

Impact of Cyberbullying on Depression Among College Students: Social Anxiety as a Mediator and Gender as a Moderator

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ABSTRACT

In light of technological development, cyberbullying is a common behavior among young people that hurts everyone involved. Cyberbullying remains a major social issue that needs to be resolved in many countries, including Jordan. It has negative effects on the mental health of Jordanian youth, such as depression and social anxiety; therefore, this study aims to examine the relationship between cyberbullying and depression in the Jordanian context. It also considers social anxiety as a mediator and gender as a moderator in the relationship between the variables. Questionnaires were distributed to 220 Jordanian university students using a purposive sampling method, and PLS-SEM was employed to examine the direct and indirect associations between variables. The results showed that cyberbullying is directly linked to depression. Social anxiety is also linked to depression. Social anxiety is a mediating variable in the effects of cyberbullying on depression. The results of this study indicate that gender does not affect the relationship between cyberbullying and depression. The Transactional Model of Stress and Coping may offer a theoretical framework in the domain of cyberbullying and suggest the implementation of additional interventions aimed at mitigating cyberbullying and its adverse impact on individuals. This study concludes that cyberbullying increases social anxiety and depression. In addition, insights into the mechanism underlying the impact of cyberbullying on adult depression were provided, and suggestions were offered to mitigate cyberbullying and depression.

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INTRODUCTION

The issue of cyberbullying has garnered significant attention in recent years, with a surge in research output (Xia et al., 2023). According to the National Center for Educational Statistics (2019), cyberbullying can be defined as “deliberate and persistent harm committed through the use of smartphones, computers, and other electronic devices (Hinduja & Patchin, 2014). This phenomenon, particularly on social networking sites, has been the subject of a growing body of literature focusing on the relationships between perpetrators, victims, and bystanders (Chan et al., 2021). Despite the rapid growth in research, the field remains in its formative phase, with several key challenges and research gaps (Strohmeier & Gradinger, 2022). Cyberbullying has become an increasingly prevalent issue in society, particularly among young people. It refers to using electronic communication tools to deliberately and repeatedly harm, harass, or intimidate someone. Cyberbullying has several severe effects on mental health, ranging from depression and anxiety to suicidal thoughts and self-harming.

In today’s age, social media and technology are important tools for enabling and preventing cyberbullying. Given the anonymity and lack of physical contact offered by platforms such as Facebook, Instagram, TikTok, and WhatsApp, people are more likely to engage in hazardous behaviors online. The ability to spread harmful content to a wide audience and the viral nature of posts intensify the emotional distress inflicted

on victims. According to studies, offenders are frequently encouraged by the anonymity offered by Internet platforms, leading to increased aggressive behavior (Aboujaoude et al., 2015; Eneizat et al., 2025). Furthermore, researchers have highlighted the global effects of cyberbullying on mental health (Collantes et al., 2020; Squillace et al., 2023). Cyberbullying victims are likely to suffer from mental health issues, such as depression and social anxiety (Xia et al., 2023). According to the World Health Organization (2017), depression is “a common mental disorder that includes prolonged sadness, loss of interest or pleasure, feelings of guilt or inadequate worth, trouble sleeping or appetite, and inadequate concentration” (p. 6). In contrast, “social anxiety is an intense and pervasive fear of interactions with others in which humiliation and embarrassment may take place,” according to The American Psychiatric Association (2013, p. 202).

Consequently, it is essential to note that the outcomes of cyberbullying are not limited to the victims only; instead, they can also have detrimental influences on the mental health of perpetrators, bystanders, and even the community as a whole. Additionally, cyber victims and cyberbullies report higher levels of stress, depression, and anxiety, as well as more social difficulties (Martínez-Monteagudo et al., 2020). For instance, bystanders may experience guilt, anxiety, and helplessness, whereas perpetrators may experience guilt, shame, and regret (Wright et al., 2018). These emotions can lead to increased levels of depression and social anxiety (Zhao et al., 2023).

In general, cyberbullying has been shown to have long-term repercussions on mental health, including the development of post-traumatic stress disorder and other mental health conditions, such as social anxiety and depression (Wang et al., 2019). Similarly, cyberbullying can have both social and emotional effects on victims. Victims may feel isolated, rejected, and powerless, leading to a decreased sense of belonging and self-worth (Collantes et al., 2020). They may also experience difficulties in forming and maintaining online and offline relationships (Collantes et al., 2020). However, the number of cases of cyberbullying is increasing in many countries. For instance, in Jordan, a report by UNICEF showed that cyberbullying is a serious problem faced by all individuals in Jordanian society (McKeever, 2020). Similarly, some studies have indicated that cyberbullying is a widespread issue among Jordanian university students (Awawdeh et al., 2023). According to Awawdeh et al. (2023), due to the scarcity of studies that have focused on the phenomenon of cyberbullying in the Jordanian context, there is an urgent need to study the impact of cyberbullying on the psychological health of university students. In addition, recent studies in Jordan have focused on adolescents (Bani-Salameh, 2023), and there is still a need to conduct research on adults (Awawdeh et al., 2023).

