

Unmasking the Digital Threat: A Systematic Review of Cyberbullying's Impact on Youth's Mental Health



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Abstract

Background: Cyberbullying, characterized by the use of digital means to harass or intimidate individuals, has become a widespread issue among young people, causing significant mental health problems. Unlike traditional bullies, the frequency and ubiquity of cyberbullying increase its psychological impact. Therefore, this systematic review aimed to determine the evidence on the mental health effects of cyberbullying in the young population.

Methods: Following the PRISMA guidelines, we conducted a comprehensive search for research published in English between 2019 and 2024 across Google Scholar, PubMed, PsycINFO, Cochrane Library, and EBSCOhost. We reviewed 1,200 articles, and after further filtering based on study design and language, 100 articles were reviewed as full articles, of which eight met our specific inclusion criteria. Data were extracted and quality assessed using the Effective Public Health Practices Project (EPHPP) tool.

Results: Studies highlighted the high prevalence of cyberbullying among young people, especially in Qatar, Saudi Arabia, and Lebanon. The primary psychiatric outcomes associated with cyberbullying are depression, anxiety, and stress. Factors such as urbanization, interpersonal problems, and specific cyberbullying behaviors were significant predictors of poor mental health outcomes.

Conclusion: Cyberbullying affects the mental health of young people, underscoring the need for comprehensive prevention programs and targeted interventions. Future research should explore practical ways to reduce the impact of cyberbullying and promote psychological well-being in vulnerable populations.

Keywords

Cyberbullying, Mental Health, Quality of Life, Youth.



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Introduction

Cyberbullying refers to the use of electronic communication tools, such as social media, messaging apps, and gaming platforms, to deliberately and repeatedly harass, threaten, or humiliate individuals¹. Unlike traditional bullying, which typically occurs face-to-face and within a limited setting like an educational institution or a workplace, cyberbullying can happen anytime and anywhere, making it pervasive and relentless²⁻³. This form of bullying can involve spreading false rumors, sending threatening messages, or sharing private information without consent⁴. Other terms related to cyberbullying may include "cyber-aggression," "internet harassment," "online bullying," and "electronic bullying," all of which emphasize the digital nature of these hostile behaviors⁵. Young adults are particularly susceptible to cyberbullying due to their extensive use of digital devices and social media platforms⁶. The near-constant connectivity of this demographic means they are continuously exposed to potential cyberbullying incidents⁷. Additionally, the developmental stage of young adulthood involves significant social and emotional changes, making individuals in this age group more vulnerable to the psychological impacts of cyberbullying⁸. The anonymity provided by the internet often emboldens perpetrators, while victims may feel helpless and trapped⁹. This widespread issue is supported by numerous studies showing high rates of cyberbullying among young adults. This can lead to adverse mental health outcomes such as depression, anxiety, and suicidal thoughts¹⁰.

Cybercrime Acts have been passed worldwide to implement precautionary measures against cyberbullying and protect its victims. For example, the Digital Charter in the UK regulates online behavior and makes social media companies accountable for hosting harmful content¹¹. Similarly, in the US, various states have enacted specific anti-cyberbullying laws requiring schools to develop anti-bullying programs¹². Despite these legal measures, enforcing them is challenging due to the transient and anonymous nature of cyberbullying¹³. The mental health impact on victims is profound; most report a decrease in self-esteem and an increase in stress levels, leading to a withdrawal from certain activities¹⁴. These mental health issues can significantly affect academic performance, relationships, and overall well-being¹⁵. Given the escalating issue of cyberbullying and its severe mental health implications for young people, there is a pressing need for a comprehensive review of the literature. Such a review aims to systematically examine and consolidate existing literature on the mental health impacts of cyberbullying among young adults, identify research gaps, and provide insights to enhance future studies and policymaking.

Methodology

This systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure thorough research and methodological rigor¹⁶.

Sources of Information

We conducted a thorough search of the published research literature in the English language from 2019 to 2024, using various digital databases such as Google Scholar, PubMed, PsycINFO, Cochrane Library, and EBSCOhost. We chose these databases because they contain a vast amount of literature on health topics, particularly cyberbullying and mental health.

