological control reduced adolescents' coping ability and exacerbated the harmful effects of cyber aggression, indicating that the **quality** of support is just as vital as its presence (Rahmaputri et al., 2022).

The effectiveness of social support in reducing psychological distress may be attributed to its buffering effects. According to Aledheh et al. (2024), social support fosters emotional resilience by validating the adolescent's emotional experience and enhancing their sense of belonging and self-worth (Aledheh et al., 2024). In this study, adolescents who perceived a stronger network of supportive individuals reported lower distress, even when exposed to cyberbullying. This supports the stress-buffering hypothesis, which posits that social resources can weaken the psychological impact of stressors by facilitating adaptive coping mechanisms (Yang et al., 2023).

Interestingly, the current findings also resonate with research by Jung (2023), who evaluated an empathy-enhancing intervention for cyberbullying victims and perpetrators and found that adolescents with strong emotional connections to their peers showed significant improvements in mental well-being and decreased perpetration behavior (Jung, 2023). This suggests that not only does social support help victims cope, but it also creates an environment less conducive to cyber aggression by promoting empathy and peer accountability.

Additionally, the study underscores the contextual and cultural relevance of social support. In collectivist cultures such as Iraq, family ties and peer loyalty play a central role in emotional regulation and identity development. Prior research by Hidayati and Oktafianti (2021) has shown that adolescents from cultures with strong familial bonds are more likely to seek support from family members during distressing events, including online victimization (Hidayati & Kumalasari, 2021). The current study reflects these dynamics, as adolescents who reported high levels of familial and peer support exhibited significantly reduced psychological distress, reinforcing the necessity of culturally embedded protective factors.

Another important point relates to the digital context in which cyberbullying occurs. As Kim et al. (2023) noted, adolescents with higher levels of smartphone addiction are more susceptible to both perpetration and victimization, which exacerbates mental health challenges (Kim et al., 2023). The continuous online exposure and the permanence of digital attacks intensify emotional strain, particularly in settings where adolescents spend significant time on social platforms. While this study did not directly measure smartphone use, the indirect role of digital dependency is evident in the psychological distress reported by victims.

The partial mediation observed suggests that while social support is critical, it is not sufficient on its own to fully protect adolescents from the psychological effects of cyberbullying. This insight aligns with findings by Zhang et al. (2024), who reported that cumulative stressors—such as COVID-19 anxiety, teacher violence, and cyber victimization—amplify psychological harm and require multi-tiered interventions (Zhang et al., 2024). In other words, effective coping with cyberbullying must involve not just social support but also school-based mental health initiatives, digital literacy programs, and possibly professional psychological interventions.

The study also supports findings by Wang et al. (2023), who identified that deviant peer affiliation and low self-control contributed to cyberbullying behaviors and victimization, suggesting that preventive efforts must extend beyond victims to include broader peer group dynamics (Wang et al., 2023). When adolescents associate with peers who normalize aggression, they are more likely to become both victims and perpetrators, creating a cyclical pattern of abuse and distress.

Gender-related dynamics may also influence these relationships. Prior studies by Kim (2022) and Yurdakul and Ayhan (2022) suggest that girls may experience cyberbullying differently and may be more emotionally affected due to gendered socialization patterns (Kim, 2022; Yurdakul & Ayhan, 2022). Although gender was not the focus of the current analysis, observed trends during data collection hinted that female participants reported more emotional reactions to online victimization. This warrants future gender-based analytical models to better understand differential impacts and responses to cyberbullying.

Finally, this study adds to the growing body of literature emphasizing the need for structural and legal frameworks to combat cyberbullying. As Widiowati (2023) and Ramadhani and Prastyanti (2024) point out, the absence of strong legal consequences and protective systems in many

developing countries, including Iraq, leaves adolescents vulnerable and often unsupported (Ramadhani & Prastyanti, 2024; Widiowati, 2023). The present findings highlight the urgent need for integrated strategies that combine family support, school policies, and legal deterrents to protect youth in online spaces.

5. Limitations & Suggestions

Despite its contributions, this study has several limitations. First, the data were collected through self-report questionnaires, which are susceptible to social desirability bias and recall inaccuracies. Adolescents may underreport or overreport experiences with cyberbullying or perceived social support based on emotional state, peer influence, or fear of judgment. Second, the cross-sectional design limits causal inferences. Although the mediation model provides insight into relationships between variables, it does not establish temporal precedence. Longitudinal designs would be better suited to examining changes in psychological distress over time. Third, the study was conducted within a specific cultural context (Iraq), which, while valuable for localization, limits the generalizability of the findings to other populations. Cultural factors such as family structure, gender norms, and digital engagement practices may influence the applicability of results across different societies.

Future research should consider longitudinal designs to assess the long-term psychological effects of cyberbullying and the durability of social support as a protective factor. Exploring other mediators, such as emotional intelligence, self-compassion, or resilience, could provide a more comprehensive understanding of coping mechanisms. Additionally, future studies should include variables such as internet usage patterns, digital literacy, and parental monitoring to better contextualize adolescents' online experiences. Expanding the sample to include diverse socioeconomic backgrounds and rural populations would also enhance the external validity of the findings. Finally, qualitative studies could offer deeper insights into the lived experiences of victims and the subjective nature of perceived support.

Based on these findings, several practical recommendations can be made. Schools should implement proactive mental health programs that focus on strengthening peer networks and building a culture of support and empathy among students. Educators and counselors must be trained to recognize signs of

psychological distress linked to cyberbullying and to provide timely interventions. Parents should be encouraged to maintain open communication with their children about their online experiences, while also promoting emotional support within the home. Community and legal institutions should collaborate to establish clear protocols and reporting mechanisms for cyberbullying cases, ensuring victims receive both protection and psychological care. Creating a multisystem support network that includes schools, families, and digital platforms is essential to effectively prevent and mitigate the negative outcomes of cyberbullying among adolescents.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

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

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed to this article.

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