Conversely, there is disagreement among existing meta-analyses regarding the relationship between cyberbullying and depression (Hu et al., 2021). Therefore, previous studies have examined the role of social anxiety and gender as mediating

and moderating variables. Social anxiety and gender differences (Gao et al., 2021) play an essential role in the relationship between cyberbullying and depression. For example, individuals with high levels of social anxiety experienced a more substantial effect of cyberbullying on depression. In addition, examining gender roles in the association between bullying and depression is important because there are differences in these relationships between males and females (Lahav-Kadmiel & Brunstein-Klomek, 2018). Consequently, this study seeks to fill these gaps in the literature. This research has the specific objective of contributing to the existing body of empirical research on the correlation between cyberbullying and depression in order to ascertain two key aspects: (1) the significance and scale of the impact of cyberbullying on depression, and (2) it is postulated that there exists a moderate effect influenced by social anxiety, as well as a moderate effect influenced by gender.

LITERATURE REVIEW

Theoretical Framework

The key frameworks that enhance understanding of the relationship between cyberbullying, social anxiety, and depression are social cognitive theory (SCT) and ecological systems theory (EST).

Social Cognitive Theory

According to Bandura's SCT, which was developed in 1986, behavioral patterns are explained by the interaction between external

settings and personal characteristics. Social anxiety and depression would increase the likelihood of psychological injuries due to cyberbullying. Such actions are encouraged by anonymity and lack of accountability in the digital sphere, which is a form of environmental influence. Victims of cyberbullying internalize the consequences or even imitate such behaviors through observational learning. Maladaptive coping strategies brought on by frequent exposure to cyberbullying result in behavioral patterns that exacerbate social anxiety and depressive symptoms. This paradigm underlines the necessity of addressing both personal vulnerabilities and environmental factors to lessen the deleterious effects of cyberbullying, calling for measures that strengthen resilience and support positive online behaviors.

Ecological Systems Theory

Thus, Bronfenbrenner's EST (1979) captures the additional layers of variables within the individual, family, social support, and social ecology that impact such developmental growth and cyberbullying reactions in children. Within the microsystem, a person's immediate experience of cyberbullying is influenced by their interpersonal interactions with their family and peers. Victims are more susceptible to depression and social anxiety when they do not have helpful relationships with others. Interactions across many settings, such as home and school, are part of the mesosystem and might influence how cyberbullying is dealt with. For instance, a strong school

policy may lessen the consequences of cyberbullying. Cyberbullying practices may be normalized or made worse by ecosystems, which refers to more indirect impacts at the larger societal level, such as media portrayal and cultural views.

The patriarchal cultural and societal standards that both structure gendered experiences of cyberbullying and intensify its psychological effects on women are part of the macro systems. Since the chronosystem deals with dynamic shifts in social attitudes and actions, as well as the resulting changes in prevalence and influence across time, it incorporates a temporal component. When these three levels are integrated, it becomes clear that cyberbullying calls for comprehensive intervention solutions that consider the needs of both people and cultural and societal orientations.

Cultural Influences and Cyberbullying in the Jordanian Context

Culture is a key element in shaping individuals' experiences and perceptions of cyberbullying and its related psychological impact. In Jordan, cultural influences are deeply rooted in a sociocultural environment that is collectivist, where values such as family honor, reputation, and community relationships are held with utmost importance (Alzoubi et al., 2022). Cultural norms influence individuals' responses to cyberbullying and their mental health. Research indicates that, in Middle Eastern societies, including Jordan, cyberbullying victims are less likely to report cyberbullying incidents because

of concerns about family reputation, fear, and social stigmas associated with cultural contexts. As a result, it exerts emotional and psychological pressure on victims, leading them to social anxiety and depression (Abol Fotouh et al., 2021). In addition, gendered experiences of cyberbullying may be influenced by Jordan's patriarchal values. According to previous studies, when women are subjected to strict expectations of behavior and modesty, cyberbullying may have greater adverse psychological impacts (Al-Nsour et al., 2022). Given that cyberbullying sometimes entails cultural humiliation of public exposure or perceived wrongdoing, female victims may experience higher levels of social depression and anxiety.

Cyberbullying and Depression

A study that analyzed the prevalence of cyberbullying further elucidated that depression is a prevailing psychological disorder among college students, showing a disconcertingly heightened occurrence (Alrajeh et al., 2021). Scholars have asserted that individuals who engage in deviant Internet behaviors are typical, which directly impacts the well-being of the online population (Alrajeh et al., 2021; Pang et al., 2022). As a result, cyberbullying has become a pressing problem with increased internet use (Pang et al., 2022). A study conducted by Wang et al. (2019) stated that people who experienced cyberbullying have increased feelings of despair and loneliness, and these two elements are considered risk factors for depression. Similarly, to support this argument, Agus et al. (2021)

and Collantes et al. (2020) discovered a link between cyberbullying and depression.

Cyberbullying is a form of aggression that occurs through technology (Ćorić & Kaštelan, 2020). It involves deliberate and repetitive actions aimed at intimidating, embarrassing, or harming individuals perceived as weaker or more vulnerable (Heiman et al., 2015). Cyberbullying can take various forms, including sending abusive messages, spreading false information, and excluding individuals from social circles (Rao et al., 2018). Therefore, it is a complex and dynamic phenomenon that can have severe consequences for the mental health and behavioral changes of those involved (Sonone et al., 2021). In contrast to traditional bullying, cyberbullying endures for an extended duration and exposes the target to heightened danger as it continues to reach the victim without any time or place constraints. Additionally, it has been observed that the prevalence of cyberbullying is a growing concern that requires early detection and preventive strategies. Factors such as self-esteem can influence individuals' engagement in cyberbullying. Efforts to combat cyberbullying involve proactive strategies at the school and family levels (Sorrentino et al., 2023). Research has shown various negative consequences of cyberbullying on targets, including increased depression, decreased self-esteem, and suicide attempts (Agus et al., 2021).