Research Strategy

The search was conducted in two phases: initially in January 2024 and updated in April 2024 to incorporate the most recent survey. We used the following combinations of keywords, i.e. “cyberbullying” OR “bullying” AND “young adults” OR “youth” AND “mental health” OR “health” OR “depression” OR “stress” OR “anxiety”. Furthermore, the references of selected articles were also searched to identify other relevant studies.

Selection of Studies

Two researchers independently screened titles and abstracts. A third reviewer was also consulted in disagreement, and consensus was reached. Thus, studies were evaluated and selected based on the following eligibility criteria:

Cross-sectional survey studies included a young population aged 12-25 years, examining the impact of cyberbullying through standardized instruments for use in assessing cyberbullying and related psychiatric disorders and published in English. Whereas studies that focused on specific subpopulations, such as young adults at risk for psychosis, with mental retardation, developmental issues, and obesity, were excluded.

Data Extraction

Data was extracted from the selected studies using a data extraction form, which included sample size and demographic information, sample characteristics, tools and methods for assessing cyberbullying, and measures and reports associations between cyberbullying and various mental illnesses, including symptoms of depression, anxiety, and other mood disorders.

Quality Assessment

The effectiveness of the included studies was assessed using the Effective Public Health Practices Project (EPHPP) tool. This tool examines various aspects of the study, including selection bias, study design, confounding factors, blinding, data collection methods, and withdrawal or withdrawal independence. Each study was rated as strong, moderate, or poor quality based on these criteria.

Results

Our comprehensive search for research published in English in several electronic databases from 2019 to 2024 yielded 1,200 studies on Google Scholar (n=400), PubMed (n=250), PsycINFO (n=150), Cochrane Library (n=200) and EBSCOhost (n=200). However, after applying our inclusion criteria, only eight studies that met our specific criteria for the impact of cyberbullying on mental health outcomes were retrieved. Further, we ensured that only the most eligible and highest-quality studies were included in our review to draw meaningful conclusions (Figure-1).