In addition, the study conducted by Bonanno and Hymel (2013) demonstrated that individuals who fall victim to cyberbullying

are more prone to experiencing emotional disorders. Given the pervasive nature of social media in people's lives, escape is often unattainable, thereby exacerbating the syndrome of depression in cyberbullying and intensifying depressive symptoms over time (Qaraqesh & Aldakhel, 2023). Cyberbullying is a serious phenomenon faced by Jordanian society (Qaraqesh & Aldakhel, 2023). According to Fredrick et al. (2023), there is an urgent need for further study since the widespread use of social media exacerbates depressive symptoms in victims of cyberbullying. According to previous research, cyberbullying affects depression. Thus, this study assumes the following:

H1: Cyberbullying is associated with depression.

Social Anxiety as a Mediator

Cyberbullying has a notable influence on mental well-being, particularly on depression and social anxiety. Wang et al. (2019) found that cyberbullying perpetration directly predicts depression, with social anxiety mediating this relationship. This was further supported by Zhao et al. (2023), who found that witnessing cyberbullying is associated with depressive symptoms and social anxiety. Zhao et al. (2023) highlighted the importance of social anxiety as a mediator in the connection between cyberbullying and depression. Consequently, research has consistently shown that cyberbullying is associated with adverse outcomes for both victims and perpetrators. Kowalski et al. (2014) and Squillace et al. (2023) highlight

the significant impact of cyberbullying on mental health, with victims reporting increased depressive affect, worsening anxiety, and suicidal behavior.

Likewise, multiple studies have consistently shown that cyberbullying dramatically affects the development of social anxiety. Numerous studies examining the link between cyberbullying perpetration and the emergence of social anxiety symptoms have revealed that experiences of cyberbullying predict higher levels of social anxiety among users (Coelho & Romão, 2018; Xia et al., 2023). In addition, cyberbullies often engage in the creation of fake online identities and deceptive behaviors, which are intricately linked to social anxiety (İçelloğlu & Özden, 2014). This tendency towards anonymity and fear of identification further exacerbates social anxiety and depression (İçelloğlu & Özden, 2014). Moreover, evidence suggests that being a victim of cyberbullying is a critical predictor of social anxiety (Wang et al., 2019; Zhao et al., 2023). The relationship between cyberbullying and social anxiety is complex and multifaceted, as demonstrated by research exploring its mediating and moderating effects (Wang et al., 2019). This exploration enhances our understanding of how cyberbullying influences social anxiety, thereby revealing the intricate dynamics of their interactions. This comprehensive view also highlights the bidirectional nature of cyberbullying and social anxiety, where each can be both a cause and consequence of the other, illustrating the intricate dynamics involved in this critical social issue.

Similarly, social anxiety and depression frequently co-occur, as highlighted by numerous studies (Lynch et al., 2021). Social anxiety frequently precedes the occurrence of depression (Xie et al., 2020). This notion is further supported by a previous longitudinal study that revealed that social anxiety can serve as an early indicator of subsequent depression (Nordahl et al., 2018). Additional investigations have identified social anxiety as a significant risk factor for depression, exerting a pivotal influence on the initiation and progression of depressive symptoms (Nordahl et al., 2018). Additionally, studies have demonstrated that social anxiety mediates the relationship between harmful internet use, cyberbullying, and depression (Wang et al., 2019; Zhao et al., 2023).

To illustrate the importance of social anxiety in understanding the relationship between cyberbullying and depression, this study focused on its role as a mediating factor that enhances the impact of bullying on mental health. Individuals with social anxiety are more sensitive to negative interactions, making them more vulnerable to cyberbullying (Xia et al., 2023). This type of bullying increases feelings of isolation, which impairs social anxiety. Social anxiety, a primary depression risk factor, causes negative thinking and social isolation (Wilkialis et al., 2021). Therefore, understanding social anxiety as a mediating factor is essential to explain the disparity in the effects of cyberbullying on depression across individuals and to provide insights for developing effective strategies to address

these issues (Lam et al., 2022). Based on a literature review, cyberbullying affects social anxiety and depression, and social anxiety affects depression. Social anxiety also plays a mediating role in this relationship. Thus, this study hypothesizes the following:

H2: Cyberbullying is associated with social anxiety.

H3: Social anxiety is associated with depression.

H4: Social anxiety mediates the effects of cyberbullying on depression.

Gender as a Moderator

Gender plays a pivotal role in determining psychological impacts (Lin et al., 2021; Mahmoud et al., 2023), with women experiencing more complex forms of bullying, such as harassment or abuse, which increases the risk of depression (Guerra et al., 2021). In contrast, men may face social pressures that diminish their feelings and exacerbate their psychological impact (Fisher et al., 2021). Stereotypes and social roles also influence the community's response and support for victims, making gender a key element in understanding differences in the psychological impacts of bullying (Salin, 2021).

According to Lin et al. (2021), gender roles are socially constructed positions that establish cultural norms and behaviors that are stereotypically acceptable and suitable for men and women. The reasons why men and women ascribe different causes to the onset of depression may be related to their gender schemas (Salin, 2021). According to Gao et al. (2021), cyberbullying is the

leading cause of depression in both sexes. Moreover, the level of cyberbullying among male students is greater than that among female students (Salin, 2021). In contrast, females who experience higher levels of depression tend to be more likely to acknowledge their exposure to stress and exhibit signs of depressive symptoms (Halldorsdottir et al., 2021). In support of this argument, a study conducted by Gao et al. (2021) confirmed that the level of depression among individuals differs by gender. Moreover, there has been much discussion about the possibility that higher-than-average levels of depressive symptoms in women are a result of gender inequality (Salk et al., 2017).

Patriarchal structures play a pivotal role in shaping gendered experiences of cyberbullying in Jordan, reflecting prevailing social and cultural values that define acceptable gender roles and behaviors (Alsawalqa & Alrawashdeh, 2022). Women and girls are often subject to severe restrictions regarding their use of the internet and social media, making them more vulnerable to cyberbullying (Shahrour et al., 2020). In contrast, cyberbullying against males may be viewed as reinforcing dominance or social power, underrecognizing its psychological effects. Jordanian society has historically prioritized a notion of “masculinity” and “manliness,” wherein violence and bullying perpetrated by boys are normalized and regarded as an expression of bravery and manhood (Eneizat et al., 2023; Shahrour et al., 2020). In addition, some studies have

found that gender significantly moderates the relationship between cyberbullying and depression (Hu et al., 2021). This gender difference may also stem from the use of social media. According to Collantes et al. (2020), cyberbullying is a predictive factor of depression. However, the relationship varies according to gender, as women tend to score higher than men; therefore, gender is considered a moderator in this relationship. Since there are differences in these relationships between boys and girls, it is crucial to examine gender roles in the connections between cyberbullying and depression (Lahav-Kadmiel & Brunstein-Klomek, 2018). However, Rodriguez-Besteiro et al. (2021) found that gender does not significantly affect the same moderator. Therefore, based on previous studies, this study assumes the following:

H5: Gender moderates the effects of cyberbullying on depression.

Conceptual Framework

The literature supports an association between cyberbullying and depression (Agus et al., 2021), cyberbullying and social anxiety (Coelho & Romão, 2018), and social anxiety and depression (Nordahl et al., 2018). To our knowledge, however, very few investigations have been conducted on social anxiety, which has the potential to function as a mediating variable in the relationship between cyberbullying and depression. It is important to note that individuals may experience varying degrees of depression depending on their levels of social anxiety. In other words, social anxiety may serve as

a mediating factor between the effects of cyberbullying and depression. In addition, the levels of depression differ between males and females; therefore, the adverse effects on individuals vary. Therefore, gender played a moderating role in cyberbullying and depression. The conceptual framework of the current study is presented in Figure 1.

METHODOLOGY

Research Design

Quantitative research facilitates the attainment of study objectives in a systematic, formal, and objective manner, thus elucidating the anticipated correlations among variables (Bloomfield & Fisher, 2019). The quantitative method was deemed the most suitable for the present study because it facilitates the collection of accurate data that enhances the correctness of the obtained replies (Bloomfield & Fisher, 2019). Therefore, the current study employs

a quantitative research approach to achieve its objectives and test the hypotheses. The study was conducted with students from the Faculty of Media at Zarqa University, Jordan. Purposive sampling was used to identify Zarqa University Faculty of Media students for this study. This non-probability method selects people with relevant traits or experiences. This strategy was used to ensure that the study sample included people who knew or had experienced the research issue, which improved accuracy and specificity. Given the study’s nature and subject, selecting a targeted sample of students from the Faculty of Media allows for a more realistic exploration of their ideas and experiences regarding the research issue.

Based on the demographic information of the respondents, the number of males was 73 (33.2%), compared to 147 females (66.8%). Of the respondents, 87 (39.5%) were aged 18–19 years, 93 (42.3%) were