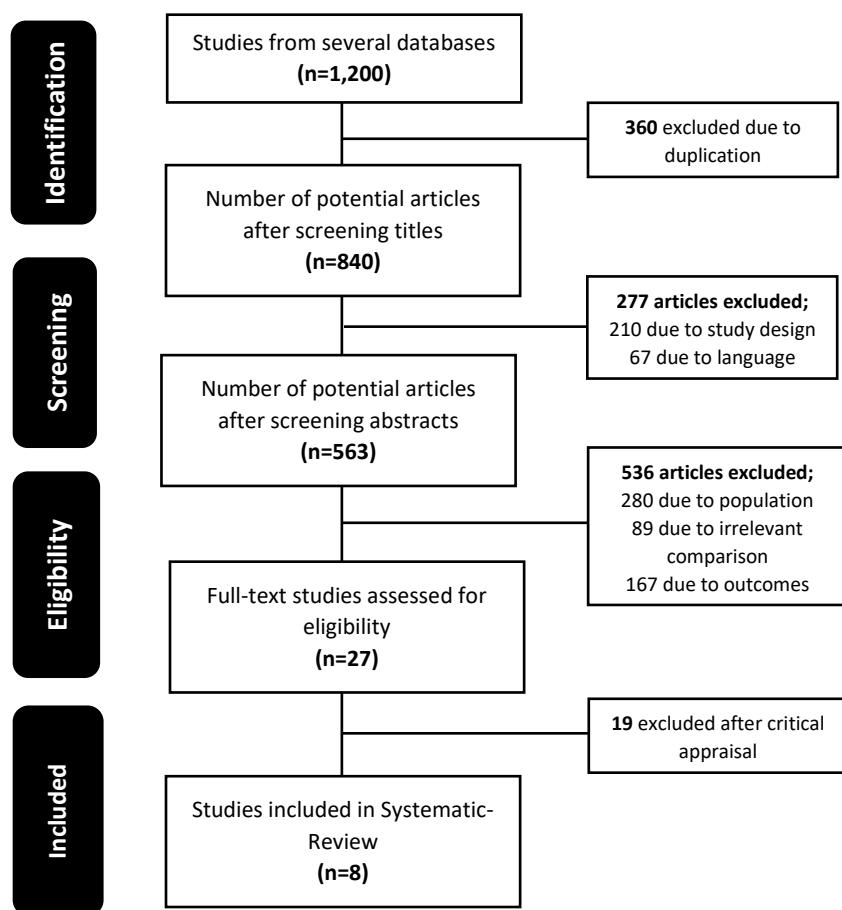


Figure-1 showing PRISMA Flow of Studies

Synthesis of Study Findings

Studies included in the review examined the prevalence of cyberbullying and health outcomes associated with different populations. Touhemi et al.¹⁷ and AlQaderi et al.¹⁹ reported that in addition to cyberbullying among teenagers and college students, other factors such as urban life, interpersonal problems, and low education are also associated with cyberbullying. These findings

are consistent with those of Alrajeh et al.²³, who highlighted a significant relationship between cyberbullying experiences and depressive symptoms. Similarly, Savani et al.²⁰ found a positive relationship between exposure to cyberbullying and levels of depression and anxiety, citing the impact of cyberbullying on mental health. Bitar et al.²¹ further highlighted the issue of cyberbullying, where gender and sexual cyberbullying were associated with more significant stress and depression, especially among Lebanese youth. Additionally, Skilbred-Fjeld, Reme and Mossige²⁴ demonstrated the significant impact of cyberbullying on mental health, which the victims of cyberbullying reported being the most affected (e.g., self-harm, suicide, and violent behavior). These findings highlight the need for urgent interventions to address cyberbullying and reduce its negative impact on mental health across society (Table-1).

Table-1 Characteristics of Included Studies

| Author (Year) | Population Characteristics | Study Design | Findings on Cyberbullying and Mental Health Outcomes |
|--|--|-----------------------------------|--|
| Touhemi et al. (2024)¹⁷ | Students enrolled in public secondary educational institutions in the Sfax region, Tunisia with average age of 16.65 years | Cross-sectional study | 47% adolescents experiences cyberbullying with significant proportion of cyberbullying victims showed strong correlation with depression, anxiety and stress |
| Albikawi (2023)¹⁸ | Saudi female nursing students aged 20.80 ± 1.62 years | Descriptive cross-sectional study | Prevalence of cyberbullying was 20.67% with 49.16% internet addiction, 34.64% anxiety and 30.17% depression symptoms |
| AlQaderi et al. (2023)¹⁹ | University students studying at UAE with average age of 21 years | Cross-sectional study | Positive correlation between cyberbullying and phone addiction with anxiety and depression |
| Savani et al. (2023)²⁰ | Medical students in Western India aged 20.65 years | Cross-sectional survey | 38.35% students experiences moderate to severe cyberbullying victimization with significant association with depression and anxiety |
| Bitar et al. (2023)²¹ | Lebanese students aged 13 to 16 years old | Cross-sectional study | Gender, age, sexual cyberbullying in cyberspace and inserting malicious content in cyberspace were significantly associated with higher levels of anxiety and depression |
| Isa et al. (2021)²² | Malaysian school children aged 13 to 17 years | Cross-sectional study | Cyberbullying was reported among 11.1% students with significant ($p < 0.05$) associations with stress, anxiety and depression |

| | | | |
|---|--|-----------------------|---|
| Alrajeh et al. (2021) ²³ | Students at Qatar university aged 18 to 24 years | Cross-sectional study | 35.5% students were the cyberbully-victims while 29.2% were cyberbullies whereas 50% students reported symptoms of depression on Patient Health Questionnaire (PHQ-9) |
| Skilbred-Fjeld, Reme & Mossige (2020) ²⁴ | Norwegian high school students aged 18 to 21 years | Cross-sectional study | The prevalence of cyberbullying was 5% with late adolescents reported significantly more self-harm, suicide attempts, antisocial behavior, anxiety and depression. |