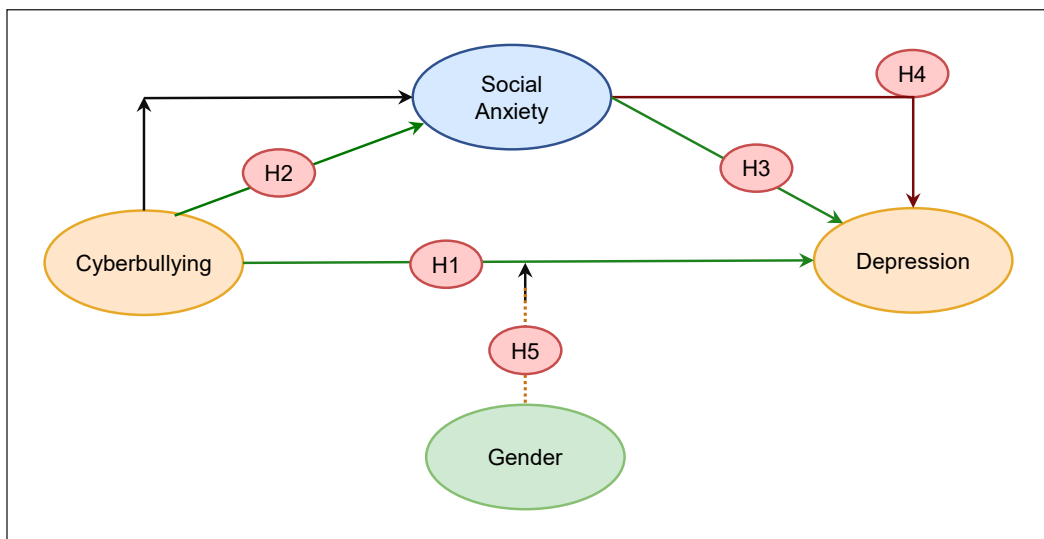


Figure 1. Research framework

aged 20–22 years, and 40 (18.2%) were aged 23 years or older (6.9%). Moreover, the number of students in the first academic stage was 41 (18.6%), those in the second stage were 67 (30.5%), those in the third stage were 64 (29.1%), and those in the fourth stage or higher were 48 (21.8%). Questionnaires were distributed online to the participants to collect data on the research topic. The questionnaires were carefully designed to ensure the comprehensiveness of the questions and their relevance to the study objectives. They were sent electronically to facilitate access and to increase the response rate. The data for this study were gathered in January 2024. A total of 220 students from Zarqa University, Faculty of Media, participated in this study. The participants were selected using a purposive sampling method.

Measurements

To ensure the suitability of these tools in the Jordanian context, the questionnaire was presented to five academics and media experts, and minor changes were made to the tools in Arabic. None of these tools includes subscales. However, the constructs were conceptualized in accordance with the local context and population. A scale measuring social anxiety, established by Fenigstein et al. (1975) and refined by Scheier and Carver (1985), was employed in the current investigation. The six items comprised the social anxiety scale. Participants scored each item on a 5-point rating system from 1 (i.e., “strongly disagree”) to 5 (i.e., “strongly agree”). Reverse one item (SA4).

In the current study, Cronbach’s alpha for the scale was 0.85, indicating reliability. A questionnaire comprising 17 questions was used to assess students’ levels of depression symptoms (Radloff, 1991). A 5-point Likert scale, ranging from 1 (i.e., “To no extent”) to 4 (i.e., “To a very large extent”), was used to rate the items. This measurement consisted of four negative items (DP4, DP6, DP10, and DP14). In this study, the Cronbach’s alpha for the scale was 0.91, indicating reliability. This study measured student cyberbullying using the Cyberbullying Scale created by Stewart et al. (2014). There are 16 items on this scale. Participants were asked to grade their feelings based on the frequency of their occurrence. Items 3 to 16 were ranked from 1 (that is, “Never”) to 5 (that is, “Always”). In this study, the Cronbach’s alpha for the scale was 0.94, indicating reliability.

Ethical Considerations

Given the sensitive topics of cyberbullying and mental health, ethical measures were followed strictly. Informed consent was obtained from all participants involved in this research, confirming their understanding of the research objectives, their voluntary participation, and their right to withdraw their participation at any moment (Resnik, 2020). Second, confidentiality was maintained by ensuring the anonymization and secure storage of the data while protecting participant privacy and preventing potential harm. To ensure that participants felt at ease and supported throughout the study, they received a

debriefing and information about mental health support resources.

Data Analyses

SPSS software (version 21) was used to run the Mardia macro to check whether the data were averaged (Cain et al., 2017). The dataset did not exhibit multivariate normality, and the multivariate skewness ($\beta = 10.13$, $p < 0.001$) and kurtosis ($\beta = 57.11$, $p < 0.001$) assessed using Mardia's tests indicated rejection of the null hypothesis. The study's measurement model and structural model were examined using the non-parametric analytic software Partial Least Squares Structural Equation Modelling (PLS-SEM) following the recommendations of Hair et al. (2016). The significance of the path coefficients was further tested using a bootstrapping approach with 5000 resamples (Hair et al., 2016).

RESULTS

Measurement Model

Reliability and Validity

Composite reliability was employed to check the internal consistency of the scale, as it is considered appropriate for PLS-SEM because it measures different outer loadings on the construct (Hair et al., 2016).

As indicated in Table 1 and Figure 2, after eliminating four items from the depression scale and one item from the social anxiety scale, the composite reliability ranged from 0.86 to 0.948, surpassing the recommended threshold of 0.7 (Hair et al., 2016). The removal of five items was undertaken to enhance the Average Variance Extracted, aligning with the suggestion provided by Hair et al. (2016) to reach a value above the 0.5 threshold. Additionally, the average variance extracted (AVE) was used to determine convergent validity. Table 1 demonstrates that all latent constructs had AVE values above 0.5, thus proving convergent validity. If the AVE was more than 0.5, the latent construct explained more than half of its indicator variance.

Coefficient of Determination, Effect Size, and Collinearity Statistics of Measurements

As shown in Table 2, a significant effect size on depression ($R^2 = 0.38$) and social anxiety ($R^2 = 0.16$) was also found. The relationship between cyberbullying and Social Anxiety, however, showed only a small to moderate impact ($F^2 = 0.196$). Furthermore, as all variance inflation factors for the predictors were less than five, there was no collinearity problem (Hair et al., 2016).

Table 1
Outer loadings

	Items	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)
Cyberbullying	14	0.944	0.948	0.578
Depression	13	0.919	0.923	0.508
Social Anxiety	5	0.851	0.86	0.628

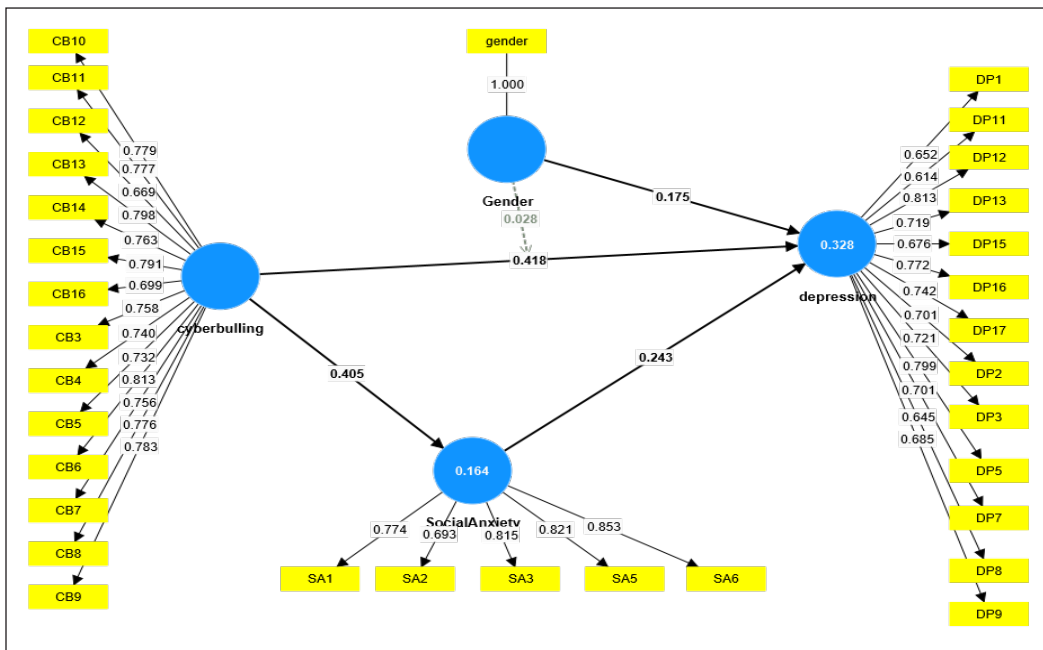


Figure 2. Measurement model (Outer loadings)

Table 2
Coefficient of determination (R^2), and effect size (F^2)

	R^2	F^2
Depression	0.328	
Social Anxiety	0.164	
Cyberbullying		Social Anxiety 0.196
Cyberbullying		Depression 0.099
Social Anxiety		Depression 0.068
Gender		Depression 0.009
Gender x cyberbullying		Depression

Structural Model

The PLS-SEM results for testing Hypotheses 1, 2, and 3 showed that cyberbullying was positively associated with depression ($p < 0.05$). Cyberbullying was positively correlated with social anxiety ($p < 0.05$). Social anxiety was positively correlated with depression ($p < 0.05$). Therefore, H1, H2, and H3 were supported (Table 3).

Mediating Effects

PLS-SEM was used to test Hypothesis 4, which suggested that social anxiety mediates the effect of cyberbullying on depression. As shown in Table 4, the analysis indicated that the indirect effect ($p < 0.05$), $CI = [0.040 - 0.169]$, was statistically significant, with a t -value of 2.982. Therefore, H4 is supported.

Table 3
Results of the direct relationship

Relationship	Path coefficient	t-values	p-values	95% Percentile Confidence Interval	Decision
CB → DP	0.418	5.077	0.000	[0.249, 0.574]	Supported
CB → SA	0.411	7.797	0.000	[0.303, 0.505]	Supported
SA → DP	0.244	3.399	0.001	[0.104, 0.384]	Supported

Note. * $p < 0.05$

Table 4
Mediating effects

Relationship	Path coefficient	t-values	p-values	95% Percentile Confidence Interval	Decision
CB → SA → DP	0.101	2.982	0.003	[0.040, 0.169]	Supported

Table 5
Moderating effect

Relationship	path coefficient	t-values	p-values	95% Percentile Confidence Interval	Decision
Gender*CB → DP	0.035	0.291	0.771	[-0.145, 0.227]	Unsupported

Moderating Effect

PLS-SEM was used to test Hypothesis 5, which suggests that gender moderates the effect of cyberbullying on depression. As shown in Table 5, the analysis indicates that the interaction effect ($p > 0.05$), $CI = [-0.145, -0.227]$, was not statistically significant, with a t -value of 0.291. Thus, H5 was not supported.

DISCUSSION

The study discovered that men and women felt that the psychological impact of cyberbullying was equal. This goes against the conventional wisdom in research that is currently in circulation, which frequently suggests that women are more likely to

experience online harassment. According to some studies, girls are more likely than boys to internalize bad online encounters, leading to higher rates of anxiety and depression (Kowalski et al., 2014). Overall, the findings of this study indicated that there are not many differences between males and females who experience cyberbullying, indicating the need for more research on the contextual or cultural elements that might be responsible for these similarities. The aforementioned conclusion in the Jordanian context can be explained by social pressure and rapid changes in social media usage. In Jordan, male and female teenagers use social media and are equally exposed to online harassment. Both men's

and women's demands affect their private and public lives in conservative societies (Al-Badayneh et al., 2024).