Study's Quality Analysis

Evaluation using the Effective Public Health Practices Project (EPHPP) tool showed that all included studies demonstrated low selection bias and robust study design. However, there was no blinding in the studies, which may introduce bias in outcome analysis. Although most studies adequately addressed confounding factors, lack of blinding may have affected the reliability of the findings. Overall, the studies were identified as moderate in quality, reflecting the robust but incomplete approach to screening for cyberbullying and its impact on mental health outcomes (Table-2).

| Table-2 Quality Assessment of Included Studies | | | | | | | |
|--|----------------|--------------|---------------------|----------|-------------------------|-------------------------|-----------------|
| Study | Selection Bias | Study Design | Confounding Factors | Blinding | Data Collection Methods | Withdrawal Independence | Overall Quality |
| Touhemi et al. (2024) ¹⁷ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | Moderate |
| Albikawi (2023) ¹⁸ | ✓ | ✓ | ✗ | ✗ | ✓ | ✓ | Moderate |
| AlQaderi et al. (2023) ¹⁹ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | Moderate |
| Savani et al. (2023) ²⁰ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | Moderate |
| Bitar et al. (2023) ²¹ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | Moderate |
| Isa et al. (2021) ²² | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | Moderate |

| | | | | | | | |
|---|---|---|---|---|---|---|----------|
| Alrajeh et al. (2021) ²³ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | Moderate |
| Skilbred-Fjeld, Reme & Mossige (2020) ²⁴ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | Moderate |

Discussion

These reviews provide valuable insights into the prevalence of cyberbullying and associated mental health outcomes across populations and settings. Touhemi et al.¹⁷ reported that young adults experienced high rates of victimization, which highlighted the need for prevention programs to address mental health, internet misuse, and self-esteem. Savani et al.²⁰ further highlighted the negative impact of cyberbullying on the psychological well-being of medical students in Western India. They highlighted the need for interventions to protect their mental health. Bitar et al.²¹, focusing on Lebanese adolescents, identified gender, age, and specific cyberbullying behaviours as essential predictors of anxiety and depression, emphasizing the importance of strategies for early detection and prevention. Isa et al. reported a high prevalence of bullying among Malaysian students, with bullying showing significant associations with stress, anxiety and depression. Alrajeh et al.²³ revealed comparatively high levels of antisocial attitudes and behaviours and emphasized the need for targeted prevention interventions and treatment strategies. Studies in Qatar, Saudi Arabia, and Lebanon found exceptionally high mental health outcomes related to cyberbullying, which suggests that cultural and social factors may play a role in the prevalence of cyberbullying and its impact on mental health outcomes. Therefore, Addressing cyberbullying and promoting psychological bullying in adolescents and young adult well-being is integral. The strength of this systematic review is the comprehensive approach to collecting evidence from multiple studies across populations and settings. The inclusion of research from a variety of sources provides a broader understanding of the world, both the prevalence of bullying and the impact of cyberbullying on mental health outcomes. Furthermore, differences in research methodologies and definitions of cyberbullying may have influenced the comparability of findings between studies.

Recommendations based on the findings of this study include developing and implementing a comprehensive prevention program targeting adolescents and young adults, focusing on positive online behaviours, and promoting and enhancing supportive school and community environments. Future research on the prevalence of cyberbullying and its impact on mental health promotion in different populations with Effective strategies should also be explored in reducing interference.

Conclusion

Cyberbullying represents a significant public health concern with adverse effects on the psychological well-being of adolescents worldwide. The findings of this systematic review highlight the need for concerted efforts by policymakers, educators, parents, and health professionals to prevent cyberbullying and promote positive mental health outcomes among vulnerable populations.

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Conflict of Interest

None.

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None.

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AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

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Acquisition, Analysis or Interpretation of Data: Atif A, Khalid SS, Sajid A

Manuscript Writing & Approval: Jehangir S, Khalid SS, Sajid A

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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