Understanding the dynamics of cyberbullying has greatly benefited from the use of current theoretical frameworks, such as Bandura's SCT from 1977 and Ecological System Theory. However, these ideas might not fully consider Jordan's unique sociocultural setting, in which societal and familial expectations have a significant impact on coping strategies and mental health outcomes. In light of these constraints, a more specialized theoretical framework that can effectively explain the connection between cyberbullying, social anxiety, gender, and depression in Jordan is urgently needed. Cultural dimensions should be incorporated into any suggested framework, including the impact of family dynamics and social media on identity, as well as how these factors interact with the pressures Middle Eastern teenagers confront (Al-Hassan et al., 2021). This approach could bring together the layered influences of the environment, community, and society in terms of how cyberbullying may affect teenagers' psychological well-being by combining EST (Bronfenbrenner, 1979) with Bourdieu's (1986) cultural capital theory.

This study created a moderated mediation model of cyberbullying based on earlier empirical research using gender as a moderating variable and social anxiety as a mediating variable. Researchers have described associations between cyberbullying and depression (Wright et al., 2018),

cyberbullying and social anxiety (Wang et al., 2019), and social anxiety and depression (Martínez-Monteaquedo et al., 2020).

Moreover, the results revealed a strong positive relationship between cyberbullying and depression. Cyberbullying is an essential indicator of the mental health, such as depression and psychological well-being of its victims (Agus et al., 2021; Collantes et al., 2020), so this study is consistent with many previous studies discussed earlier, for example, the study by Ćorić and Kaštelan (2020) and the study by Wright et al. (2018). Similarly, the present study confirmed a correlation between social anxiety and depression among college students. These results are consistent with those of previous studies (Lynch et al., 2021; Xie et al., 2020). Additionally, studies on various populations, such as nurses and adolescents, have revealed a positive correlation between social anxiety and depression (Lynch et al., 2021; Xie et al., 2020). In addition, the results highlight the substantial connection between cyberbullying and social anxiety. These findings align with research showing noteworthy correlations between different forms of cyberbullying and social anxiety (Xia et al., 2023).

Furthermore, prior studies have indicated that cyberbullying can lead to significant psychological challenges for both perpetrators and targets, specifically manifesting as depression (Agus et al., 2021; Collantes et al., 2020). However, previous research has tended to concentrate on the direct effects of cyberbullying on depression, with little attention paid

to the indirect effects of cyberbullying on depression, such as moderating and mediating mechanisms (Eneizat et al., 2024; Wang et al., 2019). Consistent with previous studies, the results of the current study indicate that cyberbullying has the potential to impact students' depression directly and indirectly through the mediating role of social anxiety. According to Coelho and Romão (2018), students engaging in cyberbullying exhibit significant signs of social anxiety and social disengagement. Consistent with empirical research (Nordahl et al., 2018), social anxiety was found to be a susceptibility factor for depression. Cyberbullying increases the risk of depression by increasing social anxiety. There were some correlations between these two factors and the other variables. Zhao et al. (2023) discovered that social anxiety plays a role in mediating the connection between depression and cyberbullying.

This study provides a deeper analysis of the role of cyberbullying in causing depression, focusing on the indirect link between cyberbullying and social anxiety. The results showed that cyberbullying indirectly contributes to the emergence of depression but increases levels of social anxiety in individuals exposed to it. Social anxiety, which arises as a result of negative online experiences, can lead to feelings of isolation and rejection, which increases the likelihood of developing depressive symptoms (Wilkialis et al., 2021). Furthermore, the study suggests that cyberbullying can undermine self-

confidence and lead to low self-esteem, which increases the impact of social anxiety and ultimately exacerbates depressive symptoms (Bhatnagar & Narayan, 2024). These findings contribute to an expanding understanding of how cyberbullying affects mental health, indicating the need to address social anxiety as a mediating factor that contributes to the development of depression in affected individuals.

Finally, the findings suggest that the insignificant moderating impact of gender may serve as an indication of the limited significance of this variable, as experienced by individuals who fall prey to cyberbullying. Although numerous investigations have examined gender disparities in cyberbullying among young adults, these inquiries have yielded inconclusive results. A few investigations have yielded similar outcomes, indicating that these specific inquiries have discovered no gender disparities in cyberbullying (Balakrishnan, 2015; Hinduja & Patchin, 2014). Contrary to the current study, scholars have found that cyberbullying is higher among males (Cénat et al., 2019), while females are more likely to be victims of cyberbullying, and males are more likely to engage in cyberbullying behavior (Zalaquett & Chatters, 2014). Lastly, there is a possible reason for no gender differences in the current study, as cyberbullying and depression are detrimental psychological impacts of cyberbullying, which may affect both men and women equally, and the indications for cyberbullying may be the same for everyone, regardless of gender.

The study discovered that men and women felt the psychological impact of cyberbullying equally. This goes against the conventional wisdom in research that is currently in circulation, which frequently suggests that women are more likely to experience online harassment. According to some studies, girls are more likely than boys to internalize bad online encounters, leading to higher rates of anxiety and depression (Kowalski et al., 2014). Overall, the findings of this study indicate that there are not many differences between males and females who experience cyberbullying, indicating the need for more research on the contextual or cultural elements that might be responsible for these similarities. The aforementioned conclusion in the Jordanian context can be explained by social pressure and swift changes in social media usage. In Jordan, male and female teenagers use social media and are equally exposed to online harassment. Both men's and women's demands affect their private and public lives in conservative societies (Al-Badayneh et al., 2024).

CONCLUSION

In conclusion, the results showed a positive relationship between cyberbullying and depression and that social anxiety had a positive effect on depression. Moreover, social anxiety plays a mediating role in the association between cyberbullying and depression among students in Jordan. However, the results showed that gender did not moderate the relationship between cyberbullying and depression, which may

be due to the problem of cyberbullying and depression faced by both genders in Jordan.

Implications of the Study

The results of this study highlight the urgent need for legislation that addresses cyberbullying and its detrimental impact on young people's mental health in Jordan. Policymakers should prioritize the creation of comprehensive anti-cyberbullying programs in educational institutions, including awareness campaigns that inform students of the dangers of cyberbullying and encourage appropriate online conduct. Policies should be inclusive, given that gender does not significantly mitigate these associations, and acknowledging that all students, regardless of gender, face comparable risks. Collaborative efforts among educational institutions, government agencies, and mental health organizations are essential for developing effective strategies to combat cyberbullying and enhance the mental well-being of the youth.

Additional Implications encompass both theoretical and practical facets that bolster the implementation of the model and the proposed interventions aimed at assisting victims. Primarily, it is of utmost significance to acknowledge that social anxiety mediates the impact of cyberbullying and depression. Given the varied approaches and settings explored in earlier research on cyberbullying, the present study provides significant insights to expand the existing body of theory. Second, previous research has concentrated on cyberbullying. However, studies conducted in Jordan have tended not

to consider the mental health of victims of cyberbullying. The study's findings indicate that cyberbullies, particularly those who struggle with social anxiety, can also have significant mental health problems, such as depression. This should serve as a reminder to parents and educators that maintaining the mental health of cyberbullies is just as important as implementing interventions aimed at curbing their behaviors.

Theoretical Implications

This study found no substantial gender disparities in the psychological effects of cyberbullying. This surprising conclusion may be due to the cultural and societal standards in Jordan, where both genders face identical demands to maintain family values and repute. The widespread adoption of social media has also dissolved conventional gender boundaries in online behavior, exposing both men and women to cyberbullying threats. The results show that the two genders suffer similar societal pressures, and future studies should look into how changing cultural and technological environments impact these dynamics. For example, both boys and girls are under pressure to avoid embarrassing their families, rendering them equally vulnerable to the psychological effects of cyberbullying. Furthermore, the increasing adoption of social media undermines the established gender norms in online settings. Platforms like Instagram and TikTok are extensively utilized by both genders, exposing them to comparable levels of abuse. Furthermore, the anonymity and

extensive reach of social media exacerbates the effects of cyberbullying on both genders. Male victims, who are typically perceived as emotionally weak, may suffer quietly owing to societal expectations of toughness, but female victims undergo public scrutiny, which intensifies their mental distress. This shared vulnerability derives from the communal emphasis on having a "perfect" internet profile, which reflects both individual and familial honor. These findings imply that the confluence of cultural norms and technical improvements has a significant impact on the experiences of cyberbullying victims in Jordan.

While Bandura's SCT and Bronfenbrenner's EST provide useful perspectives on the connection between cyberbullying, social anxiety, and depression, they fall short of addressing Jordan's sociocultural background. SCT does not properly represent Jordanian society's collectivist structure, in which family and community have a considerable impact on individual behavior. Similarly, EST presents an extensive framework but ignores the patriarchal customs and social expectations that shape cyberbullying experiences, particularly among women. These ideas must be adapted to account for cultural variations, such as family honor and traditional gender roles.

This study emphasizes the necessity of cultural sensitivity within a theoretical framework. SCT may be improved by including factors such as family reputation and social standards seen in collectivist societies. Similarly, EST may

be improved to stress the importance of patriarchal institutions and cultural norms in mitigating the psychological effects of cyberbullying.

Limitations of the Study and Recommendation for Future Research

Despite the relationship between cyberbullying, social anxiety, and depression, this study has limitations that need to be considered. First, the study utilized self-reported data, which enhanced the possibility of bias, where participants may not truly represent their experiences with social anxiety, depression, or cyberbullying. Consequently, the actual relationships among variables may be overestimated, misrepresented, or underestimated (Podsakoff et al., 2019). Therefore, future research should consider the utilization of various data collection techniques, such as observational studies or interviews, to reduce the risk of bias. Additionally, the research's cross-sectional design makes it difficult to determine the relationship between cyberbullying and mental health outcomes (Levin, 2006). In this regard, longitudinal studies may be more suitable for accurately examining correlations. While the research study was limited to Jordanian students, it may not reflect the true experiences of young people from other cultural contexts and regions (Gámez-Guadix et al., 2020). Future research should follow broader applicability with different age groups and geographical areas.

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